INCOSE SE Terms Glossary

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Preface

This document has been prepared and produced by a volunteer group of contributors within the International Council on Systems Engineering (INCOSE): the Concepts and Terms Working Group (CTWG). The original document was based on inputs from numerous INCOSE contributors, was edited by Sten Dahlberg , and published in draft form in October 1998 for internal INCOSE review.

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INCOSE members may have terms incorporated by submitting electronic source material (.DOC or .TXT) in the following format:

term (no capital letters) definition. (source 1), (source 2)

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1 INTRODUCTION

The SE Concepts and Terms WG is attempting to exclude jargon terms and non-SE terms from this listing. Definitions should consist of a single thought, expressed as one sentence. Definitions have been truncated to one sentence.

Note: This glossary is available in PC or MAC formats. This material constitutes a working draft copy of INCOSE Material and is released for comment purposes only. Unlimited copies may be made, however, INCOSE should be credited as the source.

2 GLOSSARY

abstraction — The principle of using only those aspects of an entity, object, operation, function, process, or other subject which are relevant to the current purpose and ignoring those aspects not needed to improve analytical focus on the current subject. (SGOAA)

abstraction — A view of a system that has a consistent level of behavioral and compositional detail in each branch of the architecture and hides finer, lower level detail. (DERA)

acceptability criteria — Limits placed on the degree of non conformance permitted in material expressed in definitive operational terms. (MIL-STD-109B)

acceptance — The act of an authorized representative of the government by which the government assumes for itself, or as an agent of another ownership of existing and identified supplies tendered, or approves specific services rendered, as partial or complete performance of the contract on the part of the contractor. (DOD-STD-100C)

acceptance — Acknowledgment by the certification authority that a submission of data, argument or claim of equivalence satisfies applicable requirements. (ARP 4754, Draft 35)

acceptance — The act of an authorized representative of the government by which the government, for itself or as agent of another, assumes ownership of existing identified supplies tendered, or approves specific services rendered as partial or complete performance of the contract. (FAR)

acceptance criteria — The criteria that a system or component must satisfy in order to be accepted by a user, customer, or other authorized entity. (IEEE STD 610.12-1990)

acceptance test — A test that determines conformance of a product to design specifications as a basis for acceptance. (ARP 1931-87), (SAE Dictionary)

acceptance test — A test performed to demonstrate that a specific lot of articles has been manufactured to specification tolerances. (AFR 80-14)

acceptance test — The test of a system or functional unit usually performed by the purchaser on his premises after installation with the participation of the vendor to ensure that the contractual requirements are met . (ISO 2382-8: 1987, 08.01.08)

acceptance testing — Formal testing conducted to enable a user, customer, or other authorized entity to determine whether to accept a system or component. (IEEE STD 610.12-1990)

acceptance testing — Formal testing conducted to determine whether or not a system satisfies its acceptance criteria and to enable the customer to determine whether or not to accept the system. (IEEE-STD-1012-1986)

access method — A technique to obtain the use of data, the use of storage in order to read or write data, or the use of an input/output channel to transfer data. (ISO 2382-1)

accident — Event characterized by the unwanted release of energy or toxic material, possibly resulting in death, injury or environmental damage. (WG6)

accuracy — Attributes of software that bear on the provision of right or agreed results or effects. (WG6)

acquirer — An organization that acquires or procures a system, product, or service from a supplier. (WG6)

acquisition — The process of obtaining a system, product or service. (WG6)

acquisition — Acquisition is a term used within the DID to denote the aggregation of efforts to develop, produce and provide a weapon system to the user. (MIL-STD-881)

acquisition — The acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. (FAR)

acquisition — The conceptualization, initiation, design, development, test, contracting, production, deployment, and logistic support, modification, and disposal of weapon and other systems, supplies, or services (including construction) to satisfy DOD needs, intended for use in or in support of military missions. (DSMC)

acquisition categories — Categories established to facilitate decentralized decision making and execution and compliance with statutory imposed requirements. (DSMC), (DODI 5000.2)

Acquisition Decision Memorandum — A memorandum signed by the milestone decision authority that documents decisions made and the exit criteria established as the result of a milestone decision review work-in-process review. (DODI 5000.2)

acquisition life cycle — The path, divided into phases, through which a program progresses between initial identification/documentation of the operational requirement and final retirement from the operational inventory. (AFSCP 800-7)

acquisition management — The role encompassing the topmost level of project management and engineering management in the acquisition life cycle. (DERA)

acquisition plan — The definitive plan for management of the program for development of materiel which will accomplish the objectives in an approved materiel requirement document. (AFM)

acquisition plan — A formal written document reflecting the specific actions necessary to execute the approach established in the approved acquisition strategy and guiding contractual implementation. (FAR Subpart 7.1), (DFAR Supplement Subpart 207.1), (DSMC), (DODI 5000.2)

acquisition planning — The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the need in a timely manner and at a reasonable cost. (DODI 5000.2)

acquisition process — Normally, it consists of five phases (Conceptual, Validation, Full Scale Engineering Development, Production, and Deployment) with key decision points after each of the first three phases. (AFR 80-14)

acquisition program — A directed, funded effort that is designed to provide a new or improved materiel capability in response to a validated need. (DODI 5000.2)

acquisition strategy The conceptual basis of the overall plan that a program manager follows in program execution. (DSMC), (ASG '84)

acquisition strategy A business and technical management approach designed to achieve program objectives within the resource constraints imposed. (DSMC)

acquisition strategy A business and technical management approach designed to achieve program objectives within the resource constraints imposed. (DODI 5000.2)

acquisition strategy report Describes the acquisition approach to include streamlining, sources, competition, and contract types throughout the period from the beginning of Phase I, Demonstration and Validation, through the end of production. (DODI 5000.2)

acquisition streamlining Any effort that results in more efficient and effective use of resources to develop or produce quality systems. (DODI 5000.2)

acquisition system A disciplined management approach for acquiring systems and materiel that satisfy the operational user's needs. (DODD 5000.1)

action verbs
a. Allocate: Apportion for a specific purpose or to a particular thing
b. Analyze: Solve by analysis
c. Annotate: Provide with comments
d. Apply: Put to use
e. Ascertain: Find out with certainty
f. Assess: Appraise critically.
g. Attend: Be present at
h. Audit: Officially examine
i. Build: Make by putting together
j. Calculate: Find out by computation
k. Certify: Endorse officially to attest conformance to set standards
l. Chair: Preside as chairman of
m. Co-chair: Chair jointly
n. Collect: Bring together into one body or place by careful selection
o. Compare: Find out likeness or differences
p. Conduct: Guide, lead, direct
q. Consider: Think about, decide
r. Construct: Put together, build
s. Contribute: Share in a joint effort (suggests furthering an end)
t. Control: Direct, regulate
u. Coordinate: Bring into a common action. movement or condition smoothly
v. Create: Cause to be, make

w. Define: Make clear, settle the limits; determine precise meaning of
x. Demonstrate: Prove or make clear by reasoning or evidence, illustrate, explain
y. Design: Perform an original act
z. Determine: Resolve, settle, decide
aa. Develop: Bring into being or activity
ab. Differentiate: Make a distinction between
ac. Down select: Select a smaller number or group than originally existing
Egress: To depart from a mission, target, or threat area
ad. Erect: Put together, set upright
ae. Establish: Make firm, prove beyond dispute, gain acceptance of
af. Estimate: Approximate an opinion of
ag. Evaluate: Find or fix the value of; examine and judge (non monetary)
ah. Evolve: Develop gradually, work out
ai. Examine: Scrutinize to determine the nature, condition or quality of
aj. Explore: Examine for discovery
ak. Extract: Take out, deduce, select
al. Fabricate: Build, manufacture, invent
am. Form: Give shape to, establish
an. Formulate: Put together and express
ao. Generate: Produce, cause to be
ap. Incorporate: Unite thoroughly with something existing, blend
Ingress: To enter into a mission, target, or threat area
aq. Initiate: Begin, take the first step of something that is to continue
ar. Input: Feed information into a computer
as. Inquire: Ask, make a search of
at. Inspect: Examine carefully or officially; scrutinize for error or defect
au. Install: Place, put into position
av. Institute: Set up; establish, begin
aw. Integrate: Add parts to make whole
ax. Interpret: Explain the meaning of
ay. Investigate: Search into, examine closely
az. Judge: Decide, form an estimate of
ba. Maintain: Keep in an existing state, preserve from failure or decline
bb. Make: Cause to come into being
bc. Manage: Succeed in accomplishing, direct, achieve one's purpose
bd. Manufacture: Fabricate from raw materials
be. Notice: Comment upon, review
bf. Observe: Inspect, watch
bg. Organize: Integrate, arrange in a coherent unit
bh. Originate: Initiate, give rise to
bi. Participate: Take part in an undertaking, activity or discussion
bj. Perform: Do, carry out, accomplish
bk. Plan: Devise a scheme for doing or arranging activities to achieve an objective
bl. Prepare: Make ready, put into written form
bm. Prioritize: Assign priority

bn. Probe: Investigate thoroughly
bo. Process: Subject to a special process or treatment
bp. Produce: Give birth or rise to
bq. Provide: Supply what is needed for sustenance or support
br. Pursue: Seek, obtain, or accomplish
bs. Reason: Think, influence another's actions
bt. Recommend: Advise, attract favor of
bu. Record: Set down in writing, or act of recording electronic reproduction
bv. Resolve: Reduce by analysis, clear up
bw. Review: Inspection, examination or evaluation
bx. Scan: Look through hastily, survey from point to point
by. Scrutinize: Examine closely with attention to minute detail
bz. Search: Examine to find something
ca. Seek: Try to discover, make an attempt
cb. Select: Take by preference from a number or group, make a choice
cc. Solve: Find an answer
cd. Study: Carefully examine or analyze
ce. Support: Assist, help
cf. Trace: Copy, or find by searching
cg. Track: Observe or plot the path of
ch. Update: Bring up to date
ci. Validate: Verify, substantiate, grant official sanction to. ((Expanded from MIL-HDBK-245B, Appendix A))

activation — The event in which a latent fault gives rise to a failure in response to a trigger . (WG6)

activity — Any step taken or function performed, both mental and physical, toward achieving some objective. (SEI)

adaptability — Attributes of software that bear on the opportunity for its adaptation to different specified environments without applying other actions or means than those provided for this purpose for the software considered. (WG6)

adaptive branch — A branch instruction in the computer program dealing with a robot that may lead the robot to execute a series of instructions, depending on external conditions. (McGraw-Hill Technical Dictionary)

adaptive control — A control method in which one or more parameters are sensed and used to vary the feedback control signals in order to satisfy the performance criteria. (McGraw-Hill Technical Dictionary)

adaptive control function — That level in the functional decomposition of a large-scale control system which updates the parameters of the optimizing control function to achieve a best fit to current plant behavior, and updates parameters of the direct control

function to achieve good dynamic response of the closed-loop system. (McGraw-Hill Technical Dictionary)

addendum specification Specifies the requirements for a system/item that is similar to an existing item; cites the common requirements by reference and specifies the new/changed requirements. (DID-E-3104), (MIL-STD-483), (AFSCP 800-7)

advance change study notice (ACSN) Prior to the preparation of a formal routine ECP or assembly CCP/TCP, the contractor notifies via an ACSN the contracting agency of his intent to submit a proposal. (MIL-STD-483A)

advanced development All the effort directed toward projects which have moved into the development of hardware/software for test. (DFAR, para. 235.001)

advanced development Includes all projects that have moved into the development of hardware for experimental or operational test. (DODI 3200.6), (DoD-STD-480A)

advanced development models An item used for experimentation or tests to (a) demonstrate the technical feasibility of a design, (b) determine its ability to meet existing performance requirements, (c) secure engineering data for use in further development and, where appropriate, (d) establish the technical requirements for contract definition. (MIL-STD-280A)

advanced software technology Software tools, life-cycle support environments (including program support environments), non-procedural languages, modern database management systems, and other technologies that provide improvements in productivity, usability, maintainability, portability, and other benefits, over those capabilities commonly in use. (SECNAVINST 5234.2A)

advisory notice A notice issued to provide information and/or advise what action should be taken in the use, modification, disposal, or return of a medical device. (BioMed Ind)

affordability A determination that the life-cycle cost of an acquisition program is in consonance with the long-range investment and force structure plans of the Department of Defense or individual DOD components. (DSMC, DODI 5000.2)

agreement Acknowledgment by the certification authority that a plan or proposal relating to, or supporting, an application for approval of a system, or equipment, is an acceptable statement of intent with respect to applicable requirements. (ARP 4754, Draft 35)

agreement — The activity or result of acceptance to supply product, service or information in response to and agreement package, irrespective of the level of formality. (DERA)

agreement package — The requirements, consideration and trading terms and conditions that formalize an acquirer/supplier relationship. (DERA)

ai — The branch of computer science dealing with data processing systems that perform functions usually associated with human intelligence, such as reasoning, learning, and self-improvement. (ISO 2382-1)

aircraft — Any vehicle designed to be supported by air, being borne up either by the dynamic action of the air upon the surfaces of the vehicle, or by its own buoyancy. (MIL-STD-1760A)

airtask — A document which describes those tasks which a subordinate activity are to perform on a program. (NAWCWPNS)

airworthiness — The condition of an item (aircraft, aircraft system or part) in which that item operates in a safe manner to accomplish its intended function. (ARP 4754, Draft 35)

alert — An aural, visible or tactile advisory, caution or warning message. (Aero Ind)

algorithm — An explicit set of rules, generally mathematical in nature, for solving a particular problem. (DO-178A)

algorithm — A finite ordered set of well-defined rules for the solution of a problem. (ISO 2382-1)

allocate — To assign a portion of a resource to an activity. (McGraw Hill Dictionary)

allocated baseline — The initially approved documentation describing an item's functional and interface characteristics that are allocated from those of a higher level configuration item (CI), interface requirements with interfacing configuration items, additional design constraints and the verification required to demonstrate the achievement of those specified functional and interface characteristics. (MIL-STD-480B)

allocated baseline — The initially approved documentation describing a configuration item's (CI) functional, performance, interoperability, and interface requirements that are allocated from those of the system or a higher level CI; interface requirements with interfacing CIs; design constraints; derived requirements (functional and

performance); and verification requirements and methods to demonstrate the achievement of those requirements and constraints. (MIL-STD-499B-UNAPPROVED)

allocated baseline The initially approved documentation describing an item's functional, interoperability, and interface characteristics that are allocated from those of a system or a higher level configuration item, interface requirements with interfacing configuration items, additional design constraints, and the verification required to demonstrate the achievement of those specified characteristics. (MIL-STD-973)

allocated baseline In configuration management, the initial approved specifications governing the development of configuration items that are part of a higher level configuration item. (IEEE STD 610.1990)

allocated baseline The initial approved specifications governing the development of configuration items that are part of a higher level configuration item. (IEEE STD 610.12-1990)

allocated configuration documentation The approved allocated baseline plus approved changes. (MIL-STD-973)

allocated configuration identification Current, approved performance-oriented specifications governing the development of configuration items that are part of a higher level CI, in which each specification: (a) Defines the functional characteristics that are allocated from those of the higher-level CI, (b) Establishes the tests required to demonstrate achievement of its allocated functional characteristics, (c) Delineates necessary interface requirements with other associated configuration items, (d) Establishes design constraints, if any, such as component standardization, use of inventory items, and integrated logistic support requirements. (DODD 5010.19)

allocated configuration identification Performance-oriented specifications governing the development of CIs, in which each specification: (a) Defines the functional characteristics that are allocated from those of the system or higher level CI, (b) Establishes the verification required to demonstrate achievement of its allocated functional characteristics, (c) Delineates necessary interface requirements with other associated CIs and, (d) Establishes design constraints, if any such as component standardization, use of inventory items, and integrated logistic support requirements. (MIL-STD-480B)

allocated configuration identification Allocated configuration identification (allocated baseline and approved changes) normally consists of a series of Type B specifications defining the requirements including functional, for each major configuration item. (MIL-STD-490A)

allocated configuration identification In configuration management, the current approved specifications governing the development of configuration items that are part of a higher level configuration item. (IEEE 610.12-l990)

allocated requirements — Requirements which are quantitatively apportioned from a higher level to a lower level and for which the unit of measure remains the same. (NASA MDP92)

allocation — The process of distributing requirements, resources or other entities among the components of a system or program. (IEEE 610.12-1990)

allocation — The apportionment of numerical requirements to all levels within an equipment which will result in meeting the overall contractual reliability requirement. (ARD50010-91), (SAE Dictionary)

allocation — The process of assigning whole or apportioned requirements to implementing entities. (Aero Ind)

allocation — The process (or results of) of distributing requirements, resources, or other entities among the components of a system or program. (IEEE STD 610.12-1990)

allocation, computer resource — The assignment of computer resources to current and waiting jobs. (IEEE 610.12-1990)

alphanumeric — Pertaining to data that consist of letters, digits, and usually other characters, such as punctuation marks, as well as to processes and functional units that use those data. (ISO 2382-1)

altered item — An existing item, under the control of another design activity or defined by a nationally recognized standardization document, that is subjected to physical alteration to meet the design requirements. (MIL-STD-100F)

alternatives — A choice limited to one of two or more possibilities. (DSMC)

analog — Pertaining to continuously variable physical quantities or to data presented in a continuous form, as well as to processes and functional units that use those data. (ISO 2382-1)

analog computer — A computer whose operations are analogous to the behavior of another system and that accepts, processes, and produces analog data. (ISO 2382-1)

analog cost estimate — An estimate of costs based on historical data of a similar (analog) item. (DSMC)

analysis — An evaluation based upon engineering principles. (ARP 4754, Draft 35)

analysis — Separation of a whole into its component parts. (Merriam-Webster)

analysis — Quantitative determination of the constituent parts. (SAE Dictionary)

analyzability — Attributes of software that bear on the effort needed for diagnosis of deficiencies or causes of failures, or for identification of parts to be modified. (WG6)

animation — The process by which the behavior defined by a formal specification is examined and validated against the informal requirements. (WG6), (IEC 880)

anomaly — Anything observed in the documentation or operation of software that deviates from expectations based on previously verified software products or reference documents. (IEEE-STD-1012-1986)

applicable requirements — The comprehensive and detailed airworthiness codes established by an (ICAO) Contracting State for the class of aircraft under consideration. (ICAO Annex 8 Part II), (ARP 4754, Draft 35)

application — The use of capabilities (services/functions) provided by an information system specific to the satisfaction of a set of user requirements. (P1003.0/D15), (POSIX P1003.0 Draft 14 Guide)

application domain — A bounded set of related systems (i.e., systems that address a particular type of problem). (SEI-93-TR-25)

application domain — A distinguishable class of operational environment that is characterized by its nature and/or by the interests of the owners and users of a system. (DERA)

application platform — The set of resources that supports the services on which an application or application software will run. (POSIX P1003.0 Draft 14 Guide)

application platform — The collection of hardware and software components that provide the services used by support and mission-specific software applications. (?)

application portability profile — The structure that integrates federal, national, international, and other specifications to provide the functionality necessary to accommodate the broad range of federal information technology requirements. (APP)

application problem — A problem submitted by an end user and requiring information processing for its solution. (ISO 2382-20)

application program — Software or program that is specific to the solution of an application problem . (ISO 2382-1)

application program interface — The interface, or set of functions, between the application software and the application platform. (APP)

application program interface — The interface between the applications software and the applications platform, across which all services are provided. (POSIX P1003.0 Draft 14 Guide)

application software — Software that is specific to an application and is composed of programs, data and documentation. (POSIX P1003.0 Draft 14 Guide, POSIX91)

application software — A computer software that performs a task related to the process being controlled rather than to the functioning of the computer itself. (IEC 880)

application software — Software or program that is specific to the solution of an application problem. (ISO 2382-1)

applied research — The effort that (a) normally follows basic research, but may not be severable from the related basic research; (b) attempts to determine and exploit the potential of scientific discoveries or improvements in technology, materials, processes, methods, devices, or techniques; and (c) attempts to advance the state of the art. (FAR)

applied research — Extension of basic research with a focus on a perceived practical need. (NRC)

approval — The act of formal sanction of documentation by a certification authority. (ARP 4754, Draft 35)

approved — Accepted by the certification authority as suitable for a particular purpose. (ARP 4754, Draft 35)

architectural design — The process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of a computer system. (IEEE 610.12-1990)

architecture — The structure of levels and/or branches that partition a system into its constituent parts or components. (DERA)

architecture — The design and interconnection of the main components of a hardware/software system. (DSMC)

architecture — The organizational structure of a system or component. (IEEE STD 610.12)

architecture — How functions are grouped together and interact with each other. (NASA MDP92)

architecture — A logical or physical representation of a product which depicts its structure, but, provides few or no implementation details. (IEEE P1220)

architecture — The organizational structure of a system or component. (IEEE 610.12-1990)

architecture, database — The logical view of the data models, data standards, and data structure. (DOD 8020.1-M, Appendix J)

architecture, infrastructure — Identifies the top-level design of communications, processing, and operating system software. (DOD 8020.1-M, Appendix J,para.5(14)(c), Table J-2)

architecture target — Depicts the configuration of the target open information system. (DOD 8020.1-M)

archived master (copy of software) — A software library which contains formally approved and released versions of software and documentation from which copies are made. (BioMed Ind)

artificial intelligence — The branch of computer science dealing with data processing systems that perform functions usually associated with human intelligence, such as reasoning, learning, and self-improvement. (ISO 2382-1)

artificial language — A language whose rules are explicitly established prior to its use. (ISO 2382-1)

assembly — A number of parts or subassemblies or any combination thereof joined together to perform a specific function, and subject to disassembly without degradation of any of the parts. (MIL-STD-100A)

assembly — A number of parts, subassemblies, or any combination thereof joined together to perform a specific function and which can be disassembled without destruction of designed use. (ARP 4754, Draft 35)

assembly — A number of parts or subassemblies or any combination thereof joined together to perform a specific function and capable of disassembly. (MIL-STD-280A)

assembly — A number of parts or subassemblies or any combination thereof joined together to perform a specific function. (DOD-STD-100C)

assembly — Two or more parts or subassemblies joined together to form a complete unit, structure, or other article. (DSMC)

assembly — A unit which is normally removed and replaced as a single item and consists of accessories and components that collectively perform a specific functional operation. (BMO-STD 77-6A)

assembly — An element of the physical or system architecture, specification tree, and system breakdown structure that is a subordinate element to a subsystem and is comprised of two or more components. (P1220)

assembly — The act of fitting together of fabricated or manufactured elements into a larger element. (P1220)

assess — To evaluate, appraise. (SEI)

assessment — An action of applying specific documented assessment criteria to a specific software module, package or product for the purpose of determining acceptance or release of the software module, package or product. (WG6)

assessment — An estimate or determination of the value of a process against a scale of "goodness". (WG6)

assessment — An evaluation based upon engineering judgment. (ARP 4754, Draft 35)

associated list — A tabulation of engineering information pertaining to an item depicted on an engineering drawing or on a set of engineering drawings. (MIL-T-31000)

associated list — A tabulation of pertinent engineering information pertaining to an item depicted on an engineering drawing or on a set of engineering drawings. (MIL-STD-100F)

assumption — A supposition that is made because information required to perform the study may not be complete or available from external sources. (NASA MDP92)

assumptions — Statements and /or principles accepted without proof. (ARP 4754, Draft 35)

assurance — All planned and systematic actions necessary to provide adequate confidence that a product or service satisfies given requirements. (ARP 4754, Draft 35)

asynchronous — Pertaining to two or more processes that do not depend upon the occurrence of specific events such as common timing signals. (ISO 2382-1)

attribute — A characteristic or property that is appraised in terms of whether it does or does not exist, (e.g., go or no-go) with respect to a given requirement. (Handbook H53)

attribute — A characteristic of an item; for example, the item's color, size, or type. (IEEE 610.12-1990)

attribute — A feature, characteristic, or aspect of a system or a device, or a condition affecting its operation. (FAA AC 25.1309)

attribute — A measurable physical or abstract property of an entity. (ISO/IEC 1498-1 10/28/96)

attribute — An observable property of an entity. (WG6)

attribute — A feature or characteristic of an entity. (WG6)

audit — An independent examination of a work product or set of work products to assess compliance with specifications, standards, contractual agreements or other criteria. (IEEE 610.12-1990)

audit — A documented activity performed in accordance with written procedures on a periodic basis to verify, by examination and evaluation of objective evidence, compliance with those elements of the quality assurance program under review. (BioMed Ind)

audit — An independent examination of a work product or set of work products to assess compliance with specifications, standards, contractual agreements, or other criteria. (IEEE STD 610.12-1990)

auditing — The process of examining system designs and software and their related documentation for accuracy, quality, completeness, consistency and traceability. (DO-178A)

authentication — An act by the government that results in the government approving and taking control of a configuration baseline. (MIL-STD-499B-UNAPPROVED)

authentication — The procedure (essentially approval) used by the Air Force in verifying that the specification content is acceptable. (AFSCP 800-7)

authority — The organization or person responsible within the State (Country) concerned with the certification of compliance with applicable requirements. (ARP 4754, Draft 35)

automated information system — Computer hardware, computer software, telecommunications, information technology, personnel, and other resources that collect, record, process, store, communicate, retrieve, and display information. (DODD 8000.1)

automated verification system — Any software tool that automates part or all of the verification process. (IEEE 610.12-1990)

automatic — Pertaining to a process or equipment that, under specified conditions, functions without human intervention. (ISO 2382-1)

automatic data processing (ADP) — The systematic performance of operations upon data. (ISO 2382-1)

automatic self test — Self-test to that degree of fault detection and isolation which can be achieved entirely under computer control, without human intervention. (MIL-STD-1309C)

automatic test — That performance assessment, fault detection, diagnosis, isolation, and prognosis which is performed with a minimum of reliance on human intervention. (MIL-STD-1309C)

automation — The conversion of processes or equipment to automatic operation or the results of the conversion. (ISO 2382-1)

availability — Probability that an item is in a functioning state at a given time. (ARP 4754, Draft 35)

availability A measure of the degree to which an item is in an operable and committable state at the start of a mission when the mission is called for at an unknown (random) time. (COMOPTEVFORINST 3960.1G), (MIL-STD-1472D), (DSMC)

availability Probability that an item is in an operable and committable state at the start of a mission (where the start of mission is at some unknown random time). (NAWCWPNS)

availability A determination that the life-cycle cost of an acquisition program is in consonance with the long-range investment and force structure plans of the Department of Defense or individual DOD Components. (DODI 5000.2)

availability A measure of the probability that a designated system will deliver the correct service when called upon at any time. (Adapted from LAP90), (SGOAA-1)

availability Probability that an item is in an operable state when required. (ARP 1834)

availability A measure of the degree to which an item is in operable and committable state at the start of a mission, when the mission is called for at an unknown (random) time. (MIL-STD-1309C)

availability Availability is a measure of the degree to which an item is in the operable and committable state at the start of the mission when the mission is called for at an unknown (random) time (inherent availability). (MIL-STD-721B), (AFR 80-14)

availability The probability that a system will be operative at any given instant during a specified period of time. (WG6)

avionics system The set of all electronic and processing based subsystems on a space vehicle, including all hardware, software and other electronics needed to control and operate the space vehicle. (Adapted from JSC 31000)

baseline A configuration identification document or a set of such documents formally designated by the government. (MIL-STD-480B)

baseline A specification or product that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures or a type of procedure such as configuration management. (IEEE 610.12)

baseline A configuration identification document or a set of such documents, formally designated and fixed at a specific time during a configuration item's life cycle. (DOD-HDBK-287), (AFM)

baseline A quantifiable physical condition or level of performance from which changes are measured. (ARP 1587-81), (SAE Dictionary)

baseline A line drawn in the graphical representation of a varying physical quantity, such as voltage or current, to indicate a reference value, such as the voltage value of a bias. (McGraw-Hill Technical Dictionary)

baseline A specification or product that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures. (IEEE STD 610.12-1990)

baseline A major version of a system selected for release to customers and/or for the purpose of measuring some attribute, e.g., reliability. (WG6)

baseline A defined configuration on which a design freeze decision has been implemented, thereafter requiring formal configuration management. (IEC 1513)

baseline configuration management The establishment of baselines that are formally reviewed and agreed on and serve as the basis for further development. (SEI-93-TR-25)

baseline management The application of technical and administrative direction to designate the documents that formally identify and establish the initial configuration identification at specific times during the life cycle. (DOD-HDBK-287)

baseline management The application of technical and administrative direction to designate the documents and changes to those documents that formally identify and establish baselines at specific times during the life cycle of a configuration item. (IEEE STD 610), (SEI-93-TR-25)

baseline management Base line management is the application of technical and administrative direction to designate the documents that formally identify and establish the initial configuration identification at specific times during its life cycle. (MIL-STD-483A)

basic (input) requirements Those statements of fact and assumption portraying the primary universe for application of the systems engineering process: these are mission objective, environment, constraints, and measures of effectiveness. (AFM)

basic reliability — The duration or probability of failure-free performance under stated conditions. (MIL-STD-785B)

basic research — The research directed toward increasing knowledge in science. (FAR, para. 31.205-18(a))

basic research — Efforts typically performed in laboratories as experiments to explore the basic laws of science and their potential application to DOD weapon systems or technology development. (DSMC)

basic research — Research that creates new knowledge or techniques that explain natural phenomena or human behavior, or aid in their application to human needs. (NRC)

behavior — The inherent actions and the responses to the external events in the operational environment that characterize a system. (DERA)

behavioral analysis — The analysis of the logical (stimulus/response) execution, and physical (resource consumption, event timing, throughput, etc.) execution of a system to assess the integrity of the functional events, operational scenarios, or operational environments. (IEEE P1220)

behavioral analysis — The analysis of the logical (stimulus/response) and physical (resource consumption, event timing, throughput etc.) execution of a system to assess the functional and physical. (IEEE P1220)

benign failure — A failure whose severity is slight enough to be outweighed by the advantages to be gained by normal use of the system. (WG6)

best practices — Any collection of advanced engineering design techniques that provides design excellence and high-quality products for a given product line or company. (NRC)

binary digit — Either of the digits 0 or 1 when used in the binary numeration system. (ISO 2382-1)

bioware — Bioware applies to the humans or other biological organisms that use and operate the system. (Bahill)

black box — A system or component whose inputs, outputs, and general function are known but whose contents or implementation are unknown or irrelevant. (IEEE 610-12-1990), (DSMC)

block change concept — For hardware configuration items, an engineering change implementation concept that designates a number (i.e., a block) of consecutive

production units of the configuration item to have an identical configuration on delivery and in operation. (MIL-STD-973)

block diagram A diagram of a system, computer, or device in which the principal parts are represented by suitably annotated geometrical figures to show both the functions of the parts and their functional relationships. (IEEE 610.12-1990)

block diagram A graphical representation of information or control flows for a control system using circles and function blocks. (adapted from SAE Dictionary)

block diagram A diagram of a system in which the principal parts or functions are represented by blocks connected by lines that show their relationships. (ISO 2382-1)

bottom up Pertaining to an activity that starts with the lowest-level components of a hierarchy and proceeds through progressively higher levels. (IEEE 610.12-1990)

bottom-up Pertaining to a method or procedure that starts at the lowest level of abstraction and proceeds towards the highest level. (ISO 2382-20)

boundary The plane, or planes, that separate the form from the context. (INCOSE Concepts & Terms WG)

box diagram A control flow diagram consisting of a rectangle that is subdivided to show sequential steps, if-the-else conditions, repetition, and case conditions. (IEEE 610.12-1990)

brand name description A purchase description that identifies a product by its brand name and model or part number or other appropriate nomenclature by which the product is offered for sale. (FAR 10.002)

brassboard A high-fidelity replication of the flight design that is assembled using flight hardware workmanship standards. (NASA MDP92)

brassboard configuration An experimental device (or group of devices) used to determine feasibility and to develop technical and operational data. .

breadboard configuration An experimental device (or group of devices) used to determine feasibility and to develop technical data. (DSMC)

bubble chart A data flow, data structure, or other diagram in which entities are depicted with circles (bubbles) and relationships are represented by links drawn between the circles. (IEEE 610.12-1990)

build-to specifications Those specifications which are developed during detail design and prototype fabrication. (AFM)

built in test A test approach using self-contained hardware and/or software which is an integral part of the unit under test. (MIL-STD-1388-1)

built in test An operational status checkout or test system which is integrated into a control system or function. (ARP1181A-85)

built in test An integral capability of the mission equipment which provides an on-board, automated test capability to detect, diagnose, or isolate system failures. (ARD50010-91)

built in test An automated internal test which interrupts normal operation and requires participation of either air crew or maintenance personnel. (ARP1782-89)

built in test A testing routine that is initiated to assist in diagnosing a suspected system fault. (ARD50020-91), (SAE Dictionary)

built in test An integral capability of the mission equipment which provides an on-board, automated capability to detect, diagnose, or isolate system failures. (MIL-STD-1309C)

built in test (BIT) A test approach using BITE or self test hardware or software to test all or part of the unit under test. (MIL-STD-1309B)

built in test equipment Any device permanently mounted in the prime equipment and used for the express purpose of testing the prime equipment, either independently or in association with external test equipment. (DSMC)

built in test equipment Equipment built into a unit to provide a self test capability for the unit. (SAE Dictionary)

built in test equipment Any device permanently mounted in the prime equipment and used for the express purpose of testing of prime equipment, either independently or in association with external test equipment. (OPNAVIST4790.20)

built in test equipment (BITE) Any device which is part of an equipment or system and is used for the express purpose of testing the equipment or system. (MIL-STD-1388-1)

built in test false alarm An indication of a failure that is not accompanied by system degradation or failure and, in the opinion of the operator, does not require any maintenance action. (AFP 57-9)

burn-in The operation of an item under stress to stabilize its characteristics. (MIL-STD-721C)

byte A string that consists of a number of bits, treated as a unit, and usually representing a character. (ISO 2382-1)

ca Pertaining to a technique or process in which part of the work is done by a computer. (ISO 2382-1)

calculator A device that is suitable for performing arithmetic operations, but that requires human intervention to alter its stored program, if any, and to initiate each operation or sequence of operations. (ISO 2382-1)

call graph A diagram that identifies the modules in a system or computer program and shows which modules call one another. (IEEE 610.12-1990)

capability A measure of the system's ability to achieve the mission objectives, given that the system is dependable and suitable. (MIL-STD-499B-UNAPPROVED)

capability A measure of the system ability to achieve the mission objectives, given the system condition during the mission. (DSMC)

capability A measure of the system's ability to achieve its mission objectives, given it is available, dependable, and survivable. (NAWCWPNS)

capability evaluation An independent process assessment by a trained team of professionals. (SEI)

capability maturity model A description of the stages through which software organizations evolve as they define, implement, measure, control and improve their software processes. (SEI-93-TR-25)

capability maturity model A capability maturity model for a given domain is a model which describes the key elements of an effective process for the domain. (Adapted from CCF Draft C)

capstone test and evaluation master plan A test and evaluation master plan which address the testing and evaluation of a defense system comprised of a collection of stand

alone component systems which function collectively to achieve the objectives of the defense system. (DODI 5000.2)

captive carry In testing, the use of the primary (or similar) platform in which to deploy the weapon system being tested. (DSMC)

CASE tool An automated software engineering development tool that can assist software engineers in analyzing, designing, coding, testing, and documenting a software system and managing a software project. (WG6)

CASE tool A computer program used to help develop, test, analyze, or maintain another computer program or its documentation; for example, automated design tool, compiler, test tool, maintenance tool. (WG6)

cataleptic /catastrophic failure A sudden failure which results in a complete inability to perform all required functions of an item. (WG6)

central processing unit A functional unit that consists of one or more processors and their internal storages. (ISO 2382-1)

certainty factor (confidence factor) A numerical weight given to an expression to indicate the confidence that has been derived for that expression. (Bahill)

certification Attestation that a support test system is capable, at the time of certification demonstration, of correctly assessing the quality of the items to be tested. (MIL-STD-1309B)

certification A process, which may be incremental, by which a contractor provides objective evidence to the contracting agency that an item satisfied its specified requirements. (DOD-STD-2168)

certification Legal recognition that a product, service, organization or person complies with the applicable requirements. (ARP 4754, Draft 35)

certification The process of confirming that a system or component complies with its specified requirements and is acceptable for operational use. (IEEE 610.12-1990)

certification A process, which may be incremental, by which a contractor provides evidence to the contracting agency that a product meets contractual or otherwise specified requirements. (DOD-STD-2167)

certification authority Organization or person responsible for granting approval on behalf of the nation of manufacture. (ARP 4754, Draft 35)

change (configuration) manager The person responsible for the establishment and maintenance of all configuration control procedures for an item/program and for the administrative processing/ tracking of all change proposals for the item/program. (AFSCP 800-7)

change control The process of evaluating, approving and documenting changes to the system. (DO-178A)

change control A method of configuration management, consisting of the evaluation, coordination, approval or disapproval, and implementation of changes to work products. (SEI), (MIL-STD-105)

change management The process of evaluating the impact of a requirement or design change on the system, analyzing the effects of a proposed change in terms of the system foundation architecture, performance, costs, and schedule criteria. (IEEE P1220)

change management The process of evaluating the impact of a requirement or design change on the system, analyzing the effects of a proposed change in terms of the system foundation architecture, performance, costs, and schedule criteria. (IEEE P1220)

change order A contract modification document that requires the signature of the government contracting officer. (AFSCP 800-7)

changeability Attributes of software that bear on the effort needed for modification, fault removal or for environmental change. (WG6)

change-over system A temporary information processing system used to facilitate the transition from an operational system to its successor. (ISO 2382-20)

channel A separate path along which information flows through a redundant or distributed system. (IEC 880)

Channel A channel is an element or a group of elements that independently perform(s) a function. (IEC 1508)

character A member of a set of elements that is used for the representation, organization, or control of data. (ISO 2382-1)

characteristic A physical, chemical, visual, functional or any other identifiable property of a product or material. (MIL-STD-109B)

characteristic Property by which an item can be assessed. (WG6)

check operational	A task to determine if an item is fulfilling its intended purpose. (WATOG)
checksum	A method for detecting errors in a series of bytes. (BioMed Ind)
checksum	The value from adding the individual values at each address of the hardware component which contains the software program. (BioMed Ind)
chip	A small piece of semiconductive material that contains interconnected miniaturized electronic elements. (ISO 2382-1), (ARP 4754, Draft 35)
circular error probable (CEP)	An indicator of the delivery accuracy of a weapon system, used as a factor in determining probable damage to a target. (DG 1-75)
classification of defects	The enumeration of possible defects of the unit of product, classified according to their seriousness. .
code	The representation of particular data or a particular computer program in a symbolic form, such as source code, object code or machine code. (Aero Ind)
code identification number (FSCM)	A five-digit number listed in Cataloging Handbook H41, Federal Supply Code for Manufacturers, that is assigned to activities that manufacture or develop items for the Federal government. (DoD-STD-480A)
code review	A meeting at which software code is presented to project personnel, managers, users, customers, or other interested parties for comment or approval. (IEEE 610.12-1990)
cohesion	The state or process of sticking together. (McGraw Hill Dictionary)
combat developer	The agency or command responsible for concepts, doctrine, organization, and materiel objectives and requirements for the employment of Army forces. (AFM)
commercial item	A term which includes both supplies and parts of a class or kind which is regularly used for other than government purposes and sold or traded in the course of conducting normal business operation. (MIL-STD-130G)

commercial item A product, material, component, sub-system, or system sold or traded to the general public in the course of normal business operations at prices based on established catalog or market prices. (MIL-T-31000)

commercial item description (CID) An indexed, simplified product description managed by the General Services Administration that describes, by functional or performance characteristics, the available acceptable commercial products that will satisfy the government's needs. (FAR 10.002)

commercial off the shelf An item of hardware or software that has been produced by a contractor and is available for general purchase. (IEEE 610.12-1990)

commercial off the shelf Items or equipment which can be purchased through commercial retail or wholesale distributors as is. (MIL-STD-1760A)

commercial off the shelf (COTS) Products in regular production sold in substantial quantities to the general public or industry at established market or catalog prices. (MIL-STD-130G)

commercial off the shelf software Software (including operating systems, utilities and stand-alone applications programs) already developed, tested, and sold to other DOD or commercial customers, supported by a commercial vendor over the system life cycle, and requiring no government modifications over the system life cycle. (SECNAVINST 5234.2A)

commitment A pact that is freely assumed, visible, and expected to be kept by all parties. (SEI-93-TR-25)

commitment A pact that is freely assumed, visible, and expected to be kept by all parties. (SEI)

common cause Failure which bypasses redundancy, i.e., a failure which causes the simultaneous loss of several redundant items.

Common cause failure A failure which is the result of an event(s) which because of dependencies, causes a coincidence of failure states of components in two or more separate channels of a redundancy system, leading to the defined system failing to perform its intended function. (IEC 1508)

common mode failure A failure of apparently independent components or communication links due to an initiating event that affects them all. (WG6)

common mode failure Multiple failures attributable to a common cause. (IEC 880)

common support equipment — Those items required to support and maintain the system or portions of the system while not directly engaged in the performance of its mission, and which are presently in the DOD inventory for support of other systems. (WBS)

commonality — A quality which applies to materiel or systems possessing like and interchangeable characteristics enabling each to be utilized or operated and maintained by personnel trained on the others without additional specialized training; and/or having interchangeable repair parts and/or components, and applying to consumable items interchangeably equivalent without adjustment. (DSMC)

communication interface — The boundary between application software and the external environment, such as application software on other host platforms, external data transport facilities and devices. (POSIX P1003.0 Draft 14 Guide)

communications components — Phone lines, global networks, local area networks, and packet switching equipment. (SGOAA)

communications link — The cables, wires, or paths that the electrical, optical, or radio wave signals traverse. (TA)

communications network — A set of products, concepts, and services, which enable the connection of computer systems for the purpose of transmitting data and other forms (e.g., voice and video) between the systems. (?)

communications node — A node that is either internal to the communications network or located between the end device and the communications network to operate as a gateway. (TA)

communications system — A set of assets (transmission media, switching nodes, interfaces, and control devices), which will establish linkage between users and devices. (?)

compatibility — The capability of a system or subsystem to operate in its intended environment without adverse effects to or from other systems. (COMOPTEVFORINST 3960.1G)

compatibility — The capability of two or more items or components of equipment or material to exist or function in the same system or environment without mutual interference. (MIL-STD-499B-UNAPPROVED)

compatibility — The compatibility of two or more operational items/systems to exist or function as elements of a larger operational system or operational environment without mutual interference. (DSMC)

compatibility — The capability of two or more operational items/systems to exist or function as elements of a larger operational system or operational environment without mutual interference. (AFR 80-14)

compatibility — The capability of a functional unit to meet the requirements of a specified interface without appreciable modification. (ISO 2382-1)

compatibility — Ability of entities to be used together under specific conditions to fulfill relevant requirements. (ISO 8402)

compatibility. — (1) The ability of two or more systems or components to perform their required functions while sharing the same hardware or software environment. (2) The ability of two or more systems or components to exchange information.

completeness — Completeness is the identification and fulfillment of all requirements necessary to design, fabricate, deploy, operate, maintain and support a system/equipment in its intended environment. (MIL-STD-499)

complexity — Applicable to systems using sophisticated electronic/electrohydraulic components, with system logic which is difficult to comprehend without the aid of analytical tools. (ARP 4754, Draft 35)

compliance — Successful performance of all mandatory activities, agreement between the expected or specified result and the actual result. (ARP 4754, Draft 35)

compliance — Attributes of software that make the software adhere to application related standards or conventions or regulations in laws and similar prescriptions. (WG6)

component — Any self-contained part, combination of parts, subassemblies or units, which perform a distinctive function necessary to the operation of the system. (ARP 4754, Draft 35)

component — An item (or a group of items), such as a tachometer, a servomechanism, fuses, mounts, or control devices, which is required to enable an equipment to fulfill its assigned function or which is physically attached to and essential to the operation of any given equipment and is part of that equipment. (MIL-STD-875A)

component — Subsystem, assembly, subassembly, or other major element of an end item. (DSMC)

component — One of the parts resulting when an entity is decomposed into constituent parts. (SGOAA-1)

component — An article which is a self-contained element of a complete operating unit and performs a function necessary to the operation of that unit. (NASA), (SAE Dictionary)

component — One of the parts that make up a system. (IEEE 610.12-1990)

component — A self-contained unit that is synonymous to an accessory but which generally has physical characteristics of relatively simple hardware items and which is designed to transmit power rather than performing a functional operation. (BMO-STD-77-6A)

component — Any material, substance, piece, part, or assembly used during device manufacture which is intended to be included in the finished device. (BioMed Ind)

component — A discrete, configured, essentially homogeneous part of a system that is supplied by a technology- or discipline-specific organization. (DERA)

component — Any self-contained item or equipment which is part of a larger item and contributes to the function performed by the larger item. (WG6)

component — An element of the physical or system architecture, specification tree, and system breakdown structure that is a subordinate element to an assembly and may be composed of two or more sub-components, or parts; or one or more subassemblies and their associated life-cycle processes. (IEEE P1220)

component standard — A standard that describes the characteristics or data or program components. (IEEE STD 1002-1987)

component testing — Testing conducted to verify the implementation of the design for one software element or a collection of software elements. (IEEE-STD-1012-1986)

computer — A functional unit that can perform substantial computations, including numerous arithmetic operations and logic operations without human intervention. (ISO 2382-1)

computer architecture — The logical structure and functional characteristics of a computer, including the interrelationships among its hardware and software components. (ISO 2382-1)

computer center — A facility that includes personnel, hardware, and software, organized to provide information processing services. (ISO 2382-1)

computer crime — A crime committed through the use, modification, or destruction of hardware, software, or data. (ISO 2382-1)

computer data base — A collection of data in a form capable of being processed by a computer. (MIL-STD-973)

computer data definition — A statement of the characteristics of the basic elements of information operated upon by hardware in responding to computer instructions. (DOD-STD-2167A)

computer data definition — A statement of the characteristics of elements of information operated upon by hardware in responding to computer instructions. (MIL-STD-183A), (IEEE 610.12-1990)

computer generation — A category in a historical classification of computers based mainly on the technology used in their manufacture. (ISO 2382-1)

computer graphics — Methods and techniques for converting data to or from graphic display via computers. (ISO 2382-1)

computer hardware — Devices capable of accepting and storing computer data, executing a systematic sequence of operations on computer data, or producing control outputs. (DOD-STD-2167A)

computer network — A network of data processing nodes that are interconnected for the purpose of data communication. (ISO 2382-1)

computer program — A syntactic unit that conforms to the rules of a particular programming language and that is composed of declarations and statements or instructions needed to solve a certain function, task, or problem. (ISO 2382-1)

computer program component (CPC) — A functionally or logically distinct part of a computer program distinguished for convenience in designing and specifying a complex computer program as an assembly of subordinate elements (MIL-STD-483), (MIL-STD-490), (AFSCP 800-7)

computer resource — Any element of a data processing system needed to perform required operations.

computer resources The totality of computer hardware, software, personnel, documentation, supplies, and services applied to a given effort. (DOD-STD-2167A), (DODI 5000.2)

computer science The branch of science and technology that is concerned with information processing by means of computers. (ISO 2382-1)

computer software (or software) A combination of associated computer instructions and computer data definitions required to enable the computer to perform computational or control functions. (DOD-STD-2167A), (DODI 5000.2), (MIL-STD-183A)

computer software component A functional or logical distinct part of a CSCI. (MIL-STD-483B), (AFSCP 800-7)

computer software component (CSC) A distinct part of a computer software configuration item (CSCI), (DOD-STD-2167A)

computer software configuration item A configuration item for computer software. (DOD-STD-2167A)

computer software configuration item An aggregation of software that is designated for configuration management and treated as a single entity in the configuration management process. (IEEE 610.12-1990)

computer software configuration item (CSCI) A configuration item that is computer software. (MIL-STD-973)

computer software documentation Technical data, including computer listings and printouts, in human readable form which documents the design or details of computer software, explains the capabilities of the software, or provides operating instructions for using the software to obtain desired results from a computer. (MIL-STD-1456A)

computer software documentation Technical data or information, including computer listings and printouts, which documents the requirements, design, or details of computer software, explains the capabilities and limitations of the software, or provides operation instructions for using or supporting computer software during the software's operational life. (DODI 5000.2), (DOD-STD-2167A), (IEEE 610.12-1990)

computer software documentation Technical data or information, including computer listings, regardless of media, which documents the requirements, design, or details of computer software; explains the capabilities and limitations of the software; or provides operating instructions for using or supporting computer software during the software's operational life cycle. (MIL-STD-973)

computer software quality (or software quality) The degree to which the attributes of the software enable it to perform its specified end item use. (DOD-STD-2167)

computer software unit (CSU) An element specified in the design of a computer software component (CSC) that can be tested separately. (DOD-STD-2167A)

computer system One or more computers, peripheral equipment, and software that perform data processing. (ISO 2382-1)

computer-aided Pertaining to a technique or process in which part of the work is done by a computer. (ISO 2382-1)

computer-aided publishing The production of typeset-quality documents including text, graphics, and pictures with the assistance of a computer. (ISO 2382-1)

computer-assisted Pertaining to a technique or process in which part of the work is done by a computer. (ISO 2382-1)

computer-assisted publishing The production of typeset-quality documents including text, graphics, and pictures with the assistance of a computer. (ISO 2382-1)

computer-based system A system whose functions are mostly dependent on or completely performed using microprocessors, programmed electronic equipment or computers. (IEC 1513)

computer-controlled A device whose operation is influenced or directly controlled by a program-controlled mechanism that retrieves, decodes, and executes instruction to perform its designed tasks, or whose operation is controlled by the program itself. (BioMed Ind)

computerization Automation by means of computers. (ISO 2382-1)

computing system One or more computers, peripheral equipment, and software that perform data processing. (ISO 2382-1)

concept description sheet A sheet for relating gross level designs to the functions, requirements, and constraints that the design is to meet. (AFM)

concept phase The initial phase of a software development project, in which user needs are described and evaluated through documentation. (IEEE-STD-1012-1986)

concept phase The period of time in the software development cycle during which the user needs are described and evaluated through. (IEEE STD 1002-1987)

concept phase The initial phase of a software development project, in which the user needs are described and evaluated through. (IEEE 610.12-1990)

conceptual (concept) phase The identification and exploration of alternative solutions or solution concepts to satisfy a validated need. (MIL-STD-785B)

conceptual design Synthesis. (AFM)

conceptual model A requirements model of the system/software system to be developed, its internal components, and the behavior of both the system and its environment. (WG6)

conceptual phase The initial period when the technical, military, and economic bases for acquisition programs are established through comprehensive studies and experimental hardware development and evaluation. (AFSCP 800-7)

conceptual phase The identification and exploration of alternative solutions or solution concepts to satisfy a validated need. (NASA), (SAE Dictionary)

conceptual system design A system design activity concerned with specifying the logical aspects of the system organization, its processes, and the flow of information through the system. (ISO 2382-20)

concurrent design Engineering design practice that combines the concerns of marketing, functional product and process design, production, field service, recycling, and disposal into one integrated procedure. (NRC)

concurrent engineering A systematic approach to the integrated, concurrent design of products and their related processes, including manufacture and support. (DSMC), (Institute for Defense Analysis), (SNL EPs)

concurrent engineering The application of multiple engineering disciplines to develop requirements in several different but related areas at the same time so the requirements are coordinated and mutually supportive. (SGOAA)

configuration The functional and/or physical characteristics of hardware/software as set forth in technical documentation and achieved in a product. (AFM)

configuration — The functional and physical characteristics of hardware, firmware, software or a combination thereof as set forth in technical documentation and achieved in a product. (MIL-STD-480B), (DODD 5010.19), (MIL-STD-973)

configuration — A collection of an item's descriptive and governing characteristics, which can be expressed (a) in functional terms, i.e., what performance the item is expected to achieve; and (b) in physical terms, i.e., what the item should look like and consist of when it is built. (DSMC, DODI 5000.2)

configuration — The functional and/or physical characteristics of hardware/software as set forth in technical documentation and achieved in a product. (SAE Dictionary)

configuration — The arrangement of the parts or elements of a work product or deliverable product. (DSMC)

configuration — The arrangement of a computer system or component as defined by the number, nature and interconnections of its constituted parts. (IEEE 610)

configuration — The manner in which the hardware and software of an information processing system are organized and interconnected. (ISO 2382-1)

configuration baseline — The configuration documentation formally designated by the government at a specific time during a system's or configuration item's life cycle. (MIL-STD-499B-UNAPPROVED), (MIL-STD-483A)

configuration baseline — Configuration documentation formally designated by the government at a specific time during a CI's life cycle. (MIL-STD-973)

configuration baseline — The configuration at a time recorded in documentation that fully describes the functional, performance, interoperability, interface requirement, and physical characteristics, as appropriate to the stage of the life cycle. (IEEE P1220)

configuration control — The process of evaluating, approving or disapproving and coordinating changes to configuration items after formal establishment or their configuration identification. (ARP 4754, Draft 35)

configuration control — The systematic proposal, justification, evaluation, coordination, approval or disapproval of proposed changes, and the implementation of all approved changes in the configuration of a CI after formal establishment of its baseline. (MIL-STD-480B)

configuration control The systematic evaluation, coordination, approval or disapproval, and implementation of all approved changes in the configuration of a configuration item after formal establishment of its configuration identification. (MIL-STD-482A), (MIL-STD-481A), (DoD Directive 5010.19), (DoD-STD480A)

configuration control An element of configuration management, consisting of the evaluation, coordination, approval or disapproval, and implementation or changes to configuration items after formal establishment of the configuration identification. (IEEE 610.121990)

configuration control The process of evaluating, coordinating, approving, disapproving, and implementing changes to identified configuration items. (BioMed Ind)

configuration control An element of configuration management, consisting of the evaluation coordination, approval or disapproval, and implementation of changes to configuration items after formal establishment of their configuration identification. (IEEE STD 610.12-1990)

configuration control board A board composed of technical and administrative representatives who recommend approval or disapproval of proposed engineering changes to a CI's current approved configuration documentation. (MIL-STD-973)

configuration control board An advisory group used to perform a total impact evaluation of an engineering change proposal, and to be the regulatory means for review of proposed changes, requests for deviations and waivers for the contractor's configuration manager. (MIL-STD-1456)

configuration control board A board composed of representatives from program/project functional areas such as engineering, configuration management, procurement, production, test and logistic support, training activities, and using/ supporting organizations.

