New Paradigms for Digital Games: The Finnish Perspective

Future Play Project, Final Report

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Summary

The Finnish game industry is booming. That is a fact that cannot be denied. While the prospects are exciting, the future is hard to predict in such a hit-driven business as digital games. The report at hand provides an overview of some of the emerging trends and weak signals in digital games. As the future growth of games market is expected to be driven by online and wireless games, our attention is directed particularly to the forms and consequences of online play and digital distribution. The study is based on over 20 thematic interviews that were conducted during the year 2010 with Finnish game industry experts ranging from CEOs, investors and designers to journalists and researchers. The findings are further contextualized within the existing research.

The research starts with a general review on the three key dimensions including game business, game technologies and game cultures. The study illustrates how the advent of digital distribution and game-as-a-service paradigm necessitates new strategies and skills, especially concerning innovation management, marketing and user research. In terms of technology, dematerialization of games is visible in various levels: while traditional retail is making room for online distribution, controller-free interface solutions and cloud-based gaming services question the need for dedicated physical devices. Easily accessible casual games and free-to-play social games have brought entirely new audiences to digital games. Alongside other developments, the growing player populations challenge game developers to come up with advanced models for understanding, communicating and co-operating with their players.

Traditionally the Finnish cultural industry – be it books, movies or music – has focused on creating compelling products mostly to the home market. From this perspective, games have been very different from the beginning. The Finnish game industry is full of 'born global' firms that make most of their revenue from abroad. At the same time, similar to many other European countries, Finland does not have much tradition when it comes to venture capital. This means that companies only seldom experience rapid growth, and thereby the local game industry has traditionally been characterized by a high number of small scale companies. There are, however, recent signs that this is about to change. The key challenge is to develop effective models in which both private investments and public finding can be used to boost sustainable growth among local entrepreneurs.

When discussing the particular nature of Finnish game industry, many of the informants agreed that the technological know-how and the conceptual game development skills of the local developers are of very high class. Overall, the Finnish games industry was seen as very open and cooperative. On a general level, the low hierarchy is an oft-mentioned national characteristic. In connection to games, the openness has its roots in the way the Finnish game industry has spawn from computer hobbyism and the so-called demo scene. Accordingly, instead of seeing each other as direct

competitors, the developers often like to share experiences and take newcomers under their wings. The overall informality can have its downsides as well. Some of the informants called for more professional management practices and overall courage to break away from the comfort zone.

Altogether, the disruptive influence of new platforms and new audiences requires special focus from all the involved actors. Accordingly we have presented some practical points of consideration based on the findings. The proposals are divided into three categories: 1) Governmental actors and public institutions, 2) Game companies, and 3) Research and education.

The interview-based study is complemented with two case studies that take a closer look into free-to-play model and downloadable add-on-content. By discussing both the underlying business models and the player response to these new offerings the case studies exemplify the new environment in which the game developers increasingly operate in. The last section of the report consists of invited short contributions. Selected experts were invited to reflect on the future of games in their particular area of expertise. The contributions contextualize, deepen, supplement and challenge the observations made in the main report.

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1. Introduction

The Finnish game industry is booming. That is a fact that cannot be denied. The past couple of years have witnessed a number of success stories, big and small. Consequently, several game development studios have recently secured funding from both local and international investors. At the same time, while the prospects are exciting, the future is hard to predict in such a hit-driven business as digital games.

While the popular press is full of articles related to the latest hit games, little has been written about how the Finnish game industry representatives collectively perceive the future possibilities and challenges associated with development and circulation of digital games. This is where this report steps in. By interviewing selected experts and contextualizing the findings within the existing research we aim to gain insight into emerging trends and weak signals. We openly acknowledge that it is impossible to predict the future as such. Instead, we aim to highlight some of the key trends and phenomena that will take part in shaping the future of the digital games market.

The global video game market is expected to grow from less than 30 billion $US in 2004 to over 70 billion in 2013 (PWC 2009). Over the same period, the Finnish games industry is predicted to increase from around 40 million Euro (2004) to 160 million (2013) (Neogames 2010). Overall, the growth of games market is expected to be driven by online and wireless game software (De Prato et al. 2010). Therefore, our attention is directed particularly to the online game market.

It is not easy to extensively define and quantify the online games segment. Once a niche for computer savvy "hardcore" players, online gaming now "addresses a new and much wider range of ages, and the target market is growing exponentially, sustained even further by the parallel non-stop growth of social networks communities" (De Prato et al. 2010). Networked gaming challenges the traditional game industry reasoning in a variety of levels: 1) revenue model; 2) product attributes; 3) development process; 4) distribution channel; 5) communication; 6) game style; and 7) immersion (Wi 2009, 8-31). Furthermore, as our way of living is becoming increasingly networked, online gaming expands from a single segment or genre into a feature associated with all kinds of gaming.

1.1. Theoretical and methodological starting points

The research produces a general review on the dimensions of digital gaming including 1) game business, 2) game technologies and 3) game players and cultures of playing. Our starting points are inspired by the three-circuit model introduced by Kline et al. (Figure 1).
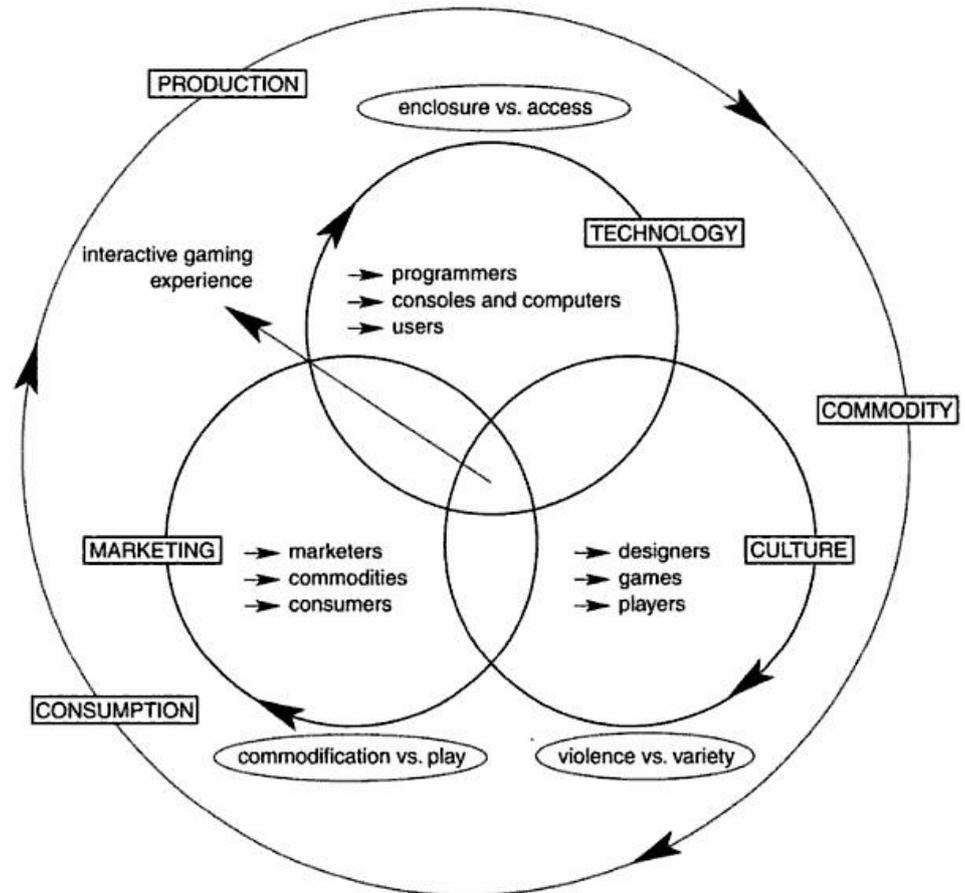
Figure 1: The three circuits of interactivity in the mediatized global marketplace (Kline et al, 2003, 58)

