

Pro AV

REAL-WORLD SOLUTIONS FOR THE AV COMMUNITY

By the People

The City of DeLand's new council chambers encourages citizen participation and information sharing using modern AV. **BY LINDA SEID FREMBES**

THE CITY OF DELAND, FLA., IS A SMALL but growing community of 20,000 people located between Daytona Beach and Orlando, Fla. As the county seat of Volusia County, DeLand's greater metro area population is estimated at 60,000 residents. When the city built its new 47,000-square-foot city hall, local government officials took into account the current and future needs of its emerging community. In 2004, the city council assembled an 18-member citizen committee composed of representatives from a variety of interest groups. Based on their recommendations, the new city hall reflects the voice of the community.

The new city hall is DeLand's third since 1905; the new building's square footage is three times that of the previous structure built in 1921 and combines the functions from two previous city buildings. To design and install elements of the new city hall's AV systems, the City of DeLand contracted Audio Visual Innovations (AVI-SPL*), a nationally known systems integrator with an office in Orlando.

AVI-SPL's main role was to integrate state-of-the-art technology within DeLand's council chambers. "In our old building, we didn't have much AV; just an overhead projector and a basic audio system," says Michael Pleus, assistant city manager, who also served as the senior project manager on the city hall project. "To determine our wants and needs, we toured other city halls. The new city hall in nearby Clermont seemed to integrate all the different AV components [that] we wanted. AVI-SPL based its design on Clermont, but with additional modern AV that fit our needs."

AVI-SPL's focus in the planning and design

of the AV system was installing technology that is easy to use and that encourages open government and citizen participation. The goal was to provide enhanced communication technology for each council member and local presenters. The project was designed based on the council's requirements and budget, which was approximately \$200,000. "We were brought into the project from meetings that we had with DeLand officials," says Peter S. Garvin, sales manager at AVI-SPL.

The City of DeLand liked the design provided by AVI-SPL, so it included the design as part of the scope of work in the contract awarded to Clancy and Theys Construction Co.'s Orlando division. AVI-SPL had also worked with architect Tim McNicholas, design principal at C.T. Hsu and Associates, also of Orlando, on other local government projects in the area.

OPEN GOVERNMENT

To facilitate open government proceedings in the new council chambers, the utmost requirement for the AV system was that it be easy to use. The design and layout of the system also needed to provide the feeling of openness and unity between commissioners and audience members. "We addressed the ease of use requirement by installing a Crestron control system," Garvin says. "It allows a city clerk, who may not be tech-savvy, to get hands-on quickly. Matt Paul, a programmer with AVI-SPL, completed the custom programming."

Primarily, the AV is used for presentations. "But the control system allows for integrated AV, switching and routing, so the room can grow with them," says Robert Thomas, AVI-SPL project manager.



Citizens attending city council meetings at the new council chambers in DeLand, Fla., view presentation materials on the two projection screens above the dais. Council members see the same materials on individual displays.

Additionally, a secondary Crestron TPS 2000L touch panel gives the guest presenter control over the peripherals, such as the projector, enabling the speaker to seamlessly present community issues to the city council. The Crestron system uses control presets, especially for optimum audio levels and full video functionality and routing. The system provides global on/off capabilities with AV equipment on a Furman Sound power sequencer so that there are no spikes in power when the system comes online.

REAR PROJECTION

The council chamber's ceiling is two stories high, and the room has seating for 130 audience members. The large open space features a dais that is a bit different from a traditional chamber design. "In a traditional chamber, the

CHALLENGE: Incorporate AV technology into a newly constructed city council chambers that encourages open government and information sharing with the audience.

SOLUTION: Use of wireless touch panels, wireless microphones, and document cameras allows audience members to view the presentation materials and encourages them to participate in government proceedings.

* On April 17, 2008, Audio Visual Innovations merged with Signal Perfection, Ltd. to form AVI-SPL.



The 12 personal AV stations on the chamber's dais (left) include interactive whiteboards and projectors (right).



AVI-SPL also equipped three conference rooms that

projection screen is behind the dais, which results in an obstructed view by the audience,” Pleus explains. “In this case, two rear-projection screens were integrated into the soffits over the dais. It is a good solution. The audience can see the visual displays, and there [are] no projector lights shining in the eyes of the council members.”

