

The RIT Big Shot: Part One

Michael Peres

With contributions from William DuBois, Dawn Tower DuBois and Willie Osterman

On December 4th, 1987 the RIT Biomedical Photographic Communications program produced the first Big Shot, which was attended by 37 people. The event was very exciting on every level, and since that time Big Shot projects have been produced for 27 consecutive years. In the more than a quarter century since that snowy December night, Big Shot has become a signature event for the University. Its mission, to foster team building and problem solving skills using simple equipment, has become a cornerstone for each great next adventure. Conceived as a nighttime community photographic event, it has remained true to that objective while growing in stature and complexity. The photographs in the portfolio now number twenty-eight. This article chronicles the trials, tribulations and triumphs of Big Shot.

Overview

On March 23, 2013, RIT Big Shot No. 28 featuring Cowboys Stadium was produced, and now stands as the most complex event in the project's history. It is a remarkable achievement that this extracurricular activity continues to flourish after more than 27 years, but then perhaps not. In the spring of 1987, Professor Bill DuBois, then chair of the biomedical photography department, and Michael Peres, an instructor in the School of Photographic Arts and Sciences, had each just completed their first academic year [in those roles]. Reflecting back on the recently completed year, they brainstormed new ideas about how to better engage students in learning how to use electronic flash for artificial light photography. A painting with light project was conceived, and in December 1987 the first Big Shot was produced featuring Highland Hospital, a small community hospital located in Rochester, New York as its subject. Since that time, the RIT Big Shot has crossed the Atlantic visiting Dubrovnik, Croatia and Stockholm, Sweden as well as many locations in the U.S.

Big Shot was originally conceived as a way to help teach students how to correctly use and balance multiple light sources in a community-based photograph that required participants to work in teams. Big Shot has changed a lot since that simple beginning, however the team has remained relatively intact. Professor Michael Peres and Professor Emeritus Bill DuBois along with Dawn Tower DuBois, were the original coordinators. In 2011, Professor Willie Osterman joined the team having participated in many projects dating back to 1988 (Figure 1).



Figure 1. The RIT Big Shot coordinators planning for Big Shot No 27. Left to right: Willie Osterman, Dawn Tower DuBois, Michael Peres and Bill DuBois. Photo by Kevin Fuller.



Figure 2. Attendees fight the torrential rain to light up The Smithsonian National Museum of the American Indian. September, 2009. Photo by R. Perdomo .

What makes the Big Shot such a powerful experience for participants is the unique method of making a photograph. Students and members of the community are invited to help light the subject after dark. Everyone brings lighting equipment, which might consist of a small handheld flashlight or sophisticated electronic flash equipment. Participants assemble at twilight, all excited about the unknown, and soon the enthusiasm of the crowd grows. People are assigned to their lighting zones and they develop a plan to execute their lighting assignment. When the sky is “Big Shot dark”, the chaos begins. On command the camera shutter is opened and the painting with light show begins. Four exposures and no more than 15 minutes later, conclude months or even years of planning (Figure 2).

Prior to making the first exposure, the coordinators agonize for months creating the lighting plan and brainstorming other considerations critical to making this type of photograph. The planning process takes into account the various features inherent in each subject that will be important to emphasize; these include glass, surface textures, environment, space, and the surroundings. The plan takes into account the management of ambient lighting as well. There are many other variables though, that cannot be planned, the most important of these being how many people will attend and the lights they will bring along. Weather is a huge variable; there is no “rain date” for a Big Shot (Figure 3).

Dealing With the Unexpected

Each project has expected challenges and unexpected surprises. Big Shot No. 24 featured the Erie Canal in Pittsford, New York and drew more than 600 people who were assigned to the various regions based on the plan. Participants with electronic flashes, for example, were placed in one section to create a more neutral color, and flashlights were used in other areas to create warmer colors. A Big Shot might be described as organized chaos, and some of the real challenges come from trying to direct all the people in the scene and get them to execute the lighting plan in order to achieve the desired result. Big Shots are also, at their core, an opportunity to solve complex problems with simple equipment. Each project is unique, and often results in gratifying