Our understanding of the global games market in the era of information capitalism is defined by the intersection of the three circuits. From the business perspective digital games represent an intriguing mix of cultural industry and game development. A number of similarities between digital games and more traditional cultural industries can be found: games are a high-risk industry with high production costs and low reproduction costs. As the cultural market of digital games is characterized by rapidly changing trends, strategies like vertical and horizontal integration are actively used to control costs and to guarantee access to a wide set of distribution channels (Kerr 2006). The technological dimension reminds us how digital games are always closely tied to the "the complex path by which inventions and technological possibilities pass from initial experimentations through the market and into mass consumption" (Kline et al. 2003, 56). Within the cultural context, digital games are discussed through the "varying degrees of openness or closure, option, and limitation" (ibid., 54) they allow for players. Both thematically and in terms of larger operational models, the key question is whether to follow the tried and safe formulas or to experiment with more diverse models that highlight the centrality of co-productive relations.

While the tripartite model importantly helps to outline and decode the complexities of the global games market, it is still an analytical distinction,

a tool that explains by simplifying things. Games and their development are increasingly defined by larger networks of actors and global flows of commodities and workforce. Contemporary digital media in general and gaming in particular are importantly co-constructed by developers and users: while some ideas emerge from bottom up, others spread from top down. Thus, the focus needs to be turned to the push-pull dynamic between the industry and the players. (Consalvo 2007, Jenkins 2006, Sotamaa 2009.) As a consequence the focus moves from individual game products to the interlinked ecosystem of people, things and services that defines the environment in which digital games are both developed and played.

The core themes of Future Play project (2010-2011) are based on the Tekes-funded project titled Games as Services (2008-2010). The previous project aimed at producing an overview on the emerging service paradigm and its consequences in the digital game market (Sotamaa & Karppi [eds.] 2011). During the project's timeframe, the online market of games, including subscription, digital game download, DLC, virtual commodities and value-added services, was steadily expanding. At the same time, with the advent of casual and social games, entirely new audiences were introduced to digital games. Hence, our particular focus on online and social games.

The practical implementation of the study relies on qualitative analysis. Over 20 thematic interviews were conducted with expert informants ranging from CEOs, investors and designers to journalists and researchers (the full list of interviewees can be found at the end of the report). In the case studies we close-read the selected games in order to outline the key economic strategies and the ways in which players are incorporated into the networks of production and consumption.

1.2. Tips for the reader

At the beginning of this Introduction we outlined why we feel that the Finnish game industry needs more attention: the current boom needs to be contextualized and the potential future directions examined. We believe that the report can help its reader obtain a deeper understanding of the future of digital games in general and the Finnish industry in particular. We explore aspects that directly concern game designers and developers. At the same time we hope to provide a useful overview that will benefit both researchers, policymakers and the wider audience interested in digital games.

The report is divided into three parts. The first section summarizes the key findings of the expert interviews. The individual chapters introduce the key transitions and emerging trends both in game business (chapter 2), game technology (chapter 3) and game culture (chapter 4). Chapter 5 discusses the particularity of the Finnish game industry and the impact of the

identified transformations on it. The first part is concluded with practical recommendations and points of consideration (chapter 6).

The second section includes two case studies that examine the appeal and dynamics of free-to-play social games (chapter 7) and downloadable content (chapter 8). By discussing both the underlying business models and the player response to these new offerings the case studies exemplify the new environment the game developers increasingly operate in. We also examine the particular design implementations of the wider development trends.

The third section of the report (chapter 9) consists of invited short contributions. Selected experts were invited to reflect on the future of games in their particular area of expertise. The invited authors include Jussi Ahlroth, KooPee Hiltunen, Aki Järvinen, Sonja Kangas, Frans Mäyrä, Vili Lehdonvirta, Janne Paavilainen and Riku Suomela. The contributions contextualize, deepen, supplement and challenge the observations and arguments made in the first two sections of the report.

As already mentioned, the Finnish game industry has in the near past produced a number of compelling game titles. Due to this high number, we have decided not to discuss individual games in detail. Instead, we have hand-picked a collection of key titles that put the defined larger development trends into specific terms. These games are introduced in dedicated information boxes.

We realise that not every reader will want to read the whole report. Thus, we encourage our readers to start directly from the section they find the most interesting. The first sections of the report are designed to include links to later contributions, » marked with blue text and arrows », so that a reader interested in particular sub-theme will easily find her way to the related parts of the report. Just to give a couple of examples, the readers concerned with social games should check out at least chapters 2.2, 4.1, Case 1 (chapter 7) and the texts of Järvinen and Paavilainen in chapter 9. If interested in mobile gaming, the reader should take a look at chapter 3.3. and the contributions of Mäyrä, Suomela and Kangas (chapter 9). Finally, if you are reading this to learn more about the Finnish game industry in particular, we recommend chapters 5 and 6 and Hiltunen's text in chapter 9.

2.   The changing business environment

The past couple of years have witnessed significant transformations in the business of digital games. While console games still form the largest sub-market, new platforms like iPhone and Facebook represent the quickest growing fields. Some of the interviewees mentioned that while it is certainly important for the Finnish industry to keep growing in scale, this is possible only if the companies are prepared to mature and operate the business in an organized and methodical fashion. In order to make well-founded decisions, one needs to understand the potential invested in competing distribution channels and development environments. It goes beyond our agenda to provide a detailed analysis of every possible business model and revenue-sharing approach. Instead, we aim to highlight particular trends that we believe will characterize the near future business environment.

2.1. Digital distribution and new revenue sharing models

In the past decade, with the advent of broadband internet connections, networked game consoles and advanced mobile solutions, various forms of digital gaming are increasingly characterized by online access. A variety of recent successes, ranging from massively multiplayer online worlds to casual games and social games, highlight the centrality of networked game components. At the same time, the distribution of games and games-related content has witnessed a significant transformation. While PC games have been in a pioneering position in introducing online distribution schemes, today all digital gaming platforms actively develop and promote digital distribution approaches.

The recent figures indicate that traditional retail still dominates the console game sales. Physical console game purchases, including both new and used, still account for over 90% of all console game purchases in the global market. At the same time, digital download market in 2010 was dominated by PC games platform Steam on a revenue basis and Apple on a unit basis for games. Digital markets are expected to continue to grow both on dedicated game machines and the pure digital markets. (FADE 2011.) Add to this the latest estimates that indicate that over $7 billion U.S. dollars worth of virtual goods we sold to players worldwide in 2010 and it becomes apparent that the role of digital distribution in the games ecosystem is seriously growing (In-Stat 2010).

For at least the past decade, the global game industry has been characterized by the rising costs of development and marketing. Because of these costs and the high expenses of distribution and retail, the game business has traditionally been based on an incremental value chain. In order to get a game into the hands of a customer, the game has to be financed, developed, marketed, packaged, distributed, and sold. This means that besides the game developer, there are a host of

outside parties taking their share of the profits. Even when working on an internally developed IP, the profit share for the game studio has remained around 10 per cent. Traditionally, in order to finance the development, the game studio has sold the entire production to the publisher. Because of the financial risk involved, the publisher has usually demanded full IP rights for the title in development. The role of the developer has been more of a subcontractor, while the publisher, as a kind of a front bumper, has enjoyed all the possible benefits – as well as all the possible setbacks.

