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**Course: Computer Games Production**

**Unit: HCI, Computers And Society**

**Unit Code: CMP2006**

**Assignment Number: 4**

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## Ethics Form – Scenario (2)

### HCI, Computers & Society

<b>Project Title</b>	Mobile pervasive game
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<b>Student Name</b>	Jason Gunn
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<b>Project Description</b>
This project aims to evaluate a mobile pervasive game using a set of volunteer participants. The game involves each participant roaming the city of Lincoln with a WiFi enabled PDA. The PDA will be running a piece of software within which 'lives' a virtual creature – the virtual creature can only survive by accessing a different unprotected WiFi outlet every 10 minutes. The longer the creature survives – the higher the game score. Players can also publish the location of unprotected WiFi spots on the game's website to assist other players. The aim is to recruit participants from the undergraduate student population at the University of Lincoln and to encourage people to take part by offering several small prizes for the highest game scores achieved during the evaluations.

<b>Ethical Issues Arising from the Project</b>
<i>Use bullet points to identify each separate issue – make sure that, for each point, you identify the person(s) affected by the issue - suggested word count: 500 – you should aim to raise between 5 to 10 issues.</i>

#### Issues effecting only research candidates:

- ❖ Ethical issues of pervasive gaming – Mobile pervasive gaming is a relatively new development however as it is designed to interact with peoples lives, it is possible that problems will occur, mental addictions such as those seen in World Of Warcraft for example. In this case people may not want to give up, forgoing other more important things in life, this however is unlikely as the game should be short lived.
- ❖ Health and safety issues with accessing a different location every 10 minutes – This project is designed to make the participants seek out a different wifi point every 10 minutes, this could have detrimental effects upon their health. If for example they are more interested in winning the game than looking after themselves they may go without food, sleep etc. They may also injure themselves when trying to locate the required wifi outlets, which would have legal repercussions for the entire project.
- ❖ Privacy issues of accessing Wifi outlets - The IP of devices accessing Wifi outlets is generally logged, this could in turn mean that any participants are traced, and are then subject to any legal action taken (Talked about later).
- ❖ Privacy issues of publishing information on websites – As with the above, IP addresses are logged when publishing information on public websites this however should not be a problem for the game website. Public location lists could also lead to a large number of people all using the same unprotected Wifi, which makes it more likely for problems to arise.

- ❖ Validity of published information – It is also possible that research participants will post invalid information onto websites, in a malicious attempt to get the highest score, this could upset other participants, and invalidate the research results.
- ❖ Possible attachment to “virtual creature” which “lives” – While unlikely it would be possible for participants to form a mental attachment to the “Virtual Creature” been as it is said to live, this in turn would make them more determined to continue accessing Wifi points, and in turn more likely to have health issues arise.
- ❖ Competitive nature of program – The game has an innate competitive nature, due to the ability to gain a high score, this again could mean people keep playing even when detrimental to themselves.

#### **Issues effecting only researchers:**

- ❖ Offering prizes as an incentive to participate/ attain a high score – This will encourage people to take part, even if they are not able (mentally physically, etc) enough to do so. It will also mean that people with a more competitive nature will keep playing, in order to ensure victory, this as mentioned above may cause health issues, both physical, and mental.

#### **Issues effecting both researchers and research candidates:**

- ❖ Legal issues of accessing “Unprotected Wifi outlets” – The wording of this is questionable, it is legal to access Free Wifi Hotspots, however not Unprotected outlets, there have been reported cases of legal action taken against people accessing private outlets already, and a large scale project like this could very likely have legal repercussions.

#### **Required changes to, or clarifications of, methodology before project can proceed**

*Use bullet points to identify each separate required change/modification – give detailed reasons why you have made your changes/clarifications compulsory – suggested word count: 250*

- ❖ “Unprotected Wifi Outlets” – This needs rewording, to protect the participant and the researchers, it must be made clear that only free to access Wifi hotspots should be used, in order to remove any legal repercussions. It is potentially a good idea to set these hotspots up prior to the experiment.
- ❖ It is important to set a viable time limit, between the access of each wifi point, increasing this considerably is required to make the experiment more ethically sound.
- ❖ Prizes – It is important that participants take part in this activity of their own free will, the incentive of prizes therefore must be removed in order to make this experiment valid.

