Digital dome

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Cultural Programs of the National Academy of Sciences

The National Academy of Sciences has a history of engagement with artists and architects dating back to 1924 when its historic home opened on Constitution Avenue in Washington, DC. The Academy's building committee, along with architect Bertram Grosvenor Goodhue, engaged a number of prominent artists of the time to adorn the building with imagery reflecting the history of science.

The idea was to use the display of art to marshal a greater public understanding of the impact of science on history and society. One of these artists was Hildreth Meière, who created the imagery for the

ceiling of the building's Great Hall depicting the history of science as it was understood in the early 1920s. This was Meière's first large commission, which gave her an opportunity to explore the representation of abstract ideas, but also, due to difficulties with paint adhering to the new Akoustolith tiles of the ceiling, it provided a chance for collaboration with engineers to develop new painting techniques.

Fast forward to today where our methods of gathering information are mediated through technology ranging from the Internet to smart phones. Quiet static images,

no matter how striking, may not have the same impact they did when they were first created.

To bring the original vision for the art of the Great Hall into the 21st century, Cultural Programs of the National Academy of Sciences (CPNAS) along with the Imaging Research Center (IRC) of the University of Maryland, Baltimore County, created an iPad application that provides additional information about the ceiling's iconography and the history of scientific thought and discovery. While standing in the space, a visitor can use the iPad to scan the ceiling and click on any of the images in the ceiling. Visitors can then use the tool to learn more about the icons and the science they represent.

Rather than engage a commercial vendor for this project, CPNAS selected the IRC, led by artist Lee Boot, in part because of their interest in developing the application beyond what has already been accomplished with technology. Enclosed spaces that often have limited or no internet access create an unstable environment for GPS. Echoing the technical challenge that Meière encountered with the materials of the ceiling, the IRC team worked with technical experts to create a single point compass solution for the application's navigation. According to Nancy Proctor, Head of Mobile Strategy and Initiatives at the Smithsonian Institution, this represents advancement in the technology that could be useful to museums and other institutions in similar situations.

To download the free application for iPad, search the Apple App store under "NAS dome" or explore the technology online at www.NASdome.com. Funding for the Digital Dome was provided by the National Academy of Sciences and by the Alfred P. Sloan, Gordon and Betty Moore, Kavli, and Spencer Foundations.

A mobile application allows visitors to explore the artwork in the dome of the NAS Building Image courtesy of the Imaging Research Center/University of Maryland, Baltimore County.