

Comparing Corporate and Themed A/V Systems

■ *Seemingly Opposite Environments Share Many Common Goals*

My travels recently took me directly from teaching at the ICIA facility design school to the IAAPA themed entertainment trade show. You would think that going from a corporate setting to a themed entertainment atmosphere would be a bit of a shock. But it actually gave me a chance to really think about how the two are related.

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When you take a look at the requirements and designs for the their audio/visual systems, you will understand that these seemingly opposite environments actually share common ground. After all, what you know about designing a system is as important as how you apply that knowledge to benefit a particular project.

What are the goals of an audio/visual system in a conference room as compared to a theme park system? In relation to audio, the systems for both are expected to produce clear and intelligible sound that everyone in a desired location can easily hear. The sound system will have to reproduce either vocal tones, music or sound effects in a specified area without affecting nearby areas.

In both environments, distributed sound systems are preferred over loudspeaker clusters for multi-room or low-ceiling height spaces because they can provide a more even coverage while running at a lower volume. Whether indoor or outdoor, a distributed system is an ideal choice for paging, background music or announcements.

In a corporate setting, distributed sound systems are also used for teleconferencing, video conferencing or vocal reinforcement during presentations and training seminars. Theme parks use distributed sound systems for pre-recorded announcements, background music, paging and narrations at certain attractions.

Loudspeaker clusters are more common in themed environments for live or pre-recorded stage shows that rely on foreground music. They are also effective for localized displays such as a video wall, or a projection screen such as you would find in a screening room or corporate auditorium. Performance audio systems for both theme and corporate auditoriums are scaled depending on the seating capacity. Corporate facilities are now asking for surround sound systems

to recreate the experience they get from home or specialty theater systems.

Video requirements tend to differ slightly between the two in terms of the number of displays. On the average, conference rooms may employ one or two screens for presentation or videoconferencing purposes. Themed video systems can employ dozens of screens for the queue areas with video walls in the main entertainment area; the focus is on entertainment as opposed to a utilitarian approach (whatever gets the job done). One other slight difference is that themed video systems use primarily video sources, while corporate systems display both video and computer graphics.

COMPONENTS

Many of the same basic components used in conference rooms are found in theme parks: microphones, amplifiers, EQs, compressors, VCRs, cassette or CD players, loudspeakers, digital video sources, computers, CRT/LCD/DLP projectors, monitors, etc. While these components will serve the same function for both environments—if ride narrations and stockholder updates are considered similar—some equipment is modified for use in theme parks.

The same theory of hiding A/V components in conference rooms to keep them from becoming a distraction also applies to theme parks. The less you see of a particular piece of equipment, the less distracting it becomes, allowing the guests to enjoy the overall ambiance. This is extremely important in a place built around a particular theme, whether it's faux countryside settings, cartoonish cities, alien planets, fishing villages or wild west building facades.

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Unlike a conference room, blending equipment into a themed environment requires more than motorized screen lifts and matching wood casework. Loudspeakers stand out the most because theme parks need so many of



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them. Manufacturers have created some that are colored to blend into foliage, and others that actually look like rocks. But unless the loudspeaker is mounted at ground level, a certain amount of creativity will be needed when choosing a location for any non-themed unit.

In addition to needing to blend in, this equipment must also be built to take an enormous amount of abuse. This can come in the form of physical contact (components shaken in ride cars or left in easy reach of vandals) and extreme environmental conditions (water-soaked ride areas, temperature changes experienced by outdoor systems and ultraviolet exposure). Many control and media playback units must be able to endure continuous use, from the opening to the closing of the park. Compared to business systems that are safe and secure in a temperature-controlled building, themed systems are the 4x4 monster truck of the A/V world.

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DESIGN ISSUES

So now we know that both places want their sound systems to broadcast sound and their display systems to show a picture. The actual technical engineering should be pretty much the same, right? Of course not! Nothing's ever that easy. Here are just a few of the issues you will face as you go from designing one system to the next:

- **Source Material**—Conference rooms may be limited to a few things such as computer graphics, a VCR and microphones. Theme parks may have all those in addition to multiple video inputs, sound effects, pre-recorded soundtracks, announcements, CDs for background music and much more. Next time you find yourself at an amusement park, see how many different sources you can identify in any one area.

- **Controls**—Have a look at a touch-screen control panel in an office and compare it with the heavy toggles and buttons in a control panel at an attraction. Presentations and teleconferences don't take place nearly as often as a show or ride turns its crowd over. Exposure to the elements is also a consideration, as we mentioned before.

- **Noise Levels**—Conference and presentation rooms are normally very quiet places. Background noise levels are low because the walls are constructed to keep the meetings private; sound isolation is a must to ensure that privacy. On the other hand, chaos at an amusement park is hard to escape. Between the screaming children and mechanical noise from the rides, it's a wonder conversations can even take place. Sound system designs must take this into consideration. Ambient volume sensors can be used to assure audio broadcast levels are adjusted to suit a particular zone's noise level.

- **Site Lines**—Conference rooms are usually made to hold a few dozen people; seating is well-spaced and obstructions are not common. This is quite unlike the hundreds (or thousands) of bodies you will find crammed near a display area in a theme park, each edging for a better view. Sight lines become very important at this point. The wrong initial calculations can leave guests staring at a support pillar or the backs of the people's heads in the preceding row.

With the pace at which technology is advancing, it is vital to make concessions for future breakthroughs. A decade ago, DVD and Plasma screens would never be seen on an equipment list. A decade from now who knows what new audio/visual equipment will share a rack mount with the current components. Whether it's a corporate or themed project, the best way to plan for the future is to leave enough space so the system can grow and expand.

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