ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS

2D	Two Dimensional
3D	Three Dimensional

A

ABCA	American British Canadian Australian
ABL	Allocated Baseline
ACI	Allocated Configuration Identification
ADCN	Advance Drawing Change Notice
ADP	Automated Data Processing
ADPS	Automated Data Processing System
AEW	Airborne Early Warning
AFB	Air Force Base
AID	Agency for International Development
AMSC	Acquisition Management System Control
AMSDL	Acquisition Management Source Data List
AN	AIR FORCE//NAVY Standards
APL	Automated Packing List
APO	Air Post Office
AR	As Required
ASCC	Air Standardization Coordinating Committee
ASCII	American Standard Code for Information Interchange
ASD (P&L)	Assistant Secretary of Defense (Production and Logistics)
ASSIST	Acquisitions Streamlining and Standardization Information System (Database)

B

BCID	Bar Coded Identification Markings
BCSN	Bar Coded Serial Number
BOT	Beginning Of Tape

C

CAA	Competent Authority Approval
CAD/CAM	Computer Aided Design/Computer Aided Manufacturing
CAGE	Commercial And Government Entity
CAGEC	Commercial And Government Entity Code
CALS	Computer-aided Acquisition and Logistic Support
C&T	Clothing and Textiles
CARC	Chemical Agent Resistant Coating
CASKO	Component, Assembly, Set, Kit, or Outfit
CDA	Current Design Activity
CDRL	Contract Data Requirements List
CFR	Code of Federal Regulation
CGM	Computer Graphics Metafile
CI	Configuration Identification

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS
(Continued)

CID	Commercial Item Description
CIRL	Completed Item Reduction Listing
CLIN	Contract Line Item Number
COC	Certificate of Conformance
COE	Certificate of Equivalency
CON CODE	Supply Condition Code
CONTR	Contract Data Markings
CONTR NO	Contract Number
CONUS	Continental United States
CNC	Computer Numeric Control
CPI	Characters Per Inch
CSI	Critical Safety Item
CSP	Critical Safety Process

D

DASD (PR)	Deputy Assistant Secretary of Defense (Production Resources)
DCMAO	Defense Contract Management Area Operations
DCN	Drawing Change Notice
DEHCP	DoD Explosive Hazard Classification Procedures
DepSO	Departmental Standardization Office
DESC	Defense Electronic Supply Center
DFAR	Department of Defense Federal Acquisition Regulation
DFARS	Department of Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DIST	Distribution Code
DL	Data List
DLA	Defense Logistic Agency
DLIS	Defense Logistics Information System
DLSC	Defense Logistic Service Center
DMSMS	Diminishing Manufacturing Sources and Material Sources
DNA	Defense Nuclear Agency
DoD	Department of Defense
DoDAAC	Department of Defense Activity Address Code
DoDI	Department of Defense Instruction
DoDISS	Department of Defense Index of Specifications and Standards
DoDSSP	Department of Defense Single Stock Point
DOT	Department of Transportation
DPSC	Defense Personnel Support Center
DRM	Drawing Requirements Manual (Earlier versions of this manual)
DSP	Defense Standardization Program
DTD	Document Type Definition
DTOT	Development Test, Operation Test
DTS	Defense Transportation System

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS
(Continued)

E

ECN	Engineering Change Order
ECP	Engineering Change Proposal
ECPSSR	Engineering Change Proposal System Safety Report
EDI	Electronic Data Interchange
EDIF	Electronic Design Interchange Format
EGD	Electronic Generated Data
EIA	Electronics Industries Association
EIC	Engineering Item Codes
EOD	Explosive Ordnance Disposal
EOT	End Of Tape
EPA	Environmental Protection Agency
ERR	Engineering Release Record
ESD	Electrostatic Sensitive Devices (Was Electrostatic Discharge Sensitive)

F

FAR	Federal Acquisition Regulation
FBL	Functional Baseline
FCI	Functional Configuration Identification
FID	Field Identifier
FII	Federal Item Identification
FMS	Foreign Military Sales
FPO	Fleet Post Office
FPMR	Federal Procurement Management Regulation
FSC	Federal Supply Class
FSCM	Federal Supply Class for Manufacturers
FSG	Federal Supply Group

G

GCA	Ground Control Approach
GDA	Government Design Activity
GD&T	Geometric Dimensioning and Tolerancing
GFB	Government Furnished Baseline
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GIDEP	Government Industry Data Exchange Program
GMT	Greenwich Mean Time
GOSIP	Government Open Systems Interconnection Profile
GSA	General Services Administration

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS
(Continued)

H

HAZMAT	Hazardous Materials
HCI	Hardness Critical Items (Nuclear)
HCP	Hardness Critical Process (Nuclear)
HHA	Health Hazard Assessment
HHAR	Health Hazard Assessment Report
HRI	Hazard Risk Index

I

IATA	International Air Transport Association
IACO	International Civil Aviation Organization
ICP	Inventory Control Point
IE	Inspection Equipment
IF	Intermediate Frequency
IGES	Initial Graphics Exchange Specification
IL	Index List
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INT	Interface Control Identification
IPC	Institute for Interconnecting and Packaging Electronic Circuits
IRS	Interface Requirements Specifications
ISC	Item Standardization Code
ISO	International Organization for Standardization
ISSPP	Integrated System Safety Program Plan

L

LSA	Lead Standardization Activity

M

MA	Managing Activity
MAPAD	Military Assistance Program Address Directory
MCA	Military Coordinating Activity
MCP	Material Consolidation Point
MIL-STD	Military Standard
MILSTAMP	Military Standard Transportation and Movement Procedures
MILSTRAP	Military Standard Transportation Reporting and Accounting Procedures
MILSTRIP	Military Standard Requisitioning and Issue Procedures
MILVAN	Military-owned Demountable Container
MOE	Major Organizational Entity
MPCAG	Military Parts Control Advisory Group
MPCASS	Modernized Parts Control Automated Support System
MRAR	Mishap Risk Assessment Report
MRO	Material Release Order

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS
(Continued)

MS	Military Standard (Sheet drawing)
MSGSAP	Missile System Ground Safety Approval Package
MSPRP	Missile System Prelaunch Safety Package
MTMC	Military Traffic Management Command
MWO	Modification Work Order

N

NATO	North Atlantic Treaty Organization
NCA	National Coordinating Activity
NDI	Nondevelopmental Item
NGS	Non-Government Standard
NGSB	Non-Government Standards Body
NIIN	National Item Identification Number
NMCS	Not Mission Capable Supply
NOA	Notice Of Availability
NOR	Notice Of Revision
NPFC	Naval Publications and Forms Center
NQA	National Qualification Authority
NRC	Nuclear Regulatory Commission
NSA	National Security Agency
NSN	National Stock Number

