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The Commissions: Devoted to Investigating and Research by Members of USITT: Computers and Software

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THE COMMISSIONS: DEVOTED TO INVESTIGATING AND RESEARCH BY MEMBERS OF USITT

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A TIMELINE OF USITT EVENTS AND PEOPLE, 1960–2010

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the COMMISSIONS:

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by members of **usitt**



ARCHITECTURE

By Raymond Kent

In a statement published in USITT's first newsletter (May 1961), several reasons were given for establishing the new organization. "In the most specific

terms our problem is only too clear. It is a matter of common concern that owners of theaters have too often had little fruitful communication with architects, architects with producers, engineers with theater administrators, and technicians in general with playwrights and actors. Each group has advanced without adequate acquaintance with its neighbors, often creating a technical language difficult for the outsider to understand. The result has been a widespread malformation in the body and limbs of the theater. Many theaters are badly equipped for the functions which they perform.

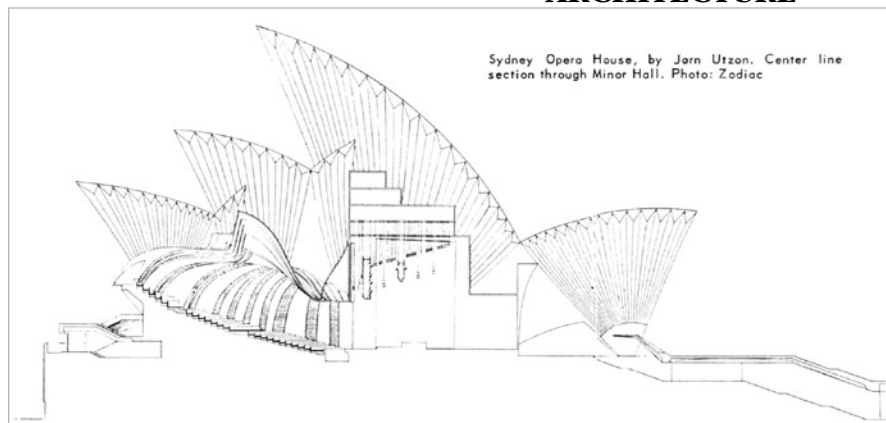
Operas are given where they should not be and not given where they should be to advantage. The complex problems of the multi-purpose stage are still inadequately studied and there remain serious problems under certain conditions as to the efficacy of such theaters. Technical progress in almost all mechanical fields has been so rapid that in many instances theaters have fallen far behind their best potential. Playwrights, working in a vacuum, have too seldom known for what stages they may be expected to write or actors on what stages they may be expected to perform. The traveling theater today faces radically different problems from those of a generation ago, problems that it is often unprepared to meet. New types of drama, opera, and dance are created without remotely adequate facilities for their performance. Our shortcomings in all of these cases are essentially defects in communication. We have lacked the roundtable about which leaders with vision in various fields may meet and exchange their views. The institute aims to provide such a table."

The challenges described above which prompted the formation of USITT are in many ways the ones we still face today. How many of us are called upon to work on or within a theater that is inadequate by today's standards? We constantly strive to do more with less in ever increasingly tough economic times making that "roundtable" even more needed.

During the last fifty years countless articles on designing and building a better mousetrap have been published in *TD&T* as well as in the *AIA Journal* and others. We have examined, convened, and re-examined every aspect of theater design, from front-of-house to the stage and auditoria, to backstage support spaces. We have had to act and react to ever changing technologies and sophistications of performances of at the time. Right now we are reacting to the digital revolution and figuring out how to create spaces for the Millennial Generation that has grown up with iPods, 200 cable channels, video on demand, and PlayStation gaming consoles. Instant access to entertainment, anywhere, anytime, is live theater's main competition. We strive to adapt. We look at the lessons learned by our predecessors and we look at the world around us—and embrace it. We learn new jargon such as Data Architecture, Net Streaming, and V-LAN. We move forward.

In the December 1965 issue of *TD&T* Donald C. Mullin writes about the foibles of theater design throughout the ages, identifying seven principal "flights from theatrical reality." He points out that there have always

The Sydney Opera House, a center line section through Minor Hall. This theatre was singled out as an example of "Theatre as Sculpture" in Mr. Mullin's *TD&T* article (Dec. 1965).



Sydney Opera House, by Jørn Utzon. Center line section through Minor Hall. Photo: Zodiac

been "apologies" for theatre's existence. "The most concrete (sometimes literally) and substantial of these apologia is that of the theater building itself, the only thing that lasts after the show has closed." The article includes many examples of theatre structures that were massaged into conformity with ideas that were thought to be respectable and worth preserving at the time instead of letting the buildings take whatever shape and form was necessary. Two common themes in Mullin's seven apologies is the lack of understanding of the art of theatre and the lack of communication in the design and construction process among the owners, architects, construction managers, and artists who will inhabit the building. The need for better understanding and communication which Mullin identified in 1965 remains a valid rationale for USITT's existence today and into the future.

Mullin followed up this article, "Theatre as Something Else: A History of Apologies," with "Real Theater Please" (May 1966) in which he offers some positive approaches to correcting what he earlier called Western culture's inability to accept theatre for what it is. The following six questions, which he says can indicate the direction to look for answers, have little to do with the size and shape of the building.

- With the current emphasis upon flexible theater, what is the most flexible form possible?
- What should be the relationship between the actor and the audience, relative to their physical environment?
- How are we to preserve theatricality, assuming we know what that is?
- How are we to create a "sense of occasion" and its attendant magic of the theater?
- What is intimacy and how can it be achieved?
- How do we accommodate scenic as well as non-scenic productions?

Mullin's suggested answers are as instructive today as they were forty-four years ago. He says the most flexible theatre form is a proscenium stage with a high opening (high enough to "vanish entirely"), a grid to match, a very large offstage space, complete traps or elevators, and with an apron that may be extended when needed. He acknowledges that many budgets won't allow his ideal theatre form and advises smaller theatres to consider scaled-down versions. The actor-audience relationship, he says, needs to accommodate several capabilities for each. For actors he insists that they be seen clearly by the audience, that they be heard (without aids) and be able to clearly hear the audience, that they not have their performances dictated by the design of the stage, that they be able to withdraw from all the house at once, and that they be distant enough to "fake business" and wear makeup convincingly. The audience, Mullin says, needs to

have pleasant surroundings and reasonable comfort, needs to share their responses, needs to have a sense of anticipation and not have the stage revealed too soon, needs to see actors and actions and hear natural voices clearly, needs to be close enough to see facial expressions, needs to be able to feel involved in actions and emotions (but also feel distant enough to be separate from "distasteful things"), and needs to be part of "a small group associated with a mass rather than a midge within a mass."

How do we preserve theatricality? Mullin insists that theatres are unique and should not feel like, or be, art galleries or cocktail lounges. He answers his question about creating a "sense of occasion" with the argument that U-shaped theatres with galleried auditoria provide the best opportunities for audience members to be seen and heard. He says intimacy doesn't equal smallness but rather depends on a sense of genuine relationship or closeness between the actors and the audience. And finally, he says scenery is entirely a function of the play—"put up scenery when you want it and don't put it up when you don't want it."

In conclusion, Mullin runs through several contemporary theatres and architects—the ANTA Theatre (designed by committee), Philip Johnson's New York State Theatre (a frank retrogression), George Izenour's theatres (trying to cover all bets), and the theatres of James Hull Miller (child-like and fragile)—and concedes that his ideal theatre has yet to be designed.

The first chair of the Standing Committee on Architecture, Engineering and Construction, Helge Westermann, AIA, identified the purpose of the committee as a place "to provide collective experience and exchange ideas and authoritative data relating to the workable, effective design, equipment, and construction of theaters." Various sub-committees had their own missions. The Sub-Committee on Architecture, chaired by Eric Pawley, AIA, provided "collective experience and exchange of ideas on effective theater architecture, based upon evaluation of the theater program as it relates to techniques, materials, and economics"; the Sub-Committee on Engineering, chaired by Hans Sondheimer, aimed "to encourage, develop, and communicate effective techniques for optimum coordination of all elements and forms of equipment, old and new, necessary for theatrical presentation and theater operation, and to review traditional, contemporary, and legal requirements for theatre construction, and to make and implement recommendations for the encouragement and facilitation of theatre construction"; and the Sub-Committee on Construction, chaired by Arthur Benline, agreed "to review traditional, contemporary, and legal requirements for theater construction, and to make and implement recommendations for the encouragement and facilitation of theater construction."

Timothy Hartung (right), Architecture Commissioner and founder of the USITT Architecture Awards, congratulates some of the winners of the 1994 awards at the USITT Conference & Stage Expo in Nashville.



These mission statements, reported in the January 1962 USITT newsletter, are not so different from the current mission statement of the current Architecture Commission (restructured and renamed in 1971): “to promote the understanding of the architect’s role in the design of theatres and performance spaces, and to provide an architectural resource for members and the professional community on theatre design.” It’s not hard to imagine that the next fifty years will ultimately prove to have the same goals and the same challenges. It is through the friendships, connections, and knowledge sharing made possible by USITT that we will continue to seek that “ideal” theater. ❖

Raymond Kent is an audio visual designer and director of the Innovative Technology Design Group at Westlake Reed Leskosky.



COMPUTERS & SOFTWARE

By Patrick M. Finelli

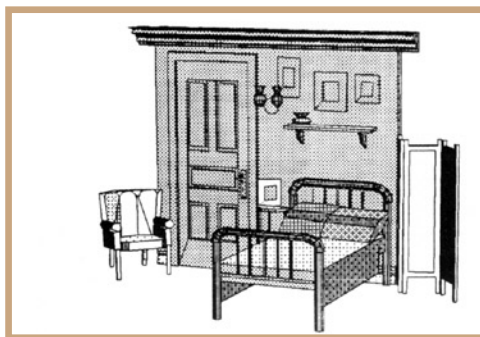
An anniversary is an occasion to commemorate an important event that happened in the past. It reminds us of who we were, and gives us a sense of where we are now and what we have accomplished. There are still quite a few distinguished USITT members around who can remember the founding of the institute fifty years ago. The rest of us have our own memories reinforced

with issues of *Theatre Design & Technology* and the stories we tell each other. While sitting at my keyboard thinking about the impact of computing on theatre technology, I’m aided by the digital archive of back issues saved by Willard Bellman and scanned into PDFs by M. Barrett Cleveland and his students. Barry and I joined USITT at about the same time and shared a common interest in theatre-related computing.

Computers were emerging as indispensable tools in science and industry. In theatre, many of the early adopters were technical directors extending their already long workdays by fiddling with CPUs and monitors, expansion boards, I/O and memory cards while trying to get the most out of their clunky machines. It was hardly a plug-and-play world. For TDs accustomed to making things work as if by magic, it was more like plug and keep plugging. As the personal computer became commonplace in our homes and offices, it made perfect sense for a cadre of USITT members to help navigate the path leading to the widespread use of computers in stage design and technology.

My first USITT conference was Denver in 1982, the same year that Robert Reinecke and Dan File began a regular column devoted to the use of computers in theatre (Winter 1982). Gordon Pearlman, who developed the first computerized lighting control board used on Broadway, had held a workshop with Al Wehlburg and others at the Cleveland conference the previous year that considered “microcomputers” (to differentiate from mainframe computers) in a context other than lighting. Our panel was dedicated to computing using mainframe computing for production management and ticketing. These were primarily customized projects written in source code and were of limited use to the general membership. There was another session with a demonstration of software written in BASIC on a PC for inventory, costume, and box office that became the core of a new product line distributed by Rosco.

Our group wasn’t the first to consider using computers in the



Mark Reaney’s article on computer software for set and costume designers (*TD&T*, summer 1989) singled out the now defunct “Superpaint” as a “powerful application that combines both drawing and painting layers, features 96 fill patterns and has room for another 32 that you design yourself.

theatre. David Thayer at Iowa State wrote an article for the first edition of *TD&T* titled "Planning for Lighting Control Systems" in which he recognized the potential for data processing and programming for lighting: "This image of the lighting control system is related to a continuously-programmed computer" (May 1965). By the late 1960s, computers began to operate stage lighting in limited applications. As a Berkeley undergraduate, I witnessed a computer-controlled light cue for the first time at the San Francisco Opera House in 1971. In the 70s, memory lighting boards were refined and made available on the general market. When it opened in 1975, *A Chorus Line* was the first Broadway show to feature computerized light control. Tharon Musser's design utilized a prototype EDI board that Pearlman based on a DEC PDP-8 computer. You might find it hard to believe that it had 8K of core memory (RAM) that was upgraded to 16K, but all the details are reported by Linda Essig (Winter 1998). Charles Levy demonstrated the Light Palette to me one afternoon at the Strand factory in New Jersey in 1979 and explained that the reason it had six parts to a light cue was because Jean Rosenthal wanted electronic boards to be able to achieve what three electricians using both hands could do with resistance dimmers. This had become a guiding principle for developers of computer control consoles ten years after her death.

Computer controlled lighting has led to numerous changes in the industry with movers, dichroic color changers, show control, open networks and programmable LED lights. No one draws a light plot by hand anymore. We could devote an entire column to iPhone and iPod apps for lighting from wireless DMX interfaces to calculators for beam angle, power and color cut sheets, gobo catalogs and remote control of professional level lighting and audio consoles. Could we have foreseen this in our wildest dreams years ago? Undoubtedly, a few among us considered it possible. Joel Rubin queried a group of lighting designers in the early 80s about new technology with results that were surprisingly prophetic: "One designer thought it would be fun to stay at home and use his touchtone telephone to set up lighting cues. Another envisioned a sophisticated console in which the lighting designer would picture what he wanted and this image would be translated into a stage picture. Another designer pointed

out that computer generated video graphics and image duplicating systems could allow the designer to paint with light on a high resolution CRT and have the results translated to the stage picture via elaborate lighting instruments focused and colored remotely" (Fall 1982). These are common practices now with mobile devices, WiFi, data visualization, LCD screens and intelligent lighting fixtures.

A special issue dedicated to sound in 1981 had many references to computing in the collection of articles authored by John Bracewell, Rollins Brook and David Collison. Bracewell mentions computer processing, Brook refers to computerized sound control for managing the complexities of live mixing and Collison proclaims that "Miniaturized electronics and the computer have revolutionized theatre lighting control over the last twenty years. Theatre sound, no longer the poor relation, is catching up fast" (Winter 1981). Strand's Levy published a response to Collison describing the 1969 re-opening of Ford's Theatre in Washington, D.C., pointing out that the entire production was controlled by a memory system for lighting and sound (Spring 1982).

A new crop of theatre designers, technicians and faculty came of age in the 1980s and met experienced veterans and new colleagues eager to share knowledge and experience at USITT conferences. Professional growth coincided with the emergence of exciting new computer technologies that infused our work with enthusiasm for a new level of technological wizardry. Creative efforts were enhanced by the development of CAD programs for scenic and lighting designers. A 1981 computer-drawn light plot for *Studio 54* by Ferren Associates still hangs on the wall above my workstation. Modes of communication expanded from telephone, letters and personal contact to e-mail and listservs on the Internet. We embraced a new networking technology through an interface called Bitnet on university mainframes or commercial programs like CompuServe and Prodigy long before the advent of Yahoo, Facebook and Twitter. Commodore users had Q-Link; Tandy and IBMers used PC-Link, which was folded into AOL's e-mail utility in 1989.

The Apple Macintosh appeared for the first time at a special pre-conference computer symposium held in Orlando in 1984. Members tried out design applications and demon-

strated drafting programs with four-color light plots, costume pattern drafting, and lighting paperwork that ran on computers made by IBM, Zenith, Radio Shack and Commodore. By 1985 articles were appearing on a regular basis in *TD&T* featuring public domain software and commercial programs that could be adapted for theatre applications. There was an abundance of word processing, spreadsheet, database, and drafting software. Windows had become the dominant OS since its introduction in 1983. Innovation progressed rapidly with a session on AutoCAD for technical directors at the Oakland Conference in 1985. Leonard Harman developed an early lighting paperwork program that worked with AutoCAD to produce dimmer schedules from data associated with block instrument symbols entered on a CAD drawing (Spring 1987). That same year Jeff Hickman organized a panel for the Minneapolis Conference on software resources. We worked together on four editions of the *Directory of Software for Technical Theatre*, a USITT publication begun in the late 80s that contained 174 reviews of theatre-related software written by members representing each of the commissions. USITT leaders considered establishing a separate computer commission, but it made more sense to retain the existing organizational structure.

A 1986 survey by Barry Cleveland indicated that 78% of theatres were using computers in at least one area of operation. The average RAM capacity was 512K and 62% were running computers without a hard disk drive. It seemed as if everyone was thinking about what they could do with a computer, but the vast majority (92%) used it for word processing. It was a time of stand-alone software and dial-up e-mail. We had the Internet, but the World Wide Web was still a few years away.

"Software and the Stage" reviewed the progress we had made and looked forward to the future possibilities with automated drafting tools, portable computers, image processing, speech recognition, interactive video and graphics (Fall 1988). Around this time I spoke with a publisher about the need for a primer dedicated to computer-assisted theatre design and he disagreed, saying that all of the people using CAD in the theatre would probably fit in one room. He should have been around the day our drafting tables were replaced with workstations, turning

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our design lab into a CAD lab.

I accepted responsibility as associate editor for computers and software in Spring 1989. That summer *TD&T* featured three articles under “Computer Graphics” that detailed CAD techniques and revealed dynamic applications that expanded the possibilities for production with computer modeling, motion detectors, MIDI events, lasers and large video displays of computer graphics (Summer 1989). The next year there were five articles under “Computers” covering a wide variety of topics from cueing to touring and even using CAD to help teach theatre history (Fall 1990). Editor Eric Fielding dedicated an entire issue to computing with eight articles covering lighting and scenic design, technical directing and health and safety (Fall 1993). The genie was out of the bottle.

As I combed through the electronic *TD&T* archives looking for connecting threads, I realized that today’s data mining software and visualization tools would make my task much easier. Forsaking the temptation to produce graphic tag cloud images through word cluster analysis, I manually scrolled through the pages of each issue looking for patterns and trends in theatre-related computing during the years that the computer evolved from an emerging technology to a ubiquitous presence in our personal and professional lives.

Designers jumped at the potential of CAD. Darwin Reid Payne described the expanding relationship between the scenographer and the computer in the design process in two articles: “Interactive Computer Model Making” (Summer 1992) and “Computer Rendering” (Summer 1994). His later drawings demonstrate noticeable improvement in drafting and rendering techniques. Nic Ularu used a combination of scanned drawings and Adobe Photoshop techniques to produce impressive costume renderings (Summer 1999). Bill Browning, who ran the computer lab at USITT Stage Expos, showed how far we had come with a lavishly illustrated treatment of 3-D modeling (Spring 2000).

The invention of the Web in 1991 and the Mosaic browser in 1993 revolutionized the flow of information. Payne promoted the use of e-mail and the web for sharing files and provided us with his URL address (Winter 1997). Alexandra Sargent and Sherman Hayes reviewed costume resource websites, online archives and search techniques (Fall 2000).

There was an effort to start a regular computer column, but it lasted for only two editions: Kent Goetz reviewed eight CAD programs for the Mac (Fall 1994) and Payne wrote about gathering digitized images and data from Internet and CD-ROM archives (Spring 1995). From this point forward there was not an overwhelming tendency to foreground the computer as a special category in *sui generis* since it was rapidly becoming an important tool for virtually all USITT members. The articles in *TD&T* after the mid-90s reflect ongoing developments in CAD, rendering techniques, motion control, show control, audio recording, technical paperwork, archiving and web resources.

