



All The World's A Botfighter Stage: Notes on Location-based Multi-User Gaming

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Abstract

This paper investigates some aspects of how location-based game concepts are challenging the traditions of gaming. The initial hypothesis is that location-based gaming that utilizes city space as a game board seem to be in conflict with the classical definitions of 'play' and 'game'. The nature of pervasive gaming is investigated in relation to different levels of mobile use and the social construction of urban space. The routines attached to mobile phones are mainly connected to interpersonal communication but also include certain 'play with location'. Therefore a mobile phone, regardless of its interface limitations, suits quite well the location-based multi-user approach. I also argue that playing in familiar real world locations brings new nuances and meanings to these places. On the other hand some elements of real life can take part in shaping the entire gaming experience.

Keywords

Location-based gaming, mobile gaming, pervasive gaming, nature of mobility, ethics of positioning, Botfighters

INTRODUCTION

The buzzword 'mobile gaming' has become widely used during the late mobile phone boom. However, already in such traditional innovations as a dice or a deck of cards we have an extremely functional mobile handheld gaming device per se. Also such early electronic games as Nintendo *Game &*

Watch series precede the mobile phone era. Therefore a remediation of *Pong* or *Tetris* in a mobile phone or a PDA is not something new or very interesting from a game studies point of view. My intention in this paper is to make some notes on how mobility and location can be brought to a central feature of gaming and what consequences does this have on the entire gaming experience.

The future prospects of mobile gaming have undergone some notable changes since the limitations of Wireless Application Protocol (WAP) and the delay of 3G networks. Lately the gaming concepts taking advantage of positioning and location information have brought new interesting features to the nature of gaming. From a technological point of view location-based games can be divided into three different groups.

The oldest games are based on using Global Positioning System (GPS) receivers that have been in the market much longer than mobile phones or PDAs. Theoretically the playground of GPS based treasure hunt games like *Geocaching* and *Geodashing* is the entire planet though standard GPS functions only outdoors. In ideal conditions a GPS device can determine your location in accuracy of a few meters but since the receivers normally have no communications features, these concepts do not support real time multi-user experiences. Today the hints and findings concerning different caches are reported mainly in the web. [1]

Secondly there are concepts based on local area networks (wlan etc.) and proximity sensors. The experiments produced so far are mainly outcomes of academic and commercial research projects. These games utilize a limited area and can make physical locations, objects, states and locations of other players intrinsic elements of the game. [2]

The third category of location-based games consists of the ones taking advantage of cell identification in GSM networks. GSM network based locating is not as accurate as other alternatives but the advantage is that cell identification does not require any new hardware or additional cards but the games can be played by using standard GSM phones. Because of the high penetration of mobile phones the first large audience hit concepts are likely to come from this category.

In the following chapters I will analyze one of the first commercial products in the area called *Botfighters*. Along with this I try to locate some more general characterizations of location-based gaming. I'm particularly interested in three different questions the *Botfighter* game presents. As a part of pervasive gaming movement *Botfighters* challenges *traditional definitions of game and play*. Secondly it questions *the notions of the nature of mobile gaming and mobility in itself*. And thirdly the game can be seen to redefine some ways *of using and inhabiting urban space*. These three themes will form the basic structure of the article.

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BOTFIGHTING SETTINGS

Botfighters game is produced by Swedish company It's Alive! and it was launched in Sweden during the spring 2001. In April 2002 *Botfighters* can be played in Sweden (Telia) and in Finland (DNA Finland) and the UK launch (Channel 4) is planned to be in the near future.

The basic concept of *Botfighters* is quite simple. The mission of the game is to locate and destroy other players (bots), and when a target is destroyed, the player earns credits and advances on the high score list. The web interface is used to build and update your robot. The mobile phone is used for the battles out on the streets. More information on the interface is presented in the following picture.