O

OASD (P&L) SPD	Office of the Assistant Secretary of Defense (Production and Logistics) Standardization Program Division
OCI	Observable Critical Item
OCONUS	Outside Continental United States
OCP	Observable Critical Process
OCR	Optical Character Reader
ODA	Original Design Activity
OMB	Office of Management and Budget
OPR	Office of Primary Responsibility
OSD	Office of the Secretary of Defense
OSHA	Occupational Safety and Health Administration

P

PBL	Product Baseline
PCB	Parts Control Board
PCI	Production Configuration Identification
PCP	Parts Control Program
PDASD (P&L)	Principal Deputy Assistant Secretary of Defense (Production and Logistic)
PHA	Preliminary Hazard Analysis
PHL	Preliminary Hazard List
PICA	Primary Inventory Control Activity

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS
(Continued)

PIIN	Procurement Instrument Identification Number
PIN	Part or Identifying Number
PL	Parts List
PM	Program Manager
PMIC	Precious Metal Indicator Code
P/O	Part of
POD	Port Of Debarkation
POE	Port Of Embarkation
POP	Performance-oriented Packaging
PPSL	Program Parts Selection List
PQA	Procurement Quality Assurance
PS	Package Data Sheet
PSCN	Permanent System Control Number
PSN	Proper Shipping Name

Q

QA	Quality Assurance
QAP	Quality Assurance Provision
QC	Quality Control
QML	Qualified Manufacturers List
QPL	Qualified Products List
QSTAG	Quadripartite Standardization Agreement (American-British-Canadian-Australian Army Standardization Program)

R

RFP	Request For Proposal

S

SAR	Safety Assessment Report
SCCSC	Safety Critical Computer Software Components
SCN	Specification Change Notice
SDR	System Design Review
SEAVAN	Commercial- or Government-owned (or leased) Shipping Container
SEP REQT	Separate Requirements
SER NO	Serial Number
SF	Standard Form
SGML	Standard Generalized Markup Language
SHA	System Hazard Analysis
SHRI	Software Hazard Risk Index
SI	International System of Units
SIM REQT	Simultaneous Requirements
SKO	Set, Kit, and Outfit
SLC	Shelf-life Code
SMA	Standardization Management Activity

ACRONYMS USED IN THIS DRM AND ELSEWHERE IN GOVERNMENT AND INDUSTRY CONTRACTS

(Continued)

SMD	Standardization Military Drawing
SMDP	Standardized Military Drawing Program
SOCD	Source Control Drawing
SOW	Statement Of Work
SPD	Standardization Program Division
SPR	Software Problem Report
SRCA	Safety Requirements/Criteria Analysis
SRR	System Requirements Review
SRS	Software Requirements Specifications
SSG	System Safety Group
SSHA	Subsystem Hazard Analysis
SSPP	System Safety Program Plan
SSPPR	System Safety Program Progress Report
SSWG	System Safety Working Group
SSR	Software Specification Review
SSS	System/Segment Specification
STANAG	NATO Standardization Agreement
STEP	Standard for The Exchange of Product Data

T

TAC	Type of Address Code
TCN	Transportation Control Number
TDP	Technical Data Package
TIR	Total Item Record
TLV	Threshold Limit Value
TM	Tape Mark
TP	Transportation Priority

U

UI	Unit of Issue
UN	United Nations
UP	Unit Price
UPC	Universal Product Code
USPS	United States Postal Service

V

VHDL	VHSIC Hardware Description Language
VHSIC	Very High Speed Integrated Circuit
VICD	Vendor Item Control Drawing
VID	Vendor Item Drawing (See VICD)

W

WDSSR	Waiver or Deviation System Safety Report
WT	Weight

DEFINITIONS USED IN THIS DRM

Note: Many definitions used in this manual are not included here. For example, many definitions related to dimensioning and tolerancing defined in Section 5 and many definitions related to 3D digital data sets defined in Section 26 are not repeated in this section. Refer to each Section for definitions specific to that Section.

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.

Acceptance Criteria. The quality provisions, including inspections and test requirements, which establish the acceptability of an item. It may range from testing the item in its use environment, to verification of electrical/ mechanical characteristics, to a simple visual inspection.

Accessory. An item used in conjunction with or to supplement an assembly, unit or set, contributing to the effectiveness thereof without extending or varying the basic function of the assembly, unit, or set. An accessory may be used for testing, adjusting or calibrating purposes. (Examples: Recording camera for radar set, emergency power supply.)

Actual Size. (See: Size, Actual.)

Administrative Control Number. A number assigned to one or more interchangeable purchased items by a Vendor Item Control Drawing (VICD) for administration purposes. An administration control number may also be assigned to an item defined by an Envelope Drawing. The number also serves as the Part or Identifying Number (PIN) for specifying such items in a Parts List. The administrative control number is assigned in addition to the item identification assigned by the original design activity.

Adopted Items. Items approved for inclusion in the DoD logistics system through assignment of National Stock Number (NSN) by the Defense Logistics Supply Agency (DLSA), or recognition by DLSA of item Reference Numbers as established by manufacturer's part number, specification or drawing, or trade name (when items re-identifiable by trade name only).

Allocated Configuration Identification (ACI). The ACI is the technical documentation governing and specifying the performance, physical and interface requirements for CIs that are part of a higher level CI, typically a system; this documentation is in the form of specifications, drawings and associated lists, and documents referenced therein, and is usually prepared during the validation phase. If there is no validation phase, the ACI may be prepared during the initial part of the full-scale development phase. Like the FCI, the ACI included test provisions to assure all of the specified requirements are achieved by the developed CI.

Altered Item. An item taken from existing stock and altered (reworked) to meet new design requirements. (e.g., standard variable resistor with a shortened, flatted shaft.)

Allowance. The intentional difference between the MMC limits of size of mating parts: the minimum clearance (positive allowance) or maximum interference (negative allowance) between such parts. Also see "Fit".

Angular Dimension. (SEE: DIMENSION, ANGULAR.)

Angularity. The condition of a surface or axis at a specified angle from a datum plane or axis.

Angularity Tolerance. (See: Tolerance, Angularity.)

Approved Item Name. An approved item name is a name approved by the Directorate of Cataloging, Defense Logistics Services Center and published in the Cataloging Handbook H6, Federal Item Name Directory for Supply Cataloging.

Artwork Master. An accurately-scaled, usually 1:1, configuration which is used to produce the Production Master (ANSI/IPC-T-50).

As Applicable. The term as applicable is intended to require inclusion of those data elements necessary to establish the engineering definition or end product requirements.

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. (Examples: Power shovel-front, fan assembly, audio frequency amplifier.)

