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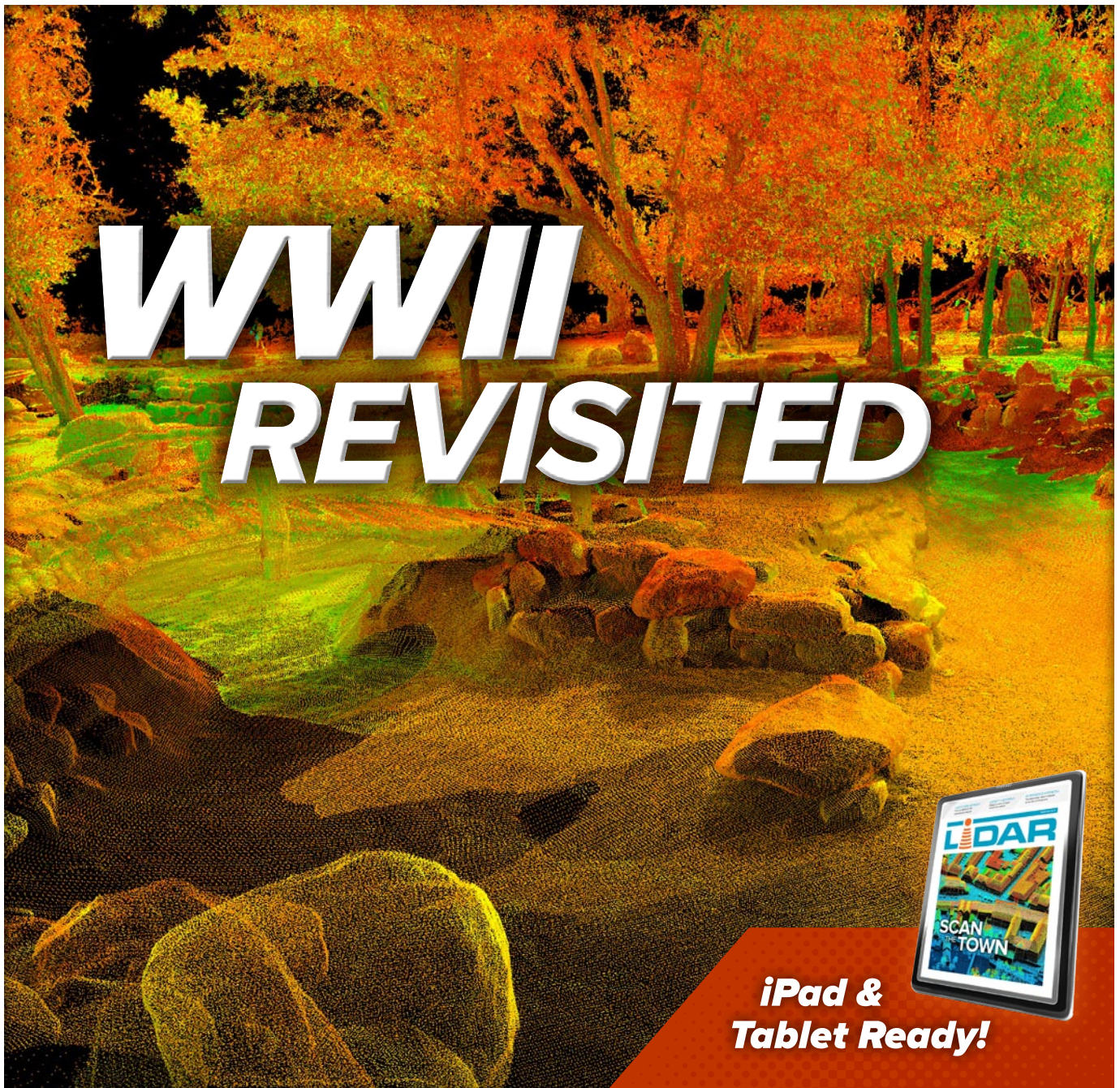
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The Virtual Japanese American Confinement Sites Project



Early draft rendering of Merritt Park reconstructed from laser scan data and historic images.

Shortly following the bombing of Pearl Harbor, President Franklin Roosevelt issued Executive Order 9066 which would affect all people of Japanese ancestry living on the Pacific Coast. In 1942, Executive Order 9066 resulted in the forced removal of over 110,000 Japanese Americans from their homes in California, western Oregon, Washington, Hawaii and southern Arizona. 62% of those moved were

American citizens. This single largest forced relocation in US history was justified at the time as a military necessity, although 40 years later the US government conceded that the relocation was based on racial bias rather than a true threat to national security. The fundamental injustice of the evacuation, relocation and internment of Japanese Americans was formally acknowledged by the Civil Liberties Act of 1988. Despite the Civil Liberties

Act and the subsequent formal apology, there is a noticeable omission of the topic of the confinement sites in social discourse, American history, and many educational curriculums.

