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Continued from March 2011 CTI Newsletter

SHoW DMX At The Metropolitan Opera

The Metropolitan Opera began performances of a new Ring Cycle in late 2010 with the first Opera in the Cycle, *Das Rheingold*. This technically sophisticated production incorporated extensive wirelessly controlled costume and prop lighting. CTI spoke to Tony Giovannetti - Metropolitan Opera Electric Construction Boss, about these demanding effects, and about the Met's use of SHoW DMX in the production to deliver wireless DMX to control them.

CTI: Who at the Met participated in the configuration and set up of the SHoW DMX System?

Tony Giovannetti: The main participants were myself, Paul Donahue – Head Electrician, and Art Danzo and Rick Sirois of our Shop Staff.

CTI: What were the parameters and design needs of the project?

Tony Giovannetti: The production used a number of props and costume pieces that contained LED lighting including a glowing nugget, armor, helmets, and magic gloves. The costumes were treated in the control system as though they were moving lights with up to 24 parameters. Because the costume lighting effects were quite complex, the costumes included built-in "chips" (memory controllers) to control the costume LEDs, and these built-in-controllers were triggered by wireless DMX commands from the SHoW DMX system. This allowed us to cue very complex effects that were integrated with the plot.

The system was controlled with a GrandMA 2 and used over 800 Slots of wireless DMX just to control the LEDs in the props and costumes.

CTI: How did you layout the system?

Tony Giovannetti: Data was distributed from the GrandMA 2 as Art-Net, sACN, and GrandMA Ethernet and converted to DMX using GrandMA and Pathways Pathport Nodes. For Wireless DMX we used two SHoW DMX Transmitters mounted side by side, upstage left and 9 feet high. Each Transmitter was provided with a CTI 8dBi Panel directional antenna, and set to 125mW broadcast power. SHoW DMX OEM Receivers were built-in to the props and costumes to receive the wireless DMX. LiPo battery packs were used in the props and costumes to power the SHoW DMX OEM Receivers, built-in controllers, and the LEDs.

We set up a second system in the principal dressing room to test the costume and prop systems. This test system included two transmitters with standard antennas and was controlled with the backup GrandMA 2 using the same cues that were running in the show.

CTI: Did you do any other testing?

Tony Giovannetti: Larry Dunn of CTI came to the Met and performed a 2.4GHz scan using the WiSpy frequency analyzer system. The scan showed moderate WiFi activity in the theatre, as well as the two universes of SHoW DMX.

CTI: Did you use any special antennas?

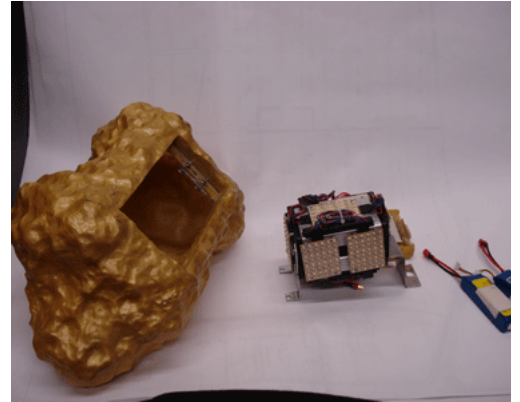
Tony Giovannetti: We used the two panel antennas on the transmitters. The SHoW DMX OEM Receivers used in the costumes and props had some miniature antennas that were provided by the prop builder, Phillippe Jean.

CTI: Did you use RDM?

Tony Giovannetti: No.

CTI: What was your overall experience in working with SHoW DMX?

Tony Giovannetti: It worked well, absolutely. It was easy to use, and CTI was ready for any support we needed. Based on our experience we will be using SHoW DMX on all our new shows when wireless is needed, such as the upcoming *Walkure* in March of this year, and we will be retrofitting our older productions to the new system, including Julie Taymor's *Magic Flute*, *Romeo*, *Boris Gudunov*, *Armida*, and *Tales of Hoffman*.



The Golden Nugget prop from *Das Rheingold*. It is shown partially disassembled, with Panels, SHoW DMX Receiver, LED driver) and LiPo batteries next to the



Das Rheingold Golden Nugget (running) next to a Receiver/Body Pa



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