

Glossary

A

Acoustics: The scientific study of sound, especially of its generation, transmission, and reception.

A/E: Acronym for architect/engineer, usually referring to a firm that is primarily architectural with some in-house engineering services such as mechanical, electrical, plumbing and structural.

Applications: A specific activity or purpose that is supported by tasks. In the context of this book, training and teaching are applications that encompass tasks such as presenting information from a computer and taking notes.

Application Software: Computer programs or processes designed for perform specific tasks or uses.

Architect: As an individual, a registered design professional in the field of Architecture. As a firm, a team made up of such professionals, and typically the party responsible for the overall design and supervision of the construction of buildings or other large structures.

Audiovisual environment: The physical environment (usually the room and the building) in which any audiovisual systems will be installed or located.

AV: Acronym for audiovisual, sometimes also abbreviated as A/V.

AV control system: A collection of hardware and software designed and installed to allow users to control audio, video or audiovisual systems and devices.

AV manager: The person responsible for the management of a facility's or campus's audiovisual systems and technology, sometimes also known as technology manager.

AV cabling: Cables and wires for the transport of audio, video and audiovisual electronic signals.

B

Benchmarking: The process of examining methods, techniques, and principles from peer organizations and facilities, which is used as a basis for design of a new or renovated facility.

Base building: Also known as "core and shell" or the "bricks-and-mortar," includes overall building elements such as structure, exterior walls and finishes, core (consisting of elevators, stairs, bathrooms, shafts and risers)

and central mechanical and electrical systems; typically completed prior to tenant fit-up and often defined by the work in the General Contract.

Best Practice: Methodology that, through experience and research, has proven to be the best path to a desired result. Recommended and agreed to by experts, best practices include the guidelines, processes, and procedures needed to accomplish an objective effectively, efficiently, and with beneficial results.

Bidding process: A procurement process in which proposals are solicited from contractor(s) or service provider(s) for the purchase of goods, services, or finished systems and buildings. Bidders' proposals may include qualifications, pricing, clarification of methods, or value engineering and are typically based on terms and specifications provided to bidders at the time of solicitation.

Bids: Offers or proposals to supply specific services and/or equipment under the terms and for the price identified in the bids.

Bid bond: A surety bond often required of bidders on construction work to ensure that the successful bidder will accept the job. See Performance Bond.

Box sales: Sale of equipment or accessories without design or installation services.

Box sale vendor or dealer: A firm or party offering box sales. An AV dealer.

BRI: acronym for Basic Rate Interface; a single ISDN line that utilizes two 56 or 64Kbps channels plus one 16Kbps data channels. *see also* PRI and ISDN.

Business model: The means and methods by which a company generates revenue and profit.

C

CA: Acronym for Construction Administration, which includes the activities of the design team and/or the owner during the construction phase that pertain to the administration of the construction contracts with the GC and subcontractors.

CAD: Acronym for Computer Aided Drafting, an electronic method of creating technical drawings. Also referred to as CADD, Computer Aided Drafting and Design.

Capital funds: Funds for purchase or improvements of buildings and equipment. These are long-term funds handled separately from short-term operational funds.

Casework: Architecturally integrated cases and cabinets, usually based on wood products for construction. See millwork.

CD: Acronym for Construction Documents, which includes the finalization of the drawings and specifications in preparation for contracting and construction. The construction documents are sometimes referred to as CDs. CD can also refer to the complete set of documents including drawings, specifications and contract agreements known as the Contract Documents.

Certification: A process, often voluntary, by which acknowledgement is accorded to individuals who demonstrate a level of knowledge and skill required in a profession or product. Certification is typically qualified and issued by a trade organization or manufacturer. Certification offered by publisher, ICIA, includes Certified Technology Specialist (CTS) designation recognizing general, design or installation proficiency, and the company level Certified Audiovisual Solutions Provider (CAVSP) designation. Also see License.

Change Order: Often abbreviated 'CO'. A written document regarding a change to the work after a bid is awarded and a contract is executed. Once approved by the appropriate parties, this document amends or "changes" the contract drawings, specifications, scope of work and/or pricing.

