
Making Friends by Killing Them: Using location-based urban gaming to expand personal networks

Josh Coe

Human-Computer Interaction
Institute
Carnegie Mellon University
Pittsburgh, PA
josh@joshcoe.com

Monchu Chen

Madeira Interactive Technologies
Institute
University of Madeira
Funchal, Portugal
monchu@uma.pt

Abstract

Cultural problems exist with current online systems for meeting new people, such as dating sites, which encourage unnatural meetings with strangers. An SMS-based murder mystery game was designed to facilitate the natural progression of growing one's personal network by meeting friends of friends. Considerations on how a location-based mobile system could further facilitate personal network expansion are discussed.

Keywords

Urban Gaming, Handheld Devices and Mobile Computing, Social Computing and Social Navigation, Ethnography, Participatory Design / Cooperative Design, User Studies, User-Centered Design / Human-Centered Design, Concept Design, User Experience Design / Experience Design

ACM Classification Keywords

K.8.0. Personal Computing – games.

General Terms

Social interaction, handheld computers

Introduction

It is the contention of this paper that location-based social gaming has potential for growing users' personal social networks. Online systems designed for meeting

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others often focus on "matching" users up with others who have similar interests for one-on-one communication and interactions that do not match natural real-world personal network expansion, i.e., by meeting friends of friends [7]. It was therefore proposed to create an online system that encouraged a more natural expansion of personal networks by forming teams of friends and making communication between teams a critical part of the system [1]. Teams of friends could interact with other teams of friends in a low-pressure gaming environment to encourage a more natural way of meeting others by promoting positive interdependence [6]. It was therefore decided to build a team-based social system that focused on connecting new people together and making new friends by "killing" strangers in an urban gaming environment.

Interviews with target users

The target user fell within extroverts in the age range of 18 to 35, i.e., still be more open to meeting new people and growing their personal networks. Twelve target users within that age range were interviewed regarding their openness to joining a new social networking system and what kind of system they would be most open to joining. Users were asked about their personal preferences regarding such items as online dating, online gaming and real-world gaming and events. It was found that users associated online dating systems with negative qualities, mainly that joining one would be an indication of lower status or "desperation." One user said that she would be embarrassed if her dating profile were discovered by colleagues. Another said that she would not join a dating site because of the perceived negative stigma attached to them. Similarly, online gaming was associated with negative qualities such as time consumption and the idea that users

would be perceived as antisocial and unpopular. However, users universally responded positively to the idea of a social network centered around parties and events, saying that they would join an online network that informed them of "secret parties" happening around their area. A majority of users even showed interest in helping to organize such events, inferring sustainability for a system that allowed for such user-generated event creation. The highest correlation of user receptiveness occurred toward secret events in a public place, if users were invited by someone within their extended personal network and if there were an element of social gaming involved. It was therefore hypothesized that an online social network would have the best chance of reaching critical mass if it were built around organizing social party events that utilized game mechanics to add a fun factor, but could still be perceived by the public as secret parties.

Concept generation

Drawing from the research, concepts were generated that utilized the idea of connecting target users together with an online social system that facilitated the creation of a fun party gaming environment. Initial concepts focused around how a system could track patterns of user activity, such as preferences for certain bars, clubs, drinks, music, etc., and connecting users passively, e.g. users observing and learning from preferences and feedback of other users, or actively, e.g., users directly engaging each other. Initial concepts also stemmed from how to support classically popular real-world field games with a heavy social element, i.e., laser tag, paintball and capture the flag [3]. Mobile location-based augmented reality technologies could summarily be utilized to enhance the experience of such games by creating a virtual world

superimposed upon the real world, an idea that was found to be popular during concept validation and user testing [8]. However, such field games were found to cater too heavily to a niche culture, while the target user was more universal. More widely applicable and validated concepts derived from the idea of "drinking games," i.e., games that utilize simple challenge-based concepts to facilitate the consumption of alcohol in a social environment. The concept with the highest positive response from the widest range of users was an SMS-based murder mystery game.

SMS-based murder mystery urban game

The murder mystery urban gaming event was created to provide a comprehensive test of how an online system could facilitate the natural expansion of the user's personal network, using interactive drama to create an increased sense of presence with the use of in-game SMS messages and characters [2, 4].

