ABSTRACT
With this short paper we want to provide insight into how the concept “multiplayer” is experienced amongst children aged between 6 and 12 (tweens). Based on a project involving the development of a multiplayer game for this target audience we conducted research in two phases. The first phase consisted of getting to know to which extend tweens are interested in multiplayer gaming based on a contextual inquiry involving known games. A second phase consisted of a multiplayer playtest of an, at the moment of testing, unreleased game. Based on both phases it is clear that there are some rough guidelines to put forward for both game developers and future projects involving multiplayer playtesting.

KEYWORDS
Multiplayer, Games, Children, Tweens, Playtesting

1. INTRODUCTION
“Tweens” are commonly referred to (Simpson, 1998) as being a group of people in between two other groups. Our research looks at tweens as an age group of children between 6 and 12. During these ages children transform rapidly from “child” to “adolescent”.
Perhaps the most radical change (Bukatko, 2003; Rice, 2000) between 6 and 12 is the change from being only influenced by parents to being influenced by peers. Also, social skills are developed as the tweens start making their own friends and develop their own social bonds.
In relation to gaming, the question raises to what extend these social changes influence the way children of this age range go about with playing (multiplayer) games. Do the same developments manifest in gaming, i.e. do children develop an interest for social contact in gaming? How is the concept of multiplayer interpreted and are they interested in multiplayer gaming in the first place?
The research described in this paper is the result of a small scale, qualitative study. Therefore the results should not and cannot be generalised. With the results we merely want to bring forward ideas and preliminary conclusions that can be built upon in further research.

2. PHASE ONE, MULTIPLAYER IN CONTEXT
During the first phase we looked at the term “multiplayer” in a very broad context. This means that we did not only focus on whether the tweens played over the internet, regarding the fact that multiplayer gaming might as well be playing together on one computer – sharing the mouse and keyboard for example.
To evaluate this we used the game KetnetKick (Larian Studios commissioned by VRT, 2004). The game KetnetKick mainly consists of a single player story set in a virtual world. In this world a variety of games can be played, going from platform games to language games. Only recently the developers introduced a multiplayer component to the game, which allows players to compete in online racing games against their friends or other players of the game over the internet.

2.1 Phase one, Method
In total we visited 25 participants of 11 families (12 girls, 13 boys) all ranging from 6 to 12 years old. Based on literature (Druin, 2002; Zaman, 2005) we decided on combining contextual investigation with active intervention techniques to get the most information out of the participants. Using these techniques it was possible to set up a very flexible way of observing but still getting very rich information in the end.

An observation session consisted of two big parts. First the game was played, the participants got the chance to show what part of the game they liked best, what part was the hardest, what they would like to change, etc…. There was no specific focus on multi or singleplayer at first. During the testing process the participants were however directed towards the multiplayer capable game (only if they didn’t already show it by themselves). During the second part, the focus was on internet usage. The participant was first asked if he/she used the internet, if so it was asked to briefly show some things he/she liked to do on the internet.

Every test executed was done with signed permission of the parents or guardian of the children.

2.2 Phase one, Results

2.2.1 The ten year old ‘turning point’

Tween’s below the age of 10 clearly play just to have fun. They don’t show a lot of interest in trying to beat the game or trying to get as many points as possible. Their play style can be considered as ‘random play’ in which they explore the game and mostly by coincidence get into certain mini games or smaller parts of the game. Since these younger tweens handle the game as a ‘medium’ to have fun, they also watch a lot of music/movie, which were integrated in the game. They sing and dance in front of the screen and have a lot of “fun” that way, comparable if they would sing along to television or the radio for example.

Once the tweens get to the age of 10 they start playing with certain goals in mind. For example, they try to be the fastest on the racing track, or to get the most points out of the game. They are conscious of the actual goals of the game and know what to do to reach them through a “defined play” play style.

The same observation manifests itself when it comes down to internet usage. Younger tweens use the internet mostly for playing games (flash games on various websites). The tweens above 10 also use the internet to surf the web, and to do their schoolwork.

2.2.2 The “Offline” multiplayer

It is, however, remarkable that even though these clear differences in age, playstyle and internet usage, none of two tween groups use the game’s multiplayer opportunities to play with their friends over the internet. Some of the respondents knew that the possibility to compete over the internet with others existed, but were not very motivated to put effort into figuring out how to setup a multiplayer game.

Within every family visited, there was however some kind of ‘offline multiplayer’ going on. Brothers and/or sisters either played games with or against one another, tried to get the ‘coolest’ outfit for their characters,… This type of multiplayer was very common, as it appeared in every household visited. Only one family used the online multiplayer functionality of the game.

It should be clearly pointed out that the ‘offline multiplayer’ is something that the game was not designed for. The respondents played games that are conceived to be played in single player mode, with two (or more) players. For instance one player would control the movement, whilst the other controls the shooting controls. Other observations were that the respondents took turns on one game, allowing players to either cooperate or compete against one another.

