

Hybrid games for stronger neighborhoods: connecting residents and urban objects to deepen the sense of place

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ABSTRACT

This learning workshop will prototype and advance theory around the participatory design of hybrid games. In contrast to screen-centered games, our platform makes it easier to repurpose ordinary urban objects – from aging payphones to experimental bus stop displays. The resulting games are hybrids, where the action is alternately woven across the digital and physical.

Successful hybrid games offer choices to players that are immediate, from introducing neighbors (building the social fabric), to photographing street art (documenting local culture), buying from a local business (shifting the economy), and revealing local history.

Based on three years of experience in South Los Angeles, our methods for Participatory Design (PD) combine low and high-tech to leverage local culture. The resulting games emphasize social mixing – including with local businesses – and are amplified online with flows of pictures, audio and text.

For workshop participants, no technology skills are needed – since the platform seeks to maximize participation in the design process. Participants’ own knowledge of cities and important cultural neighborhoods will be used to create 2-3 semi-functional games. Hidden in each design is a set of technologies that join communication networks, including cell phone SMS and Raspberry Pi computers hidden inside payphones.

The most important result of this workshop may be in identifying PD theory that could help the field of game design, and vice-versa, as the two fields increasingly consider street-based media and how to constitute publics around city streets.

SCHEDULE, FORMAT, PARTICIPANTS

This half-day workshop will involve 10 and 20 participants (or up to 35 with additional volunteers on-site). Registration will be on a first-come-first-served basis. No prior knowledge of games, coding, or art is required – though each is appreciated.

Participants will gain insights into PD with physical-digital hybrids, game design for local communities (emphasizing meaningful choices rather than shallow incentives), and embedding in local communication flows to constitute publics.

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Recruiting participants will take place in June via direct invitation, and via group invitation (including listservs in PD and social media on related topics where the authors are active).

Overview

Small teams will prototype game-based activities for 2-3 specific cities using our new platform, and then reflect on the implications for PD practice. The platform described below combines physical art, rebuilt payphones, and cloud-based services that integrate with mobile devices. The workshop will be run with a “loose coupling” of technology and cultural design (especially retaining local culture), utilizing game elements that align with placemaking, community building, and forming social ties.

Premise: old games, new tools

For thousands of years, games and play have flattened and revealed power relations -- from the nationalism of the Olympic Games, to lottery ticket dreams, to school playgrounds[2]. Now games are returning to their physical and social roots.

In participatory design, game design has long been used to help stage participation and alter power relations in design situations[1]. Actual games are rarely the goal with PD. However, for goals of urban engagement and place-making, games and social activities are increasingly targets for design.

Hybrid games represent a particularly good target for PD, since they concern real-world places, and have real-world implications. At the neighborhood level, the physical and digital increasingly intersect; strong neighborhoods are shaped by more than physical architecture – they are also socially constructed in conversations, stories, and pictures that are circulated and discussed online. (We emphasize ‘hybrid’ rather than the more common ‘pervasive games’ to retain physical design, not just mobile screens.)

Boundary objects like payphones can help bridge the physical and digital, helping to constitute a public in the spirit of infrastructuring[3]. Rewired with new sensors and Ethernet connections, existing objects can readily be made aware of physical motion or digital proximity -- and respond.

Can diverse neighborhood stakeholders jointly design a game that taps such boundary objects? In contrast to the design of tools, games are designed to encourage and sustain engagement – not maximize efficiency or minimize effort.

Two recent shifts inspire this workshop: (1) the democratization of game-making tools, as they become easier to use, including lightweight tools for prototyping -- from miniature computers we can embed in objects, to cloud-based services and alternative currencies. And (2) growing demand from urban movements for lightweight interventions outside of architecture, including tactical urbanism, social acupuncture and open streets movements.

The ethical dimensions are complex for sharing power in game design. Learning by doing is an important PD approach for theory building, including in this workshop through the design of actual games for place-based communities (alpha/proof of concepts).

Our platform and approach

It is very hard to make design participatory that combines physical and digital interaction, if only because the necessary skills vary widely -- from welding to programming in Python.