configuration control board (CCB) A board composed of technical and administrative representatives who approve or disapprove proposed engineering changes to an approved baseline. (MIL-STD-480B)

configuration documentation The technical documentation that identifies and defines the item's functional and physical characteristics. (MIL-STD-973)

configuration identification The selection of the documents to comprise the baseline for the systems and CIs involved, and numbers and other identifiers affixed to the items and documents. (MIL-STD-480B)

configuration identification The process of establishing and describing the contractual baselines; e.g., identification of configuration items. (DSMC)

configuration identification Includes the selection of CIs; the determination of the types of configuration documentation required for each CI; the issuance of numbers and other identifiers affixed to the CIs and to the technical documentation that defines the CI's configuration, including internal and external interfaces; the release of CIs and their associated configuration documentation; and the establishment of configuration baselines for CIs. (MIL-STD-973)

configuration identification The current approved or conditionally approved technical documentation for a configuration item as set forth in specifications, drawings, and associated lists, and documents referenced therein. (DOD-HDBK-287), (DoD Directive 5010.19), (DoD-STD-180A)

configuration identification. (1) An element of configuration management, consisting of selecting the configuration items for a system and recording their functional and physical characteristics in technical documentation. (2) The current approved technical documentation for a configuration item as set forth in specifications, drawings, associated lists, and documents referenced therein.

configuration item An aggregation of hardware or software (or any of its discrete portions) which satisfies an end-use function and is designated by the government for configuration management. (MIL-STD-130G), (AFM)

configuration item An aggregation of hardware, firmware, software, or any of its discrete portions, which satisfies an end use function and is designated for configuration management. (MIL-STD-480B), (MIL-STD-482A), (DoD Directive 5010.19), (DSMC), (DODI 5000.2)

configuration item Hardware or software, or an aggregation of both, which is designated by the contracting agency for configuration management. (MIL-STD-490A)

configuration item An aggregation of system elements that satisfies an end use function and is designated by the government for separate configuration management. (MIL-STD-499B-UNAPPROVED), (HDBK 2)

configuration item An aggregation of hardware/computer programs or any of its discrete portions, which satisfies an end use function and is designated by the government for configuration management. (MIL-STD-881A)

configuration item — Hardware or software, or an aggregation of both, that is designated by the contracting agency for configuration management. (MIL-STD-483A)

configuration item — An aggregation of hardware, software or both, that is designated for configuration management and treated as a single entity in the configuration management process. (IEEE 610.12-1990)

configuration item — An aggregation of hardware, software, or both, that is designated for configuration management and treated as a single entity in the configuration management process. (IEEE STD 610.12-1990)

configuration item — An arrangement of hardware, software or both that is designated for configuration management and treated as a single entity in the configuration management process. (IEEE 610)

configuration item (CI) — One or more hardware or software elements treated as a unit. (ARP 4754, Draft 35)

configuration management — A discipline applying technical and administrative direction and surveillance over the life cycle of items to: (a) Identify and document the functional and physical characteristics of configuration items (b) Control changes to configuration items and their related documentation (c) Record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes (d) Audit configuration items to verify conformance to specifications, drawings, interface control documents, and other contract requirements. (MIL-STD-480B), (MIL-STD-973)

configuration management — Technical and administrative direction and surveillance actions taken to identify and document functional and physical characteristics of an item; to control changes to an item and its characteristics; and to record and report the change processing and implementation status. (DSMC, DODI 5000.2)

configuration management — The disciplines of identifying configuration items, maintaining configuration control, auditing configuration status, and reporting on configuration status. (NB Reilly Assoc.)

configuration management — A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item, control changes to those characteristics, record and report change processing and implementation status, and verify compliance with specified requirements. (IEEE STD 610.12-1990)

configuration management — A method of controlling storages, accesses and changes to the related, discrete, defined parts of a system at any time during its lifetime.

configuration management (CM) A discipline applying technical and administrative direction and surveillance to: (a) identify and document functional and physical characteristics of a configuration item; (b) control changes to those characteristics; and (c) record and report change processing and implementation status. (MIL-STD-482A), (AFM), (ARP 4754), (Draft 35), (MIL-STD-481A), (DOD HDBK-248), (DoD Directive 5010.19), (DoD-STD-480A)

configuration management plan The document defining how configuration management will be implemented (including policies and procedures) for a particular acquisition or program. (MIL-STD-973)

configuration management plan Defines the implementation (including policies and methods) of configuration management on a particular program/project. (MIL-STD-483A)

Configuration Management Plan (CMP) Defines the implementation (including policies and methods) of configuration management on a particular program or project. (DOD-HDBK-287)

configuration status accounting (CSA) The recording and reporting of information needed to manage configuration effectively, including: (1) A listing of the approved configuration identification (2) The status of proposed changes, deviations, and waivers to the configuration (3) The implementation status of approved changes and (4) The configuration of all units of the CI in the operational inventory. (MIL-STD-480B), (MIL-STD-1456A), (MIL-STD-973), (DoD Directive 5010.19), (DoD-STD480A)

configuration. (1) The arrangement of a computer system or component as defined by the number, nature, and interconnections of its constituent parts. (2) In configuration management, the functional and physical characteristics of hardware or software as set forth in technical documentation or achieved in a product.

conformance Established as correct with reference to a standard, specification or drawing. (ARP 4754, Draft 35)

conformance Attributes of software that make the software adhere to standards or conventions relating to portability. (WG6)

conformity Agreement of physical realization of the item with the defining documents. (ARP 4754, Draft 35)

conformity Fulfillment of specified requirements. (ISO 8402)

connectivity The capability of a system or device to be attached to other systems or devices without modification. (ISO 2382-1)

connectivity service A service area of the external environment entity of the technical reference model that provides end-to-end connectivity for communications through three transport levels (global, regional, and local), (TA)

consistency The degree of uniformity, standardization and freedom from contradiction among the documents or parts of a system or component. (SEI-93-TR-25)

constant dollars A method of relating dollars in several years by removing the effects of inflation and showing all dollars at the value they would have in a selected base year. (DSMC)

constant year dollars A method of relating dollars in several years by removing the effects of inflation and showing all dollars at the value they would have in a selected base year. (DODI 5000.2)

constraint The state of being checked, restricted, or compelled to avoid or perform some action. (Merriam-Webster)

constraint A condition dictated by factors external to the study and which must be stated explicitly or may be implicit in the overall environment in which the mission is developed or operated. (NASA MDP92)

constraint A restriction or boundary impacting overall capability, priority, and resources. (DSMC)

constraint A requirement self-imposed by the supplier that does not modify the contracted requirements for the deliverable subsystem, system. (DERA)

constraint A limitation or implied requirement which constrains the design solution or implementation of the systems engineering process, is not changeable by the performing activity, and is generally non allocable. (IEEE P1220)

context Everything, that is not form, that influences, or is influenced by, the form. (Alexander, Notes On The Synthesis Of Form)

context diagram . ()

continuity Requirements changes are proportional to design changes, i.e., that changes in the requirements will propagate into changes of the same order of magnitude in the design. (SGOAA)

continuous improvement A process by which products and processes are improved year after year through study, application of sophisticated techniques, and experience; applied to the product realization process.(NRC)

contract A legal agreement between DOD and industry, or a similar internal agreement wholly within the government, for the development, production, maintenance or modification of an item. (MIL-STD-480B), (DOD-HDBK-287)

contract An agreement between two or more legally competent parties, in the proper form, on a legal subject matter or purpose, for a legal consideration. .

contract A mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. (MIL-STD-100F)

contract administration office The office that performs assigned functions related to the administration of contracts. (MIL-STD-481A)

contract change proposal A formal priced document, also referred to as Task Change Proposal (TCP), used to propose changes to the scope of work of the contract.

contract data requirements list A form used as the sole list of data and information which the contractor will be obligated to deliver under the contract, with the exception of that data specifically required by standard Armed Services Procurement Regulation clauses. (MIL-STD-1388-1)

contract data requirements list DD Form 1423- A form used as the sole list of data and information which the contractor will be obligated to deliver under the contract, with the exception of that data specifically required by standard Defense Acquisition Regulation clauses. (MIL-STD-1388-1 A, 20.)

contract data requirements list A list of data requirements that are authorized for a specific acquisition and made a part of the contract. (DODI 5000.2)

contract data requirements list Document used to order (buy) and require delivery of data. (DSMC)

contract data requirements list The sets of instructions (DD Form 1423 or AFSC Form 700 series) and referenced modification information that are included in the contract as attachments or exhibits and that are the official requirements for the contractor to submit data. (AFSCP 800-7)

contract review Systematic activities carried out by the supplier before signing the contract, to ensure that requirements for quality are adequately defined, free from ambiguity, documented and can be realized by the supplier. (ISO 8402)

contract work breakdown structure The complete WBS for a contract, developed and used by a contractor in accordance with this standard and the contract work statement. (MIL-STD-881A)

contract work breakdown structure (CWBS) The complete WBS covering a particular contractor on a particular procurement. (MIL-HDBK-259(Navy), 3.5.2)

contractor An individual, partnership, company, corporation, association or other service, having a contract with the government for the design, development, manufacture, maintenance, modification, or supply of items under the terms of a contract. (DOD-HDBK-287), (MIL-STD-973)

contractor Any individual, partnership, public or private corporation, association, institution, or other entity that is a part of the contract. (DOD-STD-100C)

contractor An individual, partnership, company, corporation, or association having a contract with the procuring activity for the design, development, design and manufacture, manufacture, maintenance, modification or supply of items under the terms of a contract. (DOD-STD-480A)

contractor Supplier in a contractual situation. (ISO 8402)

contractual data requirement A requirement, identified in a solicitation and imposed in a contract or order, that addresses any aspect of data (i.e., that portion of contractual tasking requirement associated with the development, generation, preparation, modification, maintenance, storage, retrieval, and/or delivery of data), (DODI 5000.2)

control- A means or device to regulate a process or sequence of events.

control subsystem Application which selects and implements alternative actions based on a prior criteria or real time guidance. (SCOAA)

control system A system which responds to input signals from the process and/or from an operator and generates output signals causing the EUC to operate in the desired manner. (IEC 1508)

conventional An attribute of a system is considered to be conventional if it is the same as, or closely similar to, that of previously approved systems that are commonly used. (FAA AC 25.1309)

core avionics — The control subsystems and the supporting avionics (hardware and software) needed to enable these control subsystems to function. (SGOAA)

corrective action — Action taken to eliminate the causes of an existing nonconformity, defect or other undesirable situation in order to prevent recurrence. (ISO 8402)

corrective maintenance — The maintenance carried out after fault recognition and intended to put an item into a state in which it can perform a required function. (WG6)

correlation — The maintenance of the integrity of design parameters of interrelated system elements according to valid functional, physical and environmental dependency relationships as system definition progresses. (MIL-STD-499)

cost — Cost to the government. (MIL-STD-480B), (DOD-HDBK-287)

cost analysis — The review and evaluation of the separate cost elements and proposed profit of (a) a contractors' cost or pricing data and (b) the judgmental factors applied in projecting from the data to the estimated costs in order to form an opinion on the degree to which the proposed costs represent what the cost of the contract should be, assuming reasonable economy and efficiency. (FAR)

cost analysis — An analysis and evaluation of each element of cost in a contractor's proposal to determine reasonableness. (DSMC)

cost and operational effectiveness analysis (COEA) — An analysis of the estimated costs and operational effectiveness of alternative materiel systems to meet a mission need and the associated program for acquiring each alternative. (COMOPTEVFORINST 3960.1G, DODI 5000.2, DSMC)

cost effectiveness — A measure of the operational capability added by a system as a function of its life-cycle cost. (DSMC, DODI 5000.2)

cost effectiveness — A comparison of the operational effectiveness of a system with the costs associated with that system and/or the cost incurred as a result of not having the system. (NAWCWPNS)

cost estimating relationship — A mathematical relationship that defines cost as a function of one or more parameters such as performance, operating characteristics, physical characteristics, etc. (DSMC)

cost objectives — Financial thresholds and targets established for relevant life cycle cost elements and sub-elements consistent with the ability to control and influence the element. (MIL-STD-499B-UNAPPROVED)

cost requirements — The financial thresholds and objectives expressed in terms of design-to-cost targets, RDT&E, operating and support costs, and flyaway, weapon system, unit procurement, program acquisition, and life-cycle costs (Figure 1), (MIL-STD-499B-UNAPPROVED)

coupled systems — Computer systems that share equipment and can exchange information. (McGraw Hill Dictionary)

CPU — A functional unit that consists of one or more processors and their internal storages. (ISO 2382-1), (ISO 2382-1)

creation life cycle — The structured set of processes, activities and tasks which may be tailored to define the specific sequence of actions throughout the creation phase of a specific system. (DERA)

creation phase — The period that spans the expression of a user requirement to the transfer of a system to an owner, operator or user. (DERA)

critical component — Any component of a critical device whose failure to perform can be reasonably expected to cause the failure of a critical device or to affect its safety or effectiveness. (BioMed Ind)

critical defect — A defect that judgment and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product; or a defect that judgment and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile, or space vehicle. (MIL-STD-105D)

critical design review — A review conducted to determine that the detailed design satisfies the performance and engineering requirements of the development specification, to establish the detailed design compatibility among the item and other items of equipment, facilities, computer programs, and personnel, to assess producibility and risk areas, and to review the preliminary product specifications. (DODI 5000.2), (DSMC), (MIL-STD-1521B)

critical design review — A review conducted to verify that the detailed design of one or more configuration item satisfy specified requirements; to establish compatibility among the configuration items and other items of equipment, facilities, software, and personnel; to assess risk areas for each configuration item; and, as applicable, to assess the results of producibility analyses, review preliminary hardware

product specifications, evaluate preliminary test planning, and evaluate the adequacy of preliminary operation and support documents. (IEEE 610.12-1990)

critical device A device that is intended for surgical implant into the body or to support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in a significant injury to the user. (BioMed Ind)

critical failure A failure which is assessed as likely to result in injury to persons, significant material damage or other unacceptable consequences. (WG6)

critical intelligence parameter A threat capability or threshold established by the program, changes to which could critically impact on the effectiveness and survivability of the proposed system. (DODI 5000.2)

critical item An item which, because of special engineering, procurement or logistic considerations, requires an approved specification to establish technical or inventory control. (MIL-STD-480B)

critical item An item within a configuration item which, because of special engineering or logistic considerations, requires an approved specification to establish technical or inventory control at the component level. (DOD-HDBK-287)

critical item A configuration item that is below the complexity of a prime item but which is engineering or logistics critical. (MIL-STD-499B-UNAPPROVED)

critical item In configuration management, an item within a configuration item that, because of special engineering or logistic consideration, requires an approved specification to establish technical or inventory control at the component level. (IEEE 610.12-1990)

critical item development specification (type b2) Applicable to a configuration item that is below the level of complexity of a prime item but that is engineering critical or logistics critical. (MIL-STD-490A)

critical item product fabrication specification (type c2b) Applicable to a critical item when a detailed design disclosure needs to be made available or where it is considered that adequate performance can be achieved by adherence to a set of detail drawings and required processes. (MIL-STD-490A)

critical item product function specification (type c2a) Applicable to a critical item where the critical item performance characteristics are of greater concern than part

interchangeability or control over the details of design, and a "form, fit, and function description is adequate. (MIL-STD-490A)

critical item product specifications (type c2) Applicable to engineering or logistic critical items and may be prepared as function or fabrication specifications. (MIL-STD-490A)

critical item specification Normally used for less complex assemblies and items that are engineering or logistics critical. (MIL-STD-490), (AFSCP 800-7)

critical operation Any operation in the manufacture of a critical device which, if improperly performed, can be reasonably expected to cause the failure of a critical device or to affect its safety or effectiveness. (BioMed Ind)

critical operational issue A key operational effectiveness or operational suitability issue that must be examined in operational test and evaluation to determine the system's capability to perform its mission. (DODI 5000.2), (DERA)

critical path method (CPM) A systematic procedure for detailed project planning and control. (McGraw Hill Technical Dictionary)

critical software Software whose failure could have an impact on safety, or could cause large financial or social loss. (IEEE-STD-1012-1986)

critical system A system which possesses a critical (or safety-critical) mode of failure. (WG6)

criticality A relative measure of the consequence of a failure mode and its frequency of occurrence . (MIL-STD-721C)

criticality Indication of the hazard level associated to a function, hardware, software, etc., considering abnormal behavior (of this function, hardware, software, etc.) alone, in combination or in combination with external events. (ARP 4754, Draft 35)

criticality Classification of the consequences, or likely consequences, of a failure mode, or classification of the importance of a component for the required service of an item. (WG6)

cumulative average cost The average cost of N units at any quantity N or the total cost divided by the total quantity. (DSMC)

current estimate The value of a parameter predicted for the end product of the contract. (MIL-STD-499)

customer — The person or organization providing the final ratification of requirements, will use the products, and/or provides the funding. (NASA MDP92)

customer — The set of individuals internal and external to a system development organization which receive products generated during system development and operations. (NB Reilly Assoc.)

customer — That organization that established the Operational Requirement and provides the funding required to provide and sustain the capability that satisfies the operational requirement. (NAWCWPNS)

customer requirements — Statements of fact and assumptions that define the expectations of the system in terms of mission or objectives, environment, constraints, and measures of effectiveness. (MIL-STD-499B-UNAPPROVED)

customers — Users and suppliers of system end items. (MIL-STD-499B-UNAPPROVED)

customers — Any stake holder who has a right to specify requirements. (Bahill)

cutover — The transfer of functions of a system to its successor at a given moment. (ISO 2382-20)

cyclic redundancy — A method for detecting errors in a series of bytes. (BioMed Ind)

dangerous hardware failure — Hardware failure which in a single channel configuration, puts the safety-related system in a dangerous or fail-to-function state. (IEC 1508)

data — Recorded information, regardless of form or the media on which it may be recorded. (FAR)

data — The sensor outputs to the system, input to applications from the system, output from applications to the system, input to crew or operations control elements from the system, outputs from crew or operations control elements to the system. (SGOAA-1)

data — Recorded information, regardless of form or characteristics, including administrative, managerial, financial, scientific, technical, engineering, and logistics data, whether required to be delivered to the government or retained by the contractor, as well as data developed by the government. (MIL-STD-480B)

data — The data element refers to all deliverable data required to be listed on a DD Form 1423. (WBS)

data — Recorded information, regardless of form or method of the recording. (MIL-STD-961C, MIL-STD-962B)

data — The means for communication of concepts, plans, descriptions, requirements, and instructions relating to technical projects, materiel, systems, and services. (MIL-STD-481A)

data — Recorded information, regardless of medium or characteristics, of any nature, including administrative, managerial, financial, and technical. (MIL-STD-973)

data — The raw materials from which a user extracts information. (MIL-STD-1472D)

data — Data requirements include the means for communication of concepts, plans, descriptions, requirements, and instructions relating to technical projects, materiel, systems, and services. (DOD HB 248)

data — The means for communication of concepts, plans, descriptions, requirements, and instructions relating to technical projects, materiel, systems, and services. (DoD INST 5010.12), (DoD-STD-480A)

data Analysis — A systematic investigation of the data and their flow in a real or planned system. (ISO 2382-20)

data automation requirement — A formal request for support in establishing an automated data processing system, usually for management. (AFM 300-2), (AFSCP 800-7)

data bank — A set of data related to a given subject and organized in such a way that it can be consulted by subscribers. (ISO 2382-1)

data base — A set of related data, usually organized to permit efficient retrieval of specified subsets. (MIL-HDBK-220B)

data base design document — The Data Base Design Document describes one or more data base(s) used by the CSCI. (MIL-STD-490A)

data base manager — The control subsystem which manages structured data files, file transfers and file redundancy management. (SGOAA)

data chain — A name or title given to the use of a combination of two or more logically related standard data elements, data use identifiers, or other data chains. (BMO-STD-77-6A)

data communication — Transfer of data among functional units by means of data transmission according to a protocol. (ISO 2382-1)

data dictionary — A specialized type of database containing meta-data, which is managed by a data dictionary system; a repository of information describing the characteristics of data used to design, monitor, document, protect, and control data in information systems and databases; an application of data dictionary systems. (DODD 8320.1)

data element — A basic unit of information having a meaning and subcategories (data items) of distinct units and values. (DODD 8320.1)

data element — A grouping of informational units that has a unique meaning and sub-categories (data items) of distinct units or values.(BMO-STD-77-6A)

data interchange service — A service of the platform entity of the technical reference model that provides specialized support for the interchange of data between applications on the same or different platforms. (TA)

data inventory — In an information processing system, all the data and their characteristics, including interdependencies.

data item — A sub-unit of descriptive information or values classified under a data element. (MIL-STD-482A)

data item — A set of characters of fixed or variable length that forms a single unit of data. (MIL-STD-1472D)

data item description — A form used to define and describe the data required to be furnished by the contractor. (MIL-STD-1388-1)

data item description — The official form (DD Form 1664) used to define and describe the data to be procured from the contractor. (AFSCP 800-7)

data item description (DID) — A completed form that defines the data required (data content, preparation instructions, format and intended use) of a contractor. (MIL-STD-480B) (MIL-STD-961C)

data management — This element refers to the effort required to establish and implement procedures for managing contract data requirements. (WBS)

data management — In a data processing system, the functions that provide access to data, performs or monitors the storage of data, and controls input-output operations. (ISO 2382-1)

data management service — A service of the platform entity of the technical reference model that provides support for the management, storage, access, and manipulation of data in a database. (TA)

data medium — A material in or on which data can be recorded and from which data can be retrieved. (ISO 2382-1)

data processing (DP) — The systematic performance of operations upon data. (ISO 2382-1)

data processing subsystem — An application subsystem providing data processing services. (SGOAA)

data processing system — One or more computers, peripheral equipment, and software that perform data processing. (ISO 2382-1)

data protection — The implementation of appropriate administrative, technical or physical means to guard against unauthorized intentional or accidental disclosure, modification, or destruction of data. (ISO 2382-1)

data structure centered design — A software design technique in which the architecture of a system is derived from analysis of the structure of the data sets with which the system must deal. (IEEE 610.12-1990)

data system — A network of data system services, onboard computational resources, data storage, and human-machine interface devices which provide onboard command and control, data transmission, computation/processing, and operating applications software to support a space vehicle's users, interfacing systems, applications and subsystems. (SGOAA)

data system manager — The control subsystem which manages the housekeeping and status control services for the SDSS, including health management. (SGOAA)

data system services — A service subsystem with a generic functional architecture designed to provide a comprehensive set of services to all vehicles and subsystems. (SGOAA)

database — A collection of data organized according to a conceptual structure describing the characteristics of these data and the relationships among their corresponding entities, supporting application areas. (ISO 2382-1)

decision constraints — Design limitations or implied requirements which constrain the design solution. (IEEE P1220)

decision data base — A repository for storing all information pertinent to the systems engineering process. (IEEE P1220)

decision data base — The collection of data that provides the audit trail from initially stated needs and requirements to the current description of system products and processes. (MIL-STD-499B-UNAPPROVED), (HDBK 2)

decision table — A table of conditions that are to be considered in the analysis of a problem, together with the action to be taken for each condition. (ISO 2382-20)

decomposability — Requirements can be broken into smaller pieces with potentially simpler solutions or at least better understanding and a capability for further decomposition as needed. (SGOAA)

decoupling — Preventing transfer or feedback of energy from one circuit to another. (McGraw-Hill Technical Dictionary)

defect — State an item consisting of the non-performance of specified requirements by a characteristic of the item. (ARP 4754, Draft 35)

defect — Any non conformance of a characteristic with specified requirements. (MIL-STD-105)

defect — Any non-conformance of the unit or product with specified requirements. (OPNAVIST4790.20)

defect — A non-conformance between the input products and the output products of a system development phase. (WG6)

defect — Non-fulfillment of an intended usage requirement, or reasonable expectation, including one concerned with safety. (WG6), (ISO 8402)

defect rate — Similar to the definition of failure rate - with the difference that here, item defects or errors (not failures) are considered. (ARP 4754, Draft 35)

defense materiel item — Defense materiel item is a term used within the DoD to identify a system or item that is usually established as an integral program element or is identified as a project within an aggregated program element. (MIL-STD-881A)

deficiencies — Conditions or characteristics in any hardware or software which are not in compliance with the specified configuration identification or, inadequate (or erroneous) configuration identification which has resulted, or may result, in CIs that do not fulfill approved operational requirements. (MIL-STD-480B), (MIL-STD-481A), (MIL-STD-973), (DoD Directive 5010.19), (SGOAA-1)

deficiency — Any part of a proposal that fails to satisfy the government's requirements. (FAR), (DSMC)

deficiency — Operational need minus existing and planned capability. (DSMC), (SGOAA)

defined process — A repeatable process that has clearly stated inputs, entry criteria, activities, roles, measures, verification steps, outputs, and exit criteria. (SEI), (NAWCWPNS)

degraded mode — System condition wherein some system elements (such as hardware, software, human, or procedural) are sufficiently unhealthy that the system cannot operate normally. (SGOAA), (MIL-STD-721C)

degree of demonstration — Extent to which evidence is produced to provide confidence that specified requirements are fulfilled. (ISO 8402)

delivered product quality — The actual quality of the delivered product after completion of testing, including validation. (WG6)

delivered system — The end product of the system development process, which is sold to a customer and/or provided to users. (WG6)

delivery — Release of a system or component to its customer or intended user. (IEEE 610.12-1990)

delta R — Necessary minimum risk reduction. (IEC 1508)

demilitarization — The disposal resources, processes, procedures, design considerations, and methods necessary to ensure that military-peculiar attributes of system end items (such as explosives, whether in warheads or employed to effect performance of an item) can be deactivated (rendered harmless) or otherwise disposed of in an environmentally responsible manner. (MIL-STD-499B-UNAPPROVED)

demodularization — In software design, the process of combining related software modules, usually to optimize system performance. (IEEE 610.12-1990)

demonstrated — That which has been measured by the use of objective evidence gathered under specified conditions. (MIL-STD-721C)

demonstrated — That which has been proven by the use of concrete evidence gathered under specified conditions. (ARD50013-91), (ARD50010-91), (SAE Dictionary)

demonstrated value — The demonstrated value of a technical parameter is the value that is estimated or measured in a particular test and/or analysis. (MIL-STD-499)

demonstration — A method of proof of performance by observation. (ARP 4754, Draft 35)

demonstration — The joint contractor and procuring activity effort to determine whether specific maintainability contractual requirements have been achieved. (MIL-STD-471A)

demonstration — A dynamic analysis technique that relies on observation of system or component behavior during execution, without need for post-execution analysis, to detect errors, violations of development standards and other problems. (IEEE 610.12-1990)

dependability — A measure of the degree to which an item is operable and capable of performing its required function at any (random) time, given its suitability for the mission and whether the system will be available and operate when, as many times, and as long as needed. (MIL-STD-499B-UNAPPROVED)

dependability — The trustworthiness of an avionics system and whether reliance can justifiably be placed on the service it delivers. (MIL-STD-499B-UNAPPROVED)

dependability — A measure of the degree to which an item is operable and capable of performing its required function at any (random) time during a specified mission profile, given item availability at the start of the mission.

dependability — The integrated capability for reliability, maintainability, fault detection and isolation, reconfiguration, and fault recovery with a non-stop operating system.

dependability Probability that an item is operable and is capable of performing its required functions during a specified mission profile, given it is available at the start of a mission.

dependability A measure of the degree to which an item is operable and capable of performing its required function at any (random) time during a specified mission profile, given item availability at the start of the mission.

dependability Collective term used to describe the availability performance and its influencing factors: reliability performance, maintainability performance and maintenance support performance. (WG6)

dependability The extent to which the user of a system can justifiably depend on it delivering its required services. (WG6)

dependability Collective term used to describe the availability performance and its influencing factors: reliability performance, maintainability performance and maintenance support performance. (ISO 8402)

dependent failure The failure of a set of events, the probability of which cannot be expressed as the simple product of the unconditional probabilities of the individual events. (IEC 1508)

deployment Fielding functions to be performed and system elements required to initially transport, receive, process, install, test, checkout, train, operate and, as required, emplace, house, store, or deploy the system into a state of full operational capability. (AFM)

deployment The delivery tasks, actions, and activities to be performed and system elements required to initially transport, receive, process, assemble, install, test, checkout, train, operate and, as required, emplace, house, store, or field the system into a state of full operational capability. (MIL-STD-499B-UNAPPROVED)

deployment function The delivery tasks, actions, and activities to be performed and system elements required to initially transport, receive, process, assemble, install, test, checkout, train operate and, as required, emplace, house, store, or field the system into a state of full operational capability. (MIL-STD-499B-UNAPPROVED)

depot level maintenance Maintenance performed on material requiring major overhaul or a complete rebuild of parts, assemblies, subassemblies, and end items, including the manufacture of parts, modifications, testing, and reclamation as required. (DSMC)

depot maintenance That maintenance performed on material requiring major overhaul or a complete rebuild of parts, assemblies, subassemblies, and

end items, including the manufacture of parts, modifications, testing, and reclamation as required. (MIL-STD-973)

derive — To obtain or receive from a source. (Webster)

derived measure — A measure calculated as a function of other measures, or obtained by analysis of other measures. (WG6)

derived requirements — Additional requirements resulting from design or implementation decisions during the development process. (ARP 4754, Draft 35)

derived requirements — Those characteristics typically identified during synthesis of preliminary product or process solutions and during related trade studies and verifications. (MIL-STD-499B-UNAPPROVED)

derived requirements — Requirements which are not explicitly stated in the customer requirements, but which are inferred from contextual requirements, e.g., applicable standards, laws, policy, common practice, and management decisions. (SEI)

derived type — A data type whose members and operations are taken from those of another data type according to some specified rule. (IEEE 610.12-1990), (BioMed Ind)

description of the system elements — Engineering data that defines the configuration, arrangement, and usage of all system elements and their effectiveness in achieving functional performance. (AFM)

description standard — A standard that describes the characteristics of product information or procedures provided to help understand, test, install, operate or maintain the product. (IEEE STD 1002-1987)

design — The product of the design process. (ARP 4754, Draft 35)

design — The process of defining, selecting, and describing solutions to requirements in terms of products and processes. (noun) The product of the process of designing that describes the solution (either conceptual, preliminary, or detailed) of the system, system elements or system end-items.

design — The process of defining the architecture, components, interfaces, and other characteristics of a system or component. (IEEE 610.12-1990)

design — The act of conceiving and planning the structure and parameter values of a system. (McGraw-Hill Technical Dictionary)

design — The results of the synthesis process which provides sufficient details, drawings, or other pertinent information for a physical element that permits further development; or fabrication, assembly, and integration; or production of a product. (IEEE P1220)

design (v) — The act of preparing drawings or other pertinent information for a physical element during synthesis within the systems engineering process. (IEEE P1220)

design activity — The activity having responsibility for the design of an item. (MIL-STD-130G)

design agent — A design agent is an activity contracted or tasked to develop details of a design for which the design activity retains responsibility. (DOD-STD-100C)

design certification matrix (DCM) — A formatted listing of all system level requirements, including references to the method(s) to be used in verifying compliance to each requirement, the verification status, and the identification of documentation showing compliance verification. (BMO-STD-77-6A)

design constraint — A design constraint is a detailed requirement that identifies the limits within which a configuration item (CI) must be designed for producibility and to be operated and maintained. (BMO-STD-77-6A)

design constraints — The boundary conditions within which the developer must remain while allocating performance requirements and synthesizing system elements. (MIL-STD-499B-UNAPPROVED)

design constraints — Design limitations or implied requirements that constrain the design solution. (IEEE)

design control activity — A contractor or government activity having responsibility for the design of a given part and for the preparation and currency of engineering drawings and other technical data for that part. (DODI-5000.2)

design description — A document that describes the design of a system or component. (IEEE 610.12-1990)

design diversity — The independent design and development of redundant components of a subsystem with the intention of ensuring that design failures of the different redundant components occur independently. (WG6)

design failure	A failure of an item due to the activation of a design fault. (WG6)
design failure	A failure due to inadequate design of an item. (WG6)
design fault	A fault due to the inadequate design of an item. (WG6)
design level	The design decomposition of the software item. (IEEE STD 829-1983)
design load	The most stressful combination of weight or other factors a building, structure, or mechanical system or device is designed to sustain. (McGraw-Hill Technical Dictionary)
design parameters	Qualitative, quantitative, physical, and functional value characteristics that are inputs to the design process, for use in design tradeoffs, risk analyses, and development of a system that is responsive to system requirements. (DSMC, MIL-STD-1388-1A, ¶ 20.)
design phase	The period of time in the software life cycle during which the designs for architecture, software components, interfaces, and data are created, documented, and verified to satisfy requirements. (ANSI/IEEE STD 729-1983), (IEEE-STD-1012-1986)
design process	The process of creating an item from a set of requirements. (ARP 4754, Draft 35)
design producibility	An integrated engineering function performed jointly by design engineering (lead role) and manufacturing engineering to implement the design producibility requirements. (BMO-STD-77-6A)
design producibility analysis	The identification, from alternative analyses, of design characteristics, features, and technical requirements that are an optimum balance with cost effective manufacturing technology to produce at a specific production rate and quantity. (BMO-STD-77-6A)
design projection	Design projections are conceptual system/design engineering efforts to meet the stated operational requirements. (BMO-STD-77-6A)
design requirement	A requirement that specifies or constrains the design of a system or system component. (IEEE 610.12-1990)

design requirement A requirement that specifies or constraints the design of a system or system component. (IEEE 610)

design requirements The build to, code to, and buy to requirements for products and how to execute requirements for processes. (MIL-STD-499B-UNAPPROVED)

design requirements specification A document that prescribes completely and precisely the design of a system, a system component, or software. .

design review The formal review of an existing or proposed design to detect and remedy deficiencies that could affect fitness for use and environmental aspects of the product, process, or service, and to identify potential improvements in performance, safety, or economy. (BioMed Ind)

design review Documented, comprehensive and systematic examination of a design to evaluate its capability to fulfill the requirements for quality, identify problems, if any, and propose the development of solutions. (ISO 8402)

design reviews Determination of the technical adequacy of the systems engineering and design efforts in meeting system requirements. (AFM), (IEEE 610.12-1990)

design sheet Documentation on which is recorded performance, test, and design requirements for equipment end items, critical components, and computer programs. (AFM)

design to cost The establishment and allocation of system cost goals to components and base-parts of the design for development, production, distribution, operations, training and support. (IEEE P1220)

design to cost Is a concept that establishes cost elements as management goals to achieve the best balance between life-cycle cost, acceptable performance, and schedule. (FAR)

design to cost This element includes the implementation of an acquisition management technique to achieve defense system designs that meet stated cost requirements. (WBS)

design to cost Management concept wherein rigorous cost goals are established during development and the control of systems costs (acquisition, operating, and support) to these goals is achieved by practical tradeoffs between operational capability, performance, costs, and schedule. (DSMC)

design to cost An acquisition management technique to achieve system designs that meet stated cost objectives. (MIL-STD-499B-UNAPPROVED)

design to cost The unit production cost goal or unit production cost ceiling, based on a specific quantity and rate of production and specified in constant fiscal year dollars, that is used in selected programs as a design criterion to control costs during design and development of the system/item. (AFSCP 800-7)

design to specifications Those specifications which contain the performance, design, and verification (test) requirements for an item of equipment or facility. (AFM)

design to unit production cost Contractual provision which is the anticipated unit production price to be paid by the government for recurring production costs; based on a stated production quantity, rate, and time frame. (DSMC)

designated architecture The architecture developed by means of a specified model and designed to meet the target hardware safety integrity (in respect of the target failure measure and fault count), (IEC 1508)

design-to-cost Establishes a cost goal which is equivalent to any other performance parameter. (IEEE P1220)

desk checking The manual simulation of program* execution to detect faults through step-by-step examination of the source program for errors in function or syntax. (ISO 2382-20)

detail design Detail design is the process of realizing a physical design that meets the requirements of the system design. (NAWCWPNS)

detail specification A specification which covers all requirements for one or more types of items or services so as not to require preparation of and reference to a general specification for the common requirements. (DSMC)

detail specification A document that covers (either within itself or by referencing and supplementing a general specification) the complete requirements for only one type of item, or for a limited number of types, classes, etc. of similar characteristics. (DoD-STD-480A)

detail specification A specification that covers all requirements for one or more types of configuration items or services so as not to require preparation and reference to a general specification for the common requirements. (MIL-STD-490A)

detailed design A set of products detailing how a preliminary design is to be implemented, including internal system and software specifications, a

logistics support plan, interface specifications, preliminary test plans and procedures, and the conducting of a critical design review. (NB Reilly Assoc.)

detailed design Detailed design for hardware is the translation of performance requirements and design constraints (specified in CI specifications and facility design criteria) into detailed drawings and other data required to fabricate or procure system elements. (BMO-STD-77-6A)

detailed design The process of refining and expanding the preliminary design of a system or component to the extent that the design is sufficiently complete to be implemented. (IEEE 610.12)

detected hardware failure A hardware failure that is detected by the on-line diagnostics performed by the safety-related system. (IEC 1508)

developer An organization that performs development activities (including requirements analysis, design through acceptance) during the software life-cycle process. (WG6)

developer That organization responsible for providing the verified design of the operational and manufacturing systems required to provide and sustain the capability that satisfies the operational requirement. (NAWCWPNS)

development The systematic use, under whatever name, of scientific and technical knowledge in the design, development, test, or evaluation of a potential new product or service (or of an improvement in an existing product or service) for purpose of meeting specific performance requirements or objectives. (FAR, para. 31.205-18(a), Definitions.)

development The process of working out and extending the theoretical, practical, and useful applications of a basic design, idea, or scientific discovery. (DSMC)

development All activities to be carried out to create a software product. (ISO 9001)

development The activities that transform a user requirement into a system delivered to an acquirer. (DERA)

development The planning and execution of system and subsystem definition tasks required to evolve the system from customer needs to consumer product solutions and their life-cycle processes. (IEEE P1220)

development The planning and execution of the definition, design, design implementation integration, analyses, and control tasks, actions, and

activities required to evolve the system from customer needs to system product and process solutions. (MIL-STD-499B-UNAPPROVED)

development and production tools Tools used as part of the design or assessment process. (IEC 1508)

development concept paper A coordinated management document that serves as: (a) The vehicle for major program decisions, (b) The record of basic program information, decision rationale, and review thresholds; and (c) The instrument to effect implementation of these decisions. (AFSCP 800-7)

development function The planning and execution of the definition, design, design implementation, integration, analyses, and control tasks, actions, and activities required to evolve the system from customer needs to system product and process solutions. (MIL-STD-499B-UNAPPROVED)

development life cycle A tailored set of processes. (DERA)

development specification A document applicable to an item below the system level that states performance, interface, and other technical requirements in sufficient detail to permit design, engineering for service use, and evaluation. (DoD-STD-480A)

development specification Specifications stating the requirements for the design or engineering development of a product during the development period. (MIL-STD-490A)

development specification Specifies the performance requirements for development of selected items; used to establish the allocated baseline for system programs and the functional and allocated baselines for less-than system programs. (DID-E-3102), (AFSCP 800-7)

development system The system that provides the capability to design and document the operational system that meets stated needs/requirements and defines the manufacturing system for producing the operational system. (NAWCWPNS)

development test Testing and evaluation of individual components, subsystems, and, in certain cases, the complete system, that is conducted predominantly by the contractor. (AFSCP 800 7)

development test and evaluation Test and evaluation which focuses on the technological and engineering aspects of the system, subsystem, or equipment items. (MIL-STD-471A)

development test and evaluation That test and evaluation conducted to: (a) Demonstrate that the engineering design and development process is complete, (b) Demonstrate that the design risks have been minimized, (c) Demonstrate that the systems will meet specifications, (d) Estimate the system's military utility when introduced, (e) Determine whether the engineering design is supportable (practicable, maintainable, and safe) for operational use, (f) Provide test data with which to examine and evaluate tradeoffs against specification requirements, life cycle cost, schedule and, (g) Perform the logistics testing efforts to evaluate the achievement of supportability goals. (WBS)

development test and evaluation Test and evaluation conducted to demonstrate that the engineering design and development process is complete; demonstrate that design risks have been minimized; demonstrate that the system will meet specifications; and estimate the system's military utility when introduced. (AFSCP 800-7)

development test and evaluation (DT&E) That test and evaluation conducted throughout various phases of the acquisition process to ensure the acquisition and fielding of an effective and supportable system by assisting in the engineering design and development and verifying attainment of technical performance specifications, objectives, and supportability. (COMOPTEVFORINST 3960.1G)

development testing Running test cases during development to explore the system and expose errors. (Bahill)

development testing Formal or informal testing conducted during the development of a system or component, usually in the development environment by the developer.

developmental baseline The specifications that are in effect at a given time for a system under development. (ISO 2382-20)

developmental configuration The contractor's software and associated technical documentation that defines the evolving configuration of a CSCI during development. (DOD-STD-2167A)

developmental configuration The contractor's design and associated technical documentation that defines the evolving configuration of a configuration item during development. (MIL-STD-973)

developmental configuration The contractor's software and associated technical documentation that defines the evolving configuration of a CSCI during development. (MIL-STD-483A)

developmental configuration In configuration management, the software and associated technical documentation that define the evolving configuration of a computer software configuration item during development. (IEEE 610.12-1990)

developmental configuration management The application of technical and administrative direction to designate and control software and associated technical documentation that define the evolving configuration of a software work product during development. (SEI-93-TR-25)

developmental test and evaluation That test and evaluation conducted throughout various phases of the acquisition process to ensure the acquisition and fielding of an effective and supportable system by assisting in the engineering design and development and verifying attainment of technical performance specifications, objectives, and supportability. (COMOPTEVFORINST 3960.1)

developmental test and evaluation That Test and Evaluation conducted throughout various phases of the acquisition process to ensure the acquisition and fielding of an effective and supportable system by: (a) Identifying potential operational and technological limitations of the alternative concepts and design options being pursued, (b) Providing information required by engineering design and development, (c) Supporting cost-performance trade offs, (d) Supporting the identification and assessment of risks, (e) Verifying attainment of technical performance, supportability, and manufacturing requirements, and, (f) Supporting the decision to certify the system is ready for Operational Test and Evaluation. (OPNAVINST 3960.10C)

developmental test and evaluation (DT&E) Conducted to measure progress, usually of components/subsystems, and to assist the engineering design and development process and verify attainment of technical performance specifications and objectives. (DSMC)

deviation A specific written authorization, granted prior to the manufacture of an item, to depart from a particular performance or design requirement of a specification, drawing, or other document, for a specific number of units or a specific period of time. (DoD-STD480A) , (MIL-STD-481A), (MIL-STD-973)

deviation A written authorization, granted prior to the manufacture of an item, to depart from a particular performance or design requirement's for a specific number of units or a specific period of time. (IEEE 610.12-1990)

deviation (request for) An official form (DD Form 1694, Request for Deviation/Waiver (NOR)) used by the contractor to request authorization to temporarily depart from the authenticated baseline requirements for a CI. (DI-E-3129 and MIL-STDs-480/483), (AFSCP 800-7)

device A unit of hardware (which may contain mechanical, electrical, photonic, etc., elements), (?)

device history record A compilation of records containing the complete production history of a finished device. (BioMed Ind)

device master record A compilation of records containing the design, formulation, specifications, complete manufacturing procedures, quality assurance requirements, and labeling of a finished device. (BioMed Ind)

diagnostic check interval The time interval between on-line tests which detect faults in a safety-related system with a specified diagnostic coverage. (IEC 1508)

diagnostic coverage The fraction of hardware failures detected by the on-line diagnostics embedded in the safety-related system. (IEC 1508)

direct interface The connection between an entity sending or receiving data with another entity receiving or sending data for transmission of the same data along the routing path associated with moving data from the source of the data to the end user of the data. (SGOAA)

direct measure A measure of an attribute which does not involve the measurement of any other attributes. (WG6)

direct measurement A measurement which can be made by empirical observation of a single attribute and does not depend on the measurement of other, simpler, attributes. (WG6)

directory service A service of the external environment entity of the Technical Reference Model that provides locator services that are restricted to finding the location of a service, location of data, or translation of a common name into a network specific address. (TA)

discrete Pertaining to data that consist of distinct elements, such as characters, or to physical quantities having a finite number of distinctly recognizable values. (ISO 2382-1)

disk A data medium consisting of a flat circular plate that is rotated in order to read or write data on one or both sides. (ISO 2382-1)

disposal The act of getting rid of excess, surplus, scrap, or salvage property under proper authority. (DSMC)

disposal The tasks, actions, and activities to be performed and system elements required to ensure that disposal of decommissioned and destroyed or irreparable system end items complies with applicable classified and environmental regulations and directives. (MIL-STD-499B-UNAPPROVED)

disposal — The tasks, actions, and activities to ensure that disposal or recycling of destroyed or irreparable consumer and life-cycle process products and by-products comply with applicable environmental regulations and directives. (IEEE P1220)

disposition — A process based on programmatic needs which addresses on a component level, the following areas as required: re-use, evaluation, packaging, storage, transportation, demilitarization, and sanitation. (SNL EPs)

disposition of nonconformity — Action to be taken to deal with an existing non-conforming entity in order to resolve the nonconformity. (ISO 8402)

distributed database — A database that is not stored in a central location, but is dispersed over a network of interconnected computers. (FIPS PUB 11-3)

distributed system — A collection of computers, memories, buses and networks that are concurrently operating in a cooperative manner and communicating with each other. (SGOAA)

distribution — The tasks, actions, and activities to initially transport, receive, process, assemble, install, test, checkout, train, operate and, as required, emplace, house, store, or distribute consumer products and life-cycle process products. (IEEE P1220)

diversity — Existence of different means of performing a required function, for example, other physical principles, other ways of solving the same problem. (IEC 1508)

document — The specifications, drawings, lists, standards, pamphlets, reports, or other information (printed or typewritten) relating to the design, acquisition, manufacture, test, or inspection of items under the contract. (MIL-STD-130G)

document — Document applies to the specifications, drawings, lists, standards, pamphlets, reports and printed, typewritten or other information, relating to the design, procurement, manufacture, test or acceptance inspection of items or services. (MIL-STD-100F)

document — Document applies to the specifications, drawings, lists, standards, pamphlets, reports, and printed, typewritten or other information, relating to the design, procurement, manufacture, test or inspection of items or services under the contract. (DOD-STD-100C)

documentation tree — A diagram that depicts all of the documents for a given system and shows their relationships to one another. (IEEE 610.12-1990)

drawing (engineering) — An engineering document or digital data file(s) that discloses (directly or by reference), by means of graphic or textual presentations, or combinations of both, the physical and functional requirements of an item. (MIL-STD-100F)

dumb terminal — A user terminal that has no independent data processing capability. (ISO 2382-1)

durability — A measure of useful life (a special case of reliability), (MIL-STD-721C)

dynamic analysis — The process of evaluating a system or component based on its behavior during execution. (IEC 880)

early operational assessment — An operational assessment conducted prior to, or in support-of, Milestone II. (DODI 5000.2)

effective built in test — A measure of the system's automated capability to (1) correctly ascertain the operating condition of a subsystem/function and (2) isolate defective item(s) to a designated ambiguity level without the use of test equipment which is external to the system. (AFP 57-9)

effectiveness — The extent to which the goals of the system are attained, or the degree to which a system can be elected to achieve a set of specific mission requirements. (DSMC)

effectiveness analysis — An analytical approach used to assess how well a design solution will perform or operate given anticipated environments, utilization rates, and operational scenarios. (IEEE P1220)

effectiveness analysis — An analytical approach used to determine how well a system performs in its intended use environment. (MIL-STD-499B-UNAPPROVED)

effectiveness analysis — An analysis of how well a design solution will perform or operate given anticipated operational scenarios. (IEEE P1220)

effectiveness assessment — The evaluation of the design solution with respect to manufacturing, test, distribution, operations, support, training, environmental impact, cost effectiveness, and life-cycle cost. (IEEE P1220)

effectiveness criteria — The measure of value used to assess the success or failure of a design solution satisfying its operational objectives. (IEEE)

effectiveness criteria — The measure of value used to assess the success or failure of a design solution satisfying its operational objectives. (IEEE)

effectiveness criteria — The measure of value used to determine the success or failure of a design solution. (IEEE P1220)

efficiency — A set of attributes that bear on the relationship between the level of performance of the software and the amount or resources used, under stated conditions. (WG6)

electromagnetic compatibility — The condition that prevails when telecommunications (communication-electronic) equipment is collectively performing its individual designed functions in a common electromagnetic environment without causing or suffering unacceptable degradation due to electromagnetic interference to or from other equipment/systems in the same environment. (MIL-STD-463A)

electromagnetic compatibility — The capability of systems and all associated subsystems/equipment to perform with required effectiveness, and without degradation, in the total electromagnetic environment encountered during accomplishment of the assigned mission. (MIL-E-6051D)

electromagnetic environment — The composite of electromagnetic energy, including man made and natural sources, to which a system or subsystem/ equipment will be exposed in performing its mission. (MIL-E-6051D)

electromagnetic interference (EMI) — Any electrical or electronic disturbance, phenomenon, signal, or emission (man made or natural) that causes undesirable responses, unacceptable responses, malfunctions, degradation of performance, or premature and undesired location, detection or discovery by enemy forces, except deliberately generated interference. (MIL-E-6051D)

electromagnetic interference control — The control of radiated and conducted energy such that the emissions unnecessary for system, subsystem, or equipment operation are minimized or reduced. (MIL-STD-463A)

electromagnetic pulse — Broad band high power effect encompassing the totality of a system as an antenna, such as would result from a nuclear burst. (MIL-STD-163A)

electromagnetic susceptibility — Upset behavior characteristic response of an equipment when subjected to specified electromagnetic energy-identified with the point, threshold or onset of operation outside of performance limits. (Aero Ind)

electronic counter-counter measures (ECCM) That division of electronic warfare involving actions taken to insure friendly effective use of the electromagnetic, optical, and acoustic spectra despite the enemy's use of electronic warfare to include high power microwave techniques. (DODI 5000.2)

electronic mail Correspondence in the form of messages transmitted between user terminals over a computer network. (ISO 2382-1)

electronic publishing The production of typeset-quality documents including text, graphics, and pictures with the assistance of a computer. (ISO 2382-1)

electrostatic discharge (ESD) A discharge of the potential energy that electric charges possess by virtue of their positions relative to each other. (BioMed Ind)

element A complete, integrated set of subsystems capable of accomplishing an operational role or function, such as navigation. (DSMC)

element Any discrete component of one of the following parts of a weapon system: (a) Aerospace vehicle equipment used in an aircraft, missile or space vehicle, (b) Operational support equipment that directly interfaces with other segments or AVE to survive the threats and to affect the mission operational capability of a weapon system, (c) Support equipment that includes all equipment required to perform the support function except that which is an integral part of the mission equipment, (d) Facilities, i.e., real property and associated buildings, (e) Real property installed equipment, (f) Operations, maintenance, and security personnel, (g) Operational or control software, (h) Operations and maintenance technical publications/data, (i) Spares, repair parts, and consumables, (j) Training and training equipment. (BMO-STD-776A)

element A basic component of a system, typically controlled by a unique specification, such as a single Line Replaceable Unit (LRU) or Configuration Item (CI)

element A product, subsystem., assembly, component, sub-component or subassembly, or part of a physical or system architecture, specification tree, or system breakdown structure, including the system itself. (IEEE P1220)

embedded Refers to software in a Read Only Memory; that is, computer memory that cannot be changed by the computer. (BioMed Ind)

embedded software Software that is physically incorporated into a larger system whose primary purpose is not data processing.(Aero Ind)

emulation The use of a data processing system to imitate another data processing system, so that the imitating system accepts the same data,

executes the same programs, and achieves the same results as the imitated system. (ISO 2382-1)

emulator Software run on a host computer that accepts the same input data, executes the same programs and yields the same outputs as the target computer. (DO-178A), (Aero Ind)

encapsulation A software development technique that consists of isolating a system function or a set of data and operations on those data within a module and providing precise specifications for the module. (IEEE 610.12-1990)

end article An end weapon, aircraft system, subsystem, component, or equipment e.g., transmission, engine, computer, radio, etc., being procured on the contract, including contractor furnished material. (MIL-STD-973)

end item The final production product when assembled, or completed, and ready for issue/deployment. (DSMC)

end item A final combination of end products, component parts, and/or materials which is ready for its intended use; e.g., ship, tank, mobile machine shop, aircraft. (MIL-STD-973)

end item A final combination of end products, component parts, and/or materials that is ready for its intended use; e.g., ship, tank, mobile machine shop, aircraft, receiver, rifle, or recorder. (BMO-STD-77-6A)

end item An entity identified with an element of the system breakdown structure. (IEEE P1220)

end item maintenance sheet (EIMS) Document for identifying maintenance functions on a specific end item, subassembly, and component basis. (AFM)

end product An end product is an item either an individual part or assembly, in its final or completed state. (DOD-STD-100C, ASME Y14.24M))

end product A product which is provided to a user. (WG6)

end product (end item) Those articles, materials, and supplies to be acquired for public use under the contract. (FAR)

end user The user who directly benefits from a system in its operational environment. (DERA)

end-user of data The last entity which makes a significant transformation, conversion or operation on the data. (SGOAA)

engineering analysis The technical process by which the behavior, performance, quality, and cost of an entity are predicted on the basis of engineering descriptions and specifications (the reverse of design), (NRC)

engineering change An alteration in the configuration of a configuration item delivered, to be delivered, or under development, after formal establishment of its configuration identification. (DOD-HDBK-287)

engineering change A change to the current approved configuration documentation of a configuration item at any point in the life cycle of the item. (MIL-STD-973)

engineering change In configuration management, an alteration in the configuration of a configuration item or other designated item after formal establishment of its configuration identification. (IEEE 610.12-1990)

engineering change An alteration in the configuration of a configuration item or items, delivered, to be delivered, or under development, after formal establishment of its configuration identification. (DoD-STD480A)

engineering change priorities The priority (emergency, urgent, routine) assigned to a Class I engineering change which determines the relative speed at which the Engineering Change Proposal is to be reviewed, evaluated, and, if approved, ordered and implemented. (MIL-STD-973)

engineering change proposal A term which includes both a proposed engineering change and the documentation by which the change is described and suggested. (MIL-STD-481A)

engineering change proposal A proposal to the responsible authority recommending that a change to an original item of equipment be considered, and the design or engineering change be incorporated into the article to modify, add to, delete or supersede original parts. (DSMC)

engineering change proposal In configuration management, a proposed engineering change and the documentation by which the change is described and suggested. (IEEE 610.12-1990)

engineering change proposal (ECP) A proposed engineering change and the documentation by which the change is described, justified, and submitted to the government for approval or disapproval. (MIL-STD-973)

engineering change proposal types A term covering the subdivision of Class I Engineering Change Proposals on the basis of the completeness of the available information delineating and defining the engineering change. (MIL-STD-973)

engineering data Parts lists, assembly and subassembly drawings, installation drawings, detail (parts) drawings, drawings for special relationships (e.g. matched parts, altered, and selected items), tube bend data, schematic wiring diagrams, and specifications and standards on drawing format used to define a hardware item in terms of materials, physical configuration, and, if applicable, performance. (MIL-STD-885B)

engineering data Engineering documents such as drawings, associated lists, accompanying documents, manufacturer specifications, and standards, or other information prepared by a design activity and relating to the design, manufacture, procurement, test, or inspection of items or services. (DOD-STD-100C, MIL-STD-100A)

engineering data Any technical data (whether prepared by the government, contractor or vendor) relating to the specification, design, analysis, manufacture, acquisition, test, inspection, or maintenance of items or services. (MIL-HDBK-59A, App A, 30 4.3)

engineering design The technical element in the product realization process that involves the application of knowledge and techniques from engineering, science, aesthetics, economics, and psychology in establishing specifications for products and their associated production processes; the technical process by which engineering descriptions and specifications are formulated to ensure that a product will possess the desired behavior, performance, quality, and cost (the reverse of engineering analysis), (NRC)

engineering design practices The collection of knowledge, techniques, and computer aids available to designers in pursuit of their profession. (NRC)

engineering development Includes those development programs being engineered for service use but which have not yet been approved for procurement or operation. (MIL-STD-481A)

engineering development All effort directed toward (1) the detail design of a system that is producible, cost effective, and meets all life cycle requirements, (2) the verification that the design meets all its requirements, (3) the development of a manufacturing system that can efficiently produce the system in the required quantities and at the required rates, and (4) the qualification of a producer to manufacture the system. (NAWCWPNS)

engineering development — Includes those development programs being engineered for service use but that have not yet been approved for procurement or operation. (DoD INST 3200.6), (DoD-STD480A)

engineering development models — An item used in tests to determine tactical suitability for military use in real or simulated environments for which the item was designed. (MIL-STD-280A)

engineering management — The management of the engineering and technical effort required to transform a military requirement into an operational system. (MIL-STD-499A)

engineering process group — A group of specialists who facilitate the definition, maintenance, and improvement of the process used by the organization. (SEI)

engineering release — An action whereby configuration documentation or an item is officially made available for its intended use. (?)