The most significant transition brought by digital distribution has been the reformation of the distribution channel leading from game developer to customer. The introduction of digital store fronts, accessible from every home, has led to the partial disappearance of the retailer and the distributor and to the eradication of the traditional role of the publisher. In the digital distribution economy, only a financier, a developer and a digital marketplace operator are needed. This has significantly raised the profit margin for the developer, in some cases from the measly 10 per cent all the way up to 70 per cent. The numbers do lie a bit: the majority of the largest productions are still produced the old way, meaning that even though a 70 per cent profit sounds high, the actual monetary gain is often not on the same scale.

> *You can do a little game for the iPhone in two months with two blokes. You have four man-months, or a bit more, and the audience can be really large. The fitting analogy then is that funny Youtube clip that circles around. It does, however, not compete with the Hollywood spectacle.*

Traditionally, because of the so called "economies of scale", simply putting out a high enough number of copies has made financial sense for the publisher. Because of the risk involved, only titles with enough content to justify the high price and with enough volume to justify a wide enough release have been greenlighted. Because of the diminished intermediary expenses of digital distribution, it has become profitable to publish also smaller, bite-sized titles. » See: KooPee Hiltunen (p.82) » This, combined with the increased margins, means that it has become possible for the developer to finance a title all by itself and, subsequently, to retain the IP rights within the game studio. Having IP rights means that the developer – rather than the publisher – has the possibility to capitalize on a possible hit or a subsequent franchise. This is especially important in the gaming industry where systematically building a franchise is seen as a key strategy for creating any kind of sustainability. In this respect, it is not surprising that the recent strategy report compiled by the Neogames centre and Game Developers Finland (Suomen Pelinkehittäjät ry) considers digital distribution to be the single most important development trend of the following few years (Neogames 2010).

Robust virtual marketplaces combined with the ease of digital distribution have made possible the development and publishing of smaller, edgier games. Xbox Live Arcade, PlayStation Network, Valve's Steam and especially Apple's App Store have offered a convincing, respectable

distribution channel also for a variety of smaller game companies and even individual developers. Concurrently, games relying primarily on Internet distribution and games played in web browsers have seen a significant growth in their market share with the "casual games boom".

Additionally, for digital-only titles it is possible to remain on "store shelves" as long as the actual digital marketplace is in operation. Digital packaging does not wear out and, if needed, can be easily updated or re-bundled (and re-bundled again) to look appealing next to the newer titles. As opposed to physical game copies that quickly start to litter the bargain bins, the longer shelf life of digital titles and the increased democracy of a digital store front makes the accumulating of a slower intake, the "long tail", a more significant part of the business.

Trials HD is a great example of a simple yet effective gameplay idea, that for years was seemingly just waiting for the right distribution channel. A relatively small game in file size and price, Trials HD was praised for its replayability and achieved million strong sales through Xbox 360's digital marketplace.
Developer: RedLynx
Platform: Xbox Live Arcade
Launched: 2009

2.2. Game as a service

The last couple of years have witnessed an increasing focus on games that are becoming more than products. Recent developments, ranging from persistent (game) worlds and micro-transactions to rapid development methods and player-created content, have inspired industry representatives to pronounce the rise of games-related service business. The emphasis on services is not limited to the eloquent rhetoric. As already discussed, the game industry has increasingly introduced free-to-play and subscription based business models, digital distribution systems and other innovations that make games increasingly available "as services".

Service models can be seen in a variety of different instances. Because all the modern game consoles are capable of receiving file updates, the release of the game does not mean the end of the seller-customer relationship. Instead, a business logic based on providing additional services can be built around downloadable content. » See: Case 2 » The bite-sized nature of the add-on content has made possible several new forms of content publishing such as games released episodically, games relying on virtual item sales, or games designed to be upgraded ad infinitum. The developer can also choose to charge a monthly fee for the services provided. Most of the massively multi-player online games (MMOs), for example, are either subscription-based or free-to-play, and are extensively maintained and updated. From the player's standpoint, this

means that one does not pay for a product anymore, but for participation in a larger shared experience. From the developer's standpoint, tying the customer down with an on-going service is a way of creating more sustainable and predictable business, dwarfing second-hand game sales, and keeping the franchise in the spotlight. Spreading a "product" over a wider time scale as a "service" with add-on releases, for example, lowers the risk of the release simply disappearing after the initial launch. This development also creates a need for an entirely new mindset and skills:

> *Games will become services, monetization will follow free-to-play and virtual consumption models. These new distribution models, iPhone, Facebook, and others, they're all shouting that the game is never finished. It needs to be operated, it needs to be developed, the customer relationship must be maintained, it must be marketed, the analytics must be tracked and everything else inside it. Monetization requires quite a different understanding of what customers are buying and how do you get them [to] buy.*

Facebook as a game platform crystallizes many developments associated with the service paradigm. Short development times and smaller investments have made Facebook games an enticing business. The success of Facebook as a gaming platform has also quickly led into a situation in which the platform is flooding with free-to-play games. » See: Case 1 » After the initial "gold rush", the biggest challenge now seems to be making a mark on the radar. While the few top companies measure their players in tens of millions, there is a massive amount of small companies with only a handful of customers. The biggest franchises benefit from a seemingly everlasting network effect: every new game is connected to all the previous ones adding to the combined cross-promotion power of the game line. Especially after Facebook's recent downscaling of its viral mechanisms, many of the interviewees felt that the days of start-up success are over and that Facebook too is becoming a playground for the few key players. Aggregating efforts like Applifier have sprung up to combat this development by creating the important cross-promotion network between independent titles. Risks, however, still hold true: a Facebook game must have an immediate and powerful appeal – otherwise gamers simply move on. Threats of this kind have lead developers to seek more ferocious design methods than ever before.

Applifier is a cross-promotion platform for social games and applications. It provides social applications with a portfolio of applications to cross-promote with, while the users are able to find find other interesting applications. In turn the originating applications get new, viral users without spending any money.

Developer: Applifier
Platform: Facebook
Launched: 2010

Games on Facebook benefit from an invaluable asset: they enjoy an unmediated, pervasive connection to the players. This means that the players as an audience are the developer's to sell – a key competitive factor in the new market. Also, like some MMOs, most free-to-play Facebook games are reported to be indefinitely in a beta-testing phase. Basically, this means that the structure of the game can be significantly altered on the fly. Because of the always-on network connection, a big part of on-going development is dictated by the real-time game play data available for the developer.

The development of player tracking has led to a situation in which the gameplay design of free-to-play games merges tightly with their marketing. As Hamari & Lehdonvirta (2010) propose, the design patterns and game mechanics commonly used in games can increasingly be considered as a set of marketing techniques designed to sell virtual goods. The virtual goods available are now designed to blend into the context of the game. The aim is to support spending in an unobtrusive way – blatant advertising has been abandoned in favor of psychological and social persuasion. The context here is the social network that the game is built on, and the needlessly slow pace at which the play proceeds. In many games, the message is something like "Spend only a couple of euros and you'll take a huge leap forward, not just in the game, but in the eyes of the fellow players."

In his insightful reading of the contemporary game industry, Juul (2009) proposes two readings of the on-going change. On the one hand, with the advent of casual and social games, developers can no more design games just for themselves. The game industry is reaching underserved audiences and the video game medium is blossoming. At the same time, there are people who feel that with the on-going change games are "kidnapped by commercial interests that want to simplify and dilute video games in order to sell them to a broad public that doesn't know much about video games" (ibid., 151). Furthermore, as game designer and scholar Eric Zimmerman has highlighted, the new industry branches are not without their problems:

> *There was an idea that downloadable games could be a renaissance for innovation in terms of theme, content and gameplay. But in fact, the downloadable casual games industry has evolved into something more clone driven and genre-bound than the so-called hardcore game industry that it sought to make an end run around. (ibid., 217)*

In this respect, it is important to keep in mind that decision making that is driven entirely by short-term market considerations has its shortcomings (see also Douglas et al. 2010). As will be further discussed in chapter 5, supporting steady economic growth while encouraging innovation is often the key to a sustainable future.

