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victory in immersive theater

new 4d cinematic experience at the national world war ii museum
by David Paul Green

Beyond All Boundaries at the National World War II Museum in New Orleans, Louisiana is the latest in a series of star-powered projects related to World War II. Movies like *Defiance*, *Valkyrie*, and *Inglourious Basterds*, along with HBO's upcoming TV series, *The Pacific*, have reinvigorated international interest in WWII, and the Museum's epic presentation is yet another compelling example of the relevance of WWII today.

The 4-D cinematic experience premiered November 6th, 2009, as a permanent installation at The National World War II Museum's new, \$60 million Solomon Victory Theater.

Executive-produced by actor Tom Hanks, *Beyond All Boundaries* plunges viewers into the 20th-century war whose human toll totaled 65 million. This is a multi-sensory cinematic journey that transports the audience around the globe, through the four years of America's involvement in this global struggle, starting with pre-Pearl Harbor United States and concluding with final victory, in the words of the U.S. soldiers, journalists and citizens who gave their all in the war that changed the world. Mr. Hanks has been involved with this project since the beginning due to his long lasting relationship with the museum and his enthusiasm for the historic significance of WWII.

The National World War II Museum entrusted the concept, design and production to 30-

year industry veteran Phil Hettema and The Hettema Group's creative design team, that included media design and video production company Mousttrappe, creative and technical production firm Audio By The Bay Entertainment Group, lighting design firm Visual Terrain, and composers Tim Williams and Bruce Broughton.

"From the moment we became involved with this project, we knew it was a really important story to tell," says Hettema. "Most of the team had personal connections to the war. My dad flew a B-17 over Germany and practically everyone had a relative or friend who was involved in it. *Beyond All Boundaries* is really the story of how America came of age and became the nation we know today. It's vital we make sure the story gets told in a way that will live on for future generations."

In order to do so, the team didn't just create a film, but incorporated props, effects, lighting, motion and music, to appeal to the senses and immerse the viewer in the war experience.

The story begins with a pre-show that explores the era before Pearl Harbor, and leading up to the attacks of December 7, 1943; the date President Franklin Roosevelt memorialized as, "A day that will live in infamy."

Once America enters the war, lives are disrupted, a country transforms, and the world itself changes. To emphasize the emotional and historical impacts of this global transition,

the film goes beyond portraying the war, as so many movies have done before it, and puts the viewer into the perspective of the combatants, correspondents and civilians who experienced it. Guests experience, as close to first-hand as is possible in a theater, what it is like to be in the jungle, in the desert, in the forests and trenches of the battles.

At the same time, the museum and the creative team wanted to make sure the realism of the effects did not overwhelm the factual truth of the story itself. Not everything can be covered in a four-year conflict when distilling four years of global experience into a 37-minute presentation, but the film will leave you wanting to find out more. The team was determined to maintain an even hand, keeping not just the emotional core, but the historical accuracy, intact.

Experts researched every aspect of the film in an effort to maintain that accuracy. When the film is over, viewers can head over to the main museum facility and do some additional exploring on their own to answer questions the film brought to mind.

Museum President and CEO, Dr. Gordon H. "Nick" Mueller says, "Historians around the country, WWII historians, as well as people at the National WWII Museum, scrubbed every part of this script, assuring the accuracy of every word in the entire show. I don't think there's ever been more attention given to a script."

Scenes from the *Beyond All Boundaries* 4D cinematic experience. All photos courtesy of The National World War II Museum.





The end results justify all the sweat: Museum Senior Vice President Bob Farnsworth says, "Our expectations were so high, we had set the bar so high. This is so important for this museum. Then we sat down and we saw all the layers come together and it was the magic that we'd hoped for."

Hollywood's A-List Enlisted

To tell the story of America's passage through World War II, the main film features the voices of some of Hollywood's biggest names, portraying — in their own words — the everyday soldiers and servicemen who fought to preserve America's and our allies' freedom; as well as the journalists who covered the war.

The film's director, David Briggs of Mousetrappe explains, "Tom Hanks gave us an offer we couldn't refuse. He said, 'Why don't you come up with a wish list of who you would like to have voice the other speaking parts of the main show.' And we ended up with an all-star cast that includes Tom Hanks as narrator, and names like Kevin Bacon, Jennifer Garner, John

Goodman, Emile Hirsch, Tobey Maguire, Brad Pitt, Giovanni Ribisi, Gary Sinise, Elijah Wood and many others."