Charlie Richmond introduced us to show control and digital audio with his Command/Cue software for the Amiga (Fall 1988). Fourteen years later John Huntington urged design programs to prepare technicians in real-world technologies like show control, automated lighting and digital audio systems (Fall 2002). During this period George Izenour described computers and controllers for rigging acoustic shells (Fall 1996). Loren Schreiber explained how to use programmable logic controllers (Spring 1996), stage computer interfaces, encoders and software tools for motion control systems (Summer 1998). We find ads for computer controls for chain hoists (Fall 1995) and learn about Disney’s proprietary controller that used SMPTE time code on the audio track sent to a Wholehog which then delivers DMX down the fiber optic line to an interface for strobes and cannons and other special effects (Winter 1998).

Richard K. Thomas showed how to record, edit and store sound effects using synthesis, sampling, sequencers and waveform editing in a special issue devoted to sound (Winter 1995) and wrote about digital playback with CDs, hard disk and Minidisk (Summer 1998). Dave Tosti-Lane recommended sound cards for digital recording and playback (Spring 2000). Barry Cleveland trundled out the familiar PowerPoint office application for use as a playback tool while he waited for Stage Research Inc.’s SFX cueing software (Spring 2002). Today’s sound design rivals stage lighting in its integration of advanced technology into the production process with digital mixing consoles, advanced speaker processors, computer controllers, waveform editors, show control and automated EQ.

Mark Reaney conducted innovative experiments at the University of Kansas using virtual reality to create scenes and environments, common practice today in gaming and pre-visualization software (Spring 1993). Delbert Unruh considered the theoretical implications of VR in a companion article to Reaney’s second installment (Winter 1996). Reaney received funding from USITT for his designs using head-mounted LCD displays where the audience could see live actors combined with projected 3-D images. Another article on VR documented Reaney’s production of Arthur Kopit’s *Wings* (Spring 1998), the same year that Michael Hussey described a new program at the University of Georgia focusing on CAD and computer animation (Fall 1998). Beeb Salzer displayed his own computer costume renderings in a response to Hussey the following year, asking critical questions about changing aesthetics and whether students will actually have to draw or paint in the future (Spring 1999). Three years later editor David Rodger selected a costume design created entirely on a computer by Carrie Robbins for the cover of *TD&T* (Fall 2002). She describes in detail how digital tools have expanded the capabilities of her design students at NYU. Virtual reality has not affected theatre design as much as it has the game industry with the Xbox, PlayStation and Wii. Today there are academic programs at Georgia, Southern Cal, Carnegie, Central Florida and countless others training the next generation of game designers for this popular new entertainment medium.

A keyword search uncovered some unexpected references to computing in relation to the careers of notable designers. At panel discussion with six distinguished lighting designers moderated by Bill Warfel at the 2000 conference in Denver (Winter 2001), Ken Billington mentioned Mini-CAD, Richard Pilbrow favored visualization software and Imero Fiorentino told an anecdote about losing 400 cues the first time he switched over to a computer from piano boards. Mary C. Henderson speculated about whether Jo Mielziner would have used a computer in his studio (Summer 2001) concluding that it was unlikely because he loved the rendering process, but he would have wanted to learn about it and how it could be applied to his work.

At this point in our journey through the forest of memory and the *TD&T* archives, the

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frequency and complexity of articles involving computing becomes overwhelming. Fortunately, even if you didn't personally save all the back issues like Will Bellman did, many have been available since the *TD&T* website came online in Summer 2003. There you will find references to computing across a wide variety of technical, design and historical applications. The computer is no longer fetishized as a cutting edge novelty, but a powerful tool in the arsenal of theatre artists. The computer has restructured some of the processes involved in the traditional ways of conceiving images. It encourages direct interaction with visual sources. Computer visualization makes it possible for scenographers to make decisions earlier through visual thinking and experimentation. It has become a dynamic extension of hand and mind, an expressive resource that expands our vocabulary.

We live in a world with 300 million people on Facebook (more than half log in on any given day) and fourteen billion searches a month

on Google, Yahoo and Bing. Today's technologies exploit blade servers and virtualization. We are already accustomed to cloud computing because we send e-mails and write documents using Web-based software. The Internet is no longer something we connect to, but part of our everyday life like bottled water and the air we breathe. As we move between our office, studios, shops and theatres and attend yearly conferences carrying our WiFi connected notebook computers and smart phones, we might pause to consider the immense technological transformation on a conceptual level. The essence of theatre requires an actor, audience and space, but culture, politics and technological innovation have influenced theatre practice throughout history.

There was a time, not long ago, when computers barely touched our art. Now there are jobs in today's theatre using technologies that didn't exist five years ago. The other day I observed final tech rehearsals for a new show

headed for Broadway. There were forty-one LCD screens displaying data from a variety of desktop and personal computers, multiple grandMA and EOS control consoles, graphic design workstations, digital video suites and full stage backdrops with layered LED panels. What happens on stages in the future will be determined by those who master technology in the creation of theatrical art. That talented group will undoubtedly include many members of USITT, an organization that thrives on the leading edge of theatre design and technology. ❖

Dr. Patrick Finelli, Professor at the University of South Florida in the School of Theatre and Dance, has been a member of USITT since 1981. He is the author of the textbook *Sound for the Stage*, numerous journal articles and software reviews. As theatre consultant for architecture, lighting and sound, he has completed major projects for universities, schools, churches and cultural centers



COSTUME DESIGN & TECHNOLOGY

By Peggy Rosefeldt

Any attempt to distill five decades of history into a single article in the anniversary issue of a journal is an exercise in futility, especially with a group as dynamic as the Costume Commission of USITT. Rather than just chronicling endless lists of names and events, I will focus on the many intriguing patterns and stories discovered in the archives of *TD&T*. Sometimes these smaller details can best reveal the larger picture.

Illustrations from *Costume Research Journal*, originally titled *Cutter's Research Journal*, a quarterly publication devoted to costume and textile history, as well as computer patterning software.



Fifty years proved enough time for some authors to span an entire professional lifetime. Liz Covey's and the late Rosemary Ingham's *Costumer's Handbook* was reviewed in *TD&T* in 1981; four books and one video later, the third edition of the book appeared in 2004. Janet Arnold's first two volumes of *Patterns of Fashion* surfaced in 1976; volume four was reviewed posthumously in 2009. Along the way, reviews of works by Irene Corey, Julie Taymor, and Deborah Nadoolman Landis filled the pages, as well as books by the late authors Elizabeth Montgomery, better known as Motley, and Doug Russell. Other USITT members who were prolific in their own publications included Alexandra Bonds, Rebecca Cunningham, Deborah Dryden, Joy Emery, Bobbi Owen, and Kevin Seligman. The death of Jo Mielziner, who early in his career designed costumes as well as sets, was reported in 1976; his archives were discussed in 1979, and 2001 yielded both a feature article and a full-length biography by historian Mary Henderson.

When Randall Davidson wrote an impassioned article on the Beverly Hills Supper Club fire in 1977, safety in theatre was at best an afterthought. Only a year later, a primer by Deborah Dryden on fibre-reactive dyes made no mention of safety precautions in their use. By 1992, after *TD&T* published an article on the use of spray guns for finishing costumes, Bobby Ann Loper fired off a letter to the editor objecting to the absence of any protective gear being shown while using that equipment. Monona Rossol's book on theatre safety, *Stage Fright*, reviewed in 1994, followed Davidson's call, and by 2008 ads for sky decks and pit nets, and a story on mandatory safety training for theatre students at a Canadian university proved that people were indeed listening.

A mention of the USITT contribution to the national AIDS quilt in 1992 was followed within two years by ads from three makeup companies, Mehron, Kryolan, and Ben Nye, for small individual single-show makeup kits, a now-necessary alternative to the communal makeup supply which was frequently used. A 2005 entry in the Tech Expo for wings for *Angels in America* attested to the ongoing legacy of the AIDS epidemic on the theatrical community.

In addition to health and safety, oppressive working hours, burnout and stress were addressed in articles

by Valerie Kaelin in 1982, Lucy Nowell in 1989, Don Stowell in 1990, and Richard Davis in 1994. A 1989 Fellows' Address on workloads by Willard Bellman which suggested that we might be doing it to ourselves appeared in the same issue as an ad for a university theatre department which was recruiting graduate technical assistants at a stipends of \$10,000 per year for a 35-production season.

For much of the twentieth century, women interested in theatrical design have been channeled into the costume field. Indeed, most of the members of the Costume Commission are female. From these ranks, USITT has gained some notable leaders, including Sarah Nash Gates, the first woman to head the organization (1992), Joy Emery, the first female to present a Fellows' Address (1991), immediate past president Sylvia Hillyard Pannell (2006), and Fellows Diane Berg, Whitney Blausen, Alexandra Bonds, Laura Crow, Debra Krajec and Zelma Weisfeld. Not to be forgotten are Leon Brauner, who served as president in 1998 and the late Don Stowell, the first Costume Commissioner. Costume designers and technicians have gone on to become chairs of academic departments, deans, and valued members of professional theatrical unions. But the spiritual mother of us all has to be design pioneer Millia Davenport, who told this story in a 1978 speech reprinted in *TD&T*: "Three men and I had worked ninety-six consecutive hours... The men passed out. I went up to collect. I was a living zombie, but it was clear that I would manage to swarm across the desk and kill Mr. Ziegfeld with a cut-glass presentation ashtray, if I did not get a check... You were supposed to work for Ziegfeld for the kudos...I managed to collect \$17,000...no one in the office would ever forget it."

One of the joys of membership in USITT is watching students grow into roles as theatre

professionals. In 1987, Tara Maginnis, a doctoral student at the University of Georgia, published an article on using nineteenth century stereographs for research in costume history. When transported to a much colder climate at the University of Fairbanks in Alaska, she wrote in 1994 about safely executing costume crafts at fifty degrees below. The sheer difficulty of travel in the frozen north caused her to embrace the new technology which allowed her to present her portfolio on-line (1996) and to create her own teaching Web site, www.costumes.org (2000), allowing her to interact with her far-flung students, regardless of where they were stranded for the winter. In 1988, Tan Xuixiang, a student at Utah State University, was listed as a first runner-up in the ACTF national college design competition. 2005 saw the publication of her article on magic Indian clothing and her first book, *Character Costume Figure Drawing*. In 2008, twenty years after her first mention in *TD&T*, she published her second book, which now contained her costume sketches bearing the coveted stamp of a union designer.

Because *TD&T* is a technology journal, all sorts of imaginative materials have been cited for use in creating the wonders of theatre. Some of these uses are far beyond the ones originally intended by the manufacturers. Thermoplastics first appeared in the journal in 1968, and wound up being used in corsets in 1993. Found objects proved to be favorite costume materials, with plastic laundry baskets morphing into Gothic headdresses, automobile car mats into combat armor, and the tops of recycled juice jugs turning into bosoms containing some rather unique storage space. Even clear plastic shrink wrap, first mentioned in 1977, found its way into see-through costumes for the characters in a 2002 production of *The Importance of Being Earnest*.

The machinery used to assist in theatrical endeavors has moved from the mechanical age into the electronic era. IBM Selectric typewriters (1974) and slide projectors (1979) were followed by microform archives of *TD&T* and makeup instruction on filmstrips (1985). Makeup training videos (1988) and Rosemary Ingham's *Pattern Development Video* (1990) gave way to makeup lessons on DVD's (2006). Research materials such as Joy Emery's *Commercial Pattern Archive* became available on CD-ROM's in 2007. A 1997 article on dressing performers for wireless microphones was superseded by developments out of UCLA in 2002 which foresaw the use of ultrasonic mics and tracking devices embedded in costumes which enabled performer-controlled light and sound, a development described by columnist Beeb Salzer as "The Body Electric." Plastic templates for drawing male and female figures (1985) were the primitive ancestors of Fractal Design Poser and Photoshop (1997). The use of conventional photography for makeup described in 1974 was followed by the use of a frame grabber for makeup design (1988). Digital cameras (1997) became tools for creating digital makeup sheets (2009). But the ultimate proof that everything old is new again came in reading a 1979 *TD&T* article on deriving precise measurements from scenic sketches and having Catherine Bradley explain in 2009 how to do exactly the same thing for costumes using her digital Costume Technical Sheets.

When the computer age arrived, it found a perfect partner in technical theatre. The first book on computers and the performing arts was mentioned in a review in *TD&T* in 1982. With amazing foresight, in 1983 Clairemarie Verheyen and Karen Ewick wrote a short piece expressing the need for computer programs for costume shop inventory and management. In fact, early computer programs were used for many practical purposes, such as calculating lumber and materials for scenic flats and for creating lighting plots, similar to the uses which the two women had envisioned. The early generation of computers such as the TRS-80 had a capacity of only 16K and were great for making lists and crunching numbers. In 1984 the first Apple Macintosh was on display at the USITT conference in Orlando. By 1985 the much-desired costume database program existed in the form of Wardrobe Master. 1987 brought CAD programs for lighting design. 1989 saw the



"The Art of Feltmaking: Producing Handmade Felt for Theatrical Application" at the 2000 USITT Conference & Stage Expo in Denver, one of the many professional development workshops sponsored by the Costume Commission over the years.

Millia Davenport, "the spiritual mother of us all."



advent of graphics tablets, scanners and plotters, Pattern Maker costume construction software, as well as a *TD&T* survey revealing that 78% of American theatres were using computers. 1994 saw an ad for Personal Pattern software. By 1997 USITT was offering a workshop in computer rendering, in 1999 there were sessions on computer costume rendering and digitizing portfolios, and in 2000 an article was published on costume resources on the World Wide Web. In 2002 there was a Costume Computer Software Consortium on the exhibit floor at the New Orleans conference. By 2004 digital portfolios were in regular use, and 2008 saw computer modeling being used to create virtual reconstructions of historic theatres.

Organizations, even professional technical ones, are more than the sum of their research publications, documented achievements, and production hardware. They are, as Sarah Nash Gates aptly described it, "an extended family." Having been a member of that family for a very long time, I will explain how I happen to be here and what that family meant to me at a very crucial point in my life.

I attended my first conference in 1983 in Corpus Christi, Texas because I wanted to hear Betty Edwards speak, because the conference was relatively close to my home in New Orleans, and because USITT offered member-priced registration to current ATA members. I have attended every USITT conference since then.

During that period, I have participated in Design Expo, Tech Expo, poster sessions, portfolio reviews, hosted a Costume Symposium, and was for five years an associate editor for the *Costume Research Journal*. In 1997 I became an associate editor for *TD&T* and in 1999 had

my first article published therein, only to discover that it was immediately followed by an article containing six topless photographs of Josephine Baker, a distinction unlikely to be matched by many writers for scholarly journals.

In August of 2005 I lost my home, job, studio, library, and portfolio of thirty years' work to Hurricane Katrina, retaining only my station wagon, husband, vital papers, laptop, and two cats. When I was finally able to access my e-mail, I found offers of help from around the country, half of them from members of USITT. *TD&T* editor David Rodger became my contact with the outside world, relaying messages to concerned colleagues including Randall Davidson, who offered pertinent advice on the risks of re-entering my flooded home.

My return to New Orleans found me residing in a 154 square foot travel trailer located in the middle of the parking lot of a local race track. It was a truly bizarre experience to watch

thoroughbreds zipping past my kitchen window as I edited an article for *TD&T* on design training in Odessa, Ukraine, but such tasks kept me sane for the two and a half years I found myself in such circumstances.

I am now back in my permanent home, and my new passion is planting trees to replace those which perished in the flood. To that end, I enrolled for training as a Tree Trooper, after which I received a baseball cap, a shovel with my name on it, and a diploma, of which I am as proud as any I have earned for my academic degrees. I look upon my role at *TD&T* as planting the next generation of Irene Coreys, Paul Reinhardtts, and Rosemary Inghams, and I hope that fifty years hence both the trees and the people will be deeply rooted and flourishing. ♦

Peggy Rosefeldt is a costume designer and independent scholar from New Orleans.



EDUCATION By William Kenyon

Much like several of the recalcitrant students I've had over the years, I've decided not to follow my assignment to the letter, and have gone and done my own thing. Here's the situation: as commissioners, we were assigned to write about the history of our commission. Now, I'm fairly certain there are less exciting topics than the history of educational pedagogy, but I'm hard-pressed to come up with an example right away.

I should pause here for a moment, and point out that I mean no disrespect to all those designers, technicians, and educators who formed our craft and are responsible for where we are today. There are many others, far more qualified than I, who have written wonderful pieces concerning our history elsewhere in this issue. In fact, it is because of the legions of theatre artisans who have gone before that we have such a vibrant and exciting career, and our duty to honor them may be discharged by ensuring the health of the performing arts through the education of our future generations. So, I will go forward here with the understanding that I'm flaunting George Santayana, who said, "Those who cannot learn from history are doomed to repeat it." Instead, I choose to follow George Bernard Shaw, who said, "We are made wise not by the recollection of our past, but by the responsibility for our future."

In this case, our responsibility to the future is the training of our students; a subject that I am passionate about. There have been many changes in our industry over the past fifty years, some subtle, some seismic, in their effect on training. I propose to examine the state of our educational system now, with an eye towards the challenges over the next fifty years. I'm not so vain as to think I can predict where our industry will be at that point, or what groundbreaking changes will happen, but I will try, with the input of many of

my colleagues, to suggest some strategies for dealing with the challenges of today and the future. It is my intention to include all theatre artisans in this charge, for even if you aren't a professor at a university, every one of us at some point will take on young apprentices, formal or informal. It's the way of our business, and that's one thing I don't see changing now or in the future. So invite you to read on, whether you are a teacher or not.

There are three broad categories that have emerged; The Influence of Technology on Design Training, Changes in Degree Structures and Training Pedagogy, and Teaching Life Skills. I am sure that this will spark many more discussions, and welcome the opportunity to talk further with anyone who is interested at the Education Commission Meetings in Kansas City.

The Influence of Technology on Design Training

Computers have become the single-most "game-changing" invention during the past fifty years, and their influence in various areas of our business and daily life is hard to ignore. From the use of computerized lighting consoles to CAD drafting, technology has invaded almost every part of theatre design & technology. Coupled with the explosion of the Internet in the 1990s, it's almost impossible to work in this business without a facility with technology. I graduated college in 1991, so I am a child of two eras. In college, we used rudimentary word processors, and the predecessor to Lightwright for paperwork. CAD drafting was in its infancy, and only the TD and grad students dealt with it. We did have computerized lighting consoles, but they were so unreliable that one of the main jobs of the Assistant Lighting Designer was to "track" the show by hand. This involved writing all the levels down by hand as the LD built and changed

cues, so that you had a paper record to use when (not if) the console lost its memory. I drafted every plate by hand, and became skilled in the arcane uses of the blue-line machine. All the photography I did involved toxic photo chemicals and long hours in the darkroom. In the sound lab, everything was stored on tape, and editing involved much practice with a razor blade and splice tape.

Now, we have several exceptionally advanced CAD programs, which include 3D visualization, we have a wide array of digital editors for sound, and it seems that everyone trusts the consoles enough that a file copy on a USB "jump" drive is sufficient data backup. Is life easier because of all these advances? From my perspective, yes and no. I mourn the loss of hand drafting in our curriculum, not because I'm stuck in the past (although I haven't yet seen a CAD plot with the subtle beauty of a well-done hand plate), but because the students are happy to let the computer do the heavy lifting, and don't think about layout any more.

I learned photography the expensive way, in that a failure during a photo-call was not something that would be discovered until a week later when the slides got developed, and the film and chemicals cost the same, whether the pictures were useable or not. Nowadays, with a digital camera, you know right away if the picture is ok, and it doesn't cost a thing until you know it's right and you go to print it. What has this resulted in? There is a less diligent approach to planning the shots. People just shoot a ton, and something useful is bound to turn up in the vast number of files generated at a typical photo-call now.

These things are all just skills, which may be learned, re-learned, forgotten, or replaced with new skills as needed. What is crucial is to

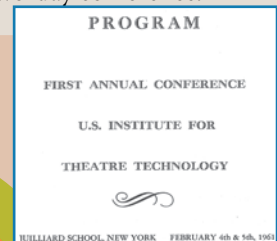
1947 Chuck Yeager breaks the sound barrier, Oct 14.