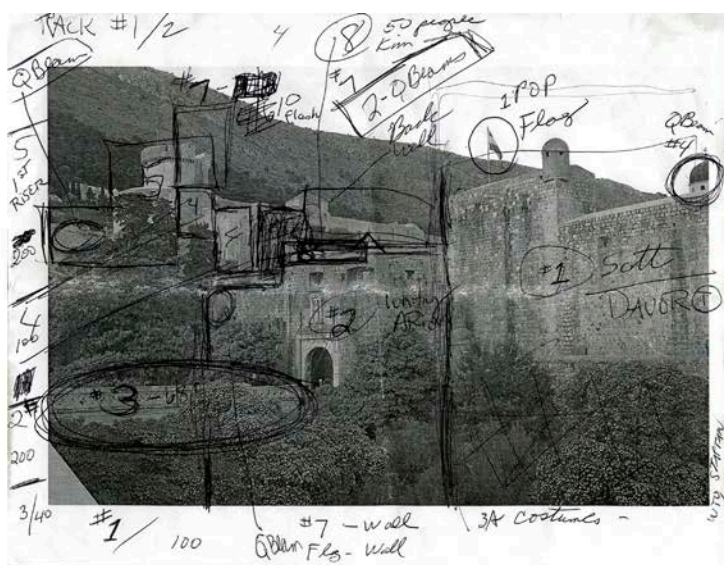


Figure 3. The lighting plan and outcome of RIT Big Shot No 23 -- The Pile Gate Dubrovnik, Croatia.



Figure 4. RIT Big Shot No. 24 — Erie Canal & Schoen Place, Pittsford, New York. May 8, 2008. Camera: Nikon D3 with 40 mm lens, Exposure time: 30 seconds @ f16 ISO 200. All external lighting was provided by multiple hand-held electronic flash units and flashlights operated by approximately 615 people.

surprises for the participants. A special element we wanted to include in this canal-based photograph was a replica of a canal boat. When we were making the photograph, the Erie Canal's current created an unexpected problem when we were trying to "freeze" the boat for the exposure. We were amazed by the unexpected strength of the Erie Canal current, which moved an anchored boat operating on full throttle out of the frame during the first exposure. This was a huge surprise. Pre-flashing the canal boat with only electronic flashes for a 5 second exposure prior to illuminating the rest of the scene solved that problem. This was not in our pre-event script (Figure 4).

Big Shot No 1

When sharing Big Shot stories, it is important to be truthful. While the planning for a photograph is comprehensive, most things do not work out exactly as planned. At Big Shot No. 1 featuring Highland Hospital, Martin Scott, then Director of Scientific Photography at Eastman Kodak, brought an antique flash powder lighting unit to the event. The light produced by the magnesium powder is evident as an explosion seen at the base of the flagpole. As the students challenged him to "load it with more" during the subsequent exposures, the magnesium was clumping with moisture from the snow. Eventually it became a pyrotechnic when it went off. After the 4th and final discharge, Martin smelled like a wet duck when the heat from the discharge singed his jacket. We replaced his jacket and that was the first "cost of doing business" expense for Big Shot. As you study the photograph, you may also see a little squiggle of light in the lower portion of the photograph. That squiggle is Bill DuBois' flashlight clipped to his jacket. Oops (Figure 5).



Figure 5. Big Shot No 1 — Highland Hospital, Rochester, New York December 4, 1987. Exposure: 30 seconds @ f/11 Film: Kodak 4×5 T-Max 400. All external lighting was provided by multiple electronic flash units (and one old-fashioned flash-powder tray) by approximately 37 people.

Big Shot No 2

Prior to making a photograph we are usually consumed with re-thinking the plan through and at Big Shot No 2, The George Eastman House, we were very careful to place orange cones at the driveway entrances in front of the house because it was snowing, and we decided that we wanted the fresh fallen snow to remain as pristine as possible for the photograph. A few minutes before the shot was made, a local television crew moved the cones and drove their vehicle directly up the driveway into the middle of the scene. We welcomed them to the event, and asked that they please move the car out of the way. When they moved it though, it was clearly evident that a car had driven through the scene. Our plan

to keep the freshly fallen snow untouched had been foiled. All the student flashers were then asked to walk through the scene to cover up the tracks left by the TV vehicle. The student carolers, all dressed in period costumes, then took their places and the first exposure was made. We also rented a large Ryder truck to keep the cameras out of the weather the day of the event. With the cameras set in the back of the truck, we were up off the ground level and protected from the weather. The truck, however, rocked and the photographers had to be very careful not to move during the exposures for fear of softening the focus (Figure 6).