engineering release record — Consists of the official data file which records and interrelates engineering data, and changes thereto, which technically describe and will be or have been used to build, operate, or maintain configuration items. (MIL-STD-483A)

engineering release system — The management procedures and directives established by the contractor to control the revision and release of drawings/ lists used for production of the item. (MIL-STD-483), (AFSCP 800-7)

engineering specialties — Those specialized disciplines that are charged with the responsibility for ensuring that a particular aspect of the design of the operational system is optimized and acceptable. (NAWCWPNS)

engineering specialty integration — The timely and appropriate intermeshing of engineering efforts and disciplines such as reliability, maintainability, logistics engineering, human factors, safety, value engineering, standardization, transportability, etc., to ensure their influence on system design. (MIL-STD-499A)

engineering specialty plan — Descriptive name for any plan or activity having requirements, constraints, or contributions that must be considered in developing the system elements. (AFM)

engineering test unit — Test hardware using non-flight parts and workmanship standards. (NASA MDP92)

enterprise — The highest level in an organization, including all missions and functions. (TA)

enterprise environment — The enterprise establishes the policies and procedures which govern the activities associated with product development. (IEEE P1220)

enterprise life cycle — The period during which a system evolves from a market/application domain opportunity to an operational solution transferred to an owner,. (DERA)

enterprise model — A high level model of an organization's mission, function, and information architecture. (?)

enterprise organization — An organization that identifies a market opportunity, or has a statutory obligation, to fulfill the need for a system. (DERA)

entity — An abstract element that represents an object in the real world, its data attributes and essential services with their respective performance and quality characteristics. (SGOAA)

entity — Synonymous with item. (WG6)

entity — That which can be individually described and considered. (ISO 8402)

environment — The natural conditions (weather, climate, ocean conditions, terrain, vegetation, dust, etc.) which define the utilization environment in which the system will be expected to operate within. (IEEE P1220)

environment — The natural environment (weather, climate, ocean conditions, terrain, vegetation, space conditions); combat environment (dust, fog, nuclear-chemical-biological); threat environment (effects of existing and potential threat systems to include electronic warfare and communications interception); operations environment (thermal, shock, vibration, power variations); transportation and storage environment; maintenance environment; test environments; manufacturing environments (critical process conditions, clean room, stress) and other environments (e.g. software engineering environment, electromagnetic) related to system utilization. (MIL-STD-499B-UNAPPROVED)

environment — The aggregate of all external and internal conditions (such as temperature, humidity, radiation, magnetic and electric fields, shock vibration, etc.) either natural or man made influences the form, performance, reliability or survival of an item. (MIL-STD-721C)

environment Used as a general reference, environment includes the generic natural environment; e.g., weather, climate, ocean conditions, terrain, vegetation, etc. (DSMC, DODI 5000.2)

environment The natural conditions (weather, climate, ocean conditions, terrain, vegetation, dust, etc.) that define the utilization environment in which the system will be expected to operate. (IEEE)

environment A set of elements outside of the system, which may influence or may be influenced by the system. (WG6)

environment In system/software engineering, the conditions (part of the real world) under which something is expected to be built or operated.(WG6)

environment The natural (weather, climate, ocean conditions, terrain, vegetation, dust, etc.) and induced (electromagnetic, interference, heat, vibration, etc.) conditions which constrain the design solutions for consumer products and their life-cycle processes. (IEEE P1220)

environment, electromagnetic The power and time distribution, in various frequency ranges, of the radiated or conducted electromagnetic emission levels that may be encountered by an equipment, subsystem or system when performing its assigned mission. (MIL-STD-463A)

environmental and design requirements/guidelines The operating and survival environments that the system will encounter. (NASA MDP92)

environmental assessment / environmental impact statements (EIS)An estimate of whether or not a proposed system will adversely affect the environment or be environmentally controversial. (DSMC)

environmental requirements The requirements that characterize the impact of the environment on the system/CI as well as the system/CI's impact on the natural environment. (MIL-STD-499B-UNAPPROVED)

environmental stress screening (ESS) A series of tests conducted under environmental stresses to disclose weak parts and workmanship defects for correction. (MIL-STD-785B)

equipment under control (EUC) Equipment/machinery/apparatus/plant used for manufacturing, process, transportation, medical or other activities for which designated safety-related systems could be used to: (prevent hazardous events associated with the EUC from taking place; or (mitigate the effects of the hazardous events. (IEC 1508)

error — An occurrence arising as a result of an incorrect action or decision by personnel operating or maintaining a system. (ARP 4754, Draft 35)

error — That part of the system state which is liable to lead to subsequent failure. (LAP 90)

error — With respect to software, a mistake in specification, design or implementation. (DO-178A), (Aero Ind)

error — A discrepancy between a computed, observed or measured value or condition and the true, specified or theoretical value or conditions. (IEC 880)

error — An incorrect internal state of a system, due to a component failure or an external failure. (WG6)

error — A discrepancy between a computed, observed or measured value or condition and the true, specified or theoretical value or condition. (WG6)

error checking — A means of determining if recording of data, its input into a computer system, and its transfer within the system, including transmission, is correct. (BioMed Ind)

error detection — Error detection schemes are parity, checksum, cyclic redundancy and longitudinal redundancy. (BioMed Ind)

error processing — The action taken in order to eliminate errors from a system. (LAP 90)

error recovery — The detection, containment and correction of an erroneous state by a fault tolerant system, to avoid a system failure.

estimated/ predicted quality — Software quality that is estimated and predicted for the end software product quality at each stage of development, and which is based on fundamental design quality and intermediate product quality. (WG6)

euc risk — Risk of the EUC and its control system (providing it is not a designated safety-re1ated system) and associated human factor issues. (IEC 1508)

evaluation — The procuring activity effort to determine, at all levels of maintenance, the impact of the operational, maintenance and support environment on the maintainability parameter of the item and to demonstrate depot level maintenance tasks. (MIL-STD-471A)

evaluation — The process of determining whether an item or activity meets specified criteria (DOD-STD-2167A)

evaluation — Evaluation is the appraisal of test data in terms of credibility, reliability, pertinence, accuracy, and acceptability against some previously agreed upon standards or criteria. (JCS)

evaluation — A judgment expressed as a measure or ranking of trainee achievement, instructor performance, job performance, process, application, training material, and other factors. (MIL-STD-1379D, 3.38)

evaluation — The review and analysis of qualitative and/or quantitative data obtained from design review, hardware inspection, testing, and/or operational usage of equipment. (AFR 80-14)

evaluation and decision — Process of determining the combination of system elements that best meet the mission objectives and support requirements. (AFM)

evaluation criteria — Standards by which accomplishments of required technical and operational effectiveness and/or suitability characteristics or resolution of operational issues may be assessed. (DSMC, DODI 5000.2)

evaluation item or target entity — An element of the environment to be evaluated and/or measured. (WG6)

evaluation level — A set of evaluation methods to be applied and evaluation results to be achieved for the software product, commensurate with the rigor required by the evaluation objectives. (WG6)

evaluation module — Encapsulation of the definition of an evaluation method applied to product or process information in order to measure software characteristics or sub-characteristics by applying metrics, check pass-fail criteria, and deliver an evaluation report and a cost report. (WG6)

evaluation report — A system follow-up report that describes how the system objectives have been met, identifies the remaining problems and is intended to assist future development. (ISO 2382-20)

evaluation/quality evaluation — Systematic examination of the extent to which an entity is capable of fulfilling specified requirements. (WG6)

evaluation/quality evaluation The process of measurement, rating and assessment of quality attributes for an evaluation item to determine if the specified software quality characteristics are fulfilled. (WG6)

evaluation/quality evaluation The quality evaluation of a software product. (WG6)

evaluation/quality evaluation Entity being evaluated. (WG6)

event An occurrence which has its origin distinct from the aircraft, such as atmospheric conditions (e.g., gusts, temperature variations, icing, lightning strikes), runway conditions, cabin and baggage fires. (ARP 4754, Draft 35)

event based planning An approach to establishing project plans, tasks, and milestones based upon satisfying significant accomplishments associated with project events rather than calendar-oriented milestones. (IEEE P1220)

event oriented planning An approach to establishing project plans, tasks, and milestones based upon satisfying predetermined completion criteria rather than calendar-oriented milestones. (IEEE P1220)

evolutionary acquisition An adaptive and incremental strategy applicable to high technology and software-intensive systems when requirements beyond a core capability can generally, but not specifically, be defined. (MIL-STD-499B-UNAPPROVED)

evolutionary life cycle An enterprise life cycle in which the system's complete functionality is enhanced in each successive delivery. (DERA)

examination An element of inspection consisting of investigation, without the use of special laboratory appliances or procedures, of supplies and services to determine conformance to those specified requirements that can be determined by such investigations. (MIL-STD-109B)

execution profile A measurement of the proportion of total execution time that is spent executing code within each subsystem or module of a software item. (WG6)

execution time A measure of the amount of execution undergone by a software item. (WG6)

exemption Formal permission granted to an applicant by the authority to allow non-compliance with an otherwise legally binding regulation. (ARP 4754, Draft 35)

exhaustive search A search strategy that systematically examines every possible path through a decision tree or network. (Bahill)

exit criteria The specific accomplishments or conditions that must be satisfactorily demonstrated before an effort can progress further in the current acquisition phase or transition to the next acquisition phase. (MIL-STD-499B-UNAPPROVED)

exit criteria Program specific accomplishments that must be satisfactorily demonstrated before an effort or program can progress further in the current acquisition phase or transition to the next acquisition phase. (DSMC, DODI 5000.2, COMOPTEVFORINST 3960.1G)

expert system A system that provides for solving problems in a particular application area by drawing inferences from a knowledge base acquired by human expertise. (ISO 2382-1)

exploratory development All effort directed toward the solution of specific military problems, short of major development projects. (DFAR, para. 235.001, Definitions.)

exploratory development An item (preliminary parts or circuits) used for experimentation or tests to investigate or evaluate the feasibility and practicality of a concept, device, circuits, or system in breadboard or rough experimental form, without regard to the eventual overall fit or final form. (MIL-STD-280A)

exposure time The length of time for which a hazard exists before being detected and corrected or avoided, or neutralized by a change in environmental conditions. (WG6), (Aero Ind)

extensibility The ability of an architecture to be extended or adapted to new conditions, changes in specifications or new technologies. (SGOAA, SGOAA-1)

external attribute An attribute of a system which characterizes its interaction with the environment. (WG6)

external attribute The external attributes of a project, process, or resource are those which can only be measured with respect to how the product, process, or resource related to its environment. (WG6)

external environment (EE) Set of external entities with which the application platform exchanges information. (POSIX P1003.0 Draft 14 Guide), (SGOAA)

external environment interface (EEI) The interface between the application platform and the external environment across which information is exchanged. (POSIX P1003.0 Draft 14 Guide)

External Environment Interface (EEI) The interface which supports information transfer between the application platform and the external environment. (APP)

external failure An undesirable event in the environment which adversely affects the operation of an item. (WG6)

external measure A measure defined for an external attribute. (WG6)

external power A source of electric power from a ground based generator, connected to the external power receptacle. (Aero Ind)

external risk reduction facilities Physical measures taken external to the safety-related systems to reduce or mitigate the risks. (IEC 1508)

external system The system or product interfaces to other systems, communication networks, power supplies, resource connectors, etc., which affect the design of the product under consideration. (IEEE P1220)

external system interfaces The system or product interfaces to other systems, platforms, or products which influence the design solutions for consumer products and their life-cycle processes. (IEEE P1220)

extremely improbable event An event with a probability of approximately 10-9 or less on a per-flight hour or per-flight basis as applicable. (Aero Ind)

extremely improbable failure Failure condition having a probability on the order of 10-9 or less. (FAA AC 25.1309-lA), (Aero Ind)

extremely remote event an event with a probability between approximately 10-9 and 10-7 on a per flight-hour or per-flight basis as applicable. (Aero Ind)

fabrication The construction of a part from raw material; the development of software code. (DSMC)

fabrication The realization or formation from raw materials of a component in accordance with its stated design. (DERA)

facilities Industrial property (other than material), special tooling, military property, and special test equipment for production, maintenance,

research, development, or test, including real property and rights therein, buildings, structures, improvements, and plant equipment. (DSMC)

facility — Any fixed installation that is an intimate part of a system. (DoD-STD480A)

facility interface sheet (FIS) — Documentation of environmental requirements and interface design requirements imposed upon facilities by the end items of equipment. (AFM)

facility or ship development specification (type b4) — A facility or ship development specification is applicable to each HWCI that is both a fixed (or floating) installation and an integral part of a system. (MIL-STD-490A)

facility specification — Used for a fixed installation that is designed as, or used as, an intimate part of a system. (AFSCP-800-7)

factory-to-target sequence — The sequence of events and situations in the life cycle of a weapon from the time it is accepted at the manufacturing plant until it has accomplished or failed to accomplish the required mission. (MIL-STD-1670A)

fail passive system or configuration — A system or system configuration which does not require immediate pilot corrective action following a component failure. (Aero Ind)

fail safe — A design methodology which requires the effect of failures and combination of failures to be considered in defining a safe design. (Aero Ind)

fail safe — When, following detection of a hazardous state, a mishap can be avoided despite a possible loss of service. (WG6)

fail safe — A design property of an item which prevents its failures from resulting in critical faults. (WG6)

fail safe — The built-in capability of a system such that predictable (or specified) equipment (or service) failure modes only cause system failure modes in which the system reaches and remains in a safe fall-back state. (WG6)

fail safe — A design property of an item in which the specified failure mode predominantly in a safe direction. (IEC 1508)

fail-operative system or configuration — A system or system configuration which is capable of continuing to provide full performance, or a specified degraded level of performance, following a component failure. (Aero Ind)

failure — Any firing test when the criterion for success was not achieved will be evaluated as a Failure. (COMOPTEVFORINST 3960.1G)

failure — The inability of an item to perform within previously specified limits. (ARP 4754, Draft 35)

failure — The event, or inoperable state, in which any item or part of an item does not, or would not, perform as previously specified. (MIL-STD-721C)

failure — A malfunction that causes degradation or complete loss of equipment performance. (MIL-STD-1309B)

failure — A deviation of the delivered service from the specified service, where the service specification is an agreed description of the expected function and/or service. (LAP 90)

failure — A loss of function, or a malfunction, of a system or a part thereof. (Aero Ind)

failure — The inability of an item to perform within previously specified limits. (MIL-HDBK-338)

failure — The inability of a system, subsystem, unit or part to perform within previously specified limits. (ARP1587-81), (SAE Dictionary)

failure — The inability to perform a function within specified limits. (ARP 1834)

failure — The effect of a fault. (D0-178A), (Aero Ind)

failure — When applied to a component or a system, either a physical failure or a functional failure or both. (Aero Ind)

failure — The event of an item not providing its full required service. (IEC 1513)

failure (reliability) — The inability of an item to perform within previously specified limits. (Aero Ind)

failure / system failure — The event of an item not providing its full required service. (WG6)

failure / system failure — The termination of the ability of an item to perform a required function. (WG6)

failure / system failure The inability of a computer system to perform its functional requirements, or the departure of software from its intended behavior as specified in the requirements. (WG6)

failure analysis Indicate how failures are to be analyzed, classified and reported. (MIL-STD-810E)

failure analysis The logical, systematic examination of an item or its diagram(s) to identify and analyze the probability, causes, and consequences of potential and real failures. (MIL-STD 1309B)

failure analysis After a failure, the logical systematic examination of an item, its construction, application, and documentation to identify the failure mode and determine the failure mechanism and its basic course.(MIL-STD-721C)

failure analysis The logical, systematic examination of an item or its diagram(s) to identify and analyze the probability causes, and consequences of potential and real failures. (ARD50010-91), (SAE Dictionary)

failure cascading A component failure which causes the subsequent failure of another component. (Aero Ind)

failure catastrophic A failure that can cause item loss. (MIL-STD-721C)

failure catastrophic Failure conditions which should prevent continued safe flight and landing. (FAA AC 25.1309), (Aero Ind)

failure cause The circumstance that induces or activates a failure mechanism; e.g., defective soldering, design weakness, assembly techniques, software error, etc. (MIL-STD-2155)

failure cause of a system The combination of a fault and a trigger which activates it in order to initiate the failure mechanism. (WG6)

failure cause of a system The circumstances during design, manufacture or use which have led to a failure. (WG6), ()

failure common area Common cause failures which are the result of components being physically close to each other. (Aero Ind)

failure common cause, common mode Two or more component failures caused by a single component failure or some other single event such as crew error, maintenance error or design error. (Aero Ind)

failure condition — A condition with an effect on the aircraft and its occupants, both direct and consequential, caused or contributed to by one or more failures, considering relevant adverse operational or environmental conditions. (ARP 4754, Draft 35)

failure condition — The effects on the airplane and its occupants, both direct and consequential, caused or contributed to by one or more failures, considering relevant adverse operational or environmental conditions. (FAA AC 25.1309)

failure critical — A failure, or combination of failures, that prevents an item from performing a specified mission . (MIL-STD-721C)

failure dependent — Failure that is caused by the failure of an associated item(s), (MIL-STD-721C)

failure effect — A description of the operation of an item as the result of a failure. (ARP 4754, Draft 35)

failure effect — The consequence(s) a failure has on the operation, function, or status of an item. (SAE ARP 926A), (MIL-STD-1629A)

failure effect — The consequence(s) a failure mode has on the operation, function, or status of an item. (MIL-STD-721C)

failure effect — The consequences a failure has on the operation, function, or status of a device. (FDA 90-423)

failure effect — The consequence(s) a failure mode has on the operation, function, or status of an item. (ARD50010-91)

failure independent — Failure that occurs without being caused by the failure of any other item. (MIL-STD-72 I C)

failure intermittent — A failure which occurs for a limited period of time, after which the functional ability recovers without any external corrective action being taken. (Aero Ind)

failure intermittent — Failure for a limited period of time, followed by the item's recovery of its ability to perform within specified limits without any remedial action . (MIL-STD-721C)

failure mechanism — The physical, chemical, electrical, thermal, or other process that results in failure. (MIL-STD-721C)

failure mechanism of a system — The process of error propagation following a component failure which leads to a system failure. (WG6)

failure mechanism of a system has led to a failure. — The physical, chemical or other process which (WG6)

failure mode — The way in which the failure of an item occurs. (ARP 4754, Draft 35)

failure mode — The consequence of the mechanism through which the failure occurs; i.e., short, open, fracture, excessive wear. (MIL-STD-721C)

failure mode — The manner in which a failure is observed. (FDA 90-423)

failure mode is recognized. — The observed set of symptoms by which a failure (WG6)

failure mode — The effect by which a failure is observed. (WG6)

failure mode and effects analysis (FMEA) — A procedure by which each potential failure mode in a system is analyzed to determine the results or effects thereof on the system and to classify each potential failure mode according to its severity. (MIL-STD-721C)

failure mode effects analysis — The process of identifying potential design weaknesses through reviewing schematics, engineering drawings, etc., to identify basic faults at the part/material level and to determine their effect at finished or subassembly level on safety and effectiveness. (Reliability Design Handbook, RDG 376, Reliability Analysis Center, Rome Air Development Center), (FDA 90-423)

failure pattern — The occurrence of two or more failures of the same component or feature in identical or equivalent applications which are caused by the same basic failure mechanism. (MIL-STD-781C), (FDA 90-423)

failure physical — An event or condition in which a component or system is not capable of functioning in all significant respects as intended, because of a physical defect or physical damage. (Aero Ind)

failure primary — A component failure which is not caused by the previous failure of another component. (Aero Ind)

failure random — Failure whose occurrence is predictable only in a probabilistic or statistical sense. (MIL-STD-721C)

failure rate — The performance figures calculated by dividing the number of failures by the total unit flying hours (airborne) or cycles accumulated during the same period. (ARP 4754, Draft 35)

failure rate — The total number of failures within an item population, divided by the total number of life units expended by that population, during a particular measurement interval under stated conditions. (MIL-STD-721C)

failure rate — The number of failures of a specified category in a given period, in a given number of computer runs, or in some other given rate of measure. (WG6)

failure severity — The seriousness of the effect of a failure. (WG6)

failure, safety related — A failure which increases the probability of an accident occurring. (Aero Ind)

false alert — An alert caused by a condition other than one which an alerting system is designed to detect, e.g., by a component failure in the alerting system. (Aero Ind)

fatigue — A physical weakening of material because of age or stress. (DSMC)

fault — The adjudged or hypothesized cause of an error. (LAP 90)

fault — A condition (physical) that prevents a device, component or element from performing in the required manner. (e.g., broken bolt, open resistor), (Aero Ind)

fault — An undesired anomaly in the functional operation of an equipment or system. (ARP 1834), (Aero Ind)

fault — The activation of an error. (DO-178A), (Aero Ind)

fault — A condition requiring corrective maintenance action(s), (Aero Ind)

fault — Immediate cause of failure . (MIL-STD-721C)

fault — A physical condition that causes a device, component, or element to fail to perform in a required manner. (MIL-STD-1309C)

fault — A physical condition that causes a device, component, or element to fail to perform in a required manner. (SAE Dictionary)

fault — The state of an item characterized by inability to perform a required function, excluding the inability during preventive maintenance or other planned actions, or due to lack of external resources. (WG6)

fault — An accidental condition that causes a functional unit to fail to perform its required function, or an error in software design or source code which if encountered may cause a failure. (WG6)

fault — The state of an item characterized by inability to perform a required function, excluding the inability during preventive maintenance or other planned actions, or due to lack of external resources. (IEC 880)

fault avoidance — The use of techniques and procedures which aim to avoid the introduction of errors during any phase of the safety life cycle and therefore avoiding faults in the safety-related system. (IEC 1508)

fault isolation — The process of determining the location of a fault to the extent necessary to effect repair. (MIL-STD-721 C)

fault isolation — The process and action, following equipment failure that are involved in the identification of the unit, assembly, or piece part that has failed. (AIR1266-77), (SAE Dictionary)

fault isolation — The ability to identify the unit in which a fault has occurred. (ARP 1834), (Aero Ind)

fault localization — The process of determining the approximate location of a fault. (MIL-STD-721C)

fault management — Those aspects of the system design which cover fault monitoring (detection), fault response, fault storage and fault annunciation, for both operational and maintenance purposes. (ARP 1834)

fault mode — An observable state of an item, which can give rise to failure under certain operating conditions. (WG6)

fault mode — One of the possible states of a faulty item, for a given required function. (WG6)

fault tolerance — The capability for providing a service to ensure compliance with the specification, in spite of faults. (LAP90)

fault tolerance — Systems that continue to operate satisfactorily in the presence of faults. (BioMed Ind)

fault tolerance — Attributes of software that bear on its ability to maintain a specified level of performance in cases of software faults or of infringement of its specified interface. (WG6)

fault tolerance — A design feature of software which enables error recovery to be performed after the manifestation of a software fault. (WG6)

fault tolerance — The built-in capability of a system to provide continued correct execution. (WG6)

fault tolerance — The attribute of an item that makes it able to perform a required function in the presence of certain given sub-item faults. (IEC 1508)

fault tree — A fault tree is a graphical representation of the various parallel and series combinations of subsystem and component failures which can result in a specific event. ()

fault tree analysis — A method used in hazard analysis to show all the contributory causes of a single undesirable event, and the logic of their combination. (BioMed Ind)

fault, hidden — A fault, the existence of which is detected either when the function it affects is unsuccessfully attempted or upon tear down and inspection. (Aero Ind)

fault, hidden — A fault that exists in the airplane that is not annunciated to the flight crew or passengers. (Aero Ind)

fault, intermittent — A fault existing for a limited time, which may unpredictably recover with little or no intervention. (Aero Ind)

fault, intermittent — A fault which manifests itself only under certain conditions or when performing certain functions. (Aero Ind)

feasibility — The degree to which the requirements, design, or plans for a system or component can be implemented under existing constraints. (IEEE 610.12-1990)

feasibility study — A study to identify and analyze a problem and its potential solutions in order to determine their viability, costs, and benefits. (ISO 2382-20)

feedback — The control of input as a function of output by returning a portion of the output to the input. (McGraw Hill Dictionary)

figure(s) of merit — Figure(s) of merit is a measure of effectiveness through which quantitative system requirements and characteristics can be related to mission objectives in optimizing the system design. (MIL-STD-499)

figures of merit — A figure of merit, often called a technical performance measurement, describes the result of a test, e.g., in this test that car went 0 to 60 mph in 6.5 seconds. (Bahill/Sandia)

file — A named set of records stored or processed as a unit. (ISO 2382-1)

findings — The conclusions of an assessment, evaluation, audit, or review that identify the most important issues, problems, or opportunities within the area of investigation. (SEI)

finished device — A device, or any accessory to a device, which is suitable for use, whether or not packaged or labeled for commercial distribution. (BioMed Ind)

fire resistant — The ability to perform intended functions in the heat and other conditions likely to result from a fire. (FAR 1.1).

fire resistant fluid — A liquid or vapor which, if mixed in proper proportions with air, creates a fire-resistant mixture. (Aero Ind)

fire resistant mixture — A mixture of a liquid or vapor and air in proportions which will ignite and burn when supplied with an ignition source, but will not continue to burn after the ignition source is removed. (Aero Ind)

fire zone — A space or compartment in which all of the following apply: a) an ignition source can be present normally, i.e., without a hardware failure or a human error; b) a flammable or fire-resistant mixture cannot be present normally at the ignition source; c) a plausible single failure or human error can cause a flammable or fire-resistant mixture to be present at the ignition source. (Aero Ind)

fireproof — When applied to materials and parts, the ability to withstand the heat of a fire at least as well as steel in dimensions appropriate for the purpose for which the materials and parts are used. (FAR 1.1)

firmware — The combination of a hardware device and computer instructions or computer data that reside as read-only software on the hardware device. (DOD-STD-2167A, DODI 5000.2)

firmware — The combination of a hardware device and computer instructions or computer data that resides as read-only software on the hardware device. (MIL-STD-483A)

firmware — Hardware that contains a computer program and data that cannot be changed in its user environment. (WG6)

firmware — Software contained within a system in such a way that it is difficult to change, or not expected to change, e.g., software held on a Read-Only-Memory, or micro-code in a multi-level computer. (WG6)

firmware — Computer logic that is either hardwired or in a state that cannot readily be modified. (WG6)

firmware — An ordered set of instructions and associated data stored in a way that is functionally independent of main storage, usually in a ROM. (ISO 2382-1)

first article — First article includes pre-production models, initial production samples, test samples, first lots, pilot models, and pilot lots; and approval involves testing and evaluating the first article for conformance with specified contract requirements before or in the initial stage of production under a contract. (DSMC)

first major production decision — The decision to begin production of procurement-funded end items intended for service deployment. (AFR 80-14)

fit — The ability of an item to physically interface or interconnect with or become an integral part of another item. (MIL-STD-480B, MIL-STD-973)

fit — The dimensional relationship between mating parts, such as press, shrink, or sliding fit. (McGraw-Hill Technical Dictionary)

fit — A measure of harmony between form and context. (Alexander- Notes On The Synthesis of Form)

flammable fluid — A liquid or vapor which, if mixed in proper proportions with air, creates a flammable mixture. (Aero Ind)

flammable mixture A mixture of a liquid or vapor and air in proportions which will ignite and burn when supplied with an ignition source, and will continue to burn after the ignition source is removed. (Aero Ind)

flammable zone A space or compartment in which all of the following apply: a) No ignition source can be present normally, b) A flammable or fire-resistant mixture can be present normally. (Aero Ind)

flight critical An item that, if failed, will prevent continued safe flight or landing of the airplane. (Aero Ind)

flight critical function A function or interface which, if it fails, could cause loss of vehicle control resulting in loss of the vehicle and, if present, crew. (SGOAA-1)

flight time The time from the moment the aircraft first moves under its own power for the purpose of flight until the moment it comes to rest at the next point of landing. (FAR Ch. 1)

flow chart A graphical representation of the progress of a system for the definition, analysis, or solution of a data processing or manufacturing problem in which symbols are used to represent operations, data or material flow, and equipment, and lines and arrows represent interrelationships among the components. (McGraw-Hill Technical Dictionary)

flow diagram A graphical representation of a process or the step-by-step solution of a problem, using suitably annotated geometric figures connected by flowlines for the purpose of designing or documenting a process or program. (ISO 2382-1)

flowchart A control flow diagram in which suitably annotated geometrical figures are used to represent operations, data, or equipment, and arrows are used to indicate the sequential flow from one to another. (IEEE 610.12-1990)

flowchart A graphical representation of a process or the step-by-step solution of a problem, using suitably annotated geometric figures connected by flowlines for the purpose of designing or documenting a process or program. (ISO 2382-1)

flyaway costs Costs related to production of a usable end item of military hardware. (DSMC)

follow on operational test and evaluation Test and evaluation that is continued as necessary during and after the production period to refine the estimates made during the IOT&E, to evaluate changes, and to reevaluate the system to ensure that it continues to

meet operational needs and retains its effectiveness in a new environment or against a new threat. (AFSCP 800-7), (AFR 80-14)

follow-on operational test and evaluation (FOT&E) That test and evaluation that is necessary during and after the production period to refine the estimates made during operational test and evaluation, to evaluate changes, and to reevaluate the system to ensure that it continues to meet operational needs and retains its effectiveness in a new environment or against a new threat. (DODI 5000.2)

form That part of the world under our control, that we may change. (Alexander, Notes On The Synthesis of Form)

form The defined configuration of an item including the geometrically measured configuration, density, and weight or other visual parameters which uniquely characterize an item, component or assembly. (MIL-STD-480B)

form The shape, size, dimensions, mass, weight, and visual parameters which uniquely characterize an item. (MIL-STD-973)

form, fit and function data Data relating to items, components, processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements, but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software. (FAR)

form, fit and function data Technical data pertaining to items, components or processes for the purpose of identifying source, size, configuration, mating and attachment characteristics, functional characteristics and performance requirements. (DSMC)

form, fit, and function That configuration consisting of the physical and functional characteristics of the item as an entity but not including any characteristics of the elements making up the item. (MIL-STD-481A), (DoD Directive 5010.19), (DoD-STD-480A), (IEEE 610.12-1990)

formal qualification review A formal review, normally accomplished incrementally at the contracting facility, of test reports and test data generated during the formal qualification of a new group of CIs comprising a system to ensure that all tests required by Section 4 of the developmental specification(s) have been accomplished and that the system performs as required by Section 3. (MIL-STD-483B, 5.1 0)

formal qualification review (FQR) The test, inspection, or analytical process by which a group of configuration items comprising the system are verified to have met

specific contracting agency contractual performance requirements . (MIL-STD-1521B), (IEEE 610.12-1990)

formal qualification testing A process that allows the contracting agency to determine whether a configuration item complies with the allocated requirements for that item. (DOD-2167A)

formal specification A specification written and approved in accordance with established standards. (IEEE 610.12-1990)

formal specification A specification that is used to prove mathematically the validity of an implementation or to derive mathematically the implementation. (ISO 2382-20)

formal test A test conducted in accordance with test plans and procedures approved by the contracting agency and witnessed by an authorized contracting agency representative to show that the software satisfies a specified requirement. (DOD-HDBK-287), (DOD-STD-2167)

foundation architecture The elements of the product design, including interfaces, which should be designed in such a manner that the adoption of new technologies or changes to the product design may be accomplished without major impacts to the system architecture. (IEEE P1220)

foundation documentation All of the documentation which supports, and defines the rationale for, formalized documentation such as specifications, drawings, and technical manuals. (NAWCWPNS)

fourth generation languages Non-procedural computer programming languages which consist of compact, english-like statements which describe the overall tasks a computer is to carry out without specifying any individual steps or their order. (SECNAVINST 5234.2A)

full operational capability The condition achieved when the complete system is in the hands of the user, is manned by a full compliment of qualified personnel, is in its planned environment, interfaces with and is supported by other systems as defined, and is deemed to be capable of meeting or exceeding planned operating capabilities. (Aero Ind)

full operational capability (FOC) The full attainment of the capability to employ effectively a weapon, item of equipment, or system of approved specific characteristics, which is manned and operated by a trained, equipped, and supported military unit or force. (DODI 5000.2)

full rate production — Production of economic quantities following stabilization of the system design and prove-out of the production process. (DODI 5000.2)

function — The action or actions which an item is designed to perform. (MIL-STD-480B, MIL-STD-973)

function — A task, action or activity that must be performed to achieve a desired outcome. (MIL-STD-499B-UNAPPROVED)

function — A task, action or activity that must be accomplished to achieve a desired outcome, or to provide a desired capability. (IEEE P1220)

function — An action/task that the system must perform to satisfy customer and developer needs. (SGOAA)

function — Appropriate or assigned duties, responsibilities, missions, tasks, functions, powers, or duties of an individual, office, or organization. (Ref. Joint Pub 1-02, DODD 8000.1, and DOD 8020-1M), (SGOAA-1)

function — Actions required to accomplish part or all of a specific mission objective and those actions required to support the basic mission. (AFM)

function — The action that must be performed by an element or elements of the system for the system to accomplish its intended purpose. (BMO-STD-77-6A)

function — A defined objective or characteristic action of a system or component. (IEEE 610.12-1990)

function — A specific purpose of an entity or its characteristic action. (SAE Dictionary)

function — A discrete action required to achieve a given objective, to be accomplished by hardware, computer program, personnel, facilities, procedural data, or a combination thereof. (AFSCM 375-5)

function — A set of related actions, undertaken by individuals or tools that are specifically assigned or fitted for their roles, to accomplish a set purpose or end. (SEI-93-TR-25)

function — A specific purpose of an entity or its characteristic action. (SAE Dictionary)

function — A specific action which must be performed. (Aero Ind)

function — The characteristic acts or operations expected of a person or thing, which imply a definite end or purpose that the thing in question serves or a particular kind of work it is intended to perform. (Aero Ind)

function — The specific purpose or characteristic action of an entity, such as system, component, or program. (BioMed Ind)

function — The implementation of an algorithm in the program with which the user or the program can perform part or all of a work task what it does. (WG6)

function — A task, action, or activity expressed as a verb-noun combination to achieve a defined outcome. (IEEE P1220)

functional analysis — Determination of the functions and their sequence and interdependence required to accomplish a mission objective, and the relating of (basic) requirements to the functions upon which they impact. (?)

functional analysis — An approach to the solution of a problem, in which problem is broken down into its component functions, such as intelligence, fire-power, or mobility. (DSMC)

functional analysis — The process of identifying and determining performance of the functions necessary to achieve the mission requirements. (NAVAIRINST 5451.2)

functional analysis — The process of examining the characteristics of a defined function to identify all the sub functions necessary to the accomplishment of the function. (BMO-STD-77-6A)

functional analysis — The process of mentally exercising a proposed system by depicting, in sequential order, what the system (and interfacing systems) must do in order to perform a defined mission.

functional analysis and allocation — Examination of defined function to identify all the subfunctions necessary to the accomplishment of that function. (MIL-STD-499B-UNAPPROVED)

functional analyst — A systematic investigation of the functions of a real or planned system. (ISO 2382-20)

functional architecture — The arrangement of functions, their decomposition, and interfaces (internal and external) which defines the execution sequencing, conditions for control or data flow, and the relative performance levels of achievement for a desired outcome, or for providing a desired capability. (IEEE P1220)

functional architecture — The framework for developing applications and defining their interrelationships in support of an organization's information architecture. (DOD5000.11-M)

functional architecture — The hierarchical arrangement of functions, their internal and external (external to the aggregation itself) functional interfaces and external physical interfaces, their respective functional and performance requirements, and the design constraints. (MIL-STD-499B-UNAPPROVED)

functional architecture — An arrangement of functions and their sub-functions and interfaces (internal and external) which defines the execution sequencing, conditions for control or data-flow, and the performance requirements to satisfy the requirements baseline. (IEEE P1220)

functional area — A distinct group of system performance requirements which, together with all other such groupings, forms the next lower level breakdown of the system on the basis of function. (MIL-STD-480B, MIL-STD-481A, MIL-STD-973)

functional area — The activities, sub-functions, and elements of a primary function. (AFM)

functional area — A range of subject matter grouped under a single heading because of its similarity in use or genesis. (DODD 8320.1)

functional baseline — The initially approved documentation describing a system's or CI's functional, performance, interoperability, and interface requirements and the verification required to demonstrate the achievement of those specified requirements. (MIL-STD-499B-UNAPPROVED)

functional baseline — The initially approved documentation describing a system's or item's functional characteristics and the verification required to demonstrate the achievement of those specified functional characteristics. (MIL-STD-480B)

functional baseline — The initially approved documentation describing a system's or item's functional, interoperability, and interface characteristics and the verification required to demonstrate the achievement of those specified characteristics. (MIL-STD-973)

functional baseline Documentation describing a system's/segment's functional characteristics and the verification required to demonstrate the achievement of those specified functional characteristics. (DSMC)

functional block diagram A diagram which illustrates the operation, interrelationships, and interdependencies of the functions (shown as functional blocks) of a system/subsystem. ()

functional block number A number appearing on each functional block of a functional block diagram that provides traceability and tracking between the diagrams and Functional Fault Analysis data. ()

functional characteristics Quantitative performance parameters and constraints, including operational and logistic parameters and their respective tolerances. (MIL-STD-480B), (MIL-STD-481A), (MIL-STD-973), (DoD Dir. 5010.19)

functional configuration audit A formal audit to validate that the development of a configuration item has been completed satisfactorily and that the configuration item has achieved the performance and functional or allocated configuration identification. (MIL-STD-1521B)

functional configuration audit The formal examination of functional characteristics test data for configuration item, prior to acceptance, to verify that the item has achieved the performance specified in its functional or allocated configuration identification. (DSMC, AFM)

functional configuration audit An audit conducted to verify that the development of a configuration item has been completed satisfactorily, that the item has achieved the performance and functional characteristics specified in the functional or allocated configuration identification, and that its operational and support documents are complete and satisfactory. (IEEE 610.12-1990)

functional configuration audit (FCA) The formal examination of functional characteristics of a CI, prior to acceptance, to verify that the item has achieved the performance specified in its functional or allocated configuration identification. (MIL-STD-480B), (MIL-STD-973), (DoD Directive 5010.19)

functional configuration documentation The approved functional baseline plus approved changes. (MIL-STD-973)

functional configuration identification The initial approved technical documentation for a CI which prescribes: (a) All necessary functional characteristics, (b) The verification required to demonstrate achievement of specified functional characteristics, (c) The necessary interface characteristics with associated CIs, (d) CI key functional

characteristics and lower level CIs, if any; and, (e) Design constraints, such as envelope dimensions, component standardization, use of inventory items and integrated logistics support policies. (MIL-STD-480B), (MIL-STD-481A), (DoD Directive 5010.19)

functional configuration identification In configuration management, the current approved technical documentation for a configuration item. (IEEE 610.12-1990)

functional configuration identification Normally includes a Type A specification or a Type B specification supplemented by other specification types as necessary to specify: (a) all essential system functional characteristics; (b) necessary interface characteristics; (c) specific designation of the functional characteristics of key configuration items; and (d) all of the tests required to demonstrate achievement of each specified characteristic. (MIL-STD-490A)

functional cycle The application of the systems engineering process to an activity for definition or refinement of appropriate system elements. (AFM)

functional decomposition A type of modular decomposition in which a system is broken down into components that correspond to system functions and sub functions. (IEEE 610.12-1990)

functional decomposition The partitioning of a large-scale control system into a nested set of generic control functions, namely the regulatory or direct control function, the optimizing control function, the adaptive control function, and the self-organizing function. (McGraw Hill Dictionary)

functional design A set of products detailing what a system shall accomplish including functional requirements, logistics support concepts, interface documentation form and format, a configuration management plan, supporting trade-off analyses, and the conducting of a system requirements review. (NB Reilly Assoc.)

functional design The aspect of system design concerned with the system's objectives and functions, rather than its specific components. (McGraw Hill Dictionary)

functional economic analysis A structured proposal that serves as the principal part of a decision package for enterprise (individual, office, organization) leadership. (DODI 7041.3), (DODD 8000.1), (DOD 8020.1-M)

functional failure or malfunction An event or condition in which a component or system is required to function but does not function as intended. (Aero Ind)

functional flow block diagram A drawing, or set of drawings, which show the time sequenced order of what a system must accomplish in order to accomplish a specified mission. ()

functional flow block diagram A schematic, symbolic, graphic portrayal of a set of functions, providing identification of the functions and the time sequential relationship between the functions. (Aero Ind)

functional flow block diagram (FFBD) A drawing on which the system requirements are structured into functional terms. (AFM)

functional hazard assessment A systematic, comprehensive examination of aircraft functions to identify and classify failure conditions of those functions according to their severity. (FAR 4754, Draft 35)

functional interconnect diagram A drawing, or set of drawings, which show the functions which cross the boundary between systems and which directions the functions flow. ()

functional isolation The property of a system which provides effective separation of functions to minimize adverse interaction. (ARP 1834)

functional management The process of planning, organizing, coordinating, controlling, and directing efforts within a structure which groups responsibilities according to the type of work to be performed. (DSMC)

functional requirement The necessary task, action, or activity that must be accomplished. (MIL-STD-499B-UNAPPROVED)

functional requirement Parameters related to the ability of the equipment to perform its intended mission. (MIL-STD-2036)

functional requirement A requirement that specifies a function that a system or system component must be able to perform. (IEEE 610.12-1990)

functional requirement An attribute that the system must possess to perform a function. (BMO-STD-77-6A)

functional requirement A specification of required functional behavior, operation, performance, or purpose. (SAE Dictionary)

functional requirement An expressed need for a system to exhibit specific, often quantified, behavior as a result of its interaction with its operational environment. (DERA)

functional requirement A system requirement that specifies a function that a system or system component must be capable of performing. (WG6)

functional requirement A system requirement that specifies a function that a system or system component must be capable of performing. (ISO/IEC JTC1)

functional requirement A statement which identifies what a product or process must accomplish to produce required behavior and/or results. (IEEE P1220)

functional review An incremental review conducted by a functional team, composed of representatives from the appropriate level of multidisciplinary product teams, to address progress for a given function (e.g., support) across the system. (MIL-STD-499B-UNAPPROVED)

functional safety The ability of a safety-related system to carry out the actions necessary to achieve a safe state for the EUC or to maintain a safe state for the EUC. (IEC 1508)

functional safety assessment The undertaking of an investigation in order to arrive at a judgment, based on evidence, of the functional safety achieved by one or more safety-related system and/or external risk reduction facilities. (IEC 1508)

Functional safety audit A systematic and independent examination to determine whether the procedures specific to the functional safety requirements comply with the planned arrangements, are implemented effectively and are suitable to achieve the specified objectives. (IEC 1508)

functional specialist Specialists who assist and exercise surveillance over lower levels of management. (DSMC)

functional specification A document that specifies the functions that a system or component must perform. (IEEE 610.12-1990)

functional specification A document that specifies the functions that a system or component must perform. (IEEE 610)

functional support Systematized methodologies and procedures, or a common set of standards applied to materiel acquisition programs, which include but are not limited to personnel, technical requirements planning, security, automated data processing, cost analysis, training, safety, audit, logistics, product assurance, reliability, equal opportunity, obligation planning and reporting, industrial preparedness, value engineering, test, public affairs, legal, inspector general, mobilization, contracting, international cooperation, and small business. (DSMC)

functional system design — A functional system design is a system design that satisfies the input/output requirement. (Wymore)

functional testing — Testing that ignores the internal mechanism of a system or component and focuses solely on the outputs generated in response to selected inputs and execution conditions. (IEEE 610.12-1990)

functional tests — Functional tests execute typical operating conditions of the software and system, with typical input values and results. (BioMed Ind)

functional unit — An entity of hardware or software, or both, capable of accomplishing a specified purpose. (ISO 2382-1)

functional verification — The process of evaluating whether or not the functional architecture satisfies the validated requirements baseline. (IEEE P1220)

functionality — A set of attributes that bear on the existence of a set of functions and their specified properties. (WG6)

fundamental design quality — Quality represented by the core parts of software design, e.g., software architecture, software structure, user interface design strategy. (WG6)

fundamental measures — Measures which are independent of the evaluation items and their software quality characteristics. (WG6)

fundamental metric — A rule and method by which a target entity is measured to get the value of a fundamental data element. (WG6)

funding profile — Program funding, usually displayed in columnar spread sheet format by years, starting with previous year through current year and out-years. (DSMC)

general specification — A document that covers the requirements common to different types, classes, grades and/or styles of items or services. (DoD-STD-480A)

general specification — A general specification covers requirements common to two or more types, classes, grades, or styles of products, services, or materials; this avoids repetition of common requirements in detail specifications. (MIL-STD-490A)

generic architecture — An architecture where the elements of the architecture do not depend on any one mission or program for their definition. (SGOAA)

glass box — A system or component whole internal contents or implementation are known. (IEEE 610.12-1990)

goal — Something to which one aspires for a program, or, a point aimed at for achievement. (DSMC)

government furnished equipment (GFE) — government furnished property, other than facilities, materials, or data/information. (NAWCWPNS)

government furnished equipment / property — Property in the possession of or acquired directly by the government, and subsequently delivered to or otherwise made available to the contractor. (DSMC)

government furnished material — government furnished property that may be incorporated into or attached to a deliverable end item or that may be consumed or expended in performing the contract. (FAR 45.301)

government furnished material — Material provided by the government to the contractor or comparable government production facility to be incorporated in, attached to, used with or in support of an end item to be delivered to the government or ordering activity, or which may be consumed or expended in the performance of a contract. (MIL-STD-1388-1A)

government furnished property (GFP) — Property in the possession of or directly acquired by the government and subsequently made available to the contractor. (FAR 45.101)

grade — Category or rank given to entities, having the same functional use but different requirements for quality. (WG6)

grade — Category or rank; given to entities, having the same functional use but different requirements for quality. (ISO 8402)

group — A collection of units, assemblies or subassemblies which is a sub-division of a set or system, but which is not capable of performing a complete operational function. (MIL-STD-100F)

guideline — A statement consisting of a recommendation or an option. (NB Reilly Assoc.)

guidelines — Recommended procedures for complying with regulations. (ARP 4754, Draft 35)

handler subsystem — Data process which implements a predefined, directed procedure, either from a control subsystem or a management subsystem. (SGOAA)

hard copy — A permanent copy of a display image generated on an output device such as a printer or plotter, and which can be carried away. (ISO 2382-1)

hardness surveillance program — A program implemented in the operational phase to evaluate whether or not the nuclear hardness of a system has deteriorated. (BMO-STD-77-6A)

hardware — An item that has physical being. (ARP 4754, Draft 35)

hardware — Articles made of material, such as tools, fittings, machine parts, weapons, vehicles, but not including computer programs or technical documentation. (MIL-STD-480B)

hardware — Items made of material, such as weapons, aircraft, ships, tools, computers, vehicles, and their components (mechanical, electrical, electronic, hydraulic, pneumatic), (MIL-STD-973)

hardware — Physical equipment used to process, store, or transmit computer programs or data. (IEEE 610.12-1990)

hardware — The physical equipment which makes up a computer system, e.g., terminals and storage devices, as opposed to programming software; weapons, combat equipment, support equipment. (DSMC)

hardware — Physical equipment used in data processing as opposed to programs, procedures, rules and associated documentation. (POSIX91)

hardware — Physical equipment, as opposed to programs, procedures, rules, and associated documentation. (FIPS PUB 11-3)

hardware — The physical part of a system: wires, connectors, relays, silicon devices, etc. (WG6)

hardware — All or part of the physical components of an information processing system. (ISO 2382-1)

hardware configuration item — A configuration item for hardware. (DOD-STD-2167A)

hardware configuration item — A configuration item that is hardware. (MIL-STD-973)

hardware configuration item — An aggregation of hardware that is designated for configuration management and treated as a single entity in the configuration management process. (IEEE 610.12-1990)

hardware design — The logic of the construction of the hardware of a system. (WG6)

hardware item — A hardware item is a configuration item as defined in MIL-STD-480 and includes any item, component, equipment, and parts thereof separately procured. (MIL-STD-885C)

hardware safety integrity — That part of the safety integrity of the safety related systems, relating to random hardware failures in a dangerous mode of failure. (IEC 1508)

hardware/software — Hardware or software, or a combination of both, in which the software includes only that associated with hardware for operational use (e.g., computer programs for command and control, handbooks for operations, maintenance, etc.) and excludes fabrication specifications, drawings, etc. (DoD Directive 5010.19), (DoD-STD-480A)

hardware/software interface (HSI) — The interface between a hardware device and the software which is executed within it (e.g., in a microprocessor) or which accepts input from it (e.g., from a sensor) or sends output to it (e.g., to an actuator), (WG6)

hazard — A potentially unsafe condition as a result of failures, malfunctions, external events or a combination thereof. (ARP 4754, Draft 35)

hazard — A condition that is prerequisite to a mishap. (MIL-STD-1472D)

hazard — A condition or event which increases the probability of an accident occurring. (Aero Ind)

hazard — A physics situation with a potential for human injury. (IEC 1508)

hazard probability — Probability of a system getting into a hazardous state within a given time interval under given conditions. (WG6)

hazard/hazardous state A state of an item which, in conjunction with certain environmental conditions, could lead to an accident. (WG6)

hazard/hazardous state A physical situation, often following from some initiating event, that can lead to an accident. (WG6)

heuristics A collection of ad hoc bits or kernels of knowledge gained from experience. (NRC)

heuristics A rule-of-thumb or other simplification that allows its user to draw conclusions without complete certainty. (Bahill)

hierarchical decomposition A type of modular decomposition in which a system is broken down into a hierarchy of components through a series of top-down refinements. (IEEE 610.12-1990)

hierarchical modeling A technique used in computer performance evaluation, in which a computer system is represented as a hierarchy of subsystems, the subsystems are analyzed to determine their performance characteristics, and the results are used to evaluate the performance of the overall system. (IEEE 610.12-1990)

hierarchy An ordered network of concepts or objects in which some are subordinate to others. (Bahill)

hierarchy A structure in which components are ranked into levels of subordination; each component has zero, one, or more subordinates; and no component has more than one super ordinate component. (IEEE 610.12-1990)

hierarchy/hierarchical levels The relationship of one item of hardware/software with respect to items above and below in the relative order of things. (NASA MDP92)

high order language (high level language) A type of source language which is problem or function oriented, that enables code to be written in a more readily understandable form than object code and can be automatically translated into object code. (DO-178A), (Aero Ind)

Hold point Point, defined in an appropriate document, beyond which an activity must not proceed without the approval of a designated organization or authority. (ISO 8402)

holistic Holistic, as used in this standard, emphasizes not only the importance of the system as a whole and the interdependence of the system elements, but the importance of assuring that each of the primary program functions are adequately addressed. (NAWCWPNS)

human engineering — The area of human factors which applies scientific knowledge to achieve effective user-system integration. (MIL-H-46855B, 6.2.6)

human engineering design criteria — The summation of available knowledge which defines the nature and limits of human capabilities as they relate to the checkout, operation, maintenance and control of systems or equipment and which may be applied during engineering design to achieve optimum compatibility between equipment and human performance. (MIL-STD-1472 D, 3.36)

human error (mistake) — A human action that produces an unintended result. (WG6)

human factors — Those elements of system operation and maintenance which influence the efficiency with which people can use systems to accomplish the operational mission of the system. (COMOPTEVFORINST 3960.1G)

human factors — This element includes the effort to develop or improve the crew/equipment/software interface and achieve the required effectiveness of human performance during system operation, maintenance, and control. (WBS)

human factors — A body of scientific facts about human characteristics. (DSMC, MIL-H-46855B, 6.2.7, DODI 5000.2)

human performance — The ability of actual users and maintainers to meet the system's performance standards, including reliability and maintainability, under the conditions in which the system will be employed. (DODI 5000.2)

human/computer interface — The boundary across which physical interaction between a human being and the application platform take place. (SGOAA)

hybrid computer — A computer that integrates analog computer components and digital computer components by interconnection of digital-to-analog converters and analog-to-digital converters. (ISO 2382-1)

ignition source — Any part, surface, gas, or flame hot enough to ignite a flammable or fire-resistant mixture, or any arc or spark resulting from a short circuit, a loose connection, an electrostatic discharge, a lightning strike, friction, or other cause, with sufficient energy to ignite a flammable or fire-resistant mixture. (Aero Ind)

ignition zone — A space or compartment in which all of the following apply: a) an ignition source can be present normally; b) a flammable or fire-resistant mixture cannot be present normally at the ignition source; c) no plausible single failure or human error can cause a flammable or fire-resistant mixture to be present at the ignition source. (Aero Ind)

ilities The operational and support requirements a program must address (e.g., availability, maintainability, vulnerability, reliability, logistic supportability, etc.), (DSMC)

image processing The use of a data processing system to create, scan, analyze, enhance, interpret, or display images. (ISO 2382-1)

implementation The act of creating a physical reality from a specification. (ARP 4754, Draft 35)

implementation The publication of directives, instructions, regulations, and related documents that define responsibilities and authorities and establish the internal management processes necessary to implement the policies or procedures of a higher authority. (DODI 5000.2)

implementation The process of translating a design into hardware components, software components, or both. (IEEE 610.12-1990)

implementation The process of translating a design into hardware components, software components, or both. (IEEE STD 610.12-1990)

implementation The transformation of a design into a more detailed form, or its realization as a working product. (WG6)