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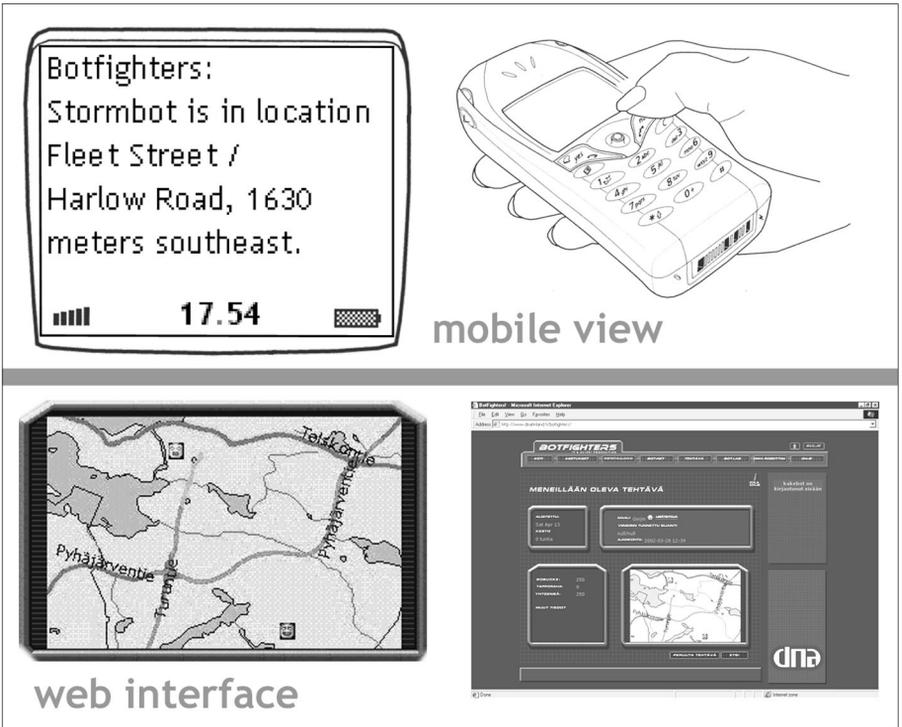


Figure 1: The gameplay options are divided between text messages and the website.

To choose a particular opponent to a target, player sends a text message with content “hunt” followed by the name of the opponent. Locating the target happens with a message “search”. Every text message command causes a feedback message giving information of the proximity between players (see Figure 1). When the opponent is within range, the actual battle starts with “shoot” message. Simultaneously, the target is aware that s/he is being hunted because of the radar warnings sent by the system. This allows opponents

to choose whether to take part in the shootout or run away and organize a counterattacking action. The GSM network cell identification is used to determine whether the users are close enough to each other to be able to hit. The damage caused depends on the type of weapon used, the efficiency of the targets shield and other preferences held by the players. [3]

Botfighters game combines features from different sources. It is advertised as “virtual paintball” but it also has some similarities with popular 3D-FPS games and such live action role-playing games as *Killer*. However, a player does not die in *Botfighters* but you only have to recharge your robot’s batteries to join the game again. This is of course partly because this way the operators can keep on charging for the SMS messages. However, there may also be other reasons. In a pervasive gaming environment manipulated with personal devices used also for personal communication, the experience may become too personal. If you feel the loss is happening straight to you an empty battery might be easier to handle than death.

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PERVASIVE GAMING EXPERIENCE

As any other game *Botfighters* has certain rules that define the actions a player can perform. It also has definitions for gain and loss and a mechanism for counting points. However, botfighting concept does not include an autonomous game board, a stadium or a virtual world. Gaming takes place in everyday physical environments among groups of people perfectly unaware of the ongoing fights.

Botfighters and other location-based games belong to the broader category of pervasive gaming. Such real-time all-media adventures as *Nokiagame* and Electronic Arts’ *Majestic* [4] harness multiple media platforms: at least mobile phones, computers, PDAs, fax machines, television and newspapers. In this kind of games the gaming ground consists of the real-life physical surroundings and different media environments. Pervasive games can also manipulate the moments and periods of gaming – for example with phone calls or SMS messages in the middle of the night.

Pervasive can be defined as something encompassing and always present. In other words the game never stops but surrounds the player 24 hours a day. In pervasive games the game world is constructed on the top of the real world: the game world exists beside the everyday environment. Thus pervasive gaming comes quite near to the idea of augmented and enhanced reality. [5] In practice the reality of the game brings new meanings to the ‘real’ environment and the practices of ‘real’ world have an influence on the ways gaming goes on

In his seminal study Roger Caillois states that the nature of play is autonomous and separated from any real-life actions. Usually play takes place in strictly determined time and place and ideally matters outside the playground have no influence on play. [6] Traditionally game also starts and

ends from a signal: “The umpire’s whistle breaks the spell and sets ‘real’ life going again” [7]. Thus it seems that the whole concept of pervasive gaming seems to be in conflict with the classical definitions of ‘play’ and ‘game’ that emphasize the nature of games as something separated from any real-life actions. I will return to this issue in the last chapter of this article when analyzing the consequences the game has on experiencing urban space.