2.3. Virtual consumption and the future of retail

As already discussed in connection with digital distribution, the current games market can be used as a prime example of the dematerialization

process of consumption. Gamers are an important early adopter group when it comes to using, producing, collecting and paying for virtual items. Virtual consumption may, however, not differ dramatically from more traditional forms of consumption. Vili Lehdonvirta (2009) has studied virtual consumption from various perspectives and suggests that "in online spaces, virtual goods function as markers of status, elements of identity and means towards ends in the same way as material consumer goods do in similarly contrived physical spaces." » See: Vili Lehdonvirta (p.87) »

Online worlds and especially MMO games have during the past decade had an important role in introducing and normalizing virtual consumption. Facebook games and other free-to-play games have pushed the appreciation and trust towards virtual environments and commodities for ever wider audiences. The free-to-play model will be discussed in more detail in Case 1, but games-related forms of virtual consumption are not limited to particular games. As one of our informants expressed, virtual items are far from insignificant for console games:

> *Avatar items are actually surprisingly significant in terms of DLC. Personally I didn't anticipate that. It's not the very basis of your business but we're talking about hundreds of thousands. I didn't see that coming, it was a positive surprise.*

The forms and uses of downloadable content (DLC) will be further examined in Case 2. It is notable that virtual commodities do not need to be manufactured or mailed to consumers, so they are altogether relatively cost-effective to produce and distribute:

> *We earn much more from virtual articles when compared to the real, physical items in which the marginals are much tighter.*

In many occasions, the relation between physical and digital items is, however, not that of opposition or even an alternative. Many popular games build on a hybrid model in which the starter pack is sold as a physical copy but downloading updates or the playing itself requires the players to connect to the official game servers. Similarly, as the example of Angry Birds has shown, a strong brand can help to sell both virtual characters and cuddly toys.

Cross-branding and merchandising have become popular survival strategies in the competitive games market. Facebook game developer Zynga has, for example, released exclusive items to their hit game FarmVille in co-operation with 7-Eleven convenience stores. In this case, particular real-world items bought at 7-eleven come with a code that allows the player to redeem an in-game item. One can think of a variety of businesses that game developers can collaborate with in order to construct innovative "bundlings" of virtual and physical items.

Some of the industry prognoses indicate a relatively quick end to the traditional brick and mortar retailers. As we have previously shown (Toivonen & Sotamaa 2010), the wildest manifestos celebrating the death

of physical game copies must be taken with a pinch of salt. While it seems that traditional retail will not vanish anytime soon, it is clear that the retailers need to reinvent their operation logic in order to survive the change. For example GameStop, the world's largest game retailer, has already launched an online store via Facebook (Rose 2011). In addition, the tangible aspects of gaming still form a crucial part of the experience for many. Consequently, collector's editions, 3D prints and other franchised items may provide a new lifeline for specialty stores.

Angry Birds took everybody by surprise in the spring 2010. 200 million downloads later it has standardised itself as the go-to game on most mobile operating systems. Widely experimenting with different marketing strategies, Rovio Mobile has supported the success with numerous updates and versions. Franchise includes everything from T-shirts and plush toys to cooking books.
Developer: Rovio Mobile
Platform: iPhone, Android
Launched: 2009

2.4. Ubiquity of marketing

From the discussion so far it should be clear that the distribution of digital games is more open to a wider group of actors than ever before. With digital distribution, one of the traditional gatekeepers, the retail sector, has lost a significant amount of its power. Of the mobile platforms, iPhone in particular is relatively standardized — it is easy to develop games for, and the publishing process is reportedly painless. Compared to any of the game consoles, the amount of applications available in the App Store is staggering. This, however, has led to new problems – the biggest challenge for new games is how to get noticed. Some of the interviewees felt that there will always be gatekeepers. Just the role and identity of these actors will change.

> *Of course it [success in a new environment] requires a little different approaches, and a little different things become important. Talking about iPhone charts [--], if you're at the top, you get purchased. If you're among top twenty you're fine, if your app is number hundred and fifty you're probably not fine, as you will no longer appear anywhere. Then the dude who controls the featured list becomes the one you need to know.*

In addition, the majority of the game companies, from start-ups to big studios, lack the sufficient resources to make the marketing effort.

> *How much sales and marketing effort do you need in addition to the game development? I've thought it's around the traditional fifty-fifty share, so that if some fifty per cent is spent on development then the other fifty should be spent on sales and marketing. But I think that's already too little.*

There are at least two different approaches to handle the situation. The studios may decide to extend and nurture the marketing skills inside the company or, alternatively, the expertise can be bought from outside. The recent advent of successful Facebook game publishers, aggregators and marketing services exemplifies the market potential of this particular field.

According to Matt Shea, Senior Vice President of WildTangent, the modes of online marketing can be differentiated between organic (mostly viral), paid (advertising) and partner-based distribution models. According to him, any successful online business builds on all three (Shea 2010). In other words, old marketing channels have not disappeared. There are simply new ones to accompany them. Despite its cross-promotional power, Zynga, for example, is rumoured to be the biggest single buyer of traditional advertising on Facebook. Creating partnerships with other businesses that have access to particular target audiences was reported to be a functional model also among our interviewees:

> *In some countries, we have become partners with local youth media, be it a TV channel, a magazine or something similar. And we've made a deal with them so that we get to use their channel and that way quickly boosted the increase of it [player population]. And when we get a critical mass and they begin to talk about it to their friends, the community has quickly grown really large. [--] It's been a pretty working model for us.*

As the quote above already implies, out of the three modes of marketing, virality is often considered to be the key feature in the online age. As all digital entertainment is increasingly connected and converged through ever present social networks, the importance of other people acknowledging anything supposedly important is huge. As one of the interviewees suggested, these days friends are simply everything:

> *Interviewee: Players have exactly the same needs as normal people [--] and by co-incidence, Facebook happens to fulfill perhaps the most fundamental one of them, namely friends. It's so important. I'm not saying Facebook would be...*
> *Interviewer: ...the final solution?*
> *Interviewee: Yeah, the service to rule them all. But it is at the moment. There is no alternative, all the friends are in Facebook and that's it.*

As games turn into distribution channels, they also enable marketing to work through the same interface. Pervasive connectedness lets the developer to share info on new and upcoming products, additions, and events. This is increasingly the case with game consoles, too, where proprietary online stores have made it possible to sell downloadable add-on content through in-game menus. Especially on the PC side it is possible to integrate games with marketing brought elsewhere from the Internet. The small scale of the games makes it even possible to launch a game from a banner ad. Proponents of cloud computing services have predicted that eventually this could be possible with any type of games.

2.5. Future directions

The new business environment characterized by online access and ever present social networks has necessitated skills previously unneeded for game development. Services need to be operated, customer contacts handled, virtual goods put on display. Many of these skills, while common courtesy in traditional shops, are new to game studios. As John Vechey, co-founder of PopCap Games, says: "Operating and evolving socially connected games is a lot of work. We are no longer a company that simply hires designers, producers, and artists. Now we have teams of server engineers, IT experts, and 24/7 service monitors." (Edge 2010) And it does not end here, either. At the outset, the merging of game design and marketing leaves the responsibility for these marketing actions on the game development team. This means that developers need to gain a new understanding of consumption and make sure that their products are quickly adapted to new environments if and when it is needed.