Command and Control Center: Centralized operations and/or dispatch center for management of large-scale systems. Also known as Network Control/Operation Centers (NCC or NOC). Used by network/Internet service providers, suppliers of electricity or natural gas, building management teams, and other organizations that run large systems that require centralized monitoring and control.

Commissioning: The test and alignment process to verify that a system is designed, installed, adjusted, and functioning optimally according to the design intent and contract requirements.

Conduit: A tube or duct for enclosing wires or cables; may be metallic or non-metallic.

Construction manager: A construction manager may be an individual or company that is hired to manage the design and construction process as a representative of the owner. Sometimes also called the Program Manager.

Consultant: In the construction industry, the designers of systems who contract with either the architect or owner.

Contract fees: Fees for services or equipment defined in a legally binding contract.

CTS: Acronym for Certified Technology Specialist, a certification offered by ICIA. Several specialty CTS certifications are available, including CTS-D (Design) and CTS-I (Installation). For more information see the Introduction or visit www.infocomm.org.

D

Data/telecom: General term referring to data networking, telephone and other digital and analog communications technologies and systems.

DD: Acronym for Design Development, which includes the activities of the design team after conceptual and schematic design and leading into the construction documents phase.

Dealer: An authorized representative and reseller of manufacturers' equipment; see Integrator.

Delivery options: Options in how the work is procured.

Delivery process: The overall process for delivery of a project from concept through completion.

Design-Bid-Build: A building or system delivery method under which design and construction or integration are provided under separate contracts, with design services usually provided by an independent consultant. See Chapter 2.

Design-Build: A building or system delivery method under which both design and construction or integration under a single contract. See Chapter 2 for more information.

Distribution systems: Systems used to distribute signals such as audio, video, data and control to multiple endpoints.

E

E/A: Acronym for engineer/architect, usually referring to a consulting engineering firm that also offers architectural services.

EC: Acronym for Electrical Contractor, the party typically responsible for the supply and construction of the electrical systems and components in a construction project.

Electrical engineer: A registered professional engineer in the field of Electrical Engineering; the party typically responsible for the design of the electrical systems in a construction project.

End-user: The person or group who uses the AV systems or equipment for their intended purpose after installation and commissioning are complete.

Equipment sales incentive: see Sales incentive.

F

Facility manager: The person responsible for the overall operations and maintenance of a facility as an employee of or contracted by the facility owner.

Fast-track: A design and construction process intended to expedite a project by altering and shortening the sequence of the design and construction, often including having traditionally sequential elements occurring in parallel.

FF&E: Acronym. See Furniture, fixtures and equipment.

Finishes: The treatment of visible surfaces in a room such as wall surfaces, floor surfaces, ceiling surfaces and furniture surfaces. Finishes include paint, laminates, fabrics, acoustical paneling, ceiling tiles, carpet, glass, and other finish materials.

Furniture, fixtures and equipment (FF&E): Items not normally considered permanently attached to a structure, but which are counted as a bondable cost in new construction or major renovation projects. These items are often funded separately from the base building capital funding.

G

Gantt chart: Used as a project management scheduling tool, with a horizontal bar graph to show plan or progress for each task within a project. Referenced against a horizontal time scale, each task's bar shows its start date, duration, and end date. A Gantt chart illustrates the established Work Breakdown Structure (WBS) of the project.

GC: Acronym. See General Contractor.

General Contractor (GC): A person or business entity that is contracted to be in charge of a building project construction team usually involving the use of subcontractors. Also called lead contractor or prime contractor. Most states require licensing of general contractors.

H

High voltage: Per the National Electrical Code (NEC), circuits and systems operating at over 600V; per the IEEE circuits and systems operating at over 1000V; commonly used in the AV industry to reference systems operating at 110V or greater.

HVAC: Acronym for Heating, Ventilation and Air Conditioning, a range of engineering and construction services often offered by a single entity.