In response to the need for a wider telling of the history of this atrocity as it relates to the American people, democracy, and civil liberties, congress established the Japanese American Confinement Sites (JACS) grant program (Public Law 109-441, 16 USC 461) for

BY ELIZABETH LEE



the preservation and interpretation of U.S. confinement sites where Japanese Americans were detained during World War II. The law authorized up to \$38 million for the entire life of the grant program to identify, research, evaluate, interpret, protect, restore, repair, and acquire historic confinement sites in order that present and future generations may learn and gain inspiration from these sites and that these sites will demonstrate the nation's commitment to equal justice under the law. One of the challenges in telling the story and conveying the events



“We must learn not only from the glorious moments of our nation’s history but also from the inglorious moments.”

—Ken Salazar,
U.S. Secretary of Interior



surrounding the incarceration of over 110,000 individuals is that little physical remains exist at the various camps and assembly centers. When visiting the sites today it is impossible to imagine how they would have looked or what the conditions would have been like.

CyArk recognized a great opportunity within the JACS program to utilize 3D technologies for a wider telling of the history of these sites and the events surrounding the forced relocation. Although little remains on the sites, 3D scanning technologies could be used to capture the



Historic Image of Manzanar courtesy of the Densho archive.



Superintendent Les Inafuku gives CyArk and ARC a tour of the site, showing the remaining foundations of the Laundry Room.

remaining fragile physical structures and landscape components. 3D technologies also offered an opportunity to virtually re-create the various camps and their conditions. Additional technologies could also be leveraged to integrate oral histories and historic images from the period of incarceration to tell the story more completely. In response to these opportunities, CyArk developed a program to address the critical issues of the JACS sites through the digital preservation of three important locations. Manzanar, Tule Lake, and Topaz.

Of the JACS program National Park Service Director Jonathan Jarvis has said “These places, where more than 110,000 Japanese Americans were unjustly held, testify to the alarming fragility of our constitutional rights in the face of prejudice and fear. The National Park Service is honored to help preserve these sites and tell their stories, and thus prevent our nation from forgetting a shameful episode in its past.”



CyArk's Scott Lee and ARC's Genaro Vargas, Jr. scan remains at Manzanar.

CyArk was fortunate to receive one of the 2011 JACS grants in order to accomplish the work. The first step in digital preservation was to accurately capture the sites and their landscape in 3D using laser scanning, GPS and photography. The Topaz War Relocation Center in Delta Utah was the first site to be captured in 3D. CyArk worked with technology center partners at CU Denver's Center of Preservation Research (CoPR) and Professor Kat Vlahos' team to complete the field documentation in August of 2011. Equipped with terrestrial laser scanners and High Dynamic Range photographic equipment, the team set up on the camp site in order to laser scan and photograph the remaining artifacts unique to the Topaz Relocation Center. This highly-accurate and geo-referenced data set will provide the "foundation" for the 3D digital reconstruction model as well as a self-guided virtual tour. Topaz Museum Board President, Jane Beckwith, noted: "The Topaz Internment Site remains very much like it was right after the government removed all buildings including the barracks, latrines, mess halls, and administrative structures.