Implementation (of a system) The system development phase at the end of which the hardware, software and procedures of the system considered become operational. (ISO 2382-20)

implementation dependent The implementation is to define and document the requirements for architectures, software constructs, correct data values or behavior (Adapted from POSIX91), (SGOAA-1)

implementation phase The period of time in the software life cycle during which a software product is created from design documentation and debugged. (IEEE STD 729-1983), (IEEE-STD-1012-1986), (IEEE 610.12-1990)

implemented software quality Quality of an intermediate software product just after code implementation, but before testing. (WG6)

improbable event An event with a probability between approximately 10-9 and 10-5 on a per-flight-hour or per-flight basis as applicable. (Aero Ind)

improbable failure — Failure condition having a probability on the order of 10-5 or less, but greater than on the order of 10-9. (Aero Ind)

incident — An event during operation of an item which may indicate that a failure has occurred. (WG6)

incremental development — A software development technique in which requirements definition, design, implementation and testing occur in an overlapping, iterative (rather than sequential) manner, resulting in incremental completion of the overall software product. (IEEE 610.12-1990)

incremental life cycle — An enterprise life cycle in which a system's existing functionality is added to in each successive delivery. (DERA)

independence — A design concept which ensures that the failure of one item does not cause a failure of another item. (ARP 4754, Draft 35)

independent cost analysis — An analysis of program cost estimates conducted by an impartial body disassociated from the management of the program. (DODI 5000.2)

independent cost estimate — A cost estimate prepared by an impartial body outside the chain of authority responsible for acquiring or using the goods or services. (DODI 5000.2)

independent verification & validation (IV&V) — Verification and validation performed by a contractor or government agency that is not responsible for developing the product or performing the activity being evaluated. (DOD-STD-2167A)

indicator — A combination (usually a ratio) of two or more data elements. (WG6)

indicator — A combination (usually a ratio) of two or more data elements or a single data element monitored over time. (WG6)

indicator — An attribute whose measurement can be used to estimate or predict the measure of some other attribute which cannot itself be measured at the time. (WG6)

indicator — A measure or representation of measures that describe the current state or predicted state of a quality factor. (WG6)

indicator — A device or variable that can be set to a prescribed state based on the results of a process or the occurrence of specified condition. (WG6)

indicator A software quality indicator is a variable whose value can be determined through direct analysis of product characteristics and whose evidential relationship to one or more attributes is undeniable. (WG6)

indirect measure A measure of an attribute which involves the measurement of one or more other attributes (i.e., it is a function of other direct and/or indirect measures), (WG6)

indirect measurement A measurement which is made by calculating the value of a function of one or more other measures. (WG6)

industrial mobilization The process of marshaling the industrial sector to provide goods and services, including construction, required to support military operations and the needs of the civil sector during domestic or national emergencies. (DODI 5000.2)

inference The process by which new facts are derived from previously established facts. (Bahill)

inference engine That portion of decision support system that contains the inference and control strategies. (Bahill)

informal test Any test which does not meet all the requirements of a formal test. (DOD HDBK-287), (DOD-STD-2167)

informal testing Testing conducted in accordance with test plans and procedures that have not been reviewed and approved by a customer, user, or designated level of management. (IEEE 610.121990)

information Any communication or representation of knowledge such as facts, data, or opinions, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. (OMB CIRC A-130)

information Knowledge concerning any objects, such as facts, events, things, processes, or ideas, including concepts, that within a certain context has a particular meaning. (ISO 2382-1)

information analysis A systematic investigation of information and its flow in a real or planned system. (ISO 2382-20)

information domain A set of commonly and unambiguously labeled information objects with a common security policy that defines the protections to be afforded the objects by authorized users and information management systems. (DISSP)

information hiding The principle used in developing system structures where components should encapsulate or hide a single requirements or design

decision, with an interface that reveals little of the inner workings of the system. (SGOAA), (IEEE 610.12-1990)

information hiding A discipline in developing structured software, whereby each module communicates with others solely via a specified interface. (WG6)

information interchange components Things like removable disk packs, floppy disks, security badges and remote data bases on other application processors accessed by way of Communications services. (SGOAA)

information interchange interface The boundary across which external, persistent storage and data interchange services are provided. (SGOAA)

information management The creation, use, sharing, and disposition of information as a resource critical to the effective and efficient operation of functional activities. (DODD 8000.1)

information management The functions of controlling the acquisition, analysis, retention, retrieval, and distribution of information. (ISO 2382-1)

information processing The systematic performance of operations upon information, that includes data processing and may include operations such as data communication and office automation. (ISO 2382-1)

information processing system One or more data processing systems and devices, such as office and communication equipment that perform information processing. (ISO 2382-1)

information resources management The planning, budgeting, organizing, directing, training, promoting, controlling, and management activities associated with the burden (cost), collection, creation, use, and dissemination of information by agencies and includes the management of information and related resources, such as federal information processing resources. (Ref PL No 99-591, DODD 8000.1)

information retrieval Actions, methods, and procedures for recovering information on a given subject from stored data. (ISO 2382-1)

information system An information processing system, together with associated organizational resources such as human, technical, and financial resources, that provides and distributes information. (ISO 2382-1)

information technology (IT) The technology included in hardware and software used for government information, regardless of the technology involved, whether computers, communications, micro graphics, or others. (Ref OMB Circular A-130 and DODD 8000.1)

informative — Providing or disclosing information which is only instructive and not preceded by a shall (adapted from POSIX91). .

informative — Providing or disclosing information; instructive. (AHD)

inheritance — The principle of receiving properties or characteristics from an ancestor. (SGOAA)

initial hazard assessment — The initial classification and estimation of an identified system hazard. (BioMed Ind)

initial hazard assessment report — A complete list of potential system hazards identified throughout product design and development, a qualitative estimate criticality (cost) of each, a qualitative (or quantitative if data are available) estimate of the probability of each, and recommendations for resolving any items that seem likely to pose problems. (BioMed Ind)

initial operational capability — The condition achieved when a system or system increment is in the hands of the user, is manned by personnel with appropriate skills, is in its planned environment, interfaces with and is supported by other systems as defined, and has completed sufficient I&CO and verifications to confirm specific functional capabilities. (Aero Ind)

initial operational capability (IOC) — The first attainment of the capability to employ effectively a weapon, item of equipment, or system of approved specific characteristics, and which is manned or operated by a trained, equipped, and supported military unit or force. (COMOPTEVFORINST 3960.1G, DODI 5000.2)

initial operational test & evaluation (IOT&E) — All operational test and evaluation conducted on production or production representative articles, to support the decision to proceed beyond low-rate initial production. (DSMC, DODI 5000.2)

initial operational test and evaluation — That portion of operational test and evaluation conducted before the first major production decision. (AFR 80-14)

input — Pertaining to a device, process, or channel involved in an input process, or to the associated data or states. (ISO 2382-1)

input — Data entered into an information processing system or any of its parts for storage or processing. (ISO 2382-1)

input — The process of entering data into an information processing system or any of its parts for storage or processing. (ISO 2382-1)

input process output chart — A diagram of a software system or module, consisting of a rectangle on the left listing inputs, a rectangle in the center listing processing steps, a rectangle on the right listing outputs, and arrows connecting inputs to processing steps and processing steps to outputs. (IEEE 610.12-1990)

input process-output — A software design technique that consists of identifying the steps involved in each process to be performed and identifying the inputs to and outputs from each step. (IEEE 610.12-1990)

input/output relation — The relation between two vectors whose components are the inputs (excitations, stimuli) of a system and the outputs (responses) respectively. (McGraw Hill Dictionary)

input/output requirement — The input/output requirement for a system to be designed consists of specifications of (a) The length of the operational life of the system to be designed, that is, the length of the operations phase of the system life cycle (this sets a standard time scale for all input and output trajectories), (b) The set of inputs to be accepted by the system to be designed, (c) The set of input trajectories or histories which the system to be designed might experience, (d) The set of outputs producible by the system to be designed, (e) The set of output trajectories that are possible for the system to be designed, (f) The eligibility function that matches outputs and inputs or input trajectories and eligible output trajectories; the eligibility function limits, or specifics, the behavior of the system to be designed. (Wymore)

insensitive munitions — Munitions that fulfill their performance, readiness, and operational requirements on demand, but are designed to minimize the violence of a reaction and subsequent collateral damage when subjected to unplanned heat, shock, fragment or bullet impact, electromagnetic pulse, or other unplanned stimuli. (NAVSEAINST 8010.5)

in-service engineering — The totality of logistics management and basic design engineering functions, including procurement support, which are required to be performed for a service equipment in order that it may continue to operate properly and perform useful functions throughout its service life. (NAVAIRINST 5400.14C)

in-service engineering — All logistic management and basic design activities, including procurement support, which are required to be performed for a service equipment in order that it may continue to operate properly and perform useful functions throughout its useful life. (NAVAIRINST 5400.14C)

inspection — An examination of an item against a specific standard. (ARP 4754, Draft 35)

inspection — The physical examination of documentation, hardware, or software to verify conformance to specified requirements. (?)

inspection — A static analysis technique that relies on visual examination of development products to detect errors, violations of development standards, and other problems. (IEEE 610.12-1990)

inspection — The examination and testing of supplies and services (including, when appropriate, raw materials, components, and intermediate assemblies) to determine whether they conform to specified requirements. (ASPR 14 001.3)

inspection — An examination of an item against a specified standard. (ARD50010-91), (SAE Dictionary)

inspection — A formal evaluation technique wherein a person or group other than the author examines software requirements, design, or code in detail to detect faults, violations of development standards and other problems. (BioMed Ind)

inspection — A static analysis technique that relies on visual examination of development products to detect errors, violations of development standards, and other problems. (IEEE STD 610.12-1990)

inspection — Activity such as measuring, examining, testing or gauging one or more characteristics of an entity and comparing the results with specified requirements in order to establish whether conformity is achieved for each characteristic. (WG6), (DOD-STD-100C)

inspection — The comparison of output products of a development phase with the input products in order to ensure that the former correctly implement the latter. (WG6), (NAWCWPNS)

inspection — Activity such as measuring, examining, testing or gauging one or more characteristics of an entity and comparing the results with specified requirements in order to establish whether conformity is achieved for each characteristic. (ISO 8402), (Bio Med)

inspection by attributes — Inspection whereby either the unit of product or characteristics thereof, is classified simply as defective or non defective, or the number of defects in the unit of product is counted, with respect to a given requirement. (MIL-STD-105)

inspection by variables — Inspection wherein certain quality characteristics of sample are evaluated with respect to a continuous numerical scale and expressed as precise points along this scale. (MIL-STD-109B)

installability — Attributes of software that bear on the effort needed to install the software in a specified environment. (WG6)

installation and check out phase — The period of time in the software life cycle during which a software product is integrated into its operational environment and tested in this environment to ensure that it performs as required. (IEEE 610.12-1990)

installation and checkout (I&CO) — The identification, definition, and sequencing of the activities necessary to transport, assemble, install, interconnect, and perform initial startup and checkout of the system in preparation of delivery or turnover to the customer or user. (Aero Ind)

installation and checkout phase — The period of time in the software life cycle during which a software product is integrated into its operational environment and tested in this environment to ensure that it performs as required. (ANSI/IEEE STD 729-1983), (IEE -STD-1012-1986)

installation qualification — Establishing confidence that process equipment and ancillary systems are capable of consistently operating within established limits and tolerances. (BioMed Ind)

instance — A single copy of a software product in operation or on test on a single installation. (WG6)

institutionalization — The building and reinforcement of infrastructure and corporate culture that supports methods, practices, and procedures so that they are the ongoing way of doing business, even after those who originally defined them are gone. (Adapted from CCF Draft C)

integrate — To put or bring (parts) together into a whole; unify. (AFM)

integrate — To make whole or complete by bringing together parts. (Webster))

integrated data base — A repository for storing all information pertinent to the systems engineering process to include all data, schema, models, tools, technical management decisions, process analysis information, requirement changes, process and product metrics, and trade-offs. (IEEE P1220)

integrated diagnostics — An initiative for delivering weapon systems designed for ease of maintenance (with built-in diagnostics) with less test equipment and fewer maintenance specialists. (DSMC)

integrated logistics support A disciplined, unified and iterative approach to management and technical activities necessary to: (a) Integrate support considerations into system and equipment design, (b) Develop support requirements that are related consistently to design, readiness objectives, to design, and to each other, (c) Acquire required support and, (d) Provide required support during the operational phase at minimum cost. (MIL-STD-480B), (DODI 5000.2), (DSMC), (DoD Dir. 4100.35)

integrated logistics support The logistics engineering effort necessary to define support requirements and resources for the system. (WBS)

integrated logistics support A composite of the elements necessary to assure the effective and economical support of a system or equipment at all levels of maintenance of its programmed life cycle. (DOD HDBK- 248), (MIL-STD-481A), (MIL-STD-1369), (AFM)

integrated logistics support A composite of all the support considerations necessary to assure the effective and economical support of a system for its life cycle. (MIL-STD-881A)

integrated logistics support plan The government's formal planning document for logistics support. (DSMC)

integrated logistics support plan (ILSP) The government's detailed ILS management plan for specific acquisition program. (MIL-STD-1388-1)

integration The act of putting together as the final end item various components of a system. (DSMC)

integration The act of causing elements of an item to function together. (ARP 4754, Draft 35)

integration The merger or combining of one or more components, parts, or configuration items into a higher level system for ensuring that the logical and physical interfaces can be satisfied and the integrated system satisfies its intended purpose. (IEEE P1220)

integration The arrangement of components in a system so that they function together in an efficient and logical way. (McGraw Hill Dictionary)

integration The timely and appropriate intermeshing of engineering efforts and disciplines to ensure their full influence on the system design and the technical program. (MIL-STD-499), (MIL-STD-881A)

integration A process of putting together selected components to provide the set or specified subset of the capabilities the final systems will provide. (SEI)

integration The merger or combining of two or more lower level elements into a functioning and unified higher level element with the logical and physical interfaces satisfied. (IEEE P1220)

integration and assembly The technical and functional activities associated with combining all other level 3 hardware elements into a prime, level 2 mission equipment. (MIL-STD-881A)

integration test The progressive linking and testing of programs or modules in order to ensure their proper functioning in the complete system. (ISO 2382-20)

integration testing An orderly progression of testing in which software elements, hardware elements, or both are combined and tested until the entire system has been integrated. (ANSI/IEEE STD 729-1983), (IEEE -STD-1012-1986)

integration testing Testing in which software components, hardware components, or both are combined and tested to evaluate the interaction between them. (IEEE 610.12-1990)

intelligence report A report provided by the appropriate intelligence agency/command to the milestone decision authority prior to each milestone review. (?)

intelligent terminal A user terminal that has built-in data processing capability. (ISO 2382-1)

interchangeability The ability to substitute one unit for another within a system and have the system perform to its specification. (ARP 4754, Draft 35)

interchangeability A condition which exists when two or more items possess such functional and physical characteristics as to be equivalent in performance and durability, are capable of being exchanged one for the other without alteration on the items themselves or of adjoining items, except for adjustment, and without selection for fit and performance. (DSMC)

interchangeability Ability of an entity to be used in place of another, without modification, to fulfill the same requirements. (ISO 8402)

interchangeable item One which possesses such functional and physical characteristics as to be equivalent in performance to another item of similar or identical purposes; and is capable of being exchanged for the other item without selection for fit or performance, and without alteration of the items themselves or of adjoining items, except for adjustment. (MIL-STD-280A), (ASME Y14.24M)

interchangeable item When two or more items possess such functional and physical characteristics as to be equivalent in performance and durability and capable of being exchanged one for the other without alteration of the items themselves or of adjoining item except for adjustment, and without selection for fit or performance, the items are interchangeable. (DOD-STD-100C)

interface A boundary with the added consideration of responsibility. (INCOSE Concepts & Terms WG)

interface The functional and physical characteristics required at least at a common boundary. (MIL-STD-973)

interface The functional and physical characteristics required to exist at a common boundary or connection between persons, or between systems, or between persons and systems. (DSMC)

interface The shared boundary between two functional units, defined by functional and other characteristics, as appropriate. (SGOAA)

interface The specifically defined physical or functional juncture between two or more configuration items. (MIL-STD-1456A, App A 30.22)

interface A boundary or point common to two or more command and control systems, subsystems, or other entities against which or at which necessary information flow takes place. (AFM)

interface A shared boundary across which information is passed. (IEEE 610.12-1990)

interface A shared boundary. (ARD50020), (SAE Dictionary)

interface A shared boundary; it may be a piece of hardware used between two pieces of equipment, a portion of computer storage accessed by two or more programs, or a surface that forms the boundary between two types of materials. (McGraw Hill Dictionary)

interface A contractual or area of responsibility boundary between/among systems and/or subsystems. ()

interface — The functional and physical characteristics required to exist at a common boundary between two or more equipment or computer software products that are provided by different contractors or customer agencies. (MIL-STD-483)

interface — The boundary between a system and its environment, across which interaction occurs by the passing of information. (WG6)

interface — A shared boundary between two functional units, defined by a functional characteristics, common physical interconnection characteristics, signal characteristics, or other characteristics, as appropriate. (ISO 2382-1)

interface agreement — A document that describes the mutually agreeable configuration management practices and procedures for a given system or CI when more than one agency is designated design responsibility to perform management functions for items that interface with the configuration item. (MIL-STD-1456A)

interface block diagram — A drawing which shows interfaces. ()

interface control — The administrative and technical procedures and documentation necessary to identify functional and physical characteristics between and within configuration items provided by different developers, and to resolve problems concerning the specified interfaces. (IEEE 610.12-1990)

interface control — The process of identifying all functional and physical characteristics relevant to the interfacing of two or more items provided by one or more organizations. (MIL-STD-480B)

interface control — The delineation of the procedures and documentation, both administrative and technical, contractually necessary for identification of functional and physical characteristics between two or more CIs which are provided by different contractors/government agencies, and the resolution of problems thereto. (MIL-STD-483B)

interface control — The process of identifying, documenting, and controlling all functional and physical characteristics relevant to the interfacing of two or more items provided by one or more organizations. (MIL-STD-973)

interface control — Consists of the delineation of the procedures and documentation, both administrative and technical, contractually necessary for identification of functional and physical characteristics between two or more configuration items provided by different contractors/government agencies, and the resolution of the problems thereto. (DOD-HDBK-287, MIL-STD-1456A, App A 30.24)

interface control The process of (a) identifying all functional and physical characteristics relevant to the interfacing of two or more configuration items provided by one or more organizations, and (b) ensuring that proposed changes to these characteristics are evaluated and approved prior to implementation. (IEEE STD 828-1983)

interface control Comprises the delineation of the procedures and documentation, both administrative and technical, contractually necessary for identification of functional and physical characteristics between two or more configuration items that are provided by different contractors/ government agencies, and the resolution of the problems thereto. (MIL-STD-483A)

Interface Control Document (ICD) A drawing or other documentation which depicts physical and functional interfaces of related or co-functioning items. (MIL-STD-1369)

interface control documentation Documents resulting from that part of the systems engineering management plan describing how interface requirements will be accomplished. (AFM)

interface control drawing or document Formal interface control documentation developed under cognizance of an interface control working group and approved by participating contractors and customer agencies. (Aero Ind)

interface control drawing/document The technical documentation generated by each party to an interface control agreement that presents that party's interface and interfacing requirements. (MIL-STD-483), (AFSCP 80-7)

interface control management plan A document defining a set of common methods and processes to be used by all interface control participants in the effective development of interface control documentation. (Aero Ind)

interface control working group For programs which encompass a system, configuration item, or a computer software configuration item design cycle, an ICWG is established to control interface activity among the government, contractors, or other agencies, including resolution of interface problems and documentation of interface agreements. (MIL-STD-973)

interface control working group An organization created by the contracting agency and composed of members from each interfacing contractor and customer agency to establish and manage the interface control activity. (Aero Ind)

interface control working group (ICWG) For programs which encompass a system/CI/CSCI design cycle, an ICWG normally is established to control interface activity between the procuring activity, contractors or other agencies, including resolution of interface problems and documentation of interface agreements. (MIL-STD-480B), (MIL-STD-483A)

interface design document The Interface Design Document provides the detailed design of one or more CSCI interfaces. (MIL-STD-490A)

interface requirement The functional, performance, electrical, environmental, human, and physical requirements and constraints that exist at a common boundary between two or more functions, system elements, configuration items, or systems. (MIL-STD-499B-UNAPPROVED)

interface requirement A requirement that specifies an external item with which a system or system component must interact, or that sets forth constraints on formats, timing, or other factors caused by such as interaction. (IEEE 610.12-1990)

interface requirements specification This type of specification describes in detail the requirements for one or more CSCI interfaces in the system, segment, or prime item. (MIL-STD-490A)

interface revision A formal, approved change to a released ICD, requiring change notices and ICWG approval. ()

interface specification A document that specifies the interface characteristics of an existing or planned system or component. (IEEE 610.12-1990)

interface specification The description of essential functional, performance, and physical requirements and constraints at a common boundary between two or more functions or physical items. (IEEE P1220)

interface testing Testing conducted to evaluate whether systems or components pass data and control correctly to one another. (IEEE 610.12-1990)

interference, electromagnetic Any electromagnetic energy that interrupts, obstructs, or otherwise degrades or limits the effective performance of telecommunications (communication-electronic) equipment. (MIL-STD-463A)

interim system review A review conducted across the entire system to assess system development progress and to address issues not solved by a subsystem team. (MIL-STD-499B-UNAPPROVED)

intermediate maintenance That maintenance which is the responsibility of and is performed by designated maintenance activities for direct support of using organizations. (MIL-STD-973)

intermediate product An item which is produced during some phase of the software development process, and is an input product to a later phase, but is not provided to the user. (WG6)

intermittent failure — A failure which occurs momentarily. ()

intermittent fault — A fault of an item which persists for a limited time duration following which the item recovers the ability to perform a required function without being subjected to any action of corrective maintenance. (WG6)

internal attribute — An attribute which describes a system considered in isolation from its environment. (WG6)

internal attribute — The internal attribute of a product, process, or resource are those which can be measured purely in terms of the product, process, or resource itself. (WG6)

internal measure — A measure defined for an internal attribute of a system. (WG6)

interoperability — The capability of a system or subsystem to transfer information (or services), as required, to or from other systems or subsystems. (COMOPTEVFORINST 3960.1G)

interoperability — The ability of systems, units, or forces to provide services to or accept services from other systems, units, or forces and to use the services so exchanged to operate effectively together. (DSMC), (DODI 5000.2), (MIL-STD-480B), (AFR 80-14)

interoperability — The ability of two or more systems to exchange information and to mutually use the information that has been exchanged. (POSIX P1003.0 Draft 14 Guide)

interoperability — The ability of the defense services and agencies to exchange information with each other (joint operations) or with an allied system (combined operations) to enable them to operate effectively together. (MIL-STD-973)

interoperability — The ability of two or more systems or components to exchange information and to use the information that has been exchanged. (IEEE 610.12-1990)

interoperability — Attributes of software that bear on its ability to interact with specified systems. (WG6)

interoperability — The capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units. (ISO 2382-1)

inventory item Any item or piece of equipment that is available from, or has been previously procured by, the government. (AFSCP 800-7)

inventory item specification Used to establish the critical design/performance parameters of an item (usually government furnished in the government inventory for which a specification already has been authenticated and over which the program manager does not have direct configuration control. (DID-E-3105), (AFSCP 800-7)

inventory item specification A specification (Type C4) that identifies applicable inventory items (including their pertinent characteristics) that exist in the DOD inventory and that will be incorporated in a prime item or in a system being developed. (MIL-STD-490A)

inventory objectives The quantity of an item of material that will satisfy the military requirement under specified mobilization conditions. (DSMC)

item A term used to denote any unit or product including materials, parts, assemblies, equipment, accessories, and attachments. (MIL-STD-130B), (DOD-STD-100C)

item A non-specific term used to denote any unit or product including materials, parts, subassemblies, equipment, accessories and attachments. (MIL-STD-415D)

item A non-specific term used to denote any unit or product including materials, parts, assemblies, equipment, accessories and computer software. (MIL-STD-100F)

item A non-specific term used to denote any product, including systems, materials parts, subassemblies, sets, accessories, etc. (MIL-STD-721C, MIL-STD-280A)

item A non-specific term used to denote any product, including systems, subsystems, assemblies, subassemblies, units, sets, accessories, computer programs, computer software or parts. (MIL-STD-480B)

item A nonspecific term used to denote any product, including systems, subsystems, assemblies, subassemblies, units, sets, parts, accessories, computer programs, or computer software. (MIL-STD-499B-UNAPPROVED)

item A non-specific term used to denote any product, including systems, materials, parts sub-assemblies, sets, accessories, etc. (ARD50013-91), (ARD50010-91), (SAE Dictionary)

item — An all inclusive term used in place of any of the following: hardware, software (system software, reusable modules of application software..), system, equipment. (IEEE)

item — A general term covering materials, parts, components, systems or structures including computer software. (IAEA 50-C-QA)

item — That which can be individually described and considered. (WG6)

item — Any part, component, device, subsystem, functional unit, equipment or system that can be individually considered. (WG6)

item — An artifact or activity. (WG6)

item (hardware/software) — A system element that is hardware or software, or a combination of both (where the software includes only that associated with the hardware in meeting its intended use), (NAWCWPNS)

iterate — To do again for the purpose of expanding, understanding, refining, improving, indenturing, or updating current knowledge. (AFM)

iteration — Repetitive requirement. (DSMC)

iteration — Repeating an analysis cycle to produce a result that approximates the desired result more and more closely with each repetition. (Aero Ind)

iterative methodology — Sequential and repetitive top-down development of a topic by - identifying those actions (functions) required to accomplish the objective; allocating the (basic input) requirements to the appropriate functions (functional allocation); translating the requirements into solutions synthesis or conceptual design) through system/design engineering studies; portraying the interdependence among the solution elements; researching and evaluating the alternate solutions ad determining the most feasible solution; analyzing the selected solutions to assess the impact on the requirements/design and other solution elements. (AFM)

joint program — Any defense acquisition system, subsystem, component, or technology program that involves formal management or funding by more than one DOD Component during any phase of a system's life-cycle. (DODI 5000.2)

just-in-time — A method of manufacturing by which parts and assemblies are made or delivered as needed, thereby greatly reducing inventory. (NRC)

key functional characteristics — Those functional characteristics that critically affect the configuration item's satisfactory fulfillment of the operational requirements. (DoD Directive 5010.19), (DoD-STD-480A)

key process area — A cluster of related activities that, when performed collectively, achieve a set of goals considered important for establishing process capability. (SEI-93-TR-25)

knowledge base — The part of decision support system consisting of facts and heuristics about the domain. (Bahill)

knowledge base — A database that provides information about human experience in a particular domain and data resulting from the solution of problems that have been previously encountered. (ISO 2382-1)

label — All written, printed, or graphic matter; (a) on a medical device or any of its containers or wrappers, or (b) accompanying a medical device. (BioMed Ind)

laboratory architecture — A structure which is capable of being configured to represent a subject open system architecture. (SGOAA)

latent fault — An existing fault that has not yet been recognized. (WG6)

learnability — Attributes of software that bear on the users' effort for learning its application (for example, operation control, input, output), (WG6)

learning/improvement curve — A mathematical way to explain and measure the rate of change of cost (in hours or dollars) as a function of quantity. (DSMC)

legacy systems — Systems that are candidates for phase-out, upgrade, or replacement. (?)

lessons learned — Capitalizing on past errors in judgment, material failures, wrong timing or other mistakes ultimately to improve a situation or system. (DSMC)

lethality — The probability that weapon effects will destroy the target or render it neutral. (DSMC)

level 1 requirements — Top-level performance requirements, which are few in number, approved by HQ, and are eventually used to assess the success of the mission. (NASA MDP92)

level of performance The degree to which the needs are satisfied, represented by a specific set of values for the quality characteristics. (WG6)

level of safety A level of how far safety is to be pursued in a given context, assessed by reference to an acceptable risk, based on the current values of society.

life cycle The system or product evolution from the identification of a perceived customer need through the disposal of consumer products and their life-cycle process products and by-products. (IEEE P1220)

life cycle The scope of the system or product evolution beginning with the identification of a perceived customer need, addressing development, test, manufacturing, operation, support and training activities, continuing through various upgrades or evolutions, until the product and its related processes are disposed of. (IEEE P1220)

life cycle The period of time that begins when a system is conceived and ends when the system is no longer available for use.(IEEE STD 610.12), (BioMed Ind)

life cycle A generic term covering all phases of acquisition, operation, and logistics support of an item, beginning with concept definition and continuing through disposal of the item. (MIL-STD-973)

life cycle All phases of the system's life including research, development, test and evaluation, production, deployment (inventory), operations and support and disposal. (DSMC)

life cycle The total life span of an aeronautical system beginning with the concept formulation phase and extending through the operational phase up to retirement from the inventory. (OPNAVINST 4790.2b)

life cycle The scope of the systems or product evolution beginning with the identification of a perceived customer need, addressing development, test, manufacturing, operation, support and training activities, continuing through various upgrades or evolutions, until the product and its related processes are disposed of. (IEEE 93)

life cycle A set of processes and their temporal relationships that describe a continuous flow of actions and states associated with the existence of system. (DERA)

life cycle All the steps or phases an item passes through during its useful life. (WG6)

life cycle cost — The total investment in product development, manufacturing, test, distribution, operation, support, training, and disposal. (IEEE P1220)

life cycle cost — The total cost to the government of acquiring, operating, supporting, and (if applicable) disposing of the items being acquired. (FAR)

life cycle cost — The sum total of the direct, indirect, non-recurring, recurring, and other related costs incurred, or estimated to be incurred, in the design, development, test, evaluation, production, operation, maintenance, support, data handling, and disposal of a system over its anticipated life span. (MIL-STD-480B), (NASA MDP92)

life cycle cost — A management discipline in which costs related to the cradle to grave span of a system are reviewed and monitored. (WBS)

life cycle cost — The total cost to the government of acquisition and ownership of that system over its useful life. (DSMC), (DODI 5000.1), (MIL-STD-973)

life cycle cost — The total cost to society of an item over its entire life, from initial concept through manufacturing and use to disposal. (NRC)

life cycle cost — The sum total of the direct, indirect, non-recurring, recurring, and other related costs incurred, or estimated to be incurred in the design, research and development, investment, operation, maintenance, and support of a product over its life cycle. (MIL-HDBK-259(Navy), ¶ 3.3)

life cycle cost — Includes all cost categories, both contract and in-house, and all related appropriations. (MIL-STD-1785, ¶ 3.11)

life cycle cost — The total cost of an item or system over its full life. (AFR 80-14)

life cycle cost — The cost of acquisition plus operation and logistic support costs for the specified operational lifetime. (MIL-STD-499)

life cycle cost (LCC) — The total investment in product development, test, manufacturing, distribution, operation, training, and disposal. (IEEE P1220)

life cycle cost analysis — The identification, quantification, and qualification of LCC by segment with the purpose of establishing the cost interrelationships and the effect of each contributor to the total LCC. (MIL-HDBK-259(Navy))

life cycle costing — Life cycle costing is the usage of LCC (or segments thereof) in various decisions associated with acquiring a product. (MIL-HDBK-259(Navy))

life cycle environmental profile — A specialist document that identifies specific natural and induced environments including electromagnetic environments associated with each event in the service use profile. (NAWCWPNS)

life cycle model — A framework containing the processes, activities and tasks involved in the development, operation and maintenance of a system, spanning the life of a system from the definition of its requirements to the termination of its use. (WG6)

life cycle phase — Any period of time during soft-ware development or operation that may be characterized by a primary type of activity (such as design or testing) that is being conducted. (IEEE-STD-1012-1986)

life cycle process product — An end item required to perform a life-cycle process in support of a consumer product. (IEEE P1220)

life cycle processes — The eight essential functional processes which are considered to provide total consumer satisfaction and meet public acceptance. (IEEE P1220)

life cycle resources — All resources required for development, manufacturing, verification, deployment, operations, support, and disposal (including by-products) of an item throughout its life cycle. (MIL-STD-499B-UNAPPROVED)

life cycle test plan — A generic term which encompasses the major materiel tests conducted throughout the materiel life cycle. (AFM)

life units — A measure of use duration applicable to the item (e.g., operating hours, cycles, distance, round fired, attempts to operate), (MIL-STD-785B)

line replaceable unit — A unit that can be removed and replaced from the airplane by the line maintenance personnel (usually less than 40 pounds), (Aero Ind)

line replaceable unit — A unit that can be removed from an aerospace system and replaced with a like operating unit to restore the operational capability of the next-higher system. (DOD-STD-863B)

line replaceable unit — An item that is normally removed and replaced as a single unit to correct a deficiency or malfunction on a weapon or support system and item of equipment. (BMO-STD-77-6A)

line replaceable unit (LRU) An assembly which forms part of a system, designed to be removed and replaced in the event of failure to improve maintainability of a vehicle. (ARP 1834)

linear life cycle A life cycle in which different processes are not executed concurrently. (DERA)

live fire test & evaluation Testing conducted to provide a timely and thorough assessment of the vulnerability and lethality of a system as it progresses through its development and subsequent production phases. (COMOPTEVFORINST 3960.1G)

live fire test & evaluation Survivability testing and lethality testing required before full-scale production. (DSMC)

local area network A computer network located on a user's premises within a limited geographical area. (ISO 2382-1)

local area network (LAN) A data network, located on a user's premises, within a limited geographic region. (FIPS PUB 11-3)

local fault A fault that is present in a part of a system but has not yet contributed to a system failure, e.g., a latent component fault. (WG6)

local user requirements Requirements that are expressed by a system development organization that are not present in the user requirement or in requirements allocated in a contract. (DERA)

logic system That portion of a safety-related system that performs the safety-function logic but excluding the sensors and final elements. (IEC 1508)

logical interface The requirements associated with establishing a data interchange interface between a source of data and the end user of the data. (SGOAA)

logistic support analysis The selective application of scientific and engineering efforts undertaken during the acquisition process, as part of the systems engineering and design process, to assist in complying with supportability and other ILS objectives. (MIL-STD-1388-1A, 20.)

logistic support analysis A systems engineering and design process selectively applied during all life cycle phases of the system/equipment to help ensure supportability objectives are met. (MIL-STD-1785)

logistic support analysis The portion of a system requirements analysis focusing on maintaining and supporting a system. (Aero Ind)

logistic support analysis (LSA) The selective application of scientific and engineering efforts undertaken during the acquisition process, as part of the systems engineering process, to assist in: causing support considerations to influence design; defining support requirements that are related optimally to design and to each other; acquiring the required support; and providing required support during the operational phase at minimum cost. (DSMC, DODI 5000.2)

logistics The science of planning and carrying out the movement and maintenance of forces. (DSMC)

logistics engineering The application of support planning and analysis techniques to: (a) Define, optimize, and integrate the logistics support considerations into the mainstream engineering effort, (b) Determine the optimal logistics posture to be established for support of a weapon system/program, and (c) Perform logistic support analysis and other synthesis, modeling, or evaluation necessary to establish optimal logistics support requirements for the activation or operational phases of a program. (MIL-STD-881A)

logistics supportability The degree to which planned logistics support (including test, measurement, and diagnostic equipment; spares and repair parts; technical data; support facilities; transportation requirements; training; manpower; and software support) allow meeting system availability and wartime usage requirements. (DODI 5000.2)

logistics supportability How well the composite of support considerations necessary to achieve the effective and economical support of a system or equipment for its life cycle meets stated quantitative and qualitative requirements. (AFR 80-14)

long lead items/long lead materials Those components of a system or piece of equipment for which the times to design and fabricated are the longest, and, therefore, to which an early commitment of funds may be desirable in order to meet the earliest possible date of system completion. (DSMC)

longitudinal redundancy A method for detecting errors in a series of bytes. (BioMed Ind)

lot A collection of units of product bearing identification and treated as a unique entity from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria. (MIL-STD-105)

low rate initial production (LRIP) The production of a system in limited quantity to provide articles for operational test and evaluation, to establish an initial production base,

and to permit an orderly increase in the production rate sufficient to lead to full-rate production upon successful completion of OT&E. (COMOPTEVFORINST 3960.1G), (DSMC), (DODI 5000.2)

LSAR candidate An end item assembly, subassembly component, or part which is considered to be repairable and for which an LSAR is required. (BMO-STD-77-6A)

mainframe A computer, usually in a computer center, with extensive capabilities and resources to which other computers may be connected so that they can share facilities. (ISO 2382-1)

maintainability The capability of an item to be retained in or restored to specified conditions when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. (COMOPTEVFORINST 3960.1G)

maintainability The measure of the ability of an item to be retained in or restored to specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. (MIL-STD- 721C), (MIL-STD-1388-1A)

maintainability A characteristic of design and installation which is expressed as the probability that an item will be retained in, or restored to a specified condition within a given period of time, when the maintenance is performed in accordance with prescribed procedures and resources. (DOD HDBK 248)

maintainability The engineering discipline concerned with predicting, assessing, and improving the maintainability and availability of the weapon system. (WBS)

maintainability The ability of an item to be retained in or restored to specified conditions when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. (DSMC, DODI 5000.2)

maintainability A measure of the time or maintenance resources needed to keep an item operating or to restore it to operational status (or serviceable status), (MIL-STD-1785)

maintainability A characteristic of design and installation which is expressed as the probability that restored to a specified condition within a given period of time, when the maintenance is performed in accordance with prescribed procedures and resources. (MIL-STD 721)

maintainability The characteristic of material design and installation that determines the requirements for maintenance expenditures, including time, manpower, personnel skill, test equipment, technical data and facilities to accomplish operation objectives in the operational environment of the user. (Aero Ind), (NAWCWPNS)

maintainability The attributes of a design and installation that determine the need for maintenance resources to continue revenue operations. (Aero Ind)

maintainability A characteristic of design and installation expressed as the probability that an item will be restored to a specified condition within a given period of time when the maintenance is performed using prescribed procedures and resources. (AFR 80-14)

maintainability The ease with which a system or component can be modified to correct faults, improve performance or other attributes, or adapt to a changed environment. (IEEE 610.12-1990)

maintainability The average effort needed to ensure that an item remains in or is restored to its operable state under operational conditions. (Aero Ind)

maintainability The ability of an item to be retrained in or restored to specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. (DOD 5000.40)

maintainability A set of attributes that bear on the effort needed to make specified modifications. (WG6)

maintainability The ease with which software can be understood, corrected, adapted, and/or enhanced. (WG6)

maintainability The probability that a given active maintenance action, for an item under given conditions of use can be carried out within a stated time interval, when the maintenance is performed under stated conditions and using stated procedures and resources. (WG6)

maintainability The probability that a given active maintenance action to an item under given conditions of use can be carried out within a stated time interval when the maintenance is performed under stated conditions and using stated procedures and resources. (IEC 987)

maintainability mission The measure of the ability of an item to be retained in or restored to specified condition when maintenance is performed during the course of a specified mission profile. (MIL-STD-721C)

maintenance All actions necessary for retaining an item in or restoring it to a specified condition. (MIL-STD-721C)

maintenance Activity intended to keep equipment (hardware) or programs (software) in satisfactory working condition, including tests, measurements, replacements, adjustments, repairs, program copying, and program improvement. (MIL-STD-1309B), (COMOPTEVFORINST 3960.1G)

maintenance The upkeep of property, necessitated by wear and tear, which neither adds to the permanent value of the property nor appreciably prolongs its intended life but keeps it in efficient operating condition.(DSMC)

maintenance The physical act of preventing, determining, and correcting equipment or software faults. (MIL-STD-1379D, 3.90)

maintenance The functions of sustaining materiel in an operational status, restoring it to a serviceable condition, or updating and upgrading its functional utility through modification. (AFM)

maintenance All actions necessary for retaining an item in or restoring it to a specified condition. (MIL-STD-721C)

maintenance (1) The process of modifying a software system or component after delivery to correct faults, improve performance or other attributes, or adapt to a changed environment. (2) The process of retaining a hardware system or component in, or restoring it to, a state in which it can perform its required functions.

maintenance Inspection, overhaul, repair, preservation, and the replacement of parts, but excludes preventive maintenance. (FAR Ch. 1), (Aero Ind)

maintenance Those actions required to restore or maintain an item to a serviceable condition. (Aero Ind)

maintenance The process of modifying a software system or component after delivery to correct faults, improve performance or other attributes, or adapt to a changed environment. (IEEE STD 610.12-1990)

maintenance The process of modifying a system or component after delivery to correct faults, improve performance or other attributes, or adapt to a changed environment. (SEI)

maintenance The combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform an required function. (IEC 987)

maintenance access solid A CATIA representation of the solid required to perform maintenance on the item in the airplane. (Aero Ind)

maintenance access solid Volume of space needed for a technician to access a component, apply and use the appropriate tools, perform the required maintenance task, i.e., adjust, inspect, check out, remove, install, etc. (Aero Ind)

maintenance action An element of a maintenance event. (MIL-STD-721C)

maintenance adaptive Software maintenance performed to make a computer program usable in a changed environment. (IEEE 610.12-1990)

maintenance concept A description of the planned general scheme for maintenance and support of an item in the operational environment.(NAVAIR 01-1A-33)

maintenance corrective Maintenance performed to correct faults in hardware or software. (IEEE 610.12-1990)

maintenance corrective All actions performed as a result of failure, to restore an item to a specified condition. (MIL-STD-721C)

maintenance deferred Maintenance not having any bearing on flight safety, which is deferred to a convenient time and/or location for accomplishment. (WATOG)

maintenance event One or more maintenance actions required to effect corrective and preventative maintenance due to any type of failure or malfunction, false alarm, or scheduled maintenance plan. (MIL-STD-721C)

maintenance line Routine check, inspection and malfunction rectification performed enroute and at base stations during transit, turnaround or night stop. (WATOG)

maintenance manning level Total authorized or assigned personnel, per system at specified levels of maintenance organization. (MIL-STD-721C)

maintenance non routine — Maintenance required of airplane components that have a failure. (Aero Ind)

maintenance perfective — Software maintenance performed to improve the performance, maintainability, or other attributes of a computer program. (IEEE 610.12-1990)

maintenance plan — A document containing technical data, tailored to a specific weapon system maintenance concept, which identifies maintenance and support resource requirements to maintain aeronautical systems, equipment, and support equipment (SE) in an operationally ready state.(OPNAVINST 4790.2b)

maintenance preventive — All actions performed in an attempt to retain an item in specified condition by providing systematic inspection, detection, and prevention of incipient failures. (MIL-STD-721C)

maintenance preventive — Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations. (FAR Ch. 1)

maintenance priority classification — The categorization of the priority or need for a maintenance response to a failure. (Aero Ind)

maintenance ratio — A measure of the total maintenance manpower burden required to maintain an item. (MIL-STD-721C)

maintenance routine — Maintenance not associated with replacement of failed items, i.e., servicing of fluids or cleaning. (Aero Ind)

maintenance scheduled — Preventive maintenance performed at prescribed points in the item's life. (MIL-STD-721C)

maintenance scheduled — That maintenance performed at defined intervals to retain an item in a serviceable condition by systematic inspection, detection, replacement of wearout items, adjustment, calibration, cleaning, etc. (WATOG)

maintenance scheduled — That maintenance performed on an airplane at a predetermined number of flight hours or cycles to retain an item in a serviceable condition by systematic inspection, detection, replacement of worn out items, adjustment, calibration, cleaning, etc. (Aero Ind)

maintenance time — An element of down time that excludes modification and delay time. (MIL-STD-721C)

maintenance unscheduled conditions. Corrective maintenance required by item (MIL-STD-721C)

maintenance unscheduled That maintenance performed to restore an item to a satisfactory condition by providing correction of a known or suspected malfunction and/or defect. (Aero Ind)

major characteristic A specified characteristic of an item is classified as major when a defect in that characteristic is likely to result in the failure of the item, or to reduce materially the usability of the item for its intended purpose. (Aero Ind)

major defect A defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose. (MIL-STD-105D)

major review A formal design review or audit that constitutes a program milestone event. (MIL-STD-499B-UNAPPROVED)

major software upgrade A change to the system architecture which would result in a cumulative one-third modification to a computer software configuration item (DOD-STD-2167A) or sub-system specification (DOD-STD-7935A) within any 5-year period and as measured in compilable source lines of code. (SECNAVINST 5234.2A)

major system A combination of elements that will function together to produce the capabilities required to fulfill a mission need, including hardware, equipment, software, or any combination thereof, but excluding construction or other improvements to real property. (DODI 5000.2), (IEEE 610.12-1990)

major system That combination of elements (such as hardware, software, facilities, and services) that will function together to produce the capabilities required to fulfill a mission need. (NMI 7100. 14A)

malfunction The occurrence of a condition whereby the operation is outside specified limits. (?)

management subsystem A data processing subsystem which may interface to a human to determine options and select alternatives for implementation. (SGOAA)

manifestation of a latent fault The event in which a latent fault gives rise to a failure. (WG6)

manufacture The complete sequence of actions that construct systems from specifications and raw materials. (DERA)

manufacturer — An individual, company, corporation, firm or government activity who: (a) Controls the production of an item, or, (b) Produces an item from crude or fabricated materials, or, (c) Assembles materials or components, with or without modification, into more complex items. (MIL-STD-100F)

manufacturer — A person or firm who owns or leases and operates a factory or establishment that produces (on the premises) materials, supplies, articles, or equipment required under the contract (or of the general character described by the specifications, standards, and publications), (MIL-STD-130G), (FAR)

manufacturer — A person or firm (a) who owns, operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the contract or of the general character described by the specifications, standards and publications.

manufacturer — Includes all organizations that directly employ the manufacturing system to produce elements of the operational system.

manufacturer — Any person, including any re-packer and/or re-labeler, who manufactures, fabricates, assembles, or processes a finished device.

manufacturer's empty weight (MEW) — Weight of structure, power plant, furnishings, systems and other items of equipment that are an integral part of the aircraft configuration. (Aero Ind)

manufacturing — The tasks, actions, and activities to be performed and system elements required for fabrication and assembly of engineering test models and brassboard and low-rate initial production and full-rate production of system end items. (MIL-STD-499B-UNAPPROVED)

manufacturing — The process of making an item by hand, or, especially, by machinery, often on a large scale and with division of labor. (DSMC, DODI 5000.2)

manufacturing — The process of producing component parts, assemblies, and complete products, including fabrication, assembly, test, storage, and distribution. (NRC)

manufacturing — The tasks, actions, and activities for fabrication and assembly of engineering test models and brassboards, prototypes, and production of consumer product solutions and their life-cycle process products. (IEEE P1220)

manufacturing data — Manufacturing data is information essential to manufacturing, and includes the required performance of special/peculiar/unique manufacturing operations. (MIL-STD-885B)

manufacturing effectiveness Manufacturing effectiveness is a quantitative measure of the manufacturer's effectiveness in producing the operational system. (NAWCWPNS)

manufacturing function The tasks, actions, and activities to be performed and system elements required for fabrication and assembly of engineering test models and brassboards and low-rate initial-production and full-rate production of system end items. (MIL-STD-499B-UNAPPROVED)

manufacturing material Any material such as a cleaning agent, mold-release agent, lubricating oil, or other substance used to facilitate a manufacturing process and which is not intended by the manufacturer to be included in the finished device. (Bio Med)

manufacturing system The manufacturing system is a system that provides a capability to produce the operational system. (NAWCWPNS)

manufacturing system The system that provides a capability to produce the operational system (i.e., the Mission, Support, and Training systems), (NAWCWPNS)

market research The process used for collecting and analyzing information about the entire market available to satisfy the minimum agency needs to arrive at the most suitable approach to acquiring, distributing, and supporting supplies and services. (FAR 10.002)

master copies of software The approved versions of software from which copies are made for use and reproduction in the manufacturing environment. (Bio Med)

master gage A hardware tool that provides a method of controlling physical interfaces between mating parts, including attachment provisions, where dimensional tolerance buildup can jeopardize interface compatibility. (Aero Ind)

master minimum equipment list (MMEL) The master FAA-approved list of items for an airplane type which may be inoperative for flight under specified conditions. (Aero Ind)

material Property that may be incorporated into or attached to a deliverable end item or that may be consumed or expended in performing a contract. (FAR)

material — Property which may be incorporated into or attached to an end item to be delivered under a contract or which may be consumed or expended in the performance of a contract. (DSMC)

material specification — Specifies the properties and alloy content of a nonstandard material critical to the correct manufacture of an item. (DID-E-3131), (AFSCP 800-7)

material specification — The type of specification (Type E) applicable to a raw material (chemical compound), mixtures (cleaning agents, paints), or semi-fabricated material (electrical cable, copper tubing) that are used in the fabrication of a product. (MIL-STD-490A)

materiel — A generic term covering systems, equipment, stores, supplies and spares, including related documentation, manuals, computer hardware and software. (MIL-STD-480B)

materiel developer — The command or agency responsible for research, development, and production validation of a system which responds to HQ DA objectives and requirements. (AFM)

mathematical model — Any model that uses mathematics to predict the value of a parameter or set of parameters for a given system. (Aero Ind)

mature airplane model — An airplane model is considered mature when the fleet has accomplished scheduled departures. (Aero Ind)

maturity — Attributes of software that bear on the frequency of failure by faults in the software. (WG6)

maturity level — A well-defined evolutionary plateau toward achieving a mature software process. (SEI-93-TR-25)

may — Indicates an optional feature, and can be interpreted in implementation as a feature that can be provided but is not required. (Adapted from POSIX91), (SGOAA-1)

mean time between demands (MTBD) — The total number of system life units divided by the total number of item demands on the supply system during a stated period of time. (MIL-STD-721 C)

mean time between failure — A basic measure of reliability for repairable items: The mean number of life units during which all parts of the item perform within their specified limits, during a particular measurement interval under stated conditions. (MIL-STD-721C)

mean time between failure — The mean equipment operating time between failures. (MIL-STD-1369)

mean time between failure — For a particular interval, the total functional life of a population of an item divided by the total number of failures within the population. (DSMC)

mean time between failure — A performance figure calculated by dividing the total unit flying hours (airborne) accrued in a period by the number of unit failures that occurred during the same period. (Aero Ind)

mean time between failure (MTBF) — Mathematical expectation of the time interval between two consecutive failures of an item. (ARP 4754, Draft 35)

mean time between maintenance actions (MTBMA) — A measure of the system reliability parameter related to demand for maintenance manpower: The total number of system life units, divided by the total number of maintenance actions (preventive and corrective) during a stated period of time. (MIL-STD-721C)

mean time between unscheduled removals (MTBUR) — Time interval between two consecutive unscheduled removals of an item. (ARP 4754, Draft 35)

mean time to failure (MTTF) — A basic measure of reliability for non-repairable items: The total number of life units of an item divided by the total number of failures within that population, during a particular measurement interval under stated conditions. (MIL-STD-721C)

mean time to repair — The sum of corrective maintenance times at any specific level of repair, divided by the total number of failures within an item repaired at that level, during a particular interval under stated conditions. (MIL-STD-721C)

mean time to repair — The mean active repair time required to repair the equipment after a malfunction has occurred. (MIL-STD-1369)

mean time to repair — The total elapsed time (clock hours) for corrective maintenance actions during a given period of time. (DSMC)

mean time to repair (MTTR) — The average time required to perform active corrective maintenance. (COMOPTEVFORINST 3960.1G)

mean time to repair (MTTR) — The mean time to repair a safety-related system, or part thereof. (IEC 1508)

measure — A unit of measurement such as source lines of code or document pages of design. (SEI)

measure — An empirical, objective assignment of a number (or symbol) to an entity (object or event) to characterize an attribute. (WG6)

measure — A function or quantity used to describe a random variable or a random process. (WG6)

measure — An objective assignment of a number (or symbol) to an entity which characterizes a particular attribute. (WG6)

measure of effectiveness — The quantitative expression (sometimes modified by subjective judgment) of the success of a system in achieving a specified objective. (DSMC)

measure of effectiveness — A particular value or set of values of system/subsystem effectiveness pertinent to one or more mission objectives. (AFM)

measure of effectiveness — Quantitative evaluation criteria that have application throughout the engineering life cycle of a system. (Aero Ind)

measure of effectiveness — An expression of system effectiveness with added consideration of cost and risk. (Aero Ind)

measure of effectiveness — The figure-of-merit which provide a quantitative means for comparing alternative system solutions. (IEEE P1220)

measure of effectiveness (MOE) — A metric used to quantify the performance of system products and processes in terms that describe the utility or value when executing customer missions. (MIL-STD-499B-UNAPPROVED)

measure of effectiveness (MOE) — The metrics by which a customer will measure satisfaction with products produced by the technical effort. (IEEE P1220)

measure of effectiveness hierarchy — A top-down set of measures of effectiveness that establishes a relationship from customer needs, requirements, and objectives to design criteria. (MIL-STD-499B-UNAPPROVED)

measure of performance — A performance measure that provides design requirements which are necessary to satisfy a measure of effectiveness. (IEEE P1220)

measurement — The action of applying a software quality metric to a specific software product. (WG6)

measurement — Application of a metric for product quality or process productivity. (WG6)

measurement — The process of empirical, objective assignment of numbers (or symbols) to properties of entities (objects and events) in the real world in such a way as to describe them. (WG6)

megaflops — A unit of measure of processing performance equal to one million floating-point operations per second. (ISO 2382-1)

memory — All of the addressable storage space in a processing unit and all other internal storage is that is used to execute instructions. (ISO 2382-1)

menu — A list of options displayed by a data processing system, from which the user can select an action to be initiated. (ISO 2382-1)

method — A formal, well-documented approach for accomplishing a task, activity, or process step. (IEEE P1220)

method — A detailed approach to solving an engineering problem. (WG6)

method — A formal, well-documented approach for accomplishing a task, activity, or process step governed by decision rules to provide a description of the form or representation of the outputs. (IEEE P1220)

methodology — A collection of methods, procedures, and standards that defines an integrated synthesis of engineering approaches to the development of a product. (SEI-93-TR-25)

methodology — A general approach to solving an engineering problem. (WG6)

metric — A standard of measurement. (MIL-STD-499B-UNAPPROVED)

metric — A quantitative measure of the degree to which a system, component or process possesses a given attribute. (IEEE 610.12-1990), (MIL-STD 490A), (MIL-STD-499), (MIL-STD-499A), (MIL-STD-1521)