NOTE: The distinction between an assembly and a subassembly is determined by the individual application. An assembly in one instance may be a subassembly in another where it forms a portion of a higher assembly.

Associated Data. Any document referenced on an engineering drawing which establishes some portion of the engineering requirements.

Associated List. A tabulation of engineering information pertaining to an item depicted on an engineering drawing or on a set of engineering drawings. For example: Parts List, Data List, Index List, and etc..

Attachment. An item used for physical connection to an assembly, unit, or set, contributing to the effectiveness thereof by extending or varying the basic function of the assembly, unit, or set. (Examples: Hoisting attachment on a truck, milling attachment for a lathe; compare "accessory.")

Auxiliary Dimension. (British term from BS308) Equivalent to "Reference" Dimension.

Average Diameter. (See: Diameter, Average.)

Axis (General). A perfectly straight line representing the center line of symmetry for cylinders, cones and other round surfaces of revolution.

Axis (Cylindrical Feature of Size). A perfectly straight line derived from a cylindrical actual mating envelope fit to a feature of size.

NOTE: In numerical control nomenclature, three mutually perpendicular axes form the basis of a Cartesian coordinate system. (See: ASME Y14.5M, appendix A.)

Baseline. A configuration identification document or a set of such documents formally designated by the Government at a specific time during a CI's life cycle. Baselines, plus approved changes from those baselines, constitute the current approved configuration identification. For configuration management purposes there are three baselines, which are established sequentially, as follows: (taken from cancelled MIL-STD-973)

a. **Functional Baseline (FBL).** 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. (taken from cancelled MIL-STD-973)

b. **Allocated Baseline (ABL).** The initially approved documentation describing an item's functional and interface characteristics that are allocated from those of a higher level 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. (taken from cancelled MIL-STD-973)

c. **Product Baseline (PBL).** The initially approved documentation describing all of the necessary functional and physical characteristics of the Configuration Identification (CI), any required joint and combined operations interpretability characteristics of a CI (including a comprehensive summary of the other service(s) and allied interfacing CIs or systems and equipments), and the selected functional and physical characteristics designated for production acceptance testing and tests necessary for support of the CI. (taken from cancelled MIL-STD-973)

Basic Dimension. (See: Dimension, Basic.)

Basic Size. (See: Size, Basic.)

Bilateral Tolerance. (See: Tolerance, Bilateral)

Bulk Items. Those necessary constituents of an assembly or part such as oil, wax, solder, cement, ink, damping fluid, grease, powdered graphite, flux, welding rod, thread, twine and chain for which the quantity required is not readily predeterminable. If the quantity is known, the physical nature of the material is such that it is not adaptable to depiction on a drawing; or the material can be cut to finished size by the use of such hand or bench tools as shears, pliers, knives, etc., without any further machining operations and the configuration is such that it can be fully described in writing without necessity of pictorial presentation. In addition high usage, low-cost items and hardware generally available (such as hinges, locks, light bulbs, fan belts, clamps, rivets, terminals sleeving, wire, nuts, bolts, screws and washers, etc.) are considered bulk materials providing such materials are normally available in commercial channels and are normally procured in bulk quantities.

Burn-in. To operate electronic items under specified environmental and test conditions to eliminate early failures and to stabilize the items prior to actual use.

Burr. A feather like cross section developed along the cut edge of a piece of material.

Center Line. (See: Symmetry.)

Center Plane. (See: Datum.)

Center Plane (General). A perfectly flat plane representing the center of symmetry for width features of size (keyways, keys), wedges, and other features which are symmetrical about a plane. Note: a width feature of size may also be considered as opposed parallel planes.

Center Plane (Width Feature of Size). A perfectly flat plane derived from an opposed parallel plane actual mating envelope fit to a width feature of size.

Checker, Drawing. A person authorized by the design activity to validate engineering documentation.

Checking, Drawing. (See: Validation)

Chemical Agent Resistant Coating (CARC). CARC (MIL-C-53072 – inactive) enhances the decontamination process for combat and support equipment that is subjected to surface contamination by chemical attack on the battlefield. Chemical agents deposited on the surface of CARC paints remain on the surface, and can be removed with decontamination procedures without destroying the coating.

Circular Runout. (See: Runout, Circular.)

Circularity. (See: Roundness.)

Clearance. The difference between actual sizes of mating features (e.g., the diametrical space between hole and shaft) when that difference is positive. Also see: Allowance, Fit.

Clearance Fit. (See: Fit, Clearance.)

Clearance, Maximum. In a clearance or transition fit, the difference between the maximum size of a female feature and the minimum size of a male feature (i.e., a least material condition (LMC) fit.)

Coaxiality. (See: Concentricity.)

Code Identification Number. A five digit number assigned to each design activity, used in conjunction with a part or identifying number in a parts list. This number (also referred to as a Commercial And Government Entity code number (CAGE) is assigned by cataloging handbook H4/H8 SECTION A and B.

Combination of Items. A combination of items is a single composite unit consisting of one or more items with the related equipment, tools and spare parts which make the unit complete for issue. A combination may also consist of two or more items without equipment, tools or spare parts.

Commercial And Government Entity (CAGE) Code. Five digit code applicable to all activities which have produced or are producing items used by the Federal Government; also applies to Commercial and Government activities which control design, or are responsible for the development of certain specifications, drawings, or standards which control the design of items. These codes are assigned in conformance with Cataloging Handbook H4/H8 SECTION A and B Commercial And Government Entity for Manufacturers, Name To Code/Code To Name Organizations which neither manufacture nor control design (such as dealers, agents, or vendors of items produced by others) and are not included in H4/H8. The CAGE Code was previously called manufacturer's code identification number or Federal Supply Code for Manufacturers (FSCM) Code.

Commercial Item. A product, material, component, subsystem, or system which (a) regularly is used for other than Government purposes and (b) is sold or traded in the course of conducting normal business operations at prices based on established catalog or market prices. A service, per se, is not normally subject to delineation on engineering drawing.

NOTE: Services shall not be delineated on engineering drawings.

Company Facility. The company facility that controls the drawing after release.

Component. (See: Part or Unit)

Computer Program/Software. A series of instructions which direct a computer to perform a sequence of operations that produce a desired output. This program may be stored on one or more physical media such as tape, magnetic disks, or punched cards. The terms computer program and computer software are used synonymously.

Concentricity. The condition of features of revolution or symmetry which have a common axis (e.g., two or more concentric features such as circles, cylinders cones, spheres, squares, prisms, etc.). (Adapted from: ASME Y14.5M, MIL-STD-8.)

NOTE: ASME Y14.5M defines the term "coaxiality", but uses symbology for "concentricity (coaxiality)."

Concentricity Tolerance. (See: Tolerance, Concentricity.)