I

ICIA®: Acronym for the International Communications Industries Association, Inc®; the trade association representing the professional audiovisual industry worldwide, also associated with its annual tradeshow, InfoComm. More information is available at www.infocomm.org.

ICAT: Independent Consultants in Audiovisual Technology Council, one of the member councils of ICIA, formed as a peer group for independent consultants. Along with the SAVVI and Technology Managers/End-Users Councils, ICAT was instrumental in advancing the publication of this guidebook.

Independent consultant: An individual or firm providing professional consulting and/or design services, which has no direct financial relationship with or obligation to any manufacturers, representatives, dealers, contractors or integrators.

InfoComm: See ICIA.

Infrastructure: In terms of an AV project, the basic facility services and installations required to support the functioning of an installed audiovisual system, including conduit, power, structural supports, cooling, data/telecom services, space planning and other aspects of base building that affect AV system operation and use.

In-house: Work or services performed or provided within a single firm without having to contract outside the firm.

Installation: The physical act of the construction of the work.

Installer: A person or firm providing installation services.

Integrator: An authorized representative and reseller of manufacturers' equipment that also offers design, installation, and repair services.

Integrator-Led Design-Build: A project process in which an AV integrator is contracted for both design and installation services. These services may be contracted directly to the owner or separately to the architect and general contractor. See Chapter 2.

ISDN: Acronym for Integrated Services Digital Network; a switched data network providing end-to-end connectivity, most notably for use for telephony and videoconferencing. *see also* PRI and BRI.

Isolated Ground (IG): Electrical system whereby the equipment ground is isolated from all building structure and conduit, and is not shared between multiple devices or branch circuits. IG wiring helps protect electronic equipment from noise generated and/or transmitted through the electrical system and requires special receptacles and wiring. Specified in NEC, Sec. 250-74.

ISP: Acronym for Internet Service Provider.

IT: Acronym for Information Technology; in corporate departmental terms, also referred to as Information Services (IS). (Sometimes this acronym is also used to represent Instructional Technology in some educational settings.)

L

LAN: Acronym for Local Area Network; a term used to denote the data network that serves an area, department, floor or building.

License: A legal credential obtained by an individual or business, usually issued by a government agency, which is required to perform work in a particular trade and/or jurisdiction. A license is often required by law or ordinance for workers in various building trades, including architecture, mechanical, electrical, and structural engineering, some low-voltage trades and other building design, engineering and construction roles.

Line item: A specific service or piece of equipment identified as a separate item in a price list, bid or specification.

Low voltage: Per National Electrical Code (NEC) ARTICLE 720, circuits and equipment operating at less than 50 Volts, however often commonly used by NEC to also reference Power Limited Circuits defined as Class 2 (less than 30V and less than 100VA) and Class 3 (greater than 30V and less than 100VA) circuits. Often also used to refer to the building-related electronics trades such as AV, data/telecom, fire protection and others.

M

Mark-up: An amount added to a cost price in calculating a selling price, especially an amount that takes into account overhead and profit.

Mechanical Engineer: A registered professional engineer in the field of Mechanical Engineering; the party typically responsible for the design of the HVAC systems in a construction project.

MEP engineering: Mechanical/Electrical/Plumbing engineering.

Millwork: Woodwork, such as doors, window casings, and baseboards, ready-made by a lumber mill or finished work by a woodworker.

N

NEC: Acronym for National Electric Code. Electrical safety code adopted in the United States; the standard on which most electrical and fire-related laws and ordinances are based. Developed by the American National Standards Institute (ANSI) and sponsored by the National Fire Protection Association (NFPA). See <http://www.nfpa.org/>.

Needs analysis: The process used to establish the needs or requirements of a project or system including functional, operational and budgetary requirements; in the architectural, design and building industries, this process is known as the Program Phase. See Program.

O

OFE: Acronym for Owner Furnished Equipment; also known as CFE (Customer Furnished Equipment).

Off-site: Most often used to refer to a location other than the project construction site.

Outsourcing: The procuring of services or products from an outside supplier or manufacturer, in lieu of using or developing in-house capabilities.