metric — Synonymous with measure. (WG6)

metric — A quantitative measure of the degree to which a system, component, or process possesses a given attribute. (WG6)

metric system of measurement The International System of Units (or SI from the French Le Systeme International d'Unites) as established by the General Conference on Weights and Measures in 1960, and as interpreted or modified for the United States by the Secretary of Commerce. (DODI 5000.2)

migration systems An existing AIS, or a planned and approved AIS, that has been officially designated to support common processes for a functional activity applicable to use DOD-wide or DOD component-wide.(Ref DOD 8020.1-M)

milestone decision authority The individual designated to approve entry of an acquisition into the next phase of life cycle management in accordance with applicable directives. (SECNAVINST 5234.2A)

millions of instructions per second A unit of measure of processing performance equal to one million instructions per second. (ISO 2382-1)

minimum acceptable operational requirement The value for a particular parameter that is required to provide a system capability that will satisfy the validated mission need. (DODI 5000.2)

minimum equipment list (MEL) An approved list of items which may be inoperative for flight under specified conditions. (Aero Ind)

minimum required accomplishments Necessary tasks that must be completed during an acquisition phase prior to the next milestone decision review. (DODI 5000.2)

minimum tasks Those V&V tasks applicable to all projects. (IEEE-STD-1012-1986)

minor characteristic A classification of an item applicable when a defect in that characteristic is not likely to reduce materially the usability of the item for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the item. (Aero Ind)

minor defect A defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit. (MIL-STD-105D)

mips A unit of measure of processing performance equal to one million instructions per second. (ISO 2382-1)

mishap — An undesirable consequence of system failure, whose cost, whether economic, ecological, or in terms of injury or loss of life, is unacceptable. (WG6)

mission — The objective or task, together with the purpose, which clearly indicates the action to be taken. (DSMC)

mission — A specific activity or effort carried out by or under the direction of a designated organization or agency for the purpose of achieving defined objectives and/or desired results. (Aero Ind)

mission analysis — A process to determine the operational capabilities of military forces that are required to carry out assigned missions, roles and tasks in the face of the existing and/or postulated threat with an acceptable degree of risk. (DSMC)

mission analysis — Formal requirements for development of a new air system, an update to an existing system, or a planned product improvement initiates the systems engineering process. (NAVAIRINST 5451.2)

mission critical function — Any function which, if it fails, results in an incomplete mission, a mission abort or a loss of payload. (SGOAA)

mission critical system — A system whose operational effectiveness and operational suitability are essential to successful completion or to aggregate residual combat capability. (DODI 5000.2)

mission element — A segment of a mission area critical to the accomplishment of the mission area objectives and corresponding to a recommendation for a major system capability as determined by a DOD Component. (DSMC)

mission essential — An item that, if failed, will reduce the airplane's capability or the crew's ability to cope with adverse operating conditions. (Aero Ind)

mission need — A statement of operational capability required to perform an assigned mission or to correct a deficiency in existing capability to perform the mission. (DSMC, DODI 5000.2)

mission need — The capability that is required to accomplish an agency mission or to effectively pursue a scientific, technological, or engineering opportunity related to an agency mission, including cost and schedule considerations. (NMI 7100.14A)

mission need — The capabilities required to accomplish a mission or to effectively pursue a scientific, technological, or engineering opportunity related to a mission, including cost and schedule considerations. (NMI 7100.14A)

mission need analysis — Assesses alternatives in an operational context, identifying what force capabilities would be gained (or foregone) by pursuing any of a designated set of alternatives. (DSMC)

mission objectives — Statements of the purpose of the mission, its output products, and the expected results of the mission which must be stated in the most descriptive and concise terms possible. (NASA MDP92)

mission operations — Any activity required to conduct and otherwise support the mission after launch and early orbit engineering checkout. (NASA MDP92)

mission profile — A time-phased description of the events and environments an item experiences from initiation to completion of a specified mission, to include the criteria of mission success or critical failures. (MIL-STD-721C), (MIL-STD-785B)

mission profile — A portrayal of operations functions, e.g., a top level FFBB. (AFM)

mission ready mode — A system condition wherein all system elements, including hardware, software, human and procedural, are available to enable the system to perform its intended function and the current mission for which it is intended. (SGOAA)

mission reliability — The probability that the system will perform mission essential functions for a period of time under the conditions stated in the mission profile. (DODI 500.2)

mission reliability — The ability of an item to perform its required functions for the duration of a specified mission profile. (MIL-STD-785B)

mission system — Those operational system elements required to accomplish the mission of the operational system. (NAWCWPNS)

mobilization base — The total of all resources available, or which can be made available, to meet foreseeable wartime needs. (DSMC)

mode — A predefined set of hardware and software configurations, and associated procedures used to organize and manage the conditions of operation for an avionics system's behavior, as planned, pre-planned or directed by a human. (SGOAA)

mode — A particular functioning arrangement or condition. (Webster's Ninth)

mode — Mutually exclusive ways of operating a system. (Aero Ind)

mode — An operating condition of a function or sub-function or physical element of the system. (IEEE P1220)

mode of operation — The way in which a safety-related system is intended to be used with respect to the frequency of demands made upon it in relation to the proof check frequency. (IEC 1508)

model — A representation of an actual or conceptual system that involves mathematics, logical expressions, or computer simulations that can be used to predict how the system might perform or survive under various conditions or in a range of hostile environments. (DODI 5000.2)

model — A representation of an artifact or activity intended to explain the behavior of some aspects of it. (WG6)

model — An abstract representation (often a mathematical representation) of an entity or an attribute. (WG6)

model for quality assurance — Standardized or selected set of quality system requirements combined to satisfy the quality assurance needs of a given situation. (ISO 8402)

modification — A minor change in the details of a provision or clause that is specifically authorized by the FAR and does not alter the substance of the provision or clause. (FAR)

modification — The process of changing software. (DOD-HDBK-287)

modification — Change to the design of an item. (WG6)

modification state — A specification of which modifications have been carried out on a particular example of an item in use on a given installation. (WG6)

modular — Pertaining to software that is organized into limited aggregates of data and contiguous code that perform identifiable functions. (DOD-STD-2167)

modular architecture An architecture composed of discrete components such that the design of one component depends only on the interface to other components, not on their internal design. (SSP 30235)

modular decomposition The process of breaking a system into components to facilitate design and development; an element of modular programming. (IEEE 610.12-1990)

modularity The degree to which a system or computer program is composed of discrete components such that a change to one component has minimal impact on other components. (IEEE 610.12-1990)

modularization The decomposition of a system into functional units, to impose hierarchical ordering on function usage, to implement data abstractions, and to develop independently useful subsystems. (Bio Med)

module An independently compilable software component made up of one or more procedures or routines or a combination of procedures and routines. (DSMC)

module A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading. (IEEE 610.12-1990)

module A uniquely identified element of a computer program which performs a specific function or set of related functions. (Aero Ind)

module A self contained software item with a specified function and a defined interface to the rest of the system. (WG6)

module A logically separable part of a computer program. (WG6)

monitor The means by which the status or faulty operation of an item is ascertained, e.g., sensor, fault monitoring circuit, etc. (Aero Ind)

multidisciplinary teamwork The timely and cooperative application of all appropriate disciplines in an open-communication, shared-information environment to effect people functioning as a team to achieve optimum solutions to problems regardless of the actual organizational structure employed. (MIL-STD-499B-UNAPPROVED)

multi-media service A service of the trm that provides the capability to manipulate and manage information products consisting of text, graphics, images, video, and audio. (TA)

munition A device charged with explosives, propellants, pyrotechnics, initiating compositions, or nuclear, biological, or chemical material for use in connection with defense or offense, including demolition. (NAVSEAINST 8010.5)

nacelle The combination of the inlet, exhaust nozzle, thrust reverser and cowling. (Aero Ind)

natural language A language whose rules are based on current usage without being specifically prescribed. (ISO 2382-1)

need A user related capability shortfall, or an opportunity to satisfy a capability requirement because of a new technology application or breakthrough, or to reduce costs. (MIL-STD-499B-UNAPPROVED)

negligible contamination level That level of nuclear, biological, and chemical contamination that would not produce militarily significant effects in previously unexposed and unprotected persons operating or maintaining the system. (DODI 5000.2)

network An arrangement of nodes and interconnecting branches. (ISO 2382-1)

network chart A directed graph used for describing and scheduling events, activities, and their relationships in project control. (ISO 2382-20)

network planning A technique that uses network charts for planning, scheduling and controlling a project. (ISO 2382-20)

network services manager A control subsystem which manages peer-to-peer communication between applications software running on distributed processing elements communicating over a network. (SGOAA)

neural network A computer system distinguished by its massively parallel adaptive connections. (Bahill)

next higher level effect The consequence(s) a failure has on the operation, functions, or status of the items in the next higher indenture level above the indenture level under consideration. (Aero Ind)

nomenclature A government-issued, standardized item/name description. (AFSCP 80-7)

non complex item development specification (type b3) A type of specification applicable to configuration items of relatively simple design that meet the following criteria: (a) During development of the system or configuration item, the non complex item can be shown to be suitable for its intended application by inspection or demonstration, (b) Acceptance

testing to verify performance is not required, (c) Acceptance can be based on verification that the item, as fabricated, conforms to the drawings, (d) The end product is not software. (MIL-STD-490A)

non complex item specification Normally used for program-peculiar items of simple design that require documentation of their design for logistics/procurement purposes. (AFSCP 800-7)

non conformance The failure of a unit of product to conform to specified requirements for any quality characteristic. (Handbook H53)

non conformance A condition of any device or component in which one or more characteristics do not conform to requirements; includes failures, deficiencies, defects, and malfunctions. (FDA 90-423)

non critical device Any finished device other than a critical device. (Bio Med)

non developmental item Existing developed and available hardware or software that are capable of fulfilling requirements, thereby minimizing or eliminating the need for costly, government-sponsored research and development programs. (MIL-STD-480)

non developmental item (a) Any item of supply that is available in the commercial marketplace including COTS, (b) Any previously developed item of supply that is in use by a department or agency of government, or a foreign government (with mutual defense cooperation agreement), (c) Any item of supply described in definition (a) or (b), above, that requires only minor modification in order to meet the requirements of the procuring agency or, (d) Any item of supply that is currently being produced that does not meet the requirements of definition (a), (b), or (c) above, solely because the item is not yet in use or is not yet available in the commercial marketplace. (MIL-STD-499B-UNAPPROVED)

non developmental item A broad generic term that covers material available from a wide variety of sources with little or no development effort required by the government. (MIL-STD-973)

non developmental item Any of the following: (a) Item of supply that is available in the commercial marketplace, (b) Previously developed item of supply that is in use by department or agency of the United States, a state or local government, or a foreign government with which the United States has a mutual defense cooperation agreement, (c) Item described above that requires only minor modification to meet the procuring agency's requirements, (d) Item currently being produced that does not meet the above requirements solely because it is not yet in use, or not yet available in the

commercial marketplace (section 907 of the Defense Acquisition Improvement Act of 1986), (MIL-STD-2036)

non developmental item (NDI), (1) Any item of supply that is available in the commercial marketplace, (2) Any previously developed item of supply that is in use by a department or agency of the United States, a State or local government, or a foreign government with which the United States has mutual defense cooperation agreement, (3) Any item of supply described in definition (1) or (2) above, that requires only minor modification in order to meet the requirements of the procuring agency or, (4) Any item of supply that is currently being produced that does not meet the requirement of definition 1, 2, or 3 above, solely because the item is not yet in use or is not yet available in the commercial marketplace. (COMOPTEVFORINST 3960.1G), (DFAR), (DSMC), (DODI 5000.2)

non developmental software (NDS) Deliverable software that is not developed under the contract but is provided by the contractor, the government, or a third party. (DOD-STD-2167A)

non essential function A single function whose failure would not reduce the capability of the airplane or the ability of the crew to cope with adverse operating conditions. (Aero Ind)

non essential function Functions for which failures or design errors could not significantly degrade aircraft capability or crew ability. (Aero Ind)

non essential systems Those systems whose failure would not contribute to or cause a failure condition which would significantly impact the safety of the airplane or the ability of the flight crew to cope with adverse operating conditions. (Aero Ind)

non major defense acquisition program A program other than a major defense acquisition program or a highly sensitive classified program. (DODI 5000.2)

non material solution Solutions to mission needs (warfighting deficiencies) that can be satisfied by changes in doctrine, tactics, operational concepts, training or organizations. (DSMC)

non recurring costs As applied to ECPs, these are one time costs, which will be incurred if an engineering change is approved and which are independent of the quantity of items changed, such as cost of redesign, special tooling, or testing. (MIL-STD-973)

non recurring costs One-time costs incurred if an engineering change is ordered and which are independent of the quantity of items changed, such as, cost of redesign, special tooling or qualification. (MIL-STD-481A)

non recurring costs — One-time costs that will be incurred if an engineering change is ordered and that are independent of the quantity of items changed e.g., cost of redesign, special tooling, or qualification. (DoD-STD-480A)

non standard part — Any part which does not meet the definition of a standard part. (?)

non technical requirements — Agreements, conditions and/or contractual terms that affect and determine the management activities of a software project. (SEI-93-TR-25)

non volatile memory — Memory which does not require power to retain the stored data. (Aero Ind)

nonconformance — The failure of a unit or product to conform to specified requirements. (MIL-STD-973)

non-conformance — Incorrect, incomplete or superfluous implementation of an input product by an output product at some phase of system development. (WG6)

non-conformance — A deficiency in characteristics, documentation or procedure which renders the quality of an item unacceptable or indeterminate. (IAEA 50-C-QA)

non-conformity — Non-fulfillment of a specified requirement. (WG6)

non-conformity — Non-fulfillment of a specified requirement. (ISO 8402)

nondeliverable software — Software that is not required to be delivered by the contract. (DOD-STD-2168)

Non-programmable system (NP) devices. — A system based on non-programmable hardware (IEC 1508)

non-programmable terminal — A user terminal that has no independent data processing capability. (ISO 2382-1)

normative — Prescribing or directing a norm or standard; used in standards to indicate text which poses requirements. (Adapted from POSIX91), (SGOAA-1)

normative — Of relating to, or prescribing a norm or standard. (AHD)

not operating (dormant) is not required to function. — The state wherein an item is able to function but (MIL-STD-721C)

notice of revision — A form used to propose revisions to a drawing or list, and, after approval, to notify users that the drawing or list has been, or will be, revised accordingly. (MIL-STD-481A), (DoD-STD-480A)

notice of revision — A document used to define revisions to drawings, associated lists, or other referenced documents which require revision after Engineering Change Proposal approval. (MIL-STD-9073)

novelty — Applicable to systems using new technology and to systems using a conventional technology not previously used in connection with the particular function in question. (ARP 4754, Draft 35)

n-squared diagram — A functional flow tool to develop data interfaces and identify critical functions. (Aero Ind)

nuclear biological and chemical contamination — The deposit and for absorption of residual radioactive material or biological or chemical agents on or by structures, areas, personnel, or objects. (DODI 5000.2)

nuclear hardness — A quantitative description of the resistance of a system or component to malfunction (temporary and permanent) and/or degraded performance induced by a nuclear weapon environment. (DODI 5000.2)

nuclear survivability — The capability of a system to operate during and/or after exposure to a nuclear environment. (DODI 5000.2, DSMC)

nuclear survivability characteristics — A quantitative description of the system features needed to meet its survivability requirements. (DODI 5000.2)

nuisance alert — An alert caused by a condition which the alerting system is not intended to detect, but does detect because of basic alerting system design limitations. (Aero Ind)

nuisance message analysis — This analysis is performed to identify potential sources of reported faults where none exist. (Aero Ind)

numeric — Pertaining to data that consist of numerals as well as to processes and functional units that use those data.

numeric character — A character that represents a nonnegative integer. (ISO 2382-1)

numerical — Pertaining to data that consist of numerals as well as to processes and functional units that use those data.(ISO 2382-1)

object — Something perceptible to the sense of vision or touch or to the mind. (SGOAA)

object oriented design — A software development technique in which a system or component is expressed in terms of objects and connections between those objects and connections between those objects. (IEEE 610.12-1990)

objective — A value beyond the threshold that could potentially have a measurable, beneficial impact on capability or operations and support above that provided by the threshold value. (DSMC)

objective — A hardware requirement established for design to achieve optimum performance, minimum weight or other technical criteria. (AS1426-80), (SAE DICT)

objective evidence — Information which can be proved true, based on facts obtained through observation, measurement, test or other means. (ISO 8402)

objectives — Requirements that currently cannot be met by the airplane design organizations. (Aero Ind)

octet — A byte that consists of eight bits. (ISO 2382-1)

off-line — Pertaining to the operation of a functional unit that takes place either independently of, or in parallel with, the main operation of a computer. (ISO 2382-1)

off-line — Pertaining to the operation of a functional unit that takes place either independently of, or in parallel with, the main operation of a computer. (ISO 2382-1)

off-the-shelf software — Product that is already developed and available, usable either as is or with modification, and provided by the supplier, the acquirer, or a third party. (WG6)

on the ground — Having two or more main landing gear in positive contact with the ground. (Aero Ind)

onboard health management — The physical resource and software used to monitor and control on-board avionics system resources to prevent or respond to system failure. (SGOAA-1)

on-line — Pertaining to the operation of a functional unit when under the control of a computer. (ISO 2382-1)

open interface standards — Standards that are complete, consistent and published. (SGOAA)

open system — A system that implements sufficient open specifications for interfaces, services, and supporting formats to enable properly engineered applications software: (a) to be ported with minimal changes across a wide range of systems; (b) to interoperate with other applications on local and remote systems; (c) to interact with users in a style that facilitates user portability. (POSIX P1003.0 Draft 14 Guide), (SGOAA), (P1003.0/D15)

open system application program interface — A combination of standards-based interfaces specifying a complete interface between an application program and the underlying application platform and is divided into the following parts: (a) human/computer interaction services API, (b) information services API, (c) communication services API, (d) system services API. (POSIX P1003.0 Draft 14 Guide)

open system architecture — A logical, physical structure implemented via well defined, widely used, publicly-maintained, non-proprietary specifications for interfaces, services, and supporting formats to accomplish system functionality, thereby enabling the use of properly engineered components across a wide range of systems with minimal changes. (MIL-STD-499B-UNAPPROVED)

open system interface standards — Standards that provide for open specifications of open systems. (SGOAA)

open systems architecture — An architecture for an open system using open specifications. (SGOAA)

open systems environment — The comprehensive set of interfaces, services, and supporting formats, plus user aspects for interoperability or for portability of applications, data, or people, as specified by information technology standards and profiles. (P1003.0/D15), (POSIX P1003.0 Draft 14 Guide)

operability — The capability of a system to perform its specified functions under operational conditions. (Aero Ind)

operability — Attributes of software that bear on the user's effort for operation and operation control. (WG6)

operable — The state of being able to perform the intended function. (MIL-STD-721C)

operating mode — A state or phase of operation in which a system/subsystem can exist. (Aero Ind)

operating system — Essentially the software that enables users to interact with a computer. (Bio Med)

operating system — Software that controls the execution of programs and that may provide services such as resource allocation, scheduling, input-output control, and data management. (ISO 2382-1)

operating system (OS) — The layer of software that isolates services and application software from the application platform hardware element. (SGOAA)

operation — The process that enables the continued availability of services or capabilities of a system during its utilization phase. (DERA)

operation and maintenance phase — The period of time in the software life cycle curing which a software product is employed in its operational environment, monitored for satisfactory performance, and modified as necessary to correct problems or to respond to changing requirements. (ANSI/IEEE STD 729-1983), (IEEE-STD-1012-1986), (IEEE 610-12-1990)

operation primary function — The tasks, actions, and activities to be performed and the system elements required to satisfy defined operational objectives and tasks in the peacetime and wartime environments planned or expected. (MIL-STD-499B-UNAPPROVED)

operation requirements — User or user representative generated validated needs developed to address mission area deficiencies, evolving threats, emerging technologies or weapon system cost improvements. (DSMC)

operational — The state of being ready to perform the intended function(s), (Aero Ind)

operational — Of, or pertaining to, the state of actual usage. (MIL-HDBK-338)

operational — Pertaining to a system or component that is ready for use or installed in its intended environment. (IEEE 610.12-1990)

operational assessment An evaluation of operational effectiveness and operational suitability made by an independent operational test activity, with user support as required, on other than production systems. (DODI 5000.2)

operational availability The ratio of system uptime to system uptime plus downtime; or, the ratio of the number of times the system was available to perform as required to the total number of times its performance was required.. (COMOPTEVFORINST 3960.1G)

operational availability The degree to which one can expect an equipment or weapon systems to work properly when it is required. (DSMC)

operational capability The measure of the results of the mission, given the condition of the systems during the mission (dependability), (DSMC)

operational concepts The intended methods and techniques planned for using the system or Hs elements as established or agreed to by the intended user or operator. (Aero Ind)

operational conditions The factors, including weather, human operations, external system interactions, etc., which contribute to defining operational scenarios or environments. (IEEE P1220)

operational conditions The environment under which a system operates when performing its intended role. (Aero Ind)

operational conditions The factors, including weather, human operations, external system interactions, etc., which contribute to defining operational scenarios or environments. (IEEE P1220)

operational constraints A definition of the expected threat and natural environments, the possible modes of transportation into and within expected areas of operation, the expected electronic warfare environment, the potential for NATO application, operational manning limitations, and existing infrastructure support capabilities. (DSMC)

operational costs Those program costs necessary to operate and maintain the capability. (DSMC)

operational effectiveness The overall degree of mission accomplishment of a system when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, tactics, survivability, vulnerability, and threat. (COMOPTEVFORINST 3960.1G), (DODI 5000.2), (DSMC), (MIL-STD-499B-UNAPPROVED)

operational effectiveness The degree to which a system is operationally suitable and can be expected to achieve its mission objectives. (NAWCWPNS)

operational effectiveness How well the system performs its intended mission in its intended environment, exclusive of system support considerations. (AFR 80-14)

operational environment The natural or induced environmental conditions, and user interactions, within which the system is expected to be operated. (IEEE P1220)

operational environment The set of external stimuli, responses and prevailing conditions that interact with a system during its utilization phase by virtue of its location or situation. (DERA)

operational environment The natural or induced environmental conditions, anticipated system interfaces, and user interactions within which the system is expected to be operated. (IEEE P1220)

operational needs The capabilities required to establish and sustain the ability to perform intended mission(s) in the anticipated environment. (Aero Ind)

operational profile A characterization of the conditions of use of a system. (WG6)

operational readiness The ability of a military unit to respond to its operations plan(s) upon receipt of an operations order. (MIL-STD-721C)

operational readiness Measure of the degree to which an item is in the operable and committable state at the start of the mission, when the mission is called for a unknown (random) time. (NAVAIR 01-1A-32)

operational reliability The probability that an operationally ready system will perform as required to accomplish its intended mission or function as planned. (AFR 80-5), (AFR 80-14)

operational reliability and maintainability Any measure of reliability or maintainability that includes the combined effects of item design, quality, installation, environment, operation, maintenance, and repair. (DSMC, DODI 5000.2)

operational requirements The characteristics, capabilities, and performance the system must possess to meet its operations needs. (Aero Ind)

operational requirements document Documents the users' objectives and minimum acceptable requirements for operational performance of a proposed concept or system. (DSMC)

operational sequence diagram (OSD) A drawing which shows all of the functions of a system in sequential order, to the lowest level of defined detail. (Aero Ind)

operational software Software resident in the system and in use while installed in its operating environment. (Aero Ind)

operational suitability The degree to which a system can be placed satisfactorily in field use with consideration given to reliability, maintainability, availability, logistics supportability, compatibility, interoperability, training, human factors, safety, documentation, transportability, wartime usage rates, and manning requirements. (COMOPTEVFORINST 3960.1G)

operational suitability The degree to which a system can be placed satisfactorily in field use with consideration given to compatibility, transportability, interoperability, wartime usage rates, maintainability, safety, human factors, manpower supportability, logistics supportability, natural environmental effects and impacts, documentation, and training requirements. (NAWCWPNS)

operational suitability An OT&E metric that measure the degree to which a system can be placed satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, safety, human factors, manpower supportability, logistics supportability, natural environmental effects and impacts, documentation, and training requirements. (MIL-STD-499B-UNAPPROVED)

operational suitability The degree to which a system can be placed satisfactorily in field use with consideration being given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, safety, human factors, manpower supportability, logistic supportability, natural environmental effects and impacts, documentation, and training requirements. (DSMC), (DODI 5000.2)

operational suitability The degree to which a system can be satisfactorily operated in the field, with consideration being given to availability, safety, human factors, electromagnetic compatibility, logistic supportability, and training requirements. (MIL-STD-1309C)

operational suitability How well the system performs its intended mission when operated and maintained by military personnel in the field. (AFR 80-14)

operational system A system that provides the operational capability to satisfy stated needs and provides the capability to sustain that operational capability.

operational system — A developed system ready for or in use under the control of its intended operators. (Aero Ind)

operational systems development — Includes a research and development effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and service employment. (DoD INST 3200.6), (DoD-STD-480A)

operational test & evaluation — Test and evaluation which focuses on the development of optimum tactics, techniques, procedures, and concepts systems and equipment, evaluation of reliability, maintainability and operational effectiveness, and suitability of systems and equipment under realistic operational conditions. (MIL-STD-471A)

operational test & evaluation — The test and evaluation conducted by agencies other than the developing command to assess the prospective system's military utility, operational effectiveness, operational suitability, logistics supportability (including compatibility, interoperability, reliability, maintainability, and logistics requirements), cost of ownership, and need for any modifications. (WBS)

operational test & evaluation — The field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users; and the evaluation of the results of such tests. (DSMC)

operational test & evaluation — Test and evaluation, initial operational test and evaluation, and follow-on OT&E conducted in as realistic and operational environment as possible to estimate the prospective system military utility, operational effectiveness, and operational suitability. (MIL-STD-1785, 3.15)

operational test & evaluation — Conducted to determine a system's operational effectiveness and operational suitability, identify system deficiencies and need for potential modifications to meet established OT thresholds, and develop tactics. (OPNAVINST 3960.10C.)

operational test & evaluation — Test and evaluation conducted to estimate the prospective system's military utility, operational effectiveness, and operational suitability (including compatibility, inter-operability, reliability, maintainability. (AFSCP 800 7)

operational test & evaluation (OT&E) — Provides an indication of potential operational effectiveness and operational suitability before the beyond low-rate initial production decision. (?)

operational testing — Testing conducted to evaluate a system or component in its operational environment. (IEEE 610.12-1990)

operational users — The operators and supporters of the operational system, and the trainers that train the operators and supporters of the operational system. (NAWCWPNS)

operational validation (OPEVAL) — The final phase of OT-II is OPEVAL, which is a prerequisite for approval for full production or rate production and fleet introduction.

operationally ready mode — A system condition wherein most system hardware, software, human and procedural elements are functioning correctly, but not all subsystems are configured as needed for a mission to be performed. (SGOAA)

operations — A military action or the carrying out of a strategic, tactical, service, training, or administrative military mission: the process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign. (AFM)

operations — The tasks, actions, and activities to be performed and the system elements required to satisfy defined operational objectives and tasks in the peacetime and wartime environments planned or expected. (MIL-STD-499B-UNAPPROVED)

operations — The tasks, actions, and activities which are associated the use of the consumer product or a life-cycle process. (IEEE P1220)

operations function — The tasks, actions, and activities to be performed and the system elements required to satisfy defined operational objectives and tasks in the peacetime and wartime environments planned or expected. (MIL-STD-499B-UNAPPROVED)

operations plan — The overall plan of how a system is to be operated. (Aero Ind)

operations procedures — The detailed procedures necessary to operate a system and its elements, including shutdown, safing, calibration and alignment, self test/checks, and startup/restart. (Aero Ind)

operations research — The mathematical study of systems with input and output from the viewpoint of optimization subject to given constraints. (McGraw Hill Dictionary)

operations security Protection of military operations and activities resulting from identification and subsequent elimination or control of indicators susceptible to hostile operations. (DSMC)

operator The organization or party who is conferred with the responsibility for operation of a system. (DERA)

opportunity Study A study to examine a problem and determine whether or not it requires being solved during the time period under consideration. (ISO 2382-20)

optimal The best compromise between desirable but competing alternatives. (Aero Ind)

optimization The process of identifying the relative operational and/or support effectiveness of system and technical program element alternatives which have been defined by systems engineering, determining cost and schedule implications, and selecting a preferred alternative or set of alternatives. (AFM)

optimization The process of identifying the relative operational and/or support effectiveness of alternative system and technical program elements that have been defined by systems engineering, relating cost and schedule implications, and selecting a preferred alternative or set of alternatives. (MIL-STD-499)

optimization Theoretical analysis of a system, including all of the characteristics of the process, such as thermal lags, capacity of tanks or towers, length and size of pipes, etc. (SAE DICT)

optimization The specific methodology, techniques, and procedures used to decide on the one specific solution in a defined set of possible alternatives that will best satisfy the selected criterion. (McGraw Hill Dictionary)

optional tasks Those V&V tasks that are applicable to some, but not all, software, or that may require the use of specific tools or techniques. (IEEE-STD-1012-1986)

order clash In software design, a type of structure clash in which a program must deal with two or more data sets that have been sorted in different orders. (IEEE 610.12-1990)

organization An entity within a company, government agency or military branch. (SEI)

organization Company, corporation, firm, enterprise or institution, or part thereof, whether incorporated or not, public or private, that has its own functions and administration. (ISO 8402)

organization A business trading in, or administrative concern conferred with the authority to supply, a system/subsystem/component , a service based on a system or an associated enabling service. (DERA)

organizational level maintenance The maintenance and repair performed by the activity level (organization) which uses the system's equipment, within the activity's capability. (DSMC)

organizational maintenance That maintenance which is the responsibility of and is performed by a using organization on its assigned equipment. (MIL-STD-1369)

organizational process maturity The extent to which an organization has explicitly and consistently deployed processes that are documented, manage, measured, controlled, and continually improving. (SEI)

organizational structure Responsibilities, authorities and relationships, arranged in a pattern, through which an organization performs its functions. (ISO 8402)

original (master) drawing The initial drawing or copy thereof on which is kept the revision record recognized as official by the design activity. (DoD-STD-480A)

output (adjective) Pertaining to a device, process, or channel involved in an output process, or to the associated data or stales. (ISO 2382-1)

output (data) Data that an information processing system or any of its parts transfers outside of that system or part. (ISO 2382-1)

output (process) The process by which an information processing system or any of its parts transfers data outside of that system or part. (ISO 2382-1)

output product A product which is the result or the output product of a process. (WG6)

output product A product which is generated by some phase of software development. (WG6)

overall sound pressure level (OASPL) The logarithmic sum of the sound pressure levels (SPL) in the frequency range including the eight octave bands centered at 63, 125, 250, 500, 1000, 2000, 4000 and 8000 Hz. (Aero Ind)

overyaw The stalling of the vertical tail resulting from the rudder overpowering the static directional stability of the airplane. (Aero Ind)

owner The organization that derives the ultimate benefit from, and incurs the highest level of obligation for, a system following its acceptance from an enterprise organization. (DERA)

packaging, handling, shipping & transportation The resources, processes, procedures, design considerations, and methods to ensure that all system, equipment, and support items are preserved, packaged, handled, and transported properly including: environmental considerations, equipment preservation requirements for short-and-long-term storage, and transportability. (DSMC)

page A fixed-length segment of data or of a computer program treated as a unit in storage allocation. (IEEE 610.12-1990)

parallel run Operation of two information processing systems, a given one and its intended replacement, with the same application and source data, for comparison and confidence. (ISO 2382-20)

parameter A determining factor or characteristic. (DSMC)

parameter A variable that is given a constant value for a specified application. (IEEE 610.12-1990)

parametric cost estimate A cost estimating methodology using statistical relationships between historical costs and other program variables such as system physical or performance characteristics, contractor output measures, manpower loading, etc. (DSMC)

parity An error detection method for small units of data (usually 8 bits, a BYTE) wherein an extra bit is appended to the data unit. (Bio Med)

parse To determine the syntactic structure of a language unit by decomposing it into more elementary sub-units and establishing the relationships among the sub-units. (IEEE 610.12-1990)

part One piece, or two or more pieces joined together which are not normally subject to disassembly without destruction of designed use. (MIL-STD-280A)

part One piece, or two or more pieces joined together which are not normally subjected to disassembly without destruction or impairment of

designed use. (MIL-STD-100F), (MIL-STD-965A), (DOD-STD-100C)

part The lowest element of a physical or system architecture, specification tree, or system breakdown structure that is not partitionable (bolt, nut, bracket, computer software unit), (IEEE P1220)

part number The number issued by the contractor to uniquely identify a specific part, group of parts, assembly, etc. (AFSCP 800-7)

part number An identification label assigned to a product as a result of the manufacturing process. (Aero Ind)

partitioning The process of determining how the system requirements will be implemented either in hardware and its components or in software and its components. (ARP 1834)

peculiar support equipment Those items required to support and maintain the system or portions of the system while not directly engaged in the performance of its mission, and which have application peculiar to a given defense materiel item. (WBS)

performance A quantitative measure characterizing a physical or functional attribute relating to the execution of a mission or function. (MIL-STD-499B-UNAPPROVED)

performance Those operational and support characteristics of the system that allow it to effectively and efficiently perform its assigned mission over time. (DODI 5000.2, DSMC)

performance The degree to which a system or component accomplishes its designated functions within given constraints, such as speed, accuracy, or memory usage. (IEEE 610.12-1990)

performance The technical, operational, and support characteristics of systems, Subsystems, equipment, or modifications (AFR 800-2. Attachment I), (AFSCP 800-7)

performance The degree to which a system or component accomplishes its designated functions within given constraints, such as speed, accuracy, or memory usage. (IEEE STD 610. 12-1990)

performance requirement The extent to which a mission or function must be executed, generally measured in terms of quantity, quality, coverage, timeliness or readiness. (MIL-STD-499B-UNAPPROVED)

performance requirement — A requirement that imposes conditions on a functional requirement. (IEEE 610.12-1990)

performance requirement — The measurable criteria which identifies a quality attribute of a function, or how well a functional requirement must be accomplished. (IEEE P1220)

performance specification — A document that specifies the performance characteristics that a system or component must possess.

performance specification — A document that specifies the performance characteristics that a system or component must possess. (IEEE 610)

performing activity — The person(s) or organization that performs the tasks specified in this Standard. (IEEE P1220)

peripheral equipment — All computer system equipment other than the computer processor circuits and memory circuits. (Bio Med)

peripheral equipment — Any device that is controlled by and can communicate with a particular computer. (ISO 2382-1)

PERT — A management control tool for defining, integrating, and interrelating what must be done to accomplish a desired objective on time; a computer is used to compare current progress against planned objectives and give management the information needed for decision making. (McGraw Hill Dictionary)

phase — A characteristic period in the sequence of events that comprise a life cycle. (DERA)

physical architecture — The arrangement of elements or components, their decomposition, interfaces (internal and external), and physical constraints, which form the basis of a system design. (IEEE P1220)

physical architecture — The hierarchical arrangement of product and process solutions, their functional and performance requirements; their internal and external (external to the aggregation itself) functional and physical interfaces and requirements, and the physical constraints that form the basis of design requirements. (MIL-STD-499B-UNAPPROVED)

physical architecture — An arrangement of physical elements which provides the design solution for a consumer product or life-cycle process intended to satisfy the requirements of the functional architecture and the requirements baseline.

physical characteristics — Quantitative and qualitative expressions of materiel features, such as composition, dimensions, finishes, form, fit, and their respective tolerances. (MIL-STD-480B), (DoD Directive 5010.19)

physical characteristics — The physical design attributes or distinguishing features which pertain to a measurable description of a product or process. (IEEE P1220)

physical configuration audit — The formal examination of the as-built configuration of a configuration item against its technical documentation to establish or verify the configuration item's product baseline. (MIL-STD-973)

physical configuration audit — Physical examination to verify that the configuration item(s) as built conforms to the technical documentation which defines the item. (DSMC)

physical configuration audit — A technical examination of a designated configuration item to verify that the configuration item as built conforms to the technical documentation that defines the configuration item. (MIL-STD-1521B)

physical configuration audit — An audit conducted to verify that a configuration item, as built, conforms to the technical documentation that defines it. (IEEE 610.12-1990)

physical configuration audit (PCA) — The formal examination of the as-built configuration of a CI against its technical documentation to establish the CI's initial product configuration identification. (MIL-STD-480B), (DoD Directive 5010.19), (AFM)

physical element — A product, subsystem, assembly, component, sub-component, subassembly, or part of the physical architecture defined by its designs, interfaces (internal and external), and requirements (functional, performance, constraints, and physical characteristics), (IEEE P1220)

physical failure — A failure which is solely due to physical causes, e.g., heat, chemical corrosion, mechanical stress, etc. (WG6)

physical fault — A fault which is the result of a physical failure. (WG6)

physical requirement — A requirement that specifies a physical characteristic that a system or system component must possess. (Aero Ind)

physical resources — Those functions based in hardware in the application platform. (SGOAA-1)

physical verification — The process of evaluating whether or not the requirements of the physical architecture are traceable to the verified functional architecture and satisfy the validated requirement baseline. (IEEE P1220)

picture processing — The use of a data processing system to create, scan, analyze, enhance, interpret, or display images. (ISO 2382-1)

piece part — A single piece not normally subject to disassembly without destruction or impairment of use. (DSMC)

piece part analysis — An analysis which analyzes the effects of the failures of the physical components which comprise the SRUs and LRUs of a system/subsystem. (Aero Ind)

pilot in command — The pilot responsible for the operation and safety of an aircraft during flight time. (FAR Ch. 1)

pilot production — A limited production run of a new system that has completed engineering development and for which the capability to mass produce the item for inventory needs to be demonstrated. (AFR 80-14)

pilot protect — A project designed to fast a preliminary version of an information processing system under actual but limited operating conditions and which will then be used to test the definitive version of the system. (ISO 2382-20)

plan — A detailed formulation of a program of action. (Merriam-Webster)

plan line — A graphic portrayal of a set of values for a measure associated with a technical performance indicator spread over time representing the expected values at points in time and used as a basis for comparison to actual measured values. (Aero Ind)

planned value — The anticipated value of a parameter at a given point in the development cycle. (MIL-STD-499)

platform — The entity of the technical reference model that provides common processing and communication services that are provided by a combination of hardware and software and are required by users, mission area applications, and support applications. (TA)

polling — In a data communications system, a line control method in which the computer asks each terminal on the system, in turn, if it has a message to send. (Bio Med)

portability — The ease with which software can be transferred from one platform, application or information system to another. (POSIX P1003.0 Draft 14 Guide)

portability — The ease with which a system or component can be transferred from one hardware or software environment to another. (IEEE STD 610.12)

portability — A quality metric that can be used to measure the relative effort to transport the software for use in another environment or to convert software for use in another operating environment, hardware configuration, or software system environment. (IEEE TUTOR)

portability — The ease with which a system, component, data or users can be transferred from one hardware or software environment to another. (TA)

portability — A set of attributes that bear on the ability of software to be transferred from one environment to another. (WG6)

portability (of a program) — The capability of a program to be executed on various types of data processing systems without converting the program to a different language and with little or no modification. (ISO 2382-1)

portable computer — A microcomputer that can be hand-carried for use in more than one location. (ISO 2382-1)

positive load factor — A load factor in which the aerodynamic force acts upward with respect to the airplane. (FAR 25.321(a))

post development review — The study of the effects of a system after it has reached a stabilized state of operational use. (ISO 2382-20)

post-deployment software support — Those software support activities that occur during the deployment phase of the system life cycle. (DODI 5000.2)

post-production support — Systems management and support activities necessary to ensure continued attainment of system readiness objectives with economical logistic support after cessation of production of the end item (weapon system or equipment), (DODI 5000.2)

practice — A corporate or commonly held view of actions and controls, drawn from experience, that permits successful execution of business and technical processes. (DERA)

pre production article An article that is in final form, employs standard parts (or nonstandard parts approved by the agency concerned), and is representative of final equipment. (AFR 80-14)

precedented system A system for which design examples exist within its class so as to provide guidance for establishing the physical architecture or alternatives. (IEEE P1220)

precedented system A system for which design examples exist within its class, so as to provide guidance for establishing the physical architecture, technical and project plans, specifications, or low risk alternatives. (IEEE P1220)

precompetitive research Research of high potential value but of such breadth and risk that the resources required to sustain it are unlikely to be available at a single location. (NRC)

predeveloped software Software which has been produced prior to the issuing of a contract or purchase order, or to satisfy a general market need. (WG6)

prediction system A prediction system consists of a mathematical model together with a set of prediction procedures for determining unknown parameters, and interpreting results. (WG6)

preliminary design A set of products detailing how a functional design is to be implemented including a preliminary logistics support plan, system specifications, system software requirements/specifications, system test requirements, interface requirements, supporting trade-off analyses, and the conducting of a preliminary design review. (NB Reilly Assoc.)

preliminary design The process of analyzing design alternatives and defining the architecture, components, interfaces, and timing and sizing estimates for a system or component. (IEEE 610.12-1990)

preliminary design The process of analyzing design alternatives and defining the architecture, components, interfaces, and timing and sizing estimates for a system or component. (IEEE 610.12)

preliminary design review Review conducted to ascertain if the preliminary design is to be committed to detailed design. (DSMC)

preliminary design review (1) A review conducted to evaluate the progress, technical adequacy, and risk resolution of the selected design approach for one or more configuration items; to determine each design's compatibility with the requirements for the configuration item; to evaluate the degree of definition and assess the technical risk associated with the selected manufacturing methods and processes; to establish the

existence and compatibility of the physical and functional interfaces among the configuration items and other items of equipment, facilities, software and personnel; and as applicable to evaluate the preliminary operational and support documents. (IEEE 610.12-1990)

preliminary design review A review conducted on each configuration item to evaluate the progress, technical adequacy, and risk resolution of the selected design approach; to determine its compatibility with performance and engineering requirements of the development specification; and to establish the existence and compatibility of the physical and functional interfaces among the item and other items of equipment, facilities, computer programs, and personnel. (DODI 5000.2)

preliminary design review (PDR) This review shall be conducted for each configuration item or aggregate of configuration items to: (a) evaluate the progress, technical adequacy, and risk resolution (on a technical, cost, and schedule basis) of the selected design approach; (b) determine its compatibility with performance and engineering specialty requirements of the Hardware Configuration Item (HWCI) development specification; (c) evaluate the degree of definition and assess the technical risk associated with the selected manufacturing methods/processes; and (d) establish the existence and compatibility of the physical and functional interfaces among the configuration item and other items of equipment, facilities, computer software, and personnel. (MIL-STD-1521B)

preliminary hazard analysis An initial hazard assessment of system hazards undertaken early in the product life cycle. (Bio Med)

preliminary system safety A systematic evaluation of the proposed architecture(s) and implementation(s) based on the functional hazard assessment and failure condition classification to determine safety requirements of the item. (ARP 4754, Draft 35)

pre-planned product improvement Planned future evolutionary improvement of developmental systems for which designed considerations are effected during development to enhance future application of projected technology. (DSMC)

pre-planned product improvement A plan for incorporating improved capabilities or enhancing performance as a follow-on step to initial system development and use. (Aero Ind)

pre-planned product improvement (P3I) Planned future improvements of developmental systems that defers capabilities associated with elements having significant risks or delays so that the system can be fielded while the deferred element is developed in a parallel or subsequent effort. (MIL-STD-499B-UNAPPROVED)

preproduction (prototype) model — An item suitable for complete evaluation of form, fit, and performance. (MIL-STD-280A)

preventative maintenance — Maintenance performed for the purpose of preventing problems before they occur. (Aero Ind)

preventive action — Action taken to eliminate the causes of a potential nonconformity, defect or other undesirable situation in order to prevent occurrence. (ISO 8402)

preventive maintenance — The maintenance carried out at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or the degradation of the functioning of an item.

primary flight control surfaces — Ailerons, flaperons, spoilers, elevators, stabilizer and rudder. (Aero Ind)

primary flight control system — Primary flight control surface hardware and all control functions necessary for positioning the primary flight control surfaces. (Aero Ind)

primary power — The normal source of electric power, provided directly from the main engine-driven electric generation equipment, normally providing power for unrestricted operations. (Aero Ind)

primary system functions — Those essential tasks, actions, or activities that must be accomplished to ensure that the system satisfies customer needs from a system life-cycle perspective. (MIL-STD-499B-UNAPPROVED)

prime contractor — A contractor having responsibility for design control and delivery of a system or equipment such as aircraft, engines, ships, tanks, vehicles, guns and missiles, ground communications and electronic systems, ground support equipment, and test equipment. (DODI 5000.2)

prime contractor — The system development organization that makes a contract with an acquisition process to supply a system. (DERA)

prime item — A configuration item that (1) is of such complexity as to be comprised of several critical items, or (2) meets the following criteria: (a) The item will be received or formally accepted by the procuring activity on a DD Form 250, sometimes subject to limitations prescribed thereon, (b) Provisioning action will be required, (c) Technical manuals or other instructional material covering operation and maintenance of the item will be required, (d) Quality conformance inspection of each item, as opposed to sampling, will be required. (MIL-STD-499B-UNAPPROVED)

prime item development specification (type b1) Applicable to a complex item such as an aircraft, missile, launcher equipment, fire control equipment, radar set, training equipment, etc. (MIL-STD-49OA)

prime item product fabrication specification (type c1b) Type C1b specifications are normally prepared for procurement of prime items when: (a) a detailed design disclosure package needs to be made available, (b) it is desired to control the interchange ability of lower level components and parts, and (c) service maintenance and training are significant factors. (MIL-STD-490A)

prime item product function specification (type c1a) Applicable to the procurement of prime items when a form, fit, and function description is acceptable. (MIL-STD-490A)

prime item product specification (type ci) Applicable to configuration items meeting the criteria for prime item development specifications. (MIL-STD-490A)

prime item specification Normally used to describe a complex top assembly such as an aircraft, missile, engine, radar set, etc. (AFSCP 800-7)

prime mission equipment (PME) The hierarchy of hardware and software that composes the operational system. (WBS)

prime mission product (PMP) The operational product element of the WBS. (MIL-STD-499B-UNAPPROVED)

privately developed item An item completely developed at private expense and offered to the government as a production article, with government control of the article's configuration normally limited to its form, fit and function. (DoD Directive 5010.19), (DoD-STD-480A), (MIL-STD-481A)

Probability of Kill (Pk) The lethality of a weapon system. (DSMC)

probable event An event with a probability of approximately 10-5 or greater on a per-flight-hour or per flight basis as applicable. (Aero Ind)

probable failure Failure condition having a probability greater than on the order of 10-5. (Aero Ind)

problem description A statement of a problem, which may include a description of the data, the method, the procedures, and algorithms used to solve it. (ISO 2382-20)

problem domain The problem space that contains pre-existing, operational systems and a need for a new system to be created. (DERA)

problems — The statement of the problem of the design of any system must begin with the definition of the inputs that the existing system shall accept, process, or survive and the outputs that the system shall produce. (Wymore)

procedure — A set of rules and/or algorithms which govern the operation of a system. (Aero Ind)

procedure — A set of steps to be followed to accomplish a task each time the task is to be done. (Bio Med)

procedure — A description of a course of action to be taken to perform a given task. (SEI)

procedure — Specified way to perform, an activity. (ISO 8402)

process — A system of operation or series of actions, changes, or functions, that bring about an end or result including the transition criteria for progressing from one state or process step to the next. (IEEE P1220)

process — A particular method of manufacture, generally involving a number of steps or operations, as defined by the process specification. (SNL EPs)

process — A sequence of steps performed for a given purpose; for example, the software development process. (IEEE 610.12-1990)

process — An organized and sequenced collection of activities and events directed toward or established to pursue selected goals and objectives or produce desired results. (Aero Ind)

process — A set of activities performed to achieve a given purpose. (SEI)

process — A set of actions that receives an information, material or artefact input and operates on it or transforms it in a specified manner to create a new information, material or artefact product. (DERA)

process — A set of tasks or activities which transform an input product into an output product by consuming human resources and computer system resources, and using methodologies and computer programs. (WG6)

process — Set of interrelated resources and activities which transform inputs into outputs. (WG6)

process — A set of activities and tasks and their inter-relationships that together transform a set of inputs into a desired output. (WG6)

process — An activity carried out over some period of time. (WG6)

process — An activity (usually performed in order to produce or enhance some product), (WG6)

process — A sequence of tasks, actions, or activities, including the transition criteria for progressing from one to the next, that bring about a result. (IEEE P1220)

process — A predetermined course of events defined by its purpose or by its effect, achieved under given conditions. (ISO 2382-1)

process — Set of interrelated resources and activities which transform inputs into outputs. (ISO 8402)

process — A system or series of continuous or regularly occurring actions taking place in a predetermined or planned manner. (McGraw Hill Dictionary)

process assessment — To evaluate the capability of an organizationÕs processes with respect to one or more reference models. (SEI)

process assessment — A disciplined examination of the processes used by an organization against a set of criteria to determine the capability of those processes to perform within quality, cost and schedule goals by characterising current practice and identifying strengths and weaknesses. (WG6)

process asset library — A collection of process assets, maintained by an organization, for use by projects in developing, tailoring, maintaining, and implementing their defined processes.