1950 Thyatron dimmer bank.



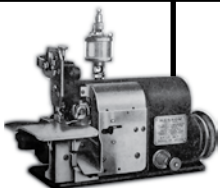
1961 First Annual USITT Conference, Juilliard School of Music, New York. Despite record-breaking snowstorm, 133 people participated in the two-day conference.



1960 USITT's official "birth date," on the certificate of incorporation papers, is October 19.

1960

1961 First manned space flight, April 12, by Yuri Gargarin (Russia).



1955 A Merrow machine.

1/1/1960 top tier ticket to *Gypsy* \$9.40.



1961-63 Thomas DeGaetani, first USITT President.

Education Commission members present their research in a "poster session" at the 2003 USITT Conference & Stage Expo in Minneapolis.



divine what is important about how we did things in the past and work to incorporate those lessons in our plan for teaching with today's technology. In these situations and others, young designers and technicians are called upon to think less and less about the end product. They may know more than I about web-site creation, HTML coding, and VectorWorks 3D modeling, but the content behind all the technology is often less engaging. We as theatre artisans need to encourage the next generation to put in the time and effort to really understand the subject matter of whatever they are working on, and commit to supporting those ideas. Turning on fifty lights in a fancy way, just because you have the technology to do so, is rarely as effective as turning on the right five or ten lights when an appropriate artistic choice has been made.

The other major influence that technology has exerted concerns the explosion of job types in our industry. Much concern was registered

early on that things like moving lights and computer control of lights, sound, scenery, and projections would take away vast numbers of jobs. On the contrary, the maintenance of all this technology has created quite a number of new job titles and categories. Thirty years ago, there wasn't a Moving Light Programmer, a Moving Light Technician, an Automation Technician, a Wireless Mic "Wrangler," and many other positions. This means that there are quite a number of new educational avenues for students to pursue. Many of the largest shows now also rely on Structural Engineers for the development of massive scenic elements and complicated fly systems. This also means additional classes need to be offered, there is more equipment to buy for your school, and potentially more staff and faculty are required to teach these new areas. Even now, very few colleges have independent Theatre Sound degrees, and even less have anything related to projections and multi-media content design. Many of my col-



1962 2nd Annual USITT Conference, New York City.



1962 President Kennedy sent a short letter to USITT saluting the celebration of World Theatre Day.

1964 USITT's second mailing address: Box 866, Radio City Station, New York, NY 10019

1961 USITT's first mailing address: Box 291, Cathedral Station, New York 25, NY.

1963 President John F. Kennedy assassinated in Dallas, TX, November 22.

1961 VELCRO, a "separable fastening device" receives U.S. patent.

1963 3rd Annual USITT Conference, New York City.

1961 First U.S. manned space flight, May 5, by Alan Shepard



1963 Opening day, May 7, of the original Guthrie Theatre in Minneapolis. All USITT members were mailed free season programs.

1963-1965 Joel E. Rubin USITT President.



leagues have felt that, aside from fancy lighting and sound boards, the fundamentals of theatrical design over the past fifty years could still be taught on a shoestring budget, but now that lighting, sound, rigging, staging, and projections have enjoyed such incredible advances, how do we raise the money to keep up with the technology? Even more importantly, how do we retain the core values of what we are teaching, so that the technology doesn't get in the way of the message?

Changes in Degree Structures and Training Pedagogy

NAST has made an effort to keep up with the changes in our fields, but we are soon to run out of room in a regular four-year BFA degree for all the classes required to give someone the well-rounded education we hope to provide. In the past twenty years, there have been many curricular additions, and the following classes are now either required or strongly suggested by several BFA curricula:

- CAD Drafting (in addition to or in place of hand drafting)
- Sound Design & Technology
- Photoshop & web-site creation
- Portfolios & Professional Practices (legal & financial concerns)
- Expanded offerings in design history.

Even the last one needs to be revised. Currently there is a requirement for history of fashion and of interiors, but the history of lighting, sound, technology, and multimedia bear inclusion and serious study. Yes, despite the impression you may have gotten from my Introduction, I am for *more* study of our history, not less. The challenge here is how do we fit it all in, and still get students out in the traditional four years?

These changes also affect the other types of degrees. For those students taking a BA, there are so many skills and support courses needed to be really successful, it's doubtful that they will be able to fit them into the smaller number of credits required. Either they have to skip the point of a BA, take a ton of extra theatre classes, and miss out on the larger set of offerings that a BA affords you, or they only get a mere taste of the detailed types of classes they will need to be successful in this business. For those students taking a two-year Associates degree, the same issues apply. If they are going to eventually transfer to a more traditional four-year school, they will generally be a year behind the rest of the students in the major classes, even if they transfer in with most of the General Education credits complete. Or, if they head out into the working world, they will have only had a taste of the extensive offerings of a four-year program. How do BA programs and two-year schools shift what they are doing in order for their graduates to remain competitive with those students coming out of four-year BFA programs?

The explosion of technology has also given rise to several new programs out there, where the focus is exclusively on the operation of the technology. Some of these are now loosely affiliated with nearby colleges, but the fact remains that the focus is on training operators, not designers. There are pros and cons here as well. On one hand, we do need people trained to a very high level on these new systems. Even though I consider myself a fair mechanic, I leave the oil changes on my wife's new Honda to the experts with the special tools. I also have a great respect for those who have devoted their careers to this aspect of the business, and recognize that there isn't enough time in my program to train students to that level

1964 USITT Special Citation given to Stanley McCandless on his retirement from teaching.



PRESENTATION OF AWARD TO PROF. STANLEY MCCANDLESS



1965 Ned A. Bowman, editor of *TD&T* from the first issue, Oct. 1965, until the Feb. 1970 issue.

1965 5th Annual USITT Conference, Indiana University, Bloomington, IN.

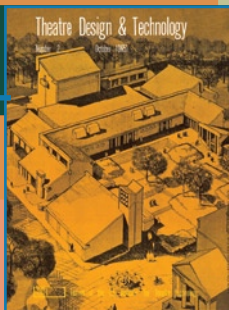
1965 President Johnson signs legislation establishing the National



Endowment for the Arts and the National Endowment for the Humanities.

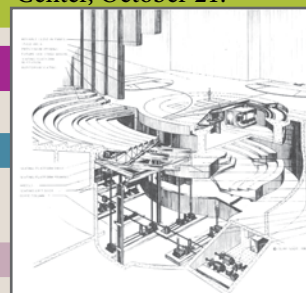
1964 4th Annual USITT Conference, New York City. Registration fee was \$5.00.

1965 Cover of issue no. 2 of *TD&T* (the first issue's cover no longer reproduces well).



1964 Opening day of the Dorothy Chandler Pavilion at Los Angeles Music Center, December 6.

1965 Vivian Beaumont Theatre opens in Lincoln Center, October 21.



1964 Opening day of 1964-1965 Worlds Fair, Flushing Meadows, Queens, New York, April 22.



1965-1968
Donald H. Swinney,
USITT President

of console proficiency. On the other hand, that's not the educational goal of my program, as I am training artisans first. Those students who only know how to push the various buttons will do very well for themselves, as those jobs are more and more critical, but they won't have the training to tell them when and why to push a particular button. There will always be a designer involved as well. To expand upon this, I don't just train designers; I train Master Electricians and Programmers too, but always with a background in the art as well as the tech. Many programs may find themselves re-tooling their curriculum to provide flexibility for students who don't want to be designers, but who want a well-rounded education in design training.

In the end, where is the best balance between technician and designer? Can you be a designer without any understanding of the technology? Can you be a technician without any understanding of the art? I think you have to have both, but where is the tipping point?

Where does high school training fit into the equation? Many lighting and sound designers got into the business because they were the "go-to" student who could get the systems working in high school. There seems to be a widening gap in experiences coming out of high school, with some programs having top of the line gear, and others still way behind the curve. I also challenge the industry to find ways to get the message across that there are many more careers in our field other than lights and sound. Across the board, it seems that about 80% of those students coming out of high school are interested in lights or sound. Costumes, make-up, scenery, props, rigging, and technical direction are woefully under-populated comparatively.

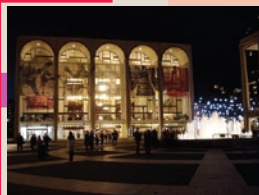
How do MFA programs fit into all this? Do they need to consider changing their approach? Many of the issues facing four-year BFA programs apply to MFA programs as well. Masters programs have long been the proving ground for young designers, but would it not also be valid to develop more Masters programs with a heavier emphasis on technology as well as art? (And yes, I recognize that Masters TD programs already do this.) How do MFA programs maintain their relevancy in today's world? I have BFA students graduate frequently with the intent on going back to get the MFA "in a few years... after I've paid off some of these loans," but I have yet to have any of these alums actually leave their paying gigs to do so. Not that I blame them!

There are over 1,400 schools claiming some type of undergraduate degree in production, and over 200 graduate programs in theatre out there. Many of my colleagues have been asking, is that too many? We have seen an explosion of growth in this area over the past thirty years. Most of my professors in college were some of the first to earn MFAs in their field, and there were many for whom MFAs didn't exist when they graduated from undergrad. Now, the MFA is required to teach on the college level, at least if you are to pursue a tenure-track position, and I hear many young graduates say they are getting the degree so that teaching will be an option for them later on. So instead of seeking advanced degrees for the additional training, exposure, and experience, some are seeking the MFA primarily for future career advancement. This isn't a bad thing, as long as the student doesn't pass up the wealth of educational experiences available to them, but it does seem to be coming up more than ever. We are in danger of becoming waterlogged with too many programs and too many educators.

1966 6th Annual USITT

Conference, University of Toronto.

1966 Opening night, Sept. 16, Metropolitan Opera House at Lincoln Center.



1967 7th Annual USITT Conference, New York City. Conference was titled, "Theatre Explosion: covering all phases of planning for the mushrooming numbers of performing arts facilities."

1968 *Man of La Mancha* opens on Broadway



1967 U.S. Patent issued to Glynn H. Lockwood for a "hot melt glue applicator."

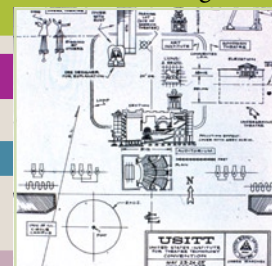
1967 First issue of *Theatre Crafts* magazine published in March.

1965 USITT's first office space, a room on the fifth floor of the ANTA building (now the Virginia Theatre building) at 245 West 52nd St., New York, NY 10019.

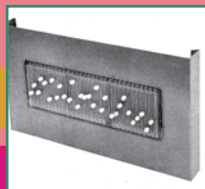
1968 New USITT logo first published in newsletter.



1968 8th Annual USITT Conference, Chicago, IL.



1966 New products featured in *TD&T* included an improved GE halogen lamp (750 watt T24) which used bromine rather than iodine gas and had a planar filament design.



1966 New products featured in *TD&T* included a preset card system by Ward Leonard which promised to provide an "infinite variation of sets of cues."



1968-1971 C. Ray Smith USITT President



(And again, I recognize that in this, I am part of the problem.)

One last change that is happening is the decline of tenure-track positions in academia. In some cases, this is a response to fiscal concerns, or an effort to avoid being saddled with “deadwood.” Many schools have created non-tenure faculty positions (sometimes called “Professor-of-Practice”), which allow for non-MFA hires. These have the added benefit of bringing in a regular stream of young, fresh, talented designers and technicians. The downside to this change is that the hire is regularly concerned with the security of their job, which does take a good bit of time away from the training of students. As long as departments retain a mix of tenure and non-tenure positions, there will be a strong through-line in the pedagogy of the program. If, and there are some out there, the program moves to a revolving door of hires, then the character of the program and its training is easily lost.

Teaching Life Skills

I’ve always approached education and training along the lines of apprentice & master, and spend as much time talking about my experiences as a freelance professional as I do about gel and lekos. To that end, I find myself talking about life skills more and more. There are several things that concern me with today’s students, well beyond the challenges of living on your own for the first time, the inevitable drinking binge, and the stormy waters of new relationships. Those are things we all dealt with too, and hopefully have some guidance to offer already. If not, I was amazed to discover how many services are available for students at most schools to deal with such things. I urge you to familiarize yourself with these *before*

you have a student in tears in your office!

In addition to these issues, I am concerned with the vastly larger number of distractions that vie for each student’s attention. When my parents went to school, the biggest luxury was to have a radio in your room, and occasionally go into town for pizza or burgers. Otherwise, it was study & socialize. When I went to college, I had a very early make of computer, a stereo, a TV, a VCR, and a phone in my dorm. We went out to eat regularly instead of the dorm food, and the priority was socialize, then study. Nowadays, in addition to all that, students are consuming unprecedented amounts of data being streamed to them through the Internet, instant messaging, smart-phones, and cable. They all have high-speed net hookups, Netflix accounts, iTunes accounts, Facebook & Twitter, personal websites, Xbox Live memberships, and a vast array of other media-heavy distractions. And yet, many of them are able to pay attention to five things at once, which serves them well in technical rehearsals. What amazes me is how they pay for it all. Most hold 1-2 part-time jobs in addition to a full load each semester, and are scheduled within an inch of their lives. Most are nervous about the volume of credit and student load debt, which focuses their choices for them; their choices are generally based on money, right now, as opposed to long-term investments in their careers. Again, I can’t blame them; what I want to know is how to help them. Nearly all of these things are essential to daily life nowadays, but are also vying for their attention, and their artistic training is shorted because of it.

I have also found that many students don’t have a sense of respect for themselves as artists. It’s hard to quantify, but I hear many students say, “that’s close enough,” or “whatever you want is fine by me.” I don’t



1969 9th Annual USITT

Conference, Los Angeles, CA. First time the conference is billed as the “USITT National Conference.”

1969 New York City Building Code, Article 8, Places of Assembly, published in the May-June 1969 issue of the USITT Newsletter. Members of USITT were very instrumental in rewriting this section of the Code.



1969 Jean Rosenthal (1912-1969), lighting designer, theatre consultant, founder of Theatre Production Services, and co-author of *The Magic of Light*, which was published posthumously.

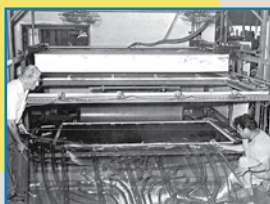
1970



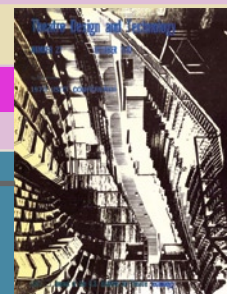
1970 10th Annual USITT Conference, New York. This conference celebrated USITT’s tenth anniversary.

7/20/1969 Apollo Moon Landing

1969 Large-scale vacuum-forming machine at the 20th Century Fox Prop and Miniature Shop used to make French cut glass windows for the movie, *Hello, Dolly!*



1970 First *TD&T* issue mainly devoted to articles on lighting and sound design (October).



know if there just isn't as much time left in the day, due to all the new outside factors, but students seem to give up a bit too easily, or take the path of least resistance/greatest expediency. Rarely do students challenge my opinion when I give notes at the tech table, and sometimes I feel it's because they just want to get it done and move on to the next thing, rather than have a meaningful (but time-consuming) discussion about why a certain choice was made. So, the question here is how to motivate students to have a passion for the work. I have many students who are passionate about what they do, and will be successful, but there is a growing percentage that doesn't seem as driven, nor are inspired by the efforts of their peers. I admit to having a softer heart than I should, as I know too much about all the other things tugging at them. Self-respect and passion should result in a far greater attention to detail than I'm seeing in most projects these days. Again, I am concerned that the technology makes it so easy to just toss off a drafting that looks "pretty good," and they will accept a level of graphic standard that I would never have accepted on a plot I had just painstakingly drafted by hand.

Conclusions

Through all of the noise, distraction, and additional layers that modern life burdens us with, we need to continue to focus on teaching the students that the play is the most important thing. In all other areas, I hope to lead by example, while examining my teaching to incorporate technology without bowing to it.

I feel that I have perhaps asked more questions than I have answered, and through the experience of writing this article, have re-examined many

of my thoughts and opinions on training. I hope that this serves to spark vibrant discussions amongst faculties and professionals across the industry. Also, please don't walk away from this feeling that I don't like my students; far from it! There are many positive, successful things going on here and elsewhere in theatre design training today, but I've focused on the concerns I have to make my points.

I welcome comments from all avenues, professional, academic, recent grads, or current student. Please email me at wkenyon@psu.edu. Perhaps, with enough response, I will be able to write a second article with more answers to these questions, or present a session at the conference in 2011. Personally, I am starting the "middle-years" of my career as an educator, and foresee several decades yet ahead of me.

We should all examine our educational views from time to time, to remain fresh and adapt to new trends, while honoring the achievements of all those who have gone before us. It is my hope as an educator to remain as in touch and relevant on the day I retire as the day I was first hired. ❖

Assoc. Professor William Kenyon is Head of the BEA Program in Design & Technology at Penn State University, and Co-Commissioner for Education for USITT.

Many thanks to my friends and colleagues who shared their opinions, including Jim Franklin, Donna Ruzika, Craig Wolf, John McKernon, Nick Gonsman, Travis Walker, Adam Mendelson, Dan Robinson, Eric Rouse, Jenny Kenyon, and Curtis Craig.

1970 First Earth Day celebrated on April 20th.

1970 First advertisements in *TD&T*, May 1970 issue. An ad for Gelatran was on the back cover.



1971 John F. Kennedy Center for the Performing Arts, Washington, DC, opening gala on September 8. (Construction photo featured on the back cover of *TD&T*, February 1968.)

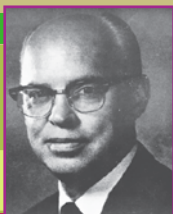
1970 Top ticket price for *Applause* is \$12.00



1972 12th Annual USITT Conference, San Francisco, CA

1971 11th Annual USITT Conference, Dallas, TX.

1972 First burglary of Democratic National Committee headquarters in the Watergate building, Washington, DC, on May 28.



1971-1972

Walter H. Walters
USITT President

1970 President Nixon signs legislation on December 29 creating the Occupational Safety and Health Administration (OSHA).



1972-1973 Ned A. Bowman
USITT President

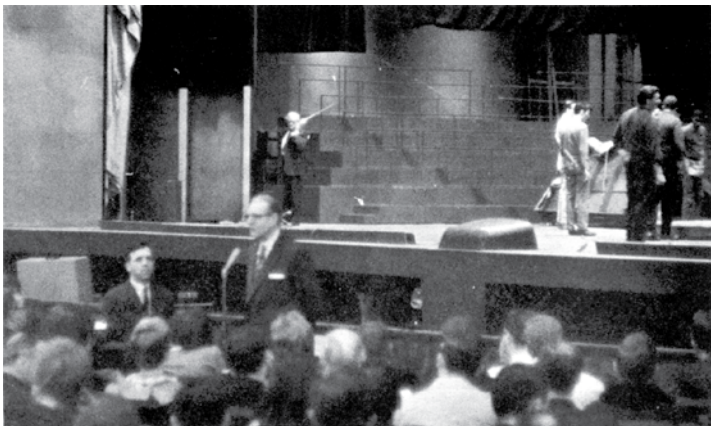




ENGINEERING By Jerry Gorrell

I was involved in theatrical production before there was a USITT and had a lot of theatrical experience before I even knew that the USITT existed. My first exposure to the institute was the 1968 USITT Conference in Chicago. I might never have learned about USITT, except that I worked for the Goodman Theatre at the time, my boss was Glen “Nick” Naselius, an early Fellow of the Institute (currently professor emeritus), and the Goodman was a conference sponsor. I feel honored and humbled to now be included in that elite group of Fellows with my mentor.

Prof. Fred Buerki addresses a USITT Engineering Commission on-site session at the 1968 USITT Conference on the winch system at the new Metropolitan Opera.