A profound understanding of digital distribution channels and the related business models is the key to successful business operations. Two case studies at the end of this report take a closer look at 1) the current implementation of a free-to-play model within social games and 2) the rationale behind a downloadable content model. Designing casual and social games for very large player populations requires updates to the whole design thinking. The key challenge is to streamline the experience and to get all the friction out of the way. More attention needs to be directed to the whole experience cycle from choosing to play to replay and afterplay (Kultima and Stenros 2010).

The game industry is not only about game studios, either. Business spawns new business, and as free games flood the web for example, aggregate services are needed to filter content. Services are needed to assist players, too. A model by Stenros and Sotamaa (2009) lists five main categories of helping players play through different services: maintenance of the environment, support of initiation, facilitation of playing, assistance for play and socialization of the player. The model clearly communicates that viewing service simply as a relationship between the provider and the player, as a pipeline through which to sell products, hinders gaining a more comprehensive view of the possibilities provided by the service paradigm. The implication is that the players crave a wider spectrum of services, not just digitally distributed game content. It seems that service-driven business models adopted by the game industry thus far cover only a small portion of the possibilities. We will come back to this in chapter 4, when the relationship between developers and players is discussed in detail.

3. Technology trends

Looking back to the past, the development of digital games has always been tied to new technologies. Games have not only been widely used to exemplify the potential of latest technological innovations, but the game industry has also actively pushed the development of interaction methods, computer graphics, controller peripherals, networking technologies and distribution channels, to mention but a few key areas. For example, the history of gaming consoles has followed a general logic in which advanced technologies have led to the creation of more powerful machines, which in turn have paved the way for more sophisticated games with more realistic graphics. The latest console cycle has, however, importantly questioned whether the success any longer lies simply in the state-of-the-art chips and high-definition lasers. The processing power and storage capacity of Nintendo Wii is outright poor in comparison to PS3 and Xbox 360 – yet, to this date, Nintendo has sold almost as many copies of its console as its contenders altogether. The success behind Nintendo's "low-tech" approach has obviously been up to the intuitive motion-sensing wireless controller scheme that has made digital gaming accessible and inviting to entirely new audiences (Kotler & Armstrong 2010, 309-311). Nintendo's Wiimote controller importantly highlights the range and diversity of technologies involved in the development of games. Consequently, it would be somewhat foolish to try to sketch an extensive technology road map for future years. Thus, we have decided to focus on the key developments highlighted by our informants and tried to contextualize them to the wider discussions within technological development.

Industry analysts often refer to "disruptive technologies" or "game changers" when discussing new technologies that unexpectedly displace established ones. In his oft-cited book, Christensen (1997) makes a distinction between sustaining and disruptive technologies. Sustaining technologies rely on incremental improvements to an established technology base, whereas disruptive technology may lack refinement but have potential to improve a product in new ways not expected by the markets. Christensen argues that while large companies traditionally operate with sustaining technologies, disruptive technologies often provide opportunities for entirely new players in the field. Afterwards Christensen (2003) has adjusted his position and argued that actually few technologies are intrinsically disruptive. Instead, the disruptive impact is provided by the novel strategies and business models enabled by the new technologies.

Going back to the interviews, many of our expert informants argued that first and foremost technology should be seen as an enabler, as something that makes big changes in other areas possible. As hardware as such is only going to become more powerful, faster, smaller and cheaper, the associated economic, social and cultural aspects are becoming increasingly central. Sociological studies of technology have for long highlighted how in order to understand the reasons for acceptance and rejection of particular technologies, we should look at the ways in which technologies are

embedded in their social contexts (Oudshoorn & Pinch 2003). This partly explains how the game market can at the same time be defined by convergent (multi-purpose devices, cross-platform concepts) and divergent (incompatible platforms, specialized audiences) strategies.

While identifying forthcoming disruptive technologies is tricky enough, it may be even more difficult to foresee their actual impacts. Internet as such has been identified as a disruptive technology decades ago. Still, the pace of change and the economic opportunities opened by networked technologies have often been miscalculated.

While online gaming is theoretically speaking almost as old as the Internet itself, as a mass market phenomenon networked games are relatively recent. Despite the long history of MUDs, "deathmatches" and "lan parties" the influence of networked technologies has reached large-scale audiences only in the past decade or so. On the console front, only the latest generation (PS3, Xbox 360, Wii) finally made the leap online in such a capacity that we now perceive Internet connection as a standard feature of a gaming console. In addition, as discussed in the previous chapter, the rapid development of high speed Internet connections has allowed online virtual stores such as Valve's Steam or Apple's App Store to become a major force to be reckoned with.

Altogether, the influence of networked technologies on games is twofold. Internet has provided a basis for powerful distribution platforms that have made digital games more accessible. At the same time, the standardization of online play has also transformed the nature of games by providing new levels of sociability. In this sense, high-speed information networks form a basis for the new environment, dictating what we can expect from games and related services in the near future. Before we move on to discuss the new opportunities provided by browsers, downloadable applications and mobile platforms, we will briefly discuss the overall development related to gaming interfaces.

3.1. Towards natural interfaces

Besides online access, the other big change standardized by the on-going console generation has been motion control. As discussed above, the mimetic control method Nintendo implemented in its Wii console has often been highlighted as one of the key innovations of the near past. Fittingly, competing interface solutions based on motion sensing and gesture recognition have been introduced both by Sony and Microsoft during the past year.

Jesper Juul considers the emergence of mimetic interfaces one of the key characteristics of the new wave of digital games:

> *Where more traditional three-dimensional games force players to imagine a bodily presence in the game world, mimetic interface games allow players to*

play from the perspective of their physical presence in the real world. (Juul 2009, 107)

This trend has importantly made gaming accessible to new audiences that may not traditionally have spent time playing digital games. While mimetic interfaces are primarily discussed in connection to console games, the larger trend towards natural interfaces is visible on a variety of platforms. Natural user interfaces aim at freeing users from complex and non-intuitive controllers. Instead, a natural interface supports the use of relatively natural movements and gestures to control the on-screen content. For example, touch screens, made popular by handheld consoles, mobile phones and tablet PCs, allow the player to use her fingers or a pen and effectively remove the need for additional input methods.

Natural interfaces nicely highlight the interdependence of technological development and market dynamics. Nintendo's Wii Remote is based on widely recognized technologies like accelerometer and optical sensors, and the first implementations of touch screen technology date back to the 1980s. In other words, the success of particular technologies is tied to finding the right time and the right market. Applying this to the near future, we can conclude that most of the key technologies already exist in the laboratories or in other industries. For example, speech recognition and eye tracking technologies already offer intriguing potential to game developers, but it may still take a while to make them reliable and affordable enough for mass market success. The more explorative projects may seek inspiration also from studies examining the mapping of the higher level mental processes, such as cognition, emotions and creativity.

Kung-Fu Live is a fighting game where the player controls her in-game picture by kicking and jumping in real life. The game works with Playstation Eye and FreeMotion technology, which the developers have created to be used with different platforms and camera technologies.

Developer: Virtual Air Guitar Company
Platform: Playstation3
Launched: 2010

Various informants in our study saw motion control already as a stable feature of gaming. Still, the promise of Microsoft's Kinect and Sony's Move was discussed with slight skepticism. While these technologies open up novel opportunities and invite new developers to excel in the field, the underlying console platforms still make the development relatively expensive, risky and time-consuming. At the same time, it is important to remember that natural interfaces are not limited to consoles but they can work well for any games that are social by nature and need to be easily learned.