process asset library — A collection of process assets that exist within a defined architecture that gives structure to the example processes, process fragments, process-related documentation, process architectures, process tailoring rules and tools, and process measurements. (SEI)

process assets — A collection of entities, maintained by an organization, for use by projects in developing, tailoring, maintaining, and implementing their processes. (SEI)

process capability — The range of expected results that can be achieved by following a process. (SEI)

process capability baseline — A documented characterization or model that defines the process capability of a specific process i.e., the range of expected results that can be achieved by following the process. (SEI)

process database — A readily accessible database that contains the process asset library and its components. (SEI)

process description — The operational definition of the major components of a process. (SEI-93-TR-25)

process management — The direction, control and coordination or work performed to develop a product or perform a service. (IEEE STD 1002-1987)

process management — The set of activities, methods, and tools applied to the definition, implementation, and monitoring of a process. (SMG)

process maturity — The extent to which a process is explicitly documented, managed, measured, controlled, and continually improved. (SEI)

process measure — A measure defined for some attribute of a process. (WG6)

process owner — The individual(s) or organization(s) with the ability to evaluate and the authority to approve changes to the process(es), (Aero Ind)

process performance — A measure of actual results achieved by following a process. (SEI)

process performance baseline — A documented characterization or model of a process that is used as a benchmark for comparing actual process performance against the expected process performance. (SEI)

process performance qualification — Establishing confidence that the process is effective and reproducible. (Bio Med)

process specification — Specifies the details of a nonstandard process critical to the correct manufacture of an item. (DID-E-3130), (AFSCP 800-7)

process specification — A type D specification applicable to a service that is performed on a product or material. (MIL-STD-490A)

process user — The individual(s) or organization(s) that implement a process. (Aero Ind)

processing unit — A functional unit that consists of one or more processors and their internal storages. (ISO 2382-1)

processor — In a computer, a functional unit that interprets and executes instructions. (ISO 2382-1)

procurement data package — Applicable to types of technical data when used for procurement purposes. (MIL-STD-885B)

procurement data package — Includes documentation prepared expressly for the identification, description and verification of items, materials, supplies, and services that are to be purchased, inspected, packaged, and packed and supplied or delivered to users. (DSMC)

procurement organization — An organization or enterprise that is conferred with the authority to acquire a system on behalf of an ownership organization or an enterprise organization. (DERA)

procuring activity — A component of a government agency having a significant acquisition function and designated as such by the head of the agency. (MIL-STD-100F)

procuring contracting officer — The individual authorized to enter and administer government contracts and make determinations and findings with respect thereto. (MIL-STD-481A)

producer — That organization that is responsible for providing the operational system and sustaining the manufacturing system. (NAWCWPNS)

producibility — Efforts associated with ensuring that the PME design can be efficiently manufactured. (WBS)

producibility — The combined effect of those elements or characteristics of a design and the production planning for it that enables the item, described by the design, to be produced and inspected in the quantity required and that permits a series of trade offs to achieve the optimum of the least possible cost and the minimum time, while still meeting the necessary quality and performance requirements. (MIL-HDBK-727)

producibility — The relative ease of manufacturing an item or system. (DSMC, DODI 5000.2)

producibility — The attributes of a design that allow it to be produced economically with consistent quality. (MIL-STD-499B-UNAPPROVED)

product — An item generated in response to a defined set of requirements. (ARP 4754, Draft 35)

product — The result of a human, mechanical or natural effort or process, such as, a manufacturing process. (IEEE P1220)

product — The item stipulated in a contract to be delivered under the contract (i.e., service, study, hardware, etc.), (DSMC)

product — Includes materials, parts, components, subassemblies, assemblies, and equipment. (MIL-STD-100F)

product — Weapon and weapon-related material, including software, produced or procured for acceptance by the DOE. (SNL EPs)

product — Raw materials, intermediate products, sub-assemblies, or complete medical devices. (Bio Med)

product — Result of activities or processes. (SEI)

product — The supplied output of a process or group of processes. (DERA)

product — Result of activities or processes. (WG6)

product — Something that has value and is generated by a manufacturing or development process. (WG6)

product — An element of the physical or system architecture, specification tree, or system breakdown structure that is a subordinate element to the system and is comprised of two or more subsystems. (IEEE P1220)

product — Result of activities or processes. (ISO 8402)

product and process data package — The evolving output of the systems engineering process which documents hardware designs, software/firmware designs with their source code listings, and life-cycle processes. (IEEE P1220)

product assurance — Those technical management and program execution activities which govern the quality of materiel throughout the materiel life cycle, including materiel reliability, availability and maintainability, quality engineering, quality

control, quality assurance and assessment of product (or system) effectiveness. (DOD-HDBK-248)

product base line The initially approved documentation describing all of the necessary functional and physical characteristics of the CI, any required joint and combined operations interoperability characteristics of a CI (including a comprehensive summary of the other service(s) and allied interfacing CIs or systems and equipment), and the selected functional and physical characteristics designated for production acceptance testing and tests necessary for support of the CI. (MIL-STD-480B), (DoD Directive 5010.19)

product base line The initially approved documentation describing all of the necessary functional, performance, and physical requirements of the CI; the functional and physical requirements designated for production acceptance testing; and tests necessary for deployment, support, training and disposal of the CI. (MIL-STD-499B-UNAPPROVED)

product base line The initially approved documentation describing all of the necessary functional and physical characteristics of the configuration item and physical characteristics of the configuration item and the selected functional and physical characteristics designated for production acceptance testing and test necessary for support of the configuration item. (MIL-STD-973)

product base line The initially approved documentation describing: all of the necessary functional and physical characteristics of the configuration item (CI); any required joint and combined operations; the selected functional and physical characteristics designated for production acceptance testing; and tests necessary for deployment/installation, support, training and disposal of the CI. (DSMC)

product base line In configuration management, the initial approved technical documentation defining a configuration item during the production, operation, maintenance, and logistic support of its life cycle. (IEEE 610.12-1990)

product configuration documentation The approved product baseline plus approved changes. (MIL-STD-973)

product configuration identification The current approved or conditionally approved technical documentation that defines the configuration of a CI. (MIL-STD-481A), (DoD Directive 5010.19), (DoD-STD480A)

product configuration identification The currently approved or conditionally approved technical documentation defining a configuration. (IEEE 610.12-1990)

product configuration identification Normally includes specification Types C, D, and E, engineering drawings and related data, as necessary, to provide a set of documents

adequate for the procurement, production, test, evaluation, and acceptance of a configuration item without requiring further development work. (MIL-STD-490A)

product definition data — The totality of data elements required to completely define a product. (MIL-D-28000)

product description — Documents used for acquisition and management purposes, such as specifications, standards, voluntary standards, commercial item descriptions, or purchase descriptions. (FAR 10.002)

product development cycle — The time it takes to create and bring to market a new product design. (NRC)

product fabrication (design) specification — A product specification that states (a) a detailed description of the parts and assemblies of the product, usually by prescribing compliance with a set of drawings, and (b) those performance requirements and corresponding tests and inspections necessary to assure proper fabrication, adjustment, and assembly techniques. (DoD-STD-480A)

product fabrication specification — Specifies the detailed description of the design of the product and the performance requirements and tests required to assure proper fabrication; used to establish the product baseline on system and less-than-system programs. (DID-E-3103), (AFSCP 800-7)

product function (performance) specification — A product specification that states (a) the complete performance requirements of the product for the intended use, and (b) the necessary interface and inter-changeability characteristics. (DoD-STD480A)

product function specification — Specifies the form, fit, and function requirements (including interface) for the item as a unit, where the internal design of the item is not critical; used to establish the functional, allocated, and product baselines for privately developed items. (DID-E-3132), (AFSCP 800-7)

product improvement — Effort to incorporate a configuration change involving engineering and testing effort on end items and depot repairable components, or changes on other than developmental items to increase system or combat effectiveness or extend useful military life. (DSMC)

product improvement proposal — A proposal for product improvement which does not significantly change the approved performance envelope of the system. (AFM)

product liability — Generic term used to describe the onus on a producer or others to make restitution for loss related to personal injury, property damage or other harm caused by a product. (ISO 8402)

product measure — A measure defined for some attribute of a product. (WG6)

product performance qualification — Establishing confidence through appropriate testing that the finished product produced by a specified process(es) meets all release requirements for functionality and safety. (Bio Med)

product realization process — The process by which new and improved products are conceived, designed, produced, brought to market, and supported. (NRC)

product specification — A document applicable to a production item below the system level that states item characteristics in a manner suitable for procurement, production, and acceptance. (DoD-STD-480A)

product specification — A document that specifies the design that production copies of a system or component must implement. (IEEE 610.12-1990)

product system — The integrated, validated system that is transferred from an enterprise organization to an ownership organization. (DERA)

product/output — The quantified results of a task or activity. (Aero Ind)

production — The process of converting raw materials by fabrication into required material. (DSMC)

production — The process of converting raw materials by fabrication into required materiel. (DOD-STD-1OOC)

production — The assembly of components and subsystems into specified and verified configurations. (DERA)

production effectivity — For an ECP, the first system/item (by serial number) on which a proposed change will be incorporated into the item on the production line. (AFSCP 800-7)

production engineering — The application of design and analysis techniques to produce a specified product. (DSMC)

production manufacturing plan — The specific plan for manufacturing the major elements to be produced. (Aero Ind)

production permit; deviation permit — Written authorization to depart from the originally specified requirements for a product, prior to its production. (ISO 8402)

production phase — The period from production approval until the last system is delivered and accepted. (MIL-STD-785B)

production phase — The period from production approval until the last system/equipment is delivered and accepted. (AFSCP 800-7)

production plan — The overall plan for producing the parts of the system. (Aero Ind)

production planning — The broad range of activities initiated early in the acquisition process, and continued through a production decision, to ensure an orderly transition from development to cost-effective rate production or construction. (DODI 5000.2)

production readiness — The state or condition or preparedness of a system program to process into production. (DSMC, DODI 5000.2, DODI 5550.2)

production readiness review (PRR) — A review ito determine the status of completion of the specific actions which must be satisfactorily accomplished prior to executing a production go-ahead decision. (MIL-STD-1521B)

production reliability acceptance test — A test conducted under specified conditions, by, or on behalf of, the government, using delivered or deliverable production items, to determine the producer's compliance with specified reliability requirements. (MIL-STD-785B)

production sheet — Document describing production facilities, equipment, personnel, and operations required to produce each configuration item. (AFM)

profile — A set of one or more base standards, and, where applicable, the identification of those classes, subsets, options, and parameters of those base standards, necessary for accomplishing a particular function. (P1003.0/D15), (BMO-STD-77-6A)

profile — A comparison, usually in graphical form, of plans or projections versus actual data, typically over time. (SEI)

profiling — Selecting standards for a particular application. (P1003.0/D15)

profiling — The process of selecting a set of one or more base standards, and where applicable, the identification of chosen classes, subsets, options, and parameters of those base standards, necessary for accomplishing a particular function. (POSIX91)

program — A related series of undertakings or collection of projects, which are funded for the most part from NASA's Research and Development (R&D) appropriation, which continue over a period of time (normally years), and which are designed to pursue a broad scientific or technical goal. (NASA MDP92)

program — A DOD acquisition program. (DSMC)

program — An organized collection of activities and events established and sequenced to achieve desired goals and objectives. (Aero Ind)

program — A syntactic unit that conforms to the rules of a particular programming language and that is composed of declarations and statements or instructions needed to solve a certain function, task, or problem. (ISO 2382-1)

program — A program, or part of a program, that may have some general or frequent use. (ISO 2382-1)

program element — The basic building block of the 5-year defense program. (MIL-STD-881A)

program maintenance manual — A document that provides the information necessary to maintain a program. (ISO 2382-20)

program management — The overall administration of the acquisition program including planning, organizing, directing, coordinating, and controlling all activities required to deliver an operational system. (WBS)

program management — The process whereby a single leader and team are responsible for planning, organizing, coordinating, directing and controlling the combined efforts of participating/assigned civilian and military personnel and organizations in accomplishment of program objectives. (DSMC)

program management plan — The document developed and issued by the program manager which shows the integrated time-phased tasks and resources required to complete the task specified in the PMD. (AFR 800-2, Batch 1), (AFSCP 800 7)

program manager — A military or civilian official who is responsible for managing an acquisition program. (DODI 5000.2)

program path — The order in which a computer executes its programmed instructions under given internal and environmental conditions. (Bio Med)

program path analysis — The identification of data and conditions that will cause a computer to execute a given program path. (Bio Med)

program phases — Time or event bounded or development category grouped collections of activities used to divide a program into a continuous and progressive series of manageable steps. (Aero Ind)

program specification — A document that describes the structure and functions of a program in sufficient detail to permit programming and to facilitate maintenance. (ISO 2382-20)

programmable electronic system — A system based on one or more programmable electronic devices, connected to (and including) input devices and/or output devices/final elements, for the purpose of control, protection or monitoring. (IEC 1508)

programmable terminal — A user terminal that has built-in data processing capability. (ISO 2382-1)

programmatic — Pertains to the cost, schedule and performance characteristics of an acquisition program. (DSMC)

programming — The designing, writing, modifying, and testing of programs. (ISO 2382-1)

programming language — A language used to express computer programs. (IEEE 610.12-1990)

programming language — An artificial language for expressing programs. (ISO 2382-1)

programming support environment — An integrated collection of software tools accessed via a single command language to provide programming support capabilities throughout the software life cycle. (IEEE 610.12-1990)

project — A defined time- and cost-controlled activity with clearly established objectives and boundary conditions executed to gain knowledge, create a capability, or provide a service. (NASA MDP92)

project — An undertaking requiring concerted effort, which is focused on developing and/or maintaining a specific product. (SEI-93-TR-25)

project control — The activities concerned with monitoring the progress of a project, its direction, quality, and resource utilization, as compared with project plans. (ISO 2382-20)

project environment — Defines the objectives, success criteria, project milestones, and associated management priorities, which will govern the systems engineering activities in support of product development. (IEEE P1220)

project environment — Defines the objectives, success criteria, project milestones, and associated management priorities which govern the systems engineering activities in support of product development. (IEEE P1220)

project management — The planning, organizing, directing, and controlling of company resources to meet specific goals and objectives within time, within cost and at the desired performance level. (Bahill/Sandia)

project management — The role that is responsible to each and every enterprise organization for the planning, monitoring and control of resources and capabilities in order to supply an agreed product or service to an acquirer. (DERA)

project management — The activities concerned with project planning and project control. (ISO 2382-20)

project plan — A management document that describes the approach to be taken for a project; for instance, developing a system. (Bio Med)

Project Planning — The activities concerned with the specification of the components, timing, resources, and procedures of a project. (ISO 2382-20)

Project Specification — A specification of the objectives, requirements, and scope of a project and its relations to other projects. (ISO 2382-20)

prompt — A visual or audible message sent by a program to request the user's response. (ISO 2382-1)

Proof Test Interval (TI) — The time interval between periodic tests performed on the safety-related system. (IEC 1508)

propulsion — Pertaining to the entire thrust generating system which includes the power plants, their installation and the associated airframe-located systems and equipment. (Aero Ind)

prospective validation — Validation conducted prior to the distribution of either a new product, or product made under a revised manufacturing process, where the revisions may affect the product's characteristics. (Bio Med)

protection — The architecture will limit the effect of abnormal conditions in design elements at run-time to just the affected modules or as a minimum will limit the propagation of abnormal conditions. (SGOAA)

protocol A set of semantic and syntactic rules that must be followed to perform communications functions within a communications system (Adapted from POSIX91), (SGOAA-1)

prototype An original or model on which a later item is formed or based. (DSMC)

prototype An initial version of a system that is developed to test the effectiveness of the overall strategies being employed to solve the particular problem. (Bahill)

prototype A model suitable for evaluation of design, performance, and product potential or an instance of a software version that does not exhibit all the properties of the final system; usually lacking in terms of functional or performance attributes. (DOD-HDBK-287)

prototype First full-scale functional form of a new system, subsystem, or component, on which the design of subsequent production items is patterned. (AFR 80-14)

Prototype A model or preliminary implementation suitable for evaluation of system design, performance, and production potential; or for better understanding or determination of the requirements. (ISO 2382-20)

prototype unit Hardware of a new design. (NASA MDP92)

provisions Equipment, assembly or installation which has all required items such as supports, brackets, tubes and fittings, electrical wiring, and hydraulic lines, installed and with adequate space allocated so that the names item can be installed without alteration to that item or the airplane. (Aero Ind)

purchase description A description of the essential physical characteristics and functions required to meet the government's minimum needs. (FAR 10.002)

purchaser Customer in a contractual situation. (WG6), (ISO 8402)

qualification The formal process by which a manufacturer's product is examined for compliance with the requirements of a source control drawing for the purpose of approving the manufacturer as a source of supply. (ASME Y14.24M)

qualification The entire process by which products are obtained from manufacturers or distributors, examined and tested, and then identified on a qualified products list (Defense Standardization Manual 4120.3-M)

qualification The process of proving that the design and associated fabrication tools, processes, materials, controls, and personnel produce a configuration item that complies with the specification requirements and, therefore, is qualified for production. (Aero Ind)

qualification The process of determining a system or component is suitable for operational use. (IEEE 610.12-1990)

qualification A documented determination that a device (and its associated software), component, packaging, or labeling, meets all prescribed design and performance requirements. (FDA 90-423))

qualification The process of determining whether a system or component is suitable for operational use. (IEEE 610)

Qualification process Process of demonstrating whether an entity is capable of fulfilling specified requirements. (ISO 8402)

qualification test Simulates defined operational environmental conditions with a predetermined safety factor, the results indicating whether a given design can perform its function within the simulated operational environment of a system. (DSMC)

qualification testing Testing conducted to determine whether a system or component is suitable for operational use. (IEEE 610.12-1990)

qualification tests Those tests that verify the design and manufacturing process and thus provide a baseline for subsequent acceptance tests. (AFR 80-14)

Qualified IStatus given to an entity when the capability of fulfilling specified requirements has been demonstrated. (ISO 8402)

qualified product A product which has been examined and tested and listed on or qualified for inclusion on the applicable Qualified Products List. (Defense Standardization Manual 4120.3-M)

qualified product list (QPL) A listing by item of manufacturers whose product has passed all qualification tests specified for the item and who is thus listed as a qualified source for the item. (AFSCP 800-7)

qualitative — Those analytical processes that assess system and airplane safety in a subjective, non-numerical manner. (FAA AC 25.1309)

quality — The composite of material attributes including performance features and characteristics of a production or service to satisfy a customer's given need. (DSMC)

quality — The composite of all the attributes or characteristics, including performance, of an item or product. (DODD 4155.11), (MIL-STD-109B), (FDA 90-423)

quality — The totality of features and characteristics of a product of service that bear on its ability to satisfy stated or implied needs. (ISO 8402)

quality — Conformance to customer requirements and known expectations. (SNL EPs)

quality — The degree to which a system, component, or process meets specified requirements. (IEEE 610.12-1990)

quality — The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. (WG6)

quality — The totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs. (ISO 8402)

quality — The totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs. (ISO 8402), (IEC 1508)

quality — Totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs. (ISO 8402)

quality assessment — Synonymous with quality evaluation. (WG6)

quality assurance — A planned and systematic pattern of all actions necessary to provide confidence that adequate technical requirements are established, that products and services conform to established technical requirements, and that satisfactory performance is achieved. (DSMC)

quality assurance — A planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to established technical requirements. (DOD-STD-100C), (DOD-HDBK-248A)

quality assurance A planned and systematic pattern of all actions necessary to provide adequate confidence that an item or product conforms to established technical requirements. (IEEE 610.12-l 990), (DOD-D 4155.11)

quality assurance A planned and systematic pattern of all actions necessary to provide adequate confidence that the device, its components, packaging, and labeling are acceptable for their intended use. (FDA 90-423)

quality assurance All activities necessary to assure and verify confidence in the quality of the process used to manufacture a finished device. (Bio Med)

quality assurance A planned and systematic means for assuring management that defined standards, practices, procedures, and methods of the process are applied. (SEI)

quality assurance All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfil requirements for quality. (WG6)

quality assurance A planned and systematic pattern of all actions to provide adequate confidence that a given product conforms to established technical requirements. (WG6)

quality assurance All the planned and systematic activities implemented within the quality system and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality. (ISO 8402)

quality assurance The planned systematic activities necessary to ensure that a component or system conforms to established technical requirements. (ISO 2382-20)

quality assurance All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality. (ISO 8402)

quality attribute A feature or characteristic that affects an item's quality. (IEEE 610.12-1990)

quality attribute A feature or characteristic that affects an item's quality. (WG6)

quality attribute The features and characteristics of a software component that determine its ability to satisfy requirements. (WG6)

quality audit A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives. (IEC 1508)

quality audit Systematic and independent examination to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives. (ISO 8402)

quality control The system or procedure used to check product quality throughout the acquisition process. (DSMC)

quality control Operational techniques and activities that are used to fulfil requirements for quality. (WG6)

quality control The operational techniques and activities that are used to fulfill requirements for quality. (ISO 8402)

quality control Operational techniques and activities that are used to fulfil requirements for quality. (ISO 8402)

quality control (QC) A management function whereby control of quality of raw or produced material is exercised for the purpose of preventing production of defective material. (MIL-STD-109B)

quality evaluation Systematic examination of the extent to which an entity is capable of fulfilling specified requirements. (ISO 8402)

quality function deployment A process for systematically translating customer requirements into appropriate technical requirements during all stages of product development from the earliest stages of product design through production. (NRC)

quality improvement Actions taken throughout the organization, to increase the effectiveness and efficiency of activities and processes to provide added benefits to both the organization and its customers. (ISO 8402)

quality indicator A measure that shows a trend in the relative quality of software or its products. (WG6)

quality loop Conceptual model of interacting activities that influence quality at the various stages ranging from the identification of needs to the assessment of whether these needs have been satisfied. (ISO 8402)

quality loss function A calculation of loss of quality as a function of deviation from desired performance; usually a continuous, not discrete, function. (NRC)

quality losses Losses caused by not realizing the potential of resources in processes and activities. (ISO 8402)

quality manual Document stating the quality policy and describing the quality; system of an organization. (ISO 8402)

quality metric A quantitative measure of the degree to which an item possesses a given quality attribute. (IEEE 610.12-1990)

quality metric. A quantitative measure of the degree to which an item possesses a given quality attribute. (WG6)

quality plan A document setting out the specific quality practices, resources and sequence of activities relevant to a particular product, service, contract or project. (ISO 8402)

quality plan A document setting out the specific quality practices, resources and sequence of activities relevant to a particular product, project or contract. (IEC 1513)

quality plan Document setting out the specific quality practices, resources and sequence of activities relevant to a particular product, project or contract. (ISO 8402)

quality planning Activities that establish the objectives and requirements for quality and for the application of quality system elements. (ISO 8402)

quality policy Overall intentions and direction of an organization with regard to quality, as formally expressed by top management. (ISO 8402)

quality surveillance Continual monitoring and verification of the status of an entity and analysis of records to ensure that specified requirements are being fulfilled. (ISO 8402)

quality system Organizational structure, procedures, processes and resources needed to implement quality management. (WG6)

quality system Organizational structure, procedures, processes and resources needed to implement quality management. (ISO 8402)

quality-related costs — Those costs incurred in ensuring and assuring satisfactory quality as well as the losses incurred when satisfactory quality is not achieved. (ISO 8402)

quantitative — Those analytical processes that apply mathematical methods to assess system and airplane safety. (FAA AC 25.130g), (Aero Ind)

quantity — That property of outputs which can be determined by measurement. (DSMC)

query language — A language used to access information stored in a data base. (IEEE 610.12-1990)

r & m engineering — That set of design, development and manufacturing tasks by which reliability and maintainability are achieved. (MIL-STD-721C)

random failure — Failures that result from a variety of degradation mechanisms in the hardware. (WG6)

random hardware failures — Failures, occurring at random times, which result from a variety of degradation mechanisms in the hardware. (IEC 1508)

random testing — The strategy of selecting test cases at random according to the probability with which they are expected to be encountered in operation, in order to ensure that the operational profile used in test and trial is a reasonable approximation to reality. (WG6)

rapid prototyping — A type of prototyping in which emphasis is placed on developing prototypes early in the development process to permit early feedback and analysis in support of the development process. (IEEE 610.12-1990)

rated maximum continuous thrust — The approved jet thrust that is developed statically or in flight, in standard atmosphere at a specified altitude, without fluid injection and without the burning of fuel in a separate combustion chamber, within the engine operating limitations established under FAR Part 33 and approved for unrestricted periods of use. (FAR Ch. 1)

rated takeoff thrust — The approved jet thrust that is developed statically under standard sea level conditions without fluid injection and without the burning of fuel in a separate combustion chamber, within the engine operating limitations established under FAR Part 33 and limited in use to periods of not over 5 minutes for takeoff operation. (FAR Ch. 1)

rating — The action of mapping the measured value to the appropriate rating level. (WG6)

rating level — A range of values on a scale to allow software to be classified (rated) in accordance with the stated or implied needs. (WG6)

re assembly — Assembling the items that were removed during disassembly and closing the reassembled items. (MIL-STD-721C)

readiness — State of preparedness of forces, weapons system, or systems to meet a mission or to warfight. (DSMC)

real time — Time as commonly recorded by clocks and proportional to the rotation of the Earth. (WG6)

real time software — Software which must return an output within a certain real time interval, in order to be able to affect some social or physical process. (WG6)

reasonable foreseeable misuse — The use of a product, process or service under conditions or for purposes not intended by the supplier, but which may happen, induced by the design of the product in combination with, or as a result of, common human behavior. . (IEC 1508), (IEC Guide 51; Definition 3.8)

recall — The return of a medical device to the supplier, its modification by the supplier at the site of installation, its exchange, or its destruction, in accordance with instructions contained in an advisory notice. (Bio Med)

record — Document which furnishes objective evidence of activities performed or results achieved. (ISO 8402)

recoverability — Attributes of software that bear on the capability to re-establish its level of performance and recover the data directly affected in case of a failure and on the time and effort needed for it. (WG6)

recovery — The resumption of all or part of the required service by an item following a failure. (WG6)

recurring costs — Costs incurred for each item changed or for each service or document ordered. (MIL-STD-481A), (MIL-STD-973), (DoD-STD-480A)

red-tagged mode — A system condition wherein sufficient system hardware, software, human or procedural elements are failed that the system cannot operate at all. (SGOAA)

redundancy — Repetition of parts or subsystems to assure operation if original (primary) part or subsystem fails. (DSMC)

redundancy — That feature of design architecture which provides more than one means to perform certain functions. (ARP 1834)

redundancy — The existence of more than one means for accomplishing a given function. (MIL-STD-721C), (ARD50013-91), (AIR1916-88)

redundancy — A parallel or secondary system that takes over when the primary system fails so control can continue uninterrupted. (SAE Dictionary)

redundancy — In an item, the existence of more than one way of performing a required function. (WG6)

redundancy — Provision of alternative (identical or diverse) elements or systems, so that any one can perform the required function regardless of the state of operation or failure of any other. (IAEA SG D8)

redundancy — In an item, the existence of more than one means for performing a required function. (IEC 50), (IEC 1508)

re-engineering — The process of improving a system after production through modification to correct a design deficiency or to make an incremental improvement. (IEEE P1220)

reference frame dependency — A property of systems in that the observer of a system employs internal feedback loops for system identification, evaluation, and selection. (INCOSE Concepts and Terms WG)

reference model — A model that is used as benchmark for measuring some attribute. (SEI)

refurbishing — The processing or reprocessing to specified requirements of a medical device, which has been previously released. (Bio Med)

regression testing — Selective re-testing of a system or component to verify that modifications have not caused unintended effects and that the system or component still complies with its specified requirements. (IEEE 610.12-1990)

regulatory control function — That level in the functional decomposition of a large-scale control system which interfaces with the plant to implement the decisions of

the optimizing controller inputted in the form of set points, desired trajectories, or targets. (McGraw-Hill Technical Dictionary)

release A configuration management action whereby a particular version of software is made available for a specific purpose (e.g., released for test), (DOD-STD-2167A)

release The designation by the contractor that a document is complete and suitable for use. (MIL-STD-973)

release A configuration management activity whereby a particular version of an item is made available for a specific purpose (e.g., released for test), (WG6)

relevant failure A failure that should be included in interpreting test or operational results or in calculating the value of a reliability performance measure. (WG6)

relevant incident An incident that should be included in interpreting test or operational results or in calculating the value of a dependability measure. (WG6)

reliability The duration or probability that an item can perform its intended function for a specified interval under stated conditions. (MIL-STD-721C), (MIL-STD-1388-1A)

reliability The duration or probability of failure-free performance under stated conditions. (COMOPTEVFORINST 3960.1G)

reliability The probability that an item will perform its intended function for a specified interval under stated conditions. (DOD-HDBK-248)

reliability The engineering discipline concerned with predicting, monitoring, testing, and improving the reliability of the weapon system. (WBS)

reliability The ability of a system and its part to perform its mission without failure, degradation, or demand on the support system. (DSMC, DODI 5000.2)

reliability A measure of the probability that an item will deliver the correct service under specified conditions without failure, for a specified period of time. (SGOAA-1)

reliability The ability of an item to perform a required function under stated conditions for a stated period of time. (ISO 8402)

reliability The probability that an item will perform a required function under stated conditions for a stated period of time.(SNL EPs)

reliability The ability of a system or component to perform its required functions under stated conditions for a specified period of time.(IEEE 610.12-1990)

reliability The probability that an item will perform its intended function for a specified interval under specified conditions. (Aero Ind)

reliability The probability that an item shall perform its intended function for a specified interval under stated conditions. (ARD50010-91), (AIR1916-88), (ARD50013-91)

reliability The closeness of agreement among a number of consecutive measurements of the output for the same value of the input under the same operating conditions, approaching from the same direction, for full range transverses. (SAE DICT)

reliability The probability that an item will perform a required function, under specified conditions without failure, for a specified period of time. (Aero Ind)

reliability The characteristic of a device, or any component thereof, expressed as a probability that it will perform its required functions under defined conditions for a specified operating periods. (FDA 90-423)

reliability The probability that an item will perform as designed, within the environmental limits, without failure, for a specified time period or number of cycles. (Aero Ind)

reliability The ability of a system or component to perform its required functions under stated conditions for a specified period of time.(IEEE STD 610.12-1990)

reliability A set of attributes that bear on the capacity of software to maintain its level of performance under stated conditions for a stated period of time. (WG6)

reliability The ability of a system to deliver its required service under given conditions for a given time.(WG6)

reliability The probability of the software successfully performing its required functions consistent with the reliability requirements of the system of which it forms a part. (WG6)

reliability The probability that an item will not fail during a given period of operating time under a given usage. (WG6)

reliability accounting That set of mathematical tasks which establish and allocate quantitative reliability requirements, and predict and measure quantitative reliability achievement. (MIL-STD-785B)

reliability assessment A quantitative assessment of the reliability of a device, system, or portion thereof. (Reliability Design Hdbk, RDG 376, Rome Air Development Center)

reliability development/growth test (RDGT) A series of tests conducted to disclose deficiencies and to verify that corrective actions will prevent recurrence in the operational inventory. (MIL-STD-785E)

reliability dispatch The percentage of flights which depart without incurring delays of greater than 15 minutes (technical) or cancellations (technical), (Aero Ind)

reliability en route The probability of completing a flight plan without a deviation, i.e., without air turnbacks, ground turnbacks or diversions. (Aero Ind)

reliability engineering That set of design, development, and manufacturing tasks by which reliability is achieved. (MIL-STD-785B)

reliability growth The improvement in a reliability parameter caused by the successful correction of deficiencies in item design or manufacture. (MIL-STD-721C)

reliability in-flight The probability of completing a flight after take-off. (Aero Ind)

reliability mission The ability of an item to perform its required functions for the duration of a specified mission profile. (DOD 5000.40), (MIL-STD-721C)

reliability performance The probability that an item can perform a required function under given conditions for a given time interval, (t1,t2)

reliability qualification test (RQT) A test conducted under specified conditions, by, or on behalf of, the government, using items representative of the approved production

configuration, to determine compliance with specified reliability requirements as a basis for production approval. (MIL-STD-785B)

reliability schedule The probability of starting and completing a scheduled revenue flight without a schedule interruption, i.e., without delays of greater than 15 minutes, cancellations, air turnbacks, ground turnbacks or diversions. (Aero Ind)

reliability system The probability that a system will perform a required function under specified conditions without significant flight crew procedural change for a specified period of time. (Aero Ind)

reliability, availability, & maintainability Requirement imposed on acquisition systems to insure they are operationally ready for use when needed, will successfully perform assigned functions, and can be economically operated and maintained within the scope of logistics concepts and policies. (DSMC)

repair A procedure which reduces but does not completely eliminate a nonconformance resulting from production, and which has been reviewed and concurred by the Material Review Board (MRB) and approved for use by the government. (MIL-STD-480B)

repair The restoration or replacement of parts or components of real property or equipment as necessitated by wear and tear, damage, failure of parts or the like, in order to maintain it in efficient operating condition. (DSMC)

repair The replacement of a faulty physical atomic component, or a change to the design of an item, in order to correct a fault. (WG6)

repair That part of corrective maintenance in which manual actions are performed on the item. (WG6)

Repair Action taken on a non-conforming product so that it will fulfill the intended usage requirements although it may not conform to the originally specified requirements. (ISO 8402)

repair parts Consumables bits and pieces; that is, individual parts or nonrepairable assemblies, required for the repair of spare parts or major end items. (DODI 5000.2)

repair parts Those support items that are an integral part of the end item or system which are coded as non-reparable. (MIL-STD-1388-1)

repair time That part of active corrective maintenance time during which repair actions are performed on an item. (WG6)

repairable item — An item which can be restored to perform all of its required functions by corrective maintenance. (MIL-STD-721C)

reparability — The probability that a failed system will be restored to operable condition within a specified active repair time. (DSMC)

replaceability — Attributes of software that bear on the opportunity and effort of using it in the place of specified other software in the environment of that software. (WG6)

reporting point — A geographical location in relation to which the position of an aircraft is reported. (FAR Ch. 1)

required function — A function of an item which is necessary to provide a given service. (WG6)

required inputs — The set of items necessary to perform the minimum V&V tasks mandated within any life-cycle phase. (IEEE-STD-1012-1986)

required product quality — The quality represented by the essential requirements stated in the Software Requirements Specification, that can be evaluated through validation. (WG6)

required service — The totality of functions required to be performed by an item on behalf of its users. (WG6)

requirement — Characteristics that identify the accomplishment levels needs to achieve specific objectives for a given set of conditions. (MIL-STD-499B-UNAPPROVED)

requirement — A shall statement about a product characteristic that must be satisfied, or an activity which must be carried out. (NB Reilly Assoc.)

requirement — The need or demand for personnel, equipment, facilities, other resources, or services, by specified quantities for specific periods of time or at a specified time. (DSMC)

requirement — A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification or other formally imposed documents. (IEEE 610.12-1990)

requirement — A specification element which describes a performance capability needed for satisfactory system performance with acceptable

operability and which can be provided within the needed schedule with acceptable risk and cost. (Aero Ind)

requirement A binding statement, usually as a contractual provision, which expresses what, how well, and under what conditions one or more specific system input(s) must be converted into specific system output(s), (Aero Ind)

requirement A condition or capability that a system or component must meet or possess to satisfy a contract, standard, specification or other formally impose document. (Bio Med)

requirement A condition or capability needed by a user to solve a problem or achieve an objective. (IEEE 610.12-1990)

requirement An expression of need, demand or obligation. (DERA)

requirement An essential condition that a system has to satisfy. (WG6)

requirement An essential condition that a system has to satisfy. (IEC 880)

requirement A statement which identifies a product or process limitation, capability, or physical characteristic. (IEEE P1220)

requirement An essential condition that a system has to satisfy. (ISO 2382-20)

requirement allocation A misnomer for Functional Allocation. (Aero Ind)

Requirement Allocation Sheet (RAS) A format on which the requirements and constraints are defined for each function and related to the appropriate system elements(s), (AFM)

requirement hierarchy The composite view of the arrangement and relationship of requirements into a prioritized series. (IEEE P1220)

requirement standard A standard that describes the characteristics of a requirements specification. (IEEE STD 1002-1987)

requirement(s) Item(s) which must be satisfied by the design, without deviation, to meet standards of design, performance, and safety. (Aero Ind)

requirement(s) analysis — The process of studying user needs to arrive at a definition of system, hardware, or software requirements. (IEEE 610.12-1990)

requirement(s) analysis — A misnomer for Functional Analysis. (Aero Ind)

requirements — Statements which identify the essential needs for a system in order for it to have value and utility. (IEEE P1220)

requirements — Characteristics that identify the accomplishment levels needed to achieve specific objectives for a given set of conditions. (MIL-STD-499B-UNAPPROVED)

requirements analysis — The determination of system specific characteristics based on analyses of customer needs, requirements, and objectives; missions; projected utilization environments for people, products, and processes; constraints; and measures of effectiveness. (MIL-STD-499B-UNAPPROVED)

requirements analysis — The process of defining the best set of technical requirements the system must meet in order to meet user needs; considering all requirements and constraints over the entire life-cycle of the system. (NAWCWPNS)

requirements analysis — The process of studying user needs to arrive at a definition of system, hardware, or software requirements. (IEEE STD 610.12-1990)

requirements analysis — A systematic investigation of user requirements to arrive at a definition of a system. (ISO 2382-20)

requirements architecture — An architecture that can be tailored for design implementation based on actual system requirements. (SGOAA)

requirements baseline — The composite set of requirements at any time in the system life-cycle which represent the agreed-to and approved set of requirements which serve to guide design and management decision processes. (IEEE P1220)

requirements baseline — The composite set of operational, functional and physical requirements which serve to guide development and management decision processes. (IEEE P1220)

requirements baseline validation — The process of evaluating the results of the requirements analysis activities of the systems engineering process to ensure compliance with customer expectations, project and enterprise constraints, and external constraints. (IEEE P1220)

requirements for quality Expression of the needs or their translation into a set of quantitatively or qualitatively stated requirements for the characteristics of an entity to enable its realization and examination. (WG6)

requirements for quality Expression of the needs or their translation into a set of quantitatively or qualitatively stated requirements for the characteristics of an entity to enable its realization and examination. (ISO 8402)

requirements inspection report A report of the proceedings and recommendations of an inspection review of a requirements specification. (Bio Med)

requirements of society Obligations resulting from laws, regulations, rules, codes, statutes and other considerations. (ISO 8402)

requirements phase The period of time in the software life cycle during which the requirements, such as functional and performance capabilities for a software product, are defined and documented. (ANSI/IEEE STD 729-1983(1)), (IEEE-STD-1012-1986)

requirements phase The period of time in the software life cycle during which the requirements for a software product are defined and documented. (IEEE 610.12-1990)

requirements review A process or meeting during which the requirements for a system, hardware item, or software item are presented to project personnel, managers, users, customers, or other interested parties for comment or approval. (IEEE 610.12-1990)

requirements specification A document that specifies the requirements for a system or component. (Aero Ind)

requirements specification language A specification language with special constructs and sometimes, verification protocols, used to develop, analyze and document hardware or software requirements. (IEEE 610.12-1990)

requirements trace matrix A document that records or traces the links or correspondence between requirements identified at each stage of product or system development. (Bio Med)

research Systematic inquiry into a subject in order to discover or revise facts, theories, etc. (DSMC)

research All effort of scientific study and experimentation directed toward increasing knowledge and understanding in those fields of the physical,

engineering, environmental, and life sciences related to long-term national security needs. (DFAR, para. 235.001)

research and development cost — The sum of all contract and in-house costs required to bring a product's development from concept to production including engineering design, analysis, development, test, evaluation, and management. (MIL-HDBK-259(Navy), 3.2 and 5.3.1)

resource — A class of input to a process which is consumed by the process. (WG6)

resource — Any element of a data processing system needed to perform required operations. (ISO 2382-1)

resource access services — Those low level services which enable the DSS to interact with physical resources. (SGOAA-1)

resource behaviour — Attributes of software that bear on the amount of resources used and the duration of such use in performing its function. (WG6)

resource measure — A measure defined for some attribute of a resource. (WG6)

resources — The source that creates or supports the capability to perform the desired tasks or create the desired products or outputs. (Aero Ind)

responsible agency — The agency controlling the index in which a particular specification or standard is listed. (FAR 10.002)

retirement phase — The period of time in the software life cycle during which support for a software product is terminated. (IEEE 610.12-1990)

retrofit — The incorporation of an engineering change (at any level) into government accepted or in-service items. (MIL-STD-480B)

retrofit — A modification of a configuration item to incorporate changes made in later production items. (DSMC)

retrofit — The incorporation of new design parts resulting from an approved engineering change to an item's current approved product configuration documentation into already accepted and/or operational items. (MIL-STD-973)

retrofit — Incorporation of an engineering change (at any level) in accepted or in service items. (MIL-STD-481A)

retrospective validation — Validation of a process for a product already in distribution based upon accumulated production, testing, and control data. (Bio Med)

reusable software — Software developed in response to the requirements for one application that can be used, entirely or in part, to satisfy the requirements of another application. (DOD-STD-2167A)

rework — Action taken on a nonconforming product so that it will fulfill the specified requirements. (ISO 8402)

risk — A measure of the uncertainty of attaining a goal, objective, or requirement pertaining to technical performance, cost, and schedule. (MIL-STD-499B-UNAPPROVED)

risk — A subjective assessment made regarding the likelihood or probability of not achieving a specific objective by the time established with the resources provided or requested. (DODI 5000.2)

risk — The estimated probability that an item cannot be produced to satisfy its specification within acceptable cost and schedule. (Aero Ind)

risk — A measure of uncertainty regarding an outcome. (Aero Ind)

risk — Potential occurrence that would be detrimental to plans or programs. (Aero Ind)

risk — The possibility of suffering loss. (SEI-93-TR-25)

risk — The likelihood that a threat is converted to some loss, such as an accident, which affects continued safe flight and landing, critical and essential functions, combined functions, critical, combined functions essential, controlled flight, or safety of passengers. (Aero Ind)

risk — A measure of the cost of operating a system, derived by combining hazard probability, danger, and severity of mishap. (WG6)

risk — The probable rate of occurrence of a hazard causing harm and the degree of severity of the harm. (IEC Guide 51; Definition 3.2), (IEC 1508)

risk analysis — The application of qualitative and quantitative techniques for analyzing, quantifying, and reducing the uncertainty associated with the realization of time, cost, or performance goals. (AFM)

risk assessment The identification and evaluation of the probable impact upon cost, technical performance, and schedule objectives of those items which, by analysis or test, appear to possess an inherent probability of failing in the design and develo0pment effort to meet some critical programmatic, performance or design requirement which is essential for the successful deployment of the system to accomplish its intended mission. (NASA MDP92)

risk management The activities associated with the identification, evaluation, quantification, prioritization, reduction or elimination of risks in attaining an objective. (IEEE P1220)

risk management An organized, analytic process to identify what can go wrong, to quantify and assess associated risks, and to implement/control the appropriate approach for preventing or handling each risk identified.(MIL-STD-499B-UNAPPROVED)

risk management All actions taken to identify, assess, and eliminate or reduce risk to an acceptable level in selected areas (e.g., cost, schedule, technical, producibility, etc.); and the total program. (DSMC, DODI 5000.2)

risk management An approach to problem analysis which weighs risk in a situation by using risk probabilities to give a more accurate understanding of the risks involved. (Aero Ind)

risk management The identification, actions and control of the factors that can minimise the adverse consequences of uncertainty throughout the system life cycle. (DERA)

risk management The activities associated with risk management preparation, risk assessment, risk handling option assessment and risk control. (IEEE P1220)

risk management plan Description of the risk management program that describes the approach and activities for risk management. (MIL-STD-499B-UNAPPROVED)

robust design The design of a system such that its performance is insensitive to variations during its manufacturing, or in its operational environment (including maintenance, transportation, and storage), and the system continues to perform acceptably throughout its life-cycle despite component drift or aging. (DSMC, DODI 5000.2)

robustness The measure of a system's ability to support continued functioning under abnormal operating conditions. (SGOAA)

robustness — The degree to which a system or component can function correctly in the presence of invalid inputs or stressful environmental conditions. (IEEE 610.12-1990)

robustness — Insensitivity of systems to uncontrolled perturbations and independent of changes in environmental parameters as demonstrated mathematically. (NASA), (SAE DICT)

role — A unit of defined responsibilities that may be assumed by one or more individuals. (SEI)

routine — A subprogram that is called by other programs and subprograms. (IEEE 610.12-1990)

routine — A program, or part of a program, that may have some general or frequent use. (ISO 2382-1)

rte procurement — The process by which additional quantities are procured, usually as spares, after production of the related major system or item of equipment has ended. (AFSCP 800-7)

safe hardware failure — A hardware failure which, in a single channel configuration, causes the safety-related system to erroneously shutdown the EUC. (IEC 1508)

safe state — The state of the EUC when the specified hazard no longer exists. (IEC 1508)

safety — Freedom from those conditions that can cause death, injury, occupational illness, or damage to or loss of equipment or property. (MIL-STD-882B)

safety — The measure of how free an item is of unintended hazards. (Aero Ind)

safety — The conservation of human life and its effectiveness, and the prevention of damage to items, consistent with mission requirements. (MIL-HDBK-338)

safety — The conservation of human life and its effectiveness, and the prevention of damage to items, consistent with mission requirements. (ARD50010-91)

safety — To secure against loosening or rotating, as to safety a bolt by passing a restraining wire through its head. (ARP 4107-88), (SAE DICT)

the degree to which the test or tests exercise the actual implementation. (Aero Ind)

safety — The probability that an item can operate for a given time in a given environment without mishap. (WG6)

safety — The ability of a system to operate without unacceptable risk. (WG6)

safety — The expectation that a system does not, under defined conditions, lead to a state in which human life: limb and health, economics and environment are endangered. (WG6)

safety — Freedom from unacceptable risk of harm. (IEC Guide 51), (IEC 1508)

safety — State in which the risk of harm (to persons) or damage is limited to an acceptable level. (ISO 8402)

safety critical function — Any function which has an associated condition, event, operation, process, equipment or system (including software) with the potential for major injury or damage, adapted from (SSP 30235)

safety critical function — A function which can cause or allow a hazard to exist. (WG6)

safety critical software — Computer programs that control functions that affect system safety. (Bio Med)

safety critical software — Software which performs (or controls a subsystem which performs) a safety-critical function. (WG6)

safety critical software — Software, including firmware, used to implement a function or component of the highest level of safety integrity. (WG6)

safety critical software — Software which is part of a special safety system and which is required for the special safety system and which is required for the special system to meet its allowable performance standards. (WG6)

safety integrity — The likelihood of a safety critical system, function or component achieving its required safety features under all the stated conditions within a stated measure of use. (WG6)

safety integrity — The probability of a safety system satisfactorily performing the required safety functions under all the stated conditions within a stated period of time. (IEC 1508)

safety integrity level — One of 4 possible discrete levels for specifying the safety integrity requirements of the safety functions to be allocated to the safety-related systems. (IEC 1508)

safety life cycle — The necessary activities involved in the implementation of safety-related systems, occurring during a period of time that starts at the concept phase of a project and finishes when none of the safety-related systems are any longer available for use. (IEC 1508)

safety related software — Software which ensures that a system does not endanger human life, limb and health, or the economics or environment of the capital equipment and control. (WG6)

safety requirements specification — The specification that contains all the requirements of the safety functions that have to be performed by the safety-related systems. (IEC 1508)

safety-related control system — A system which carries out active control of the EUC and which has the potential, if not in accordance with its design intent, to enter an unsafe state. (IEC 1508)

safety-related protection system — Designed to respond to conditions on the EUC, which may be hazardous in themselves, or if no action were taken, could give rise to hazardous events, and to generate the correct outputs to mitigate the hazardous consequences or prevent the hazardous events. (IEC 1508)

safety-related software — Software that is used to implement safety functions in a safety-related system. (IEC 1508)

scaffolding — computer programs and data files built to support software development and testing, but not intended to be included in the final product. (IEEE 610.12-1990)

scalability — The ability to use the same application software on many different classes of hardware/software platforms from personal computers to super computers (extends the portability concept), (USAICII)

scalability — The capability to grow to accommodate increased work loads. (DSAC SYS IM), (Aero Ind)

scale — A numerical relation system into which a mapping from entities in the real world is defined (i.e., a measure) to characterise an attribute. (WG6)

schedule — Series of things to be done in sequence of events within given period; a timetable. (DSMC)

schedule requirements — Progress characteristics imposed in terms of operational capability, production and surge rates, production and repair cycle times, or other development time constraints. (Mil-STD-499B-UNAPPROVED)

schematic — A diagram in which the component parts are represented by symbols as opposed to pictures or drawings of their actual physical configuration. (Aero Ind)

schematic block diagram — A diagram in which the critical items of the system are represented as blocks that are connected with lines labeled to represent the functional interfaces between blocks. (Aero Ind)

schematic block diagram — A diagram showing the interrelationships of components (elements) of a system, subsystem, or function. (Aero Ind)

schematic block diagram (SBD) — A basis for assembling function performance requirements and criteria into an integrated set of design requirements for the system. (AFM)

security — Attributes of software that bear on its ability to prevent unauthorized access, whether accidental or deliberate, to programs and data. (WG6)

security — The ability of a system to deliver its required service under given conditions for a given time without unauthorised access. (WG6)

segment — A grouping of elements that are closely related and often physically interface. (DSMC)

segment — A generic term for a portion (and all its constituent parts) of a system. (MIL-STD-499)

segment — Major divisions of systems which, taken by themselves, would normally be considered to be systems. (Aero Ind)

segment — One of the subsystems of combinations of subsystems that make up an overall system. (IEEE 610.12-1990)

segment — A first-level, major subdivision of a system. (Aero Ind)

self inspection — Inspection of the work; by the performer of that work, according to specified rules. (ISO 8402)

semantics — The relationships of symbols or groups of symbols to their meanings in a given language. (IEEE 610.12-1990)

sensitivity — The characteristic of an explosive component which expresses its susceptibility to initiation by externally applied stimuli. (AIR913-89)

sensitivity — In a sensing element, the ratio of change in output to a specified change in input. (ARP89C-70)

sensitivity — Response of a mathematical model to variations of the input parameters. (NASA)

sensitivity — The degree to which a process characteristic can be influenced or changed by a small change in some physical or chemical stimulus. (SAE DICT)

separation — The space/partitioning required between redundant systems/functions to achieve system safety and reliability requirements. (Aero Ind)

serious injury — Any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) involves lacerations that cause sever hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second or third degree burns or any burns affecting more than five percent of the body surface. (Aero Ind)

service — The work performed for a user by subsystem or application software. (SGOAA-1)

service — Result generated by activities at the interface between the supplier and the customer and by supplier internal activities, to meet the customer needs. (WG6)

service — The delivery, installation, maintenance, training, and other labor intensive activities providing life-cycle support associated with the products and processes of the system. (IEEE P1220)

service — Result generated by activities at the interface between the supplier and the customer and by supplier internal activities, to meet the customer needs. (ISO 8402)

service delivery — Those supplier activities necessary to provide the service. (ISO 8402)

service life — The period of usefulness of a tangible capital asset (or group of assets) to its current owner. (FAR)

service life — The expected length of time in inventory (use) for a system, component or subassembly. (DSMC)

service subsystem — Service software on an applications platform, which provides transparent services to the using control or data processing subsystem. (SGOAA)

service use profile — A description of all the events the elements of a system will be exposed to over their useful life. (NAWCWPNS)

serviceability — A measure of the degree to which servicing of an item will be accomplished within a given time under specified conditions. (DSMC)

serviceable — The condition of an end item in which all requirements for repair, bench check, overhaul or modification, as applicable, have been accomplished, making it capable of performing the function or requirements for which originally designed. (OPNAVINST 4790.2D)

servicing — Any act of replenishment for the purpose of maintaining the inherent design operating capabilities of an item. (Aero Ind)

set — A unit or units and necessary assemblies, subassemblies and parts connected together or used in association to perform an operational function. (MIL-STD-100F), (MIL-STD-280A), (DOD-STD-100C)

severity — The worst potential consequence of a failure, determined by the degree of injury, property damage, or system damage that could ultimately occur. (Aero Ind)

severity — A qualitative measure of the possible consequences of a hazardous event. (Bio Med)

severity classifications — A qualitative measure of the worst potential consequences resulting from design error or item failure. (Aero Ind)

shall — Implies that compliance with a requirement is mandatory for compliance with the standard. (Bio Med)

shelf life — The length of time an item can be stored under specified conditions and still meet specified requirements. (MIL-STD-721C)

shelf life — The expected length of time in inventory (use) for a system, component or subassembly. (DSMC)

shop replaceable unit — An shop level maintenance item located within an LRU. (Aero Ind)

shop replaceable unit (SRU) — An item which is part of an LRU and is designed to be removed or replaced in the shop. (Aero Ind)

should — Indicates a recommendation for implementers, but does not establish a requirement. (SGOAA-1)

should — Implies that compliance with a requirement is strongly recommended but is not mandatory for compliance with the standard. (Bio Med)

signal — A variation of a physical quantity used to represent data. (ISO 2382-1)

simplified english — Simplified English consists of a combination of writing rules and a limited vocabulary. (Aero Ind)

simulation — A simulation is a method for implementing a model. (DSMC, DODI 5000.2)

simulation — Synthetically representing the characteristics of a real world system or situation. (AS 5721B. 6.2)

simulation — Synthetically representing the characteristics of a real world system or situation, typically by interfacing controls and displays (operational or simulated) and positions of the system with a computer, which solves a mathematical model of the real world system and situation. (MIL-HDBK-220B)

simulation — The representation of physical systems and phenomena by computerized models, e.g., and imitative type of data processing in which specialized computer programs are used to mimic the behavior of a physical device or system. (ARP 1834), (Aero Ind)

simulation A mathematical model that mimics a system, usually using a standard simulation procedure or computer language, to predict the value of a parameter or set of parameters for a given system. (Aero Ind)

simulation A name often applied to this process of conducting experiments on a model instead of attempting the experiments with the real system. (J.W.Forrester)

simulation The use of a data processing system to represent selected behavioral characteristics of a physical or abstract system.

simulation The use of a data processing system to represent selected behavioral characteristics of a physical or abstract system. (SO 2382-20)

simulator A generic term used to describe a family of equipment used to represent threat weapon systems in development testing, operational testing, and training. (DODI 5000.2)

single point failure The failure of an item which would result in failure of the system's primary objective and is not compensated for by redundancy or alternative operational procedure. (Aero Ind)

single point failure A system failure due to the failure of a single component. (WG6)

single shot The attainment of a goal in a single attempt, thus excluding repetition or iteration. (DERA)

six sigma method A statistical method for quantifying the degree of deviation permitted by parts, products, and processes that guarantees that failure will typically occur less than three times in a million opportunities. (NRC)

sneak circuit analysis A procedure conducted to identify latent paths which cause occurrence of unwanted functions or inhibit desired functions assuming all components are functioning properly. (MIL-STD-721C), (3) A software component that is not subdivided into other component. (IEEE 610.12-1990)

soft copy Non-permanent output of information in audio or visual format. (ISO 2382-1)

software A combination of associated computer instructions and computer data definitions required to enable the computer hardware to perform computational or control functions. (DOD-STD-2167A)

software — The programs, procedures, rules, and any associated documentation pertaining to the operation of a data processing system. (POSIX91)

software — a set of instructions formulated to produce a desired sequence of output states on a specified digital computer in response to a given initial state and sequence of inputs. (Aero Ind)

software — Computer programs, procedures, and possibly associated documentation and data pertaining to the operation of a computer system. (IEEE 610.12-1990)

software — Instruction, procedures, rules, and associated documentation and data concerned with the operation of a computer system, particularly those on electronic media. (Aero Ind)

software — Intellectual creation comprising the programs, procedures, rules and any associated documentation pertaining to the operation of a data processing system. (ISO 2382-1:1984), (ISO 9001)

software — Programs, procedures, rules and any associated documentation pertaining to the operation of a computer system. (WG6)

software — A set of programs, associated data, procedures, rules, documentation, and materials concerned with the development, use, operation, and maintenance of a computer system. (WG6)

software — Computer programs, procedures, and possibly associated documentation and data pertaining to the operation of a computer system. (WG6)

software — Computer program code and its associated data, documentation and operational procedures. (WG6)

software — All or part of the programs, procedures, rules, and associated documentation of an information processing system. (ISO 2382-1)

software — Intellectual creation comprising the programs, procedures, rules and any associated documentation pertaining to the operation of a data processing system. (IEC 1508)

software architecture — The organizational structure of the software or module. (IEEE STD 610), (SEI-93-TR-25)

software build — An operational version of a software system or component that incorporates a specified subset of the capabilities the final software system or component will provide. (IEEE 610.12-1990)

software characteristic — An inherent, possibly accidental, trait, quality, or property of software. (IEEE STD 1008-1987)

software complexity metrics — A measure of the degree of complication of a system or system component: number of branches, nesting, data structures, lines of code, program size, etc. (Bio Med)

software component — A part of the computer program that implements some but not all of the functions or tasks of the complete program, viz., a subroutine, a code module, a function, or a procedure. (Bio Med)

software component — A component which consists solely of software. (WG6)

software configuration control procedures — A document that prescribes the procedures to be followed in evaluating, coordinating, approving, and disapproving changes to software. (Bio Med)

software defect — A software defect is a perceived departure in a software product from its intended properties, which if not rectified, would under certain conditions contribute to a software system failure (departure from required system behaviour during operational use), (WG6)

software deficiency — A condition in which a stored program or stored data conforms to drawing requirements, but does not function as intended. (Aero Ind)

software design description — A representation of a software system created to facilitate analysis, planning, implementation, and decision making. (IEEE STD 1016-1987)

software design description (SDD) — A representation of software created to facilitate analysis, planning, implementation, and decision making. (IEEE-STD-1012-1986)

software detailed design document — A document that describes the detailed decomposition of TLCSCs to lower level computer software components (LLCSCs) and units. (MIL-STD-490A)

software development cycle — The period of time that begins with the decision to develop a software product and ends when the software is delivered. (IEEE 610.12-1990)

software development file — A repository for a collection of material pertinent to the development or support of software. (DOD-STD-2167A)

software development library — A controlled collection of software, documentation, and associated tools and procedures used to facilitate the orderly development and subsequent support of software. (DOD-STD-2167A)

software development process — The process by which user needs are translated into a software product. (IEEE 610.12-1990)

software development specification (type b5) — Applicable to the development of computer software and consist of a software requirements specification and interface requirements specification(s), (MIL-STD-490A)

software diversity — a software development technique in which two or more functionally identical variants of a program are developed from the same specification by different programmers or programming teams with the intent of providing error detection, increased reliability, additional documentation, or reduced probability that programming or compiler errors will influence the end results. (IEEE 610.12-1990)

software engineering — The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software. (IEEE 610.12-1990)

software engineering — The systematic application of scientific and technological knowledge, methods, and experience to the design, implementation, testing, and documentation of software to optimize its production, support, and quality. (ISO 2382-1)

software engineering environment — The set of automated tools, firmware devices, and hardware necessary to perform the software engineering effort. (DOD-STD-2167A)

software engineering environment — The hardware, software, and firmware used to perform a software engineering effort. (IEEE 610.12-1990)

software failure — System failure due to the activation of a design fault in a software component. (WG6)

software failure — System failure due to the activation of a design fault in a software component. (IEC 1513)

software fault — A design fault located in a software component. (WG6)

software fault — A design fault located in a software component. (IEC 880)

software feature — A software characteristic specified or implied by requirements documentation (for example, functionality, performance, attributes, or design constraints), (IEEE STD 1008-1987)

software feature — A distinguishing characteristic of a software item (for example, performance, portability, or functionality), (IEEE STD 829-1983)

software hazard analysis — The identification safety-critical software, the classification and estimation of potential hazards, and identification of program path analysis to identify hazardous combinations of internal and environmental program conditions. (Bio Med)

software hazard analysis report — A document that records the proceedings and recommendations of a software hazard analysis. (Bio Med)

software item — Any identifiable part of a software product at an intermediate step or at the final step of development. (ISO 9001)

software item — Source code, object code, job control code, control data, or a collection of these items. (IEEE STD 829-1983)

software life cycle — The period of time that begins when a software product is conceived and ends when the software is no longer available for use. (IEEE 610.12-1990)

software life cycle — The sequence of processes performed when developing and maintaining software. (WG6)

software life cycle — The activities occurring during a period of time that starts when software is conceived and ends when the software is no longer available for use. (IEC 1508)

software package — A complete and documented set of programs (synonymous with application software) supplied to several users for a generic application or function. (WG6)

software package — A complete and documented set of programs supplied to several users for a generic application or function. (ISO 2382-1)

software package — A complete and documented set of programs supplied to several users for a generic application or function. (ISO 2382-20)

software piracy — Illegal use of copying of software products. (ISO 2382-1)

software product — Complete set of computer programs, procedures and associated documentation and data designated for delivery to a user. (ISO 9001)

software product — The complete set of computer programs, procedures, and possibly associated documentation and data designated for delivery to a user. (WG6)

software product specification (type c5) — Applicable to the delivered CSCI and is sometimes referred to as the as built software specification. (MIL-STD-490A)

software quality — The ability of a software product to satisfy its specified requirements. (DOD-STD-2168)

software quality — The totality of features and characteristics of a software product that bear on its ability to satisfy stated or implied needs. (WG6)

software quality assessment criteria — The set of defined and documented rules and conditions which are used to decide whether the total quality of a specific software product is acceptable or not. (WG6)

software quality characteristics — A set of attributes of a software product by which its quality is described and evaluated. (WG6)

software quality metric — A quantitative scale and method which can be used to determine the value a feature takes for a specific software product. (WG6)

software release — A version of the software product that has been extended with new functionality as compared with the previous version. (IEC 880)

software requirements review (SRR) — A review of the requirements specified for one or more software configuration items to evaluate their responsiveness to the interpretation of the system requirements and to determine whether they form a satisfactory basis for proceeding into preliminary design of the configuration items.(IEEE 610.12-1990)

software requirements specification — A document that prescribes completely and precisely the conditions and/or capabilities that system or product software must posses or meet to satisfy the system or product requirements specification. (Bio Med)

software requirements specification(SRS) — Documentation of the essential requirements (functions, performance, design constraints, and attributes) of the software and its external interfaces. (IEEE-STD-1012-1986)

software safety — The safety of a system as measured using only critical software failures as the class of relevant failures. (WG6)

software safety — The ability of software to function in accordance with its requirements in a consistent and predictable manner, under all conditions. (WG6)

software safety integrity — A measure that signifies the likelihood of software in a Programmable Electronic System achieving its safety functions under all stated conditions within a stated period of time. (IEC 1508)

software safety integrity level — One of 4 possible discrete levels for specifying the safety integrity of software in a safety-related system. (IEC 1508)

software specification review — A formal review of the final computer software configuration item (CSCI) requirements and operational concept. (Aero Ind)

software specification review (SSR) — A review of the finalized CSCI requirements and operational concept. (MIL-STD-1521B)

software support — The sum of all activities that take place to ensure that implemented and fielded software continues to fully support the operational mission of the software. (DOD-STD-2167A)

software support — The sum of all activities that take place to ensure that implemented and fielded software continues to fully support the operational mission of the system. (DODI 5000.2)

software test environment — A set of automated tools, firmware devices, and hardware necessary to test software. (DOD-STD-2167A)

software testing — Software testing is the process of examining the behaviour of a programme or part of a programme by executing it on selected sets of input data. (WG6)

software top level design document — Describes how the top-level computer software components (TLCSCs) implement requirements allocated from the software requirements specification and, if applicable, interface requirements specification(s), (MIL-STD-490A)

software verification and validation report — Documentation of V&V results and appropriate software quality assurance results. (IEEE-STD-1012-1986)

software version — Any modification or correction of the software product will result in a new version of the software product. (IEC 880)

sound pressure level (SPL) Twenty times the logarithm to the base ten of the ratio of the root-mean-square value of the fluctuating pressure to the reference pressure of 20 micro-Pascals. (Aero Ind)

source The originator of data passed across a logical interface. (SGOAA)

source documents Users' documents, which are a source of data eventually processed by the computer program, such as target lists, supple codes, parts list, maintenance forms, bills of lading, etc. (MIL-STD-1472D, para 3.59)

space generic open avionics architecture (SGOAA) Target open architecture standard being developed to provide an umbrella set of requirements for applying a generic architecture interface model to the design of specific avionics hardware/software systems. (SGOAA)

space operations control subsystem The high level integrating command and control functional entity for a space vehicle and mission. (SGOAA-1)

space provisions The space required for a specific installation is unoccupied in the airplane. (Aero Ind)

spare parts Repairable components or assemblies used for maintenance replacement purposes in major end items of equipment. (DODI 5000.2)

spares Units or assemblies used for maintenance replacement purposes in end items of equipment. (MIL-STD-480B)

spares Denotes both spare and repair parts. (DSMC, DODI 5000.2)

spares Those support items that are an integral part of the end item or system which are coded as repairable. (MIL-STD-1388-1A, 20)

spares acquisition integrated with production (SAIP) A procedure used to combine procurement of selected spares with procurement of identical items produced for installation on the primary system, subsystem, or equipment. (DODI 5000.2)

spares and repair parts All efforts associated with the manufacture and delivery of replacement components, assemblies, and repairable PME sub-elements. (?)