Conceptual. At an early stage of concept, probably not reflecting finalized configuration.

Configuration Identification (CI). The selection of the documents to comprise the baseline for the systems and CIs involved, and the numbers and other identifiers affixed to the items and documents. The approved documents that identify and define the item's functional and physical characteristics in the form of specifications, drawings, associated lists, interface control documents, and documents referenced therein. The configuration identification is developed and maintained through three distinct evolutionary increasing levels of detail, each used for establishing a specific baseline. (MIL-STD-973 – cancelled)

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. CIs may vary widely in complexity, size and type; from an aircraft, ship or electronic system to a test meter or round of ammunition. During the development and manufacture of the initial (prototype) production configuration, CIs are those items whose performance parameters and physical characteristics must be separately defined (specified) and controlled to provide management insight needed to achieve the overall end use function and performance. Any item required for logistic support and is designated for separate procurement is a CI. (MIL-STD-973 – cancelled)

Contract. An agreement or order for the procurement of supplies or services; an award or notice of award; a contract of a fixed-price, cost, cost-plus-a-fixed-fee, or incentive type; a contract providing for the assurance of job orders, task orders, or task letters thereunder; a letter contract or purchase order; a supplemental agreement with respect to any of the foregoing.

a. **Contracting Activity**. That Government activity having legal agreement or order with an individual, partnership, company, corporation, association or other entity for the design, development, manufacture, maintenance, modification, or supply of items.
b. **Contracting Officer.** Any person who, in accordance with departmental procedures, is currently authorized to enter into and administer contracts and make determinations and findings with respect thereto or with any part of such authority. The term also includes the authorized representative of the contracting officer acting within the limits of his authority.

c. **Contractor.** Any individual, partnership, public or private corporation, association, institution, or other entity which is a party of the contract. A government activity performing any of the foregoing functions is to be considered a contractor for configuration management purposes. (MIL-STD-973 – cancelled)

Coordinate Dimensioning. (See: Dimensioning, Coordinate.)

Copy. Any reproduction or duplication of an original in any media.

Corner. An intersection of edges.

Critical Safety Characteristic. Any feature (such as tolerance, finish, material composition, manufacturing, assembly or inspection process) or product, which if nonconforming or missing, could cause the failure or malfunction of the critical safety item.

Critical Safety Item (CSI). A part, assembly installation or production system with one or more critical characteristics that, if not conforming to the design data or quality requirements would result in an unsafe condition. Unsafe conditions relate to hazard severity categories I and II of MIL-STD-882, System Safety Program Requirements, and include conditions which could cause loss or serious damage to the end item or major components, loss of control or serious injury to personnel.

Current Design Activity (CDA). An activity (Government or contractor) currently having responsibility for the design of an item and the preparation or maintenance of drawings and associated documents. Current design activity could be the original activity or new activity when that responsibility is transferred from another Government or contractor design activity.

Dash Number (Part Suffix). A number suffixed to a drawing number to identify individual parts or assemblies depicted and controlled by the drawing.

Datum. A theoretically exact point, line, plane or combination thereof derived from the true geometric counterpart of a datum feature used to establish a datum reference frame.

Deficiencies. Deficiencies are the identification of improper, inadequate, or non consistent effort directed toward accomplishment of a contract. Deficiencies can be identified in three areas as follows:

a. **Design Deficiencies:** Design deficiencies are identified by Engineers assigned to monitor the contractor's effort. Examples of these deficiencies are incompatibility of material, structurally weak design, improper material, or protective coatings not consistent with application requirements.

b. **Configuration Deficiencies:** Configuration deficiencies are identified by personnel assigned to monitor the contractor's effort. Examples of these defects are: inadequate item specifications that do not provide adequate system compatibility, test and acceptance requirements which do not guarantee the performance desired, or inadequate detail design.

c. **Documentation Deficiencies:** Contracts for Weapon Systems include requirements for documentation of the expended contractor's effort. Two major requirements are for preparation of Engineering Drawings, Lists and reference documents which transmit the design and manufacturing requirements of the Weapon System and preparation of Technical Manuals which provide maintenance and repair procedures for systems. Documentation deficiencies consist of inadequate preparation of documentation when evaluated against the requirement of the applicable contract.

Department of Defense Index of Specification and Standards (DODISS). This publication lists Federal and Military Specifications, Standards and related standardization documents and non-Government documents that are approved for use by the Department of Defense (DoD). Note: The DODISS has been replaced by the Acquisitions Streamlining and Standardization Information System (ASSIST) Database.

Design Activity. A design activity is an activity that has, or has had, responsibility for the design of an item. The activity may be Government, commercial or non-profit organization.

Design Activity, Current (CDA). An activity currently having responsibility for design, drawing and associated documents preparation or maintenance. Current design activity could be the original activity or new activity when that responsibility was transferred from another Government or contractor design activity.

Design Activity, Original. A design activity (Government or Contractor) having had responsibility originally for the design of an item and whose drawing number and CAGE code is shown in the title block of all drawing and associated documents.

Design Agent. An activity contracted to or tasked to develop details of a design for which the design activity retains responsibility.

Design Disclosure Drawing(s). A drawing or a set of drawings and associated data which delineates the detailed engineering requirements of an end product necessary for the fabrication, assembly, inspection, and test of the item.

Development. The systematic use of scientific knowledge which is directed toward the production of, or improvements in, useful products to meet specific performance requirements, but exclusive of manufacturing and production engineering.

Development Test, Operation Test, phase II (DTOT II). The development, prove out milestone initiating Government-Configuration Management control and the "design-frozen" phase of configuration item life cycle.

Diameter, Average. An average diameter on a non rigid part is necessary to ensure that the actual diameter of the feature can be restrained to the desired shape at assembly. An average diameter is the average of several diametrical measurements across a circular or cylindrical feature. Normally, a sufficient number of measurements, usually no less than four, are taken to assure the establishment of an average diameter; if practicable, an average; diameter may be determined by a peripheral tape measurement.

Digital Data. Data stored on a computer system that employs a display on which the user and the computer interact to create entities for the production of layouts, drawings, numerical control tapes, or other engineering data.

Dimension, Angular. Angular dimensions are expressed in degrees, minutes and seconds. These are expressed by symbols: for degrees ^{o}, for minutes', and for seconds". Where degrees are indicated alone, the numerical value shall be followed by the symbol ° Where only minutes or seconds are specified, the number of minutes or seconds shall be preceded by 0^{o} or $0^{o}0'$, as applicable. Where desired, the angle may be given in degrees and decimal parts of a degree and the tolerance in decimal parts of a degree.

Dimension, Basic. Basic Dimension. A numerical value used to describe the theoretically exact size, shape or location of a feature or datum target. It is the basis from which permissible variations are established by tolerances on other dimensions, in notes or by feature control symbols.

