Interview with Nancy Proctor *Head of Mobile Strategy and Initiatives, Smithsonian Institution*

Mobile technology is exploding all around us and the Smithsonian recently created a new position to focus on mobile efforts. Nancy Proctor graciously agreed to share her thoughts.

Let's start with the basics—how do you define mobile technology? What falls under the category?

When I talk about mobile I'm talking about cell phones, smart phones, text messaging, mobile websites, mobile apps like those in the iTunes store, or downloadable content like podcasts, which can be audio only or with video, and PDFs which are downloadable from places like iTunes U. Then there are devices like iPad and e-book readers which enter a new realm. We are only just beginning to understand how audiences use them. There is a difference between mobile and portable. A laptop is portable but not in the same way as a cell phone. An iPad may or may not be mobile—we are learning about those nuances now.

I've heard that 2012 has been called the tipping point for mobile technology in the U.S. What does that mean?

I've heard several different dates, some experts predict that by 2012 a majority of access to the Internet will be through mobile devices; other predictions move closer to 2020. All seem to be in agreement that the rate of adoption is very fast and that mobile devices will be the dominant way to access the Internet very soon. But remember that the way we use mobile technology is very different and no one is suggesting that it will replace fixed (i.e., non-mobile) Internet access.

There is a cultural shift that has happened as a result of mobile technologies. Remember what it was like to arrange to meet someone before cell phones? We are much more able to arrange and rearrange appointments on the fly. The result is a new flexibility and freedom. One's productivity rate can increase—some personal examples include answering email while commuting on the train, listening to podcasts to study Chinese or keep up with the daily news. But this is just the beginning; personal mobile devices are increasingly mobile computers with enormous potential to fundamentally shift how we do things.

It's really impossible to imagine anyone going back. There are also huge economic forces in place around the mobile industry whose aim is to ensure that we don't!

What does this explosion of mobile technology in the market mean for museums and historic sites?

I can think of three ways it impacts history organizations. First, it affects interpretation and mobile learning. We've had audio tours for a long time, but usually only a minority of visitors used them. Now people are using their own handheld devices. With the addition of video capability, of social media interaction, and the ability to respond, bookmark, and share with friends, we can now offer many new ways of enhancing the museum visit both onsite and for virtual visitors who aren't at the museum. The second is outreach. The marketing capability should not be underestimated. For example, the ability to reach people when they're spending their day in D.C., and provide last-minute information, maybe an invitation to a program if people are looking for something to do in the area. Third, with research. Mobile platforms offer interesting opportunities for the scholarly community and including contributions from citizen scholars as well. For example, the National Museum of Natural History is developing an app that helps with botany research. The user can take photos of leaves and compare them with a database to identify the tree. If it hasn't been identified, they can document it in the database. There is also enormous potential for people using their location-aware mobile devices to help tag information with its geolocation. A couple of initiatives in Philadelphia have geocoded historic photographs of the city and you can see them on maps or as you're walking around the city at their location. The Museum of London has done a similar thing called Street Museum (www.museumoflondon.org.uk/MuseumOfLondon/

Resources/app/you-are-here-app). The American Art Museum has a database of outdoor sculptures, from the Save Outdoor Sculpture! project, and has talked about using mobile devices to crowdsource condition reports, photos, and geotags for outdoor sculpture around America. There are lots of great opportunities just now starting to be realized.

If we accept that in the coming years the majority of interaction will be done through mobile devices we must also understand that the majority of our visitors never come to our museums, but will visit on their mobile devices. This requires a rethinking of how we reach these audi-

> "Convergence is now. The device in the pocket or purse of the majority of museum visitors is quickly becoming a vortex of almost all emerging communication technologies. What used to be called a mobile phone is now a potential hub of all personal communication."
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> **From Herminia Din and Phyllis Hecht, eds.,** *The Digital Museum: A Think Guide,* **35.**

ences. What kind of content do they need? Where are the audiences located? What if they are commuting on a train in England or in developing countries? Is there a way to connect with them? This requires careful thought and study.

In this rapidly changing technology landscape, how can any museum or historic site even try to keep up with technology especially dealing with the ever-present challenges of slow decision making processes and small budgets?

By not getting hung up on technology but focusing on content and experience design. Make the gadget as irrelevant as possible and build according to Web standards. The content is where the majority of investment should be, not the technology. How do you future-proof it? Design it to be platform independent to

as great an extent as possible. The biggest challenge is thinking about context—what does the audience want from your content in each context and moment when they might access it—and this requires the biggest investment.

In your opinion, what factors determine whether or not a history organization should consider putting funds toward mobile technology?

Start with audience: who are they and what do they need? If two-thirds never come to your building, you will think about mobile investment differently.

While the cost of creating and managing content remains a factor, the cost of providing it online and distributing it through the Web is, as Chris Anderson and Clay Shirkey have pointed out, approaching zero. That makes it more possible for us to serve a larger number of niche audiences than we ever could in the analog world, where printing, shipping, and storage costs are prohibitive for all but mass audiences. I think there's a lot of power in leveraging niche audiences, and museums are more naturally disposed—with their large collections of niche content, and their subject experts whose knowledge runs deep—to serve niche communities of interest than the mass market.

These days it's not hard to track online audiences to understand these niche needs better. Facebook is at the forefront of this. We can know a lot about our users, where they spend their time and the communities they are part of. We need to get smart about doing this.

What kind of strategy is the Smithsonian developing to address mobile technology?

We are still in the early stages, but I think SI Mobile will have five main components.

First, an architecture and framework that allows everything to link to each other, I'm thinking more in terms of connections, so a kind of organic whole that's greater than the sum of its parts. Second, standards that help us build our mobile content and experiences for long-term use. Third, best practice documentation and training in mobile design and development. Fourth, infrastructure, such as wifi throughout museums and tools for metrics and evaluation. Finally, what I call a mobile toolkit—a collection of reusable code so we don't need to reinvent any wheels for standard mobile functions like calendars, maps, and commenting.

The Smithsonian has done some recent evaluation about mobile technology. How is this research helping to direct decision-making?

It is absolutely fundamental. We are fortunate to have the Office of Policy and Analysis with decades of audience research experience. We commissioned OPA to do what I believe is the largest study ever done on mobile needs—they surveyed nearly 1,600 visitors on the Mall about how they use mobile and how they would like to. The report is coming soon at: http://smithsonian-webstrategy. wikispaces.com/Mobile+Research. ◉

"History Bytes" is a forum for discussing Web issues facing all types of historical institutions. Tim Grove can be reached at grovet@si.edu.