Highlighting some unpredictable successors is characteristic to the late mobile culture. The success of SMS messages could not be predicted: the value of the technical solution is quite modest but as a social innovation an SMS message has a great significance. Today it seems obvious that the meanings new technologies get are culturally shaped and produced continuously through usage. People find new ways of using different devices and services and share the innovations with their friends. Equally the nature of game culture seems to encourage players on petty producing and creating shadow cultural economies. Gaming communities actively lower the border of producing and consuming by shaping the games more suitable for their own purposes. With all this in mind, it is quite predictable that also the features of botfighting game are used into purposes different from the primary inside-game functions.

The game is played with botnames that do not reveal the actual identity of a player. However, it does not take a very long time to notice that if you know your friends nickname, the game can also be used to locate friends. Therefore if your friend has a *Botfighters* account it is possible for example to check if s/he is still at the office at 10 p.m. and to send a go-home-message. This kind of surveillance can be scary and no doubt it raises some ethical questions. On the other hand between friends this kind of behaviour can become a mutually accepted play that also brings new nuances to gaming experience.

Privacy issues always include trade-offs: to learn to know other people you have to tell something about yourself, to get more personal service you have give some information of yourself etc. Still the case of personal real time location information is troublesome since so far people have such a little experience on the issue. In this context I presume to make a following suggestion. Games can offer a functional testing ground for potential users of such location-based services that take advantage of personal real time location. In a setting with commonly accepted rules, people can experiment what it feels like when other people are able to locate you. Being able to unsubscribe the game whenever one wants to prevents the game becoming too scary.

Botfighters concept suits this testing purpose extraordinary well. For one thing as long as you don’t tell your nickname to anyone you can play the game completely autonomously. Secondly a GPS accuracy could make you feel stalked but in case of cell identification it is very improbable that someone could actually track you down.

MOBILITY OF MOBILE GAMING

It's obvious that a mobile phone has its limitations as a gaming device. Since lately the displays have not supported any multicoloured visuals that are quite essential in most of the video and computer games. Also the input methods are very limited in a mobile phone. Some of the latest models include a kind of joystick but also in these cases it is not designed primarily for gaming. Likewise the basic communications protocols (SMS, WAP) are not designed for gaming purposes.

On the other hand a mobile phone has also some benefits in gaming context. Most of the people who own one carry it with them most of the time. A phone is primarily a communicative device that allows you to be in contact with other people. A new medium that already carries within strong social habits can be seen to fit quite well into a multi-player approach.

While stationary phones are primarily associated with fixed locations the identity of mobile phones is connected to persons and changing contexts. [8] You can make a call practically anywhere and the receiver can answer your call almost anywhere. In most cases it is even impossible to know the location of a receiver beforehand. Therefore it is very common to start a conversation with describing one's contextual situation: Where are you? Are you able to talk now? What are you doing? Who's with you? etc. [9]

This kind of play with location makes mobile phone users more sensitive and more aware of the nature of different locations and contexts. The mobile phone etiquette is continuously redefined: It seems to be suitable to answer a phone call in such a public place as a train or a bus but what about in the movies? And it's maybe not suitable to answer a call during a business meeting but for sure you can send a couple of text messages or emails. Studies on youth mobile culture show that often most of the calls made and text messages sent come from a restricted amount of spaces, the most popular being one's own room. [10] Therefore it seems that although people are able to use their devices almost anywhere, the significance of locations and contexts is only increasing.

The first phase of mobile gaming has been described as *entertainment of idle moments*. The most widespread examples picture a "mobile" gamer sitting in a tube or a bus stop or waiting for a friend. As Lasse Seppänen has put it: "This is the core of mobile gamer behavior: mobile gaming remedies moments of boredom when there's no access to better gaming devices. The result is a completely different pattern of playing – whereas traditional gaming consists of a few long sessions, mobile gaming is all about multiple short sessions." [11]

In this context it is necessary to examine the definition of mobility bit more deeply. The character of mobility can be divided at least into two different categories. *Semimobile* refers to contexts where users and surroundings do not constantly move but wireless communication is the most suitable way to take care of businesses (hotels, cafes, public transportation). *Fully mobile* environment imposes more restrictions to the use because the user has other

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tasks simultaneously: for example s/he has to use a device while walking or driving a car. [12]

The definition of semimobile seems to fit in quite well to Seppänen's description of mobile gaming. On the contrary, *Botfighters*-type location-based games are close to fully mobile since using a physical environment as playground forces players to divide their attention between the information a device offers and the actual physical settings. One important additional aspect from the point of view of mobility is that a location-based game can actually force a player to move: to search for certain hot spots or to find or to avoid other players. This kind of "required mobility" goes beyond the two-piece categorization and adds a new level to the definition of mobility.

