Mobile History Games:
Challenges, Frameworks, and Design Principles

Owen Gottlieb, New York University/ConverJent
Jim Mathews, Clark Street Community School/Placework Studios
Karen Schrier, Marist College
Jennifer Sly, Minnesota Historical Society

Introduction and Overview

This panel covered nearly a decade of work in mobile and location-based history games, and reflects on the key questions, learnings, and challenges in this emergent field. Using location-based mobile technologies to explore historic moments can be powerful: designers and educators can access narratives from the past, in the places that they occurred, and can potentially disrupt those narratives to create new versions of the past. Historical narratives have always been "constructed," and so, history is, in essence, rewritten through the experience of these games. This is a significant responsibility for designers and educators. How do we characterize the interplay of fiction and non-fiction in the mobile history game, since players' own narratives are mixed with the historical narrative? How do we appropriately show sentiments and biases that were representative historically, but perhaps not considered ethical by today's standards, or in some cases, by any standard?

Mobile environments can also allow for place-based, in-*situ* exploration of historical moments, debates, and interpretations. They can help simulate historical systems of production, trade, commerce, or environmental impact, and they can augment reality through the use of historical media and the digital reproduction of primary sources. Mobile history games can situate play within local communities, such as those at historic sites, allowing learners to participate more tangibly with the past. These games can also provide an historical context for contemporary events and issues by facilitating interactions with contemporary community members on location.

How can genres, such as the situated documentary or resource management game, guide or limit a designer, educator, or learners' choices? How might we further mobilize mobile history games toward civic engagement and critical thinking?

The panel explored these questions in relation to specific mobile history games, with Schrier's *Reliving the Revolution* (created at M.I.T. in 2004-5) and Mathews' development of *Dow Day*, to current place-based and museum-based mobile history games: Gottlieb's *Jewish Time Jump: New York,* and *Play the Past* at the Minnesota Historical Society (Sly).

As we investigated this "history" of mobile history games, we considered how mobile history gaming has evolved over the past ten years, its failures and successes, and how we might collectively conceive its future.

Reliving *Reliving the Revolution*

Almost a decade ago, Schrier designed a location-based game to teach children historical thinking skills. The game, *Reliving the Revolution* (2005), invited participants to explore the physical location of the Battle of Lexington (Lexington, Massachusetts) and access virtual information about the Battle using GPS-enabled Palm Pilots. The game was tailored to students in middle and high school, and provided numerous first-person narratives (based on historic testimonials), which would automatically appear on the players' phones depending on where they were standing at the physical Battle of Lexington site. To complete the game, students needed to interpret the narratives about the historic moment of the Battle to create a meta-narrative about who fired the first shot at the Battle. Each participant played as one role: a white male Minuteman soldier, female white loyalist, African American male Minuteman soldier, or British regular (white/male) soldier, each of whom were based on real people involved in the battle. Depending on which role you played, the NPCs (non-playing characters) would provide slightly different testimonials. In this panel, Schrier discussed and revisited the design principles used to create what ended up being the first location-based history game of its kind, and how she would adjust it, now almost 10 years later. In particular, Schrier discussed the ethical considerations and historiographic ramifications of this game.

Dow Day: Unpacking the Genre of Situated Documentary

Mathews presented *Dow Day*, a situated documentary designed to promote local historical inquiry and help players make connections between the past and present. He discussed the questions, challenges, tensions

and opportunities that arose during the production, implementation, and evaluation of *Dow Day*. He also applied frameworks and questions from history education and documentary studies to frame his design decisions and reflect on the relative success of *Dow Day*. Some of the questions he presented for consideration included: How might we classify these types of mobile-based designs (and should it matter)? What types of learning outcomes should we be concerned about? What dilemmas and opportunities arise when we use situated documentaries within an educational context?

Surrogates, Suturing, and Supra-reveals: Developing Narrative Design Principles for Mobile History Games

Dynamic interactive approaches to teaching history can catalyze the development of an active citizenry through teaching aspects of citizen journalism and the power of issue-based advocacy. The exploration of such topics can promote a sense of ownership of community challenges. What design elements for place-based mobile history gaming may better achieve the kinds of history learning goals that could lead to deeper civic engagement? Gottlieb uses mixed methods and design-based research in the process of developing mobile augmented reality gaming for teaching history. Design-based research employs iterative cycles of design and development paired with field study to arrive at new design knowledge. In these cases, the knowledge is in the form of design principles for the genre of the "situated documentary." Gottlieb shared design principles and best practices from *Jewish Time Jump: New York*, a game centering on immigrant, women's, and labor history in early 20th Century America. The newly derived design principles address learning goals including perspective-taking and learner investigation, as well as offering approaches for historically grounding contemporary civic concerns from within the game environment.

Play the Past: Weaving Critical Thinking and Problem Solving into Immersive History Exhibits

Play the Past is a new and student-directed, mobile technology-supported, field trip experience at the Minnesota Historical Society. Students use iPods loaded with a mobile game to explore the *Then Now Wow* exhibit at the Minnesota History Center. They enter historical situations and, through critical thinking and collaboration, earn badges and collect digital items for later use. Students meet historic characters and solve challenges emulating those that actual Minnesotans faced. Back at school, the interaction continues as educators and students build upon the experience through further research and classroom activities. Drawing from the development of *Play the Past*, including the iterative design with over 1,500 students and formal evaluation, Sly explored design questions, such as: How does narrative fit in or balance with game play/mechanics? How does role-play complement or compete with historic narrative? How can designers represent historic characters for which there exist no media artifacts?

Key Discussion Questions

 A number of key questions emerged through the presentations and Q&A. They included: What design principles have you found useful in producing these games? What opportunities and dilemmas arise when you invite players to take on roles as part of historical games? What data are you collecting and how are you analyzing it? What is the future of mobile history games? The panelists and audience discussed these questions, and such questions can be useful in shaping future design and research.

Emergent Themes

Themes that emerged included balancing content needs with constraints. For example, how does a designer balance a complexity of rich, layered content, and multiple perspectives with constraints such as small screens, technical issues, and time.

Another theme related to the opportunities, challenges, and need for balancing associated with narrativizing historical moments, and the historiographic questions that are important to foreground (see Marcus & Stoddard, 2009; Stoddard, 2010).

All media experiences (including those in a textbook) are designed, which means that there is someone designing it, and their values, sociocultural context, and other perspectives will affect the design. It is important to make those design decisions as transparent as possible, such that the learner is made aware of how these designs may be affecting their learning. The problem remains: how to make a game's design as transparent as possible while enabling players to immerse themselves in the game, and have the "suspension of disbelief" that is necessary to fully embrace the experience. Finding a balance between one's meta-understanding of the game and immersion in the game should be considered.

Looking Ahead to the Next Generation of Mobile History Games

Some of the trends, goals, hopes, and suggestions for the next generation of mobile history game design include:

•Cultivating more learner-designed history games as a means for exploring places and historical moments

•Promoting the development of games that engage players in producing new content, such as games in which players collect oral histories or document historical places.

• Taking advantage of the newest functionality of mobile devices, such as evolving augmented reality technology for just-in-time location based history, or using "heads up" games development to allows users to not have to stare at a screen (Soute, Lagerström, & Markopoulos, 2013).

•Creating templates for educators and designers to be able to quickly generate location-based games for various use cases (such as the "classroom case," the "museum case" or the "battle site" case.

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