Younger designers and technicians now cut their teeth on USITT, attending conferences while in college, joining local sections, and being mentored by those who have been seeped in the institute.

Against this backdrop of my own story, my purpose is to discuss the history of the Engineering Commission, the standards program, and the impact of technology on our work.

I started doing theatre in junior high school, when I started working in children’s theatre in Evanston, Illinois. I don’t remember how or why, but I enjoyed it, despite the hard work, even then. Although many of you have similar stories, I want to share some of the highlights of my early activities, many of which antedate USITT.

I did little bit of this and a little bit of that, from building scenery to running shows. Mr. Duckworth, the Technical Director/Designer was a thorough teacher who taught me the basics of stagecraft. I learned it well.

1973-1975 Richard Arnold
USITT President



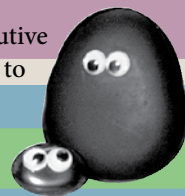
1974 Hank Aaron breaks
Babe Ruth's home run record.

1974
President Nixon
resigns, August 9.

1974 14th Annual USITT Conference, New York, NY.

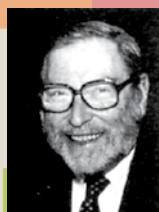


1975 Advertising executive
Gary Dahl gives birth to
the Pet Rock.



1975 USITT's second office space,
1501 Broadway, Rm. 1408, New
York, NY 10036.

1973 13th Annual USITT
Conference, St. Louis, MO.



1972 Tom Watson, editor
of *TD&T* from the October
1972 issue until the Winter
1977 issue. The cover
image of his first issue is
the Anita Tuvin Schlechter
Auditorium at Dickinson
College.





Lighting control console, c. 1968, at the Goodman Theatre in Chicago.

One thing I still remember from those days was the importance of a good pair of gloves because synthetic ropes were not yet used in the theatre, and the lights were hot.

The lights we used were never larger than six inches and maxed out at 500 watts. Most of the lights were Fresnels, some plano-convex lens types and a few ellipsoids (ellipsoids at about a \$100 each were horribly expensive. By the way, the ellipsoidal was invented by Joseph Levy and Edward Kook, institute members) and, of course, three color border

lights with PS type lamps. Cyscs were lit with 10" scoops and/or striplights.

The dimmer boards were mostly autotransformer (remember the Superior Electric autotransformer in the light blue case?) but resistance boards were still around. Experiments with other dimming and control technologies were happening just off stage.

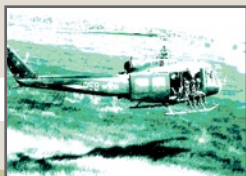
Throughout high school, I was the all around "stage guy" for the small stage at my church. However my main theatrical activity was as lighting designer and electrician for a troupe of actors which toured around the north part of Chicago and suburbs performing *A Sleep of Prisoners* and *Murder in the Cathedral* in church sanctuaries. Talk about learning rigging on-the-job.

At this point I left theatre activities behind me, or so I thought. I headed off to study mechanical engineering. At about this same time, the institute was being formed. After two and a half years realizing that my love for the theatre trumped mechanical engineering I changed my major and moved to a new school. I went back to theatre, earning a BFA in Technical Production and never left except for a couple of short lapses.

My experiences and the things I worked with define the state of the technical art for most of the theatrical world at the time USITT was formed.

Many things have changed relative to the products we now use on a regular basis. In lighting, we enjoy the increased efficiency of lamps, the most notable being the HPL introduced by ETC in 1992 with the Source Four ellipsoidal. Use of carbon rods in followspots has been replaced by the use of arc lamps. Various arc lamps are now used in a variety

ENGINEERING



1975 Last U.S. helicopter leaves Saigon, South Vietnam, April 30.

1975 **A CHORUS LINE** opens on Broadway, July 25. The Electronics Diversified LS-8, developed by Gordon Pearlman, was the first computer lighting console used on the Broadway.

1975 15th Annual USITT Conference, Anaheim, CA.



1975-1977
Edward F. Kook USITT President.



1975 USITT new officers elected in 1975.



1975 Publication in *TD&T* (Winter issue) of "Standards for Designer's Portfolios" by Lawrence L. Graham, endorsed by the Performing Arts Training and Education Commission.

1976 U.S. celebrates Bicentennial in the New York Harbor.



1976 16th Annual USITT Conference, New Orleans, LA.



of lighting fixtures. The fix, finish and ease of operation have undergone dramatic improvements.

When we rig trusses of various types, we have become concerned with sizes and strengths of our equipment. The use of equipment from other industries (chain hoists, for example) was creatively adapted. Some of this equipment is now designed and manufactured specifically for theatrical use. Nylatron and synthetic ropes are two examples of materials in existence for a while but new to the theatre.

The Engineering Commission is reported to be one of the original commissions of the institute. It is my opinion that the Commission was created early in the history of the institute because of the rapid changes in technology and equipment. During these periods of change, USITT and the Engineering Commission did not sit on the sidelines.

While the Engineering Commission was not directly involved in the development of new products, many of its members worked for the companies that were creating these new devices and experimenting with new materials and encouraging these companies and their designers and engineers to develop products to meet the increasing demands of the theatrical world.

The late 1950s and early 1960s mark the beginning of ever increasing change in theatrical equipment. The patent for the first SCR dimmer was filed by Kliegl/Macklem in 1958 and issued in 1960. The quartz Klieglight brought the tungsten-halogen lamp to the theatre. This light first appeared at the 1964 New York World's Fair. The Q-file computerized lighting console, originally designed for the BBC, was brought to the United States in 1970 by Kliegl. The Q-file was upgraded from discrete

DTL logic to IC's in 1973 and introduced in Las Vegas as the Q-file 2000 in the show room at the Tropicana. A second one was installed at the original MGM Grand Hotel.

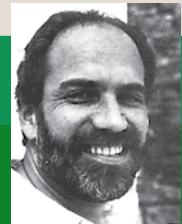
In 1974, Colortran introduced the first portable, trouvable modular control system and in 1975, introduced the first ellipsoidal specifically designed for axially mounted tungsten-halogen lamps. The Colortran fixtures used a joy-stick alignment of the lamp rather than screws and had a lens system that could be re-configured for different beam angles.

In the 1980s, a need to find methods to interconnect the diverse pieces of developing electronic, electrical, sound and lighting equipment was identified by the Engineering Commission members. The Commission members and others with the institute also identified and began to address an expanding need to ensure all this new equipment and existing equipment was used safely. The Engineering Commission used this identification of critical needs to begin its ongoing venture into the area of codes and standards. The first standards resulting from this expanding venture were the 1986 issues of *DMX512 Digital Data Transmission Standard for Dimmers and Controllers* and *AMX192 Analog Multiplex Data Transmission Standard for Dimmers and Controllers*.

The DMX512 standard was, in my opinion, one of the more significant developments in the control of theatrical lighting control. While initially resisted by some part of the lighting control industry, DMX512 has led to interoperability of various controls, dimmers, fixtures and other equipment. This standard has remained in place for almost thirty years. Even as development proceeded on its younger more advanced brother



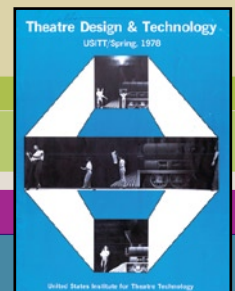
1978 18th Annual USITT Conference, Phoenix, AZ.



1978 Arnold Aronson and Kate Davy, co-editors of *TD&T* from the Spring 1978 issue until the Summer 1988 issue. The cover image of their first issue is scenes from Robert Wilson's *Einstein on the Beach*.

1977 17th Annual USITT Conference, Washington, DC.

1977 New USITT logo published in the newsletter.



1977-1980

Charles Williams
USITT President



1977 Elvis dies on August 16.



1979 50th anniversary of Thespian Society.

ACN (ANSI E1.17-2006, *Entertainment Technology – Multipurpose Network Control Protocol Suite*) which was issued in 2006, a need was felt to issue an update to DMX512 in 2004 and make it an American National Standard (ANSI E1.11). Last May *ANSI E1.31 – 2009 Entertainment Technology – Lightweight streaming protocol for transport of DMX512 using ACN* was approved, proving that DMX512 will be with us for the future.

It can be argued that without the creation of DMX512 and the resultant changes, the more advanced and flexible ACN would never have been created.

The Engineering Commission was not the only commission working on standards. In 1991, the Sound Commission issued MIDI Show Control, one part of the MIDI 1.0 Specification, currently known as MSC 1.1, extension of the original MSC 1.0 specification.

The Engineering Commission made its first foray into involvement with and participation in other code development groups in 1981, when a group of New York USITT members led by Steve Terry developed and submitted the first USITT proposals to the National Electrical Code. This was followed by a west coast effort in 1984 led by Mitch Hefter and ongoing work by Ken Vannice. As a result, USITT has voting representation to the electrical code panel responsible for the portions of the code affecting the entertainment industry. The institute now has representation on the places of Assembly Committee of NFPA 101 Life Safety Code and NFPA 80 Fire Doors and Windows and Other Opening Protectives. NFPA 80 covers, among other things, fire safety curtains.

In 1992, the institute created the Standards Committee to provide

the guidance and assistance needed for USITT to develop institute standards. A few years later, when the Entertainment Services and Technology Association (ESTA) created its standards program, the Standards Committee developed a close working relationship with the ESTA Technical Standards Program (TSP). The ESTA Technical Standards Manager is a member of the USITT Standards Committee and the USITT Standards Committee Chair is a member of the ESTA Technical Standards Committee (TSC). The TSC provides oversight and direction for the ESTA Technical Standards Program.

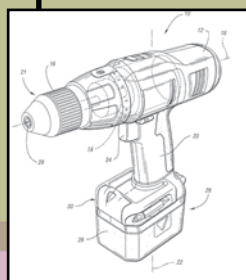
The institute has continued to work on its own projects such as *RP-1, Contact Function Assignments for Multi-Circuit Circular Pin Connectors Used for Distribution of Multiple Lighting Circuits*, issued in 1999; *USITT Guideline for a Standard Technical Information Package*, issued in 1996; *RP-2, Recommended Practice for Theatrical Lighting Design Graphics*, issued in 2006. *S3-1997, Standard for Stage Pin Connectors – USITT S3-1997* served as the basis for *ANSI E1.24-2006* which modifies, expands on, and supersedes this document. *USITT RP-3 Sound Graphics Recommended Practice* is being ratified as this article is being written.

A number of projects were moved from USITT to ESTA's program so that these standards could be implemented as American National Standards (ANSI) through the rigorous process involved.

Another project of the Engineering Commission was the creation of a standard for theatrical rigging. This project started in the late 1980s under the guidance of Jay Glerum. In the early 1990s, a guidance document on

ENGINEERING

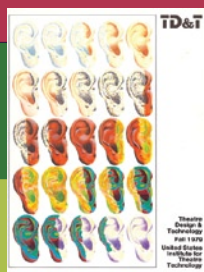
1978 Battery-operated drill patented by Skill Corp.



1979 19th Annual USITT Conference, Seattle, WA.

1979 USITT logo with comedy and tragedy masks disappears from masthead of newsletter.

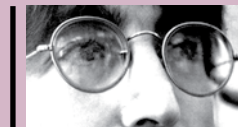
1979 First *TD&T* issue devoted to articles on sound design and technology.



1980 T. Richard Fitzgerald, sound designer and CEO of Sound Associates, receives Tony Award for the introduction of Infrared Listening Systems in Broadway theatres.



1980 John Lennon assassinated outside his home in the Dakota apartments in New York, December 8.

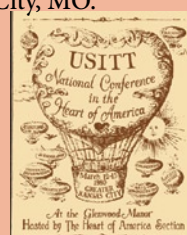


1980 Top ticket price for *Evita* is \$25.00

1980 20th Annual USITT Conference, Kansas City, MO.



1980-1982
Lee Watson USITT President



1980

stage rigging was published but much more was needed. Last summer, after nearly twenty years of work by USITT and ESTA, *ANSI E1.4 – 2009 Entertainment Technology - Manual Counterweight Rigging Systems* was approved. Approved at the same time, but not requiring nearly as long for development, was a companion document, *ANSI E1.22 – 2009 Entertainment Technology - Fire Safety Curtain Systems*.

Members of the Engineering Commission continue to work on standards and guidance documents within USITT and ESTA and wherever the need arises. The range of subjects is wide, including control protocols, rigging, electrical power and sound graphic standards, among others.

The Engineering Commission has long emphasized and focused on training. The electrical workshop program was first presented at the 1991 Boston conference and was next presented at the 2001 Long Beach conference. The workshop has been presented and continues to be presented at every LDI since 2001 and numerous USITT conferences, as the need for such training has increased as the technology has the need for basic knowledge continues to exist and the technology has become complex, coupled with the implementation and increasing importance of the ETCP program and need for certification. Jay Glerum's regular presentations at the conference on rigging and Ken Vannice's conference sessions on basic electricity are other examples of the Engineering Commission's focus on training.

The fifty years since the founding of USITT have been accompanied by huge changes in the underlying technology used in the entertainment

industry and the world at large. Hemp cordage has all but disappeared, replaced by stronger, more easily used synthetic products. Lamp technology has evolved from the incandescent lamp. LEDs are emerging as the light source of the future. Programmable and remotely controlled lighting fixtures and accessories perform tasks and effects not even dreamed of fifty years ago. Truss design and use has gone from sections of antenna towers laid on their side to the many types and strengths available today. Basic equipment such as ladders and lifts have gone through a evolution in these fifty years as technology improves.

The complete list of changes in materials, equipment and hardware over the last fifty years is extensive. We all can add to the list of specifics. The challenge for the Engineering Commission, as we move further into the twenty-first century, is to keep up with advancing technology and help the members of USITT to use new technology in a safe and effective manner. We also want to promote positive technological advancements and thereby help keep our industry at the forefront of the changes which will continue to occur, even more quickly and dramatically than before. ❖

***Jerry Gorrell** is a theatre safety program consultant, chair of the USITT Standards Committee, and a member of several national and international safety and standards committees*

ENGINEERING

1981 21st Annual

USITT Conference,
Cleveland, OH.



1981 Introduction of the first IBM personal computer.

1982 22nd Annual USITT Conference, Denver, CO.

1981 USITT's third office space, "located in a less 'carney' area of Times Square," 330 West 42nd Street, Rm. 1702, New York, NY 10036.



1982 The first release of AutoCAD demonstrated at COMDEX in Las Vegas.



1984 First Annual USITT Computer Symposium for the Performing Arts, held the day before the Orlando conference.

1984 First Macintosh computer introduced, January 24.

1981 The Vari-Lite system was first used in a Genesis concert in Barcelona, Spain.

1982-1984 Ronald Olson USITT President

1982 Past Presidents of USITT gathered at the 1982 conference in Denver: l to r, Ronald Olson, Richard Arnold, Lee Watson, Edward F. Kook, Charles Williams, Donald H. Swinney, Joel E. Rubin, and Ned A. Bowman.



1983 23rd Annual USITT Conference, Corpus Christi, TX





HEALTH & SAFETY

By David C. Glowacki

The health and safety of theatrical designers and technicians has been a core concern of USITT since its birth as a professional organization. As early as 1964 a committee was formed to work on theatre related portions of New York City's Building Code. Members of this committee included

C. Ray Smith, chair, Arthur Benline, Thomas DeGaetani, Donald Swinney, William Warfel, Joel Rubin, and Richard Thompson. In 1972 USITT organized into several commissions, one of which was the Codes Commissions with George T. Howard named as the first commissioner. Soon, however, the commission was renamed the Health & Safety Commission and under the leadership of Randall W. A. Davidson it continued to define safe work practices for our industry, write safety codes that would improve theatrical workplaces, and educate members so they would have the opportunity to grow old in this business. Dr. Davidson, widely recognized as Dr. Doom, was commissioner from 1973 until 1992.

The work of the Health & Safety Commission is usually done behind the scenes, supporting the efforts of designers, technicians, and performers, and helping to ensure that our patrons also have a safe experience. We work with other commissions to identify safety and health concerns specific to their specialties and then provide information and support to help resolve those issues. Our work isn't particularly glamorous. The new tools, colors, fabrics, gobos, and computer applications introduced each year in Stage Expo are aimed at the members of other commissions. But while health and safety issues can be rather dry (have you read the NFPA *Life Safety Code* lately?), the leadership of the commission has had some very colorful characters, including Randall "Dr. Doom" Davidson,

"Foggy" Bill Hektner, LaVahn "Big Top" Hoh, "California" Jim Cooper, and Nate "The Youngest Commissioner Ever" Otto.

The Occupational Safety and Health Act, created in 1970, says, "*Each employer shall furnish to each of their employees a place of employment that is free from recognized hazards that are causing or likely to cause serious physical harm to their employees.*" This simple statement didn't become law without years of effort by workers in nearly every industry in the U.S. who had concerns about their health and the safety of the tasks they were being asked to do. Unfortunately for many in our industry who are no longer with us, this simple directive was in direct opposition to the hallowed tradition, *the show must go on*.



1984 24th Annual USITT Conference, Orlando, FL.

1986 26th Annual USITT Conference, Oakland, CA



1986 First Tech Olympics; the overall team winners were University of Texas, Austin, and San Jose State University (tied).

Student Tech Olympics Held in Oakland

Winners of the events of the first Tech Olympics held during the '86 Conference in Oakland are as follows:

STUDENT CHAPTER TEAM RESULTS		
1. University of Texas at Austin	22 points	tie
1. San Jose State University	22 points	
2. University of South Florida	18 points	

BEST ALL-AROUND INDIVIDUALS

1. Theoria A. Tivol, California State University Sacramento
2. Lynne Orone, University of South Florida
3. Bart Simpson, University of Texas at Austin

A complete list of the first five individuals in each category is available from Paul Viera, Student Coordinator, MPO Box 221, Purchase, New York 10577.



1986 New USITT logo published in masthead of newsletter. This logo will remain in effect until 2009.



1986-1988

David Hale Hand USITT President

1984-1986

James R. Earle USITT President



1985 25th Annual USITT Conference, New York, NY.



1986 "DMX512 Digital Data Transmission Standard for Dimmers and Controllers" approved by USITT Board of Directors.

For the past forty years, the Health & Safety Commission has been working to reconcile the differences between the unstoppable force of the OSH Act and the unmovable object of this theatrical tradition. The primary effort was directed toward educating USITT members about new safety regulations and helping find solutions that would address hazards and satisfy OSHA officials without compromising the art that we work so hard to create and share. Other projects included efforts to educate OSHA officials about our peculiar little industry and collaborating with other commissions to develop and document safe working practices and to find safe alternatives for many products that were commonly used, such as aniline-based dyes and many types of spray-foam.

In many ways the work of the Health & Safety Commission was made more difficult by the early work of the fledgling government agency, as the majority of enforcement efforts during the first twenty-five years of OSHA's existence were focused on high-risk industries like construction, refining, and manufacturing. Many theatre folks interpreted this lack of OSHA attention as a tacit acknowledgement that our workplaces were somehow exempt from regulation, and that the show *could* go on, regardless of the risk or cost. As late as 1997, when I attended my first USITT Conference & Stage Expo, a widely held belief argued that not-for-profit organizations and educational programs and facilities were exempt from OSHA regulations. At the 2001 Annual Conference, Randall Davidson was invited to give the Fellows Address. In that speech he included an abbreviated listing of the hazards he had identified that are common in the entertainment industry. I have taken the liberty of editing his list in order to highlight those entries that I continue to see as frequent concerns in theatrical workplaces:

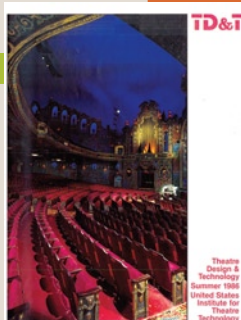


At the 1993 conference in Wichita, Rick Stephens, right, presents a plaque to Dr. Randall W. A. Davidson, naming him Commissioner Emeritus for his longstanding service to the Health & Safety Commission.

