

Glossary

Information Systems/Technology Terms and Definitions

Applications Programmer: An individual who writes application programs in a user organization typically in one or more of the high level languages such as COBOL2, C++, CICS, DB2, FORTRAN, IDMS, Oracle CASE, Visual Basic, etc. Contrast with Systems Programming. Applications Programming does not include writing basic queries, macros or formulas for standard personal computer office support products (see Personal Computer Software).

Architecture: Refers to distinct aspects of the information systems environment, which are usually identified as (1) applications, (2) data, (3) organization or (4) technology.

Artificial Intelligence (AI): Refers to a subfield of computer science aimed at pursuing the possibility that a computer can be made to behave in ways humans recognize as “intelligent” (reasoning; learning).

CAD/CAM: Computer Assisted Design/Computer Assisted Modeling

CASE Tools: Computer Aided Software/Systems Engineering is a form of software that provides automated methods for designing and documenting traditional structured programming techniques.

Centralized Management Environment: A Majority of IT functions are located at one central location.

Client/Server: An information systems application which spans two or more platforms. Client/server applications have the following characteristics - the application is distributed into tasks, the tasks run on different computers and one of the computers is a programmable workstation.

Client: A type of information systems Customer. See information under “Customer” for more detail.

Complex: In the Information Systems (IS) occupational area, complicated and difficult work delineated by the variety of distinctive tools, applications, customers, platforms or other IS factors which an individual position has to comprehend and employ successfully to complete the assigned duties.

Compilers: A computer program that converts a higher level language to a machine language.

Customer: Refers to all entities which receive IS services. When used in the Information Systems Classification Specifications the term “customer” will include those persons or organizations which may also be called “client” and “user.” The terms “external” and “internal” may also be used to contract between customers inside and outside the work unit/division/agency.

Data Warehouse: The central repository where data from a number of productions systems and other sources is collected and stored for use in supporting information needs across an organization with a number of locations or offices.

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Database Administration: The complete control of data by a Database Administrator, defining data via a Data Dictionary, and controlling the work flow through a data management system similar to IBM's Information Management System (IS).

DBMS: Database Management Systems.

Decentralized Management Environment: IT functions are distributed among functional or geographic units with only general guidance provided by a central authority.

Decision Support Systems: Systems that are designed to help managers evaluate and analyze complex situations.

DE: Electronic Data Interchange.

Environment: Environment is the framework or structure which includes all the elements that define an agency's information systems. These may include hardware, software, connectivity, data/information, procedures, standards, and/or people. Environment is the foundation on which architecture and technology rest in that order.

Expert Systems: A specialty within the field of Artificial Intelligence (AI). Computer programs, typically "rule based," that are intended to model the performance of a human expert in his or her specialized tasks.

External: For the purposes of these classification specifications, external means considerations outside of the work unit where a specific positions allocation is located.

4GL: Fourth generation language (e.g., Focus, Natural, Nomad).

GUI: Graphical User Interface.

High Level Language: For this specific definition, one source statement will generate one or more machine instructions and includes such languages as PASCAL, COBOL, PL/1, and FORTRAN. These languages are designed for problem solving without knowledge of the particular machine codes. Allows programmers to express operations in terms similar to a normal human language representation of a problem statement or procedures to be followed.

Information Systems (IS): The occupational area also referred to as Information Technology, which allows the acquisition, processing, storage, protection and dissemination of various types of information through computers. Positions in the Information Systems and Technology occupational area perform duties which require skills, techniques, and methodologies specifically linked to computer-based information systems.

Internal: For the purposes of these classification specifications, internal means considerations or contacts inside the work unit where a specific position is located.

Lead Worker: An individual who assigns and reviews the work of other positions as designated, but who is not assigned the full range of duties expected of a supervisor.

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Local Area Network (LAN): A group of computers linked together so that they may communicate with one another and share resources. In this environment, users can access hard disk drives, printers and other peripherals and take advantage of special network services such as access to a mainframe system. All of these devices are shared and are available to anyone on the network.

Methodology: The detail as to how a particular operation or function is to be carried out. Methodology defines steps, processes, and linkages. Provides the information as to how the stages in a Systems Development Life Cycle will be carried out.

Network: The collection of communications hardware (wires, fiber optics, cables, routers, servers, hubs, boards, etc.); data communications software; workstations; printers and applications software connected together so that customers can access the same IS services and information from many locations. Networks come in many sizes and configurations.

New Technology: Technical innovations, changes, or additions which are not currently in general or wide-spread use. Technology which is not yet an industry standard.

On-line: Peripherals or terminals operating in direct interactive communication and under the control of the CPU via a communication channel.

Personal Computer (PC) Software: Personal Computer Software includes PC operating system software such as MS or PC-DOS, OS/2, Windows (Workgroups, NT, etc.). PC applications software includes standard office support products such as Word Processing (MS Word, WordPerfect, etc.), Spreadsheets (MS Excel, Lotus, Quattro Pro, etc.), Databases (MS Access, dBase III, etc.), Project Management (MS Project, TimeLine, etc.), Desktop Publishing (Pagemaker, Quark, etc.), Presentation (PowerPoint, Harvard Graphics, etc.), and Accounting (Peachtree, Quicken, etc.).

Platform: The computer layout including hardware, software, and interfaces through which information systems services are provided.

Procedures: The detailed steps in definite order used to accomplish a specific process.

Project: An approved, planned undertaking with IS staff assigned to meet a timeline for project completion with anticipated products and clearly defined goals and objectives. For example, a project may be implemented for the development of a new IS application with phases developed around the Systems Development Life Cycle.

Project Lead: The individual assigned as determined by workload requirements to provide oversight for a significant phase of an IS project with impacts outside of the agency or campus or of a specific IS project internal to the agency or campus. The Project Lead ensures time schedules are met and ensures work product uniformity among staff assigned to the project.

Project Manager: The individual appointed with the responsibility for coordinating the work of distinctive information systems team/s dedicated to specific IS project/s. The project manager, among other assigned duties, facilitates project

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schedules, ensures technical uniformity and works with management to ensure adequate resources to meet project requirements and ensures the involvement of the appropriate IS customers.

Protocols: An agreed upon set of actions or rules that must be followed in order for a particular operation or function to occur. Protocols usually refer to a set of procedures for establishing and controlling data transmission. Protocols may be purchased.

Real-time: Transactions are processed as they occur rather than accumulating them and running them in batches. On-line processing is used for real-time systems; however, not all on-line processing is real-time.

Standards: Consistent ways of doing things or approved products throughout the IS environment, which are documented and followed, so that the outcome is uniform.

Systems Development Life Cycle (SDLC): The process used to establish a computer-based information system. Commonly divided into the following states: analysis, definition, design development, implementation, and evaluation.

Systems Software: The programs (electronic instructions) that are the principal support for all hardware, applications software, and people using the system. Systems software includes the operating system and other general-service programs and is distinctive from applications software.

Technology: Technology is one aspect of the IS environment. Technology includes the components of hardware, systems software, interfaces, and procedures which support the IS applications and data architectures and are supported by the organization's architecture.

Telecommunications: The electronic transfer of information from one location to another using analog and digital transmissions including data, voice and video.

Wide Area Network (WAN): A network which covers a broad geographic area. Data communications which link two or more geographically separated locations which may include at each node a Local Area Network (LAN).

Users: A type of 'customer.' See the definition for "customer" for more detail.

Walk Through: Usually refers to the review process which occurs between the information systems professional, management or customers at various points during the Systems Development Life Cycle (SDLC). Walk through may be used to describe a review process outside of the SDLC as well.