spares parts Components or assemblies used in maintenance replacement purposes in major end items of equipment. (DOD-STD-480), (MIL-STD-1456A), (DoD Directive 4100.35)

special test equipment — Single or multipurpose integrated test units engineered, designed, fabricated, or modified to accomplish special purpose testing. (DSMC)

special tooling and test equipment (STTE) — The efforts, materials, and other resources associated with the planning, design, calibration and certification of special tooling and test equipment. (WBS)

specialty engineering — Engineering disciplines that specialize in certain subjects or characteristics. (Aero Ind)

specific — Referring to a particular value or standardized arrangement, usually to those required in a standard or a legal requirement. (Bio Med)

specification — A document intended primarily for use in procurement, which describes the essential technical requirements for items, materials or services including the procedures for determining whether or not the requirements have been met. (MIL-STD-480B), (DoD Directive 4120.3)

specification — A document prepared to support acquisition and life cycle management that clearly and accurately describes essential technical requirements and verification procedures for items materials and services. (MIL-STD-499B-UNAPPROVED, GTE)

specification — A description of the essential technical requirements for items, materials, and services that includes the verification criteria for determining whether these requirements are met. (MIL-STD-499B-UNAPPROVED)

specification — A document used in procurement which clearly and accurately describes the essential and technical requirements for items, materials, or services, including procedures by which it can be determined that the requirements have been met. (MIL-STD-885B, DOD-HDBK-248)

specification — A document prepared specifically to support acquisition which clearly and accurately describes essential technical requirements for purchasing materiel. (MIL-STD-961C)

specification — A document intended primarily for use in procurement, which clearly and accurately describes the essential technical requirements for items, materials or services including the procedures by which it will be determined that the requirements have been met. (DSMC)

specification A description of the technical requirements for a material, product, or service that includes the criteria for determining whether these requirements are met. (FAR 10.002)

specification A complete compilation of the functional performance required of a system or its constituent parts, along with the conditions under which the performance is required and the means to be used to assure that the system performs as required. (Aero Ind)

specification A document that specifies, in a complete, precise, verifiable manner, the requirements, design, behavior, or other characteristics of a system or component, and, often, the procedures for determining whether these provisions have been satisfied. (IEEE 610.12-1990)

specification A description of the criteria that define the performance, attributes and constituents of a system or its parts or its associated enabling systems or services. (DERA)

specification Document stating requirements. (WG6)

specification A document that specifies, in a complete, precise, verifiable manner, the requirements, design, behavior, or other characteristics of a system or component, and, often, the procedures for determining whether these provisions have been satisfied. (IEC 880)

specification A document which fully describes a physical element or its interfaces in terms of requirements (functional, performance, constraints and physical characteristics) and the qualification conditions and procedures for each requirement. (IEEE P1220)

specification A detailed formulation, in document form, which provides a definitive description of a system for the purpose of developing or validating the system. (ISO 2382-20)

specification Document stating requirements. (ISO 8402)

specification change notice (SCN) A document used to propose, transmit, and record changes to a specification. (MIL-STD-481A), (MIL-STD-973), (DoD-STD-480A)

specification change notice (SCN) A document used in configuration management to propose, transmit, and record changes to a specification. (IEEE 610.12-1990)

specification element — A product, subsystem, assembly, component, sub-component, subassembly, or part of the specification tree described by a specification. (IEEE P1220)

specification fault — A design fault of an item which results from its required function having been incorrectly or incompletely defined. (WG6)

specification language — A language, often a machine-processible combination of natural and formal language, used to express the requirements, design, behavior, or other characteristics or a system or component. (IEEE 610.12-1990)

specification requirement — The value or range of values contained in a contractual performance specification or allocated from such a specification with a verification requirement for the end product. (MIL-STD-499)

specification tree — The hierarchical depiction of all the specifications needed to control the development, manufacture and integration of items in the transition from customer needs to the complete set of system products and processes that satisfy those needs. (MIL-STD-499B-UNAPPROVED)

specification tree — A diagram that depicts all of the specifications for a given system and shows their relationships to one another. (IEEE 610.12-1990)

specification tree — A hierarchy of specification elements and their interface specifications which identifies specifications related to physical elements. (IEEE P1220)

specified — Referring to a value or arrangement to be chosen for the purpose under consideration and indicted usually in accompanying documents. (Bio Med)

speech interference levels (SIL) — The arithmetic average of the sound pressure levels in the 1000, 2000 and 4000 Hz octave bands. (Aero Ind)

spiral model — A model of the software development process in which the constituent activities, typically requirements analysis, preliminary and detailed design, coding, integration and testing are performed iteratively until the software is complete. (IEEE 610.12-1990)

spreadsheet program — A program that displays a table of cells arranged in rows and columns, in which the change of the contents of one cell can cause recomputation of one or more cells based on user-defined relations among the cells. (ISO 2382-1), (ISO 2382-20)

stability — Attributes of software that bear on the risk of unexpected effects of modifications. (WG6)

stage — A period of the enterprise life cycle comprising a complete system creation process and the associated enterprise process controlling actions. (DERA)

standard — A document that establishes engineering and technical requirements for items, equipment, processes, procedures, practices and methods that have been adopted as standard. (MIL-STD-962)

standard — A document that establishes engineering and technical limitations and applications of items, materials, processes, methods, designs, and engineering practices. (FAR 10.002)

standard data services manager — The interface handling subsystem that manages the services that process requests for interaction between sensors, effectors, applications software and other services. (SGOAA)

standard part — A part covered by contractually required general equipment specification. (MIL-STD-965A)

standard process — A repeatable process that is documented, maintained, and controlled by the organization as a basis for common usage and tailoring throughout the organization. (SEI)

standardized profile — A balloted formal, harmonized document that specifies a profile. (POSIX P1003.0 Draft 14 Guide)

standards — Specifications that refer to the method of development procedures, rules, conventions and guidelines used for prescribing all or any part of program design, coding and testing. (Aero Ind)

standards — Mandatory requirements employed and enforced to prescribe a disciplined uniform approach to system development. (Aero Ind)

standby loads — Those electrical loads resulting from equipment necessary to maintain safe flight and landing after the loss of all primary and auxiliary sources of electric power. (Aero Ind)

standby power — That source of electrical power which is required to maintain safe flight and landing after loss of all other sources of electric power. (Aero Ind)

startup — The actions, configuration, conditioning, and procedures involved with the first operation of all or a designated part of a system. (Aero Ind)

state — An operational system condition can change with reaction to external or internal forces over time.(SE HDBK)

state — A condition which characterizes the behavior of a function/sub-function or element at a time. (IEEE P1220)

state diagram — A diagram that depicts the states that a system or component can assume, and shows the events or circumstances that cause or result from a change from one state to another. (IEEE 610.12-1990)

statement of work — That portion of a contract which establishes and defines all non-specification requirements for contractors efforts either directly or with the use of specific cited documents. (DSMC)

statement of work — A description of all the work required to complete a project, which is provided by the customer. (SEI-93-TR-25)

statement of work — A detailed description of the efforts and tasks which the contractor is required to perform. (AFSCP 800-6), (AFSCP 800-7)

statement of work (SOW) — The non-specification work tasks to be completed by the contractor. (MIL-STD-499B-UNAPPROVED)

state-of-the-art — The level to which technology and science at any designated cutoff time have been developed in a given industry or group of industries, as in the missile's capabilities were determined by the state-of-the-art at the time it went into production.. (DSMC)

states — States are conditions that a system may exist in. (Aero Ind)

status accounting — The process of documenting the current approved status of the system, including a historical record of all approved changes. (D0-178A)

stepwise refinement — A software development technique in which data and processing steps are defined broadly at first and then further defined with increasing detail. (IEEE 610.12-1990)

storage — A working draft copy circulated for comments or suggested changes. (DSMC)

storage (device) A functional unit into which data can be placed, in which they can be retained, and from which they can be retrieved. (ISO 2382-1)

storage life The length of time an item can be stored under specified conditions and still meet specified requirements. (MIL-STD-721C)

store Any device intended for internal or external carriage and mounted on an aircraft suspension and release equipment , whether or not the item is intended to be separated in flight from the aircraft. (MIL-STD-1760A)

stovepipe system A system, often dedicated or proprietary, which operates independently of other systems. (?)

strategy A careful plan or method. (Webster)

strawman concept A mission and system approach used as a baseline for initiating the requirements definition and evolution process. (NASA MDP92)

stress tests Stress tests are designed to overload a system, such as input of out of range data, rapid data entry, over processing, disconnecting interfaces, etc. (Bio Med)

strike count to failure The time that a state must exist in digital equipment before a failure is annunciated. (Aero Ind)

structural provisions The primary structure will be structurally adequate to support a specific installation, but items such as brackets, bolt holes, electrical wiring and hydraulic lines, are not provided. (Aero Ind)

structure chart A diagram that identifies modules, activities, or other entities in a system or computer program and shows how larger or more general entities break down into smaller, more specific entities. (IEEE 610.12-1990)

structure clash In software design, a situation in which a module must deal with two or more data sets that have incompatible data structures. (IEEE 610.12-1990)

structure tests Structure tests examine the internal processing logic of the software. (Bio Med)

structured design Any disciplined approach to software design that adheres to specified rules based on principles such as modularity, top-down design, and stepwise refinement; transaction analysis; transform analysis. (IEEE 610.12-1990)

structured program A program constructed of a basic set of control structures, each one having one entry point and one exit point. (WG6)

structured software Software implemented as a set of independent modules, each with a defined function and interface. (WG6)

structured walk-through A systematic examination of the requirements, design, or implementation of a system, or any part of it, by qualified personnel. (ISO 2382-20)

subassembly Two or more parts which form a portion of an assembly or a unit replaceable as a whole, but having a part or parts which are individually replaceable. (DOD-STD-100C), (MIL-STD-280A)

subassembly Two or more parts joined together to form a unit, capable of disassembly, which is only a part of a complete machine, structure, or other article. (DSMC)

subassembly A self-contained unit of an assembly that can be removed and replaced and repaired separately. (BMO-STD-77-6A)

subassembly An element of the physical or system architecture, specification tree, and system breakdown structure that is subordinate to a complex component and is comprised of two or more sub-components. (IEEE P1220)

sub-characteristic Property of an item which is part of the definition of a higher-level characteristic. (WG6)

subcomponent An element of the physical or system architecture, specification tree, and system breakdown structure that is subordinate to a noncomplex component, or a subassembly, and is comprised of two or more parts. (IEEE P1220)

subcontractor An individual, partnership, corporation, or association that contracts with a contractor to design, develop, design and manufacture, manufacture items, which are or were designed specifically for use in a-military application. (DOD-HDBK-287)

subcontractor A person or business that contracts to provide some service or material necessary for the performance of another contract. (MIL-STD-480B)

subcontractor Supplier, distributor, vendor or firm which furnishes supplies or services to or for a prime contractor or another subcontractor. (DOD-STD-100C)

subcontractor — A person or organization that provides product to a supplier. (Bio Med)

subcontractor — An individual, partnership, corporation, or association who contracts with an organization to design, develop, and/or manufacture items. (SEI)

subcontractor — A supplier to a prime contractor. (DERA)

sub-contractor — Organization that provides a product to the supplier. (ISO 8402)

subprogram — A separately compilable, executable component of a computer program. (IEEE 610.12-1990)

subroutine — A routine that returns control to the program or subprogram that called it. (IEEE 610.12-1990)

substantial damage — Damage or structural failure that adversely affects the structural strength, performance, or flight characteristics of the aircraft, and that would normally require major repair or replacement of the affected component. (Aero Ind)

subsystem — A grouping of items satisfying a logical group of functions within a particular system. (MIL-STD-499B-UNAPPROVED) (HDBK 2)

subsystem — A collection of equipment and subsystems, designed and integrated to function as a major subdivision of a system and to perform an operational function, or functions, therein. (MIL-STD-461C)

subsystem — A combination of sets, groups, etc., which performs an operational function within a system and is a major subdivision of the system. (MIL-STD-721C), (MIL-STD-280A)

subsystem — A configuration item or grouping of configuration items within a particular segment. (NAWCWPNS)

subsystem — An element of a system that, in itself may constitute a system. (MIL-STD-882B)

subsystem — The device or functional unit receiving data transfer service from the data bus. (MIL-STD-1472D)

subsystem — A functional grouping of components that combine to perform a major function within an element such as electrical power, attitude control, and propulsion. (DSMC)

subsystem — A secondary or subordinate system within a larger system. (IEEE 610.12-1990)

subsystem — A combination of components which perform an operational function within a system and is a subdivision of the system. (Aero Ind)

subsystem — A major functional portion of a system which contributes to operational completeness of the system. (WATOG)

subsystem — A collection of equipment and subsystems, designed and integrated to function as a major subdivision or a system and to perform an operational function or functions. (MIL-STD-463A)

subsystem — A combination of related groups or equipment, sets and LRUs arranged to perform a specific function within a system, and is a major subdivision of the system. (DOD-STD-863B)

subsystem — A major functional element of a system, usually consisting of several equipment that are essential to the operational completeness of the subsystem/system. (MIL-E-605 I D)

subsystem — The first level of expanded detail below the system level; a major portion of a system having specific boundaries and boundary conditions. (Aero Ind)

subsystem — A system viewed and defined as being a discrete part of a larger. (DERA)

subsystem — A component of a larger system which interacts with other components via a defined interface and which is sufficiently complex to be considered as a system in its own right. (WG6)

subsystem — An element of the physical or system architecture, specification tree or system breakdown structure that is a subordinate element to a product and is comprised of one or more assemblies and their associated life-cycle processes. (IEEE P1220), (WG6)

sub-system — A division of a system that in itself has the characteristics of a system. (IEC 987)

subsystem impact — The next higher level effect or consequence a failure has on the operation, function, or status of the major subsystem being analyzed. (Aero Ind)

subsystem level — Assembly levels at or below top assembly drawings of any single associate contractor. (BMO-STD-77-6A)

subsystem review — An incremental review is held at the CI (or aggregate of CI) level to assess subsystem development risks, issues, and progress. (MIL-STD-499B-UNAPPROVED)

subtask — Activities (perceptions, decisions, and responses) that fill a portion of the immediate purpose within a task (for example, remove a lug nut), (MIL-STD-1379D, 3.137)

subtask — A related set of discrete perceptions, decisions, or motor actions performed to accomplish a task. (BMO-STD-77-6A)

subtype — A subset of data type, obtained by constraining the set of possible values of the data type. (IEEE 610.12-1990)

suitability — A measure of the degree to which a system is appropriate for its intended use with respect to non-operational factors such as man-machine interface, training, safety, documentation, producibility, testability, transportability, maintainability, manpower availability, supportability, and disposability. (MIL-STD-499B-UNAPPROVED)

suitability — Attributes of software that bears on the presence and appropriateness of a set of functions for specified tasks. (WG6)

supercomputer — Any of the class of computers that have the highest processing speeds available at a given time for solving scientific and engineering problems. (ISO 2382-1)

supersystem — The integrated system comprising product system and all its neighbouring systems in the operational environment. (DERA)

supplemental agreement (S/A) — A bilateral contract modification document which requires two signatures, one by the government contracting officer and one by the contractor's contracting officer. (AFSCP 800 7)

supplementation — The publication of directives, instructions, regulations, and related documents that add to, restrict, or otherwise modify the policies or procedures of a higher authority. (DODI 5000.2)

supplied requirement — A requirement placed on the system by the procuring activity and supplied to the contractor in the product specification or statement of work. (Aero Ind)

supplier — That organization that is responsible to the customer for providing those system elements, procedures, and data required to provide and sustain the capability satisfying the operational requirement within funding and schedule constraints established by the customer. (NAWCWPNS)

supplier — The entity who produces a product for a customer. (IEEE 1074-1991)

supplier — The person, or persons, who produce a product for a customer. (IEEE STD 1074-1991)

supplier — The party to an agreement who delivers a solution to an acquirer's need. (DERA)

supplier — Organization that provides a product to the customer. (WG6)

supplier — Organization that provides a product to the customer. (ISO 8402)

supplier(s) — The development, manufacturing, verification, and deployment personnel that define, design, code, fabricate, assemble, integrate, verify, test, deliver and/or install system end items, and safely dispose of the by-products of their activities. (MIL-STD-499B-UNAPPROVED)

supplier(s) — Any private company or government activity supplying systems, subsystems, components, or assemblies under contract or purchase order to any other company or government activity for eventual inclusion as a part of an end item or system for delivery to the government under a contract. (MIL-STD-1695)

support — The tasks, actions, and activities to be performed and the system elements required to provide operations, maintenance, logistics (including training) and materiel management support. (MIL-STD-499B-UNAPPROVED)

support — The set of activities necessary to ensure that an operational system or component fulfills its original requirements and any subsequent modifications to those requirements. (IEEE 610.12-1990)

support — The tasks, actions, and activities to provide supply, maintenance, and support material and facility management for sustaining operations. (IEEE P1220)

support equipment — Equipment required to operate and maintain an item, system, or facility in its intended environment. (MIL-STD-480)

support equipment — Equipment and computer software required to maintain, test, or operate an item or facility in its intended environment. (MIL-STD-973)

support equipment — That equipment required to make an item, system, or facility operational in its intended environment. (?)

support function — The tasks, actions, and activities to be performed and the system elements required to provide operations, maintenance, logistics (including training) and materiel management support. (MIL-STD-499B-UNAPPROVED)

support manual — A document that provides the information necessary to service and maintain an operational system or component throughout its life cycle. (IEEE 610.12-1990)

support program — Software or program that aids in the development, maintenance, or use of other software or provides general application-independent capability. (ISO 2382-1)

support software — Software that aids in the development or maintenance or other software, for example, compilers, loaders and other utilities. (IEEE 610.12-1990)

support software — Software or program that aids in the development, maintenance, or use of other software or provides general application-independent capability. (ISO 2382-1)

support synthesis — The identification, description, and assembly of all support approaches into alternative support systems for examination in tradeoff analyses. (BMO-STD-77-6A)

support system — Those operational system elements required to maintain the performance of the mission system at specified levels. (NAWCWPNS)

support system — All the equipment, facilities, procedures and personnel required to maintain the AVE and OSE in an operating condition. .

supportability — The degree to which system design characteristics and planned logistics resources, including manpower, meet system peacetime readiness and wartime utilization requirements. (DSMC, DODI 5000.2)

supporting technology — A class of input to a process which is used but not consumed by the process. (WG6)

supporting technology — A class of input to a software process that is not consumed by the process. (WG6)

surge — An increase in the production or repair of defense goods of limited duration. (DODI 5000.2)

survivability — The capability of a system to avoid or withstand man-made hostile environments without suffering an abortive impairment of its capability to accomplish its designated mission. (COMOPTEVFORINST3960.1G), (DSMC), (MIL-STD-499), (MIL-STD-973)

survivability — The capability of a system to avoid or withstand a hostile environment without suffering an abortive impairment of its ability to accomplish its designated mission. (MIL-STD-480B)

survivability — The engineering disciplines and efforts concerned with specifying the PME survivability criteria, analyzing the survivability PME system/subsystem alternative designs, monitoring the system/subsystem design survivability features, determining and improving the system/subsystem vulnerability characteristics, attaining the required level of system/subsystem radiation hardening, and ensuring low observability criteria of the PME (Prime Mission Equipment), (WBS)

survivability — Probability that a system is able to avoid and/or withstand a specified threat environment and mission profile without suffering an abortive impairment of its ability to accomplish its designated mission, given it is available and dependable. (NAWCWPNS)

survivability — The capability of a system to avoid or withstand manmade hostile environments without suffering an abortive impairment of its ability to accomplish its designated mission. (DODI 5000.2), (AFR 80-14)

survive — The ability of an equipment, subsystem or system to resume functioning without evidence of degradation following temporary exposure to an adverse electromagnetic environment. (MIL-STD-463A)

susceptibility — The degree to which a device, equipment, or weapons system is open to effective attack due to one or more inherent weaknesses.(COMOPTEVFORINST 3960.1G, DSMC)

sustainability — The staying power of U.S. forces, units, weapons systems and equipment usually measured in number of days capability to sustain combat. (DSMC), (DODI 5000.2)

symbol — A graphic representation of a concept that has meaning in a specific context. (ISO 2382-1)

synchronous — Pertaining to two or more processes that depend upon the occurrence of specific events such as common timing signals. (ISO 2382-1)

synergism — The cooperative action of discrete agencies such that the total effect is greater than the sum of the effects taken independently. (Aero Ind)

syntax — The structural or grammatical rules that define how the symbols in a language are to be combined to form words, phrases, expressions and other allowable constructs. (IEEE 610.12-1990)

synthesis — The combining of information, concepts, constraints, components or elements to establish a complete and consistent system architecture, or to identify conflicts or deficiencies in established requirements or design solutions. (IEEE P1220)

synthesis — Translation of functions and requirements into possible solutions (resources and techniques) satisfying the basic input requirements. (AFM)

synthesis — The translation of functions and requirements into possible solutions (resources and techniques) satisfying the basic input requirements. (MIL-STD-499B-UNAPPROVED)

synthesis — Design. (McGraw Hill Dictionary)

synthesis — The combination of parts, elements, or diverse conceptions into a coherent whole; to put together. (Aero Ind)

system — An integrated composite of system elements that provide a capability that satisfies stated needs. (NAWCWPNS)

system — A set of functional elements organized to satisfy user needs. (IEEE)

system — An integrated composite of people, products, and processes that provide a capability to satisfy a stated need or objective. (MIL-STD-499B-UNAPPROVED))

system — Any process that converts inputs to outputs. (Bahill)

system (1) an assemblage or combination of elements or parts forming a complex or unitary whole, and (2) any assemblage or set of correlated members, (3) an ordered and comprehensive assemblage of facts, principles, or doctrines in a particular field of knowledge or thought; (4) a coordinated body of methods or complex scheme or plan of procedure; and (5) any regular or special method of plan of procedure. (NAWCWPNS)

system An integrated combination of system elements that form a unitary whole with a capability greater than the sum of the capabilities of the individual system elements. (NAWCWPNS)

system A composite of equipment, skills, and techniques capable of performing or supporting an operational role, or both. (?)

system A combination of two or more sets, which may be physically separated when in operation, and such other assemblies, subassemblies and parts necessary to perform an operational function or functions. (MIL-STD-280A)

system A composite of equipment, subsystems, skills, and techniques capable of performing or supporting an operational role. (MIL-STD-461C)

system People, machines, and methods organized to accomplish a set of specific functions. (FIPS PUB 11-3)

system A composite of equipment, skills, and techniques capable of performing or supporting an operational role, or both. (MIL-STD-480B)

system A composite of equipment and skills, and techniques capable of performing or supporting an operational role, or both. (MIL-STD-721C, MIL-STD-280)

system A composite, at any level of complexity, of personnel, procedures, materials, tools, equipment, facilities, and software. (MIL-STD-882B)

system A combination of two or more sets, generally physically separated when in operation, and such other assemblies and parts necessary to perform an operational function or functions. (DOD-STD-100C)

system The determination of the integrated quantitative and qualitative requirements for prime mission equipment, its supporting equipment and facilities, procedures (including computer programs), personnel selection and training, and logistics support. (CHASE)

system A combination of two or more interrelated equipment (sets) arranged in a functional package to perform an operational function or to satisfy a requirement. (DSMC)

system A set of functional elements organized to satisfy user needs. (IEEE P1220)

system The composite of equipment, material, computer software, personnel, facilities and information/procedural data that satisfies a user need. (SYSB-1)

system A composite of equipment skills and techniques capable of performing and/or supporting an operational role. (AFM), (MIL-E-6051 D)

system A set of interdependent internal systems (segments, elements, subsystems, components, and so on) which perform together as a defined functional unit. (NB Reilly Assoc.)

system An interacting collection of hardware, software, people, facilities, supplies, and procedures designed to accomplish a specified mission or objective. (Aero Ind)

system A collection of components organized to accomplish a specific function or set of functions. (IEEE 610.12-1990)

system A combination of inter-related items arranged to perform a specific function. (ARD50010-91)

system An organized arrangement in which each component arrangement in which each component part acts, reacts, or interacts in accordance with an overall design inherent in the arrangement. (AIR 1489-88)

system The complex or hardware and software utilized to affect the control of a process. (Aero Ind)

system In data processing, any group of software and hardware that is connect to operate as a unit. (SAE DICT)

system A composite of subsystems, assemblies (or sets), skills, and techniques capable of performing and/ or supporting an operational (or non-operational) role. (DoD-STD-480A)

system — A composite of equipment, subsystems, skills, and techniques capable of performing or supporting an operational role. (MIL-STD-499A), (MIL-STD-463A)

system — A combination of parts, assemblies and sets joined together to perform a specific operational function or functions. (DOD-STD-100C)

system — A combination of inter-related items arranged to perform a specific function. (WATOG)

system — A complex composite of devices and/or procedures to provide a desired functionality. (Aero Ind)

system — A set or collection of interacting elements within a specified boundary. (Aero Ind)

system — A device, procedure, or scheme which behaves according to some description, its function being to operate on information and/or energy and/or matter in a time reference to yield information and/or energy and/or matter. (Systems Philosophy, Ellis & Ludwig, Prentice-Hall, 1962)

system — Orderly combination or arrangement as of particulars, parts, or elements into a whole; especially such combination according to some rational principle. (Black's Law Dictionary, 5th Ed., West Pub, St. Paul, MN, 1979)

system — A combination of inter-related items arranged to perform a specific function. (Aero Ind)

system — A regularly interacting or independent group of items forming a unified whole which performs one or more required functions. (Aero Ind)

system — A composite of equipment, skills, and techniques capable of performing or supporting an operational role, or both. (Aero Ind)

system — Includes all elements of equipment necessary for the control and performance of a particular major function. (FAA AC 120-42A)

system — The concept of system is an abstract, devised synthetic entity. (adapted from W.P.Chase, Mgmt of SE)

system — A combination of elements that will function together to produce the capabilities required to fulfill a mission need. (DFAR)

system — An interacting combination of elements viewed in relation to function. (INCOSE Adopted and Recommended Definition)

system — A term which describes the characteristic action, function, or conditions at the external boundaries of a combination of elements, components, or sub-systems which interact together. (draft NCOSE Terminology WG)

system — A homogeneous entity that exhibits predefined behaviour in the real world and is composed of heterogeneous part that do not individually exhibit that behaviour. (DERA)

system — An item or equipment designed to provide a required service to a set of users, and which is complex enough to consist of several interacting components. (WG6)

system — A collection of components organised to accomplish a specific function or set of functions. (WG6)

system — A system is defined to consist of a set of components which interact according to a design. (IEC 1508)

system acquisition process — The sequence of activities starting with the decision to proceed toward the realization of an approved mission need and continuing through the introduction of a system into operational use or otherwise achievement of program objectives. (NMI 7100.14A)

system acquisition process — The set of process and activities that result in the supply of a system in accordance with agreed user requirements and enterprise organization constraints. (DERA)

system airframe — Any system on the airplane that is not a part of the propulsion system. (FAA AC 120-42A)

system allocation document — A document that identifies the aggregate of configuration items by software inventory number and the system configuration at each location. (DOD-HDBK-287)

system allocation document — A document which identifies the aggregation of configuration items by serial number and the system configuration at each location. (MIL-STD-483A)

system architecture — The composite of the physical architectures for consumer products and their life-cycle processes. (IEEE P1220)

system availability — Probability that a system is in an operable and committable state at the start of a mission (where the start of mission is at some unknown random time), (NAWCWPNS)

system block diagram — . ()

system capability — Measure of the system's ability to achieve its mission objectives, given it is available, dependable, and survivable. (NAWCWPNS)

system complex — A system is considered to be complex if structured methods of analysis are needed for a thorough and valid safety assessment. (FAA AC 25.1309)

system computer — A system containing one or more computers and associated software. (IEEE 610.12-1990)

system configuration — Same as System Design. (Aero Ind)

system contractual scope — The term system is restricted to the segment of a system which is encompassed by the contract, including interfaces with other system segments for which the contractor will be contractually responsible. (MIL-STD-499)

system definition — Determination of qualitative and quantitative performance and physical requirements which are adequate for design of a system element. (MIL-STD-499)

system definition — The determination of the integrated quantitative and qualitative requirements for prime mission equipment, its supporting equipment and facilities, procedures (including computer programs), personnel selection and training, and logistics support. (adapted from W.P.Chase, Mgmt of SE)

system dependability — The probability that the hardware and software will perform successfully during one or more required sequences of a mission, given the hardware and software status at the start of the mission (availability), (DSMC)

system dependability — Probability that a system is operable and is capable of performing its required functions during a specified mission profile, given it is available at the start of a mission. (NAWCWPNS)

system description — Documentation that results from system design defining the organization, essential characteristics and the hardware and software *requirements of the system. (ISO 2382-20)

system design The preparation of an assembly of methods, procedures, or techniques united by regulated interaction to form an organized whole. (JCS)

system design To develop a model on the basis of which a real system can be built, developed, or deployed that will satisfy all its requirements. (Wymore)

system design The product of the development process which provides sufficient details, drawings, or other pertinent information, on the system components, elements, parts, interfaces, etc., to permit the fabrication, production, assembly, integration and testing of the system under development.(IEEE P1220)

system design A hierarchical process of system definition involving development of system concepts, a functional design, a preliminary design, a detailed design, and design modifications required to produce a final product baseline. (NB Reilly Assoc.)

system design The process of: defining alternative assemblages of realizable subsystems that will meet system level requirements; selecting the best alternative, and describing the selected solution. (NAWCWPNS)

system design (noun) A portrayal of the structure and parameter values of a system. (Aero Ind)

system design (verb) A technique of constructing a system that performs in a specified manner, making use of available components. (McGraw Hill Dictionary)

system design (verb) A technique of constructing a system that performs in a specified manner. (Aero Ind)

system design The complete sequence of actions that creates a specification of components and their relationships that when manufactured conform to a user requirement. (DERA)

system design A process of defining the hardware and software architecture, components, modules, interfaces and data for a system to satisfy specified requirements. (ISO 2382-20)

system design concept An idea expressed in terms of general performance, capabilities, and characteristics of hardware and software oriented either to operate or to be operated as an integral whole in meeting a mission need. (DSMC), (NMI 7100.14A)

system design concept — A summary portrayal of a system design expressed primarily in terms of functionality, effectiveness, interface, and type of technology. (Aero Ind)

system design problem — Explicit definitions of the input/output requirement, technology requirement, performance requirement, cost requirement, trade-off requirement, and the system test requirement. (Wymore)

system design requirements — The effort to perform analyses, such as the comparison of alternative design configurations, design integrity, program risk assessments, intrasystem and intersystem compatibility, and cost/effectiveness trade-offs which result in the top level specifications and the system configuration of choice. (WBS)

system design review — Conducted to evaluate the optimization, correlation, completeness and risks of a system associated with its allocated technical requirements. (DSMC)

system design review — A review conducted to evaluate the manner in which the requirements for a system have been allocated to configuration items, the systems engineering process that produced the allocation, the engineering planning for the next phase of the effort, manufacturing considerations and the planning for production engineering. (IEEE 610.12-1990)

system design review (SDR) — A review to evaluate the optimization, correlation, completeness, and risks associated with the allocated technical requirements. (MIL-STD-1521B)

system development — A process that usually includes requirements analysis, system design, implementation, documentation and quality assurance. (ISO 2382-20)

system development cycle — The period of time that begins with the decision to develop a system and ends when the system is delivered to its user. (IEEE 610.12-1990)

system documentation — The collection of documents that describe the requirements, capabilities, limitations, design, operation, and maintenance of an information processing system. (ISO 2382-1), (ISO 2382-20)

system effectiveness — A quantitative measure of the extent to which a system can be expected to satisfy customer needs and requirements. (MIL-STD-499B-UNAPPROVED)

system effectiveness The measure of the extent to which a system may be expected to achieve a set of specific mission requirements. (MIL-STD-499A), (DSMC)

system effectiveness The ability of a system to satisfy its intended operational uses when called upon to do so. (IEEE P1220)

system effectiveness A quantitative measure of the extent to which a system can be expected to achieve its mission objectives. (NAWCWPNS)

system effectiveness A measure of the extent to which a system may be expected to achieve a set of specific mission requirements expressed as a function of availability, dependability, and capability. (McGraw Hill Dictionary)

system effectiveness The probability that a system can successfully meet an operational demand within a given time when operated under specified conditions. (WATOG)

system effectiveness A measure of how well a particular system may perform a particular mission. (Aero Ind)

system effectiveness A measurement of the ability of a system to satisfy its intended operational uses as a function of how the system performs under anticipated environmental conditions; the reliability and maintainability of system elements; and the ability to produce, test, distribute, operate, support, train, and dispose of the system throughout its life-cycle. (IEEE P1220)

system element Any item required to produce, test, deploy, operate, maintain, and support the system, i.e., equipment, personnel, facilities, procedural data, or computer programs. (AFM)

system element Those basic constituents that comprise a system. (NAWCWPNS)

system element A discrete portion of a system. (MIL-STD-499), (IEC 1508), (IEC Guide 51; Definition 3.5)

system element A general term for a part or portion of a system at any hierarchy level: a functional area, segment, subsystem, configuration item, or major component. (Aero Ind)

system element The basic constituents (hardware, software, facilities, personnel, data, material, services, or techniques) that comprise a system and satisfy one or more requirements in the lowest levels of the functional architecture. (MIL-STD-499B-UNAPPROVED)

system element — A product, subsystem, assembly, component, sub-component, subassembly, or part of the system breakdown structure which includes the specifications, configuration baseline, budget, schedule, and work tasks. (IEEE P1220)

system end item — A deployed system product and/or process that is ready for its intended use. (MIL-STD-499B-UNAPPROVED)

system engineering — A comprehensive, iterative technical process to: (a) Translate an operational need into a configured system meeting that need through a systematic, concurrent approach to integrated design of the product and its related manufacturing, test, and support processes; (b) Integrate the technical inputs of the entire development community and all technical disciplines (including the concurrent engineering of manufacturing, logic, and test) into a coordinated effort that meets established program cost, schedule and performance objectives; (c) Ensure the compatibility of all functional and physical interfaces (internal and external) and ensure that system definition and design reflect the requirements for all system elements (hardware, software, facilities, people, and data); (d) Characterize technical risks, develop risk abatement approaches, and reduce technical risk through early test and demonstration of system elements. (DoDI 5000.2)

system engineering — A robust approach to the design and creation of systems to accomplish desired ends. (NASA)

system engineering — The interdisciplinary approach governing the total technical effort required to transform a requirement into a system solution. (IEEE P1220)

system failure — A failure which is observed at the interface of a system with its environment. (WG6)

system follow-up — The study of the effects of a system after it has reached a stabilized state of operational use. (ISO 2382-20)

system function — An action or actions the system must accomplish in order to satisfy operational user needs. (NAWCWPNS)

system hardware architecture — The architecture consisting of the set of hardware resources in a configuration of distributed computers, memories, buses and network elements. (SGOAA)

system hazard analysis — The identification of specific internal and environmental conditions that may cause hazards in a system. (Bio Med)

system hazard analysis report A document that records the proceedings and recommendations of a system hazard analysis. (Bio Med)

system impact The end level effect or consequence a failure has on the ability of the system to operate or complete its mission. (Aero Ind)

system integration Bringing subsystems together to produce the desired result and ensure that the subsystems will interact to satisfy the customers' needs. (Bahill/Sandia)

system integration The procedures involved in combining separately developed sub-systems or components so that they work together as a complete system. (Aero Ind)

system integration The sequenced assembly and validation of delivered configurations of component/subsystem. (DERA)

system integration The progressive assembling of system components into the whole system. (ISO 2382-20)

system interconnect diagram A diagram which expands the details of the interface(s) portrayed by the Interface Block Diagram into physical and/or functional specifics. (Aero Ind)

system level Operational assemblies above top assembly drawings of any single associate contractor such as launch facility, silo, operational missile, etc. (BMO-STD-776A)

system life cycle The period extending from inception of development activities, based on an identified need or objective, through decommissioning and disposal of the system. (MIL-STD-499B-UNAPPROVED)

system life cycle The period of time that begins when a system is conceived and ends when the system is no longer available for use.(Aero Ind)

system life cycle The course of developmental changes through which a system passes from its conception to the termination of its use. (ISO 2382-20)

system lifecycle The activities occurring during a period of time that starts when a system is conceived and ends whenthe system is no longer available for use. (IEC 1508)

system maintenance The modification of a system to correct faults, to improve performance, or to adapt the system to a changed environment or changed requirements. (ISO 2382-20)

system management service A service of the Platform entity of the TRM that provides for the administration of the overall information system. (TA)

system manager A general term of reference to those organizations directed by individual managers, exercising authority over the planning, direction, and control of tasks and associated functions essential for support of designated weapons or equipment systems. (JCS)

system model In computer performance evaluation, a representation of a system depicting the relationships between workloads and performance measures in the system. (IEEE 610.12-1990)

system physical resources architecture The set of physical resources in a configuration of distributed computers, memories, buses, and network elements. (SGOAA-1)

system profile A set of measurements used in computer performance evaluation, describing the proportion of time each of the major resources in a computer system is busy, divided by the time that resource is available. (IEEE 610.12-1990)

system propulsion Each component that is necessary for propulsion, components that effect the control of the major propulsion units, and components that effect the safe operation of the major propulsion units. (FAA AC 120-42A)

system readiness objective A criterion for assessing the ability of a system to undertake and sustain a specified set of missions at planned peacetime and wartime utilization rates. (DODI 5000.2)

system reliability and maintainability parameter A measure of reliability or maintainability in which the units of measurement are directly related to operational readiness, mission success, maintenance manpower cost, or logistic support cost. (DODI 5000.2)

system requirement A condition or capability that must be met or possessed by a system or system component to satisfy a condition or capability needed by a user to solve a problem. (IEEE STD 610), (SEI-93-TR-25)

system requirements Provides a description of desired capabilities, constraints, and other details which pertain to the product's functional, performance, and physical characteristics. (IEEE P1220)

system requirements A condition or capability that must be met or possessed by a system or system component to satisfy a condition or capability needed by a user to solve a problem. (IEEE STD 610.12-1990)

system requirements Provide a description of desired capabilities, constraints, and other details which pertain to the productÕs functional, performance, and physical characteristics. (IEEE P1220)

system requirements A description of desired capabilities, constraints, and other details which pertain to the product's functional, performance, and physical characteristics. (IEEE P1220 (adapted))

system requirements allocated to software The subset of the system requirements that are to be implemented in the software components of the system. (SEI-93-TR-25)

system requirements analysis A sequential and iterative engineering process designed to establish the functional requirements for each element of a system. (Aero Ind)

system requirements analysis (SRA) A structured and iterative engineering effort that establishes the technical requirements of equipment, software, facilities, personnel, test procedures, technical data, training, training equipment, spares, repair parts, and consumables needed to test, deploy, operate and maintain a system (BMO STD-77-6A)

system requirements review Conducted to ascertain progress in defining system technical requirements. (DSMC)

system requirements review A review conducted to evaluate the completeness and adequacy of the requirements defined for a system; to evaluate the systems engineering process that produced those requirements; to assess the results of systems engineering studies; and to evaluate systems engineering plans. (IEEE 610.12-1990)

system requirements review (SRR) The objective of this review is to ascertain the adequacy of the contractor's efforts in defining system requirements. (MIL-STD-1521B), (MIL-STD-499B-UNAPPROVED)

system requirements specification A document that prescribes completely and precisely the conditions and/or capabilities necessary for the system or product to fulfill its intended use and/or to satisfy any additional contracts, standards, specifications, or other formal agreements with the firm's customers. (Bio Med)

system safety The engineering discipline that identifies and eliminates hazards, or reduces risk associated with hazards. (WBS)

system safety The application of engineering and management principles, criteria, and techniques to optimize safety within the constraints of operational effectiveness, time, and cost throughout all phases of the system life-cycle. (DSMC, DODI 5000.2, MIL-STD-882B)

system security engineering An element of systems engineering that applies scientific and engineering principles to identify security vulnerabilities and minimize or contain risks associated with these vulnerabilities. (MIL-STD-1785, 3-21)

system security management plan A formal document that fully describes the planned security tasks required to meet system security requirements, including: organizational responsibilities, methods for accomplishment, milestones, depth of effort, and integration with other program engineering, design and management activities and related systems. (MIL-STD-1785, 3.23)

system services software Common software, independent of application software, which is needed to run applications software and enable it to interface to data within a system or across the EEI. (SGOAA)

system software Application-Independent software that supports the running of application software. (ISO 2382-20)

system software Software designed to facilitate the operation and maintenance of a computer system and its associated programs; for example, operation system, assemblers, utilities. (IEEE 610.12-1990)

system software Software designed for a specific computer system or family of computers systems to facilitate the operation and maintenance of the computer system and associated programs, for example, operating system, compilers, utilities. (IEC 880)

system software Application independent software that supports the running of application software. (ISO 2382-1)

system software architecture The architecture consisting of the elements and interfaces between software components in a system. (SGOAA)

system specification States the technical and mission requirements for a system as an entity, allocates requirements to functional areas and defines the interfaces between or among the functional areas. (DOD-HDBK-248A)

system specification A document which states the technical and mission requirements for a system as an entity, allocates requirements to functional areas (or configuration items), and defines the interfaces between or among the functional areas. (DoD-STD-480A)

system support The continued provision of services and material necessary for the use and improvement of an implemented system. (ISO 2382-20)

system survivability — Probability that a system is able to avoid and/or withstand a specified threat environment and mission profile without suffering an abortive impairment of its ability to accomplish its designated mission, given it is available and dependable. (NAWCWPNS)

system test — The testing and evaluation spanning the integration of configuration items into a complete system in as near an operational configuration as is practicable, which is a joint contractor-procuring agency effort under procuring agency control. (AFSCP 800-7)

system test — Determining performance characteristics of an integrated, interconnected assemblage of equipment under conditions that evaluate its ability to perform as intended and that verify suitability of its interconnections. (SAE DICT)

system test and evaluation plan — A plan that establishes detailed requirements, criteria, general methodology, responsibilities, and general planning for test and evaluation of a system. (ISO 2382-20)

system testing — The process of testing an integrated hardware and software system to verify that the system meets its specified requirements. (ANSI/IEEE STD 829-1983), (IEEE-STD-1012-1986)

system testing — Testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. (IEEE 610.12-1990.)

system testing — Testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. (WG6)

system threat assessment — Describes the threat to be countered and the projected threat environment. (DODI 5000.2)

system trade-off analyses — Includes special studies conducted by the systems engineering organization that are concerned with potential improvements to the system. (WBS), (ISO 2382-1)

system unit — A combination of parts, assemblies and sets joined together to perform a specific operational function or functions. (DOD-STD-100C)

system views — The system definition resulting from each iteration of the systems engineering process are presented in four views. (NAWCWPNS)

system/equipment — Synonymous with the term end item as defined in MIL-STD-1375 (Navy), (MIL-STD-1369)

system/segment specification (type a) — States the technical and mission requirements for a system/segment as an entity, allocates requirements to functional areas, documents design constraints, and defines the interfaces between or among the functional areas. (MIL-STD-490A)

systems acquisition — The design, development, and production of new systems. (DFAR)

systems analysis — A management planning technique which applies scientific methods of many disciplines to major problems or decisions. (DSMC)

systems analysis — A systematic investigation of a real or planned system to determine the information requirements and processes of the system and how these relate to each other and to any other system. (ISO 2382-20)

systems analysis — To develop a model by means of which a real system will be managed, controlled, augmented, evaluated, or modified in order to satisfy all its requirements. (Wymore)

systems analysis — The examination of an activity, procedure, method, technique, or a business to determine: a) behavioral relationships or, b) what must be accomplished an how. (SAE DICT)

systems analysis — The use of mathematics to determine how a set of interconnected components whose individual characteristics are known will behave in response to a given input or set of inputs. (McGraw Hill Dictionary)

systems analysis — The analysis of an activity, procedure, method, technique, or business to determine what must be accomplished and how the necessary operations may best be accomplished. (McGraw Hill Dictionary)

systems analysis — The overall process for arriving at the best mix of equipment, personnel, and procedural requirements for a system design. (adapted from W.P.Chase, Mgmt of SE)

systems analysis and control — The assessment and control mechanisms, including performance based progress measurements to: (1) establish system effectiveness; (2) balance cost, schedule, performance, and risk; and (3) control the system configuration. (MIL-STD-499B-UNAPPROVED)

systems architecture — Same as System Design. (Aero Ind)

systems architecture The composite of the functional, physical, and foundation architectures, which form the basis for establishing a system design. (IEEE P1220)

systems architecture A top-level system design defined by a set of logical components, their interconnection, and identification of system requirements allocated to each component. (Chandler Ramchandani)

systems architecture A hierarchically structured description of a system including its internal systems, and internal and external interfaces. (NB Reilly Assoc.)

systems architecture The aggregation of decomposed system functions into interacting system elements whose requirements include those associated with the aggregated system functions and their interface requirements/definition. (NAWCWPNS)

systems architecture A high level system description which regularizes a candidate solution sufficiently to perform trade studies. (McKendree)

systems engineer An engineer who analyzes requirements, performance and functions of the total system including hardware and software, partitions this system into elements showing requirements and functions allocated to these elements. (SYSB-1)

systems engineer The individual or group responsible to program management for implementing an interdisciplinary, holistic approach for transforming an operational needs into system level technical requirements, a system architecture, and finally a detail design that defines a cost effective and affordable operational system that has been verified as meeting that need. (NAWCWPNS)

systems engineering An interdisciplinary approach to evolve and verify an integrated and life-cycle balanced set of system product and process solutions that satisfy customer needs. (MIL-STD-499B-UNAPPROVED)

systems engineering The intellectual, academic, and professional discipline the principal concern of which is the responsibility to ensure that all requirements for a bioware/hardware/software system are satisfied throughout the life cycle of the system. (Wymore)

systems engineering Concerned with the design and analysis of the whole system to achieve optimum results. (U.S. Naval Academy)

systems engineering An interdisciplinary activity that ensures that the customer is needs are satisfied throughout a system is entire life cycle. (Bahill/Sandia)

systems engineering The iterative but controlled process in which user needs are understood and evolved (through increasingly detailed levels of requirement specification and system design (to an operational system. (IBM)

systems engineering The application of scientific and engineering efforts to (a) transform an operational need into a description of system performance parameters and a system configuration using an iterative process of definition, synthesis, analysis, design, test, and evaluation; (b) integrate related technical parameters and ensure compatibility of all physical functional, and program interfaces in a manner that optimizes the total system definition and design; and (c) integrate reliability, maintainability, safety survivability, human, and other such factors into the total engineering effort to meet cost, schedule, and technical performance objectives. (MIL-STD-499A)

systems engineering An integrated technical process for establishing a system design that includes the product design and the process definitions for development, test, manufacturing, distribution, support, operation, training, and disposal. (IEEE)

systems engineering The process of ensuring that a given system is optimal in terms of its functional performance, operability, risk, development schedule and cost. (Aero Ind)

systems engineering The branch of engineering dealing with the design of a complex interrelation of many elements (a system) to maximize an agreed-upon measure of system performance. (McGraw Hill Dictionary)

systems engineering A branch of engineering using especially information theory, computer science, and facts from systems-analysis studies to design integrated operational systems for specific complexes. (Webster)

systems engineering The application of scientific and engineering efforts to (a) transform an operational need into a description of system performance parameters and a system configuration through the use of an iterative process of definition, synthesis, analysis, design, test and evaluation; (b) integrate related technical parameters and assure compatibility of all physical, functional and program interfaces in a manner which optimizes the total system definition and design; (c) integrate reliability, maintainability, safety, survivability (including electronic warfare considerations), human and other such factors into the total engineering effort.(MIL-STD-499), (MIL-STD-881A)

systems engineering A logical sequence of activities and decisions transforming an operational need into a description of system parameters and a preferred system configuration. (BMO-STD-776A)

systems engineering Designing, installing and operating a system in a manner intended to achieve optimum output while conserving manpower, materials and other resources. (SAE DICT)

systems engineering A structured methodology for the development of complex systems. (Aero Ind)

systems engineering A logical sequence of activities and decisions transforming an operational need into an description of system parameters and a preferred system configuration. (Aero Ind)

systems engineering The selective application of scientific and engineering efforts to: (a) transform an operational need into a description system configuration which best satisfies the operational need according to the measures of effectiveness; (b) integrate related technical parameters and ensure compatibility of all physical, functional, and technical program interfaces in a manner which optimizes the total system definition and design; and (c) integrate the efforts of all engineering disciplines and specialties into the total engineering effort. (AFM)

systems engineering The interdisciplinary approach governing the total technical effort required to transform a requirement into a system solution. (IEEE P1220), (IEEE P1220)

systems engineering Management of the systems engineering process and the integration of all engineering activities and technical aspects of the system/ project from receipt of a requirement for a new system or materiel item through the delivery of the system or item to the operational inventory. (AFM)

systems engineering The translation of user needs into an affordable, timely and operationally effective total system that best satisfies the user requirements (needs), (SYSB-1)

systems engineering An interdisciplinary holistic approach for: (a) transforming operational needs into realizable system requirements, subsystem requirements, and a detail design that defines an effective and affordable operational system that has been verified as meeting that need; (b) developing program plans that enhance program stability by defining technical goals, the plans for achieving those goals, and the means for quantifiably determining progress against the plans; and (c) effecting post development changes to the operational system. (NAWCWPNS)

systems engineering Includes the technical efforts required to translate an operational need into a fully integrated system design. (WBS)

systems engineering The application of scientific and engineering efforts to: (a) transform an operational need into a description of system performance

parameters and a system configuration through the use of an iterative process of definition, synthesis, analysis, design, test, and evaluation; (b) integrate related technical parameters and ensure compatibility of all physical, functional, and program interfaces in a manner that optimizes the total system definition and design; and (c) integrate reliability, maintainability, safety, survivability, human, and other such factors into the total engineering effort to meet cost, schedule, and technical performance objectives. (WBS)

systems engineering A formal awareness of the interactions between the parts of a system. (J.W.Forrester)

systems engineering The process of selecting and synthesizing the application of the appropriate scientific and technological knowledge in order to translate system requirements into a system design, and, subsequently, to produce the composite of equipment, skills, and techniques and to demonstrate that they can be effectively employed as a coherent whole to achieve some stated goal or purpose. (W.P.Chase, Mgmt of SE)

systems engineering Encompasses what all organizational entities and all persons, technical or business, within an enterprise must accomplish to produce a quality, competitive product that will be marketable, will provide a return on investment, and will provide customer satisfaction. (IEEE)

systems engineering An interdisciplinary approach to evolve and verify an integrated and life-cycle balanced set of system product and process solutions that satisfy customer needs. (MIL-STD-499B-UNAPPROVED)

systems engineering detailed schedule (SEDS) The detailed, task-oriented schedule of the work efforts required to support the events and tasks identified in the SEDS. (MIL-STD-499B-UNAPPROVED)

systems engineering for development The systematic application of proven standards, processes, and tools to the technical organization, management, control, and execution of: system design, design maintenance, implementation, integration and test, logistics support, and transfer to operations. (NB Reilly Assoc.)