Figure 6. Big Shot No 2 — The George Eastman House, Rochester, New York December 10, 1988. Exposure: 12 seconds @ f/11 Film: Kodak 4×5 T-Max 400. All external lighting by 70 participants with multiple flashes of electronic flash units. Illumination for the group was an old-fashioned flash-powder tray.

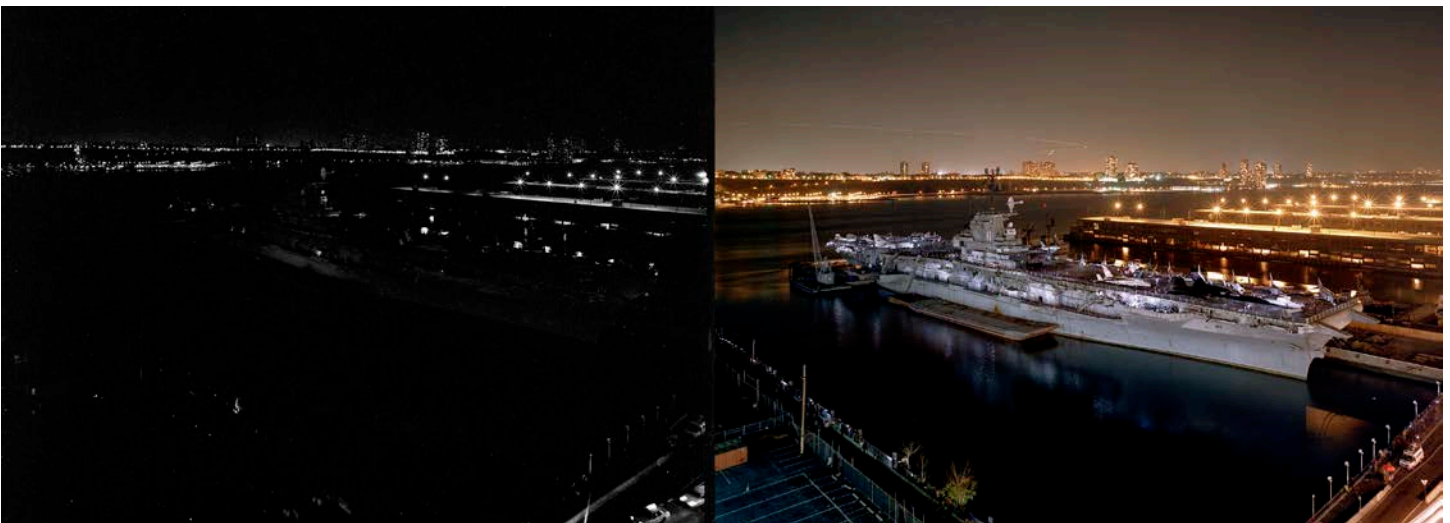


Figure 7. RIT Big Shot No 14 Intrepid Sea, Air, and Space Museum New York, New York. October 28, 1999. Camera: Sinar F with 65mm lens. Exposure: 2 minutes @ f/11 . Film: Kodak Porta 400 MC. All external lighting was provided by multiple hand-held electronic flash units operated by approximately 1,200 people.

RIT Big Shot No 14

The Intrepid Air Sea and Space Museum project was huge, and for the first time the event added RIT to the name Big Shot. It was the first project outside the Rochester area. Because we were so anxious about the many details involved, we spent an extraordinary amount of time planning for this event, which included the creation of three different communication systems. We were not sure what would be the best way to communicate if we got a big crowd, because the camera was now going to be a quarter of a mile away from the subject. We needed to tell participants when to start and stop flashing, when the lens would be opened and closed, etc.

