



National Park Service
U.S. Department of the Interior

Mount Rushmore
National Memorial

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Mount Rushmore National Memorial News Release

Project to Digitally Preserve Mount Rushmore Announced

(Keystone, SD) Mount Rushmore National Memorial, a unit of the National Park Service (NPS) is developing a groundbreaking partnership with CyArk – a US-based non-profit organization that pioneered the digital preservation (3d laser scanning, modeling and archiving) of world heritage sites and monuments, - and the Culture Minister of the Scottish Government. The partnership’s task is the 3D digital recording of Mount Rushmore and will provide, for the first time, a visual documentation of this internationally important memorial in South Dakota.

At a press conference today (Friday, 3rd July), Gerard Baker, Superintendent at Mount Rushmore National Memorial, said: “Today, we have discussed a commitment to pursue a truly pioneering partnership with CyArk and through them, the Scottish Government, RESPEC Engineering, Wyss and Associates, and the South Dakota School of Mines and Technology, to take advantage of truly innovative opportunities in digitally recording, preserving and managing our historic resources.

“While Mount Rushmore is a national icon in the US, there is expertise in other countries which can assist us to preserve it in a modern context. Therefore, we have identified international partners with technical expertise and commitment who share our vision to expand Mount Rushmore’s and the National Park Service’s ability to offer more interactive interpretive, educational and research programs while enhancing our preservation and security capabilities.

“A partnership of the size allows us to celebrate our cultural heritage on a world-wide stage by recording one of America’s most important historical sites for the benefit of future generations.”

The organizations are now seeking to complete an agreement to share other expertise, explore further international collaboration, and develop cultural connections between Scotland and the United States.

Michael Russell, Scotland’s Minister for Culture, said: “I am delighted to announce a partnership between the National Park Service, CyArk, the Scottish Government, RESPEC Engineering, Wyss and Associates, and the South Dakota School of Mines and Technology – with a common goal to digitally preserve cultural heritage sites which will bring to the fore a unique method of digitally visualizing and understanding historic landmarks.

“Scotland has great expertise and a wealth of experience in preserving, understanding and researching its historic environment. We have embraced 3D scanning to increase our awareness and are now able to share our knowledge in digital documentation with countries and organizations on a world stage for everyone to enjoy.

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“This is a first step in what I believe can be a successful long term international partnership.”

Ben Kacyra of CyArk, whose Foundation seeks to digitally capture world heritage sites and monuments to create a lasting record with world heritage projects such as Mesa Verde in the US, Pompeii in Italy, Ancient Thebes in Egypt, Tikal in Guatemala, Chichen Itza in Mexico, and Angkor in Cambodia, to list but a few said: “It was exciting to meet Superintendent Baker and his staff last fall and to learn of his vision of digitally preserving this American Icon for future generations. His further objective of making this invaluable data available to the public worldwide aligned with CyArk’s mission of dissemination through the CyArk website.

“We are indebted to Historic Scotland for their very generous donation of resources and technology to perform the 3D laser documentation. This underscores the international importance of Mount Rushmore and Scotland’s world class capabilities in this field. We are delighted to have Mount Rushmore and Historic Scotland as active partners in CyArk and to have the Memorial as one of the first heritage sites to be included the CyArk 500.”

Kacyra is credited with introducing the first commercial portable 3D laser scanning and modeling system in the early 90’s through his company Cyra Technologies. Cyra Technologies was acquired by Leica Geosystems in 2002.

Douglas Pritchard from The Glasgow School of Art said: “The digital documentation of Mount Rushmore is a technically challenging but exceptionally exciting project. It follows the success of the research relationship between the Digital Design Studio (DDS) at the Glasgow School of Art and Historic Scotland.

“The technical approach to be taken at Mount Rushmore will be similar to our Scottish-based projects, such as Stirling Castle and Rosslyn Chapel, although at a larger scale.

“This is a once-in-a-lifetime opportunity to demonstrate the unique technical skills at the DDS on such internationally significant heritage site.”

The scanning project will be led by CyArk with critical technical and logistical support through Historic Scotland – Scotland’s heritage agency and its partner, Glasgow School of Art – who will work with the Park Service at Mount Rushmore and devise a scanning timetable. The project is expected to begin in late September and be completed in two-weeks. Local technical partners RESPEC Engineering, Wyss and Associates, and the South Dakota School of Mines and Technology will benefit from the partnership by developing capabilities from shared experience to sustain and further develop this unique method of digitally visualizing and understanding the Memorial and other historic landmarks.

The Mount Rushmore scanning project would provide a three-dimensional, digital model capable of recreating sculpted surfaces with an accuracy of less than 1 centimeter. This 3-D model will be the focus of the comprehensive CyArk website for showcasing to the public the heritage and historic assets contained within the Memorial boundary.

The value of the 3-D model provides realistic digital information of the site and has applications to provide innovative and interactive public interpretation, education, research and security programs. Regarding our mutual goals of preserving our precious heritage sites, in the event of

an incident resulting in damage to the sculpture, the model would provide the data necessary to accurately replicate carved surfaces.

The digital model will also give the NPS the ability to develop a very realistic interactive model for Mount Rushmore for education and interpretive use including potential “virtual tours” of the Memorial, as well as the entire site; the 3D models of the sculpture and the site could be used to create 3D digital educational programs for grades K-12.

The Hall of Records represents a “time capsule” displaying all phases of the carving process. The digital model will capture this information with millimeter-scale accuracy for posterity and provide a means to share this unique information, educationally and interpretively, with individuals not able to visit the site.



Photo caption: Officials Friday, July 3, 2009, announced a project to digitally preserve Mount Rushmore National Memorial as part of an international project digitally preserving world heritage sites and monuments. Commemorating the partnership at the sculptor's studio at Mount Rushmore, Keystone, SD., were, from the left, Michael Russell, Scottish Culture Minister; Ben Kacyra of CyArk, a nonprofit organization that has pioneered digital preservation using 3D laser scanning and modeling; and Gerard A. Baker, superintendent of Mount Rushmore National Memorial. Scotland is in the process of digitally preserving its five world heritage sites. (Steve McEnroe/Mount Rushmore Photo)

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