

# The Promise of Games for Deep Engagement

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## ABSTRACT

This paper addresses the problem of how researchers can gain deep engagement from participants when the topic explored or the system designed is supportive of, but ancillary to, the day-to-day work priorities of participants. A closer look at games reveals fundamental qualities of games that make them uniquely equipped to address this problem of participant engagement. When used early in an exploration, games can help build participant investment in the discovery process.

## Author Keywords

Games, participant engagement, discovery process, user-centered design

## ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## INTRODUCTION

Participatory design is a method traditionally used for tackling design problems around which participants have deep personal engagement and are key stakeholders in the end design. It is generally implied that users care about the problem at hand and have a stake in the outcome. However, I have observed that participation can add valuable insight even before participants become stakeholders, as I will illustrate with an example from a project exploring “intelligent mail.” The challenge is getting deep engagement when participants are not yet fully invested.

The work discussed here was completed at Advanced Concepts & Technology (AC&T), the Research & Development arm of Pitney Bowes, a U.S. Fortune 500 mail and document management company. In AC&T, I work with customers of Pitney Bowes to collaboratively create new product and service solutions. While our customers focus on their core business (for example: law, or financial services) our business is to support theirs by providing mail and document management solutions. Therefore, the types of solutions that emerge from AC&T

projects play a supporting role in the work of our customers.

In AC&T, there is deep methodological conviction on the importance of learning about work first-hand from users and participatory design is central to our toolbox. Although innovations for mail can profoundly impact the way customers carry out direct marketing campaigns, manage relationships with their customers, and conduct general business, initially engaging users in participatory design activities about the mail can be challenging, because participants do not always perceive the potential impact of mail innovation. Monetary incentives are one way to gain willingness to participate but do not inherently encourage deep engagement in the problem at hand.

In addition, gathering situated data about mailing behavior and unmet needs to which mail innovations may be a solution is particularly challenging. Mail events are short lived, and observing the preparation of a mail piece often does not reveal motivation, intent, and other critical drivers of mailing activity. Bounding an investigation solely around mail also limits the scope of innovation because future mail applications may be able to solve user problems that today aren't associated with the mail at all.

The intent of this piece is to share my journey of an attempt to probe users with a game-like activity, and then my exploration to understand the fundamental qualities of games. My hypothesis is that games have certain qualities that can provide creative ways to gather data while at the same time gain deeper engagement from users during the discovery process.

## PROJECT BACKGROUND

The game discussed here was designed in the context of a project aimed at uncovering future applications for the United States Postal Service's (USPS) “intelligent mail” technology [9]. Today, intelligent mail uses machine-readable codes to uniquely identify mail pieces and allow the USPS to track the location of individual mail pieces traveling between sender and recipient.

The USPS is interested in expanding intelligent mail to include other types of data and services beyond tracking. Some questions to consider are: What kinds of information would people want about the mail? What kinds of information do they already have but not know how to use?

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[6,7]. A small team was formed in AC&T to approach these questions.

In most AC&T projects, the exploration for new business opportunities begins with understanding user needs, and then considers technology and other solutions to address those needs. Contrary to the typical approach, this project was focused on finding innovative applications for a new technology. Innovating around intelligent mail technology meant exploring new uses of mail that people had not previously imagined. I was faced with the challenge of choosing a customer research methodology to probe for problems that intelligent mail could solve. I tried using traditional interviewing techniques to bring participants into a focused, generative space, but interviews proved unfruitful.

At the time of the project, I was introduced to the idea of using games in participatory design. I became interested in the possibility that during the discovery process, games could be used to create a space that was focused but playful and generative. I saw an opportunity to experiment with games as a mechanism for focusing participants to provide examples of their current mail usage and to think creatively about how they might use new information about the mail.

### CREATING THE SCENARIO GAME

When I designed the game described here, I had unrefined ideas about what makes an activity a game. I was particularly interested in games for their tangible qualities and their activity-centered nature. As an anthropologist, I was intrigued by the idea of putting something into the hands of my informants that would shape our interaction, rather than the traditional form of engagement where the researcher allows the action to unfold. With this mindset, I designed a “game” for participants to construct a mailing scenario and then rank the value of having different information about each mail piece in the scenario.

The activity consists of a board with cards that are used to describe the details of a specific mailing (see Figure 1). There are five sets of cards, one for each question the participant must answer: What is the intent of the mailing? What contents are included? Who are the recipients? What is the potential action by the recipient? and What is the channel for expected action? On the board, the participant lays out as many cards as apply to describe that mailing, explaining each card as it is chosen.