Dimension, Rectangular Coordinate. Rectangular coordinate dimensioning is where all dimensions are measured from two or three mutually perpendicular "origins" or datum planes.

Direct Tolerancing The method of applying tolerances directly to a dimension, which includes plus and minus tolerances (+/-) and limit dimensions.

Discrete Wiring Board. A base material upon which discrete wiring techniques are used to obtain electrical interconnections.

Distribution Statement. A statement used in marking a technical document to denote the extent of its availability for distribution, release and disclosure without need for additional approvals and authorizations from the controlling DoD office. (DOD D 5230.24)

Document. A specification, drawing, sketch, list, standard, pamphlet, report, or other information relating to the design, procurement, manufacture, test or inspection of an item.

Document Identification Number. Consists of numbers or combinations of letters, numbers, and dashes. This number is assigned to a document, in addition to the title, for identification purposes.

Drawing (engineering). An engineering drawing is an engineering document or stored digital data that disclosed (directly or by reference), by means of graphic or textual presentations, or combinations of both, the physical and functional requirements of an item.

Drawing Format. The standardized form, usually preprinted, upon which various constant information (design activity identification, standard tolerance block, etc.) is provided; together with spaces for variable information (drawing number, title, etc.)

Drawing Number. Consists of letters, numbers or combinations of letters and numbers which may or may not be separated by dashes. The number is assigned to a particular drawing for identification (file retrieval) purposes by the design activity.

Drawing Type. Name applied to a drawing, descriptive of its content and end use. (See SECTION 4)

Duplicate Original. A replica of an engineering drawing or digital data file(s) made by a photo-duplicating technique, or a combination of a photo-duplicating technique and drafting on a medium (vellum, plastic base material, etc.) to serve as the official record when the original has been lost. The duplicate to be suitable for reproducing other reproducible and non-reproducible drawings.

Edge. A line of division bounded by two surfaces.

End Product (end-item). A part or assembly in its final deliverable condition.

Engineering Data. Drawings, associated lists, accompanying documents, manufacturer specifications, and standards or other information relating to the design, manufacture, procurement, test, or inspection of items or services.

Engineering Definition. A description expressed in engineering terms in sufficient detail to enable meeting the requirements of design, development, engineering, production, procurement or logistic support.

Engineering Document Release. The process of transferring custody of an engineering document, or change thereto, from the preparing activity to a control activity which is responsible for its reproduction, distribution, storage, and the maintenance of change history records.

Engineering Drawing. An engineering document or digital data file(s) which discloses, by means of pictorial and/or textual presentations, the form and function of an item.

Element, Technical Data Package. Classification of engineering drawings, models, associated lists, specifications, and software documentation which are used in a TDP as selected from MIL-DTL-31000C.

Exchangeability Of Items.

a. **Interchangeable Item**. One, which (1) possesses such functional and physical characteristics as to be equivalent in performance, reliability, and maintainability to another item of similar or identical purposes; and (2) is capable of being exchanged for the other item (a) without selection for fit or performance, and (b) without alteration of the items themselves or of adjoining items, except for adjustment.

b. **Replacement Item.** One which is interchangeable with another item, but which differs physically from the original item in that the installation of the replacement item requires operations such as drilling, reaming, cutting, filing, shimming, etc., in addition to the normal application and methods of attachment.

c. **Substitute Item.** One which possesses such functional and physical characteristics as to be capable of being exchanged for another only under specified conditions or in particular applications and without alteration of the items themselves or of adjoining items.

Exterior corners and edges. Corners and edges having included angles less than 180 degrees measured through the material.

Exterior edge/corner break. Unless otherwise specifically defined with a radius or chamfer requirement, the phrase "SHALL BE BROKEN" is defined as either a radius or a basic 45 degree chamfer. Therefore, "SHALL BE BROKEN .02 + .02" allows a R .02 to R .04 or a basic 45 degree chamfer with sides from .02 to .04.

Federal Supply Code For Manufacturers (FSCM). See Commercial And Government Entity (CAGE); Current Identification.

Find Number. The item number from a parts list used in the field of an assembly drawing to locate the item and to cross-reference to the item on the parts list. On an electronic assembly, a reference designation (per ANSI/IEEE Std 200) may be used as a "Find Number".

Firmware. The combination of a hardware device and computer instructions or computer data that reside as read-only software on the hardware device. The software cannot be readily modified under program control. (IEEE/EIA 12207.0, IEEE/EIA 12207.1, IEEE/EIA 12207.2)

First Tier. Normally used with specifications. the "top" specification. Other specifications reference the "top" or "first tier" specification.

Fit, Clearance. The general term used to signify range of tightness or looseness which results from application of a specific combination of allowances and tolerances in mating parts.

Formal Engineering Change Control. The method of controlling revisions to engineering drawings by means of configuration management procedures involving release of data to the Technical Data Repository and subsequent preparation of Engineering Release Record(s) (ERRs), Engineering Change Proposal(s) (ECPs), Notice of Revision(s) (NORs) and related documentation.

Formulation. A mixture such as an explosive, filler, propellant, pyrotechnic, etc. Each formulation is discretely identified. Formulations are not to be construed as "bulk materials".

Full Scale Development Phase. During this effort, the system, including all items necessary for its support, is designed, fabricated and tested. The intended output is a hardware configured system and the documentation needed to produce the hardware. The objectives of full-scale development are to ensure that the engineering design is completed, that all major problems have been resolved, and that this has been demonstrated by actual performance testing as systems progress through the development process. These objectives are under continuous review from the definition and refinement of requirements through the evaluation and selection of alternatives to the management and direction of production.

Functional Configuration Identification (FCI). The FCI is the technical documentation for a CI as set forth in specifications, drawings and associated lists and documents referenced therein, which is initially prepared during the conceptual phase, to establish performance and physical requirements for a CI to be developed or produced. The FCI addresses the technical and mission requirements of a system (or major equipment) as an entity and includes test provisions to assure requirements are achieved.

Government Design Activity (GDA). Government agency responsible, or scheduled to become responsible, for configuration management and design requirements of a configuration item.

Government Drawing Format. A drawing format on which a department or agency of the DoD affixes its identity.

Government Procurement Quality Assurance (PQA). The function by which the Government determines whether a contractor has fulfilled his contract obligations pertaining to quality and quantity. This function is related to and generally precedes the act of acceptance.

Group. A collection of units, assemblies, or subassemblies which is not capable of performing a complete operational function. A group may be a subdivision of a set or may be designed to be added to extend the function or the utility of the set. (Example: Antenna group.)