- Electric shock hazards from working near high power lines, especially at heights.
- Impact, crush, and fall injury hazards from the lack of training in safe rigging practices.
- Fire and burn hazards from lack of formal fire extinguisher training.
- Health and injury hazards due to exposure to hazardous chemicals.
- Injury and fire hazards from employing incompetent pyrotechnicians.
- Hazards from fatigue due to short-staffing, tight schedules, and extended hours.
- Slip, trip and fall hazards due to poor housekeeping practices.
- Shock hazards from electrical systems that do not comply with NEC regulations.
- Fire hazards from defective fire curtains.
- Health hazards from aerosol sprays.
- Ergonomic hazards from incorrect lifting and moving actions.



1986 Publication in *TD&T* of "Recommended Guidelines for Stage Rigging and Stage Machinery" edited by Paul J. Brady and Jay O. Glerum.



1987 First Annual USITT Technical Theatre Exhibit, aka Tech Expo.



1987 USITT wins the Golden Trigue Award at the 1987 Prague Quadrennial.



1986 Association for Theatre in Higher Education founded.

1987 27th Annual USITT Conference, Minneapolis, MN.



1987 ESTA was founded (then known as the Theatrical Dealers Association).



1986 The American Theatre Association files for bankruptcy just shy of its 50th anniversary.



1987 AIDS Memorial Quilt displayed for the first time on the National Mall in Washington, DC.

USITT Helps Raise \$53,000

Institute Participates in 1989 Broadway Cares Flea Market

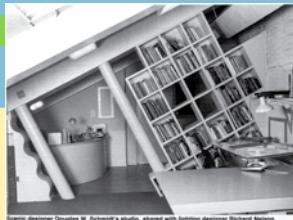
- Fire hazards resulting from illegally hanging items from sprinkler pipes and heads.
- Fall hazards from edges, steps and openings.
- Fire and burn hazards from using open burners and stoves in costume areas.
- Injury and health hazards from lack of appropriate Personal Protective Equipment (PPE).
- Health hazards from using and sharing old make-up.
- Physical injury hazards from the improper use of tools.
- Crushing hazards from moving or improperly-secured scenery and equipment.
- Multiple health, injury, and fire hazards from unsafe welding practices.
- Respiratory hazards from the lack of proper ventilation in production workspaces.
- Slip and fall hazards from improperly abraded step and walkway surfaces.
- Fire hazards due to improperly stored pyrotechnic materials.
- Injury hazards from the misuse of stage weaponry.
- Fall hazards due to the improper use of ladders and lifts.
- Improper application of NFPA-approved fire protection methods and procedures.
- Health hazards from blood borne pathogens when Universal Precautions are not followed.
- Fall hazards from improper construction and use of wire rope ladders.
- Injury hazards from improperly installed and maintained stage lighting equipment.
- Hazardous exposure to impact and sustained high decibel noise.
- Injury hazards from the lack of proper guards on power tools and equipment.
- Fire hazards from blocked access to fire hoses and extinguishers.
- Impact and crush hazards from using non-rated or defective rigging equipment.
- Health hazards from lack of proper training in CPR and first aid.
- Fall hazards from poorly constructed step units, platforms, handrails.
- Impact hazards due to platforms and scaffolds without proper toe and kick plates.
- Fire and burn hazards from using open flame on stage.
- Crush and fall hazards from poorly constructed scenery.
- Hazards from lack of proper crowd management and crowd control.
- Fall hazards for personnel who are required to work at heights.
- Electrical shock hazards from improperly wired equipment.
- Fire hazards from the lack of flame retardant treatment on scenery, props, and softgoods.
- Fall and crush hazards from using improper hanging points to rig.
- Lack of proper reporting and recording of accidents and near-accidents.
- Impact hazards due to lighting top hats and barn doors not being properly secured.
- Fall hazards from ladders and lifts being moved with personnel on them.
- Health and injury hazards due to improper safety training and supervision.



Designer Janet Campbell at the model table.



Costume designer Patricia Zipporri in her studio.



Scene designer Douglas W. Schmitt's studio, shared with lighting designer Richard Nelson.

The 1987 U.S. exhibit featured recreations of four rooms, simulating a California production designer's studio, a costume shop, a lighting designer's workspace, and a set designer's studio.

SPECIAL OFFER!! FOR USITT MEMBERS ONLY!!
Order Now and Get a Discount of 20%
On The NEW *Backstage Handbook*!!
Special Price: Only \$10.00 (regularly \$12.95)

1988 First Edition of the *Backstage Handbook* by Paul Carter with illustrations by George Chiang.

**BACKSTAGE
HANDBOOK**



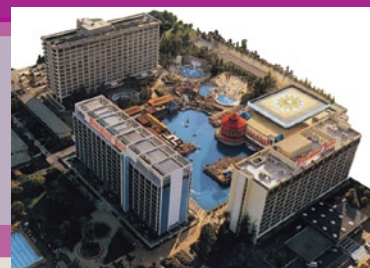
1988-1990 Richard M. Devin
USITT President

1988

Publication of *Directory of Software for Technical Theatre* edited by Patrick M. Finelli. Supplements were published in 1989, 1990, and 1991.



1988 28th Annual USITT Conference & Stage Expo, Anaheim, CA. With this conference, "Stage Expo" has equal billing in the name. Record attendance may be due to the conference being held at the family-friendly Disneyland Hotel.



- Fire hazards from lighting instruments being placed too close to curtains and drapes.
- Injury hazards from using damaged tools.
- Fall hazards from improperly installed fixed ladders.

As he was concluding his address, Dr. Davidson said, "We strongly urge those in authority or in any supervisory capacity to 'properly train for competency' those individuals and technicians who are under their care as employees, volunteers or students and who are subject to these hazardous exposures." This is the ongoing work of the Health & Safety Commission.

I am happy to report that much has changed even since 2001. The hazards listed above are still present, but there are many indications that a tangible shift towards a more safety-conscious theatre culture is underway. I have seen attendance at sessions presenting safety and health information steadily increasing, as have requests for our assistance throughout the year. Proactive efforts to work with OSHA have been initiated and pursued, with Consultation Service representatives frequently sharing their expertise and resources at USITT conferences, both regional and national. Another very positive change I have seen is the increasing inclusion of formal safety training in Theatre Technology programs at colleges and universities across the country.

In the past few years, USITT has recognized the need to further improve the health and safety resources available to its membership. A grant from the Commissioners' Fund allowed me to complete the necessary training to become an Authorized OSHA Outreach Instructor. Response to this initiative was so positive that discussions are underway to identify

another member willing to complete the training.

USITT is also pursuing the opportunity to join the OSHA Alliance program, whereby USITT would be recognized as a professional organization dedicated to improving the health and safety of this industry. Engaging in this program can bring a number of benefits to USITT, including the assistance of OSHA to develop and publish Best-Practice Guidelines, increased support from OSHA Consultation Service representatives at the Annual USITT Conference & Stage Expo as well as at Regional events, and (hopefully!) their assistance to develop a formal Entertainment Technician Safety Training program.

As was noted earlier, the work of the Health & Safety Commission is not glamorous, but it has its rewards. We are proud to have been an integral part of USITT for the past fifty years, and plan to continue serving and supporting the members of this great organization for the foreseeable future. Happy birthday, USITT! ♦

David C. Glowacki is the Production Manager for the Rozsa Center at Michigan Technological University in Houghton, Michigan. He serves as Vice Commissioner of Programming for the Health & Safety Commission of USITT, and as the Associate Editor of Health & Safety for TD&T. Prior to assuming his current position in the land of deep snow, Dave lived and worked in the Cleveland area and was active in the USITT-Ohio Valley Regional Section. In 2006 he completed USITT-sponsored training to become an OSHA Authorized Outreach Trainer

1988 Eric and Cecelia Fielding, co-editors of *TD&T* from the Fall 1988 issue until the Summer 1995 issue. The cover image of their first issue is a conceptual drawing for Cecil B. DeMille's film, *The Ten Commandments*.



1988 Publication of the revised edition of the "Internship Directory," edited by David Flemming and members of the Education Commission.

1989 Publication in *TD&T* (Winter issue) of "The Technical Director in Educational Theatre" by Willard F. Bellman, a USITT position paper establishing guidelines for evaluating the performance of a technical director for the purposes of retention, promotion, and tenure.



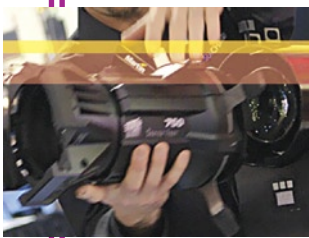
1989 Publication in *TD&T* (Spring issue) of "Job Satisfaction Among Technical Directors" by Dennis Dorn and Lisa Anne Schlenker Aitken.

1989 29th Annual USITT Conference & Stage Expo, Calgary, Canada.



1989 Publication of first issue of *Cutters' Research Journal*.

1990



LIGHTING DESIGN

by Richard Devin and Richard E. Dunham

Lighting design has been a major interest of USITT members from the early days of the institute as exemplified by an article in the first issue of *TD&T: Planning for Lighting Control Systems* by David Thayer (May 1965). For the first couple of decades, the USITT Technical Information Commission and the Engineering Commission included research and projects in lighting technology within their mission, but by 1980, the expanding and increasingly vocal interests of production and facility designers in lighting and sound demanded more in-depth attention. Randy Earle, who was then the Vice President for Commissions and Projects, contacted Charlie Richmond and Dick Devin with the idea that they form a subcommittee to the Scenography Commission for lighting and sound and explore the need and desirability within the membership to embrace an expanded focus on lighting and sound design issues, research, and communication. Members were asked to send us their ideas and questions and to register their interest in formally expanding the institute's activities and organization in these areas of focus. The response was impressive, though in the pre-e-mail era, it took a while for the notes and letters to dribble in. In 1981, a new Lighting and Sound Commission was formed with Charlie Richmond and Dick Devin as co-commissioners. (Jim Sales later served as co-commissioner of the combined lighting and sound commission.)

In August of 1984, President Randy Earle announced the formation of two separate commissions, the Sound Design Commission and the Lighting Design Commission. Charlie Richmond of Richmond Sound Design served as Sound Design Commissioner and William Warfel was the first commissioner of the new Lighting Design Commission.

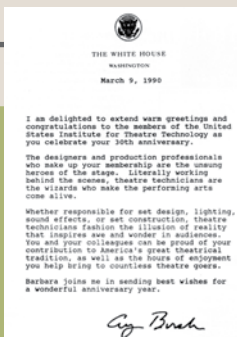
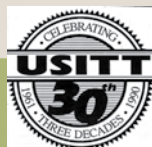
(For more information about the sound commission, see page 70.) Succeeding William Warfel were John Williams (1988), Cindy Limauro (1990), Craig Wolf (1993), Ellen Jones (1997), Rich Dunham (1998), Buddy Combs (2003), Anthony Phelps (2007), and Vickie Scott (2010). The Lighting Commission often had co-commissioners

LIGHTING DESIGN



1990 Nelson Mandela freed after twenty-seven years in prison in South Africa, February 11.

1990 President George H. W. Bush sends USITT letter extending best wishes on its thirtieth anniversary.



1990 Iraq invades Kuwait, August 2.

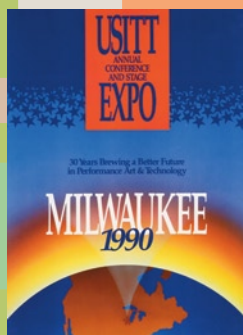
1990 Exhibit of the works of Russian designer, Kazimir Malevich, opens at the National Gallery of Art, Washington, DC. Lucy Kraus wrote about the exhibit in the Fall issue of *TD&T*.



1990 Top ticket price for *Miss Saigon* is \$100.



1990 Publication of first edition of "Practical Projects for Teaching Lighting Design, a Compendium." Second edition was published in 1992 and updated with corrections in 1999.



1990 USITT's fourth office space, 10 West 19th St., Ste. 5A, New York, NY 10011-4206



1990-1992

Donald C. Shulman USITT President

1990 30th Annual USITT Conference & Stage Expo, Milwaukee, MN. Introduction of "falling star" motif in conference graphics.

1994 Distinguished Lighting Designer.



to help share the load and to break in a new commissioner so that a smooth transition could occur in the leadership. In addition, a host of vice-commissioners have also helped lead specific interest areas of the commission over the years.

In January 1981, USITT sponsored the "Training of Lighting Designers" conference, held at Purdue University. This brain-child of President Lee Watson gathered twenty-three industry leaders from theatre, television, film, architectural, and interior lighting design and asked them to develop a consensus statement on how and why lighting designers

should be trained. The statement appears in a report on the T.O.L.D. conference in the Summer 1981 issue of *TD&T*.

Early projects of the Lighting and Sound Commission included a collaboration with the Education Commission to create the Graphic Standards Board, focusing on lighting design and sound design graphic standards, and joint efforts with the Education Commission and Scenography and Costume Commissions in the development of the first iteration of the "Theatre Design and Technology Promotion and Tenure Guidelines."

In 1993, the Lighting Commission began recognizing the accomplishments of outstanding lighting designers with the Distinguished

Lighting Designer Award. These awards were an opportunity to honor respected colleagues and to bring them to the Annual Conference & Stage Expo to speak and answer questions. (The Distinguished Achievement Awards, which had been adopted by other commissions, were recognized formally in 1998.) The recipient of the first Distinguished Lighting Designer Award was Abe Feder (1993), followed by Ken Billington (1994), Tharon Musser (1996), Imero Fiorentino (1997), Jennifer Tipton (1998), Richard Pilbrow (1999), Max Keller (2001), Beverly Emmons (2002), Allen Lee Hughes (2003), William M. Klages (2004), Luc Lafortune (2005), James L. Moody (2006), and Jules Fisher (2009).

Under Commissioner Cindy Limauro, the commission began a project to advance best practices in teaching lighting design. Spearheaded by Bruce Auerbach, the compendium project, as it was known, began with a national survey that solicited design projects from lighting educators across the country with the purpose of assembling a collection of proven exercises from which an instructor might draw while teaching lighting design. The first edition, titled "Practical Projects for Teaching Lighting Design, a Compendium" was published in 1990. A second edition followed in 1992, edited by Rich Dunham. This publication continues to be a best-selling title in USITT's on-line bookstore, as are similar teaching project compendiums by the Costume Design & Technology Commission and the Scene Design Commission that used this publication/project as a model.

Perhaps USITT's best-known publication, DMX512/1990 - Digital Data Transmission Standard for Dimmers and Controllers, documents

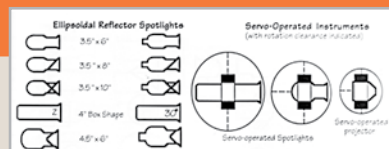
1991 31st Annual USITT Conference & Stage Expo, Boston, MA.



1991 Approval of MIDI 1.0 Recommended Practice RP-002.



1991 Publication in *TD&T* (Fall issue) of "Revised Standard Graphics Language of Lighting Design" edited by Patrick Gill. Significant changes include the addition of moving lights.



1991 Tim Kelly organizes the first "Art Auction," held at the USITT Conference & Stage Expo in Boston, MA.

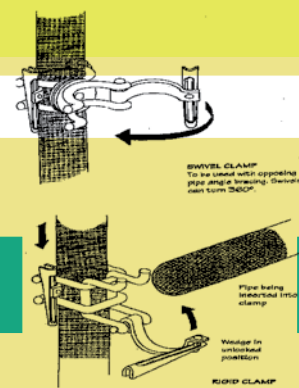


1991 "Mozart in America," the U.S. exhibit in the 1991 Prague Quadrennial, wins the "Gold Medal for the Special Theme." Several stagings of Mozart's operas were featured in the exhibit, including *The Magic Flute*, directed by Robert Wilson, who also co-designed the costumes with John Conklin (above).



1991 Publication of first "Technical Source Guide" in *Sightlines* (July/August 1991)

PIPE CLAMP EXAMPLES

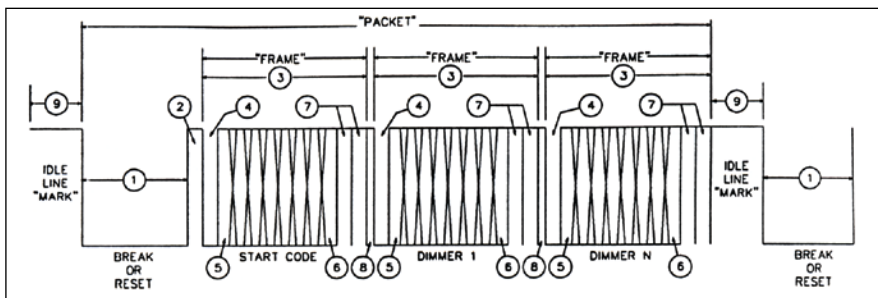


what has become the fundamental protocol for communications between lighting and other control systems. (See the Engineering Commission's article on page 50 for a history of DMX512's development.)

Two other important publications sponsored by the Lighting Commission are "USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics (2006)" and "USITT Lighting Design Commission Portfolio Guidelines for Designers." The lighting graphics standard, which is widely reprinted in textbooks, describes uniform symbols and drafting conventions for creating light plots and sections. Most lighting CAD applications and lighting templates incorporate the graphics in RP-2. The portfolio guidelines project was developed between 1993-98 with Ellen Jones writing the final draft.

One more project, "Lighting Job Descriptions Project" edited by Vicki Scott, is in final preparation for publication. Patterned after a similar document prepared by the Costume Commission in 1995, "Lighting Job Descriptions" outlines a series of job descriptions with their specific responsibilities and qualifications for positions within the lighting industry.

Of the myriad articles on lighting design published over the years in *TD&T* three early ones deserve rereading: in the December 1967 issue, Klaus Holm (Donald Oenslager's Broadway lighting associate) wrote, "Stage Lighting—the Broadway Practice"; in the Fall 1980 issue—this one a treat for both sound and lighting designers—"Sound-Controlled Reflected Light" by Jay Glerum and Mary-Beth Tallon is about a design



Timing diagram for data packets in DMX512/1990 standard.

solution for a water-reflected light image manipulated by sound; and in the Fall 1982 issue, Dr. Joel E. Rubin had some prescient predictions in his article, "Stage Lighting and the State of the Art in Twenty Years." ❖

Richard Devin is a lighting designer was until recently the producing artistic director of the Colorado Shakespeare Festival. He has served USITT in numerous leadership positions, including president from 1988 to 1990.

Richard E. Dunham is Head of Design Area at the University of Georgia, Athens, and has been designing lighting and scenery for over twenty-five years. He is an active member of USITT having served as a Lighting Design Commissioner from 1998 to 2006 as well as on the Board of Directors.

LIGHTING DSIGN

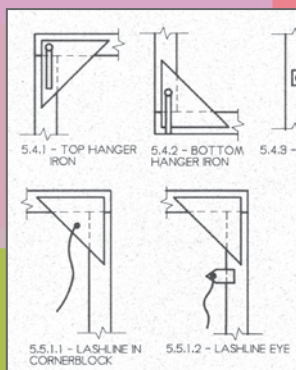


1992 Publication of *A Bibliographic and Supplier Listing for Scenic Modelers*, prepared and annotated by Elbin L. Cleveland.

1992 32nd Annual USITT Conference & Stage Expo, Seattle, WA.



1992-1994
Sarah Nash Gates
USITT President



1992 Publication in *TD&T* (Winter issue) of "Workloads for Theatre in Higher Education," by Willard F. Bellman

1992 Approval of "ASCII Text Representation for Lighting Console Data, Version 3.0"

1992 Publication in *TD&T* (Summer issue) of "Gender Bias in Technical Theatre" survey, conducted by the USITT Technical Production Commission. Figure 15 from the published article shows the dramatic difference in perceptions among men and women regarding equal treatment in advancement.

