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USITT N

## Third Annual MMDC slated for May 2nd

The University of Illinois, Krannert Center for the Performing Arts and USITT Midwest will host the third annual Midwest Mechanical Design Competition (MMDC) on Saturday May 2nd. Visit [www.usitt.org](http://www.usitt.org) and click in "Ongoing Outreach" for a link to details and registration information.



ETC Welcomes USITT Midwest members to their new facilities, Middleton, WI

## New Facilities in Madison, Wisconsin, and 'Projections in Theatre' at Purdue Highlight Fall Programs Part 1: By Mick Alderson, Part 2: By Michael McNamara

### Part 1:

Madison, Wisconsin was the site of the first Section program of the season, which took place September 27th. Events included a tour of the Overture Center and an in-depth discussion with Joseph Myers, of Kirkegaard Associates, about acoustic considerations of the project and ended in the afternoon with a tour of the newly enlarged ETC factory in nearby Middleton.

The day began at the Overture Center in downtown Madison. Thirty-two members of the Section toured the facilities, which contain two proscenium theatres, a thrust theatre and three black box theatre/rehearsal/ reception spaces. Steve Schroeder and Brian Anderson, Head Audio Engineer, led tour groups. Schroeder, who has been TD of the space since 1980, was involved in planning,

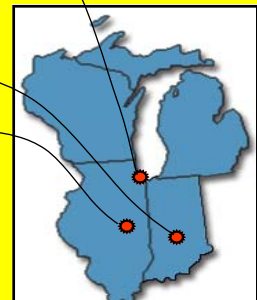
## Upcoming Events

**Chicago Theatre Day**  
Saturday, February 28th

**"IT Basics Seminar"**  
Indiana University Theatre,  
Bloomington, IN,  
Saturday, March 7th

**Midwest Mechanical Design Competition,**  
Univ. of Illinois  
Saturday, May 2nd

Visit [usittmidwest.org](http://usittmidwest.org)!



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defining the specifications, and in overseeing construction throughout the recent renovations.

The tour began by covering some history. The facilities began as The Capitol, a 2500 seat movie theater built in 1928. The movie palace presented silent movies and live vaudeville shows and featured a Grand Barton organ that is still in use. In 1980 it was renovated as part of the new Madison Civic Center and renamed the Oscar Mayer Theatre. The Center also included the Isthmus Playhouse, a smaller performance space. The Oscar Mayer saw continued use as a movie theatre and as a roadhouse for touring shows. But the stage, wide and shallow, as well as the basement level loading dock made the space a challenge for visiting productions.

In 1998, local businessman W. Jerome Frautschi made a gift of of \$50 million (which eventually grew to \$205 million) for the development of a new cultural district in downtown Madison. Planning began for an expanded performing arts facility that now includes six performing spaces. The largest is the Overture Center, a 2250 seat performance hall for presenting symphony, touring shows, and opera. The signature feature of this space is a massive 170,000 lb. orchestra shell, which can be moved into storage to become the back wall of the stage house so that touring shows can be accommodated. The shell contains the pipes for a 4500 pipe organ. The side walls of the shell fold to cover and protect the pipes. The Capitol Theatre (original name restored) has become an updated mid-size theatre with an improved stage and seating reduced to 1100. The Playhouse, once the Isthmus Playhouse, is now a 350 seat thrust theatre and the home of Madison Repertory Theatre. The Center also includes three black box style spaces of various sizes, which can be used as performance spaces, rehearsal halls, or as reception/meeting halls. The Overture Center lobby has also become an unexpectedly popular venue for local events.

Maximizing the acoustical experience of the audience of all the performing spaces was of prime importance throughout the entire project. To that end, Joseph Meyers of Kirkegaard Associates was brought in as the acoustics consultant, and he joined us to discuss how each part of the project was affected and shaped by acoustic considerations. From the beginning, everything involved collaboration. User groups and facilities staff were asked input before planning ever began, and those needs have been met quite well.