- ❖ High Score –As with prizes the high score element needs to be removed from this experiment, this will remove the more competitive elements of the “game”, ergo it is less likely that mental and physical issues will occur as a result of taking part.
- ❖ “Virtual Creature” that “Lives” – This needs to be reworded, or removed, while it is unlikely as mentioned people may become attached to the virtual element and continue to sustain its “Life” by finding new access points. By removing/rewording this chance is highly decreased.
- ❖ It is also important to express how long this experiment will run for, to verify if there will be any periods where the game is not running, for example to allow participants to sleep etc.
- ❖ It is also essential that all information posted by participants is valid therefore the brief needs to show that this will be the case.

### **Suggestions to safeguard well-being and anonymity of participants**

*Use bullet points to identify each separate suggestion – suggested word count: 500*

- ❖ IP Tracking – As mentioned IP’s are tracked when the participant accesses Wifi outlets, and websites. It is therefore suggested that the researchers allow only participants of the game to access the website for the posting of Wifi hotspots, the website will also require a moderator to ensure that all submitted information is valid. It is also suggested that the experiment use an IP masking program so that data is not collected when participants access Wifi Hotspots, this will ensure that they are not traced.
- ❖ 10 Minutes – It is irresponsible to allow the participants to run around, and endanger themselves in an attempt to find the next access point. Either the time limit needs to be increased considerably, or the researchers need to set up fixed access points throughout the city in order to make the task easier for the participants. If this is not done then participants are likely to suffer health problems, or injure themselves.
- ❖ Mental Symptoms – It is essential that this experiment remove competitive elements, while this may alter the findings, it is not fair upon participants to suffer for the sake of results. Therefore as already stated, elements such as prizes, high scores etc must be taken out of the game. This will reduce the chance of mental problems arising, such as addiction, violent competition in an attempt to win etc.
- ❖ Physical – Because participants will be roaming around the city in an attempt to find the required Wifi hotspots it is required that the experiment give them breaks throughout the day, periods for eating, sleeping, etc. If this is not the case then the participants may neglect themselves causing ill effects. It is also important to place access points in relatively safe locations remove any threat posed.

- ❖ Participation – Because there will be many people participating in this experiment it may be necessary to allow each person to participate at a different time to the other, this will ensure that participants are not recognised for having the PDA, etc. However if this is not viable, then it is important to explain that participants may be interacting with others.
- ❖ Assurance – It is essential to explain to participants that this is just an experiment, that all information obtained will be kept private, and that they may stop at any time. This will help to remove any stress caused, and enable a more accurate set of results to be obtained in theory.

### Suggestions for further reading

*Give three reputable online resources that you believe the project leader(s) should consult before proceeding further – in each case give the URL of the resource and a 100 word description of the resource's relevance to this project.*

- ❖ <http://www1.sdu.dk/Hum/bkw/walther-pg-article-06.pdf> - Walther, B.K. Pervasive Game-Play: Theoretical Reflections and Classifications, 2007b (to appear). – This paper talks about the theoretical principles of pervasive gaming. Talking about the games design, mechanics and ethics. I believe that it would be beneficial to the project leader (s) when they are redesigning the experiment, to enable them to create a more ethical outcome. The paper also talks about how having to explore a large space can take away from the Gameplay experience by adding in real life hazards such as traffic or other people being in the way, which bring rise to more ethical issues.
- ❖ [http://papers.ssrn.com/sol3/Papers.cfm?abstract\\_id=692881#PaperDownload](http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=692881#PaperDownload) – Hale, II, R. Wi-Fi liability: Potential legal risks in accessing and operating wireless internet. Santa Clara Computer and High Technology Law Journal 21 (2005). – This paper talks about the possible legal repercussions of accessing unprotected Wi-Fi outlets. This is essential for the project leader (s) to look into due to the very wording of their initial experiment proposal. There is a wealth of information on what is, and is not acceptable in these circumstances, which could stop them having to deal with larger problems once the experiment has been run. It mentions that the Wi-Fi operators should protect their own network, but not that this is an open invitation to piggyback bandwidth.
- ❖ [http://www.ipsi.fraunhofer.de/ambiente/pergames2005/papers\\_2005/PerGames2005.pdf](http://www.ipsi.fraunhofer.de/ambiente/pergames2005/papers_2005/PerGames2005.pdf) - Louise, M.C. Gaming on the Edge: Using seams in Pervasive Games (2005) – This paper is a reflection of a project very similar to the one proposed, in which players interact virtually via the use of a PDA in an urban area. It would be useful for the project leader (s) to read this so that they can identify any weak areas within their proposal, and to evaluate any potential problems that may arise from it. The paper talks about some of the issues they expected to arise, and then reflects upon them, such as interaction with traffic around the city.