Nextel sponsored the event by providing cell phones that could be used as walkie-talkies for our team captains, but we were never given access to the walkie-talkie service in New York City. Once we determined the phones would not work, we rented walkie-talkies, but some of the batteries went dead on some and Michael's radio was picking up a Spanish station from the greater NYC metro area. In the end, we reverted to our third communication system, which was a series of blinking and continuous red and white lights that we put together; this system is still used today. A continuous red light informed participants where the camera was located; we asked them to please not aim their light at the camera. When the red light started blinking that told the crowd that we were within one minute of opening the camera shutter. When it became a white flashing light, the lens was opened and

participants were to begin lighting their assignment. The flashing light was the only means of communicating across eight lanes of the West Side Highway. The camera was situated on the roof of the UPS Building located across the highway from the Intrepid.

The RIT photographers stood on the roof of the UPS building eight-stories above the street waiting for the sun to set; they looked down at the pier while an RIT alum was setting up lighting equipment provided by another sponsor, Bogen Imaging, Inc. As they watched, the NYC Police arrived and threatened to tow our car since it was parked illegally on Pier 84. Bill and Dawn were watching this spectacle from a distant vantage point and there was nothing they could do but watch and hope. Luckily, as part of our planning, we had obtained a NYC photography permit and the event was able to proceed without further incident (Figure 7).

RIT Big Shot No 23

Once the vantage point for the Pile Gate photograph (in Dubrovnik, Croatia) was determined, we decided the scene (a couple square miles) would be the largest we had ever attempted. This particular scene was chosen to highlight the gate and the bridge that leads into the old city. We also wanted to place re-enactors on the bridge wearing period costumes to establish the time period and provide a sense of scale. The fact that we were photographing such a large area, including many walls and the Serbian mountainside presented new problems for us. The Croatian national highway is located on that mountainside, and



Figure 8. Dawn Tower DuBois reveals the Croatian flag that would be used in the evening's photograph while Bill DuBois makes final camera preparations.

we were able to have the lighting turned off for 30 minutes while we were making the exposure. It was a stroke of luck, and the result of many favors being called in.

The success of the lighting in this photograph was the result of: 1. The execution of the most ambitious and complicated lighting plan ever been attempted for a Big Shot, and 2. the volunteers handling the lights with great precision. During the exposure, the bridge in the foreground was determined to be too bright so we shut down that lighting team after only half of the total exposure time. The flag was illuminated with only one pop of an electronic flash to allow it to look like it was blowing freely in a nonexistent breeze. And the wall that was furthest back required three lighting teams using 1,000,000-candlepower portable lights to do the job. It is interesting to note that our communication throughout the scene was handled using voices of many attendees to form a "vocal bucket brigade." We were fortunate to have had Willie Osterman and his class in Dubrovnik during the preparation for the photograph. They contributed significantly to the success of the photograph by doing hours of painstaking networking and scouting work for us (Figure 8).

RIT Big Shot No 28

Cowboys Stadium might be a classic example of "be careful what you ask for, you might just get it". Since Big Shot does not have a master plan, many of our projects find the project rather the project finding them. Early in the summer of 2011 Scott Salinger, an alum visiting Rochester, asked if it was OK to approach the owner of the NFL Dallas Cowboys about proposing a RIT Big Shot photograph of Cowboys Stadium. Having been a major contributor to Big Shot No. 18 featuring the Alamo in March 2000, he knew full well the challenges inherent in producing a Big Shot. We said sure, and he made a pitch to Jerry Jones owner of the NFL franchise during media day. Twenty months later, with more than 2400 in attendance, Cowboys Stadium was photographed using a 30 second exposure under a dreary and misty 52-degree night.

Each subject has its challenges, and gaining permission to make this photograph might have been the most time consuming and complex undertaking in the history of Big Shot. It took more than a year to finally sign a contract. No one could have ever imagined the challenges we would face in getting that accomplished. Everything about working with a NFL Stadium seemed to have enormous complexities associated with it, and seemed like it was never going to get done. The process of seeking a formal agreement began in August 2011, and the contract was not signed until October 30, 2012. The Big Shot team visited Arlington in June for a site visit, which was part of the deal (Figure 9). At those meetings, everything required for the successful completion of the project was discussed. Because the project would take place in a big city so far from Rochester, everything became more complicated. Who would act as our liason on the ground in Arlington? How could we create a process to get students there?