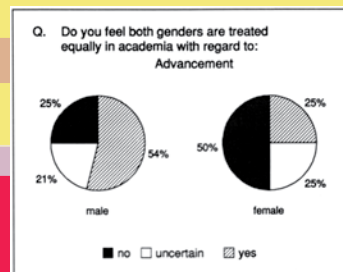


FIGURE 15



MANAGEMENT By Richard Peterson

Can you imagine? You are a stage manager for the newest musical in town. You have been working for four to five months on the production. The opportunity comes your way to be placed in a management position for the regional theatre facility operations department. You take it—more money, benefits, regular hours, to a point. Why not!

This is how many of us started as managers, directors, operations managers, you name it, a few years ago. USITT holding places in the areas of Costumes, Lighting, Scene Design etc. needed a management commission too. Where were these people heading into some management role going to learn more, adapt more quickly, become the best? So it begins.

This writer will “flash-back” to the early 1980s—far enough for those of us who were there, and discuss some of the ideas and concepts that have moved through the commission.

One of the early projects was the yearly pre-conference seminar with Bill Flynn and Larry Christenson discussing the many roles we play as managers. We talked about where we were, why we do what we do, when best to ask for promotion, more money, when to move on. Remember, yelling out, “Just DO IT!”? The sessions were somewhat limited for enrollment and we all tried to “take the class” year to year for at least two times some three or four times. From the pre-conference activities many of us plowed right into the sessions and roundtables. Remember the sessions discussing job titles? How many ways can you state Stage Manager,

Operations Manager, the list was extensive! Well that was us. Some leaders were generated, many followers, but the work of the commission was to represent management to the technical theatre world because so many of us became managers without knowing the inside story. How do we read an employee's abilities, or inabilities! How do we handle a stressful employee problem? How do we hire and fire people? All of these have been topics for discussion at the regional level and national conferences.

Many of us would look forward to the conferences to reacquaint with old friends, meet new ones and look for new ways to solve problems. Thing is, we soon found out we all have the same kind of issues—different names and faces, but the management issues are similar. This led to more diversification and some new avenues for the commission.

Management commission work is ongoing and deeper behind the scenes than the other commissions. Managers are working ahead, planning budgets, future dates for staff work projects, and coordinating multiple efforts from all the angles-bridging the gap between Board of Directors and staff needs. Searching through the current USITT Membership Directory

1993 Publication of *IATSE: One Hundred Years of Solidarity*, celebrating the union's centennial.



1993 33rd Annual USITT Conference & Stage Expo, Wichita, KS. President Sarah Nash Gates rides into the banquet in style.

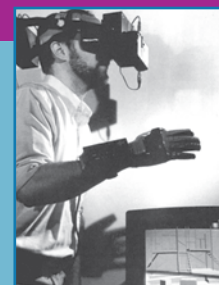


1994-1996
Richard W. Durst USITT President

1994 34th Annual USITT Conference & Stage Expo, Nashville, TN. Incoming president, Elvis, played by Dick Durst, brings the banquet to a thunderous close.



1993 Publication in *TD&T* of research at University of Kansas by Mark Reaney in virtual reality as a scenographic tool. Photo shows typical VR interface head-mounted display and power-glove which are connected to a Macintosh personal computer running Virtus Walkthrough software.



I see many names of management commission members in USITT's leadership ranks—members of the board of directors, vice presidents, and committee chairs. Amazing how the time has flashed by as I recall their expressing interest in joining the Management Commission not to many years ago. Funny how time presses on.

Elynmarie Kazle Zimmerman writes:

As a young professional and new board member of USITT in 1990, I was eager to see what I could really do to make a major contribution to the institute. After much thought, I wondered if there was a way to put stage management training to work to improve our conference operations. My initial idea was to pair student stage managers with professionals to manage the performance type events at conference to provide them with an experience and improve the event. Secondly, I wanted to provide students with the educational opportunity to work as a team with other stage managers and to provide an avenue for open dialogue with the pros. The third part I envisioned was University Affiliation; linking students in and out of strong university programs to improve stage management training.

Project chairs were used for the mentorees and supported the students with professionals during the first year. Steph Young was involved I believe that first year and one of the students was fortunate to stage manage the first (or one of the first) lighting demonstrations with Jennifer Tipton. Other mentors included Lori Rosencrantz from American Ballet Theatre and Stephen Brown from the Met. We also assisted that first year with Banquet, International Reception, Keynote and New Products Showcase.

In 92 the conference committee and I turned our attention to the New Products Showcase. With some imagination and the help of the student stage managers, the Seattle Committee and I turned it back into a show—and in 1996 Dick Durst and I took the stage together for the first time and NPS was back on the radar. In Wichita, Rick Stephens and the UT Austin Contingent joined us for the first of several years of mentoring along with Travis DeCastro (attending his first conference?) and the late Cindy Poulson. I believe Wichita was the first time I expended dollars to bring in professionals as there were not as many local contacts to draw upon as there had been in Seattle and Boston.

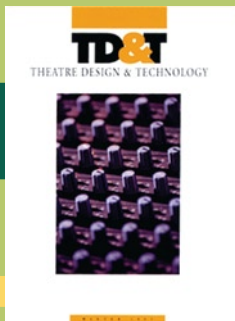
After Nashville it was time to turn the reins of the project over to another leader and by our 1996 conference in Austin, TX the transition was made to James Birder. He gave the project its own style and I believe coined the phrase SMMP. Along the way, with the help of Chris Kaiser, Leon Brauner, Dick Durst and others we were able to formalize the project, get into a regular application process. We encouraged the professional stage managers to begin contributing to the New Century Fund to support programs such as these each year. Following Birder was Rick Cunningham and Jack Feivou. From my point of view their biggest contribution was the development of the private roundtables and more one-on-one time with students and their professional mentors.

Now we begin a new era with Cameron Jackson. Leadership in USITT basically gives back what you put into it. If USITT was not the leader-in-training opportunity for theatrical professionals and volunteers, this nationally recognized program would not exist.

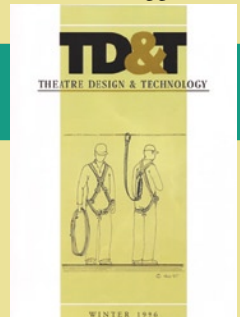
1995 Publication in *TD&T* (Spring issue) of "USITT Costume Design & Technology Commission Job Descriptions Project."



1995 David Rodger, editor, and N. Deborah Hazlett, art director, begin work on *TD&T* and *Sightlines*. Richard Durst is guest editor of the Fall 1995 issue of *TD&T*. The cover image of their first full issue (Winter 1996) is an illustration by Steve Nelson of riggers in fall protection gear.



1995 Gabriel Berry, a costume designer in the 1995 U.S. Prague Quadrennial Exhibit, holds her Silver Medal for Costumes. At right is one of her sketches for *Henry IV* at the New York Shakespeare Festival, 1991



1996 Rocky Paulson, co-author of "Fall Protection for Arena Shows" (Winter issue of *TD&T*) demonstrates fall protection hardware at Stage Expo.



1995 35th Annual USITT Conference & Stage Expo, Las Vegas, NV.



Another look from Carolyn Satter:

Over the past ten years with the Management Commission, I realized that we differ from other commissions in that we do not have a tangible product of our trade. No lights, sound cables, sets, costumes. What we offer to the production is our organization skills. The sharpening of these skills, the education of electronic techniques to enhance these skills, and the mentoring to the next generation has been the drive of Commission programming and projects. Mentoring opportunities for the rising stage managers are available at the annual conference. Currently being developed is a year around program for production managers, matching the aspiring with the professional. As theatrical experiences have exploded over the past decades, so has the opportunity to the student and the professional to branch out into non-traditional arenas. For the professional member of the commission, there is an abundance of networking, in a vast variety of theatrical management fields from theme park to opera, from corporate meetings to fund raising events. As the Commission looks to the future, emphasis is being placed on creating a curriculum guide for the Arts Management program, one of the emerging, vital, newbies for the twenty-first century.

The professional stage managers who participated in USITT's Stage Manager Mentoring Program during the 1998 USITT Conference & Stage Expo in Long Beach.

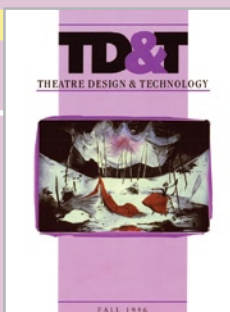


Now from David Grindle

Since joining the Management Commission in 2002 I've seen much change and positive direction from both the commission and the institute.

The Management commission serves a broad and diverse group of folks, from Front of House to Production Management and administration. We have sought to develop programming that appeal to entry level, mid-level, and upper level management. For example, our periodic leadership

1995 Approval of "Standard for Rigging and Stage Machinery Wire Rope Terminations," first published in *TD&T*, Spring 1996 issue.



1996 Publication in *TD&T* (Spring issue) of "USITT Guideline for a Standard Technical Information Package."

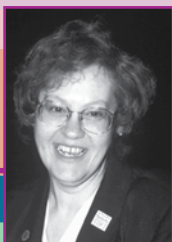
1997 7th Annual USITT Conference & Stage Expo, Pittsburgh, PA.

1997 Approval of "USITT Recommended Practice RP-1: Contact Function Assignment for Multi-Circuit Circular Connectors Used for the Distribution of Multiple Lighting Circuits," first published in *TD&T*, Winter 1999 issue.

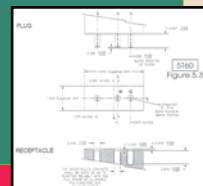
1997 United Scenic Artists (Local USA 829 of IATSE) celebrates its centennial.

1996-1998

Christine L. Kaiser
USITT President



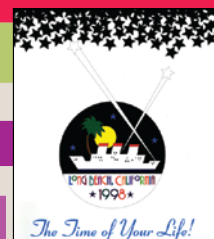
1997 Publication in *TD&T* (Fall issue) of "USITT S3-1997 Standard for Stage Pin Connectors."



1996 36th Annual USITT Conference & Stage Expo, Fort Worth, TX.



1996 USITT office moves from NYC to its fifth location, 6443 Ridings Rd. Rm 134, Syracuse NY 13206



1998 38th Annual USITT Conference & Stage Expo, Long Beach, CA.

1998 Publication in *TD&T* (Winter issue) of "USITT Lighting Design Commission Portfolio Guidelines for Designers."

workshops have helped managers assess their leadership styles and improve their communication. We've also tried to stay on top of trends in the industry offering conference sessions and workshops on managing coproductions, ticketing systems, and fundraising developments.

Recently we worked with NAST to develop BFA Stage Management degree standards, something that was missing from the NAST guidelines, but was a growing need across the country. Additionally, we partner with the production managers forum to offer resume and interviewing workshops to conference attendees. This partnership between academic and professional managers helps develop relationships for current theatre folks and the future, a founding principle of the institute.

Additionally, we work with other commissions to provide stage management for complex sessions at the conference. This allows our Stage Management Mentoring Students the opportunity to put their skills to practice in management people, places, and events.

In eight years I've gained relationships both professional and personal from my participation in USITT. I am most happy with all I've gotten from my work and look forward to many years of growth and learning.

Future thoughts from Jack Feviou

Not wanting to rest on our laurels of the past fifty years, at the Management Commission we are continually looking forward. As we look into the next decade we will continue with the diverse programming and the partnerships that have been formed and continue to grow with other commissions. As managers and leaders our greatest strength is working with

others as a multiplier, pulling the best ideas and programming from all of the commissions and presenting it in an entertaining and educational way. We will continue our Stage Management Mentoring Program and hope to add both a Production Manager and Arts Manager mentoring programs that would connect industry leaders throughout the year and during the conference we can share some of the learning and experiences these professionals acquire. I am looking forward to assuming the leadership of the Management Commission and building on its rich history within the organization.

A wrap up or stop the flash back sequence

A march through fifty years, we did not hit all of them, or list all the accomplishments, but important remarks by these members hopefully allowed you to remember some of the things Management has accomplished. Managers reflect and plan ahead as we have all mentioned one way or the other. Let's look ahead USITT and make the next fifty years ever improving, always the best, and the most fun of all for all of our audiences. ❖

Richard S. Peterson, CFE is Executive Director of the Todd Performing Arts Center at Chesapeake College, Wye Mills MD. He is a former Vice-Commissioner for Management Commission, presented at conferences, currently associate editor TD&T for Management.



1999 39th Annual USITT Conference & Stage Expo, Toronto, Canada.



2000 40th Annual USITT Conference & Stage Expo, Denver, CO. Well-wishers sponsored 40th anniversary cakes.



1999 Publication of "Projects for Teaching Costume Design and Technology, a Compendium."



1998

First LDI trade show, Dallas, TX.



1998-2000

Leon I. Brauner
USITT President

1999 The U.S. exhibit for the Prague Quadrennial was remounted at the conference in Denver 2000.

2000



2000-2002

William J. Byrnes
USITT President

2000 Approval of revised edition of "USITT Tenure and Promotions Guidelines," originally published in 1987.



SCENIC DESIGN Edited by Heidi Hoffer

The Scene Design Commission's goals are to "further interest in the areas of scene design, scenic painting and properties: providing information about innovations and trends within the field, and encouraging improvements in the teaching of design." There are opportunities for publications, special projects, symposia development, session and professional development workshops, new

media research, and portfolio reviews, to name a few.

Bob Schmidt, co-commissioner with Barry Batterson from 1988 to 1990.

The Scene Design Commission went through a major structural shift during my term as co-commissioner. We created the vice-commissioner leadership positions (there were many!) thereby allowing for more participation in the commission. In the September 1989 issue of *Sightlines* we reported the following would be our first vice-commissioners: Scene Design Heritage: Konrad Winters; Scene Design in Contemporary Arts: Gary M. English; Design Symposium: Chuck Erven; Scene Painting: Herb Camburn; Properties: Margaret A. Perry; and Scene Design Training and Education: Dick Block. This acceptance of leadership responsibilities allowed the conversation in the commission meetings to shift from what members thought the commission should do (third person), and place it more squarely on what the members would do (first person).

Steve Gilliam, co-commissioner with Dick Block from 1991-1996.

During my term we developed a stronger scene painting focus. At the 1993 Wichita USITT pre-conference session, led by Jason Phillips, Kim Williamson and Nadine Charlsen, we had a large space, water, good lighting, and a large crowd of folks who couldn't get enough painting pleasure. Out of this, we created the *Scene Painter's Newsletter*, which enjoyed a two-year run. At this same conference, Mann Brothers supplied some of the paint and got involved with the institute. Sculptural Arts Coatings which has been involved with USITT since 1991 also donated a palette of paint.

Another high point took place at the 1994 Nashville conference. It was a double session called "Alternatives to Watercolor Rendering" where Jason Phillips demonstrated techniques he had to develop to produce the

SCENIC DESIGN

2001 Publication of *New Theatre Words-World Edition*. Subsequent editions for northern and central European languages bring the total to twenty-four languages.

2001 41st Annual USITT

Conference & Stage Expo,
Long Beach, CA.



2003 43rd Annual
USITT Conference
& Stage Expo,
Minneapolis, MN,
with Sesame Street
characters courtesy
of Vee Corp.



2002-2004

Bruce Brockman
USITT President



2002 42nd Annual USITT
Conference & Stage Expo,
New Orleans, LA.



2003 The Walt Disney Concert Hall opens at
Los Angeles Music Center.



2004 44th Annual USITT
Conference & Stage Expo, Long
Beach, CA.



2004-2006

John S. Uthoff
USITT President



2004 A revised DMX512 is approved by ANSI as "ANSI E1.11 - Entertainment Technology - USITT DMX512-A - Asynchronous Serial Digital Data Transmission."

2003 The U.S. exhibit in the Prague Quadrennial won a Special Honorary Diploma for its "inclusivity and internationalism."

large number of renderings he had to produce each year while working for Greg Thompson Productions. In his session, he covered magic marker rendering, prismacolor pencil on black paper, prismacolor pencil on frosted acetate, textural rendering, multi-layer rendering using foam core, and multi-layer rendering using acetate. Then he gave a more thorough demonstration of prismacolor work and handily, since PRISMACOLOR is based in Nashville, he got them to donate a large number of pencils, so he spent some time with attendees actually working in the medium. It was pretty cool and the response was great.

Most importantly, at the 1995 Las Vegas conference we revived the Property Vice-Commissioner position. This was an enjoyably discussed and hugely successful addition. We all agreed that it seemed natural to separate props into its own category. Student employees often work in props, we needed solid leadership from people who professionally work in props, and the professionals needed a group of their own to refine and exchange ideas.

Kim Williamson, co-commissioner with Nadine Charlsen from 1996 to 2002.

As I look back on the Scene Design Commission's activities during the past ten to fifteen years I see remarkable people who stepped up to take on a task, initiate a new idea, or lead the commission into new challenges. This commitment to participate is what makes it all work.

Steve Gilliam and Dick Block breathed new life into the commission through their enthusiasm, their lack of fear in moving forward with great

"Trompe L'Oeil Scene Painting Made Simple," a professional development workshop at the 2003 conference in Minneapolis.



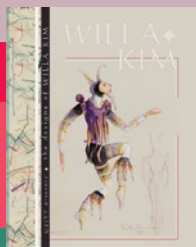
ideas inspired by their belief that one should "ask forgiveness, not permission," and by their abilities to engage others because *they* were so interested in what other people were doing.

Nadine and I are proud to have been part of activities such as Professional Development Workshops with outstanding theatre professionals the likes of Thurston James and Tim Saternow; the first Digital Design Exhibit by Kent Goetz and Peter Beudert; special guests at conferences such as Monona Rossol and Distinguished Achievement Award recipients Ming Cho Lee, Lester Polakov and Tony Walton; a highly entertaining session with Barbara Taylor, David Letterman's property master; and two special exhibits—"Designing Women" and the works of Chinese designers Xu-Zheng He and ShanFu Zhao.



2006 Announcement of first class of ETCPC Certified Riggers: 97 people certified in Arena Rigging, 111 people certified in Theatre Rigging (45 people hold both certifications).

2005 USITT Study Tour: Greece; led by Richard Durst.



2005 Publication of *The Designs of Willa Kim* by Bobbi Owen.



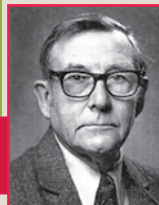
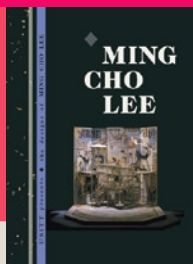
2006 46th Annual USITT Conference & Stage Expo, Louisville, KY, where Stage Expo opened with the traditional "call to post."



2005 45th Annual USITT Conference & Stage Expo, Toronto, Canada.



2006 Publication of *The Designs of Ming Cho Lee* by Delbert Unruh.

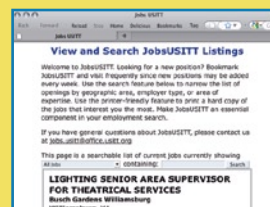


2007 W. Oren Parker (1912-2007), educator, designer, and author with Harvey Smith of *Scene Design and Stage Lighting*.

2006 Publication in *TD&T* (Summer 2006) of "USITT RP-2, Recommended Practice for Theatrical Lighting Design Graphics." This is the third revision of this recommended practice.

2006 Publication of "Practical Projects for Teaching Scene Design, a Compendium."

2006-2008 Sylvia Hillyard Pannell
USITT President



2006 USITT switches from classified ads in *Sightlines* to on-line service, "JobsUSITT."

Frank Ludwig, co-commissioner, 2008–present.