Furthermore, if we follow the description, mobile gaming situations tend to be occasional and of brief duration. Also in this case *Botfighters* makes an exception since successful gaming requires being in active mode as much as possible. Other players can attack whenever but simultaneously that gives you an opportunity to earn points and robucks.

BOTFIGHTERS AND THE SOCIAL CONSTRUCTION OF URBAN SPACE

The fact that players are forced to move in and through physical spaces raises the larger issue of social construction of space – and in case of *Botfighters* particularly urban space. It's obvious that city areas gather more potential players than rural locations. However, the most important reason for city-centered orientation of *Botfighters* players is that the GSM network cell sizes vary and only in urban areas the cell identification is accurate enough.

When examining urban space as a gaming setting it is important to recognize the 'betweenness' of place. Individual places are continuously produced and reconstructed from subjective point of view but simultaneously other meanings are attached to same places by outsiders. Which is home or 'my neighborhood' for some people is a nameless collection of buildings, streets and people for others. [13]

Some studies have lately presented that young people have abilities of subverting and resisting the production of public urban space [14]. Skateboarders create alternative uses for modern urban environments and find interesting locations that have no special significance to anyone else in the city. The city space is continually reproduced and particular street corners and objects (benches, rails, ramps etc.) become meaningful and filled with memories. [15] It is also obvious that homeless people interpret the streets differently than people who use a street for protesting or partying, or gaming.

Based on Lefebvre's original distinction David Harvey suggests that spatial practices can be analyzed through three different levels: material spatial practices (experience), representations of space (perception) and spaces of representation (imagination). [16] This distinction gives a loose framework that can also be used to examine the elements of urban game space.

The production of the first level consists of physical infrastructures and territorial organization of social infrastructures. From a game point of view the physical infrastructure can be divided into the existing city setting (streets, buildings, vehicles etc.), physical gaming objects visible to gamer (computers, mobile phones) and the game architecture (networks, cells, identification methods, game servers etc.). In the beginning of the game, players have to choose their base, which is normally the city they live in. More complex ingame organization of social territories can possibly develop in result of organization of botfighting clans and teams and local leagues.

On the level of representations *Botfighters* uses quite traditional means. As presented in the Figure 1 the website shows a map of the location of the target in relation to the location of the player scanning the environment. The text message feedback utilizes cardinal points and metric system. The street names connect the representation straight to the physical city infrastructure.

In Harvey's categorization the imaginary level of city space consists for example of utopian plans and mythologies of space and place. In *Botfighter* context this means primarily the fictional game world inhabited by the bots. The backstory that defines the properties and functions radars, shields, guns, batteries etc. produces the basic sense to the game world. However these game world objects are not connected to the existing real world settings.

As the staging of a play the existing city setting has an influence on the whole gaming experience, but in the end it does not have any major function in the game concept. A wall or a waterway can in some cases influence the events but what is of primary importance are the other players. The bots are not searching for treasures or trying to reveal ancient secrets but the name of the game is fighting against other bots. Due to the actual movements of other people certain areas of the city become safe and others dangerous.

Thereby it seems that using streets as a game board not only questions the definition of gaming but also brings new nuances and levels to the production of urban space. If the mobile gaming ideal is to free players from the chains of time and place, location-based gaming on the contrary operates through creating new meanings to familiar locations. Experienced gamers may be able to learn to locate the borders of network cells and this kind of new information can have an influence on the daily usage of city space.

On the other hand, when social space is mixed with game space players also become more aware of the routines, fears and fondnesses they direct on familiar urban environments. Then again these emotions attached to certain places can affect the game play, because in some cities the territorial organization can produce virtual no-go areas for certain groups of people depending on for example "race," class or gender. No doubt the urban geography of fear is very powerful in many big cities and for example at nighttime certain city areas are strongly avoided.

