

## Lighten Up: Enhancing the Visitor Experience

When the Smithsonian's National Postal Museum (NPM) was afforded the opportunity to expand their exhibition space and create the William H. Gross Stamp Gallery they also took on a familiar challenge to museums of balancing access to the collection with preservation concerns. As outlined by **Linda S. Edquist**, the NPM's Head of Preservation since 1995, these challenges fell into three categories:

- Museum envelope (building-level) improvements
- Gallery-specific solutions
- Object-level projection

All three of these categories presented different difficulties and resulted in a variety of solutions. All of these solutions focused on providing a single result, however: improving access to the collection and the visitor experience while maintaining a safe environment for the long-term preservation of the collection.

Ms. Edquist referenced Angela Matchica's article in the May 2013 issue of *LD+A* (the magazine of the Illuminating Engineering Society of North America) as a starting point for the NPM's focus on enhancing the visitor experience as an integral part of their expansion plans and gallery design. Ms. Matchida's article, which is available online, states that "Museums are no exception—daylight, or any connection with the outdoors, contributes to prolonged visitor stays."<sup>1</sup> This was especially relevant to the museum envelope improvement and gallery-specific solutions as several of the new gallery areas had historic windows that had to be preserved and any solution would need to be approved by the Historic Preservation Office.

Because the NPM had time before beginning the expansion project, it undertook a solar tracking and light penetration study to determine the maximum extent of the natural light from the historic windows into the building. Based on the results of that study they were then able to test several possible solutions. As outlined by Ms. Edquist they created sample windows with embedded stamp graphics that would be visible on the exterior of the building both during the day and when illuminated at night. They also tested various densities of Mecho shades to obtain the light levels necessary for various object requirements. In the historic postmaster suite, for instance, a denser Mecho shade was needed to reduce the natural light to acceptable levels.

In addition to these solutions, the NPM also made gallery location decisions based on the objects included in each gallery. The Gems of American Philately gallery, which would contain important objects selected by the curators for permanent display, for instance, was located farthest away from the windows. In other galleries walls with graphics and didactic materials were placed in front of windows to further reduce the

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<sup>1</sup> Angela Matchica, "The Fine Art of Museum Lighting," page 46, *LD+A*, May 2013.

natural light penetration. Finally, a variety of object-level protections were put in to place to protect the most fragile works in the collection.

These object-level solutions included motion sensors, pull-out drawers, objects behind doors that visitors would lift, and SmartGlass technology. Each has had a various level of success but also some difficulties. Motion sensors sometimes fail to detect visitors, pull-out drawers and covers can be both difficult for visitors to manipulate and can have mechanical issues as well in that door pulleys and magnetic light activators fail. Refining the design of these has eliminated many of the initial issues, but daily gallery checks to determine if the doors and drawers are working properly has become necessary.

One particularly interesting object-level solution was the use of Smartglass to protect some extremely fragile objects such as the anthrax letter sent to Senator Daschle. Smartglass is made using nano-particles that align when the visitor presses a button sending voltage thru the glass and activating the light inside the case. According to the manufacturer, SmartGlass provides near total reduction of light when not activated and 100 percent UV protection.<sup>2</sup> A recording light meter placed inside a case by the NPM recorded a 90% reduction of light. Another benefit is that Smartglass does not deteriorate over time. A challenge, however, is that visitors do not always realize that there is an object underneath what appears to be a blank screen, so signage needs to be clear.

Finally, Ms. Edquist also discussed the National Stamp Salon, a gallery in which 275 pullout frames containing tens of thousands of stamps and pieces of mail are accessible to visitors. The historic design of pullout frames were difficult to manipulate and lacked security features, so the NPM worked with Goppion in Milan, Italy to create a new design that would solve these issues. Several prototypes were made before the design was finalized. To maintain the exhibition, collections and conservation staff meet bi-monthly to clean the frames and check mountings.

In concluding her presentation, Ms. Edquist remarked that there is still more that can be done in both efforts to enhance the visitor experience and in finding cost-saving solutions for museums in general. She stated that teamwork from the NPM staff from the beginning lead to better results from the start and that working together to find solutions, instead of creating roadblocks, was crucial to the success of the expansion project.

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<sup>2</sup> Smartglass is manufactured by Smartglass International, [www.smartglassinternational.com](http://www.smartglassinternational.com).