

CASE STUDY

The Museum of Modern Art (New York) MoMA

Creativity is the soul of innovation

Pioneering is an attitude often associated with America. Since opening in 1929, The Museum of Modern Art has continuously surprised the public and the museum community with its innovations in terms of exhibitions and outreach to its audience. For the past 20 years, MoMA has taken pioneering to new heights in respect to how it has integrated various technologies as it strives to provide an immersive and accessible experience for all visitors.

The Museum has Community and Access Programs staff dedicated to the process of achieving wider accessibility in all aspects of the Museum's organization. These staff members were recently recognized by the New York Chapter of the Hearing Loss Association of America with an award for the dedication shown by the organization in its outreach to individuals who live with hearing loss.

"Within MoMA, there is organizational recognition that the improvements we introduce initially for one section of our audience are often beneficial to others. For example, captioning of videos is used by many of our foreign language visitors who benefit from the written word as well as by individuals with hearing loss," stated Francesca Rosenberg, Director of Community Access, and School Programs, MoMA.

When Francesca's team became aware of the capabilities of hearing loops (which wirelessly transmit the sound from a source across a specific area) they were intrigued and initially discussed the technology with other cultural institutions that were also exploring the opportunity. With that knowledge gained, MoMA then created a taskforce to investigate the technology's feasibility and acceptability within the scope of the



The Museum of Modern Art, designed by Yoshio Taniguchi. Entrance at 53rd Street. © 2007 Timothy Hursley

various environments that had been outlined for inclusion in the development project. This taskforce included personnel from across MoMA's departments, to ensure the widest possible benefits were being gained. With a clear specification agreed, external experts in assistive listening technology were interviewed and a selection of the partners to proceed with the program was made.

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North East Hearing, NY, an audiology and hearing loop installation company and Contacta Inc., an assistive listening equipment manufacturer and customer system design consultancy, were chosen for the program.

MoMA's taskforce had specified its requirements for enhancements to the assistive listening devices already available at the Museum. The progress made in technology now allowed hearing loop solutions to be installed cost effectively and across various applications. The range of solutions required an extensive site survey to be undertaken to ensure the selected technology best suited the users and space requirements.

"From the entrance of the Museum, through visitor contact points and on into the galleries, classrooms and theaters, specific solutions were agreed, with the overall requirement being our ability to better serve our visitors with hearing loss," commented Francesca.

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At the membership, visitor information, and ticketing desks in the Museum's main lobby, there are now one-to-one hearing loops installed. This type of loop systems works when a staff member uses a desktop microphone linked to an amplifier connected to a portable hearing loop that sits on the desk. This system allows highly effective personal communication with any visitor using a hearing instrument fitted with a telecoil. The telecoil, or t-coil, is a receiver, which is a vital component of today's hearing instruments and cochlear implants. The telecoil is a minute metal cylinder coiled with copper wire that, when activated, responds to electro-magnetic waves generated by hearing loops to provide clear sound without background noise.

MoMA's Titus 1 and Titus 2 and Bartos theaters have been equipped with low spill phased array hearing loops. The programming in these areas required the aerial wires to be looped around seat sections throughout the theaters to ensure that every seat and the stage area receives a strong signal from the hearing loop amplifier installed in the sound cabinet. Using this tightly looped configuration creates low overspill of the signal ensuring the signal is confined to the theater. The aerial wires were secured under the existing floor covering to ensure that the cabling would not interfere with normal space use.

The Museum's largest conference room has also been permanently looped using a phased array loop configuration; this solution is used for more advanced installations that utilize two signal drivers. This design is useful in situations where difficult or changing seating arrangements are involved. The loop aerial is laid in a multiple figure eight pattern in the concrete flooring to ensure an even signal output across the area.

In keeping with MoMA's pioneering spirit, the Museum's second-floor Donald B. and Catherine C. Marron Atrium has also been looped, as it is frequently used as an exhibition space. This provides a clear demonstration of the flexibility of the technology, the system design, and the achievements of MoMA's audio-visual team in this multi-story space with its 110ft ceiling height. Early in 2014, the hearing loop in the Atrium was successfully integrated into the exhibition Isaac Julien: Ten Thousand Waves, a multi-level and multi-screen sound and video installation. Hearing instrument users, as well as neck loop and headset users, were able to fully interact with this spectacular multisensory experience.

Essential to the integration of MoMA's assistive listening program was the education and technical training of its AV Department in the maintenance and development of the systems. Currently, together with the permanent theater, classroom and Atrium systems and the countertop units, the AV Department also maintains a highly flexible portable gallery solution that can be installed for specific exhibitions almost anywhere in the Museum. The training they received allows the team to be confident in their understanding of the considerations of the systems' capabilities and the users' needs whenever exhibition space is being discussed for a show with a strong sound element.

"Incorporating assistive listening technology into the Museum's exhibitions has been driven by the enthusiasm of the AV team towards the capability of the system. The technology has been absorbed into the culture at MoMA, which means it becomes part of our exhibition checklist. The news is spreading, and we find that artists are aware of the technology and want it incorporated into their shows," Francesca concluded on the program's successful implementation.
