
THORBURN ASSOCIATES INC.
Acoustic and Technology Consultants
Newsletter

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Believe it or not, we're actually glad to see the holidays come around. Between preparing for our autumn trade shows, attending them, and the subsequent followUps, we could use the relaxation of crowded malls and last-minute shopping frenzies. It was great seeing some familiar faces at the IAAPA show in Orlando, and we hope everyone had a good time at the TEA party. As always, if you have any feedback about this newsletter, or want to be put on our 'electronic newsletter' list, drop us a note at TA@TA-Inc.com.

Comparing Themed and Corporate A/V Systems

What's the difference between a themepark and a corporate conference room? Not as much as you think. This might sound like some kind of bad joke at first, but when you look at the requirements and designs for their audiovisual systems you'll realize that these opposite environments actually share some common ground.

System Objectives

What are the goals of an audiovisual system in a conference room as compared to a themepark? In relation to audio, the systems for both are expected to be clear and intelligible for everyone in a desired location. The sound system should be able to reproduce vocal tones, music or sound effects in a specified area without affecting other nearby areas.

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 systems are also used for teleconferencing, video conferencing, or speech reinforcement during presentations and training seminars. Themeparks use distributed systems for background music, pre-recorded announcements, 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 found in screening rooms and corporate auditoriums. Performance audio systems for both theme and corporate auditoriums are scaled depending upon the seating capacity of the room. Corporate facilities are now asking for surround sound systems to recreate the experience they get from home or specialty theatre systems.

Video requirements differ slightly between the two except for the number of displays. Most conference rooms may employ one or two screens for presentation or video conferencing 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 basic components used in conference rooms are found in themeparks: microphones, amplifiers, compressors, EQs, VCRs, cassette or CD players, loudspeakers, digital video sources, computers, CRT/LCD/DLP projectors, monitors, etc. While these components serve the same functions for both environments - if you consider ride narrations and stockholder updates as similar - some equipment has to be modified for use in themeparks.

Looking back at our Spring newsletter ("The Invisible Audiovisual System") we discussed hiding A/V components in conference rooms so they wouldn't become a distraction. That same theory applies to themeparks. The less distracting a particular piece of equipment becomes, the more your guests can enjoy the overall ambiance of a facility. 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 façades.



In an area accented by frontier overhangs, decorative lights and trees, a minimal amount of effort could have hidden the loudspeakers mounted on this pole. Instead, it is plainly obvious to the park's guests.

Unlike a conference room, blending equipment into a themed environment requires more than motorized screen lifts and matching wood casework. Loudspeakers seem to stand out the most because themeparks need so many of them. Manufacturers have created some which are colored to blend into foliage, and others which 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, themed 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 within easy reach of vandals) and extreme environmental conditions (water-soaked ride areas, or ultraviolet exposure and temperature changes experienced by outdoor systems). 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.





An example of proper theming. If you can find the loudspeaker hidden in the rocks along this boardwalk, let us know.

Design Issues

So now we know that everyone wants 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's just a few of the issues you'll 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. Themeparks 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 too the heavy toggles and buttons on 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; high sound isolation ratings ensure minimal sound transfer. On the other hand, the chaos at an amusement park is hard to escape. Between the screaming children and mechanical noise from the surrounding rides, it's a wonder conversations can even take place. Sound system designs must take this into consideration. Ambient volume sensors could be used to assure audio broadcast levels are adjusted to suit a particular zone's noise level.



- Sight 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 even thousands) of bodies you'll 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 has been advancing, it is vital to make concessions for future breakthroughs. A decade ago DVD and Plasma screens would never have been seen on an equipment list. A decade from now who knows what new audiovisual 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 for the system to grow and expand.

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