In conclusion, it can be said that employing urban space as a game board has some unavoidable consequences. Memories and personal histories attached to real world places in 'real world' can become a part of the gaming

experience. Real life events and appreciations can in practice limit the alternatives a player has in the game. This forces us also to thinking how our society should treat games that have an immediate influence on the real life actions. Should location-based games be rated as adult only content if they can for example encourage children to places beyond where they are permitted to wander? [17]

CONCLUSION

In this article I have concentrated on concepts that focus only on utilizing the real time location information of players. More complex approaches can be created through bringing both player-specific location information and statistic or mobile caches as parts of the game concept. Also other real world features than location can become significant in the future. One early example of the new genre is the Japanese game *Samurai Romanesque* in which the real life weather conditions have an influence on the events in the game world.

What is to be learned from *Botfighters* game is that real life elements brought into the game world maintain at least some of their real life meanings and effects also inside the game. Locations may get new meanings through playing but simultaneously the real life meanings and memories attached to locations have an influence on the way the game is played.

REFERENCES

1. For further information see <http://www.geocaching.com> and <http://www.geodashing.org>
2. See for example *Pirates!* (<http://www.viktoria.informatik.gu.se/groups/play/projects/pirates/>) and eErie (<http://www.sics.se/eerie/index-en.html>). More information on *Pirates!* in Björk, S., Falk, J., Hanson, R., & Ljungstrand, P. "Pirates! Using the Physical World as a Game Board" (2001), <http://www.viktoria.se/play/publications/2001/pirates.interact.pdf>
3. For game details see <http://www.itsalive.com/games/gamedetails.asp?Message=83>
4. For further information see <http://www.nokiagame.com> and <http://www.majestic.ea.com/>
5. Järvinen, A. "Milloin pelistä tulee mobiili? – Mobiilipelien alkeista suunnittelun työkaluihin" in *mediumi* 1.1. (2002), <http://www.m-cult.net/mediumi/article.html?articleId=29&print=1>
6. Caillois, R. *Man, Play and Games*. The Free Press of Glecoe, Inc., New York, 6-7.
7. Huizinga, J. *Homo Ludens: A Study of The Play-element in Culture*. Routledge & Kegan Paul, London, Boston & Henley, 1949, 9.
8. Ljungstrand, P. "Context Awareness and Mobile Phones". *Personal & Ubiquitous Computing* (2001) 5:58–61. Springer-Verlag, London.
9. Kopomaa, T. *The city in your pocket: birth of a mobile information society*. Gaudeamus, Helsinki, Finland, 2000.

10. Kasesniemi, E.-L., & Rautiainen, P. *Kännyssä piilevät sanomat – Nuoret, väline ja viesti. Tampere University Press, Finland, 2001* and Ito, M. “Mobile Phones, Japanese Youth, and the Re-placement of Social Contact”. Society for the Social Studies of Science meeting, Boston, 2001, <http://www.itofisher.com/PEOPLE/mito/Ito.4S2001.mobile.pdf>
11. Seppänen, L. “Designing Mobile Games for WAP” in Gamasutra Mobile Games Resource Guide (2001), http://www.gamasutra.com/resource_guide/20010917/seppanen_01.htm
12. Väänänen-Vainio-Mattila, K., & Ruuska, S. “Designing Mobile Phones and Communicators for Consumers’ Needs at Nokia” in Eric Bergman (ed.) *Information Appliances and Beyond: Interaction Design for Consumer Products*, Morgan Kaufmann Publishers, 2000, 169–204.
13. Knox, P. *Urban Social Geography: An Introduction*. Longman, London, 3rd Edition, 1996, 215.
14. Valentine, G., Skelton, T., & Chambers, D. “Cool Places: An Introduction to Youth and Youth Cultures” in T. Skelton, & G. Valentine (ed.) *Cool Places: Geographies of Youth Cultures*, Routledge, London & New York, 1998, 1–32.
15. Borden, I. “A Performative Critique of the American City: The Urban Practice of Skateboarding, 1958-1998” in *Journal of Psychogeography and Urban Research*, Volume 1, No. 1, Autumn 2001, http://www.psychogeography.co.uk/v1_n1/borden_on_skateboarding.htm
16. Harvey, D. *The Condition of Postmodernity: An Enquiry into The Origins of Cultural Change*. Basil Blackwell, Oxford & Cambridge, MA, 1989.
17. Meyers, S. “Social policy issues of mobile games”, <http://www.stephan.com/MobileSocial.html> (2001).