Recruiting users

Different methods were used to recruit users to play the game. The concept of co-creation was utilized, i.e., giving users a chance to brainstorm with the organizer about how the game could be created and thus feel a sense of ownership toward the event. Nine users showed up for the brainstorming session, all of whom ended up attending the event. From this it was surmised that an online system could allow users to obtain a similar sense of ownership toward an event and thus provide a higher level of word-of-mouth advertising and attendance rate. An online event page was also created, where users could sign themselves up for the event, and optionally pledge a monetary amount to go toward the purchase of after-party drinks. Users were encouraged to sign up a team of

four friends, which many did. Of those in attendance, most were either acquaintances of the organizer, or friends or colleagues of those acquaintances. Turnout was low for users on the third level of acquaintance (i.e., friends of friends of friends), and for complete strangers. This pattern of attendance was notable for being parallel to natural expansion of one's personal network. The concept of blacklisting was also found to have more powerful effects on the user base than it had in a virtual world environment: One user with a violent reputation was blacklisted from the murder mystery game, and four of his close friends took their names off of the online sign-up list upon learning this.



figure 1. A team of friends assigned to be the spades suit opens an envelope with murder clues and simultaneously receives an SMS message telling them to kill the hearts.

Playing the game

The murder mystery event was organized to test whether a social gaming system utilizing modern technologies could facilitate the expansion of users' social networks in a more natural way than existing online systems. Thirty-two players were divided into

eight teams of four that were each assigned a playing card suit. They were then given paper envelopes that showed them how to gather clues (real-world artifacts) to buy ammunition in the form of playing cards that could be used to kill other teams [9]. In-game staff would act as characters who would check clues, distribute ammunition and solve disputes. An online SMS system declared new enemies, stages and rule changes. For example, at the start of the game, each team was told to kill a specific card suit, i.e., "Kill the hearts." They then had to gather clues, exchange them for ammunition and engage the "hearts" teams in combat. Teams who were killed would then have an alcoholic beverage. These observations were noted:

- During gameplay, teams strategized with each other, exchanging different kinds of ammunition that would be most beneficial in their specific situations.
- Combat with other teams also facilitated communication. For example, one team encountered another one, killed them, and then the group of eight went to a bar to have a drink together for an extended period, enjoying getting to know each other.
- Team-based gaming concepts were validated, i.e., users were motivated to socialize to facilitate the acquisition of clues and ammunition, and to hang out with friends and meet new people in a fun social setting. Users enjoyed walking and using paper-based weapons in a game context, but their experience could have been improved with higher tech methods to keep track of gameplay.
- Human- and paper-based methods of organization and support made it easy for users to "cheat the system": For example, if one group gathered the wrong

clues, the staff might not catch this, and that group would then have an unearned advantage in the game.

- Users also expected there to be a clear winner at the end, but the paper-based system made it impossible to reliably keep track of game progress.
- Users were divided about the ambiguity of the rules: Some users expressed frustration or called upon staff members to sort out disputes; other users used the ambiguity to convince competitors of their own versions of the rules. The ambiguity contributed to the natural evolution of the tribe, i.e., players who were more passive ultimately fell farther behind in the game.
- The staff member in charge of managing the SMS system had to manually send out group SMS messages manually, which presented role strain that could have been prevented by a more automated system.
- After the game, players stayed at the bar talking and connecting with each other. Feedback from 20 users in an exit survey was notable for the unanimous sentiment of enjoying meeting new people and having fun. In follow-up interviews after one month, users noted that they still made contact with other players.



figure 2. A staff member interacts with teams in a role that could be automated by an online system in a future iteration.

Conclusions

Initial explorations of concepts centered around using online location-based systems to facilitate social gaming and widen personal networks have been shown to have a high positive response from users. For systems that cater to drinking games, health effects of alcohol consumption must be considered; a modern technology system has the capability of not only encouraging social gaming but also keeping health in check by monitoring alcohol levels. Also, the concept of blacklisting users should be considered. While online games can choose to blacklist users without serious repercussion, real-world gaming can include dangers such as violence. An urban gaming system could also give users a chance to provide their input in the game, thus providing the sense of ownership that was shown to correlate with event attendance and enjoyment.



figure 3. After finishing the murder mystery game, users came back to the starting point to socialize and discuss memorable moments during the game.

A future version of the murder mystery game or similar location-based urban game would benefit from an expansion of the technology system's role from rule setting to include clue distributing and checking, dispute settling and score tracking [1]. This would minimize the necessity of the human staff role, thus eliminating such room for error and allowing users to become self-reliant or rely on autonomous characters for support [10]. Team concepts could also be applied to virtual gaming environments, where formation of groups by location could be encouraged to create an easy transition from the virtual to the real world. The focus could expand in the future to expand personal networks for dating, relationships, activities, professional networking, travel and other exploits. While further primary research should be done to refine the specific urban gaming concepts that would be most effective at expanding users' personal networks, initial testing into this domain has been shown to have a positive response that encourages further exploration into this domain.

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