

# Devil In The Details

## Ensuring Proper Handling Of Submittals

by Steven J. Thorburn  
In the June issue of SCN Steven J. Thorburn addressed projects' close-

out submittals. This month, he looks at the other two primary sets of submittals that consultants typically look

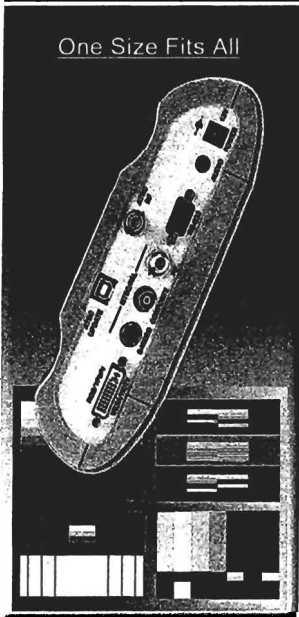
for: bid submittals and construction submittals.

Let's look at the word "submittal." The American Heritage Dictionary of the English Language's third definition of submittal is: to commit (something) to the consideration or judgment of another.

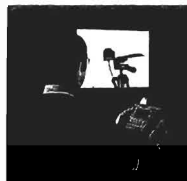
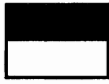
From a consultant's point of view, submittals are printed documents or samples that define something. It could be the contractor's qualifications, or products' quality, quantities and locations. It provides information for the owner and the rest of the design and construction team to review in a consistent format with which everyone is familiar.

As was stated in last month's edition, submittals are not requested by the consultant just to make busy work for the contractor, but rather to keep the playing field as level as possible. During the facilities portion of ICIA's Design School, we always remind the students that there are two parts to the design documents: the drawings and the specifications. The drawings define the quantity and location of the equipment. The specifications define the quality. The submittal process follows the same parallel process where the cut sheets and equipment lists allow the manufacturer (through the contractor) to present the quality of the product. The shop drawings are the actual build-to drawings that need to coordinate the location and quantity of the audiovisual devices with the rest of the construction trades. (See sidebar for text that Thorburn Associates actually uses in our bid/contract documents. With a new master format coming out, the numbering and order will change slightly, but the content will largely stay the same.)

In looking at item B, the bid submittal section, this is the contractor's opportunity to put together and present the best possible team for review by the owner/general contractor/consultant (i.e. the individuals that will be making the decision on who gets the project). This format allows you to tell others who your build team is going to be. The experience and number of projects for the individual people assigned to the project is also very important. There have been a number of projects where we recommended that the owner go with a new start-up company. This recommendation



One Size Fits All



**User Friendly. All The Options.**  
The Sencore VP400 Series Multimedia Generator covers all your display testing needs - in ALL operating modes.



**Training Available. CEDIA Credits.**  
The ISF/HAA Maximizing Home Theater seminar teaches complete home theater setup from calibrating video, to analyzing sound and room acoustics.

**SENCORE**  
3200 Sencore Drive Sioux Falls, SD 57107 USA

sales@sencore.com

www.sencore.com

1-800-736-2673

1-605-339-0100

INDICATE 54 ON FAST FACTS CARD OR VISIT [www.thru.to/systemscontractor](http://www.thru.to/systemscontractor)

### Easy and Fast Setup

- Simple GUI interface sets up in minutes
- System works right out of the box
- Auto-sensing feature directs set-up information to laptop
- Intuitive control surface flattens learning curve

### Easy Compatibility for All Your Signal Types

- Support for RGB, RGsB, RGBHV, component HDTV, Y/C, and composite video provides versatile signal switching



- Configurations offered in 8x4, 12x8, 16x8, and 16x16
- 500-MHz wideband system handles any display resolution

- Built-in Web page enables remote configuration and monitoring
- SNMP support enhances networking capability
- Simple protocol emulation allows for operation with third-party protocols

### And Easy on the Eyes With Superior Image Quality

- Integrated CleanVUE™ system eliminates hum
- Balanced video inputs virtually eliminate humbars, common-mode noise, and other visible effects caused by improper grounding



# A Sure Thing

The matrix switcher that does it all

**Premiere: A sure thing for your multimedia presentations — in corporate, government, sports, or entertainment venues.**



PESA Switching Systems, Inc.  
35 Princeton Road, Suite 102E  
Melville, NY 11747 USA  
Phone: +1 (801) 945-9029  
Toll Free: (800) 328-1008  
Fax: +1 (801) 945-9023

Get more information at  
[www.pesa.com/premiere.htm](http://www.pesa.com/premiere.htm)  
Sales information: [salesinfo@pesa.com](mailto:salesinfo@pesa.com)  
[www.pesa.com](http://www.pesa.com)

INDICATE 45 ON FAST FACTS CARD OR VISIT [www.thru.to/systemscontractor](http://www.thru.to/systemscontractor)

[www.systemscontractor.com](http://www.systemscontractor.com)

is based on our past experience with the project manager/project supervisor assigned to this particular job—more often than not, it is not the firm but rather the people that will make or break the job.

The number and quality of the firms' projects are also important. This allows us to establish a bar that will weed out the local stereo store that is trying to move into the commercial market without the proper experience. This experience can come from certification. Certification within our industry is very important. ICIA developed the first certification program for the commercial audiovisual industry. NSCA's NICET followed and CEDIA is doing a great job with its certification.

In looking at item C, the construction submittal section, this is when the consultant resists providing our electronic drawings to contractors for one very specific reason. It is not in the project's best interest for the

contractor to take the consultant's drawings, change the title block, and reissue the drawings as construction coordination shop drawing submittals. This is the contractor's first opportunity to verify the design, interface plate back boxes, equipment call-outs and quantities. It is a formal opportunity for the build team to build the job on paper. It's the contractor's opportunity to tell the other trades what is needed to work out the little details of specific floor box locations, to move the ductwork running directly over projectors, and to relocate the sprinkler heads that are shown over the equipment racks.