In addition to Pitt and Goodman, who have ties to New Orleans, actors Wendell Pierce and Patricia Clarkson maintain residences in New Orleans and took particular interest in participating in this project by lending their voices to the exhibit's main film.

"Beyond All Boundaries weaves a spectacular tapestry of World War II – authentic, powerful and inspiring," says Tom Hanks. "I'm proud to have served as executive producer of Beyond All Boundaries."

Settling The Score

The film's original score was completed by 2005 and 2008 Thea Award-winning feature film, theater and spectacle composer, Tim Williams, and recorded by a 60-piece orchestra in Los Angeles, at the Warner Brothers scoring studio. The score was produced by Paul Freeman and Bob Wackerman of Audio By The

Bay Entertainment Group, who also oversaw the sound design for the film, where every sound effect had to be researched to ensure authenticity.

Academy Award-nominated, Emmy Award-winning composer Bruce Broughton — known for his scores to Tombstone, Silverado, The Three Musketeers and Harry and the Hendersons — composed the main themes for the film. "I think it's particularly interesting because audiences will follow this enormous conflict across the planet. At first there's excitement – we're going to beat up the bullies!" says Broughton. "Then we move into the awfulness of the war, its savagery and the horror of invading Japan which ends in the nuclear blast. Emotionally, it's quite a journey."

"There's a wonderful scene where the audience is transported into a Belgian forest and the snow is falling and the music is playing Silent Night, which is also a German hymn," he continues. "Just as you get a feeling of relief, out of nowhere comes this massive Nazi attack. The audience is plunged into the situation. You are there."



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Broughton's father, Harold Broughton, now 86, was an anti-aircraft gunner and veteran at the Battle of Leyte Gulf in the Pacific. The elder Broughton stood not more than ten feet away from MacArthur when the famous general waded ashore during his "return" to the Philippines in 1944. Other members of the production have had similar connections to the Greatest Generation. Broughton believes those ties conspired to create a unique and powerful piece of cinematic history.

"From the director to the producer I've rarely seen so many people in a production on the same page," he says. "We all had the same goal: to tell the story of America in World War II. I think we've done a great job."

The A-Team Behind the A-List

The production team on the project begins with The Hettema Group, whose President, Phil Hettema, acted as Creative Director on the project.

In his previous position, Phil Hettema was Senior Vice President, Attraction Development for Universal Studios Theme Parks Worldwide for over a decade. There he was responsible for the creative development of attractions and shows, master planning the ongoing development for all five Universal parks. He oversaw development of overall theme park concepts for domestic and international expansion for Universal Studios Hollywood, Universal Studios Florida, Universal's PortAventura (Spain), Universal's Islands Of Adventure (Florida), and Universal Studios Japan.

As The Hettema Group was assembling the creative team, they brought in Pasadena-based media design and production specialists, Mousetrappe to produce the heart of the attraction — the film itself.

Multidisciplinary Los Angeles lighting design firm Visual Terrain, known for the lighting of the iconic towers at Los Angeles Airport, various theme park attractions worldwide, and performers from Bruce Springsteen to Styx, was brought in for the delicate task of enhancing the visual experience by adding lights to enhance the film and in many places expand the action from the screen into the room itself.

Principal Lighting Designer Lisa Passamonte Green of Visual Terrain, credits senior lighting designers Michael Mahlum and Steven Young, and lighting programmer Jen Goldstein, with developing a lighting scheme that remained flexible until the last possible moment. "It allowed for unexpected opportunities that arise when all members of the creative team are in the building assembling the show."

4-D Experience Without the Glasses

Seating 250, the Solomon Victory Theater features a 120-foot-wide, 30-foot-tall screen that curves nearly 180 degrees around the audience. Images on the screen interact with

physical set pieces lifted hydraulically from a pit or dropped down from the 75-foot ceiling. Motion is incorporated into the seats, allowing them to rumble when a tank comes through, or react to explosions. Viewers also experience gentle falling snow along with a lone soldier in the Belgian forest, and see the piercing glare of a searchlight from the concentration camp guard tower.

Media Designer, Daren Ulmer, President and CEO of Mousetrappe, explains, "Normally a screen this size is big enough for 1,000 to 1,200 people. There is an intimacy in this theater where this screen is overwhelming, but it's overwhelming in a way that makes you feel immersed."