Figure 9. The June site visit meeting of representatives from the Stadium and RIT.



Figure 10. 37 RIT students pose for a group photograph at the Stadium.

How would we pay for the opportunity to make this once-in-a-life time photograph? Stadium exclusivities, corporate trademarks, and branding became part of every conversation. With patience and persistence, everyone was on board and the details of lighting 360-degrees of a glass building could be publicly promoted.

Four months is a very short time frame for planning such a large-scale production. We divided the various jobs across the members of the team, and moved ahead with the plan and identified strategic partners to help execute that plan. All Big Shots need collaborators, and with this photograph more so than most because of its scale. Nikon, a long time Big Shot sponsor, immediately got involved and their endorsement was a tremendous validation. From that point forward, everything took shape very quickly. Nikon introduced us to Arlington Camera and many others. We needed a PA system to communicate with an expected large crowd, and we reached out to a planned Art Festival and a local ambulance company. We also wanted a 40-foot elevated point of view and needed to locate a lift truck rental company. Establishing dialogues with the City of Arlington



Figure 11. The students photographed children for holiday portraits and Bill DuBois ran an auction that raised \$16,000.



Figure 12. The Big Shot was promoted prior to Cowboys football games in December.

RIT Big Shot Lighting Team 1

- Go to Team location
- Identify Team capt. Team leaders will have red blinking hat lights
- Learn about lighting plan and method
- Shutter will be open
 - Long wail of siren (5 sec)
 - White blinking light on camera platform
 - Tweeting: Shutter Open
- Shutter closed
 - Bursts of siren (5 sec)
 - Red blinking light on camera platform
 - Tweeting: Shutter Closed
- There will be 4 attempts
- Downloadable file after April 15, 2013

agencies including the police, street lighting and special events office was complicated. In each of these conversations, they always start with, “You want to do what? Why don’t you simply take the photo during the day?” Call after call was made finding the right person to keep the project moving forward. We also needed a website worthy of such an event with the ability to allow for pre-registration, a requirement of the Stadium.

One of most exciting components of a Big Shot is getting students involved. 38 students raised over \$50K to fund their trip. Holiday family portraits were made, a holiday auction was held, and a few other events when matched by RIT resulted in a sizable sum for them. The kids took on all sorts of leadership roles for us, which was unbelievable (Figure 10), (Figure 11). The students were eager to get involved and because the subject was Cowboys Stadium, home of the NFL Dallas Cowboys, we wanted to do new things as well. After numerous conversations across the campus, we decided to try to broadcast the event live using the Google Hangout. We also wanted to attempt a 3D reconstruction image with our colleagues in Imaging Science, and to try to set a Guinness record for the greatest number of people needed to make a photograph. We also pitched the story to Sports Illustrated, NBC and ESPN. In addition, the story was promoted prior to Cowboys football games in December (Figure 12).

Bill DuBois traveled to Arlington in February to recruit, do more research and finalize our lighting plan. While there, he participated in a meeting of the Texas Association of Photography Instructors. At our site visit in June, we formulated a lighting plan based on 5,000 bodies. The Stadium being round with walls of glass at an 18-degree angle, forced us to think differently in making this plan in order to control specular highlights and the location of team members. Our master plan was to light up the parking lots and let their brightness be reflected into the glass. We

Figure 13. The handout card that participants were given for instructions.