Once the participant has described a representative scenario, he or she is given another collection of cards (information cards) to evaluate. Each card has a different piece of information or action that is theoretically possible for a mailer to have or do about individual mail pieces using the intelligent mail technology. For example, people may want information about the geographical location of an address, since the amount of crime in the area may have an impact on the security of the mail contents. People may also want the ability to control mail after it has been sent, like



**Figure 1. (Left) Game board with scenario cards; (Right) Information cards ranked by a participant.**

changing the destination address. Participants are asked to rank the cards based on perceived usefulness of the information and explain the decisions made in ranking the cards (see Figure 1).

We tested the new approach and learned from a human resources professional the information she would find useful when she mails healthcare benefits packages out to 30,000 employees. She said many benefits packages are returned by the postal service because they are too large, and it would be helpful to know the size of the recipient’s mailbox before she mails the information. Employees have a limited window of time to review their benefits and sign up. When packages are returned, employees may not receive another package in time to review and respond.

### ANALYZING THE RESULTS

On the surface, the activity appeared successful. We sought to focus the conversation and gain insight about how additional data related to the mail might prove useful to customers. And indeed, we walked away with a concrete example and a new use for location information. But my intuition told me something was missing. I didn’t feel the participant was invested in the problem. She had politely created a mailing scenario and ranked the information cards, but she had limited stake in the outcome.

Russell Ackoff concluded that one requirement for participation in design to be successful is that participation is fun [4]. It is striking to consider the requirement that it be “fun” to participate. Fun was certainly a quality that was missing in the Intelligent Mail Scenario Game. What else was missing? What qualities of games might make them successful for deep engagement?

### GAMES CAN ENGAGE USERS

Games and design activities have a long history as part of participatory design [4]. Games create dialogue, build ownership of the design, facilitate co-creation, and build design competence [1, 2, 3, 4, 5].

Games have also been the object of study for many years across several disciplines. Leveraging the work of those who have explored various theories of games reveals certain qualities of many games that may bring value to participatory design and help address the issue of participant engagement.

In their book, *Rules of Play*, Salen and Zimmerman [8] provide an overview of games as defined by eight theorists from diverse disciplines. In their analysis, they conclude there is little overlap in the ways the eight theorists define games; however, three main qualities emerge that are shared by almost all the theorists: (1) that games proceed according to rules that limit players, (2) that games present players with a challenge, and (3) that games are oriented around a goal or outcome. Along with their comparison, Salen and Zimmerman also describe a concept they call “magic circle,” derived from the work of J. Huizinga.

Using the Salen and Zimmerman exploration as a starting place, I will describe these qualities of games, suggest the possibilities they hold for participatory design, and explain how these qualities were missing in the Intelligent Mail Scenario Game.

### **Rules and Challenge**

Two fundamental qualities of games form the framework, or space, in which a game is played. These qualities are *rules and challenge*.

A challenge is a degree of difficulty or complexity that players confront in a game, and the rules are crisp, agreed-upon limitations or constraints on achieving that challenge. A simple example is the game of hopscotch. A set of squares is laid out on the ground. The challenge is to *hop once* in *each* box until the end of the boxes. The rules are that players cannot switch feet. Without the rules, the challenge could be met by skipping across the boxes. Without the challenge, the boxes would be merely paint on the sidewalk. So the challenge and the rules work together to frame the game.

Taken into the realm of participatory design, rules can focus the scope of engagement. They set up an artificial space where the topic at issue (mail, for example) is given greater importance in the space of the game than it has in real life. The challenge gives the participants a stake in the activity beyond the content. Challenge pushes the level of engagement, sometimes utilizing competition. It is not enough to just “do” as in a design activity, but in a game one must “try.” Together, the rules and the challenge can focus and direct the work (for the benefit of the researcher) and establish a purpose (to the delight of the participant.)

In the Intelligent Mail Scenario Game, the rules and challenge were not crisp or strong. The participant’s objective was to define a scenario and rank the information cards, but these objectives were task-oriented and not challenging. In addition, there were no clear rules established. Participants were asked to organize the scenario cards on the board; however, if participants used the table instead of the board, they could not be accused of breaking the rules or “cheating.” Lack of crispness in rules and challenge for the Intelligent Mail Scenario Game left it without a strong framing. It also hampered the participant

from developing any strong investment in an established purpose.

### **Goal or Outcome**

Another critical quality for games is a clear goal or outcome. The phrase “game over” is a linguistic clue that points to the fact that one primary quality of games is the ability to know when the game is over, finished, or complete. All players can recognize the end of a game, and therefore it is an agreed-upon outcome.

In participatory activities, having a clear outcome is helpful. The participants know the extent of their commitment, and have a gauge for measuring progress towards the outcome. Recognizing the outcome also allows participants to see their contribution towards that goal. With an ambiguous outcome, participants may walk away wondering how much value they added or what was the impact of their participation.

