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Continued from February 2011 CTI Newsletter

Mountain Light Company Lights The 21st Annual Budweiser International Snow Sculpture Championships

Loading in a complicated show under the best conditions isn't easy, but add working at 9,000 ft. elevation, with freezing weather, darkness, high winds, snow, generators, and slippery conditions and even the best gear and technicians are put to the test. CTI's distributor in Colorado, [Mountain Light](#) was up to this challenge for this very unique snow sculpture event. We spoke with Mountain Light's founder and Principal, [John Fuller](#), who described how he and his team of fearless lighting professionals did it.

CTI: What were the general parameters and design needs for the project?

John Fuller: Through our association with the Colorado Festival and Events Association, we had been contacted shortly before the event by the client to provide an LED based design and lighting solution for the Snow Sculpture Championships. The venue was outdoors in a space about the size of two football fields in which would be built twenty 10' x 10' x 12' high cubes of packed snow that would then be sculpted by international teams of artists and then be open for public view. In the past years, the Snow Sculpture Championships were lit using construction/highway masts with integral generators for white lighting and were looking for a solution that had a smaller carbon footprint, less noise and a better visual esthetic to create a nicer public experience for night-time viewing of the sculptures. The requirement would be for general task lighting in the nights prior to the public opening for set-up and while the sculptors were working, followed by more attractive and colorful lighting specific to the sculptures and ending with general illumination for the final tear-down of the event.

CTI: How did you lay out the design?

John Fuller: We erected a total of ten 18' tall truss towers, each with up to four Philips Solid State Lighting RGB Color Reaches and four Color Blast 12's. Given the time allowed, we emulated the tower placement from years past.

CTI: Were there specific design, budget or physical constraints that you had to work within?

John Fuller: The venue was outdoors in winter at over 9,000 feet altitude – it's quite cold and the weather can change quickly – so we wanted to be as well-prepared and have as much of the gear pre-assembled and programmed as possible. There were local Town requirements for wind load and safety for the towers, as well – the towers needed to be able to withstand a 90mph wind gust for 3 seconds. Each tower was secured to two 3,000 lb. concrete Jersey barriers.

CTI: Why did you want to use [SHoW DMX](#) in this case?

John Fuller: The event area was large and open to the public so a wireless layout was the best solution. Access lanes needed to be kept open and cable free – both for pedestrian walkways as well as for snow removal around the site.

Control was from an iPlayer 3 installed in a NEMA-rated outdoor enclosure we had made with a SHoW DMX OEM Transmitter. We had made outdoor enclosures with SHoW DMX OEM Receivers in them, as well, which also can control PDS-60's and relays for controlling AC outlets on board. To power and control the uplights on the sculptures along the center aisle we used PDS-375 TRw's for wireless control. We custom-built special enclosures for the PDS's so they could be outdoors in the snowy environment.

The "Wow" moment for the show came when we transitioned the venue from the white worklight we had been using to the colorful, artistic lighting to show the sculptures.

CTI: Did you do any preliminary testing?

John Fuller: We own a lot of SHoW DMX gear in our rental stock already. We did test all the equipment thoroughly before leaving the shop, of course, it's a lot easier to wring it all out indoors where it's warm. We mocked up 80% of the show on a laptop with the iPlayer 3 back in the shop.

CTI: What settings did you use on the equipment?

John Fuller: We used a single universe of DMX - "Plug and Play" - we didn't need to limit bandwidth, broadcast power or number of DMX channels or use directional antennas. We did not use RDM over SHoW DMX at all.

CTI: Would you have done anything differently in hindsight?

John Fuller: The electronics and LEDs worked fine in the cold weather. LEDs love the cold, of course. We had thought through everything carefully back in the shop, where it was warm. The control was pretty flawless. We were worried about the big blocks of snow – being largely water, we were concerned they would be a barrier to wireless transmission. We were also worried about the public and bodies in motion as the human body is largely water, as well. We were careful with our equipment and antenna placement and had no problems.

We followed stage lighting best practices in mounting, hanging and safetying all the equipment in an outdoor location. If I had had more time, I would have built more outdoor enclosures for the gear.