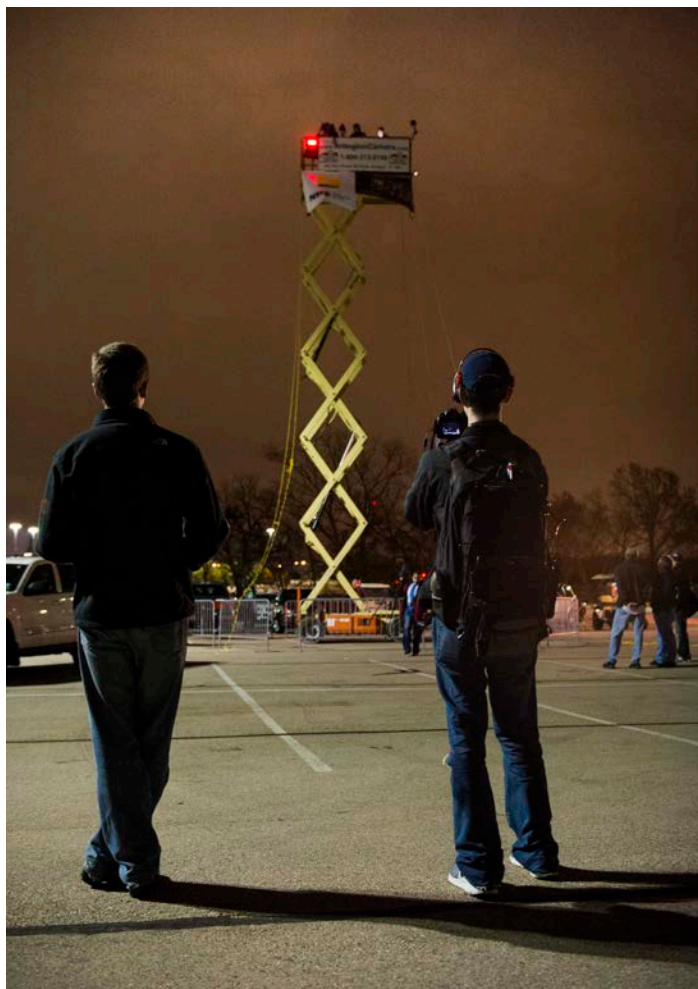


Figure 14. The 40 ft lift truck showing the red light system and the Google Hangout live broadcaster to the right. Photo by David Beyerlein

also wanted to showcase the girders, the shape of the structure and the roof. Each section required their own solution. Of course there was a pouring rain during his visit and we were not able to confirm that our idea would work.

Communicating with large groups continues to be a challenge. We often say that we have champagne tastes on a beer budget. This being said, our solution for this project had to be relatively inexpensive and efficient. We created a simple method to assign participants to lighting teams using plastic cards that had the lighting instructions printed on one side of the card and the team lighting assignments on the other side. The cards were given to participants upon their arrival on site and worked very well (Figure 13). We also used a blinking light system at the camera that was first used in New York in 1999; a red light, the shutter is closed, a white light, the shutter is open. We had hoped to partner with Art in the Greene (the aforementioned festival) but the distance from their event to ours was significant, and the audio from the sound stage would not carry the distance. We also reached out to American Medical Response, an area ambulance company. They were interested and immediately became part of the project. The PA in the ambulance and the siren both worked to instruct people in the vast and dark parking lot spaces where the event was taking place. The Stadium also had a PA system imbedded in light poles adjacent to the Stadium, which we used as well. In addition the Stadium loaned the project 50 walkie-talkies, which were used to share information across the vast site (Figure 14).

March 23rd arrived as it always does the day after March 22nd and everyone was nervous, excited and experiencing uncountable emotions. We had been watching the weather forecast all week and of course Saturday morning there were heavy thunderstorms and the temperature was 46 degrees. The weather was terrible, but as the day wore on the storms diminished, and better weather

prevailed. As the crowds began to arrive we knew we were doing something very special; you could feel it in the air. The Stadium lights had never been completely turned off since the Stadium was opened in 2008. At 8:30 we made our first exposure and much to our surprise, 2400 lighters using a camera aperture of f11 resulted in a grossly overexposed image. That was a pleasant surprise since the crowd was smaller than expected. Since the camera was inaccessible, we used new technology to share screens. Breaking new ground continues to be important to the project, and using iPads and screen-sharing websites with the laptop camera workstation proved to be a huge resource necessary in making



Figure 15. Members of the Big Shot team work on image profiling prior to publishing.