On a recent project we completed, which was a designer-led design/build project, this process saved a client time and money. The local AV contractor spent a great deal of time coordinating with the electrical, mechanical and framing subcontractors and caught many of the issues such as

conduits running through the rear-projection optical cone, framing clearances around built-in equipment racks, and duct-placement issues in the rear-projection room. Their use of the submittal process allowed this fast-track project to come in on time and under budget. The management of the details up front on paper is what ultimately

saved time and money for the client. As they say, the devil is in the details. And as another client puts it: "Words fly away, but paper is forever."

Steven J. Thorburn, PE, (SJT@TA-Inc.com) is co-founder of Thorburn Associates, an acoustic and audiovisual system design and engineering firm.

## Project Management

The following is the base text that Thorburn Associates uses in our bid/contract documents. For all projects, it is reviewed and modified to match the project, but this is where we start.

### 1.06: Submittals

A. Contractor shall comply with the general requirements and general conditions of this project.

B. Bid Submittals: Contractor shall submit the following qualification documents with the bid proposal:

1. Firm description of the contractor, and a copy of the contractor's license, as well as a statement regarding the relationship of the license holder to the contractor.

2. Provide a minimum of 10 related projects, four of which must have been completed within the last 12 months.

3. Résumé of project manager and foreman/project supervisor documenting related experience. Foreman/project supervisor must have completed at least two similar installations in the past 12 months.

4. Submit a list of major equipment components, along with any deviations, to the system design and specification. Indicate which products will not be purchased directly from the manufacturer.

5. Submit a list including names, firm description, job foreman, copy of license and scope of work, for any subcontractors whose work would be part of this contract.

6. Submit a list of names for the lead installers who will be working on this project and indicate for each, if they are NSCA NICET/EST or ICIA CTS-Install, certified or registered.

### C. Construction Submittals

1. Provide shop drawings and record drawings using the following scales:

- Plans—not less than 1/8 inches=1 foot
- Details—not less than 1/4 inches=1 foot

2. Before ordering equipment, submit catalog data sheets, neatly bound with title page, space for submittal stamps and tabbed dividers between sections. List all proposed equipment with reference to corresponding specification paragraph numbers or equipment title. Denote all approved substitutions.

3. Submit point-to-point wiring diagrams and typed wire lists identifying every connection. Include electronic devices such as switches, transformers and terminal blocks. Indicate location of all components. Identify cables by types, colors and wire numbers.

4. Submit system plans showing all device locations.

5. Submit reflected ceiling plans showing distributed loudspeaker layouts with wattage tap settings, projection systems, cameras and other ceiling-mounted devices.

6. Submit conduit riser diagrams showing connection of all devices along with types and quantities of cables to be used and cable identification tags.

7. Submit rack layouts indicating the proposed arrangement of mounted equipment including junction boxes and locations of conduit penetrations.

8. Submit fully-dimensioned construction details of all panels, plates and other custom fabricated items or modifications (e.g. installation of audiovisual equipment in lecterns). Include complete parts lists and, as required, schematic diagrams.

9. Submit fully-dimensioned construction details of all coordination items, such as panel or plate installation in casework or millwork.

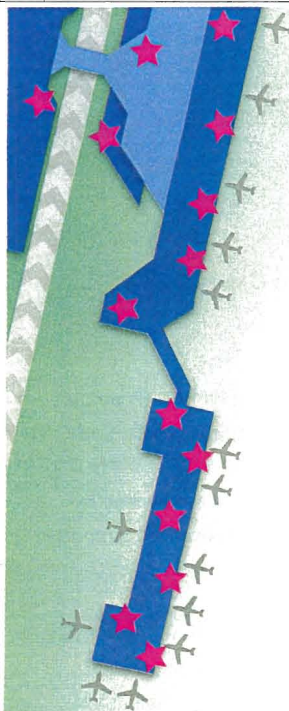
10. Submit a schedule of finishes indicating proposed materials and color selections for all exposed items subject to architect's approval.

11. Submit samples of engraved labels, cable-marking system, faceplate etching/finishes and loudspeaker grilles.

12. Submit mounting and support details for distributed ceiling loudspeakers, video projectors and all other items mounted overhead, complete with parts lists and dimensions. Include a full plan view, front elevation and side elevation of each item, with corresponding support structure and mounting hardware. Verify load ratings of all hanging components including attachment hardware. A structural engineer registered in the state shall stamp details.

13. Submit a list showing coordination of selected frequencies for all wireless transmitters.

14. Before final control-system program installation, submit printed copies of all control-system touchpanel pages as well as an electronic copy of the pages as required by Part 2 of this section.



**IT's**  
the magic of  
**Magenta.**

Unquestionably the  
smartest way to  
**distribute** your video

From Here...

To There...  
**cost-effectively**

To There...  
**1500 feet  
from the PC**

To There...  
**with PC video  
& RS-232**

To There...  
**over CAT5/  
UTP cable**

Only with...

**magenta**  
MAGENTA RESEARCH

934 Federal Rd, Brookfield, CT 06804  
Tel: 203-740-0592 Fax: 203-740-0596  
email: ask@magenta-research.com  
www.magenta-research.com

★ FIDS

★ BIDS

★ KIOSKS

Airport IT managers are drastically lowering FIDS costs for equipment, installation and maintenance with the MultiView™ Series. Comm closets and PCs are reduced by a factor of three to five using multi-port MultiView™ transmitters, receivers and switches that adapt to any layout. Magenta leads the industry by a wide margin in resolution over distance, and displays are serial-controlled over the same CAT5. Put the magic to work for you!