Initial Graphics Exchange Specification (IGES). Neutral based format (information structures) used in the digital representation and communication of product definition data for the purpose of compatible exchange of such data between various CAD/CAM (Computer Aided Design and Computer Aided Manufacturing) Systems (MIL-STD-1840).

Inseparable. Incapable of being disassembled without destroying the intended function of the item.

Interchangeable Item. (See: Exchangeability of items.)

Interface Dimensions. Those dimensions which affect the physical or functional dimensions of co-functioning items. The dimensions are established to allow equipment or systems to be compatible with equipment or systems under control of different customers, contractors, or design activities. Changes to interface dimensions and tolerances shall be coordinated with all affected activities.

Interior Corners and Edges. Corners and edges having included angles greater than 180 degrees measured through the material.

Item. A non-specific term used to denote any product, including system, material, part, subassembly, set, accessory and computer software.

Item Identification. The combination of the part or identifying number and the original design activity CAGE code. (NOTE: Not applicable to vendor item drawings.)

Item Levels. Item levels (as defined elsewhere from the simplest division to the more complex) are as follows:

Part
Subassembly
Assembly
Unit
Group
Set
Subsystem
System

Level, Drawing. Classification of engineering drawings as selected from DOD-D-1000.

Level, Equipment. (See: Item Level.)

Limited Production. Manufacture under model-shop conditions, as opposed to mass production under factory (production line) conditions.

Manufacturer. "Manufacturer" is 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; or (b) who, if newly entering into a manufacturing activity of the type described above, has made all necessary prior agreements for manufacture space, equipment, and personnel to perform the manufacturing operations required for contract performance.

Master Drawing. A document that shows the dimensional limits or grid locations applicable to any or all parts of a printed board (rigid or flexible), including the arrangement of conductive and nonconductive patterns or elements, size, type, and location of holes; and any other information necessary to describe the product to be fabricated. (ANSI/IPC-T-50)

Matched Parts. "Matched parts" are those parts, such as special application parts, which are machine or electrically matched, or otherwise mated, and for which replacement as a matched set or pair is essential.

May. Optional or non-mandatory.

Mission Item Specification. A military specification that describes general, essential requirements common to an entire category of major end items or weapon systems.

Model (Development And Production). [Note: This usage refers to a physical model or mock-up.]

a. **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.

b. **Advanced Development.** An item used for experimentation or tests to (1) demonstrate the technical feasibility of a design, (2) determine its ability to meet existing performance requirements, (3) secure engineering data for use in further development and, where appropriate, (4) establish the technical requirements for contract definition. Dependent upon the complexity of the equipment and the technological factors involved, it may be necessary to produce several successive models to achieve additional objectives. The final advanced development model approaches the required form factor and employs standard parts (or nonstandard parts approved by the agency concerned). Serious consideration is given to military requirements such as reliability, maintainability, human factors and environmental conditions.

c. **Engineering Development (Service Test).** An item used in tests to determine tactical suitability for military use in real or simulated environments for which the item was designed. It closely approximates an initial production design, has the required form, employs standard parts (or nonstandard parts approved by the agency concerned) and meets the standard military requirements such as reliability, maintainability, human factors, environmental conditions, etc.

d. **Reproduction (Prototype).** An item suitable for complete evaluation of form, fit, and performance. It is in final form in all respects, employs standard parts (or nonstandard parts approved by the agency concerned) and is completely representative of final equipment.

e. **Production.** An item in its final form of final production design made by production tools, jigs, fixtures and methods. It employs standard parts (or non-standard parts approved by the agency concerned).

Model. [Note: This usage refers to a 2D or 3D digital data file used as product definition; taken from SECTION 26.] A combination of design model, annotation and attributes that describes a product.

Module. Depending upon context, the term "module" can mean any in a series of standard units for use together. A packaged functional assembly of electronic/mechanical components for use with other such assemblies. An independent unit that is a part of the total structure.

National Stock Number (NSN). A number assigned to each item of supply that is purchased, stocked or distributed with the Federal Government.

Nationally Recognized Standard. A specification or standard issued with the intent to establish common technical requirements. Such standards are developed by or for a Government activity or by a non-Government organization (private sector association, organization, or technical society) which conducts professional standardization activities (plans, develops, establishes, or publicly coordinates standards, specifications, handbooks, or related documents) and is not organized for profit. (MIL-STD-961)

Non-Government Standard (or document). A standardization document developed by a private sector association, organization or technical society which plans, develops, establishes or coordinates standards, specifications, handbooks or related documents. Non-Government standards adopted by the DoD are listed in the ASSIST Database. (MIL-STD-961).

Non-Part Drawing. An engineering drawing that provides requirements, such as, procedures, instructions or firmware etc. applicable to an item when it is not convenient to include this information on the applicable part drawing. Examples include test requirements drawing and logic diagram.

Nuclear Effects. In this context, nuclear effects include the effects on assemblies, subassemblies or parts due to nuclear-power sources, space radiation or nuclear-weapon-produced environments.

Nuclear Hardness Critical Items (HCIs). Nuclear Hardness Critical Items are items of hardware or software that satisfy one or more of the following conditions:

a. Functionally required hardware (meaning hardware included in system design to satisfy any requirement other than nuclear hardening) whose response to the specified nuclear environments could cause degradation in system survivability unless additional provisions for hardness are included in the item specification, design, manufacture, item selection process, provisioning, configuration control, etc.

b. Functionality required hardware or software that inherently provides protection** for the system or any of its elements against the specified nuclear environments, and which if modified, removed or replaced by an alternate design could cause a degradation in system survivability.

c. Hardness dedicated hardware or software included in the system solely to achieve system nuclear survivability requirements.

d. Hardware items (at the level of application) to which an HCP is applied.

e. A subassembly or higher level of assembly which contains one or more HCIs.

** For example, the item was not designed for its nuclear weapon response but has the intrinsic capability to perform adequately in the specified nuclear environments. This definition included items whose design is modified to provide for nuclear survivability of other items, but not to provide for its own survivability.

Nuclear Critical Processes (HCPs). Nuclear Hardness Critical Processes are any fabrication, manufacturing, assembly, installation, maintenance and repair or other process or procedure which implements a hardness design feature and satisfies system hardness requirements.

Observable Critical Item (OCI). An OCI is any part or material specifically designed, selected or qualified to meet specified observable requirements.

Observable Critical Process (OCP). An OCP is any fabrication, manufacturing, assembly, installation, maintenance and repair or other process or procedure which implements an observable design and satisfies observable system requirements.

Original Date. An original date (located in the title block) is to establish a base line and is retained throughout the life of the drawing for historical record purposes.

Original Design Activity (ODA). An activity (Government or contractor) having had responsibility originally for the design of an item and whose drawing number and CAGE Code is shown in the title block of drawings and associated documents.