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"This is a three-dimensional experience, truly," he continues. "It's not about putting glasses on and watching a 3-D film, but you are in a three-dimensional space. We have a big widescreen, but we also have almost as much depth as there is width to the screen."

In addition to the multi-sensory effects and 3-D set pieces, there are three layers of projection utilizing nine Digital Cinema DLP Projectors at a resolution equivalent to 4K digital projection (4,000 pixels of horizontal resolution.) The main projection screen is actually a scrim screen (a transparent screen that allows the audience to see through it when lit from behind), but video images are also projected on a cyclorama behind the scrim and on three moveable projection panel screens that appear from the orchestra pit at key emotional points in the show.

"We worked hard to integrate the lighting within the set pieces – as in the design and creation of a custom guard tower light that echoes the searchlights used on the actual towers," says Visual Terrain's Passamonte Green. "We also used a variety of lighting within the multi-layered screens and sets to reinforce the more dimensional approach to the overall experience, which helps to draw the audience in even further. For instance, in the dogfight scene, we are careful to move the lighting across the audience in a way that mimics the fight on-screen. During the heat of the jungle scenes, we wanted to reinforce the feeling of the heat beating down on the soldiers day after day, and during the snow falling scene, we used the lighting to highlight the actual snow falling on the audience, as well as to light the audience in cool blues."

The Story

In the quest for historic accuracy, the Museum and the production team, including writer Chris Ellis, researched the museum's extensive film archives to uncover rare footage.

"We have actually joked that we were writing the show longer than the war itself actually lasted, which is true," says Ellis. "Anyone that's interested in history would relish the

opportunity to work with guys like Donald Miller, Nick Mueller, and Hugh [Ambrose]. So we had some fantastic historians working with us, but how do you tell a story that everyone has probably heard? How do you take a new, fresh approach to it?"

"Viewers will be excited to see that we've gone beyond the typical World War II footage," said Seth Paridon, Manager of Research Services for The National World War II Museum. Paridon and his staff spent years going through film archives to secure rarely viewed footage that has often been overlooked by filmmakers and documentarians, for a truly unique experience. Leading historians, such as Dr. Donald L. Miller, Hugh Ambrose (son of and editor for the museum's co-founder and author of *Band of Brothers*, Stephen Ambrose), and Museum President and CEO, Dr. Nick Mueller, also consulted on the production.

"We were covering new territory here," Mueller says. "No museum in America, perhaps the world, had put a story of this scope into this kind of a multi-sensory cinematic experience."

Creative consultant, screenwriter and Professor of History at Lafayette College, Donald L. Miller, author of several best-selling books about the war, collaborated on the screenplay of *Beyond All Boundaries*. As a historian, it was vitally important to Miller that the facts be accurate. "We wanted it to have fidelity," he said. "The story is too good to make up. You're seeing events that really happened. *Beyond All Boundaries* gives audiences a tremendously exciting, immersive and significant picture of the immensity of World War II. It was a true global conflict, and America is the only country that fought it globally."

Ellis adds, "A lot of us working on this show grew up around WWII veterans, and I think a lot of us realized that we are the last generation who will speak with them personally. And I think for a lot of us it became something almost of a sacred trust to convey that sense of reality."

"We made a conscious decision, first of all, that we weren't going to do a slam-bang, get-em-out-of-their-seats applauding ending," explains Phil Hettema. "It just didn't seem appropriate

for the story. What we wanted the audience to be was - thoughtful."

The pre-show and main film are told from an American perspective, yet is careful not to editorialize. The viewer will however, walk away with a clear understanding of the price that was paid to win this epic struggle.

"It was in one of our several development sessions when we sat down with Tom Hanks and he suggested, 'Could we tell this with the voices of people who were there?'"

Director David Briggs remembers, "We took one of the early drafts of the script and we made a timeline based on all the elements of the script, and it filled an entire wall. And then we came back with post-it notes that we placed all over the wall with emotions that each scene brought out. And we used that as the process to refine every visual, every piece of music, and every special effect in the film."

"We fortunately have Tom Hanks as narrator," continues Phil, "that provides us with continuity, but I think the conscience of the film — the real heart and soul of it — is the individual voices and particularly [war correspondent] Ernie Pyle, voiced by Gary Sinise, who we bring back several times during the story."

The result is an experience that plunges audiences into a sensory world where they travel from the Pacific Theater to the European Front, feeling the steam rising from Guadalcanal's jungles, brushing snowflakes from their cheeks in a Belgian forest with a lone soldier, and flinching at deadly anti-aircraft fire as they fly with bomber crews thousands of feet above Nazi Germany.