Joseph Myers, of Kirkegaard Associates, sharing acoustic details of the Overture Center with Section Members.

Joseph began with the Capital Theatre, the original space which serves as a smaller touring house, as home to both the Wisconsin Chamber Orchestra and the Childrens' Theatre of Madison. It was actually the final space renovated, after the budget has become more limited, but Joseph feels this actually helped the project in the decisions that were required.

Most everything in the space contributes to the acoustics, but not obviously so. The proscenium was narrowed to create wing space, and to house speakers behind acoustically transparent hangings and simultaneously raised to improve acoustic coupling of the performance and audience spaces. A wall was added to create a lobby for the space in what were the last 16 rows under the balcony, removing seats with poor sound coverage and making the space more intimate and comfortable. Seating boxes were added which imitate the original boxes to provide needed wheelchair seating areas and also improve the original reverberation patterns. Felt and fabric covering are used on surfaces to control high frequency reflections while leaving mid and low frequencies for a warm and rich reverberation without lose of clarity. The result is a smaller space suitable for its use and faithful to its original appearance, but with an improved acoustic environment.

The Isthmus Playhouse was stripped to the floor and grid, and rebuilt as the Playhouse, a 350 seat thrust theatre. The acoustics are such that almost all sound is live, clean, clear, and quiet; the sound system is only required for effects. The space is very actor-friendly. Surfaces are angled slightly to scatter



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reverberations and to avoid the "flutter" which can be caused by parallel walls. Thin felt covered with fabric is again used to roll off highs while preserving mids and lows for warmth and fullness. Walls and surfaces are angled to direct reflections where they are useful and to avoid too-long reflection paths that can muddy sound. Quiet scenes are still intelligible.

The Overture Center was built from the ground up, and everything was a choice. The entire hall is acoustically isolated from the rest of the building. The 18" thick concrete walls are surrounded by an isolation space. HVAC machinery is in an adjacent space, and the ducts into the Hall are ducted to isolate the sound from the audience. Ventilation is via a plenum under the auditorium with warm air venting via convection at the ceiling. All this creates a very quiet environment.

The hall is narrow to reduce reflection times with a very "present" sound. This has consequences, however. There are multiple stacked balconies to accommodate seating. Curved panels on the bottom side of each balcony reflect sound onto the seats below to fill the acoustic shadow that might otherwise occur. Most of the reverberation in the room comes from a large space above the acoustically transparent ceiling panels. Other panels in the side walls can be opened or closed to control sidewall reverb as needed. Non-parallel surfaces cut flutter and reflect clean, clear sound; even the front facings of the balcony is fragmented to diffuse sound and prevent echo.

The result is a fine acoustic achievement. While Myers acknowledges that some unexpected problems arose at times, both resident and visiting artists have praised the results. The Overture Center, along with the Capital Theatre and the Playhouse all provide a fine listening experience to performers and audiences alike. Joseph Myers was likewise able to provide us with a clear, understandable tour of the choices and their effects that went into creating these venues.

Section members spent the afternoon at lunch and on tour of the Electronic Theatre Controls facilities in Middleton, WI. The tour was led by Ellen White, Education Product Manager for ETC and a director on the Midwest Section Executive Board.

The ETC factory is a large facility that was once located in seven buildings scattered around Middleton. Co-founder and CEO Fred Foster wanted a

showplace for ETC that would also bring all the facilities under one roof and so several years ago built a new structure that houses factory and corporate offices in one building. But the success of ETC products meant the company outgrew their new home in a short time and so they have just completed a



"Looking at Lights" at the Electronic Theatre Controls factory

78,000 sq. ft. expansion. This new section was the focus of the tour that also covered the rest of the facility.

The tour began in the foyer of the building, where members attending were treated to a light lunch courtesy of ETC. This is not your usual corporate foyer; instead, Fred Foster had it designed to show off what ETC products can do. The area was inspired by Edward Hopper's painting, "Nighthawks". The foyer is a recreation of a 1940's New York street scene, complete with office buildings, shops, a movie theatre with marquee, and the Empire State building. A recreating of the "Nighthawks Cafe" serves as the reception area. It is a fitting theatrical setting for a company producing theatrical products.