2.2.3 Parental control, technical restrictions and privacy issues

Besides the multiplayer aspect, the play style and overall gaming experience of a tween are greatly influenced by the parents. Most tweens were assigned certain ‘time slots’ in which they could play games. On average, these time slots were 30 minutes. This means that if a certain storyline would take longer than that time, it cannot be guaranteed that the player will experience the whole story in one session.

Related to the fact that parents influence the tween’s gameplay is that one third of the respondents did only have access to the game tested at one (physical) location. This was mainly due to technical constraints; often there was only one computer compatible with or powerful enough to run the game, or that had internet access. This points out that both the physical location of the player and the technology used is very crucial toward delivering a game that can be enjoyed by a large crowd of tweens.
A last aspect that was observed was the importance of privacy. It was clear that both parents and children were aware of the ‘dangers’ of the internet in terms of privacy. Parents try to push the use of internet as far back as possible, mostly because of privacy issues.

3. PHASE TWO, MULTIPLAYER PLAYTESTING

Taken the results of the first phase in account, we went on to a second phase in which a prototype of an entirely new game was tested. (note: At the moment of writing this game is not released, therefore this can not be discussed in detail) The tested game targets the same audience as the KetnetKick game that was used during the first phase. The major difference is that the game tested during the second phase is much more focused on the multiplayer aspect as in certain areas of the game it is possible for the players to see each other, play together or against each other and even chat with each other.

After testing this game it was possible to get an indication on how tweens actually perceive the concept of multiplayer, whereas during the first phase the focus was on the context around multiplayer gaming.

3.1 Phase two, Method

3.1.1 Sessions & Participants

To playtest the game we held six testing sessions. During these sessions we tried to vary as much as possible in age, experience with gaming, participation during the first phase and the number of participants involved in a session. In total 18 participants between 6 and 12 took part in the sessions, 10 boys and 8 girls. A session consisted of minimum 2 and maximum 4 tweens. Every session was set up in such a way that there was a good mix of respondents with and without experience in gaming.

Unlike the first phase, the sessions took place in a controlled environment. This mostly due to the technical requirements of having to have four networked computers to be able to play the game. The test sessions were mostly done with one observer. Only during the sessions were we had four children playing, we worked with an extra observer on ‘standby’ for when things would really get out of hand.

3.1.2 Session setup

Every session started with a short introduction to the game. Nothing was said about what they had to do or how to control the game. The tweens then got the chance to full explore the game for about 30 minutes. In this time they ran through a tutorial level and got to play some of the early levels in the game.

After this ‘free play’ the tweens were asked to move to another section in the game where they would be confronted with the multiplayer content. In this section the players would be ‘dropped’ in a room together, in which they got to see each other’s character. This room should be imagined as a lobby were players gather, and then move on to playing a game together. Once the multiplayer game was finished, the players automatically left the multiplayer group and were placed back in single player mode. At that point they had, in the best case, played all available game content at that time.

3.2 Phase two, Results

The global trend of the results clearly illustrates the findings found during the first phase. Tweens of age 10 and up grasp the concept of multiplayer much better than younger players. This showed most at the moment the players got ‘dropped’ in the multiplayer zone. The younger children did not realise that the other characters walking around were their friends sitting in the same room with them. Older players reacted very differently and realised it a lot faster. Overall, the older players valued the multiplayer much higher than the younger players who were mostly talking about the way the characters looked and the variety of things they could do in the game.

An unforeseen result was the big difference when there were tweens in the room that knew each other. They would communicate a lot with each other, mostly by shouting things out like for example their progress through the game or their position in the world. It was interesting to see that the ‘people fun’ (Lazarro, 2005)
and overall game experience was enhanced a lot by their social bond. This also relates to the importance of the ‘offline multiplayer’ during the first phase.

4. CONCLUSION

As an overall conclusion, the age of 10 should be seen as a very clear turning point regarding the way multiplayer gaming is experienced by tweens (6 to 12 year olds). Tweens younger than 10 generally play in a random way, without defined goals in mind. Once they reach the age of 10, their play style changes to a more defined style. Because the social influence of their peers increases at that age, the concept of competition and ‘playing to win’ is understood. This also leads to a higher interest in multiplayer gaming. This is illustrated in Figure 1 by a very defined ‘split’ at the age of 10.

Our results show that the above is valid only for what is commonly understood as an ‘online’ multiplayer game. The younger tweens are playing a lot of games together at one computer, where there is physical contact between them. When developing for this age group, thinking from within an ‘offline’ multiplayer context opens a lot of opportunities for game design and it clearly is something younger tweens would appreciate. There are however some clear restrictions, the most important ones being the 30 minute playtime per session, the influence of the parents on location and privacy issues. Also, developers should take a vast amount of people with hardware limitations into account. Figure 1 shows an overview of these conclusions, showing the different age groups in the top white (< 10 years old) and bottom shaded (> 10 years old) area. The bottom icons illustrate the various restrictions, mentioned earlier, tweens have towards gameplay and overall game experience.

The method used for multiplayer playtesting turned out to work well, however we did not expect the difference between tweens that knew each other and those who didn’t to be that big. Therefore it would be interesting to refine the method in the future, taking these aspects into account.

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REFERENCES