

## Expanding Audiences: The Audio Tour Access Project at the New York Hall of Science

Alan J. Friedman  
New York Hall of Science

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Since 1997, the New York Hall of Science has been engaged in a project designed to make our hands-on exhibitions more accessible to low-vision and blind visitors. The concept was to adapt the random-access, audio—tour technology we had already been testing with various audiences to meet the needs of this group of visitors. Support for the project has come from the National Science Foundation, NEC Foundation of America, and Acoustiguide Corporation.

I'm a technophile myself. I had expected that a single type of wonderful hardware like the audio-tour technology would provide a quick answer to the challenge. But it wasn't long before we met with some surprises:

- 1) The problem turned out not to be just making exhibitions *more accessible*. We quickly learned that our exhibits were *totally inaccessible* for the great majority of low-vision and blind visitors. Our plan had called for controlled experiments, with visitors using one exhibition with an audio tour and one without. That scheme failed utterly—nobody was interested in spending any time in an exhibition that couldn't be understood because the labels were effectively invisible.
- 2) We couldn't just make our *exhibitions* accessible; the *entire museum experience* required some adjustment, including staff training, brochures, and marketing strategies. There were networks, terminologies, technologies, attitudes, and politics to understand before we could begin to reach this new audience.
- 3) The low-vision and blind public is enormously varied, and no single set of solutions works for everyone. For example, physical signage giving the number of the audio track for each exhibit unit needed to be readable in three ways: high-contrast print, raised letters, and Braille. Each was used by a different subset of the audience.

Today, we are still learning from this project. The evaluations are complete, and we have demonstrated that our institution and its exhibitions can indeed be made accessible, for the first time, to part of our potential public that had seen no value in visiting us—or, for that matter, any other museum—because so much of the experience had previously been inaccessible to them.

One of the happy findings of our experiments was that the equipment, Acoustiguide's Inform system, worked as flawlessly for this audience as it had with our other audiences. Low-vision and blind visitors quickly learned how to operate the Inform units, and the introduction of a tiny

raised bump on the “5” key by Acoustiguide midway through our project made the learning process even easier. We also discovered, as have so many other access projects, that “universal design,” a single choice of equipment and script for all visitors, is not only achievable but a good way to improve the experience for everyone.

These are satisfying results, but we are far from finished. The New York Hall of Science is still largely unknown to people with visual impairments. A significant marketing effort will be needed, over a period of years, before we can expect to win a loyal following and repeat visitors from this community. Ongoing expenses will include staff training, large print and Braille brochures, and maintenance of audio equipment.

### **Serving New Audiences**

As an inveterate lover of experimentation, new technology, and the appreciation of unfamiliar parts of our culture, I found this project personally rewarding. But as a science—technology center director, how can I justify the resources it required and will continue to require?

There are several criteria directors typically use when deciding where to apply their always-finite institutional resources?

*Does the project fit the mission?* Every science—technology center includes in its mission such terms as “reaching the general public” and/or “reaching out to under-served groups.” Low-vision and blind individuals are part of the general public and are typically underserved, particularly in museums. Increasing access for them certainly fits within the mission of most institutions, including that of the New York Hall of Science.

*Will the project bring in new revenue?* Among the large set of challenges consistent with our mission, any challenge that can potentially be financed by new revenues—either from grants or from earned income—usually rises to the top of the pile. In general, new audiences help to produce new income through admission fees, memberships, and occasionally by becoming donors and board members.

More than 1 percent of the nation’s population is unable to read signage without assistance. In New York City; for example, 35,800 people are legally blind and another 132,000 have low vision. Since senior citizens are among the fastest-growing segments of the population, the percentage of the public with some form of vision difficulty is expected to increase, and the numbers of potential beneficiaries of these access tools will increase accordingly.

We have little expectation, however, that new earned revenue will cover even part of the cost of ongoing access through audio tours. We have obtained an opinion that audio-tour equipment would be classified as an “accommodation” under the terms of the Americans with Disabilities Act, so we cannot charge low-vision and blind visitors the fee we charge other visitors for the use of audio-tour equipment.

*Does the project have other significant benefits for the institution and its mission?* Ultimately, directors must make some nonquantifiable decisions about what projects will help establish their institutions' unique identity and self-image. Particularly in New York, a city in which diversity has always been a source of pride and challenge, our institution has treated the attraction and retention of highly diverse audiences as an area in which we should excel.

There are many ways to keep a goal like this before us, but one way that I have found particularly effective, after 15 years as director, is to challenge ourselves to add new audiences as often as we can. Learning how to reach each new population serves, I believe, to reawaken our attention to the needs of *all* visitors.

Every individual visitor has "special" needs. Learning to recognize those needs and building up a kit of tools to meet them give us a sense of continuing accomplishment and a new link to the community. At the New York Hall of Science, the Audio Tour Access Project has reinforced that tradition.

*Alan J. Friedman is director of the New York Hall of Science, Corona Park. This article is based on work supported by the National Science Foundation. The Audio Tour Access Project was also supported in part by NEC Foundation of America, with generous in-kind support from Acoustiguide Corporation. Staff at the Hall of Science were assisted by an advisory committee, more than 100 low-vision and blind visitors, and three consultants: Steve Tokar, who wrote, engineered and narrated the tour; Ellen Giusti, who conducted the project evaluations; and Katharine Bond, who served as primary consultant on access enhancement. A full report will be available; contact [afriedman@nyscience.org](mailto:afriedman@nyscience.org).*