Stepping into the factory area takes one immediately into the 21st century. ETC has created a bright and open space for its 500+ employees where all product lines as well as most of the components are assembled in one location. Light is a feature. There are windows and skylights to bring in natural light, and a dry shake finish on the concrete floor has created a surface that reflects light and helps maximize the illumination level. It is a much lighter and area workplace than its predecessors.

Even lighting the factory has created an income stream. OSHA requires that aisles in factories



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be given various safety markings where fork lifts and foot traffic share the path. But the dry shake floor coating created an unforeseen issue; it was hard to get the standard painted warnings to stick! As a lighting company, ETC turned to light as a solution. Custom dichroic gobos in Source 4-HIDs are used to project floor markings onto the floor, and OSHA inspectors were brought in to approve the unusual solution. The OSHA people were impressed, approved the system, and started sending supervisors from other factories to ETC to see it. So ETC patented the system of lighting factory floors with colored dichroic gobos. A problem has become a new product!

We spent a large portion of our time in the newest section of the building. The addition includes skylights that at times can be too bright for comfort. So the theatrical theme of the foyer was applied here, too, and skylights are partially shaded by scrims with clouds painted on them. With daylight behind it, the scrim becomes transparent, and at night, the clouds appear. A bit of whimsy led to including the shapes of birds, a cat, and even a profile of Fred Foster in the cloud shapes.

This portion of the factory provides a new home for the metal cutting and cabinet construction, distribution equipment (such as plugging strips), touring racks and company switch construction, a receiving dock for UPS shipments, and so on. Moving in is still on-going, but when complete will ease overcrowding in other parts of the building.

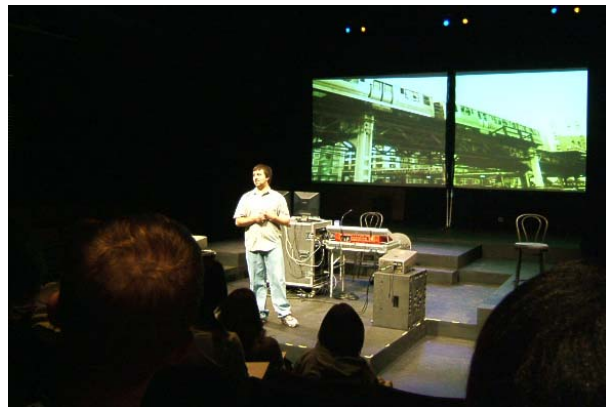
At the end of the tour we viewed an "homage" to the Expression/Express control board line. This highly successful series of control boards has been the foundation and a mainstay of ETC's success. Starting with the original ELC board (the "Entertainment Lighting Console"), the line continued with the Concept, Vision, Micro-Vision, Impression, Expression, and Express boards. A total of with 27,367 consoles were eventually built. But technology moves on, and ETC has just retired the line. So the tech support was raided for working models of every board in the sequence, and set out chronologically. We all found it impressive!

We concluded our tour back in the foyer where we began. Here a photo was taken of the

Midwest Section group atop the "Century Theatre" marquee, a ritual which has become a traditional conclusion to factory tours. All in all, it was a fascinating afternoon for tech theatre junkies.

## Part2: By: Michael McNamara

On November 15, Purdue Theatre in West Lafayette, Indiana hosted a USITT-Midwest program with a workshop entitled "Projections in Theatre" and a tour of the numerous theatrical venues on campus.



Geoff Gooch, Live Event Video and Lighting Technician, Elliot Hall of Music, Purdue University.

The "Projections" workshop was led by Geoff Gooch, lead technician in Live Event Video and Lighting for the on-campus Elliott Hall of Music. This wing of Hall of Music Productions, a full-service event production company, manages all campus video presentations including "big screen" sports coverage, the annual Christmas Show (attended by 30,000 people live and millions via television), the numerous campus commencements each year and much more. Participants in the workshops saw demonstrations of the equipment used including a Pandora's Box media server and the projectors and controllers that make it all happen. Mr. Gooch also talked about challenges involving networking, the learning curves of software and personnel issues that arise when projections are introduced into live events.

