Placemaking Across Platforms: Playing to Circulate Stories in the Smart City

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Abstract. Urban placemaking can deepen the sense of place, including with novel technologies. Placemaking seeks to revitalize public spaces, attract investment, and rally stakeholders. How can play help to position residents as storytellers and circulators of key images tied to local history? This study shows how play can leverage smart city technologies, including urban furniture and rebuilt payphones. Game mechanics were selected to gather crowds at local monuments, generate pictures of the group tied to local mythology, and automatically circulate images online. In contrast to "app" based approaches, the design facilitated cross-platform "spread" for local storytelling. The study shows how placemaking can benefit from physical objects and hybrid interfaces to facilitate the circulation of local placemaking narratives.

Keywords: Playful · Smart city · Tangible object · Placemaking · Stories

1 Introduction

The movement for "creative placemaking" offers a growing opportunity for games in smart cities and neighborhoods. Placemaking seeks to revitalize public spaces and bring together local actors to shape the character and experience of a neighborhood.

Recent shifts in placemaking have made pervasive games [1] especially relevant. The placemaking movement has expanded beyond branding and architecture to include *creative activities* that deepen our sense of place and attachment to it [2]. Games offer a powerful way to design such activities, especially as our places become hybrids of physical space and digital information flows [3].

Smart cities have a growing range of basic technologies available to facilitate placemaking, from screens embedded in public space [4] to mobile media [5] that move with residents. Beyond sharing information, technologies can facilitate social activity and transform how we experience a place [6]. Play can further deepen our sense of place, even functioning as a form of urban planning [7]. Structured games can leverage smart city technology, for example by co-opting existing urban screens as part of

festivals [8], and reaching consumers in the "app economy" with locative games [9]. But how can games position players as active placemakers themselves?

A novel strategy for games is to facilitate the *circulation* of placemaking stories and images. Circulation is necessary for citizens to discover local stories from each other, spread the stories they care about, and bring historical facts into lived culture. Content for circulation includes the photographs of iconic buildings, tales of local history, and testimony about cultural assets. Games can position players as direct circulators of multimedia, and as live performers drawing attention to public space.

To maximize circulation across platforms, this study advances two design strategies. First, for games in smart cities this study explores the use of *smart tangible objects* to connect the circulation of bodies and digital media. Such objects facilitate street-level storytelling, while also serving as hybrid interfaces [10] to guide players through space, providing clues and feedback. Second, rather than focusing player attention inward to game content, this paper investigates content as *spreadable media* [11] that is optimized for players to circulate across their personal networks, including with web links that can easily be shared or reposted.

2   Game Design and User Trials

A game prototype called *Sankofa Says* was developed for a small California city that was already pursuing placemaking. The game took place over a weekend in a 10-block area, during a game festival that brought many visitors to town for the first time. Content was developed in consultation with the local historical society.

Playing involved gathering crowds at local monuments, performing as historic characters, taking cellphone pictures, and calling a cloud-based hotline for group trivia questions about the neighborhood. The technical design connected multiple platforms, including cloud-based audio hotlines, picture messaging, and smart tangible objects (e.g., a rebuilt payphone containing a Raspberry Pi computer [12]).

Players gained points by gathering in crowds at historic landmarks and key sites. Team members earned additional points based on the size of the group, encouraging recruiting. Parades formed as groups walked between landmarks, sometimes spontaneously and sometimes led by game facilitators with megaphones.

At each landmark, players used their cellphones to dial a smart hotline. The hotline recognized each player using caller ID, and gave them information on the current crowd. New players could sign up by phone to join the crowd at any time. After players' individual calls, the crowd staged a group photograph at the landmark (e.g., the site of a famous battle – see Fig. 1).

When the crowd submitted a photograph (using the phone of any one participant), the game system reposted it automatically to a blog for that landmark. The result was a public narrative of what happened at that landmark, including pictures and a record of players who joined the crowd (using their first name or pseudonym of choice). Later, the best pictures for each landmark were moved to the top of the page.

A rebuilt portable payphone served as an object to spark curiosity – and as a recruiting station. The payphone included a loudspeaker system that was used to announce special events at landmarks (Fig. 2). For example, players might be told of a special guest arriving at a nearby landmark in 15 min.

Fig. 1. Screenshots of player phone during game, and resulting webpage

Fig. 2. Rebuilt payphone as tangible object *(left)*; social and paper media *(right)*

When players lifted the handset, the rebuilt payphone played audio that invited them to learn more. "Press 1 to play," and "Press 4 for more on the city" were two of the options. Many were curious about the payphone itself.

Local, pre-existing payphones were also incorporated into the game route. Two of the landmarks featured working payphones in the city that required quarters to play. One served as the gathering spot for what local news outlets have proudly insisted is the "World's Smallest Main Street," next to an antique store.

Mixing old payphones with the history of the city helped embody the idea of living history. Placemaking often relies on historic assets that can be repositioned to tell a story of local distinction, creating in the process a new vision for where the community will go in the future. Payphones are ideal for stories about urban futures, as they embody a blending of physical and communication infrastructures [12].

After the game, news websites and local blogs covering *Sankofa Says* told their own stories of the city. Additionally, a planning meeting for the city's Centennial

Celebration included a review of pictures taken of the game, leading to a discussion with the Chamber of Commerce about how to continue the placemaking.

In total, more than 30 players directly engaged with the game, and several hundred observers and peers were involved in the story circulation. The game's structural role was then analyzed through more than a dozen participant interviews, "post-mortem" sessions with notes, and interviews with stakeholders (e.g., the local historical society). Beyond individual effects, the game shifted the circulation of placemaking stories during its trial run – both in person and online.

3   Discussion and Conclusions

This case investigated the use of games for placemaking in smart cities and communities. In contrast to the tradition of secrecy and conspiracy of Alternate Reality Games in public space [13], placemaking seeks publicity, transparency and building trust around the core narratives. This study advances how games can facilitate the circulation of stories, including through designs that make players visible in the city, center competition on gathering crowds, encourage taking pictures at iconic sites, and automate the reposting of key photographs online.

Design choices for game infrastructure can help to position players as active circulators of stories, and thus as placemakers. For smart cities, one strategy is to combine smart tangible objects (including urban furniture like rebuilt payphones) [14] with traditional print media for gameplay [15]. Other urban furniture that might be similarly deployed includes bus stops, newspaper boxes, and even smart benches (as the authors have done in other interventions [16]). Avoiding the "app economy" of mobile phones can also increase accessibility by reducing the need for downloads.

Authenticity and accountability to the community are central to placemaking concerns, including the process of choosing which landmarks to emphasize. Authority shifts when games empower players, and this study revealed some of the fault lines – and strategies to manage them. Working with historians and community organizations can help inoculate designs to the risk of excessive deferral to business visions of neighborhoods [17], and the shallow notions of culture that can arise in place-branding. But there remain uncertainties in play (and in fact, uncertainty is a defining characteristic of games [18]). In *Sankofa Says*, historians were consulted on the recommendation of organizations with broader stakes in the community. Yet the game encouraged visitors who were new to the neighborhood to take pictures and circulate local knowledge in their own words. Risks come with such openness, even as participation is guided by the structures and seed content of the game.

In an age of hybrid interfaces, new tactics are needed for creative placemaking. As this study showed, games are one way to advance placemaking by spreading digital stories tied to physical experiences and crowds. To be effective at circulating stories, games may need to encourage crossing platforms rather than using a single app, object, or form of media. Yet the ethics and permissions of play raise distinct challenges. It will be up to communities to invest in games as a placemaking strategy.

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