The height is approximately 25 feet from the floor to the bottom of the projection screens; the elevated position of the screens provide a broader viewing spectrum for the audience. Two 60-inch-by-80-inch Vista Power Optical projection screens from Custom Display Solutions are integrated above the dais; two NEC NP 1000 3,200 lumen LCD multimedia projectors are installed within the soffits to complete the rear projection system.

While the screens may seem simple on the outside, the soffit and screens were an architectural challenge during the construction process. Thomas explains, “The rear projection screens are 120-inch diagonal viewing surfaces that are installed in a curved wall. AVI-SPL worked with the framers and drywallers to implement it correctly.”

Within the walls, though, the projectors needed the amount of space for its 10-foot, 3-inch throw distance. “The projectors needed a straight line of sight. The challenge was to work with the architect to get a clear light path with nothing structural in the way,” says Fred Grob, AVI-SPL design engineer.

“The screens are integral so that the audience feels like council proceedings are an open process; there is no hidden information. The audience is getting what information the

council is getting,” Pleus says.

The design for each of the 12 council member workstations was revised to include personal AV at each seat at the dais. Each member has a 17-inch NEC LCD1770NXM LCD flat-panel monitor that is mounted and recessed into the dais so the audience can see their faces and not the back of the monitor; a Shure MX418S/C gooseneck microphone, and a Littlite L2 low intensity gooseneck light with dimmer.

“Audio at the dais is a full mix-minus system using Biamp AudiaFLEX digital signal processing. Each council member has his or her own KLH Audio HTA4100 full-range speaker integrated into the millwork, so they can hear whoever is speaking,” says Grob. In addition, 27 JBL Control 26CT recessed ceiling speakers provide sound coverage for the audience seating area.

AUDIENCE FRIENDLY

In addition to the AV, the room layout is also audience-friendly. The presenter's lectern is angled to the side of the dais rather than in the center of the room so the presenter does not have his or her back to the audience. The lectern itself is equipped with full AV capabilities, including a JVC HRS3902U VCR, a Tascam DVD-6500 DVD player, an owner-furnished PC, a Shure MX418S/C gooseneck microphone, a Littlite L2 light with dimmer and an NEC LCD1770NXM LCD monitor for full view of the presentation. “The key is to have the council and audience see and hear everything,” says Grob.

“DeLand pushed to have the audience interaction. This system is probably the most

audience-friendly system I have seen in a long time,” Thomas says.

One concession in the AV design was the placement of the document camera. Originally designed as a recessed piece over the audience lectern, AVI-SPL had to bring it down to a lower height so that the camera could focus. “We tried everything to avoid bringing it down from the ceiling. We even tried different cameras,” Thomas explains. “But in the end, it was most important that the document camera could convey the detail that the audience needs to see.”

System racks are located in a separate room with proper HVAC and power behind the dais. A 44-space Middle Atlantic WRK-44-27 rack provides enough space for current and future needs. “We held numerous meetings with [Pleus] and other members of the DeLand government, including the mayor, to communicate details of the AV design,” explains Garvin, who says that the project timeline was approximately one year from the first meeting to completion of the project.

The first meeting in the new council chambers was held Feb. 5, 2007. Since its debut, the room is used two to three times per week. “My advice for other cities and towns is that it is important to do your homework,” Pleus says. “It is best to identify uses of the room for smaller meetings and be careful to review specifications.”

The install team also thought ahead. “The system is capable of AV teleconferencing when we are ready for it in the future. The room is wired and rack space is ready. We also wired for a broadcast system so it will be easier to implement when we are ready,” Pleus adds.

In addition to the council chamber, AVI-SPL equipped three stand-alone conference rooms with 77-inch SMART SB680 interactive whiteboards, Mitsubishi XD-490U LCD projectors, and audio reinforcement by Extron and Atlas Sound. **AV**
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CLEAR PATH

The clear unobstructed light path for the chamber's rear projection system was achieved through detailed CAD drawings coordinated with architect Tim McNicholas and design engineer Fred Grob during the design phase of the building.

For the construction phase, on-site coordination meetings with the mill workers and drywallers were critical to ensuring that the same vision was shared and that the information on paper was correctly translated.

For venting and cooling of the system, the large soffit area where the projectors are installed provided sufficient air circulation to accommodate the projector BTUs.