Mimetic interface games return to the type of social interaction found in traditional board games, card games, and party games, giving players a face-to-face experience, even with the video game. (ibid., 119)

This holds true also for games designed for Apple's iPad and other tablet PCs launched onto the market. These multi-purpose machines with touch screen interfaces naturally facilitate multi-player gaming with the players gathering around the single screen. In addition, these platforms are more open to projects of different scale, allowing developers to start small and expand and diversify later. Our informants further discussed the so called exergames in relation to natural user interfaces, and some even identified exercising with the help of digital games as one of the most important growing markets. We will get back to exergaming in a moment, but before that we briefly turn our attention to the latest developments in graphics, displays and other modes of presentation.

3.2. Presentation technologies

The game industry has for long driven the development of computer graphics and display technologies. For example, the advent and evolution of graphics accelerators goes hand in hand with the history of PC gaming. While the launch of the latest console generation accentuated the revolutionary potential of HD (high definition), at the time of writing we already witness the coming of the 3D era.

Key platform holders like Sony and Nintendo have already taken serious steps to embrace the 3D technology. Their respective consoles have been made 3D-compatible, and a growing number of first-party and third-party 3D titles are already on offer to tech savvy gamers. The rationale behind this development is to maintain the cultural dominance of the "premium" home entertainment experience. Because 3D necessitates particular hardware (3D glasses), it creates a wedge between the haves and have-nots.
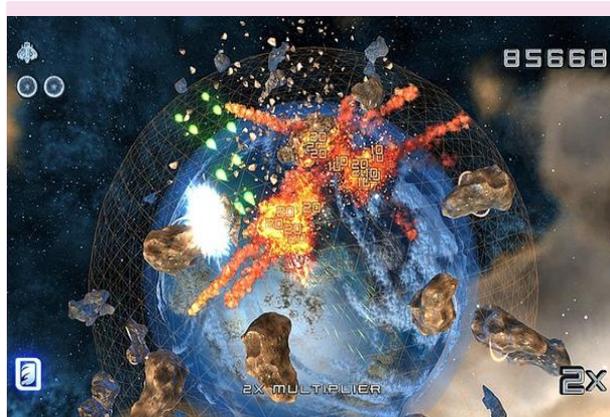
Super Stardust HD gives a good example of the gradual iterating process a game series may go through. Initially conceived in early 1990's, the classic shooter has gone through numerous versions and updates during the years and is still generating sales through PSN even today. The latest update introduced support for 3D graphics.
Developer: Housemarque
Platform: Playstation3, PSP
Launched: 2007/2010

While 3D has potential to become a mainstream success, it still has some points to prove. To avoid becoming just another gimmick, the immersive potential of 3D needs to be seriously investigated:

Then there is 3D. It adds a little extra. It may, however, take some five years for it to properly break through. We need to work out how to truly take advantage of the new dimension and to use it to add immersion.

Related to this, some of our interviewees felt that the controlled comfort of one's own living room may provide a sustainable environment for approachable augmented reality (AR) applications. One key point of departure for domestic AR could be found in collaboration with toy manufacturers:

[I]f your child has glasses on, some kind of non-intrusive system with glasses, and suddenly she gets to have those playmates around her, there's a huge potential and huge amount of money to be made, since we parents are going to spend enormous amounts of money on our children anyway…

At the time of writing, the latest entrant in the 3D market is Nintendo 3DS, a handheld console capable of providing impressive 3D effects. Among other things, 3DS introduces easily approachable augmented reality games based on particular AR cards. The console identifies the cards in 3D space and instantly constructs an imposing game world on any surface. The handheld game console nicely highlights how quickly the technology develops and becomes affordable for larger audiences.

On a larger scale, auto-stereoscopic displays will at some point remove the need for glasses for good but it will still take some time for them to become common. Probably the most exciting potential lies in the combination of 3D and motion control. Eye and head tracking systems that allow the user to look around in a proper 3D environment will importantly improve the stereo effect. Furthermore, technology providers are already hinting at such attractions as domestic holographics. Harnessing the full potential of these technologies will require specialization and dedication from the developers. It is clear that we will witness some impressive projects, but very high production values and relatively high budgets are required.

All in all, one has to remember that this is obviously only one side of the story. It is not difficult to foresee that some genres, such as first-person shooters, will significantly benefit from the 3D effect. At the same time, there are entire genres that are altogether relatively ill-suited to 3D. This is related to a wider development: while the latest improvements in the game graphics may attract the most hardcore group of players, there is a growing population of players who could not care less. Alongside with very advanced graphical modelling (photorealistic graphics, lifelike characters etc.), there is a growing need for simple and efficient visualizations, scalability and optimization.

3.3. Mobile dimensions

In our everyday environments we are increasingly surrounded by invisible, ever present wireless networks. This reflects, among other things, the shifting paradigm of technology attuning to people's daily routines - not the other way around. Probably the most visible consequences of the pervasive ever present networks can be seen in the widespread emergence of mobile Internet and the related developments in the domain of gaming.

The past decade has generated quite a diverse mobile gaming industry in Finland. Already around the turn of the millennium there was quite a buzz around mobile games and quite a few mobile gaming companies were founded at the time. A handful of games have been developed for handheld consoles but due to the influential role of Nokia, the primary focus has been on mobile phone gaming. While the early years obviously witnessed some success stories, most of the games lacked advanced online features and were mostly played offline. As a consequence, gaming via mobile phones was often dismissed as a weak substitute for dedicated handheld gaming devices, such as Nintendo's Gameboy series.

In the past few years, the new generations of Internet-capable smartphones, including Apple iPhone, Nokia E- and N-series, BlackBerry devices, Android and Windows phones have been associated with a noticeable upsurge in the mobile Internet usage. Furthermore, the mobile use is no more restricted to handsets, but laptop computers, netbooks and tablet PC:s have gained quite a popularity. The ease and prevalence of mobile Internet use has also provided a more diversified picture of the relations between mobile devices and gaming.

> *As "mobile Internet" is no longer synonymous with dedicated mobile phone services, the character of "mobility" itself is undergoing transformations. The combination of social networking with playful, or game-like uses and behaviours emerges as an important contemporary form of online communication, mixing and muddling up the boundaries between work and play, as well as leisurely and utilitarian interests. (Mäyrä 2011)*

Another significant change in mobile hardware technology is the emergence of a strong platform. Traditionally, the key challenge of mobile development has been posed by the immense collection of scattered devices in the market. The recent increase in the popularity of mobile gaming can be seen to be caused partly due to the focusing effect of the new platform standard, namely Apple's iPhone. Apple has unified the mobile gaming scene and greatly amplified it. This has led to an increase in game development, both in quantity and quality. Due to the reasons discussed in the previous chapter, doing business solely based on mobile content has suddenly become available for a larger base of developers. At the time of writing, a number of game developers are looking at the Android platform as the newest viable games market. Business-wise the mobile platforms are, however, not identical. If we look at the example of Angry Birds, the paid content model that has been very successful for

iPhone had to be changed into an ad-supported free-to-play model on Android. This once more highlights how crucial it is for developers to do their homework before they head to the new markets.

Traditionally mobile games have often been described as "snack games" that fit perfectly the sporadic idle moments of everyday life (Koivisto 2007, 6). While this feature will characterize many mobile games also in the future, it is not so far-fetched to predict more diversity in gaming concepts. Modern day mobile phones are powerful computers that support advanced graphics and also invite players to more "hardcore" experiences. Furthermore, the dedicated enthusiast status associated with smartphones directs the player base: the audience consists of the very people who want to invest in the latest and most expensive gadgets.

While the high hopes associated with cross media games (Lindt et al 2005) and transmedia storytelling (Jenkins 2003) have not yet fully materialized, the improved connectivity of mobile devices can importantly boost this intriguing field. As the example of WoW Mobile Armory shows – the iPhone application that allows the players of the popular MMO game to check, plan and adjust selected in-game events – mobile devices can also serve an important supporting role in connection to the more immersive forms of digital play.