Overall, the event went very well – we planned carefully and thoroughly and allowed for being outdoors in cold, changeable weather at altitude and we were able to deliver a greener and more esthetic lighting design for our client.



Carl Olson, Tonya Neely, John Fuller, and Courtney Walsh with a Mountain Light ice sculpture.



The truck next to blocks of compacted snow shows the scale of the sculpture blocks.

Mountain Light lights the snow sculptures



Aerial view of the site with uncarved blocks.



Uncarved blocks lit from the towers



Sculpture lit from outside and inside



Not easy conditions to hang a show! Ice, wind, and danger everywhere.



Rigging the lighting towers

Mountain Light lights the snow sculptures



Kangaroo sculpture



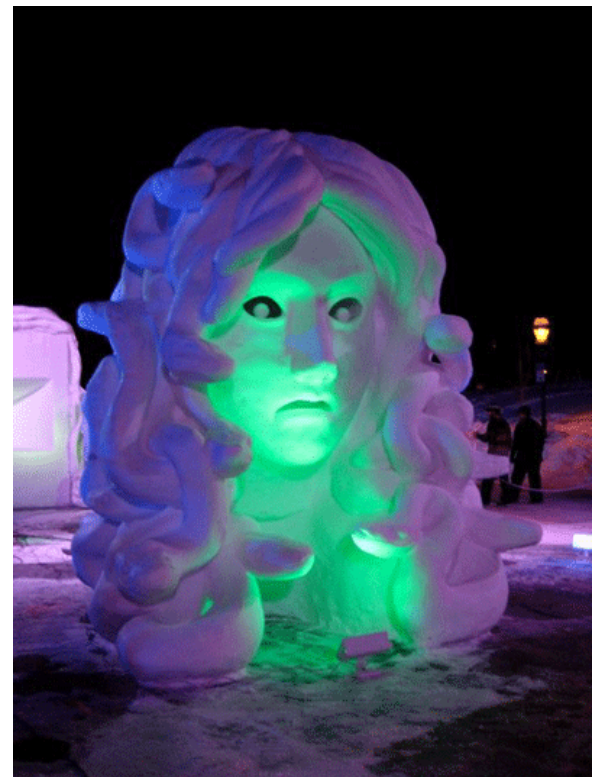
Camera sculpture



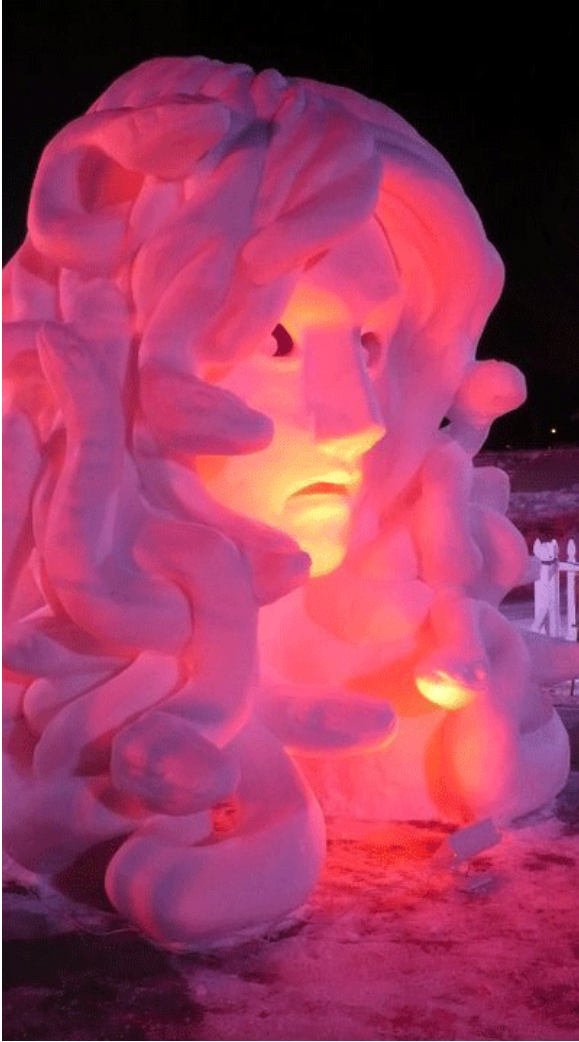
The Mountain Light crew: Carl Olson, Ryan McArthur, Courtney Walsh, Tonya Neely, Brad Helzer, and John Fuller