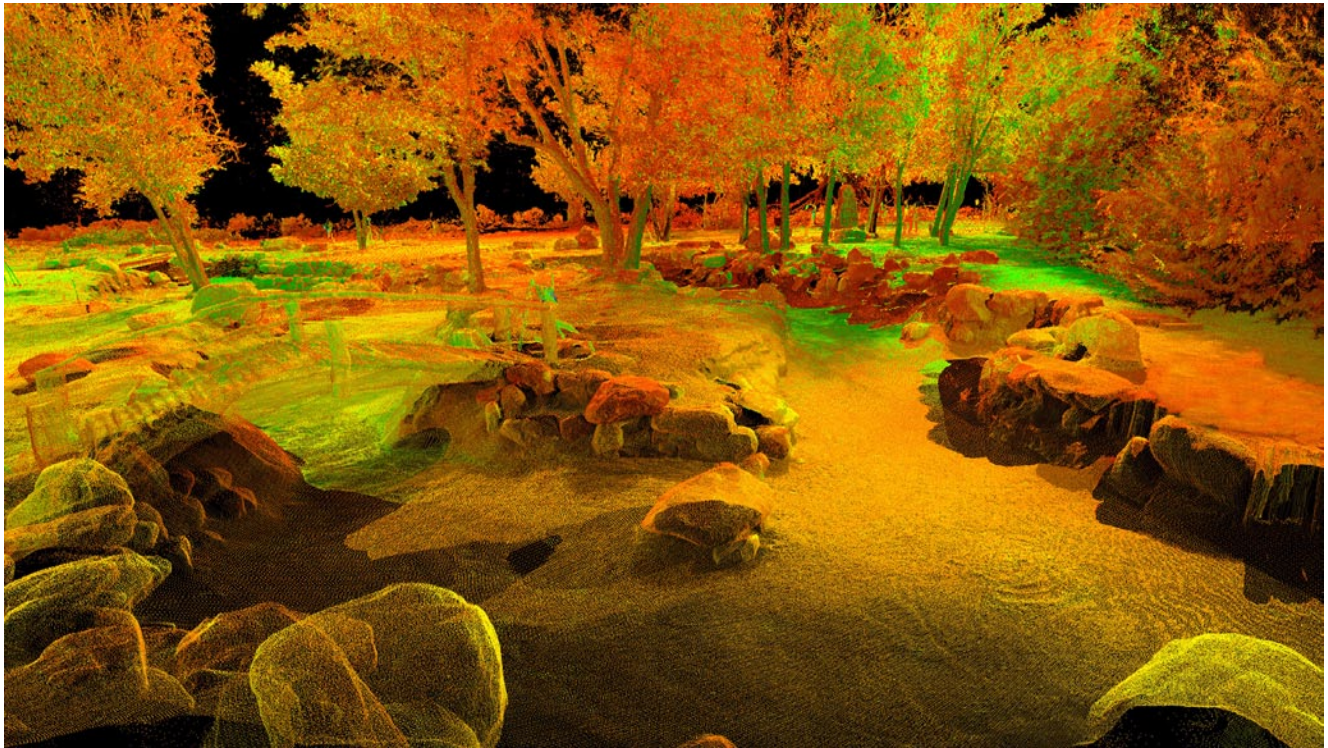


Photograph of Merritt Park at Manzanar today.

Despite this, the site remains rich with features that have been ignored for almost 70 years. The work that CyArk is doing here will give us a greatly needed record of just how much of the site remains."

The process of field capture was then repeated in September at Manzanar National Historic Site in partnership with Architectural Resource Consultants (ARC), an architectural firm based in Irvine CA. In November, the Tule Lake Segregation Center

National Monument was captured partnership with CoPR. Each individual site has unique features that were ideal for digital documentation. For example, Manzanar has several rock gardens built throughout the camp. These gardens were constructed by the internees to beautify the barren landscape and personalize their surroundings. At Tule Lake there is a very fragile collection of pencil graffiti throughout the prison building. These one of a kind features



Merritt Park Laser Scan data.

were very critical to capture during the on-site work.

The data from these sites will be stored and archived by CyArk as part of the ongoing program. Although the data capture on the sites was a substantial effort on the part of CyArk and partners, it was only the first step in the project. The next challenge was to use the 3D laser scan data, GPS coordinates, and historic images to authentically recreate Manzanar, Tule Lake, and Topaz. In addition to creating virtual reconstructions of the camps, CyArk is working with Densho, another non-profit organization, to integrate existing oral histories and historic images and documents.

Although the overall project is very much still in progress, the laser scan data of the sites has been an invaluable tool in accurately recreating the landscapes. Registered point

cloud data is first meshed into a solid model. The meshed data can then be brought into specialized rendering engines for adding features which are no longer a part of the site. Using the accurate point cloud data as the base, CyArk is able to draw from historic photographs and oral histories about the site for an accurate reconstruction. CyArk's current work is focused on the recreation of Merritt Park at Manzanar. Merritt Park today is arid and dusty. The virtual recreation of the park will allow virtual visitors to hear the sound of the waterfall that connected the two lakes and see the famous wild rose bushes grafted by Kuichiro Nishi. The final output of the project will result in both an online interactive web portal for viewing the project and mobile applications for visitors to augment an onsite experience. Utilizing these

new technologies provides fourth and fifth generation Japanese Americans with the ability to envision the actual barrack where their grandparents (great grandparents) were held. It is hoped that through the use of these new digital technologies, a wider telling of this unfortunate but important story may be possible.

CyArk will continue to provide project updates through cyark.org. The special JACS web portal is scheduled for launch in late summer of 2012. ■

Originally trained as an archaeologist, **Elizabeth Lee** has managed projects for CyArk all over the world. A California based non-profit, CyArk has digitally preserved over 50 important heritage sites including Pompeii, Tikal, Ancient Thebes, Chichen Itza, and Babylon. As Director of Operations for CyArk, Ms. Lee is currently responsible for all aspects of digital preservation project work.