CTS Cheat Sheet

Cheatography by jrolando via cheatography.com/198641/cs/42057/

Process for AV Project Delivery	
Consultant-Led Design-Bid-Build	AV Designer is contracted to consultant and both are responsible for Design
Integrator-Led Design-Build	AV integrator is responsible for Design and Installation of of AV and is contracted to Architect for design and to GC for install
Consultant-Led Design-Build	AV consultant provides program/project management while Integrator provides designs and instal- lation
Consultant/Integrator Team Design- Build	AV Consultant and Integrator are contracted as single entity and work together though they are seperate buisness entities
Owner Furnished Equipment/Integrator Installed	owner supplied equipment, Integrator installed
Owner Furnished Equipment/Owner Installed	owner supplied equipment and owner installed

Program phase steps	
1. Review existing documents and facilities	Architectural, Organiztional, Technical documents
2. Benchmark comparable facilities	Visit other facilities
3. Conduct program meetings	reveal what a system currently does, what it needs to, and what people wnat it to do
4. Write program report	report containing user needs and a conceptual/functional system description as well as impact it will have on existing spaces
5.Distribute program report	owner, end users, IT, architects, construction manager, GC, integrators, cost estimators,
6. Approve the program report	formally approved report becomes basis for the design

Program report contents

executive summary	brief overview of entire document	
systems descriptions	description of each type of system	
infrastructure considerations	impact to lighting, electrical, mechanical, acoustical, data/telecom, structural, architectural, interior, budget impacts	
Special Issues	major obstacles, schedule issues, specific options for specific spaces	
Preliminary budget and terms	budget and Estimate of cost	
breakdown of probable cost	basic breakdown of costs of rooms or equipment	
additional costs	labor, equipment, taxes, markup, contingencies	
operational staff expertise required		

maintenance budget and life cyle expectations

Key elements of a Project	Types of Drawings
Scope: what is being done	
Time: Effort and Duration	
Cost: Labor and Equipment	
Quality: Ensuring performance meets expectations	
Risk: Threats, Opportunities, and Response Strats	
Needs analysis steps	

- 1. Talk to stakeholders
- 2. Review exisiting documents3
- 3. Site survey
- 4. Conduct program meetings
- 5. Write program report.

Two Envelope Bid Method

1. Create Request for Qualifactions (RFQ) and Request for Proposal (RFP)

- 2. Target potential providers
- 3. send out RFP/RFQ to potential providers
- 4. Review Qualifications response *without* opening proposal and create "short list"
- 5. interview "short list" and rank them

6. Open proposal for the higest ranked provider and if fee is within range, they win the bid

7. If fee is too high move on to the next highest ranked provider until one falls within budget.

Qualification based selection

- 1. Create Request fo Qualifications (RFQ)
- 2. Target potential providers
- 3. send out RFQ to potential providers
- 4. Read responses and create "short list" of 3-5 providers
- 5. Interview "short list" and rank them
- 6. Negotiate with highest-ranking firm for project fee
- 7. If acceptable fee and scope cannot be established move to next provider

Method selection chart



Plan Drawing	Top view floor plan
Schematic Layout	Shows relationships between objects. Often not to scale
Section Cut Flag	Shows which section drawing to look at
Architectural drawings	As-built drawings or design for project in progress
Reflected Ceiling	Shows the elements in the veiling
Elevation	View of a space from the front, back, or side
Section	View of an interior in the vertical plane
Detail	Depicts small items that need to be enlaged to show how to install

Reactance

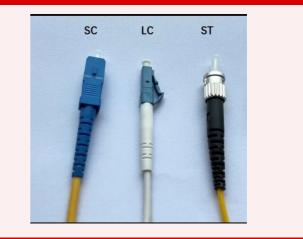
Depends Capacitance and Inductance

Voltage levels

IEC voltage range AC RMS voltage (V) DC voltage (V) Defining risk High voltage > 1 000 > 1 500 Electrical arcing Low voltage 50 to 1 000 120 to 1 500 Electrical shock Extra-low voltage < 50</td> < 120</td> Low risk

Cables/Termination			
Fiber	ST, LC, SC connectors; single or multimode	30km range, 40 Gbps	
Ethernet	8p8c or RJ4, bidirectional	1gb at 300ft, 10gb at 150ft	
RS232	DB-9 connector, bi direct- ional, unbalanced	50ft, 20kps, 2 devices	
RS422	DB-9/DB-25 Connector, balanced	4000ft up to 10 devices, 10Mbit/s	
RS485	5 pin xlr, bi directional	32 devices or 256 using DMX, 4000ft 10Mbit/s	