Original Drawing. An original of a drawing is the drawing or digital file(s) copy thereof on which is kept the revision record recognized as official by the design activity.

Part. One piece or two or more pieces joined together which are not normally subject to disassembly without destruction or impairment of design use. (Examples: transistor, composition resistor, screw, gear, transformer, milling cutter). **Note**: The term "component" should not be used to mean "part".
Part Drawing. An engineering drawing that defines an item and assigns a part or control number to identify its configuration.

Part Number. See: Part or Identifying Number (PIN).

Parts List Format. When parts lists are prepared integral with the drawing they shall include, as a minimum, columns shown in ASME Y14.34M. Column entries shall follow rules established for appropriate columns as provided in Section 10.

Part or Identifying Number (PIN). The identifier assigned by the responsible design activity or by the controlling nationally recognized standard which uniquely identifies (relative to that design activity) a specific item. The PIN generally includes the controlling drawing or document number and optional suffix. The PIN does not include the drawing revision identifier, drawing size, or CAGE Code. The term "part or identifying number" replaces the terms "part number" and "bulk material identification number". (SECTION 7 and MIL-STD-961)

Performance Specification. A specification that states requirements in terms of the required results with criteria for verifying compliance, but without stating the methods for achieving the required results. A performance specification defines the functional requirements for the item, the environment in which it must operate, interface, and have interchangeability characteristics.

Prime Contractor. A contractor that has or had a specific contract directly with the Government.

Printed Board. The general term for completely processed printed circuit and printed wiring configurations. (This includes single-sided, double-sided and multilayer boards with rigid, flexible, and rigid-flex base materials.)

Printed Circuit. A conductive pattern that is composed of printed components, printed wiring, or a combination thereof, that is formed in a predetermined arrangement on a common base.

Printed Wiring. A conductive pattern that provides point-to-point connections, but no printed components, in a predetermined arrangement on a common base.

Procuring Activity. A component of a government or commercial agency having a significant acquisition function and designated as such by the head of the agency and considered as the customer. Unless agency regulations specify otherwise, the term "procuring activity" shall be synonymous with "contracting activity".

Product. Includes materials, parts, components, subassemblies, assemblies, and equipments. The term product wherever used in this document shall also encompass a family of products. A family of products is defined as all products of the same classification, design, construction, material, type, etc., produced with the same production facilities, processes, and quality of material, under the same management and quality controls, but having the acceptable variety of physical and functional characteristics defined and specified in the applicable engineering documentation.

Product Definition Data. Denotes the totality of data elements required to completely define a product. Product definition data includes geometry, topology, relationships, tolerances, attributes and features necessary

to completely define a component part or an assembly of parts for the purpose of design, analysis, manufacture, test and inspection. (See ASME Y14.41, ISO 10103 and subs, and Section 26).

Product Drawing. Drawings providing engineering data for support of production and competitive procurement.

Production. The process of converting raw materials by fabrication and assembly into required material. It includes functions of production-scheduling, inspection, quality control, and related processes.

Production Configuration Identification (PCI). The PCI (also referred to as Technical Data Package) is the technical documentation establishing the technical requirements for production of Army-Navy-Air Force material. The technical documentation shall specify form, fit and function to insure interchangeability of CIs and/or detail design disclosure to permit the delivery of identical items, within specification tolerances, by qualified sources. This documentation is in the form of specifications, drawings and associated lists, and documents referenced therein, and is initially prepared or acquired during the full-scale development phase. All items for which individual procurement is projected, repair parts as well as prime items, shall be supported by PCI. This includes performance and quality assurance requirements as well as form, fit and function, and /or detail design disclosure as applicable.

Production Master. A one to one (1 to 1) scale pattern which is used to produce one or more printed boards (rigid or flexible) within the accuracy specified on the Master Drawing (ANSI/IPC-T-50).

Proved. Use of an engineering drawing in producing, inspection and testing of a satisfactory product.

Purchased Item. A term that encompasses both commercial item and vendor-developed item.

Qualification. The formal process by which a manufacturer's product is examined and tested for conformance to the drawing requirements and the subsequent identification of that manufacturer on a source control drawing as an approved source.

Quality Assurance. A planned and systematic pattern of all actions necessary to assure that an item conforms to established technical and procurement requirements of a Source Control Drawing (SOCD) for the purpose of approving the manufacturer as a source of supply.

Quality Assurance Provisions (QAPs). Quality Assurance Provisions (QAPs) are the documented requirements, procedures and criteria necessary for demonstrating that designs conform to user requirements and that materiel and associated services conform to approved designs. In the context of this standard, "QAP" is use to convey a document prepared separate from but in direct support of the stated drawing requirements.

Reference. To invoke associated data by callout on an engineering drawing. Such callouts may be located on the field of the drawing, in the general notes, in the parts list, or elsewhere on the drawing.

Reference Data. Information (including dimensions) which does not govern production or inspection operations. Reference Data is indicated by enclosing the data in parentheses or by labeling it REF.

Referenced Documents. A document which is cited on a drawing or list.

Release. The transfer of custody of an engineering document, or change thereto, from the preparing activity to a control activity which is responsible for its reproduction, distribution, storage, and maintenance of change history records.

Repair Part. Any part, assembly or component, that is required for installation in the maintenance of an end item.

Repairable. Capable of being restored to original condition. An item whose parts are welded, encapsulated (or otherwise permanently joined) is usually non-repairable.

Replacement Drawing. A new original drawing substituted for the previous original drawing of the same drawing numbers.

Replacement Item. See "Exchangeability of items".

Revision. Any change to an original drawing after that drawing has been released for use and shall require the revision level to be advanced.

Revision Authorization. A document such as a "Notice of Revision" (NOR), "Design Chance Notice" (DCN), "Engineering Change Notice" (ECN) or "Revision Directive" (RD) which describes the revision in detail and is issued by the activity having the authority to revise the drawing.

Revision Symbol. A letter (which maybe accompanied by a suffix number) used to identify particular revisions on the face of the drawing or in a revision description block. (Also see "Suffix Number".)

Roundness. Roundness is a condition of a surface of revolution where:

a. For a cylinder or cone, all points of the surface intersected by any plane perpendicular to a common axis are equidistant from that axis.

b. For a sphere, all points of the surface intersected by any plane passing through a common center are equidistant from that center.

Run-in. To operate mechanical items under specified environmental and test conditions to eliminate early failures and to stabilize the items prior to actual use.

Runout, Circular. Runout is a composite tolerance used to control the functional relationship of one or more features of a part of a datum axis. The types of features controlled by runout tolerances include those surfaces constructed around a datum axis and those constructed at right angles to a datum axis.