After lunch, a tour of the current and former Purdue theatrical venues was led by Van Phillips,



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Purdue Professor Emeritus and co-principal of Jones & Phillips Associates, Inc., an international theatre consulting firm founded in 1974. The group viewed the previously mentioned Elliott Hall of Music, by seating the largest proscenium theatre on an academic campus in the United States with 6,025 seats and constructed in 1940. Other venues included the Loeb Playhouse, the Experimental Theatre (the Theatre Division's former residence since the 1950s) and Purdue's new state-of-the-art venues in Pao Hall just opened in 2005.

The event was organized by USITT-Midwest Member-At-Large Michael McNamara who is a n Assistant Professor and Faculty Lighting Designer for Purdue Theatre.



Geoff Gooch, Live Event Video and Lighting Technician, Elliot Hall of Music, Purdue University.

## Information on Upcoming Events

### Theatre Day in Chicago

Our third event of the season has been moved to Saturday, February 28th and will take place at Lookingglass Theatre at the Water Tower Water Works in Chicago. The theatre opened up in this space in June of 2003. The existing space in this landmark building was designed to be a flexible state of the art performance facility housing two theatres.

Details of the tour, and specific times are still being finalized, so check in with the web site for more up to date information. Tentative schedule is as follows: Tour of facilities in the morning. There is a matinee at 3:00pm and evening performance at 7:30pm of *Our Town* directed by Anna Shapiro on that day.

Check out their web site for more information [www.lookingglasstheatre.org](http://www.lookingglasstheatre.org).

### IT Basics Seminar

On Saturday, March 7th, Indiana University Theatre will host Davin Huston, AV Systems Designer and IT Integration specialist with Kirkegaard Associates in Chicago, will teach a seminar on the basics of Information Technology and its application in the theatre.

The seminar will cover basic networking topics such as: Topology, Devices, Wireless Networking, Network Design, Network Configuration and Network Troubleshooting. Part of the seminar will be Q and A for any specific topics or problems facing networks in the theatre. The seminar will be held from 9:00am to 4:00pm.

Please go to [usittmidwest.com](http://usittmidwest.com), or contact Paul Brunner, [pbrunner@indiana.edu](mailto:pbrunner@indiana.edu), or Davin at, [dhuston@kirkegaard.com](mailto:dhuston@kirkegaard.com), for more information.

**SUBMISSIONS** Design & Production Review is published by the Midwest Section of the United States Institute for Theatre Technology. The region includes Wisconsin, Illinois, Michigan, and Indiana. Submissions to DPR may be made by any member of the Section and may cover any topic: critiques, commentaries, educational approaches, new materials or processes, new products, book reviews, theatre history, facilities, section news and events, etc. Please send inquiries and submissions to [pbrunner@indiana.edu](mailto:pbrunner@indiana.edu).





Join the Midwest Section members and leadership for the annual meeting, with refreshments, at 8:00am-9:30am Thursday, March 19. Hope to see you there!!

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**YOU ARE CORDIALLY INVITED TO PARTICIPATE  
IN THE USITT '09 CINCINNATI CONFERENCE**

**TECHNICAL POSTER  
SESSION**

A Poster Session is a very good way to present new research or research in progress- the presentation prep is less extensive than a full session so you can include up to the minute information. Each participant will have a 4' x 8' homosote board and an 18" x 96" table to present your research on. You have an opportunity to show your research to the assembled audience and receive instant feed back on your work! Technical folks from the North Carolina School for the Arts and the University of Texas at Austin will be showing their work, now you can represent your organization!

If you have a new idea, approach, or method you think might be useful in the theatre please let me know and I will reserve you a spot at the session!

Michael D. Fain  
Session Chair  
Mdfain@ou.edu