Fiber connectors



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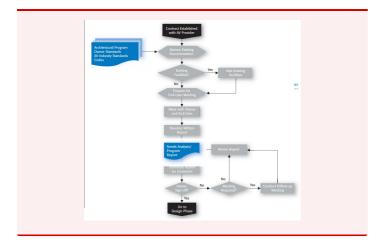
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OSI		AV process ov	erview
	LAYERS OF THE OSI MODEL Enter your sub headline here	Project	Si Contract Building Schematic Design
	Hyspitaction + End Units Larger - Entity FTP, BCC, SAL, DVX Presentation - Sal, Sal, Sal, MAX, FTP, MAYEL, JPEG - Sal, Sal, Sal, MAX, FTP, MAYEL, JPEG - Sal, Sal, Sal, MAX, FTP, MAYEL, JPEG - Sal, Sal, Sal, Sal, MAX, Sal, Sal, Sal, MAX, Sal, Sal, Sal, Sal, Sal, Sal, Sal, Sal	Consultant-Led	Select AV Consultant Design Coordinate
	Transport • End-to pod Connections Network • Pacters Network • Pacters Data Link • Frances Packal • Paces	Integrator-Led	Select // Introgener Develop Preliminary Develop Beste Building Control GO(3)Short(n)(FP) AV Program AV Systems Develop Develop Develop (see Chapter 3) and Budget Develop Develop Develop Develop (see Chapter 3) and Budget Develop Develop Develop Develop
	 Cose, Thate, Wrense, Hold, Republic 	Owner	Provide Input to // and Building Program Review Bate Building Design
			Chapter 4: Chapter 5: The Program Phase The Design Phase
DSI	Human-computer interaction layer, where	AV process ov	erview pt 2
	APPLICATION LAVER 7 = applications can access the network services PRESENTATION LAVER 6 = Ensures that data is in a usable format and is where data encryption accurs SESSION LAVER 5 — Maintains connections and is responsible for controlling ports and sessions		Bese Building Construction Building Commissioning Building W Bid AV System Installation Occupancy
	TRANSPORT LAYER 4		Develop Ar System Design Pridage (see Oxpter 5) Select Wintgeat/r GPD Select Review Mondar Review Review Mondar Train Review Mondar Warranty Review Submitiski Review Numbers (See Building Schmittiski Mondar Mondar Mondar Inflammuture Computation Submitiski Review Submitiski Mondar M
	DATALINE LAYER 2 — Defines the format of data on the network PHYSICAL LAYER 1 — Transmits raw bit stream over the physical medium		Contract Same // Hisingstort (no: Chapter) Develop // System Design Pre-Task System Commission the // System Train the System Warrenty The System Review Dubling Schemistics Monber Infrastructure Contraction Pre-Task System Commission the // System Train the // System Warrenty End-System Review Dubling Schemistics Monber Infrastructure Contraction Pre-Task System Commission the // System Train the // System Warrenty End-System
ighting		-	Review // Eds Provide CPE CommonScience Services Conditional Services Review // Systems Design Review // Systems Sign Off Sign Off review // Systems Design Review // Systems Sign Off Sign Off Chapter 6: Construction Phase Chapter 7: Commissioning and Training Chapter 7:
	University Univer	Logic network	
	Construction project		
. Programm	ing		
. AV bid		Four Teams of	F Project Management
. Move-in		Owner	End-User, Facility Manager, AV Technology Manager, Building Committee, Buyer, Contract Rep
Vork Breakd	Work Breakdown Structure	Design	Architect, AV Designer, Interior Designer, most Consultants
	AV Production System	Installation	General Contractor, AV integrator, Contractors
	Actor Legren, magnet Weak During Bayoon Stream Monghores Durin Inglifer Londgrafers RD DeConstDa Denvin Callerg Callerg FDS Service Stream Media Denvin DeconstDa	Management	Developer, Construction Manager, Building Management Agency, Move Consultant
Contenser Free Free Contenser Some What is the required result? Specific, measurable, verifiable, unambiguous		Forms for Sco	ring RFQ
	© 2013 No Convertingend	form SF330 form A350 TM -	1986
		101111 A330 -	1900



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Safety Switches		Common video Re	Common video Resolutions	
Ground Fault Interrupt Circuit		VGA or SD	640x480	4:3
Core Balance Relays		SVGA	800x600	4:3
Earth Leakage	Circuit Breakers	XGA	1024x768	4:3
Residual Currer	nt Devices	XGA+	1152x864	4:3
		SXGA	1280x960	4:3
Drawing Abbr.		UXGA	1600x1200	4:3
AS	Above Slab	WXGA	1280x768	5:3
CL	Centerline	SXGA	1280x1024	5:4
CM	Construction Manager	HD	1366x768	16:9
Dia	Diameter	HD+	1600x900	16:9
VIF	Verfied in Field	HD-1080	192x1080	16:9
AFF	Above Finished Floor	WXGA	1280x800	16:10
E.	East	WSXGA	1440x900	16:10
E.C.	Empty Conduit	WSXGA+	1680x1050	16:10
EC	Electrical Contractor	WUXGA	1920x1200	16:10
(E) or EXG	Existing	QHD	2560X1440	16:9
ELEC	Electrical	2K	2048X1080	1:1.77
Fut	Future	4K	3840X2160	1:1.9
GC	General Contractor	8K	7680X4320	16:9
MISC	Miscellaneous			
NIC	Not in Contract Roles of Video Processors			
NTS	Not to Scale	Adjust timing/signal strenth		
OC	On Center	Ensure continuous transistions, ie avoid crash switching		switching
OD	Outer Diameter	Correct deficiences in the orginal signal		
OFCI	Owner Furnished-Contractor Installed	Adjust picture color, contrast, brightness		
OFE	Owner Furnished Equipment	Change format of signal		
OFOI	Owner Furnished-Owner Installed			
PM	Project Manager	Composite VS Cor	mponent video	
RCP	Reflected Ceiling Plan	•	nes luminance and chroma in	
SECT	Section	Component: lumin	ance and chroma are in sep	erate cables

Projector Throw Distance

Zoom Ration x Screen Width

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Component color		
red	R-Y/ Pr /Cr	
green	У	
blue	B-Y/Pb/Cb	

С

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