systems engineering group The collection of individuals (both management and technical staff) who have responsibility for specifying the system requirements; allocating the system requirements to the hardware, software, and other component; specifying the interfaces between the hardware, software and other components; and monitoring the design and development of these components to ensure conformance with their specifications. (SEI-93-TR-25)

systems engineering management The planning, monitoring and controlling required to manage the systems engineering technical discipline, and ensure the efficient and

effective implementation of the systems engineering process including specialty integration as required by a project or program. (SYSB-1)

systems engineering management (SEM) the result of applying systems engineering concepts and techniques to a program, project, or company (all are systems) for the purpose of reducing or controlling risk. (Aero Ind)

systems engineering management (SEM) The planning and control of a totally integrated engineering effort related to a system program. (MIL-STD-499)

systems engineering management plan The plan for a particular program which details the systems engineering process for that program. (Aero Ind)

systems engineering management plan A comprehensive document that describes how the fully integrated engineering effort will be managed and conducted. (MIL-STD-499B-UNAPPROVED)

systems engineering management plan (SEMP) A plan for the application of the principles of management to ensure effective execution of the systems engineering effort. (AFM), (WG6)

systems engineering master schedule (SEMS): A compilation of key accomplishments requiring successful completion to pass identified events. (MIL-STD-499B-UNAPPROVED)

systems engineering process The utilization of the basic decision making process (Figure 4) in the performance of systems engineering. (NAWCWPNS)

systems engineering process The sequential and iterative methodology involving top-down development of the product and technical program task elements of the Work Breakdown Structure and allocation of requirements for design and for technical program definition to all system and technical program elements including those for technical performance measurement.. (AFM)

systems engineering process The methodology of sequential and iterative application of selected scientific and engineering efforts to convert user needs into a system solution that will best satisfy the requirements and constraints in accordance with agreed to effectiveness measures reflecting the users needs. (SYSB-1)

systems engineering process A comprehensive, iterative problem solving process that is used to: (a) transform validated customer needs and requirements into a life-cycle balanced solution set of system product and process designs, (b) generate information for decision makers, and (c) provide information for the next acquisition phase. (MIL-STD-499B-UNAPPROVED)

systems engineering process A logical sequence of activities and decisions transforming an operational need into a description of system performance parameters and a preferred system configuration. (MIL-STD-499A)

systems engineering process The sequence of activities and decisions selected for a particular program, or problem, to transform an operational need into a description of system performance parameters and a preferred system configuration. (Aero Ind)

systems engineering process The application of scientific and engineering effort to: (a) Transform an operational need into a description of system performance parameters and a system configuration through an iterative process of definition, synthesis, analysis, design, test and evaluation, (b) Integrate related technical parameters to assure the compatibility of all physical, functional, and program interfaces in a manner which optimizes the total system definition and design, and, (c) Integrate reliability, maintainability, safety, human and other such factors into the total engineering effort . (Aero Ind)

systems engineering process A tiered listing of all systems engineering technical tasks and resulting products or outputs organized and sequenced into a complete and cohesive process as an integral part of the total engineering effort for a generic large system program. (Aero Ind)

systems engineering process A comprehensive, iterative problem solving process that is used to: (a) Transform validated customer needs and requirements into a life-cycle balanced solution set of system product and process designs (b) Generate information for decision makers and (c) Provide information for the next acquisition phase. (MIL-STD-499B-UNAPPROVED)

systems engineering process element A specialty task/program which contributes to an integrated, comprehensive systems engineering process. (AFM)

systems engineering support team (SEST) Provides systems engineering technical support on individual programs. (NAVAIRINST 5451.2)

systematic failure (reproducible) A failure related in a deterministic way to a certain cause, which can only be eliminated by a modification of the design or of the manufacturing process, operational procedures, documentation or other relevant factors. (WG6)

systematic failures Failures due to errors (including mistakes and acts of omissions) in any Safety Life cycle activity which cause it to fail under some particular combination of inputs or under some particular environmental condition. (IEC 1508)

systematic fault failure. A fault which manifests itself as a systematic (WG6)

systems engineering The branch of engineering concerned with interacting combinations of elements viewed in relation to function. (SETWG Preferred Definition)

systems engineering An interdisciplinary approach and means to enable the realization of successful systems. (INCOSE)

systems engineering An interdisciplinary collaborative approach to derive, evolve, and verify a life-cycle balanced system solution which satisfies customer expectations and meets public acceptability. (IEEE P1220), (SEI)

systems engineering The subject of man-made systems or the engineering activity that is undertaken during the system life cycle. (DERA)

systems engineering implementation plan (SEIP) The technical plan that defines the system and subsystem tasks and requirements, their interrelationships, and the associated roles and responsibilities in the execution of systems engineering throughout a program life cycle. (NAVAIRINST 5451.2)

systems engineering management The field of systems engineering concerned with interacting combinations of people and organizations viewed in regard to the function of technical development. (SETWG Preferred Definition)

systems integration The combining of subsystems each with numerous interfaces for the input and output of data and each with specified functions vital to the planned success of the main system. (NASA), (SAE DICT)

Taguchi Methods Generic term covering a variety of methods for statistically determining required quantitative features of a design or a manufacturing process that render it robust against disturbances, variations, and uncertainties, with the objective of reducing quality loss. (NRC)

tailoring The process by which the requirements of this standard are adapted (that is, modified, deleted, or supplemented) to the peculiarities, characteristics, or operational requirements of the material in an individual equipment or subsystem specification. (MIL-STD-461C)

tailoring The selective application of systems engineering, technical, and managerial resources to fulfill the objectives of a project/program. (AFM)

tailoring The process of evaluating individual potential requirements to determine their pertinence and cost effectiveness for a specific system or

equipment acquisition, and modifying these requirements to ensure that each contributes to an optimal balance between need and cost. (MIL-STD-470B)

tailoring The process of choosing or altering test procedures, conditions, values, tolerances, measures of failure, etc., to simulate or exaggerate the effects of one or more forcing functions to which an item will be subjected during its life cycle. (MIL-STD-810E)

tailoring The process by which individual requirements (sections, paragraphs, or sentences) of specifications, standards, and related documents are evaluated to determine the extent to which they are most suitable for a specific system and equipment acquisition and the modification of these requirements to ensure that each achieves an optimal balance between operational needs and cost. (MIL-STD-961C)

tailoring Commensurate with risk and affordability considerations, such approaches as maintaining multiple alternatives in high risk areas; competitive prototyping of critical systems, subsystems, and components; combining developmental and operational test and evaluation; dual sourcing; and using multi-year procurement should be considered when developing acquisition strategy. (DSMC)

tailoring The process by which individual requirements of standards, DIDS and related documents are evaluated to determine their suitability for a specific acquisition, and the modification of those requirements to ensure that each achieves an optimal balance between operational needs and cost. (DOD-HDBK-287)

tailoring The process by which individual task statements (sections, paragraphs, or sentences) of specifications, standards, and related documents are evaluated to determine the extent to which they are most suitable for a specific system and equipment acquisition and the modification of these requirements to ensure that each achieves an optimal balance between operational needs and cost. (MIL-STD-499B-UNAPPROVED)

tailoring The process by which the requirements of a standard are adapted (that is, modified, deleted, or supplemented) to the peculiarities, characteristics, or operational requirements of the material in an individual equipment or subsystem specification. (MIL-STD-463A)

tailoring The process of selectively applying the requirements of military specifications and standards on a contract. (AFSCP 800-7)

tailoring The process by which the individual requirements (sections, paragraphs, or sentences) of the selected specifications and standards are evaluated to determine the extent to which each requirement is most suitable for a specific materiel acquisition and the modification of these requirements, where necessary, to

ensure that each tailored document invoked states only the minimum needs of the government. (MIL-STD-785B)

tailoring The process by which the requirements of a standard are adapted (that is, modified, deleted or supplemented) to the peculiarities, characteristics or operational requirements of the material in an individual equipment or subsystem specification. (MIL-STD-463A)

tailoring The process of selectively applying the requirements of military specifications and standards on a contract. (AFSCP 800-7)

tailoring The process by which the individual requirements (sections, paragraphs, or sentences) of the selected specifications and standards are evaluated to determine the extent to which each requirement is most suitable for a specific materiel acquisition and the modification of these requirements, where necessary, to assure that each tailored document invoked states only the minimum needs of the government. (MIL-STD-785B)

tailoring To modify a process, standard or procedure to better match process or product requirements. (SEI-93-TR-25)

takeoff thrust The jet thrust that is developed under static conditions at a specific altitude and atmospheric temperature under the maximum conditions of rotor shaft rotational speed and gas temperature approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification. (FAR Ch. 1)

task A software entity that is executed in parallel with other parts of a software program to perform an action. (BOO-CH87, SGOAA-1)

task A related set of personnel activities directed toward a purpose. (BMO-STD-77-6A)

task A definitive activity performed for a specific purpose, usually with a desired result or output. (Aero Ind)

task element A single perception, decision, or motor action which, when performed in sequence with other related task elements, makes up a task or sub task. (BMO-STD-77-6A)

tasking activity The person, persons, or organization that directs a performing activity to accomplish the work specified in this Standard. (IEEE P1220)

taxonomy A scheme that partitions a body of knowledge and defines the relationships among the pieces. (IEEE STD 1002-1987)

team — A collection of people, often drawn from diverse but related groups, to perform a well defined function for an organization or a project. (SEI)

technical data — Data other than computer software, which are of a scientific or technical nature. (FAR)

technical data — Recorded information, regardless of form or characteristics, of a technical nature. (MIL-STD-480B)

technical data — Scientific or technical information recorded in any form or medium (such as manuals and drawings), (DSMC)

technical data — The recorded information (regardless of the form or method of recording) of a scientific or technical nature (including computer software documentation) relating to products and processes. (MIL-STD-499B-UNAPPROVED)

technical data — Recorded information (regardless of the form or method of recording) of a scientific or technical nature (including computer software documentation) relating to supplies procured by an agency. (Title 10, USC, Sect. 2302), (MIL-STD-973)

technical data package — A technical description of an item adequate for supporting an acquisition strategy, production, engineering, and logistics support. (DODI 5000.2)

technical data package — The engineering drawing, associated lists, process descriptions, and other documents that define system product and process physical geometry; material composition; performance characteristics; and manufacture, assembly, and acceptance test procedures. (MIL-STD-499B-UNAPPROVED)

technical data package — Should include all engineering drawings, associated lists, process descriptions, and other documents which define the physical geometry, material composition, performance characteristics, manufacture, assembly, and acceptance test procedures. (MIL-STD-973)

technical data package — A technical description of an item adequate for supporting an acquisition strategy, production, engineering, and logistics support. (DSMC)

technical effort — The total engineering, test, manufacturing, and specialty engineering effort associated with the development of a product offering which encompasses all of the system, equipment, facilities, etc., necessary for the enterprise to develop, produce, distribute, operate, test, support, train, and dispose of the product. (IEEE P1220)

technical effort — Any activity that influences system design. (MIL-STD-499B-UNAPPROVED)

technical effort — The total engineering, test, manufacturing, and specialty engineering effort associated with the development of a product which encompasses all of the system, equipment, facilities, etc., necessary for the enterprise to develop, produce, distribute, operate, test support train, and dispose of the product. (IEEE P1220)

technical interchange meeting (TIM) — A meeting, usually between the contractor and the customer, to discuss a specific agenda of technical subjects. (Aero Ind)

technical management — The application of technical and administrative resources to plan, organize and control engineering functions. (IEEE STD 1002-1987)

technical manual — A publication that contains instructions for the installation, operation, maintenance, training, and support of weapon systems, weapon system components, and support equipment. (DODI 5000.2)

technical objectives — The target values for the development effort when insufficient data is available for stating binding technical requirements. (MIL-STD-499B-UNAPPROVED)

technical parameters — A selected subset of the system's technical metrics tracked TPM. (MIL-STD-499B-UNAPPROVED)

technical performance measurement — The identification, prediction, measurement, and demonstration of the achievement of key technical objectives which reflect the ability of the system design to satisfy the system effectiveness objectives. (IEEE P1220)

technical performance measurement — The continuing demonstration and prediction of the degree of actual or anticipated achievement of selected technical goals or objectives of a system or part thereof, together with a causal analysis of the variance between the achievement and the objective. (MIL-STD-499)

technical performance measurement — The continuing prediction and demonstration of the degree of anticipated or actual achievement of selected technical objectives. (MIL-STD-499A)

technical performance measurement — The continuing verification of the degree of anticipated and actual achievement of technical parameter. (MIL-STD-499B-UNAPPROVED)

technical performance measurement (TPM) The design assessment function of performance measurement which estimates through engineering analyses, or measures through tests, the values of essential performance parameters of the current design of system elements and forecasts the values to be obtained through the planned technical approach. (AFM)

technical program The total program effort for a system. (AFM)

technical program The total technical program effort for a system includes all design/development/test/evaluation tasks to progress from an operational requirement to the system in operational use, including interfaces with production, operation by user, logistic support and training. (MIL-STD-499)

technical program contractual scope The total technical program to progress from the beginning of a contractual effort to the delivered products of that effort. (MIL-STD-499)

technical program element element of the contract work breakdown structure down to the work package level. (AFM)

technical program element A discrete portion of the technical program consisting of a task or aggregation of tasks either completing work related to an element of the contract work breakdown structure or contributing an intermediate product. (MIL-STD-499)

technical program planning Determination of the requirements for the technical program effort which will provide adequate assurance that system element requirements will be met on schedule within budget is considered technical program planning. (MIL-STD-499)

technical program planning and control The management of those design, development, test, and evaluation tasks required to progress from an operational need to the deployment and operation of the system by the user. (MIL-STD-499A)

technical publication A manual containing a description of a weapon system and equipment, with instructions for effective use, including one or more of the following sections: installation, preparation for use, operation, maintenance, overhaul, parts breakdown, related technical information, or procedures. (DOD-STD-863B)

technical reference model The document that identifies a target framework and profile of standards for the DOD computing and communications infrastructure. (TRM)

technical requirements An all inclusive term encompassing one or more of the following terms: Functional requirements, design constraints, numbers and skills of

personnel, quantities of equipment, spares, repair parts or consumables; personnel tasks, etc. (BMO-STD-77-6A)

technical requirements Those requirements that describe what the software must do and its operational constraints. (SEI-93-TR-25)

technical reviews A series of systems engineering activities by which the technical progress on a project is assessed relative to its technical or contractual requirements. (MIL-STD-480B)

technical reviews A series of systems engineering activities by which the technical progress of a program is assessed relative to its technical or contractual requirements. (MIL-STD-499B-UNAPPROVED)

technical reviews A series of systems engineering activities by which the technical progress on a project is assessed relative to its technical or contractual requirements. (MIL-STD-973)

technical specifications A detailed description of the technical characteristics of an item or system in sufficient detail to form the basis for design, development, production and, in some cases operation. (SAE DICT)

technical variance The difference between a demonstrated value and the corresponding planned value (demonstrated variance), or between a specification requirement and the current estimate for the end product (predicted variance), (MIL-STD-499)

technically critical area System functional requirements which are critical to system operational and/or support effectiveness, program schedule or cost, and/or for which the proposed or alternate solutions involve significant technical risk. (AFM)

technology The tools, techniques, training, and methods that can be applied by people in accomplishing some particular result. (SEI)

technology A collective term for a group of practices, tools, techniques, and/or methods. (WG6)

technology base The R&D science and technology base consisting of research, exploratory development and some non-system advance development. (DSMC)

technology requirement Consists of the specification of the set of components (hardware, software, and human or bioware (considered, by the designers and the customer, to be available to build the system to be designed. (Wymore)

terminal A functional unit in a system or communication network at which data may be entered or retrieved. (ISO 2382-1)

test Any program or procedure which is designed to obtain, verify, or provide data for the evaluation of: research and development (other than laboratory experiments); progress in accomplishing development objectives; or performance and operational capability of systems, subsystems, components, and equipment items. (DSMC)

test An activity designed to provide data in an operational environment. (NAWCWPNS)

test Functions to be performed and system elements required to verify that a system meets, exceeds, or fails to meet the technical or operational properties ascribed to the system. (AFM)

test Any device/technique used to measure the performance, skill level and knowledge of an individual. (MIL-STD-1379D)

test Any program or procedure which is designed to obtain, verify, or provide data for the evaluation of: research and development (other than laboratory experiments); progress in accomplishing development objectives; or performance and operational capability of systems, subsystems, components, and equipment items. (AFR 80-14)

test A procedure or action by which an item is subjected to conditions, real or simulated, that will determine or demonstrate its true qualities or capabilities, or its suitability for use in a particular kind of operation. (Aero Ind)

test A procedure or action taken to determine under real or simulated conditions the capabilities, limitations, characteristics, effectiveness, reliability or suitability of a material, device, system or method. (MIL-STD-1309C)

test An activity in which a system or component is executed under specified conditions, the results are observed or recorded, and evaluation is made of some aspect of the system or component. (IEEE STD 610.12-1990)

test An activity in which a system or component is operated under specified conditions, the results are observed or recorded, and an evaluation is made of some aspect of the system or component. (SEI)

test Technical operation that consists of one or more characteristics of a given product, process or service according to a specified procedure. (WG6)

test The tasks, actions, and activities for evaluating synthesis products against the functional architecture or requirements baseline, or the functional architecture against the requirements baseline. (IEEE P1220)

test and evaluation (T&E) Process by which a system or components are compared against requirements and specifications through testing. (DSMC)

test and evaluation master plan An overall test and evaluation plan, designed to identify and integrate objectives, responsibilities, resources, and schedules for all test and evaluation to be accomplished prior to the subsequent key decision points.(DSMC)

test and evaluation master plan (TEMP) The controlling document for all T&E. (COMOPTEVFORINST 3960.1G)

test case Documentation specifying inputs, predicted results, and a set of execution conditions for a test item. (ANSI/IEEE STD 729-1983(1).), (IEEE-STD-1012-1986)

test case One or more sets of test data and associated procedures developed exercise a particular function or program path, or to verify compliance with a specific requirement. (Bio Med)

test case specification A document that specifies the test inputs, execution conditions, and predicted results for an item to be tested. (IEEE 610.12-1990)

test coverage The degree to which a test or tests exercise the software, subdivided into (a) requirements test coverage the degree to which the test or tests show compliance with the requirements and (b) software structure test coverage

test design Documentation specifying the details of the test approach for a software feature or combination of software features and identifying the associated tests. (ANSI/IEEE STD 829-1983(4).), (IEEE-STD-1012-1986)

test directive A HQ USAF document which provides direction and guidance for OT&E for those cases not covered by PMD. (AFR 80-14)

test director A person assigned to conduct a test in accordance with the test plan, and who exercises overall responsibility for achieving test plan objectives. (AFR 80-14)

test measurement and diagnostic equipment Any system or device used to evaluate the condition of an item to identify or isolate any actual or potential failures. (MIL-STD-721C)

test phase The period of time in the software life cycle in which the components of a software life cycle in which the components of a software product are evaluated and integrated, and the software product is evaluated to determine whether or not requirements have been satisfied. (ANSI/IEEE STD 729-1983), (IEEE-STD-1012-1986)

test plan Documentation specifying the scope, approach, resources, and schedule of intended testing activities. (ANSI/IEEE STD 829-1983), (IEEE-STD-1012-1986)

test plan A formal document which provides the complete detailed coordination and integrated plan for the time phased task of providing answers and solutions to the critical questions and areas of risk identified in the Development Concept Paper and other program documentation. (AFR 80-14)

test plan A document prescribing the approach to be taken for intended testing activities, typically including, items to be tested, tests to be performed, schedules, personnel requirements, evaluation criteria, risks, and contingency plans. (Bio Med)

test procedure Documentation specifying a sequence of actions for the execution of a test. (ANSI/IEEE STD 829-1983), (IEEE-STD-1012-1986)

test qualification (design approval) A test conducted under specified conditions, by, or on behalf of the government, using items representative of the production configuration, in order to determine compliance with item design requirements as a basis for production approval. (MIL-STD-721C)

test readiness review A review conducted to evaluate preliminary test results for one or more configuration items; to verify that the test procedures for each configuration item are complete, comply with test plans and description and satisfy test requirements; and to verify that a project is prepared to proceed to formal testing of the configuration items. (IEEE 610.12-1990)

test readiness review (TRR) A review conducted for each CSCI to determine whether the software test procedures are complete and to assure that the contractor is prepared for formal CSCI testing. (MIL-STD-1521B)

test report A document that records the conduct and results of test procedure carried out for a system or system component. (Bio Med)

test requirements sheet (TRS) Functions to be performed and system elements required to verify that a system meets, exceeds, or fails to meet the technical or operational properties ascribed to the system. (AFM)

test requirements specification A document that prescribes completely and precisely the test cases, including correct results, necessary to verify that the system, product, or software possesses, meets, or fulfills the appropriate Requirements Specification. (Bio Med)

test set architecture The nested relationships between sets of test cases that directly reflect the hierarchic decomposition of the test objectives. (IEEE STD 1008-1987)

test unit A set of one or more computer program modules together with associated control data, (for example, tables), usage procedures, and operating procedures that satisfy the following conditions; (a) all modules are from a single computer program, (b) at least one of the new or changed modules in the set has not completed the unit test, (c) the set of modules together with its associated data and procedures are the sole object of a testing process. (IEEE STD 1008-1987)

testability The degree to which a system or component facilitates the establishment of test criteria and the performance of tests to determine whether those criteria have been met. (IEEE 610.12-1990)

testability Attributes of software that bear on the effort needed for validating the modified software. (WG6)

testability The testability of a software product is the extent to which it can be verified as conforming to the specification, and is dependent on whether the requirements have been/may be expressed quantitatively and precisely. (WG6)

testbed A system representation consisting partially of actual hardware and/or software and partially of computer models or prototype hardware and/or software. (DODI 5000.2)

testing That element of inspection that determines the properties or elements, including functional operation of supplies or their components, by the application of established scientific principles and procedures. (FAR)

testing The process of executing a program with the intent of finding errors and establishing confidence in correct program operation. (Aero Ind)

testing Operating a system (possibly under unrealistic conditions of use) in order to detect faults. (WG6)

testing development (growth) A series of tests conducted to disclose deficiencies and to verify that corrective actions will prevent recurrence in the operational inventory. (MIL-STD-721C)

text Data in the form of characters, symbols, words, phrases, paragraphs, sentences, tables, or other character arrangements, intended to convey a meaning, and whose interpretation is essentially based upon the reader's knowledge of some natural language or artificial language. (ISO 2382-1)

third-party certification The procedure and action, by a duly authorized independent body, of confirming that a system, software subsystem, or computer program is capable of satisfying its specified requirements in an operational environment. (Bio Med)

threat The sum of the potential strength, capabilities, and intentions of any enemy which can limit or negate mission accomplishment or reduce force, system, or equipment effectiveness. (COMOPTEVFORINST 3960.1G)

threat An event which significantly increases the probability of an accident. (e.g., Lightning strike, bird strike, maintenance abuse, turbine burst).

thresholds. Monetary, time, resource, or performance limitations placed on a program, to be used as guides as the program progresses and the breaching of which is cause for careful review of at least some aspects of the program. (Adapted from DSMC)

throughstop time The time required to complete an enroute stop to the aircraft's primary destination. (M-7360-91-0386)

time critical Term used to indicate task must be performed within certain time limit to meet system requirements. (BMO-STD77-6A)

time critical functions Those functions which must be accomplished within critical time constraints; otherwise system performance fails. (AFM)

time down (downtime) That element of active time during which an item is not in condition to perform it required function. (MIL-STD-721C)

time in service With respect to maintenance time records, the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing. (FAR Ch. 1)

time line — A schedule line showing key dates and planned events. (DSMC)

time line analysis — Analytical task conducted to determine the time sequencing between two or more events. (MIL-STD-499B-UNAPPROVED)

Time Line Sheet (TLS) — Documentation for analysis of (expected) time-critical functions and functional sequences. (AFM)

time requirements — Factors critical to achieving required functional capabilities that are dependent on accomplishing a give action within an opportunity window. (MIL-STD-499B-UNAPPROVED)

tolerable risk level — The level of risk of a particular technical process or condition that is as low as reasonably practicable in the context of the specific application. (IEC 1508)

tolerance — A measure of the accuracy of the dimensions of a part or the electrical characteristics of an assembly or function. (DSMC)

tools common — Tools expected to be found in a mechanic's tool box. (Aero Ind)

tools standard — Tools which are readily available from two or more tool dealers and would be found in a tool storage area. (Aero Ind)

top-down — Pertaining to an approach that starts with the highest level of a hierarchy and proceeds through progressively lower levels. (DOD-HDBK-287), (DOD-STD-2167)

top-down — Pertaining to a method or procedure that starts at the highest level of abstraction and proceeds towards the lowest level. (ISO 2382-20)

total quality management — A set of principles having a primary purpose of increasing value to the customer and involving continued attention to quality at every step of the product realization process by all members of the organization. (NRC)

total quality management — The consistent integrated orchestration of the total complex of an organization's work processes and activities to achieve continuous improvement in the organization's processes and products. (DOD TQM Master Plan, Aug, 1988)

total quality management — Management approach of an organization, centered on quality, based on the participation of all its members and aiming at long term

success through customer satisfaction, and benefits to all members of the organization and to society. (ISO 8402)

total quality management (TQM) A management philosophy committed to a focus on continuous improvement of product and services with the involvement of the entire workforce. (DSMC)

trace A record of the execution of a computer program, showing the sequence of instructions executed, the names and values of variables, or both.. (IEEE 610.12-1990)

traceability The capability to track system requirements from a system function to all elements of the system which, collectively or individually, perform the function; an element of the system to all functions which it performs: a specific requirement of the source analysis or contractual constraint which originated the requirement. (AFM)

traceability (1) The degree to which a relationship can be established between two or more products of the development process, especially products having a predecessor-successor or master-subordinate relationship to one another. (IEEE 610.12-1990)

traceability The capability to track system requirements from (a) a system function to all elements of the system which collectively or individually perform the function; (b) an element of the system to all functions which it performs; and (c) a specific requirement to the source analysis or contractual constraint which originated the requirement. (Aero Ind)

traceability The ability to trace or associate each function between the various documentation levels which define the system and software requirements, test and design. (Aero Ind)

traceability The capability to track system requirements from: (a) A system function to all elements of the system that collectively or individually perform the function, (b) An element of the system to all functions that it performs, (c) A specific requirement to the source analysis or contractual constraint that originated the requirement. (Aero Ind)

traceability Includes tracking allocated design and technical program requirements through the work breakdown structure between the system level and the lowest level of assembly requiring logistic or maintenance consideration. (MIL-STD-499)

traceability Ability to trace the history, application or location of an entity, by means of recorded identifications. (ISO 8402)

traceability matrix A matrix that records the relationship between two or more products of the development process; for example, a matrix that records the relationship between the requirements and the design of a given software component. (IEEE 610.12-1990)

trade-off Selection of a preferred parameter. (AFM)

trade-off Selection among alternatives to obtain optimum balance for a system. (DSMC)

trade-off analysis The conduct of specialized analyses, tests, demonstrations or inspections, to assess the viability of proposed solutions, and to quantify their effect on life-cycle costs, design-to-cost, and schedule objectives. (IEEE P1220)

trade-off analysis Desirable and practical trade-off among stated user requirements, design, program schedule, functional and performance requirements, and life-cycle costs shall be identified and executed. (MIL-STD-499B-UNAPPROVED)

Trade-off Study An objective evaluation of alternative requirements, architectures, design approaches, or solutions using identical ground rules and criteria. (MIL-STD-499B-UNAPPROVED)

trade-off study reports Documentation for the evaluation of all possible problem solutions and the selection of the most promising approach. (AFM)

training The tasks, actions, and activities to be performed and system elements required to achieve and maintain the knowledge and skill levels necessary to efficiently and effectively perform operations and support functions. (MIL-STD-499B-UNAPPROVED)

training Includes deliverable training services, devices, accessories, aid, equipment, and parts used to facilitate instruction through which personnel will acquire sufficient concepts, skills, and aptitudes to operate and maintain the weapon system with maximum efficiency. (WBS)

training developer The agency or command responsible for concepts, doctrine, organization, materiel objectives, and requirements for the training of Army personnel. (AFM)

training equipment All types of maintenance and operator's training hardware, devices, visual/audio training aids and related software which are used to train maintenance and operator personnel by depicting, simulating or portraying the operational or maintenance characteristics of an item, system or facility, and must, by their nature, be

kept consistent in design, construction and configuration with such items in order to provide required training capability. (MIL-STD-481A), (DoD-STD480A)

training function The tasks, actions, and activities to be performed and system elements required to achieve and maintain the knowledge and skill levels necessary to efficiently and effectively perform operations and support functions. (MIL-STD-499B-UNAPPROVED)

training system Those operational system elements required to provide mission and support personnel with the level of knowledge and skills required for them to adequately perform their assigned functions relating to the operational system. (NAWCWPNS)

trajectory Any function of time.(1) An input trajectory is a schedule or a time record of the way in which inputs arrive at the input ports of a system; (2) An output trajectory is a schedule or time record of the outputs produced by a system at its output ports over a period of time. (Wymore)

transaction In software engineering, a data element, control element, signal, event, or change or state that causes, triggers or initiates an action or sequence of actions. (IEEE 610.12-1990)

transaction analysis A software development technique in which the structure of a system is derived from analyzing the transactions that the system is required to process. (IEEE 610.12-1990)

transaction matrix A matrix that identifies possible requests for database access and relates each request to information categories or elements in the database. (IEEE 610.12-1990)

transfer function The mathematical relationship between the output of a control system and its input; for a linear system, it is the Laplace transform of the output divided by the Laplace transform of the input under conditions of zero initial-energy storage. (McGraw Hill Dictionary)

transform analysis A software development technique in which the structure of a system is derived from analyzing the flow of data through the system and the transformations that must be performed on the data. (Aero Ind)

transportability The capability of materiel to be moved by towing, self-propulsion, or carrier through any means, such as railways, highways, waterways, pipelines, oceans, and airways. (DSMC, DODI 5000.2), (ISO 2382-1)

transportation — The inherent capability of an item to be moved efficiently over railways, highways, waterways, oceans, or airways, either by carrier, towing, or self-propulsion. (DSMC)

trigger — The combination of circumstances which activates a latent fault. (WG6)

turnaround time — The time required for 100% exchange of passengers, baggage and cargo. (M-7360-91-0217)

turnkey system — A data processing system that is ready to use when installed, and supplied to the user in a ready-to-run condition possibly customized to a specific user or application. (ISO 2382-1)

two part specifications — Combine both development (performance) and product fabrication (detail design) specifications under a single specification number as Part I and Part II, respectively, and may be selected as a contracting agency option. (MIL-STD-490A)

type-A system specification — States all necessary functional requirements of a system in terms of technical performance and mission requirements, including test provisions to assure that all requirements are achieved. (DSMC)

type-B development specification — States all necessary design requirements of a configuration/development item in terms of performance. (DSMC)

type-C product specification — Applicable to any item below the system level, and may be oriented toward procurement of a product through specification of primarily function (performance) requirements or primarily fabrication (detailed design) requirements. (DSMC)

type-D process specification — Applicable to a service which is performed on a product or material. (DSMC)

type-E material specification — Applicable to raw material (chemical compound), mixtures (cleaning agents, paint), or semi-fabricated material (electrical cable, copper tubing) used in the fabrication of a product. (DSMC)

ultimate goal quality — The necessary and sufficient quality required to satisfy user stated and implied needs. (WG6)

uncertainty — A condition, event, outcome, or circumstance of which the extent, value, or consequence is not predictable. (DSMC)

uncontained failure damage — Damage occurring to aircraft components outside of the system which has failed, especially as relating to any secondary damage caused by mechanical failure of an engine or Auxiliary Power Unit (APU) which is not contained within the engine or APU structure or housing, particularly if this secondary damage results in subsequent failure of another system or otherwise impacts flight safety. (Aero Ind)

understandability — All requirements related to a subject can be found and viewed together, and individually and jointly understood by the analysts and designers. (SGOAA)

understandability — Attributes of software that bear on the users' effort for recognizing the logical concept and its applicability. (WG6)

undetected failure — A postulated failure mode for which no indication is exhibited. (Aero Ind)

undetected hardware failure — A hardware failure that cannot be detected by the on-line diagnostics performed by the safety-related systems. (IEC 1508)

unit — The item or task to which the contracting officer and the contractor agree to Value Engineering Change Proposal (VECP) applies. (FAR)

unit — An assembly or any combination of parts, subassemblies and assemblies mounted together which are normally capable of independent operation in a variety of situations. (MIL-STD-480), (DOD-STD-100C), (MIL-STD-280A), (MIL-STD-100F)

unit — An item which has a specific function in equipment operation but which is used independently or in conjunction or association with, but not as an integral portion (component) of one or more equipment. (MIL-STD-875A)

unit — The smallest logical entity specified in the detailed design which completely describes a single function in sufficient detail to allow implementing the code to be produced and tested independently of other units. (DOD-HDBK-287)

unit — (1) A separately testable element specified in the design of a computer software component. (2) A logically separable part of a computer program.

unit cost curve — A plot of the cost of each unit of a given quantity. (DSMC)

unit reference designator — An identifier for a specific piece of hardware. (Aero Ind)

unit requirements documentation — Documentation that sets forth the functional, interface, performance and design constraint requirements for a test unit. (IEEE STD 1008-1987)

unit test — A test of individual programs or modules in order to ensure that there are no analysis or programming errors. (ISO 2382-20)

unit testing — Testing of individual hardware or software units or groups of related units. (IEEE 610.12-1990)

unprecedented system — A system for which design examples do not exist so that the physical architecture alternatives are unconstrained by previous system descriptions. (IEEE P1220)

unprecedented system — A system for which design examples do not exist so that the physical architecture alternatives are unconstrained by previous system descriptions. (IEEE P1220)

updating changes — Updating changes (unique to the Air Force) are configuration changes to previously delivered systems, equipment and munitions, including related Contractor Furnished Equipment (CFE), and delivered spares for which the change requirement is identified prior to the established AFSC/AFLC program management transfer, regardless of the method of generation. (AFR 57-4.), (MIL-STD-483A)

upgrade — To improve the performance and capability of a software product or other attribute. (DOD-HDBK-287)

usability — A set of attributes that bear on the effort needed for use, and on the individual assessment of such use, by a stated or implied set of users. (WG6)

usability — The ease with which a human user can obtain a required service from a system. (WG6)

usability test — A test to determine whether an implemented system fulfills its functional purpose as determined by its users. (ISO 2382-20)

usage — The conditions of use of an item. (WG6)

useful life — The number of life units from manufacture to when the item has an non-repairable failure or unacceptable failure rate. (MIL-STD-721C)

user — The operators and supporters of system end items, and the trainers that train the operations and support personnel. (MIL-STD-499B-UNAPPROVED)

user — Any person, organization, or functional unit that uses the services of an information processing system. (FIPS PUB 11-3)

user — The operator and maintainer of the system. (DSMC)

user — The agency or organization that will actually employ or operate the system being developed. (Aero Ind)

user — An individual that uses the software product to perform a specific function. (ISO/IEC 14598-1 10/28/96)

user — A beneficiary of the capability or service provided by a system in its operational environment. (DERA)

user — A consumer of the service provided by a system. (WG6)

user interface service — A service of the Platform entity of the Technical Reference Model that supports direct human-machine interaction by controlling the environment in which users interact with applications. (TA)

user manual — A document that describes how to use a functional unit, and that may include description of the rights and responsibilities of the user, the owner, and the supplier of the unit. (ISO 2382-20)

user perceived quality — Quality that is perceived by the user when the software product is actually used in the users' environment, based on user attributes not visible to the developer. (WG6)

user terminal — A terminal that enables a user to communicate with a computer. (ISO 2382-1)

user-friendly — Pertaining to ease and convenience of use by humans. (ISO 2382-1)

users — The set of personnel within an organization or community for which a system is developed, including upper management, middle management, supervisors, support personnel, and system operators. (NB Reilly Assoc.)

users — The operators and supporters of system end items, and the trainers that train the operations and support personnel. (MIL-STD-499B-UNAPPROVED)

utility function — A function, which if it fails, will result in no control loss or unsafe condition. (SGOAA)

utility loads — Loads that do not affect airplane flight control functions and that can be shed under overload conditions. (Aero Ind)

utilization life cycle — The generic set of processes, activities and tasks which may be tailored to describe the specific sequence of actions throughout the utilization phase of a specific system. (DERA)

utilization phase — The period during which a system is productively used to the benefit of owners and users. (DERA)

validated ada compiler — A compiler registered with the Ada Joint Program Office (AJPO), (SECNAVINST 5234.2A)

validating requirements — Ensuring that the requirements are consistent and that a real-world solution can be built and tested to prove that it satisfies the requirements. (Bahill/Sandia)

validation — The process used to ensure that the requirement is justifiable, applicable, traceable, and effective. (NASA mdp92)

validation — The process of evaluating software at the end of the software development process to ensure compliance with software requirements. (ANSI/IEEE STD 729-1983), (IEEE-STD-1012-1986)

validation — The process of evaluating a configuration item, sub-system or system to ensure compliance with software requirements. (IEEE P1220)

validation — The process by which the contractor (or as otherwise directed by the DOD component procuring activity) tests a TM for technical accuracy and adequacy. (DSMC)

validation The process by which the preparing activity for a document determines that the document reflects accurate and current requirements, including reference to current documents that are clearly and specifically applicable to the document being validated. (DOD-STD-100C)

validation The determination of compliance to user requirements. (NAWCWPNS)

validation The process of evaluating software to determine compliance with specified requirements. (DOD-STD-2167A)

validation Process of establishing that a system design will meet its mission objectives. (NB Reilly Assoc.)

validation Building the right system: writing specifications and checking performance to make sure that the system does what it is supposed to do. (Bahill)

validation The determination by review of quality evidence that a particular project, product, or process has met specified requirements. (SNL EPs)

validation The process of confirming that satisfaction of the ensemblage of requirements contained in a specification ensures that the system will provide its desired functionality. (Aero Ind)

validation The process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirements. (IEEE 610.12-1990)

validation The process of establishing that the product, of which the software is a part, complies with equipment, system or aircraft level requirements. (Aero Ind)

validation The process of ensuring that the requirements specified are appropriate and complete in order to provide for proper operation throughout the airplane operational envelope, including failure conditions, improper operational procedures, and maintenance. (Aero Ind)

validation Demonstration and authentication that a final product operates in all modes and performs consistently and successfully under all actual operational and environmental conditions founded upon conformance to the applicable specifications. (DOT/FAA/CT-86/40)

validation The process of evaluating software at the end of the software development process to ensure compliance with software requirements. (Bio Med)

validation Establishing documented evidence which provides a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality attributes. (Bio Med)

validation Establishing .documented evidence which provides a high degree of a high degree of assurance that a specific process will consistently produce a product meeting its pre-determined specifications and quality attributes. (Bio Med)

validation The process of evaluating a PEMS or a component of the PEMS during or at the end of the development process to determine whether it satisfies the requirements for its intended use. (Bio Med)

validation The process of evaluating software to ensure compliance with specified requirements. (ISO 9001)

validation The process of evaluation of the delivered system or product against stated customer requests, needs, expectations. (Adapted from the CCF Draft C)

validation Confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled. (ISO 8402: 1994), (WG6), (IEC 1508)

validation The actions giving confirmatory evidence of the compliant operational behavior of a system with its user requirement. (DERA)

validation Steps taken to ensure that a system meets the real requirements of the user. (WG6)

validation Determination of the correctness of the final program or software produced from a development project with respect to the user's needs and requirements. (WG6)

validation A test to determine whether an implemented system fulfills its specified requirements. (ISO 2382-20)

validation The evaluation, integration, and test activities carried out at the system level to ensure that the finally developed system satisfies the using command's mission requirements set down as performance and design criteria in the system specification. (AFSCP 800-7)

validation phase The period when major program characteristics are refined through extensive study and analyses, hardware development, test and evaluations. (AFSCP 800-7)

validation protocol A written plan stating how validation will be conducted, including test parameters, product characteristics, production equipment, and decision points on what constitutes acceptable test results. (Bio Med)

validation testing Testing that commences after the completion of the development testing and includes module and subsystem level testing.(Bio Med)

value engineering (VE) A functional analysis methodology that identifies and selects the best value alternative for design, materials, processes, systems, and program documentation. (DSMC)

vdt A user terminal with a display screen, and usually equipped with an input device such as a keyboard. (ISO 2382-1)

vendor A manufacturer or supplier of a commercial item. (DOD-HDBK-287), (DoD-STD-480A)

vendor A design activity, manufacturer, seller, wholesaler, or agent from whom are acquired items for use in the performance of the contract. (DOD-STD-100C)

vendor The person or organization that sells a system or service to a set of customers. (WG6)

vendor The person or organization which sells a system or service to a set of customers. (IEC 880)

verification The process of evaluating the design - including hardware and software - to ensure the requirements have, in fact, been met. (NASA MDP92)

verification The process of determining whether or not the products of a given phase of development fulfill the requirements established during the previous phase. (?)

verification The contractor effort, monitored by the procuring activity, from date of award of the contract, progressing concurrently through hardware development from components to the configuration item (CI); to determine the accuracy of and update the analytical (predicted) data obtained from the maintainability engineering analysis; to identify maintainability design deficiencies; and to gain progressive assurance

that the maintainability of the item can be achieved and demonstrated in subsequent phases. (MIL-STD-471A)

verification Conducted by government personnel, normally includes contractor assistance, and consist of: (a) A technical review of the principles of operation and related data, and, (b) Actual performance of selected operating, testing and troubleshooting, and maintenance procedures. (AL-855TM-GYD-000)

verification The tasks, actions, and activities to be performed and the system elements required to evaluate progress and effectiveness of evolving system products and processes and to measure specification compliance. (MIL-STD-499B-UNAPPROVED)

verification The process of evaluating the products of a given software development activity to determine the correctness and consistency with respect to the products and standards provided as input to that activity. (DOD-STD-2167A)

verification Process of establishing that a baseline product meets requirements of a previous baseline. (NB Reilly Assoc.)

verification The process of determining whether or not the products of a given phase of development fulfill the requirements established during the previous phase. (IEEE)

verification The tasks, actions, and activities to be performed and the system elements required to evaluate progress and effectiveness of evolving system products and processes and to measure specification compliance. (MIL-STD-499B-UNAPPROVED)

verification Building the system right: ensuring that the system correctly implements the specifications. (Bahill)

verification The process of determining whether or not the products of a given phase of the software development cycle fulfill the requirements established during the previous phase. (ANSI/IEEE STD 729-1983), (IEEE-STD-1012-1986)

verification The determination of compliance to specification requirements. (NAWCWPNS)

verification The process of confirming that a specific realization of a system satisfies the ensemblage of requirements contained in its specification. (Aero Ind)

verification The process of evaluating a system or component to determine whether the products of a given development phase satisfy the conditions imposed at the start of that phase. (IEEE 610.12-1990)

verification Demonstration by similarity, previous in-service experience, analysis, measurement or operation that the performance, characteristics or parameters of equipment and parts demonstrate accuracy, show the quality of being repeatable, and meet or are acceptable under applicable specifications. (DOT/FAA/CT-86/40)

verification The process of reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether or not items, processes, services, or documents conform to specified requirements. (Bio Med)

verification The process of evaluating the products of a given phase to ensure correctness and consistency with respect to the products and standards provided as input to that phase. (ISO 9001)

verification The process of evaluating a PEMS or component to determine whether the products of a given development phase satisfy the conditions imposed at the start of that phase. (Bio Med)

verification The act of reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether or not items, processes, services, or documents conform to specified requirements. (Bio Med)

verification The process of determining whether or not the products of a given set of activities fulfill the requirements established during the previous set. (Adapted from CCF Draft C)

verification Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. (ISO 8402.1994)

verification The actions giving confirmatory evidence of the correctness of a specified system/subsystem/component. (DERA)

verification Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. (WG6)

verification Steps taken to ensure that the output products of any development phase correctly implement the input products. (WG6)

verification The process of determining whether the products of a given phase of the software development cycle fulfil the requirements established during the previous phase. (WG6)

verification — Confirmation by examination and provision of objective evidence that the specified requirements have been fulfilled. (IEC 1508), (ISO 8402)

verification — Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. (ISO 8402)

verification (of computer programs) — The iterative process of determining whether the product of each step of the Computer Program Configuration Item (CPCI) development process fulfills all of the requirements levied by the previous step. (AFSCP 800-7)

verification (test) — A test of a system to prove that it meets all its specified requirements at a particular stage of its development. (ISO 2382-20)

verification analysis — In the context of a verification process, analysis requires evaluating some aspect of the item before success or failure to comply with a requirement can be determined. (Aero Ind)

verification and validation (V&V) — The process of determining whether the requirements for a system or component are complete and correct, the products of each development phase fulfill the requirements or conditions imposed by the previous phase, and the final system or component complies with specified requirements. (IEEE 610.12-1990)

verification data — Verification data is information used to check or test items to assure their proper performance and configuration as specified. (MIL-STD-885B)

verification function — The tasks, actions, and activities to be performed and the system elements required to evaluate progress and effectiveness of evolving system products and processes and to measure specification compliance. (?)

verification function — Tasks, actions, and activities to be performed to evaluate progress and effectiveness of evolving system (people, product, and process) solutions and to measure compliance with requirements. (MIL-STD-499B-UNAPPROVED)

verification testing — An acceptance test of software. (Bio Med)

verify — To confirm by examination and provision of evidence that specified requirements have been met. (Bio Med)

version — An identified and documented body of software. (DOD-HDBK-287)

video display terminal A user terminal with a display screen, and usually equipped with an input device such as a keyboard. (ISO 2382-1)

virtual Pertaining to a functional unit that appears to be real, but whose functions are accomplished by other means. (ISO 2382-1)

virtual machine A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system. (ISO 2382-1)

visibility Documentation to verify that data is so constructed as to determine and illustrate factors concerning technical or mission critical areas for evaluation. (AFM)

visual display terminal A user terminal with a display screen, and usually equipped with an input device such as a keyboard. (ISO 2382-1)

visual display unit A user terminal with a display screen, and usually equipped with an input device such as a keyboard. (ISO 2382-1)

VM A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system. (ISO 2382-1)

volatile memory Memory that requires a continuous supply of power applied to its internal circuitry to prevent the loss of stored data. (Aero Ind)

vulnerability The characteristics of a system that causes it to suffer a degradation (loss or reduction of capability to perform the designated mission) as a result of having been subjected to a certain (defined) level of effects in an unnatural (man-made) hostile environment. (COMOPTEVFORINST 3960.1G), (DSMC), (DODI 5000.2)

vulnerability, electromagnetic The characteristics of a system which cause it to suffer a finite level of degradation in performing its mission as a result of having been subjected to a certain level of threat mechanism in a man-made hostile environment. (MIL-STD-463A)

waiver A written authorization to accept an item, which during manufacture, or after having been submitted for government inspection or acceptance, is found to depart from specified requirements, but nevertheless is considered suitable for use as is or after repair by an approved method. (MIL-STD-973)

waiver A written authorization to accept a configuration item or other designated items, which during production or after having been submitted for inspection, are found to depart from specified requirements, but nevertheless are considered suitable as is or after rework by an approved method. (DSMC)

waiver A written authorization to accept an item which during production or after having been submitted for inspection, is found to depart from specified requirements, but nevertheless is considered suitable for use as is or after rework by an approved method. (MIL-STD-481A)

waiver Approval to deviate from policy contained in this instruction which requires a detailed justification to support. (SECNAVINST 5234.2A)

waiver A written authorization to accept a configuration item or other designated items which, during production or after having been submitted for inspection, are found to depart from specified requirements, but nevertheless are considered suitable for use as is, or after rework by an approved method (DoD Directive 5010.19), (DoD-STD-480A)

waiver Written authorization to use or release a product which does not conform to the specified requirements. (ISO 8402)

waiver and deviations close out plan A document that identifies how any problems and discrepancies discovered during the verification or acceptance process leading to delivery of an item, element, or system area to be identified, processed, approved, dispositioned, and documented. (Aero Ind)

walk through A static analysis technique in which a designer or programmer leads members of the development team and other interested parties through a segment of documentation or code, and the participants ask questions and make comments about possible errors, violation of development standards, and other problems. (IEEE 610.12-1990)

watchdog A combination of diagnostics and an output device (typically a switch) the aim of which is to monitor the correct operation of the programmable electronic device and takes action upon detection of an incorrect operation. (IEC 1508)

waterfall model A model of the software development process in which the constituent activities, typically a concept phase, requirements phase, design phase, implementation phase, test phase, and installation and checkout phase, and are performed in that order, possibly with overlap but with little or no iteration. (IEEE 610.12-1990)

WATOG World Airlines Technical Operations Glossary)

weapon system Items that can be used directly by the armed forces to carry out combat missions and that cost more than $100,000 or for which the eventual total procurement cost is more than $10,000,000. (DSMC), (DODI 5000.2)

wearout The process which results in an increase of the failure rate or probability of failure with increasing number of life units. (MIL-STD-721C)

weighted sound level (dBA) The sound pressure level which has been weighted per the frequency response characteristic given in ANSI S1.4-1983. (Aero Ind)

wooden round A round (shell, missile, etc.) requiring no maintenance or preparation time prior to loading for firing. (DSMC)

word processing Data processing operations on text, such as entering, editing, sorting, merging, retrieving, storing, displaying, or printing, using hardware and software. (ISO 2382-1)

work around plan A plan and approach established and greed to with the customer defining responsibilities and authorities for developing, coordinating, authorizing, and controlling the use of interim or temporary procedures and/or equipment and software to minimize the cost, schedule, or program impact resulting from unforeseen problems. (Aero Ind)

work breakdown structure A product-oriented family tree composed of hardware, software, services, data, and facilities which result from systems engineering efforts during the development and production of a defense materiel item, and which completely defines the program. (MIL-STD-499B-UNAPPROVED)

work breakdown structure A product-oriented family tree composed of hardware, services, and data. (AFM)

work breakdown structure A product-oriented family tree composed of hardware, services and data which result from project engineering efforts during the development and production of a defense material item, and which completely defines the project/program. (?)

work breakdown structure A product-oriented family tree, composed of hardware, software, services and other work tasks, which results from project engineering effort during the development and production of a defense material item, and which completely defines the project or program. (MIL-STD-1388-1)

work breakdown structure — A product-oriented family tree of project components which organizes and defines the total scope of the project. (IEEE P1220)

work breakdown structure — An organized method to break down a project into logical subdivisions or sub-projects at lower and lower levels of details. (DSMC)

work breakdown structure — A product-oriented family tree composed of hardware, software, services, and other work tasks, which results from project engineering effort during the development and production of an item, and which completely defines the project or program. (DoD Directive 5010.19), (DoD-STD-480A)

work breakdown structure (WBS) — A product-oriented listing, in family tree order, of the hardware, software, services and other work tasks which completely defines a product or program. (MIL-STD-480B), (DoD Directive 5010.19)

work breakdown structure element — A work breakdown structure element is a discrete portion of a work breakdown structure. (MIL-STD-881A)

work product — All the data, files, documents, assemblies, components, etc., generated in the course of performing any process. (Adapted from CCF Draft C)

work product — Result of activities or processes. (SEI)

workload — The mix of tasks typically run on a given computer system. (IEEE 610.12-1990)

workload model — A model used in computer performance evaluation, depicting resource utilization and performance measures for anticipated or actual workloads in a computer system. (IEEE 610.12-1990)

workstation — A functional unit at which a user works. (ISO 2382-1)

worst case — A set of conditions encompassing upper and lower processing limits and circumstances, including those within standard operating procedures, which pose the greatest chance of process or product failure when compared to ideal conditions. (Bio Med)

worst case — A set of conditions encompassing upper and lower processing limits and circumstances, including those within standard operating procedures, which pose the greatest chance of process or product failure when compared to ideal conditions. (Bio Med)

worth expended. The measure of value received for the resources (DSMC)

zero indenture maintenance analysis An LRU/SRU support analysis conducted for those areas not covered by functional requirements analysis or 1indenture (CI level) LRU/SRU support analysis. (BMO-STD-77-6A)

INCOSE Glossary List- INCOSE Approved Systems Engineering Terms. ()

This list represents those terms which have been recommended by the Systems Engineering Terminology Working Group (SETWG) and approved by INCOSE as INCOSE Preferred Systems Engineering Terms. In each case, the rationale for the preference is included. ()

system relation to function. An interacting combination of elements viewed in (INCOSE Approved Definition) INCOSE, July, 1995. This definition is recommended because it captures the two critical aspects of that which distinguishes a system from all else. The first critical aspect is interacting elements, or the structure, arrangement, or form of the system. The second critical aspect is functional view. Functional view indicates that recognition and labeling of a system is dependent upon the observer's frame of reference.

Example of system: From most viewpoints, a rock is not a system, it is just a rock. If we have a pile of papers and place a rock upon them, we may view such a combination of interacting elements (a form) as a paperweight system. However, coming to work one morning and finding broken glass strewn about and a new rock on our desk, we would be unlikely to view this form as a paperweight system.

systems engineering An interdisciplinary approach and means to enable the realization of successful systems. (INCOSE Approved Definition) INCOSE Winter Workshop 1996. This definition was approved by the INCOSE Board of Directors. It establishes the domain of INCOSE.