P

Parameters: Measurements or values on which something else depends.

PE: acronym: see Professional Engineer.

Performance bond: A surety bond issued to one party of a contract as a guarantee against the failure of the other party to meet obligations specified in the contract.

Plenum: The air-handling space found above ceilings or below raised floors; most commonly the return-air path for an HVAC system. Federal and local laws require fire-code ratings for any materials installed or located within this space.

PCO: Acronym. See Proposed Change Order.

POTS: Acronym for Plain Old Telephone System or Service. This refers to the traditional analog telephone line.

Prime contract: The contract for the party having overall responsibility for the services or work referenced in the contract.

Pro-AV, or pro AV: Short form for professional audiovisual. This refers to products and systems that incorporate commercial-grade components for mostly commercial, government and educational facilities. These products and systems are differentiated from consumer and residential AV.

PRI: Acronym for Primary Rate Interface; a multi-channel ISDN line consisting of twenty-three 56 or 64 kbps 'B' (data) channels and one 16 kbps 'D' (signaling) channel. Similar in bandwidth to an E-1 or T-1 line. *see also* ISDN and BRI.

Procurement: The process associated with the acquisition and/or purchase of goods and services.

Program: A document summarizing the results of a needs analysis. During the program phase, the architect, AV professional and other design team members discover the end-user's needs by examining the required application(s), the tasks and functions that support the application, and the wishes and desires of the end-user. (Alternate meaning: software program. See Application Software.)

Program manager: The program manager's job is to make sure the owner's needs are met according to the architectural and system program that has been established. This function is sometimes combined with the Construction Manager role.

Programming: In the electronics trades, generally refers to writing code to operate an electronic device, e.g. a control system or DSP processor. (Alternate meaning: the act of developing the architectural and AV program or needs analysis.)

Project Manager (PM): The individual (or sometimes a firm) who oversees, plans, and coordinates a project, or delineated part of a project. The PM is responsible for a team's budget, schedule, administration, and adherence to contract.

Project model: The process selected which defines the means and methods to be applied to a project for design and procurement.

Project schedule: A schedule developed specifically for a project identifying coordination with other trades and any relevant milestones or deadlines. A project schedule is often documented through the use of project management tools such as a Gantt chart and Work Breakdown Structure (WBS).

Project type: A delineation of a project based on descriptors such as the project model or delivery method, the vertical market in which the project is being built and the type of systems involved.

Professional Engineer: A registered and/or licensed engineer, often associated with design building disciplines such as electrical, mechanical, plumbing, structural and others. See the National Society for Professional Engineers website <http://www.nspe.org/>.

Proposed Change Order (PCO): A Change Order that has been proposed but not yet approved or accepted by the appropriate parties. Similar to Request for Change; see Change Order.

Q

Quality control/assurance: A system for ensuring the maintenance of proper standards and quality of manufactured goods or systems, especially by periodic random inspection of the product

R

Renovation: Usually refers to the demolition, re-design and re-building of a space or building, often with modifications to the floor plan and possibly adapted for re-use to the same or a different purpose. This is sometimes distinguished from restoration.

Restoration: Usually refers to a specific type of renovation of an existing space or building with the intent of retaining its existing purpose and/or restoring the space to its original look and use.

Retrofit: The replacement of existing devices or systems with newer items or systems using the existing infrastructure or within the existing space.

RFI: Acronym for Request For Information. A project document submitted during bidding or construction to obtain additional information or clarification.

S

Sales incentive: A financial incentive related directly to the sale of equipment or services, typically offered to sales personnel as incentive to meet quotas. Equipment manufacturers often establish Sales Promotion Incentive Funds (SPIFs) to support these incentives.

SAVVI: Sound, Audiovisual and Video Integrators Council; one of the member councils of ICIA, formed as a peer group for AV integrators and dealers. Along with the ICAT and Technology Managers/End-Users Councils, SAVVI was instrumental in advancing the publication of this guidebook.