USITT turned twenty-five the year I joined. As near as I can figure it (being designer types our commission has always been bigger on ideas than record keeping) Robert Schmidt was the commissioner the year I joined and Gary English was the commissioner the next year when I attended my first conference. My first involvement in conference programming came at the Boston Conference in 1991 when I was one of two young designers who were selected by Dick Block and Steve Gilliam (successors to Mr. English and the first co-commissioners) for a public portfolio critique. I don't remember the names of the other designer in the critique, but I do remember what it felt like to have Ralph Funicello and John Conklin speak about my work in a room full of fellow designers and students. If I were any less young or ignorant at that time I would have been too terrified to have remembered as much as I did. The public critique was replaced the following year by the fabulously successful Young Designers Forum while the Portfolio Review Program continues as a valuable service to our student members.

Over the years I have assumed responsibility for various projects, starting with portfolio review coordinator. Now I suddenly find myself joining Karen Maness as co-commissioner. Everyone who has ever been involved in the Scene Design Commission has his or her own tale of introductions, handshakes, and offered opportunities.

Sometimes it seems like whether you do or don't get involved really boils down to who you bumped into and what you accidentally knocked out of his hand. But what keeps people involved are the opportunities: ongoing development of your own skills and sharing your talents and knowledge with your colleagues and with younger members.

A great deal has changed in our profession since USITT began, fifty years ago. Just look at what it was like twenty-five years ago when I got my first job as a scene designer—no computers, no cell phones, no Internet, and no large-format printers. We had to do research at the library using real books which we found using a card catalogue. I did not own a mechanical pencil but that was no real hardship because they were not allowed in drafting class anyway. Remember lead holders and lofting pencils? I still have a couple in my kit. In those days the only ways to network were on the job or at the Annual USITT Conference & Stage Expo. There was also no Facebook, no Theatre Face, no Yahoo groups and of course no YouTube. For all that has changed it is equally interesting to look at what has not changed. While there is a greater degree of specialization in our industry, the collaborative nature of our art has not changed. While the tools of the trade are very different, the fundamental process of design is the same. The material we work with has not really changed. A few months before USITT was founded you could have seen the opening night of *Bye Bye Birdie*. Today you can once again see a new production of *Bye Bye Birdie*.

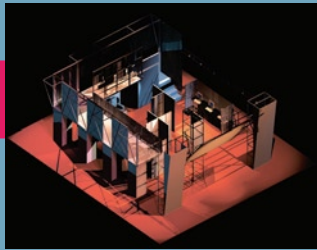
SCENIC DESIGN

2007 Announcement of first class of ETCP Certified Entertainment Electricians.

2007 USITT USA PQ 2007 exhibit, designed by Nic Ularu.



2007 USITT Study Tour: Balkan countries plus PQ, led by Richard Durst



2007 Samuel Scripps (1927-2007), noted philanthropist and generous supporter of USITT's international activities.



2007 George Izenour (1912-2007), professor, author, inventor, and authority in the fields of theatre design, engineering, and acoustics.

10/1/2007 USITT's sixth office location, 315 South Crouse Ave, Ste 200, Syracuse NY 13210.



2007 47th Annual USITT Conference & Stage Expo, Phoenix, AZ.



2007 Publication of *The Designs of Tharon Musser* by Delbert Unruh.



Karen Mannes, Co-Commissioner, 2007–present.

The Scene Design Commission, like most of the other commissions, is made up of people with many diverse interests. My initial attraction to the commission, over ten years ago, was because of the people like me who have a special interest in scenic art. Over the years, people like Mary Heilman, Susan Crabtree, Howard Jones, Lance Brockman, Rachel Keebler, Claire Dana, Jenny Knott, Bob Moody, Kamilla Harkless, Joan Newhouse, Diane Fargo, and Clare Rowe have given conference sessions in which they shared their expertise in materials, classical and contemporary painting techniques, pedagogical perspectives, and much more.

In addition to our regular conference sessions, Professional Development Workshops with master painters, sculptors, props artisans, and designers have become a regular avenues for our members to meet and learn from the experts in our field. Often, USITT corporate members like Rosco, Rosebrand, Limelight, Sculptural Arts, and Smooth-On have generously donate their products. Additionally, the Scene Design Commission has worked with the Health & Safety Commission to promote product safety and healthy work habits.

On a lighter note, one of my favorite USITT memories is the tour of the National Ballet production space and paint shop during the 2005 conference in Toronto. The tour was fantastic and we saw some beautiful Santo Loquasto drops being painted, but the really fun part was the transportation. Realizing that we only had a few people signed up, I booked a

van—a Karaoke van. It was priceless. With speakers blaring, we sang our way across snowy Toronto.

Looking to the future, the Scene Design Commission has begun a relationship with “5D,” an organization that promotes the cross-pollination of design practitioners and technology to redefine the concept of design as a whole. We have programmed and will present our first in a series of sessions on the topic of Immersive Design this spring in Kansas City. To support this new and important focus we have created a new leadership position to oversee the area of Immersive Design and act as a liaison to our fellow commissions.

Finally, a wonderful statement by Michael Devine speaks to the spirit the Scene Design Commission and the institute as a whole: “We’ve grown up with USITT as a part of our professional landscape, whether it has been as a resource, an organization that has provided opportunities to students (who might later have assisted us), a forum to communicate ideas to our colleagues, or to provide a center for the education and advancement of the disparate members of our tribe. The core of USITT is a legacy of passing along hard won knowledge to new members of our craft. Passing on the knowledge and passion which is at the center of our profession.”

Heidi Hoffer is resident designer and professor at Oklahoma State University. She serves as Vice-Commissioner of Publications for the Scene Design Commission, and is an associate editor of TD&T.

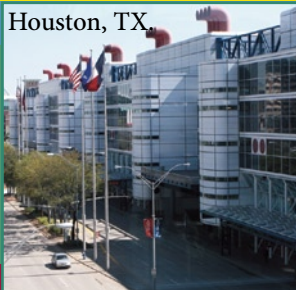
2008 48th Annual USITT Conference & Stage Expo,

Houston, TX.



2008-2010

Carl Lefko USITT President

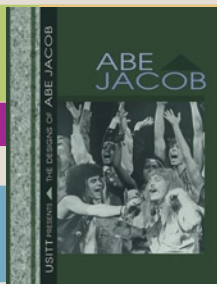


2009 Ursula Belden (1947-2009)

scenic designer, teacher, and leader in many USITT activities, especially international.

2008 First Tony Award given to a sound designer. First costume and scenic designer awards were in 1947; first lighting design award was in 1970; from 1948 to 1963 a Tony Award was given to the best stage technician.

2008 Jennifer Tipton named a new MacArthur Fellow.



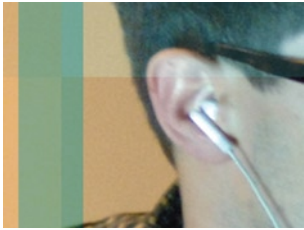
2008 Publication of *The Designs of Abe Jacob* by Richard K. Thomas



2008 Golden Pen Award goes to George Tsypin *Opera Factory: Building in the Black Void.*

SOUND DESIGN

By Dave Tosti-Lane



Scanning the wonderful Bellman Archives of *TD&T*, looking for the first article about sound, I was pleased to discover “Professional Sound Facilities in the Theatre” in the second issue, October 1965. I was even more delighted to find author Gary W. Gaiser, the Director of Stage Lighting and Sound at Indiana University, using the term “sound designer” in almost the same way we do today long before the earliest official designation we know of on a professional show in the U.S.

“The present availability of flexible electronic control of sound for theatre production allows the director to specify not only the necessary high fidelity sound effects the play demands but also a sound environment consistent with any style of directing. The resources of such an audio envelope permit the sound designer to interrelate prelude, entre-act, and postlude music with explicit and implicit sound effects specified by the playwright and the style of the production.”

It is significant that Gaiser did not say “system designer,” he said *sound* designer, and if there was room to misinterpret what he meant, one needed only read a little further:

“As part of the theatre’s ensemble of tools, [sound] should join other production arts in a compatible and aesthetically satisfying revelation, definition, and orientation of the environment and action. Once this composition is achieved, the entire design should be focused to reinforce the dramatic atmosphere of the production and yet not be obtrusive as an independent agent or force. Finally, the time-art demands of the theatre must be recognized...”

My excitement was tempered as I continued to work through the archive and the collection of *Sightlines* issues made available to me for research. Certainly, people were talking about sound but there was no push at the time to create a sound commission. To be fair, there really wasn’t yet a solid commission structure in any area, the institute was still going about discovering what it wanted to be (an endeavor that arguably never really ends).

Between this first sound article in 1965 and Lee Watson’s announcement of the formation of the Lighting & Sound Commission in 1981, I found no fewer than twenty-three articles in *TD&T* about sound. So our perception today that sound has only recently been “discovered” as one of the arts of theater is perhaps a bit suspect. Most of these early articles were focused on the technology of sound, but that was about to change dramatically.

The Fall 1979 issue of *TD&T*, the first “big sound issue” (with the first appearance of the human ear as cover model—in fact twenty-five of them in multi-color glory) included articles prepared by the Audio and Acoustics sub-commission of the USITT Engineering Commission, up to now the organizational unit of USITT involved with sound. Mostly focused on acoustics

2009 49th Annual
USITT Conference
& Stage Expo,
Cincinnati, OH.



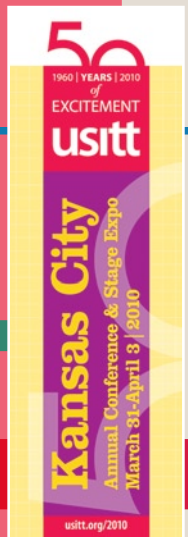
2009 Tharon Musser
(1925-2009), lighting
designer of over 150
Broadway shows and
winner of three
Tony Awards.



2009 New USITT logo published in *Sightlines*.
Logo was unveiled for the first time in March
during the conference in Cincinnati.

usitt

2010 50th
Annual USITT
Conference &
Stage Expo,
Kansas City, MO.



2009 “ANSI E1.31 - 2009 Entertainment Technology – Lightweight streaming protocol for transport of DMX512 using ACN” is approved by ANSI.



2009 Publication
of *The Designs
of Jules Fisher* by
Delbert Uhrh.



2009 Golden Pen
Award goes to
*Dressed: A Century of
Hollywood Costume
Design* by Deborah
Nadoolman Landis.



2010-2012
Joe Aldridge
USITT President

in the theatre, articles were included by Harold Burris-Meyer and Vincent Mallory, R. Laurence Kirkegaard, Russell Johnson, L. Gerald Marshall, and a young man named Charlie Richmond, who contributed an article entitled *A Practical Theatrical Sound Console* describing his work in developing low cost consoles that were actually designed for use in a theater, and tested “in battle.”

When Charlie Richmond began to intersect with USITT, he found himself frequently bumping into another fellow who seemed to be just as intensely focused on sound in theatre, Dr. John Bracewell. These two men would become key participants in the genesis of the USITT Sound Commission. I asked them how they met and how they got involved in USITT as part of a 2003 *TDE&T* article:

“John Bracewell: I first heard about [USITT] around 1964 from Charlie Reimer who was technical director at Florida State then. I went to my first conference in Los Angeles in 1969, if I remember correctly. Didn’t make the next few conferences, then went to the conference in San Francisco in 1972, where I first encountered Charlie. I got involved with Performing Arts Training and Education Commission (precursor of Education Commission) there, and I got more deeply involved shortly thereafter as P.A.T.E. Vice Commissioner, then Commissioner.

“Charlie Richmond: The first time we met was in San Francisco in 1972. I displayed a prototype matrix console made from a Uher Mix-5 and two Advent graphic equalizers (just being used as a matrix of sliders) at their fledgling ‘trade show’ at San Francisco State College. Because this venue was so far away from the meetings, I actually only met one person that I recall—John Bracewell.

“I also displayed our Model 816 at the Anaheim USITT conference in ’75 or ’76 and bumped into the sound designer Shawn Murphy, who was working at Disneyland. I worked under Shawn at ACT in 1970 until he left and I took over his job. Again, at USITT in Seattle in ’79, I displayed a prototype computerized sound system (made with an Ithaca Theatre Lighting console) as well as our regular Model 816Q. Again, I bumped into John Bracewell and Bob Scales and was invited back by ACT (who got the USITT ‘Company of the Year’ award) to design *Romeo and Juliet* on the new 816Q they just bought for the Geary.”

Flash forward to April 1981; USITT President Lee Watson writes:

“USITT owes a ticker-tape parade to Vice President Randy Earle for his long and successful stewardship of the Commission structure. *During the past year he has responded to a felt need and added a new Lighting & Sound Design Commission.*” (italics added)

Charlie Richmond was named the Co-Commissioner for Sound, and Richard Devin the acting Co-Commissioner for Lighting (Devin was simultaneously being “kicked-up” to Vice President for Commissions).

In the September 1981 Newsletter, Richmond stated the purpose of the new joint commission as follows:

“The Lighting and Sound Design Commission provides a forum for research and discussion in the less graphic, ephemeral design elements. The Commission serves the needs of design personnel in projects dealing with aesthetics and processes of design for theatre, television, architecture, and film.”

Devin wrote in the October 1982 USITT Newsletter:

“We continue to work toward identifying areas that the Lighting and



Memories of USITT’s next fifty years—
friendships, places, discoveries—begin today.

Sound Design Commission should attack in solving problems and establishing better communication in the profession, especially in areas related to design process and aesthetics. If you have ideas for needs/solutions or work you would like to do, please contact us."

The dual Lighting and Sound commission continued for several years. Appearing the same year in the next sound-focus *TD&T* (Winter, 1981, V17 #4) John Bracewell's pivotal article *Sound as a Design Art* is the first that explicitly and definitively sets forth the argument that sound is a design art, worthy of taking its place at the design table with scenic, costume, and lighting. In this sound issue, only this one article referred to the design of *sound*, the remaining six articles were focused on sound technology, or sound system design and installation. Still, this was an impressive collection of articles for a single issue, and it highlighted the growing recognition of sound in the theatre. Fall of 1982; a new Associate Editor for Sound, Rollins Brook, appears on the masthead of *TD&T*. In Spring 1983, Brook begins a regular column on sound.

Looking at the conference schedule for Corpus Christi in 1983, it is evident that the sound contingent of the Lighting and Sound Commission was hard at work. There are seven sessions listed with sound focus, even though one might have to make a difficult choice on Thursday night at 7:30 between attending the session in Room 26 "Ambiophonics of Sound Systems" and the session next door in Room 27 "Divorce, Burnouts and Heart Attacks."

By 1984, it had become clear that both Lighting and Sound were important areas of focus in their own right. In the Fall, 1984 Newsletter, V.P. for Commissions Dick Devin announced:

"The Board of Directors approved the dissolution of the Lighting and Sound Design Commission and the formation of two distinct Commissions with separate Commissioners and budget lines. The new Lighting Design Commission and the Sound Design Commission will focus on issues that deal with both design and technology that are appropriate to their interests. The Commissioners are: Sound Design Commissioner, Charlie Richmond; Lighting Design Commissioner, William Warfel."

Fall 1987; another pivotal individual in the history of the Sound Commission surfaces in print when Richard (Rick) Thomas writes an article for *TD&T* (Fall, 1987, V23 #3), about the issue of union representation for sound designers. The discussion of efforts to gain representation similar to our visual artist colleagues would go on for many years—in fact, it would wait for the onset of the twenty-first century to finally be resolved. According to his recollections recorded in a fascinating video made for the USITT Living History Project, Rick became involved with USITT at the suggestion of Lee Watson and Van Phillips. In 1979 at the Seattle convention, Rick participated in a panel with Harold Burris-Meyer on the topic of "What Is Sound Design." Over the next thirty years, Thomas would chair at least one session in all but three USITT national conferences.

With the Winter 1987 *TD&T* issue, Charlie Richmond took over as Associate Editor for Sound, and began to write the Sound column. In the Summer 1987 issue, Richmond's article "Theatre Sound Leads Film Sound?" poses a fascinating question about the similarities and differences of film and theatre sound designers, and the functions of sound score design and reinforcement design, marking the return in print fully six years after Bracewell's 1981 article, of the discussion of sound as a design art rather than primarily a technical craft.

In 1988, the success of Richmond Sound Design Ltd. as providers of the first functional computerized audio control system was consuming increasingly much of Charlie's time, so he made the difficult decision to step down as Commissioner of Sound, passing the baton to Dr. John Bracewell. Richmond continued to serve USITT as a Director at Large of the Board, and continued to serve as the associate editor for sound for *TD&T*. In Spring and Fall of 1988 he wrote a pair of articles, entitled "A Sound Future," on the nature of the machine/designer interface which explored the way that computers pass information to the designer, and the ways that the designer or technician can use the computer to control the sound system.

In the Winter 1988 *TD&T*, Rick Thomas, now a Vice Commissioner of the Sound Commission returns to print with the first article to appear in *TD&T* that confronts the issue of copyright with regard to sound in the theatre. This thorough article, written more than twenty years ago, describes a conundrum that is still very current. The commission will return to this issue several times in the ensuing years, and in fact will return to it again from a slightly different angle with a session at the 2010 conference.

In the Spring 1989 issue, another name that will return at the 2010 conference appears when U.K. sound designer and recordist John Leonard pens "Money for Nothing," the firmly tongue-in-cheek sure fire guide to success for the young designer-to-be, or perhaps that should be "wanna-be." (John will be the Sound Commission International Sound Artist, sharing his work and wit in our opening session, Wednesday, March 31 at 1:30 pm.)

Charlie Richmond's Spring 1990 article "Theatre Networking Through MIDI" continued his efforts to chronicle developments in the technology of control systems for performance. He describes several systems that were using MIDI to control sound playback using Richmond Command Cue software. The article reports on the work under way with the MIDI Manufacturers Association to "create a truly useful MIDI communication standard for the theatre environment." (This work was performed largely on the USITT Callboard MIDI Forum, and culminated in the adoption of the MSC (MIDI Show Control) standard by the MIDI Manufacturer's Association (MMA) and the Japan MIDI Standards Committee (JMSC) in 1991.)

This was followed in the Winter 1991 issue with another Richmond article that would create something of a stir. In "Automated Redundancy (Through Redundant Automation)," he begins the article on what seems like a frightening note: "It was inevitable. In the theatre, as in many other industries, technology is threatening to put people out of work. Those threatened are the ones we work with and rely upon: our colleagues and friends—and ourselves. Why did I imagine that live theatre and performance art would always be immune to this threat?"

But this was clearly an opening ploy, as he developed the story of how show control technology would reshape the industry he went on to point out: "Even with memory lighting systems, computerized rigging controls and programmable sound, the complement of stagehands required to run a typical show has not radically altered. Most theatres have one person for each of those systems, just as they did for the manual systems which preceded them."

Hindsight reveals that he was largely correct in his predictions for the way that technology would change many aspects of running shows, and that he was also correct that the move to computer control would increase rather than reduce the number of people working on a typical show. Not surprisingly (as Richmond predicted in the article), there was

an immediate stormy response from at least one reader, and even stronger response from attendees of sessions in the Boston 1991 conference where Charlie attempted to explain the system. Over the course of several future articles, Richmond would try to “cure the apoplexy” of the responders with cogent explanations of how control systems would really work. But the topic remained a hot button for many years to come. Richmond would return to it with numerous articles in *TD&T* appearing from Winter 1992 through the Summer of 1993. While he was repeatedly accused of advocating rigid computer control of technical aspects, most often the thrust of Charlie’s articles was about the necessity for *maintaining* and *enabling* human control—again and again he made the point that there are places in the interface where there is no substitute for a live (alert) human being!

In 1991, Rick Thomas became Co-Commissioner with John Bracewell, and in 1992 Bracewell stepped down and Thomas became the Commissioner.

At this point in the story, it seems important to make note of the service Charlie Richmond and John Bracewell performed for this community of sound artists through their long and exhaustive efforts to build the USITT Sound Commission into a viable entity. Beginning long before the Lighting and Sound Commission was formed, their involvement would span more than two decades, and would build the solid foundation on which the current work of the commission depends. Reading their early articles reveals that both were uncannily perceptive about the future of the industry, and both were willing to expend enormous energy to get us there. On second thought, that would be *here*.