> *We already have a variety of gadgets that get you online. And they allow a variety of different ways to play. They link different [ways of playing] and [people can] take their game along with them.*

The combination of a mobile Internet connection and positioning technologies (especially GPS becoming common in smartphones) provides concrete ways of building links between the virtual and the physical worlds. Several of the interviewees singled out *Foursquare* as a current example of the developments to come. This location-based social service is built around a simple ludic core: the users earn points by "checking-in" in various everyday locations. Repeated activities allow the user to progress in the game's hierarchy and earn different badges. Probably most importantly, the game supports links to other social services, making it possible to release news from the game events to one's Facebook or Twitter friends (Mäyrä 2011).

Alongside physical movement, the way users traverse digital space can open up new domains for playful behaviour:

> *Related to location based games, I believe in playful applications that tap into tourism and also in those that can be used to motivate physical exercise.*

Location information is still only a start. » See: Sonja Kangas (p.98) » A variety of relatively inexpensive sensors like proximity sensors, accelerometers or light sensors provide a lot of information in an effortless manner. In addition, various forms of public raw data, including weather and traffic conditions and data from the activities of the local community,

can be synchronized with the personal sensor data in new and intriguing ways.

Shadow Cities is a location based massive multiplayer role-playing game played on the smartphones. It shows in-game enemies and other players on a map, showing the familiar real-life streets where the player has to move in order to proceed. The game itself is free but players can buy magical energy called mana to battle with their enemies.
Developer: Grey Area Labs
Platform: iPhone
Launched: 2010

3.4. Browser vs. apps

Looking to the trends in the online world, various analysts have for some years now suggested a shift from "desktop to webtop". As the popularity of Facebook gaming and browser game portals have highlighted, current web browsers provide a gaming platform accessible for masses of players. Industry veterans like Trip Hawkins, the founder of Electronic Arts, have openly marketed the web browser as the dominant gaming platform of the future (Alexander 2011). Our Finnish experts pay attention to the same development:

> *I can see a few disruptions in the game sector. One of them is connected to the gaming platforms: it is clear that we're moving away from the specialized game devices [--]. If you play games on your PC or Mac you increasingly play them in your browser that is available basically everywhere and for everyone.*

Accessible development tools, instant access to large audiences and the potential of viral marketing make a browser a compelling game development environment.

The most obvious challenge for the dominance of the browser is posed by applications that use the Internet for transport but not the browser for display anymore. In his provocative feature, Chris Anderson (2010), editor-in-chief of Wired and the author of the best-seller *The Long Tail*, declared the death of the web as we know it. The key message Anderson wants to put across is that the traditional World Wide Web is in decline, whereas approachable and sleek services and applications are starting to dominate.

As discussed already in the previous chapter, app-driven platforms provide intriguing new opportunities for game developers. While it is important for game developers to acknowledge the differences between the competing mobile platforms, it is clear that the popular application market places like Apple App Store or Android Market provide an attractive and accessible

distribution channel for those who know how to distinguish their product from the mass.

While there is no denying the challenge that Internet-dependent semi-closed platforms place on the wide-open web, Anderson's celebratory ethos needs to be balanced with more critical views. For example Jonathan Zittrain (2008, 8), Professor of Law at Harvard Law School, argues that devices like mobile phones and networked game consoles actually persuade "mainstream users away from a *generative* Internet that fosters innovation and disruption, to an *appliancized* network that incorporates some of the most powerful features of today's Internet while greatly limiting its innovative capacity".

As the significance of mobile devices is predicted only increase in the years to come, one of the decisive issues is related to the development of mobile browsers. Currently for example Facebook game applications, designed and programmed mostly in Flash, run poorly or not at all within the mobile phone browsers. According to the interviewed specialists, this appears to be changing as well:

> *Mobile browsers are actually one of the key issues. If you can replicate the smooth circulation of flash games from the desktop web to the mobile [--] then you don't need to download the game at all but it will run on your browser. That will mean one more meteoric rise for the mobile market.*

> *[The key changes include] the development of flash and the fact that you can also make visually impressive games with it. And then there's HTML5 that will come to mobile browsers as well. That will surely shuffle the deck again.*

Games and other apps built specifically for Apple's iOS devices or Android devices have to be rebuilt in order to work on other platforms, so the portability of HTML5 makes it appealing to developers and game publishers alike. » See: Riku Suomela (p.96) » This also highlights how the browser and applications do not need to be mutually exclusive. As the ways of presenting things become more flexible, the player can eventually decide whether the same game is run on a browser or as a stand-alone application. The accessibility of the game is further boosted by supporting simple ways of viral circulation:

> *Sharing your game with others and altogether accessing the game will be much easier. [--] Let's say you get an email to your iPad with a link in it. And once you click the link you have the game there immediately without any downloads.*

The quote above already refers to our next topic: the emerging provision of networked computational resources, in other words, the cloud.

3.5. Promise of the cloud

Present-day digital gaming is increasingly characterized by dematerialization. As already discussed, digital distribution is challenging the traditional forms of circulation, and new controller-free interface

solutions question the need for a physical game controller. The most dramatic challenge for the game business as we know it comes, however, from the cloud.

In short, 'cloud computing' refers to the on-demand provision of computational resources utilizing the present-day information networks. In this decentralized model, processing power is not statically located but it can be called on when needed. The wide-spread availability of high-speed Internet connections and the constant increase in processing power has boosted the potential associated with cloud-based services. One of the key consequences of cloud computing is that the devices themselves may not need very much intelligence themselves. The boldest predictions suggest that the ubiquitous networked processing power will turn our everyday devices into mere screens of varying sizes.

Game-wise the effects of the cloud are diverse. The key changes are related to the way games are rendered and delivered. The promise of playing high-end titles anytime, anywhere and on almost any device is truly compelling. At the same time the forecasts concerning the pace of this development vary significantly. The details of the projects that aim to virtualize dedicated gaming hardware like game consoles also differ from each other.

OnLive is probably the most well-known cloud-based on-demand gaming service, announced in 2009 and launched for the North American market in 2010. The user needs to install a stand-alone client on her device, but otherwise she only needs a high-speed internet connection plus a newish operating system, or alternatively a TV equipped with a dedicated adapter. At the time of writing, OnLive has further announced plans to provide a built-in version to Vizio's new HD TVs and to run the service in HTC's new Flyer tablet computer. The clearest competitor of OnLive is the browser-based service brand titled *Gaikai*, announced in 2010 and currently in open beta. Gaikai requires no special hardware. Instead it is announced to operate in a standard web browser (equipped with up-to-date Flash and Java plugins) or even in a smartphone. In addition to a high-speed Internet connection, the player needs to be located in relative proximity to one of Gaikai's data centres.

The aforementioned services and similar projects like OTOY or Spoon aim to provide an easily approachable and frictionless access to high quality games. The shared objective of these projects is to make games playable anytime, anywhere and to as many people as possible. In this near future of no downloads and no installs, games are accessed instantly with a single click. Issues with performance will hold the wildest dreams back for some time to come, but already the current services anticipate compelling features. Most of the games available via OnLive are optionally rentable, allowing players to flexibly choose between a full payment for unlimited access and a significantly lower cost for a dedicated play session. At the same time, Gaikai supports URL-based instant access to games that will allow players to launch high-end titles from banner ads or tweets they

receive from their friends. While it is too early to say how the aforementioned services will transform the consumer behaviour, cloud-based services actually already enable and enhance many current forms of digital gaming.