In the Intelligent Mail Scenario Game, the outcome was a scenario and a ranking of the information cards. These objectives were relatively clear to the participants. Here, participants had a sense when they had accomplished the task they were given. The weakness in this example is that the outcome was not a goal in which the participant had investment. A game with an outcome players find worth striving for will deliver deeper engagement than a game that requires little achievement.

### **Magic Circle**

Described by Salen and Zimmerman [8] and based on the work of Huizinga, a magic circle is a suspension of reality that people willingly make when they enter into a game. The space of the game is separate from everyday life and entering into the magic circle is a willing act on the part of the players. Huizinga calls this the lusory attitude; it is a playful spirit. The magic circle is a force governing rules of play. For example, adults going through the motion of a child’s game might be accused of “not playing correctly” because they have not entered the proverbial circle. Elsewhere a concept similar to that of the magic circle has described the space inside a game as a liminal space [3].

The magic circle has critical implications for games in participatory design. The challenge and rules frame the game, but the “magic” is players entering in and taking the challenge and rules seriously. The magic circle might help users to authentically participate, relieve the Hawthorne effect, and perhaps uncover tacit needs.

In the Intelligent Mail Scenario Game, there was no magic circle. There was no “play.” Participants never engaged on a level where they were in any way separated from everyday life. The idea of a magic circle has great promise for getting deep participant engagement; the degree to which a game designer can control the establishment of a magic circle remains unclear. One might argue that it is the players who create the magic circle by their willingness to

enter in, and that the existence of the magic circle is not inherent to the design of the game at all.

### ISSUES AND RESEARCH DIRECTIONS

The next step in this work is to design a new game for exploring intelligent mail tailored to gain deeper participant engagement by utilizing game qualities like rules, challenge, outcome, and the magic circle. An engaging game is not designed overnight and a game with an underlying research purpose will take an additional amount of thoughtful planning. As a researcher working in industry, my concern is what return on investment I can expect when designing a game to apply to a specific research question. Will the investment in a game pay off because the game will uncover insight that other methods would miss? Looking to the future, I consider whether it is possible to have a tool-kit for designing games that would allow me to quickly adapt a standard game format for particular research questions or problem types.

### CONCLUSIONS

Critical to the success of using games in participatory design is the degree to which a game intentionally leverages certain qualities of games to meet the aims of the research. Exploring games and game-playing can help enrich an understanding of the possibilities for games in design.

In the example of the Intelligent Mail Scenario Game, the activity successfully framed the problem but did not foster deep engagement by the participants. The fact that the game lacked many of the qualities described here could lead one to conclude it was not a game at all; but defining games enters a cross-disciplinary space that is beyond the scope of this exposition. Regardless, the activity's limitations lead me to probe more deeply into the fundamental qualities of games that can enable deep engagement.

If, as researchers, we can articulate the underlying purpose for using a game as part of research, along with the qualities of games that will enable a game to further our purpose, we can be more intentional about how we design games to facilitate research and design.

My hope is that this exposition will spark interest of other researchers and practitioners in the challenge of using games as a method for gaining deep engagement in exploratory research. Only by trial and error with using

games in design can we build a rich understanding of games to make them practical methods for research in participatory design.

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### REFERENCES

1. Burr, J., Soendergaard, A., Video Card Game: An augmented environment for User Centred Design discussion. *Proc. DARE2000*, ACM Press (2000), 63-69.
2. Brandt, E., Messeter, J., and Buur, J. Hands-on experience with design games in collaborative design. *Proc. PDC 2004*, Vol 2, CPSR (2004), 205-206.
3. Clark, B., Andersson, N. Emphasizing the Social: Building Board Games Together. Poster at EPIC 2005 <https://www.epic2005.com/abstracts.html>
4. Ehn, P. and Sjögren, D. From System Description to Scripts for Action. In Greenbaum, J., and Kyng, M. *Design at Work: Cooperative Design of Computer Systems*, Lawrence Erlbaum Assoc. (1991), 241-268.
5. Iversen, O., Buur, J. Design is a Game: Developing Design Competence in a Game Setting. *Proc. PDC 2002*, CPSR (2002), 22-28.
6. Pintsov, L. Intelligent Mail and Entity Relationship Model [www.postinsight.com/go.cfm?file=Pintsov%2Eppt](http://www.postinsight.com/go.cfm?file=Pintsov%2Eppt)
7. Pintsov, L. Intelligent Mail as a communication system <http://www.postinsight.com/go.cfm?file=Pintsov%5FUPUForum%2Eppt>
8. Salen, K., Zimmerman, E. *Rules of Play: Game Design Fundamentals*. The MIT Press, Cambridge, MA, USA, 2004.
9. United States Postal Service Intelligent Mail <http://www.usps.com/intelligentmail/welcome.htm>