

case study | Orange County Convention Center

Orlando, Florida, U.S.A.



The Challenge: Provide an easy-to-use lighting control solution that integrates with state-of-the-art design and is flexible enough to adapt to the daily changes at one of America's largest convention centers.

Perhaps more than any other facility, the **Orange County Convention Center (OCCC)** in Orlando, Florida, demonstrates the fusion of technology and design elements that make state-of-the-art convention centers possible. The sheer scale of the OCCC's North/South Building project necessitated fresh thinking about how such an elaborate system could be controlled, and Lutron rose to the challenge with the implementation of its eLumen™ system throughout the facility. The Lutron solution allows the Center to execute configuration changes with speed and simplicity anywhere in the building, or even remotely, from any telephone.

In the rapidly growing world of convention and exposition centers, bigger is usually better—for exhibitors, attendees and local economies alike. The explosive rise in “big box” facilities across the U.S.A. and throughout the world attests to the boom in this business. Lighting and control systems for these mega facilities both present a unique set of challenges, not only from the architectural and design standpoints, but also for the staff that must operate and maintain these centers through dozens or hundreds of different events each year.

Perhaps more than any other facility, the Orange County Convention Center (OCCC) in Orlando, Florida demonstrates the fusion of technology and design elements that make these state-of-the-art centers possible. Comprised of two buildings connected by a covered pedestrian walkway,





the Center offers 2.1 million square feet of exhibition space, and approximately 4.9 million additional square feet dedicated to meeting rooms, lobbies and support space, making the OCCC the second largest convention center in the country. While able to house even the most demanding trade shows, the Center's lighting is configurable through ten exhibit halls that can be set up as contiguous or discrete spaces through an array of automated partitions. This allows the facility to quickly customize itself for more intimate events such as lectures, pageants, performances and graduations, all of which can, and often do, run simultaneously.

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Greg Cyr

Technical Services Supervisor,
Orange County Convention Center

The challenge to design a lighting scheme with the versatility that OCCC's new North/South Building required fell to Robert Laughlin and Associates of Winter Park, Florida, which designed a system that could provide optimum flexibility for the Center's partitioning abilities, and would also utilize the abundant Florida sunshine to its best effect. The sheer scale of the project necessitated fresh thinking about how such an elaborate system could be controlled, and Lutron rose to the challenge with the implementation of its eLumen™ system throughout the new building. The Lutron solution allows the Center to execute configuration changes with speed

and simplicity anywhere in the North/South Building, or even remotely, from any telephone.

The system began with the deployment of the Lutron GRAFIK 7000™ system. User interfaces were created for the Center's operations team with customized, graphical representations of the various spaces and configurations made possible by the OCCC's partitioning. These “pictures,” which were generated by Lutron through AutoCAD drawings provided by the architect, make life simple for the Center's technical crew, which operates and maintains OCCC's lighting, audio, video and electronic signage infrastructure. The crew consists of five full-time operational technicians and two component-level repair technicians. A touch-screen interface controls hundreds of Lutron XP switching panels and GP dimming panels throughout the facility, which combine to give the North/South Building its infinite flexibility. Says OCCC Technical Services Supervisor Greg Cyr. “The benefit of the Lutron system over systems that I've used before is that you get this kind of control over dimmable scenes, as well as relays. In the exhibit hall for example, we have dimmable incandescent fixtures, and high intensity discharge fixtures. The Lutron system lets us quickly change from a trade show to a concert or anything in between.”

The Lutron lighting system has been tied via automation to various “typical” configurations that the facility uses, but manual control is also available at the touch of a button for on-the-fly modifications. Using the customized graphical user interface, courtesy of the Lutron PictureIt™ software from the eLumen™ software suite, the Center's operator can

The fusion of technology and design



click on any fixture in the room and accommodate any special lighting requests. Best of all, it's possible to do all this remotely.

"I've seen lighting systems evolve from back in the early '80s, when you used to have to pencil in data info onto a paper card, and then feed the card into a reader. That has now evolved," says Cyr, with a chuckle. Indeed, the Lutron system has been designed to offer simplified yet granular remote control over any room or lighting component via Internet connection or in this case, by client request, even through the telephone. Says Cyr, "People call and ask can I have lights in the central lobby for cleaning or whatever. We can just pick up a phone, even our cell phone, put in the code, and voila."

Cyr worked closely with the lighting companies to devise an intuitive coding system that would make it simple to control the Center's lighting remotely. For example, the OCCC's Hall A gets a code of 1000, but since that Hall can be split into four rooms, additional codes follow logically, as 1002, 1003, and so on. The end user enters the code and the configuration is controlled. According to Cyr, "We also use four-digit codes to schedule the lighting through automation. When we receive a document detailing upcoming event activity, we use that to input a daily lighting schedule. However, we can always override them for non-scheduled daily activities."

Smooth daily operation for a facility of this size is the result of careful pre-planning, reliable technology and customer support, each of which have earned

Lutron a straight "A" from the OCCC. Lutron Associate Engineer Joe Malarkey reflects that "This was one of the largest jobs we've ever been involved with. We worked closely with 'in house' technicians and construction electricians. We had our field engineers onsite throughout the installation, after which we provided everyone with an instructional system for a week-long training session."

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As a county-controlled facility, the Center is required to have jobs of this type quoted out to various manufacturers, but the Center was looking for enhancements to the technology that had been implemented in its older, West Building. According to Lutron Senior Design and Development Engineer Michael Ratushny, who was closely involved in the project. "Our products have the Lutron patented Softswitch™ technology, which has been tested to over a million cycles, and increases the life of the



Winner:

1999 – 2005 Facilities and Destinations Magazine “Prime Site Award”
2005 Convention South Magazine “Readers Choice Award”
2001 – 2005 Association Meetings Magazine “Inner Circle Award”
1997 – 2004 Meeting News Magazine “Planner’s Choice Award”

Client:

Orange County Convention Center
Orlando, Florida, U.S.A.

Equipment provider:

Lutron Electronics Co., Inc.
Coopersburg, Pennsylvania, U.S.A.

Architect:

Helman Hurley Charvat Peacock Architects Inc.

Lighting design:

Robert Laughlin LLC Lighting Consultants, IALD.

Electrical engineering:

CHP & Associates, Consulting Engineers Inc.

relay.” The Center has been so pleased with the reliability of these Lutron components that it is now looking to upgrade OCCC’s West Building to the new relays.

Perhaps the most vivid affirmation of the partnership strength of Lutron comes from the actual end user. Says OCCC’s Cyr, “I worked for Disney World for about six years before coming to OCCC in 1987, and I’ve spent a long time working in the development of these kinds of projects. I’ve seen companies that disappear when the job is done and you never hear from them again. But Lutron is a company that treats its customers well. It’s important to have a company that will work with you to work out any bugs, and Lutron has been great with their customer service.”

Creating a “best of the best” convention center is a matter of collaboration between the visionaries that conceive it, the engineers that devise it and the technologies that empower it. Lutron is proud to be an integral part of the Orange County Convention Center and all that it symbolizes for what is possible in the art of convention center design.



Products used in this project

- GRAFIK 7000™ centralized lighting control systems
- GRAFIK 7000 processors
 - Lutron GP dimming panels
 - Lutron XP switching panels
 - eLumen™ software suite

Location Photography: © Ben Tanner Photography



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