Security Classification And Notation. The applicable security classification, espionage, and downgrading notations shall be shown on engineering drawings requiring security classification in accordance with the DOD Industrial Security Manual for Safeguarding Classified Information, DOD 5220.22-M.

Selected Item. A selected item is an existing item under the control of another design activity or defined by a nationally recognized standardization document, that is subjected to refined acceptance criteria (such as fit, tolerance, performance or reliability) to meet design requirements.

Separable Assembly. Capable of being disassembled without destruction of its intended use.

Set. A unit or units and necessary assemblies, subassemblies and parts connected together or used in association to perform an operational function. (Example: Radio receiving set, sound measuring set, radar homing set, which include parts, assemblies and units such as cables, microphone and measuring instruments.) ("Set" is also used to denote a collection of related items such as "tool set", "drawing set", or a "set of tires".)

Shall. Mandatory and binding.

Size, Actual. The measured size.

Size, Basic. (See: Dimension, Basic.)

Specialized Segment Of Industry. A business entity which has recognized technological expertise or experience in manufacturing products or product lines to meet customer requirements.

Specification. A clear and accurate description of the technical requirements for a material, a product or a service, including the procedure by which it can be determined that the requirements have been met. (MIL-STD-961)

Staking. A method of securing screws, nuts, or bolts when a lock washer or locking wire is impracticable may consist of staking varnish, glyptal, or upsetting metal with a punch. Staking will be used only when called for by print or visual aids.

Standard. A document which establishes engineering and technical limitations and application for items, materials, processes, methods, designs, drafting room, and other engineering practices. A standard may be issued by a design activity, a government agency, or by an industry association. (MIL-STD-962)

Standards, Company. Company standards are those developed to establish engineering and technical applications for items, materials, processes, methods, designs and engineering practices to facilitate standardization within that company. (MIL-DTL-31000)

Standard, Military. Military standards are documents issued within the Department of Defense in accordance with the basic policy of the Defense Standardization and Specification Program. Military standards are used for the comprehensive presentation of engineering practices (including test methods), procedures, processes, codes, safety requirements, symbols, abbreviations, nomenclatures, type designations and character-istics for standard equipments or items, either singly or in families. Military standards are also used to cover overall characteristics of families of end items or major components. These characteristics include, as applicable, envelope dimensions, performance ratings, primary structural features, and data required for the interchangeability of components. Limited coordination standards follow the same procedures and processes for format as specified for coordinated standards. (MIL-STD-962)

Standard, Non-Government. A nationally recognized standardization document, issued with intent to establish common technical requirements by a non-Government organization, which conducts professional standardization activities and which is not organized for profit. (Includes "INDUSTRY STANDARDS". Does not include "Company Standards"). Non-Government standards adopted by the DoD are listed in the ASSIST Database. (MIL-STD-962)

Standard, Sheet Form. A standard prepared in format similar to MS sheet or MIL-STD unit page.

Standardization Document. A document developed by the Government or private sector association, organization, or technical society which plans, develops, establishes or coordinates standards, specifications, handbooks, or similar documents for the purpose of standardizing items, materials, processes or procedures.

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. (Examples: Gun mount stand, window sash recoil mechanism, floating piston, telephone dial, IF strip, terminal board with mounted parts.) MIL-STD-962

Subcontractor. A vendor who supplies items per the drawings/specifications of a higher-level design activity. The subcontractor may or may not produce the design item.

Substitute Item. (See: "Exchangeability of items".)

Subsystem. A combination of sets, groups, etc., which perform an operational function within a system and is a major subdivision of the system. (Examples: Data processing subsystem, guidance subsystem.)

Suffix Number. Included in the revision symbol to distinguish between different changes located by the same revision letter; also to cross-reference such changes on the field of the drawing to the description thereof entered in the revision block.

Supplier. (See: Vendor.)

Symmetrically Opposite Parts. Those parts which are mirror images of each other.

Symmetry. Symmetry is a condition in which a feature (or features) is symmetrically disposed about the center plane of a datum feature.

System.

a. **General.** A composite of equipment, skills, and techniques capable of performing or supporting an operational role, or both. A complete system includes all equipment, related facilities, material, software, services, and personnel required for its operation and support to the degree that it can be considered self sufficient in its intended operational environment. (Example: Dew Line.) (See MIL-HDBK-505)

b. **Electrical-Electronic.** A combination of two or more sets, which may be physically separated when in operation, and such other assemblies, sub-assemblies and parts necessary to perform an operational function or functions. (Examples: AEW electronic system, antiaircraft defense system, telephone carrier system, GCA electronic system, fire control system including the tracking radar, computer, and gun mount.)

Title Block. The block located in the lower right corner of the drawing format which contains the primary drawing identification. (Ref. ASME Y14.1/Y14.1M)

Tolerance. The total amount by which a specific dimension is permitted to vary. The tolerance is the difference between the maximum and minimum limits.

Tolerance, Angularity. Angularity is the condition of a surface or axis at a specified angle (other than 90^{o}) from a datum plane or axis. An angularity tolerance specifies one of the following:

a. A zone defined by two parallel planes at the specified basic angle from a datum plane (or axis) within which the surface of the considered feature must lie.

b. A tolerance zone defined by two parallel planes at the specified basic angle from a datum plane (or axis) within which the axis of the considered feature must lie.

Tolerance, Bilateral. A tolerance in which variation is permitted in both directions from the specified dimension.

Tolerance, Concentricity. Concentricity is the condition where the median points of all cross-sectional elements of a controlled feature are within the specified tolerance from a datum axis or datum center point.

Unit. An assembly or any combination of parts, subassemblies and assemblies mounted together, normally capable of independent operation in a variety of situations. (Examples: Hydraulic jack, electric motor, electronic power supply, internal combustion engine, electric generator, radio receiver.) This term replaces the term "component". Note: The size of an item is a consideration in some cases. An electric motor for a clock may be considered as a part in as much as it is not normally subject to disassembly.

Unique Identifier. See Part or Identifying Number (PIN) and item identification.

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.

Validation Phase. The validation phase is the second effort of the weapon system life cycle. During this effort, the major characteristics of the program/project are defined and validated for the alternative(s) selected in the previous effort. Validation is the first step in the development phase during which preliminary design and engineering are verified or accomplished and firm contract and management planning are performed.

Vendor. A design activity, manufacturer, wholesaler, or agent other than the prime contractor, from whom are acquired items used in the performance of the contract. Also referred to as a supplier.

Vendor-developed Item. A specialized version of a vendor's general product line which is not normally stocked as an off-the-shelf item but is procurable on order.

Work Package. A group of related items (which do not make up a complete assembly) with instructions for installing the items in a major assembly structure (e.g., a power supply and mounting hardware with instructions for installing them in a telecommunications satellite structure.)