In response, we have created a series of ready-made components and “linking tools” (including circuit boards, code snippets for cloud services, and purely physical art). These together constitute our PD platform. They connect urban furniture with audio recording, text messaging, photo printing, crowd detection, and more. Our first game with the system was an official selection at IndieCade 2014 – a leading festival for independent games.

This session will be hosted by a co-founder of the Games for Change movement, urban planners, and hardware hackers.

Special features of the platform include:

- Working hardware for turning old payphones into digital hubs for location-based activities. In contrast to raw sensors, payphones are familiar features of the urban landscape, inheriting a set of social practices and cultural shortcuts. Our custom circuit board (freely available), ties them to internet services and sensors for organizing crowds and directing players.
- Simplified methods for bringing the thinking of game design into participatory design. The goal is to sustain engagement, not simply the usual ‘efficiency’ goals of tools, and not just the representational approaches that are common in multi-stakeholder design.
- A set of recommended building blocks for social interaction with payphones. For example, forming crowds at public statues, pairing strangers with “buy local” coupons, walking tours, and mapping cultural assets. (These are based on more than three years of testing in the African-American neighborhood of Leimert Park in Los Angeles.)
- Global voice and messaging cloud-based interactivity system. Allows the payphone to circulate text messages, receive pictures, initiate conference calls, etc. (Based on the Twilio infrastructure for scalable voice and MMS, the system works in many countries worldwide.)
- Code “snippets” for rapidly creating games, based on the voice tree systems used in call centers. For example, the payphone can ask players to “press 1 to learn about the game,” demand “the secret code from your neighbor,” or “tap your bus transit card to check in.”

Agenda for the workshop

OPENING: a brief provocation of 15 minutes featuring prior payphone redesigns, including with games; then the design challenge will be specified (e.g., that hybrid requires design methods to balance physical with digital).

TEAM FORMATION (groups of 3-5 people). Groups form based on geographic interest and personal expertise, as well as a balancing of skills -- from artistic to coding and planning. Several stakeholder groups will be simulated based on roles assigned.

PHASE I: PAYPHONE PROTOTYPE: Customizing a rebuilt payphone. Teams will have their own payphone handset and keypad (which can later be installed in used or new payphones).

Each team then deploys their payphone setup with game elements. Although traditional payphones are disappearing, cities are increasingly deploying sensors in public space – and the robust metal exterior of payphones can be invaluable.

PHASE II: GAME DESIGN: Each game will be deeply customized to a particular city – or even neighborhood. Target players will include residents from diverse ethnic and class backgrounds. The hardest challenge is expected to come in aligning the basic “mechanics” of each game with a clear social need for the chosen neighborhood; our methods of augmenting established cultural activities make this significantly easier to learn and model. The results are often surprising for the emergent complexity and crossover between social issues. We will guide teams through successive iterations to optimize their designs.

ANALYSIS: After demonstrating each game, we dive into debriefing and more explicit theory building. This will take nearly an hour, and includes guiding participants through several levels of analysis (user-centered, community-centered, and hybrid flow).

GOALS

This workshop seeks to:

- 1) Refine PD methods for neighborhood hybrid activities. Demonstrate (and gather feedback on) methods to sustain participation at the neighborhood level across very different roles that include: artists, historians, technologists, and community builders.
- 2) Share our kit for “radically accessible” prototyping that connects ancient infrastructure (payphones) with miniature computers (Raspberry Pis) and cloud-based flows of communication (SMS and WordPress). Social practices that put “culture first” are emphasized, rather than traditional technology tools.
- 3) Align PD with communication theories of local empowerment through place-making and community cohesion (including group identity strengthening, building social capital, and increasing group efficacy).

Conclusion

The future of local neighborhoods (in an era of participation) may depend on the ability to design a new kind of game. Hybrid games and activities can build social cohesion and local identity. Yet without participatory design, such games can also deepen power imbalances. This workshop advances the use of PD in designing games. The low-tech approach of our toolkit helps to make design more accessible, especially with boundary objects. Several games will be prototyped. More importantly, this workshop will show how to approach game design as a sustained effort to constitute publics for neighborhood concerns and stronger communities.

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