The Winter 1995, *TD&T* once again devoted the bulk of its article space to sound. “The Dramatic Auditory Space” by Rick Thomas and Ken Bell, opens with: “This article presents concepts developed regarding sound control and placement, and the relationship of the auditory space surrounding the audience and the dramatic production. Its purpose is to assist in the development of the ‘spatial’ repertoire of the sound score designer. ...the sound score designer needs to develop the ability to work with sound in the theatre in three dimensions from both a technical and aesthetic perspective. We will explore the basics of space in sound score design, with attention to various acoustic decisions, and will demonstrate how various effects and moods can be created.”

This important article emphasized that in the work of the sound designer the aesthetic and technical blend together, though to many observers only the technical craft is immediately obvious. Other articles in this same issue covered using computers to create sound cue sheets, sound scores in sequencers, and speaker plots prepared with CAD.

By 1995, considerable momentum had gathered in the sound commission. A group had come together that would remain active until the present day. Conference sessions were expanding to the point that USITT would eventually limit the number of sessions an individual commission would be allowed to present.

Rick Thomas continued as commissioner from 1992 through July 1996 when Martin Gwinup would join him as co-commissioner through July of 1998. Also in 1996, the Sound Commission welcomed an international Sound Design guest, one David E. Smith, recently arrived from the UK. (David became a member of the Sound Commission, and would subsequently chair sessions in every annual convention until 2007.) In 1998, Tom Mardikes took on the leadership of the Sound Commission, serving as Commissioner through July 2000.

The Harold Burris-Meyer Distinguished Career in Sound award was established by USITT in 1999. The first award went to Abe Jacob, known as “the godfather of Broadway sound” (Abe would later receive the USITT Award at the 2008 conference in Houston, and is the subject of the monograph *The Designs of Abe Jacob*, written by Rick Thomas and available through USITT publications). The next two Harold Burris-Meyer awards would go to Charlie Richmond in 2000, and John Bracewell in 2001, who both, like Burris-Meyer himself had been honored as Fellows of the Institute. Subsequent recipients of the Burris-Meyer award would include Tony Meola in 2002, Dan Dugan in 2003, Jonathan Deans in 2005, Don & Carolyn Davis in 2006, David Collison in 2007, John & Helen Meyer in 2008 and Jack Mann in 2009.

In July 2000, Mike Hooker assumed the mantle of Sound Commissioner. Meanwhile, Rick Thomas was busy pursuing his passion for recognition of sound as a design art by making his presence known in OISTAT meetings. He was named Vice Commissioner for International Liaison, and by 2000, he had nearly single-handedly succeeded in moving OISTAT to create the Sound Design Working Group. This international connection was bi-directional, involving many of the USITT Sound Commission members in activities abroad, and connecting us to international sound artists who became a regular part of sound commission programming each year. Since that time, the Sound Commission has given the International Sound Artist guest pride of place as the first session held each year. Those international artists often became “hooked” on USITT, and many of them would return in subsequent years to participate in the conference.

Together, the USITT Sound Commission and the OISTAT Sound Working Group began talking about something extraordinary: the first-ever international gathering of sound designers. The Royal National Theater and the Central School of Speech and Drama in London, UK offered to make their facilities available, and the event was held in the summer of 2002. Reporting on the event, this author wrote in the Summer 2002 *TD&T* article *Sounds Like a First*:

“A Colloquium on Theatre Sound Design, the first such meeting of international sound designers ever to occur, was attended by more than forty sound designers from sixteen countries. [On the trip to London,] Rick Thomas noted ‘This is a truly unique gathering, focusing on the dramaturgy rather than the technology of sound design, and it is an important step in raising the prominence of sound design within the industry, in academia, and with audiences.’”

Connections made during this breakthrough event led to collaborations and interchanges that resonated in the commission and the institute for years to come. The newly formed OISTAT Sound Working Group met during the colloquium to plan activities for the 2003 Prague Quadrennial, which would be the first to include specific focus on both sound and lighting design as legitimate disciplines within the scenographic arts. The October 2003 issue of *Sightlines* reported on OISTAT meetings held during the 2003 Prague Quadrennial the sound working group’s activities were detailed:

“The Sound Working Group expressed enthusiasm for the efforts to include sound at the 2003 PQ. The group’s activities included nine presentations for the Scenofest Stage, the first International Theatre Sound Score and Music Composition Exhibition, sound design for the Costume Working Group’s Fashion Show, and design and installation of the sound system for all the Scenofest Mainstage events.”

The OISTAT Sound Working Group would continue to work closely

with the USITT Sound Commission in ensuing years, participating in the 2005 World Stage Design Exposition in Toronto, the 2007 Prague Quadrennial, and the 2009 World Stage Design Exposition in Seoul. This collaboration is ongoing with preparations under way for the 2011 PQ.

In 2004, David E. Smith became the Sound Commissioner; in 2006 David also joined the Commissions Steering Committee. In 2006, William Liotta was named Co-Commissioner with David, and in 2007 Smith stepped down and Jonathan Darling became Co-Commissioner with Liotta. Inevitably, this article has left out more than it has included in sketching the history of this very active commission. Space precludes going into detail for more recent years, but one look at the exciting programming for the 2010 conference listed on the USITT website suggests that far from resting on laurels, the commission is moving forward at a brisk pace. We hope to have you join us for the exciting ride to come in the next fifty years. ❖

Professor Dave Tosti-Lane is Chair of the Performance Production Department and Sound Design Area Head at Cornish College of the Arts in Seattle. He serves as Vice Commissioner for Programming for the Sound Commission, and Associate Editor for Sound Design for *TD&T*.

A LIFELONG LOVE/HATE AFFAIR by Charlie Richmond

My life has been interwoven with USITT for many years, starting in 1972 when I exhibited a prototype programmable theatrical sound control system on a table at San

Francisco State College in conjunction with the Conference that year. This generated a small amount of interest amongst a few sound people but it primarily allowed me to meet for the first time Dr. John Bracewell, who had just begun to teach technical theatre at Whittier College. This began many years of lively correspondence in which he continued to encourage me to develop my ideas for such systems and to promote them to the theatre world. The system I showed had been custom built for the American Conservatory Theatre's performance space in the Marine's Memorial Theatre, in which I worked as an operator and assistant designer. It also began a lifelong friendship with Dr. John which now continues after his retirement from Ithaca College.

This encouragement made me start Richmond Sound Design Ltd. which then produced a range of commercial theatre sound control consoles that we marketed over the next fourteen years and which evolved into computer controlled sound systems. One of our early customers was Purdue University who installed one of our Model 816Q consoles into their Experimental Theatre and I was invited in 1976 to commission this installation in conjunction with a conference on advanced theatrical lighting and sound control systems which was organized by Van Phillips and his newly hired instructor Richard K Thomas (for whom I would write a recommendation for tenure many years later) and included about a dozen of USITT's most significant luminaries of the time. Being a very junior member of the group, my presentation was eminently forgettable although it did foreshadow the computerization efforts which we turned into a commercial product less than ten years later.

Meeting all these impressive individuals so intimately involved with USITT resulted in being invited to demonstrate a prototype computer

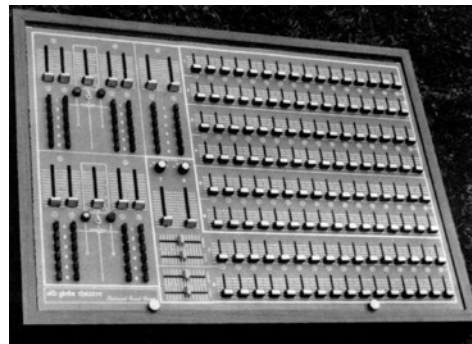
controlled sound system at the University of Washington in conjunction with the Seattle conference in 1979, at the invitation of Dick Devin. This was also the last year I actually designed a show (*Romeo and Juliet* for ACT in San Francisco—my fifty-fifth professional design, and the last, mainly because my rates had risen too high for this industry). This was done on the Model 816Q which was installed at ACT the same year. The discussions in Seattle focused heavily on the fact that many people thought USITT should have a lighting and sound design commission since there was so much more intense interest in these areas at that time so Dick Devin and I resolved to push it forward.

Sometime in 1980 this effort began and in 1981 there was born a Lighting & Sound Design Commission which was headed up by Dick and myself as co-commissioners but I was actually unprepared to attend the 1981 conference and was unable to make the very first commission meeting. I did make the one in 1982 in Denver and it was a reasonable success, adding a substantial number of sound designers and sound students to the commission rolls. In fact, my recollection is that for the next few years, more sound programming was created by this new commission than lighting and it was decided in 1984 to split the commissions into two separate entities in order to allow more conference programming.

RSD introduced our Command/Cue computerized sound system at the 1986 conference and even greater interest in these systems and sound in the theatre ensued. In fact, by 1988 I was accused of running the sound design commission as a private fiefdom for my own benefit only (with of course absolutely no substance) so I resigned and Dr. Bracewell took over for a couple of years. I joined the USITT board of directors in 1989 and began four years of conflict with some directors over the role of the commercial exhibitors. I thought the institute was too focused on the educational community and needed to direct more attention to members who were out in the "real world" making and selling new products. In the meantime, Rick Thomas became the sound design commissioner and some of the best sessions ever done were sponsored.

In 1987 I assumed the role of Sound Design editor of *TD&T* and because of the almost total absence of submissions (and extremely poor quality of the few that were submitted) basically used the magazine as a forum for my own views and beliefs on theatre sound design, much to the chagrin of the editors. After I had run dry, I turned my attention to show control and started a MIDI forum on USITT's Callboard network, which used the resources of the early internet to allow people around the world to communicate.

I and about two dozen others, mainly lighting manufacturers spent January through September of 1990 developing a show control standard which was presented to the MIDI Manufacturers Association in January, ratified by them and the Japan MIDI Standards Committee by June and



Richmond Sound Design's Model 816 (8 inputs and 16 outputs) Theatrical Sound Console for small- and medium-sized theatres.

published in July, 1991. I believe this was the first international standard that was completely created without the members having a single physical meeting because it was all done virtually. Sadly, it was done under the auspices of USITT but it is rarely acknowledged by the institute.

I presented the newly ratified show control standard at the USITT conference in Boston (1991) and also made a special presentation to the Stage Managers Association. The stage managers apparently didn't appreciate the benefit of controlling complex cues through MCS because many of them reacted as though I was trying to take their jobs away. Elymarie Kazle, a board member who was active in the Management Commission, tried valiantly to defuse the situation but it seemed hopeless to me. I continued promoting show control to USITT for a short time as *TD&T*'s associate editor for show control (1995-1996) and wrote a couple of articles about MSC but ceased being a member shortly afterward.

The 1993 conference in Wichita was a real low point in my participation in USITT activities. The Sound Commission sponsored a special sound room where virtually every sound manufacturer of any importance displayed their equipment. Most of the arrangements were made by an outside sound consultant who failed to contact my company, RSD. We had a booth

in Stage Expo, as we had done for several years, but no presence in the special sound exhibit at all. Ironically, I heard that some of the sound experts who spoke at the event recommended RSD equipment and software. After being shut out or ignored like that, RSD never exhibited at Stage Expo again, nor did I significantly participate in the annual USITT conferences.

I did come back in 1995 to Las Vegas to accept being made a Fellow of the institute, which was much appreciated and again in 2000 to Denver where I received an achievement award and attended a few sound design sessions, but the nicest aspect of these was the opportunity to get together with so many great old friends with whom I had worked in the '70s and '80s and helped try to build the foundations on which the USITT has now been laid.

And now I find us living in parallel lives, wishing I had much more to do with USITT and willing to do so but finding every year that I really don't even though my love is and has always been first and foremost for the theatre and live performance and always will be.

Thanks!
Charlie



Two of the seven cash award recipients in the 1995 Tech Expo, Richard Donnelly (left) and Loren Schreiber (right) with Tech Expo Committee chair, Ben Sammler (center).



As I look back over the history of the Technical Production Commission, there is one accomplishment of which every leader and member is most proud. I am, of course, referring to the Tech Expo. It is an event that continues to contribute to the entire USITT membership every two years with an always interesting, if sometimes bizarre, exhibition of a collection of ingenious solutions, techniques, or new products which address some technical theatre problem. Due to its egalitarian and eclectic nature, it features exhibits from any and all commissions. But I'm getting ahead of myself. First a little history of the Technical Production Commission, its origin, and the events which led to the creation of the Tech Expo.

A Committee or a Commission?

In the early days of the institute, the various interest or discipline divisions were designated as standing committees. By September of 1968, the list of standing committees included: Theatre Presentation, Theatre Architecture,

TECHNICAL PRODUCTION

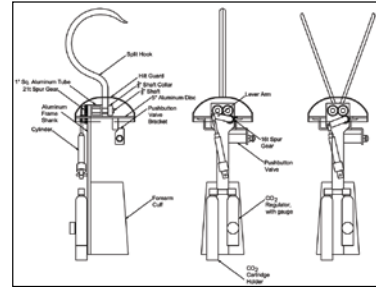
By Bill Browning

Assignment: write a retrospective which focuses on some aspect related to the Technical Production Commission for the USITT 50th Anniversary issue of

TD&T. Hmm...? How about looking at the things we regularly use today, but that didn't exist fifty years ago? Let's see, there's computers, ...and the Internet, ...and ...and Velcro! Well, maybe, maybe not. I'm guessing computers and the Internet will be well covered by others and I suspect the Costume Commission will have Velcro pinned down. Perhaps a straight forward look at the origin, extraordinary accomplishments, and very impressive leadership of the Technical Production Commission would be a better tack to take. Better still, I'll focus on one of the Commission's most significant accomplishments, one that is considered by many to be its "crown jewel."

Theatre Engineering, Theatre Administration, Publication, Research, Membership, Public Relations/Communication, and Ways and Means. With the approval of a new set of by-laws at the 1972 San Francisco Conference, the designation of the various interest/discipline committees was changed to commissions to reflect the distinction of those groups for their research and project development as opposed to the more administrative activities of the standing committees such as membership, publications, nominations, and finance. Those earliest Commissions included: Administration, Architecture, Codes, Engineering, Performing Arts Training and Education, and Presentation Technology, with the Costume Commission being added in 1975. Technical Production is noticeably absent, but the times they were a changin'!

As a result of the first ever Commissioners' Retreat held in June 1976, then 2nd Vice President Randy Earl announced the creation of two new commissions: Scenography and Technical Information. At the same time the PATE (Performing Arts Training and Education) Commission was renamed



About every five years or so the leadership of the USITT likes to reexamine and tinker with its structure, it's by-laws, etc. It was the Commission structure that once again underwent transformation at the 1981 Cleveland Conference in order to attract and involve more of the membership. The Scenography Commission was restructured into three interest groups: Scenic Design, Lighting and Sound Design, and the already strong Costume Design and Technology, all three of which were tied together by the newly created Scenography Liaison. The second big change was the renaming of the Technical Information Commission to the Technical Production Commission. As stated in the Commissioners' report from the summer 1981 newsletter, "The Technical Information Commission has been replaced and expanded to form the new Technical Production Commission, designed to serve the needs and projects of the Technical Director, Stage Manager, Production Manager, Stage Hand, Carpenter, Electrician, and Shop Foreman. The new Commission will address the organization, coordination, communication, and techniques of the technical team." The new name more directly addressed the identity of its constituent members, and besides, some

of Technical Production programming for the Oakland conference because he put together a pre-conference workshop on stress management, and he organized five of the six Technical Production sessions for the conference in addition to his support for Tech Olympics. I recall that conference vividly. It seemed everywhere I went, there was Rick Stephens chairing or participating in yet another session! No doubt it was his energy and enthusiasm that had the VP for Commissions select him as one of the new CO-commissioners. As the conference was winding down, Rick approached Ben Sammler with an idea for an exhibition of technical solutions from actual production problems. According to Rick, "The idea was to document these solutions with written articles that would accompany the exhibits and help us all 'quit reinventing the wheel.'" Knowing that Ben was the best member to take on this project due to his extensive experience with Yale Tech Briefs, Rick was delighted that Ben agreed to put together a proposal for the exhibition with the proviso that he be able to select a CO-chair. His selection was, of course, Dennis Dorn. Ben and Dennis submitted their proposal before the summer Commissioners' Retreat and the Board of Directors' meeting. Although the proposal seemed like a simple "no-brainer" to Rick, Ben, and Dennis, it met with a surprising amount of controversy. Against a background of several years of the budget-challenged Design Expo's exhibitions and subsequent national tours, the prospect of yet another exhibition to drain the resources of the USITT was met with less than cheers and applause. As Rick Stephens, who was in attendance at those meetings, recounts it, "Our proposal was to cost less than \$3,000, and we had a plan to have corporate sponsorship to pay a good bit of that. As we got into the discussion I was told finally that the leadership just didn't believe that we could do what our proposal outlined, particularly in the area of cost. I tried for some time to explain that what we wanted wasn't a museum-quality touring exhibit; that we were TDs and we not only knew what we were talking about, but we did this sort of thing all the time!" Rick, who by his own admission was getting a bit hot under the collar at this point went on to say, "Just when things were starting to get out of hand, Bob Scales, who had sat quietly throughout, spoke up in his quiet way. 'Really, Dick (Devin, VP Commissions), I think that this is perfectly feasible.' The room went quiet for a long 'five count,' and the atmosphere instantly changed. If Bob Scales, Great Tech god that he was, felt that this was 'perfectly feasible' who would dare to argue? We had an approved proposal!" Tech Expo was officially off and running.

Now all that remained to do was... Raise the money... Generate submissions ... Create exhibit/display structures... Oh, and then there is the publishing of the exhibition catalog, all of which had to be accomplished between August and the following March. Referring to these problems, Ben Sammler said, "Dennis and I met and divvied up the work. Fundraising fell on my side of the ledger. What surprised me the most was how easy this was. I made one phone call to each of the first six sponsors we targeted and to my delight, everyone said yes. We had our funding. It was immediately clear to me that there was an overwhelming interest and support within the industry to recognize the creative contributions of theatre technicians." Solutions to the other problems associated with this project quickly fell into place either through the efforts of energetic volunteers or due to the overwhelming industry support for this kind of recognition. Still, the expected number of submissions for that initial exhibit was only in the area of fifteen to twenty. It has been reported, although largely disputed as unbelievable by those who know him, that Ben Sammler was "giddy" when he reported that there were thirty-six submissions. Quickly regaining his composure, Ben then set

himself about the task of editing and printing the exhibit catalog which contained articles submitted by each of the thirty-six entries. That now treasured exhibit catalog sold for a mere three dollars at the conference. Following the conference, the June 1987 newsletter reported, "This was an outstanding 'first' first-class exhibit." Although Tech Expo was originally conceived as an annual exhibit, it was later decided that it would alternate years with the Design Expo and continues to do so today. The 12th Tech Expo was a big hit last March in Cincinnati. Although it is a break from the typical every-other-year cycle, you can look forward to a special "retro" exhibit featuring some of the best submissions of past Tech Expos in the upcoming 50th Anniversary Conference in Kansas City. The Tech Expo is indeed the "crown jewel" of the Technical Production Commission.

The Tech Expo is not the only jewel in the Technical Production crown. New Products Showcase, Tech Olympics, and Graphic Standards are all ongoing projects or features of USITT conferences that originated in or were co-sponsored by the Technical Production Commission. Lesser known, but every bit as important jewels are the Networking for Women, Job Satisfaction Survey, USITT Survey of Perceived Gender Bias in Technical Theatre, and the Tenured TD Mentoring projects. In all likelihood I have neglected to mention many other important projects and accomplishments of this vital commission, but if nothing else, history has shown, and I am confident that the future will bear out, that Technical Production truly is the "Can-Do Commission." ❖

Bill Browning is professor and head of technical production at University of Delaware. He also serves USITT as TD&T's associate editor for technical production and as a member of the board of directors.



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