



Quantapoint Project Summary

Digitizing the Guggenheim

Quantapoint Helps Restore a Frank Lloyd Wright Treasure

Situation

The Guggenheim Museum, the innovative concrete building designed by Frank Lloyd Wright, had been suffering from surface cracks since its construction in 1959. The future of the New York landmark was in question. The Solomon R. Guggenheim Foundation hired a team of experts to implement a very detailed and difficult \$28 million dollar restoration project.

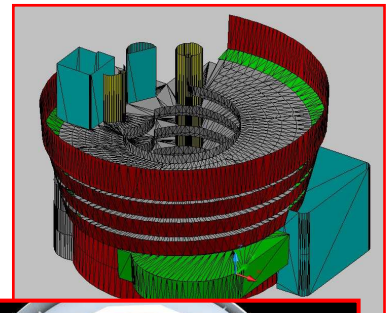


Challenge

The restoration team was faced with the dual challenges of documenting the structural cracks and formulating an action plan to repair them as well as restoring and preserving the integrity of the building. Additionally, accurate documentation of the interior was also required to help improve exhibit locations, traffic flow patterns and spatial planning. To further complicate the project, the museum was to remain open throughout the restoration process.

Solution

Robert Silman Associates commissioned Quantapoint to digitize the Guggenheim using our patented laser scanning technology – without invasive manual measurements, significant personnel in the field or purchasing costly hardware. In only 9 days, Quantapoint digitized both the interior and the exterior of the Guggenheim during “off-hours”.



Quantapoint then used our award-winning Laser Model™ technology to create a high-definition digitized version of the Guggenheim (a Digitized Facility™) that could be accessed directly or within various CAD packages. Quantapoint combined this with other non-destructive evaluation (NDE) technologies – such as seismic, sonar and x-ray studies – to create highly accurate 3D CAD models for finite element analysis (FEA). By providing a single source of information, engineers had a better understanding of the structural integrity of the museum and could determine what improvements need be made to ensure the longevity of this landmark treasure. Additionally, the Digitized Facility was used to create additional drawings as needed for maintenance, operations and interior spatial planning.