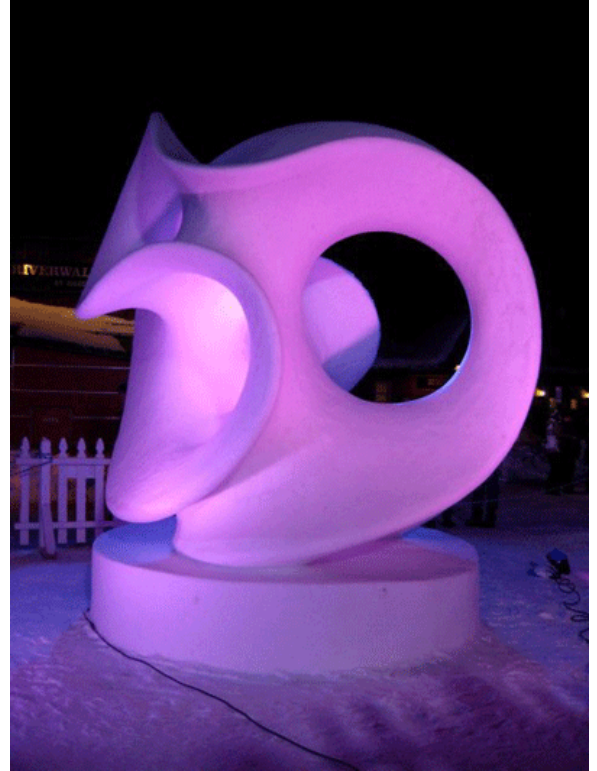
Face sculpture



Medusa head lit from the front



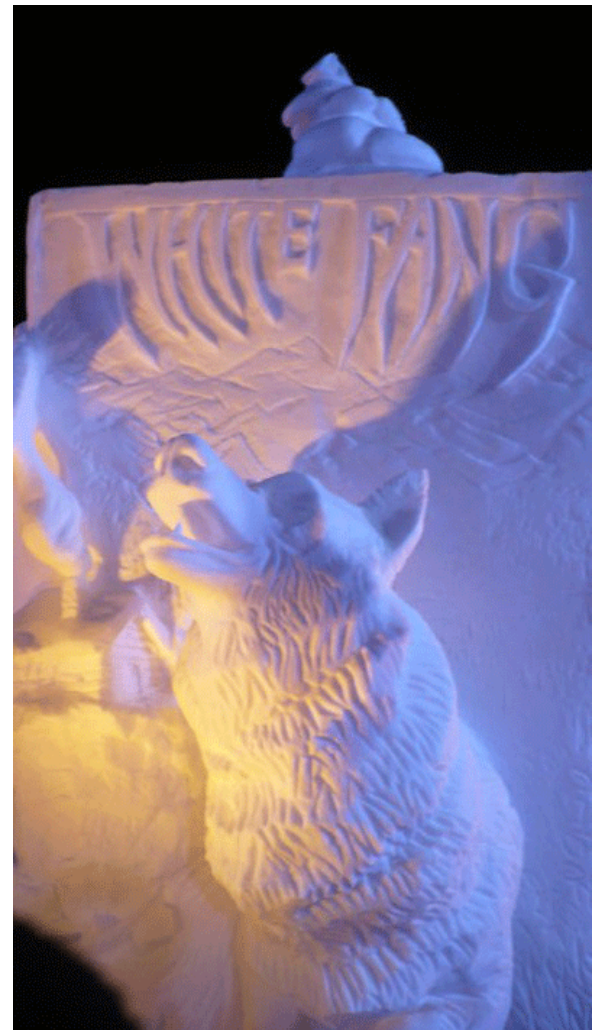
LED from the front produces a lot of uplight



Carved sculpture



Two heads sculpture



Intricately carved White Fang sculpture

Mountain Light lights the snow sculptures



Carl Olson and John Fuller of Mountain Light