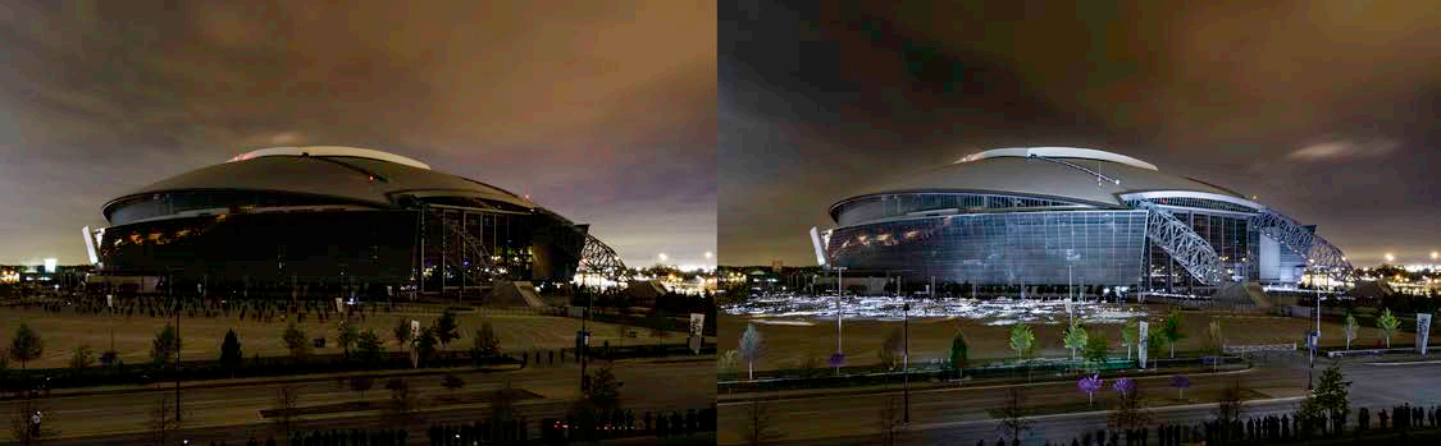


Figure 16. RIT Big Shot No 28 – Cowboys Stadium. Arlington, Texas, March 23, 2013. Camera: Nikon D800 with 14 mm lens. Exposure time: 30 seconds @f16, ISO 400. All external lighting was provided by 2,430 volunteer participants using hand-held electronic flash units and flashlights.

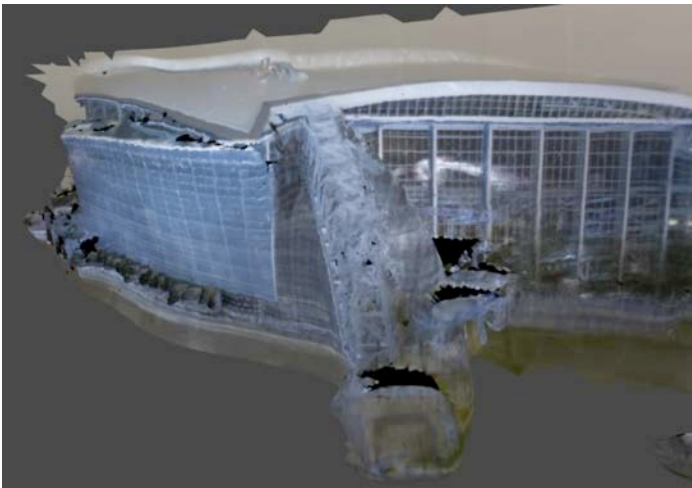


Figure 17. Faculty and students from the RIT Center for Imaging Science produced a 3D reconstruction of the Stadium using 36 files captured at 36 different locations using light from the 2400 participants.



Figure 18. RIT crew celebrate the publishing of the photograph. Photo by David Beyerlein.



Figure 19. A short video documentary of Big Shot No. 28 produced by Brianna Byrne. (To view video, see the online version of JBC).

adjustments as to where people we assigned were, and how much light they were putting out (Figure 15).

By 9:05 the four exposures were complete, and in a mad dash several members of the team were rushed to the media room of the Stadium to get the Big Shot photograph file out to 350 media outlets with whom we have fostered relationships. What a rush! The file was sent at 9:50 CST, and by Monday March 25, 32,000 had viewed the photograph on the Big Shot Facebook page (Figure 16), Figure 17, showing a 3D reconstruction of the Stadium produced by faculty and students from the RIT Center for Imaging Science and (Figure 18). Figure 19 features a short video on this project and Figure 20, a time-lapse video of the event. (To view videos, see the online version of JBC).