Whether the viewer is new to this time in world history or a seasoned WWII history buff, they are sure to walk out of the theater with a hunger to learn more. And, they have only to walk across the street to the main building to explore the countless archives and exhibits offered there to do just that.

"What I hope people take away from this experience as they exit the theater is a deeper understanding of the sacrifice, a deeper

understanding of what Americans and the rest of the world went through, and a desire to find out more," says David Briggs. "And I hope it takes you several days to sort out what you've felt. And I hope you come back and see it again."

New Orleans Recovery

The \$60 million Solomon Victory Theater is just the first phase of a \$300 million museum expansion master plan, which will ultimately host seven pavilions and take up most of the square block that faces the museum's main building. The later phases are scheduled to be completed in 2015.

The expansion is being well-received in New Orleans, which has been slow to recover from Hurricane Katrina in 2005 and which continues to struggle, along with the rest of the country, in the current economic downturn.

The existing National WWII Museum is located in the Warehouse District of downtown. It comprises 16,000 square feet of gallery space, featuring state-of-the-art, interactive exhibits with oral histories from veterans, artifacts, documents, photographs, and rare film footage. The museum was dedicated in 2000 as the National D-Day Museum, and became the National WWI Museum thanks to a Congressional designation.

According to the American Association of Museums, the expansion venture is one of the most ambitious in the United States.

The Solomon Victory Theater was made possible in part by a \$5.5 million donation from the Solomon Family, inspired by patriarch Theodore G. "T.G." Solomon, who served four years in the U.S. Army, including time in the Pacific theater during the war. The experience had a formative effect on Solomon. He returned to the states and led a family theater business that grew into a 600-theater chain.

Solomon's daughter, Glenda Solomon Bradley, says, "The Solomon Victory Theater represents our father's life and work, his accomplishments and, most of all, his passion. We are so proud to come together as a family to honor him and his legacy."

Dr. Nick Mueller says, "Never has a family gift been so perfectly matched to the project. What could be more appropriate than to host the Theater's grand opening in November with the Solomon name on the marquee?"

In addition to the theater, the museum also opened the Stage Door Canteen, a live entertainment venue, and The American Sector, a John Besh restaurant, in November.

(In addition to winning a James Beard award, Besh himself is also a veteran of the first Gulf War.)

"Ten years from now, twenty years from now, fifty years from now this museum is going to be here," Mueller says, "and this museum is going to help people understand what their grandparents and great grandparents did during that war, and that's going to be something special."

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David Paul Green is a Los Angeles-based writer and information architect. He is president of Monteverdi Creative, Inc. Email: info@monteverdicreative.com The National World War II Museum, The Hettema Group, and Mousetrappe also contributed to this article.

Projection: 9 Digital Cinema DLP Projectors equivalent to 4K digital projection

Capacity: 250 seats, 8 showings a day

Executive Producer: Tom Hanks

Producer: The National WWII Museum

Show Designer/Developer: The Hettema Group

Media Design/Production: Mousetrappe

Sound Design and Music Production:

Audio By The Bay Entertainment Group

Show Action: L.A. Propoint, Inc.

Lighting: Visual Terrain

Technical Production / Special Effects:

Electrosonic, Inc.

Bandit Lites, Inc.

Rando Productions, Inc.

Effects: Multi-Layered Screens (Scrims/Pit Screens), Seat Rumbling, Snow, Smoke, and 3-D Scale Models Props (lifting in and out throughout show)

Projection/Audio: 9 Digital Cinema DLP Projectors equivalent to 4K digital projection and a full surround custom audio system

Narrator: Tom Hanks

The Voice Cast: Kevin Bacon, Adam Beach, Corbin Bleu, Patricia Clarkson, Kevin Connolly, James Cromwell, Blythe Danner, Viola Davis, Jesse Eisenberg, Jennifer Garner, John Goodman, Neil Patrick Harris, Jay Hernandez, Emile Hirsch, Kevin Jonas, Tom Kane, Justin Long, Tobey Maguire, Joseph Mazzello, Paul McCrane, Daran Norris, Wendell Pierce, Chris Pine, Brad Pitt, Giovanni Ribisi, William Sadler, Hans Schoeber, Sab Shimono, Gary Sinise, and Elijah Wood.



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