Shop drawings: Set of drawings that contain all details required to fabricate and install a system per the contract intent. Details include equipment, wiring, mounting, plans, elevations, sightlines, wire-tags, pin-outs, etc.

"Shopping" the design/proposal: The distribution and use of one provider's proposal or design to solicit similar proposals from other parties with the intent of obtaining the lowest price. When done without the prior consent of the original provider, the practice is often considered unethical.

Site monitoring: Oversight at the project site.

SPIF: Acronym for Sales Promotion Incentive. See Sales incentive.

Stand-alone upgrade: An equipment or system upgrade not affecting other systems or devices.

Start-up: Initial activation and operation of a system.

Structural: Related to the physical structure of a building and often requiring safety considerations for support and mounting of equipment and devices.

Structural engineer: A registered Professional Engineer in the field of Structural Engineering; the party typically responsible for the design of the structural systems in a construction project.

Subcontractor: A firm or individual providing services under a contractual agreement to another contractor.

Submittal: In construction, submittal refers to the documents, samples and information to be submitted to the project designers, the owner or others in a defined manner normally identified in the Contract Documents.

Surety bond: In the construction industry, this most often refers to an agreement or insurance policy that provides monetary compensation to the owner should a contractor fail to perform. See bid bond and performance bond.

System concept: A conceptual-level design of the system indicating general requirements, primary devices and major subsystems.

System requirements: See Needs analysis.

System upgrade: A functional or performance enhancement to a system.

T

Technical representative: A representative, usually an Owner or End User, familiar with the technology and/or technical requirements of a project.

Technical support: Operations and/or physical support and maintenance of the systems and devices.

Technology-rich: Enhanced technical systems or capabilities.

Third-party: Any person or firm who is not a party to a contract. This term is often used to refer to someone who may become involved in or affected by a contractual relationship between others.

T-1/E-1: A dedicated high-speed digital connection commonly used to connect businesses to telephone and data networks. The North American T-1 supports data at rates up to 1.544 megabits per second on 24 data channels (also referred to as DS-1, or Digital Service - Level 1); the European E-1 supports up to 2 mbps on 32 data channels.

Timelines: A schedule identifying specific deadlines or milestones. In the construction industry, they are often expressed in a Gantt chart.

Training: Education of the designated Owner's representative, technology managers, and/or end-users for the operations, maintenance, and support of a system or device.

Turnkey: A complete system solution; supplied, installed or purchased in a condition ready for immediate use, occupation or operation in the audiovisual industry, normally applied to a "one-stop" process with a single contracted entity responsible for all facets of a project process, from Program through Commissioning.

U

UTP: Acronym for unshielded twisted pair. Used to generically denote cabling that includes two insulated copper conductors twisted together without any shielding conductor surrounding the twisted pair. Common telephone cabling and data cabling (including Category 3, 5, 5e and 7) as well as typical audio speaker cabling is considered to be UTP.

V

Value engineering: An organized effort directed at analyzing the function of the systems, equipment, facilities, procedures, and supplies for the purpose of achieving the required function at the lowest total cost of effective ownership, consistent with requirements for performance, reliability, quality, and maintainability. This should not be confused with budget or cost reduction that simply reduces the scope of work or negatively affects the project's performance, reliability, quality or maintainability.

Vertical market: Market segment, delineated by market type or industry such as religious, corporate, educational, government, medical, etc.

Videoconferencing: Communication between two or more physically remote parties with picture and sound, normally with real-time or near real-time interaction.

W

Warranty: An assurance by the seller of goods or services that the goods or services are as represented or will be as promised; guaranties given to the purchaser by a company stating that a product or system is reliable and free from known defects and that the seller will, without charge, repair or replace defective parts within a given time limit and under certain conditions.

Work Breakdown Structure (WBS):

Hierarchical listing of tasks and sub-tasks required for completion of a project, organized by trade, team, function or phase. Often represented in the form of a Gantt chart, a WBS is articulated so as to represent dependencies between tasks, critical paths, and resource needs. A sample WBS is included in the Appendix.

Work directive: A written directive relating to the work being performed.