For more on the RIT Big Shot visit: <http://www.rit.edu/bigshot>

Acknowledgements

Since the first Big Shot in 1987, Rochester Institute of Technology (RIT) and the School of Photographic Arts and Sciences (SPAS) have been our main sponsors. An immeasurable number of University students, faculty, staff and alumni have been active and enthusiastic partners in the annual project's

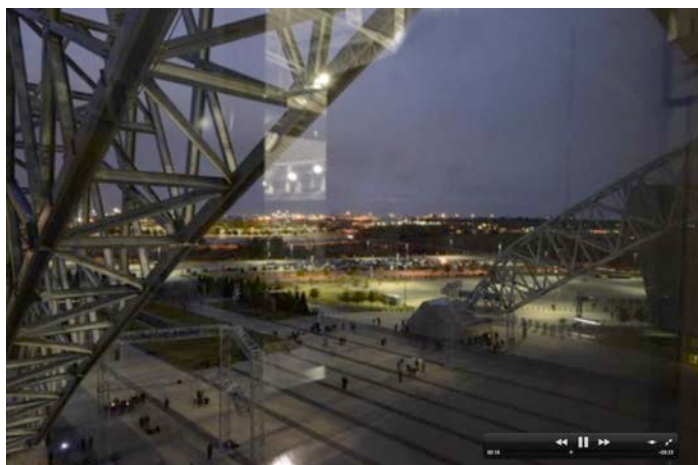


Figure 20. A time-lapse of the evening produced by Mike Dear (from inside of the Stadium). (To view video, see the online version of JBC).

development and display. We thank them all for their unwavering assistance and contributions beginning from day one.

Integral to the realization of the annual RIT Big Shot have been countless colleagues and friends. We wish to thank Nikon's NPS group. In particular Bill Pekala and Kristine Bosworth. Also Mike Dear, Therese Mulligan, Frank Cost, Gunther Cartwright, Denis Defibaugh, Bill Fischer, Nanette Salvaggio, Eric Kunsman, Howard LeVant, John Retallack, Christye Sisson and Tom Zigon. These core team members have helped us achieve our vision on each and every photograph. The project's achievements are all the more meaningful due to their expertise and commitment. We also owe a debt of gratitude to the vision of Staffan Larsson and Dean Don Hudspeth, who proposed and directed the Big Shot projects in Sweden and Croatia respectively. Because of their participation, the Big Shot gained international attention and acclaim beyond what we could ever had imagined. Special thanks to SPAS alum Scott Saldinger, a tireless ambassador for the Big

Shot photographs featuring the Alamo in San Antonio and the Cowboys Stadium No. 28. Thanks also to SPAS alum Corey Meitchik, who promoted the 1989 photograph of the Intrepid Air Sea and Space Museum and SPAS alum Chris Kay, for unconditional support for the 2009 Big Shot of the Smithsonian's National Museum of the American Indian. Other inspirational contributions to the Big Shot project came from the School's professional staff including Debbie Kingsbury, Mark Sager, Bill Springer, Donna Sterlace, Lisa Deromanis and so many others.

Vital to the accomplishments of the Big Shot project are COUNTLESS corporate sponsors and cultural institutions whose gracious and generous support make the annual project possible.

Author

Michael Peres is a professor of biomedical photographic communications at Rochester Institute of Technology. He joined the faculty in 1986. Peres teaches photomicrography, biomedical photography and other related applications of photography in support of research and discovery in science. He served as the chair of the department from 1989 until June 2010 when he was appointed associate administrative chair. Peres has enjoyed a varied photographic career working and living in a number of cities since 1974. He has been actively publishing most of his career and in 2007 served as the editor-in-chief of the *Focal Encyclopedia of Photography*, 4th Edition. Some of his current professional activities include co-coordinator for the R•I•T Images from Science and RIT Big Shot projects. Peres has received numerous awards including the RIT Eisenhart outstanding faculty teaching award, and the Louis Schmidt Award from the BioCommunications Association. Peres holds a masters degree in instructional technology and bachelor degrees in biology and biological photographic communications. He is also a board-certified Registered Biological Photographer (RBP). mrppph@rit.edu