Facebook games provide a timely example of a recent development that has significantly benefited from the cloud. During the past year, Zynga's games, for example, have shot up to over 200 million monthly active users. The quick increase in the number of players was enabled by the cloud-based infrastructure. In the autumn of 2010, it was announced that the daily volume of data that Zynga's properties move had increased to 1 petabyte (10^{15} B). While Zynga originally operated its own data centres, it has moved to using a hybrid private/public cloud infrastructure (Rao 2010). In the spring 2011, at least one half of the top ten Facebook games at any given time are hosted by Amazon's Web Services.

Altogether, cloud-based rendering is anticipated to free players to access games and related content from a variety of devices. Games are no more limited to dedicated machines and situations, but players can integrate games more closely into their daily lives. We will examine more closely the trend of contextual gaming in the following chapter 4. Before this, we shortly conclude by discussing the future defined by omnipresent networked technologies.

3.6. Technology everywhere: towards gamification

As discussed in this chapter, we are already surrounded by devices capable of providing a wide variety of playful experiences. The pervasive connectedness of these devices has made digital games increasingly social, context-aware and omnipresent. Technologies are attuning to people's daily routines - not the other way around. In addition, the daily tasks and environments offer new possibilities for game development:

> *I believe that one of the big transitions [--] is that the domain of game business will still extend. Maybe in the future we will not talk anymore only about entertainment business [--] but game industry can instead serve a variety of societal sectors.*

Gamification, one of the current buzzwords, refers exactly to the process of applying game mechanics outside the traditional domain of play. By making everyday technologies more engaging, gamification aims to encourage particular behaviours. » See: Frans Mäyrä (p.84) » Jane McGonigal (2011), one of the most visible proponents of gamification, highlights how engaged people are when they play games and ponders how all this positive energy could be used to solve real-world problems. She suggests that by adding a game-like layer to the world we can make the everyday reality more engaging and compelling.

Following this line of thought, it is not far-fetched to argue that the game industry can produce services also for other industries. Daniel Cook (2008) has spoken of "princess applications", i.e. taking advantage of structures like goal hierarchies and skill progression in designing applications. According to Cook, the classic video game goal – such as that of Mario's – could be applied to the usage patterns of any application. Any kind of system in which people operate by certain rules is a potential place for fun interfaces and logics. Basically any system displaying progress can be peppered with game mechanics. Typical examples of existing game-like setups include, for example, retail chains' bonus systems, physical exercise programs or dietary guidance.
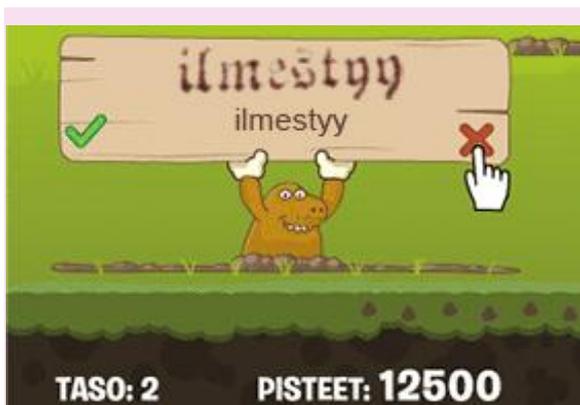
Digitalkoot (Digital Volunteers) e-programme is a project launched by the National Library of Finland. Volunteers turn historical documents and material – otherwise unreadable by computer software – into digitized text form through playing two online games, *Mole Hunt* and *Mole Bridge*.
Developer: The National Library & Microtask
Platform: Facebook
Launched: 2009

As many readers have already recognized, the objectives of gamification are closely related to so-called serious games that have been used for decades in different "serious" purposes like learning and training. While serious games may not traditionally operate a massive consumer market, they can still form a basis for a profitable and sustainable business.

> *In terms of pure business, the benefit of serious games is that they [--] are pretty clear projects that have a clearly defined client. Extensive marketing effort is not needed. The project starts and ends and normally the client has the money to pay for it. It's very different from the model in which you first make a game and then hope that it will fetch something.*

Traditional uses of serious games include for example coaching, collaboration and advertising. The ideas for new "gamified" services can be found from smart fusions of existing solutions, new technologies and the available data. As already discussed, bringing together social networks, location data and maps has spawned fresh services that can provide both casually playful and more intensively immersive experiences. Another area that highlights the range and potential of playful solutions is data visualization. Innovative new solutions are needed both to present the growing amounts of player data generated by networked games and to create ways of presenting other forms of data in a playful and engaging way:

> *I believe that the most obvious area in the coming years is the usage of genuine real time data. [--] As the data is released, that is, different*

organizations offer their own data pools for usage openly and publicly, I believe it's one of the potential trends in the near future.

On the whole, the rules of the playing field can change quickly and the range of opportunities for games related businesses is growing fast. It seems that the know-how cultivated by the game industry can furthermore be transferred to serve other sectors as well. Application areas are many, including navigable 3D environments, easy interfaces, graphic models and real time simulations, physics modelling, AI applications, networking technologies, advanced product testing, user motivation and rewarding, and user-developer relationship management (for more see Neogames 2010).

4.   Emerging game cultures

In the past few years, playing digital games has become an everyday activity for hundreds of millions of people. If digital games once were mainly consumed by children and adolescent males, these days almost anyone can become a gamer. The Entertainment Software Association reports that two thirds of American households play computer and video games (ESA 2010). The latest national survey indicates that a little over one half of Finns play digital games at least once a month (Kuronen & Koskimaa 2010).

All in all, people increasingly treat digital games with a similar appreciation associated with more established cultural products. Playing games and talking about them is becoming an increasingly natural part of social interaction:

> *We no longer need the question of whether you're a player or not. 'Are you a film watcher?' No one asks that anymore, nor 'are you a book reader?'.*

The transformation has not happened by accident. As Juul (2009) argues, with the advent of casual and social games, players are no more asked to structure their lives to fit the demands of a game. Instead, the games are designed to fit the lives of the player. One way to conceptualize the change is to say that with the widening player populations we are witnessing an increasing normalization of digital play (Kultima 2009).

4.1. Online play = social play?

The popular considerations of digital games still every now and then pose a stereotypical notion of a player. Not only is it commonplace to consider gaming a solitary activity but, more than this, also an isolating one. (Newman 2004, 145-146). These notions forget that the nature of play has always been social and already such early digital games as *Spacewar!* (1962) and *Pong* (1972) were designed for more than one player. » See: Aki Järvinen (p.93) » Online gaming has at least for the past two decades now highlighted the importance of social interaction for digital games. The recent emergence of so-called social games played on Facebook and other social networking sites have further accentuated how play does not exist in a vacuum, but instead is intensively tied to the forms of everyday communication.

In the past two years, social games have attracted a lion's share of the public interest directed to gaming in general, and online play in particular. As discussed earlier on in this report, social games represent one of the quickest growing markets within digital games. At the same time, these constantly updated applications that tap into our existing social networks affect the player expectations on a larger scale. Consequently, both MMOs

and AAA console titles have a lesson to learn from the player cultures that currently spawn around social games.

Several interviewees saw Facebook as one of the most essential factors influencing games and gaming at the moment. It brings a gaming platform and the social lives of people together in a whole new way. Whilst social media have become a key part of the daily lives of very large populations, gaming is also increasingly closely weaved into social networks, ordinary routines and different areas of life. The presumptions concerning the size and nature of potential audiences have acquired whole new dimensions. By and large the general public is also starting to see gaming as an activity possible to everyone.

Millionaire City is a social network game that centres on business and real estate investing. It quickly became Digital Chocolate's most popular Facebook game and is now available also as a mobile version for iPhone and iPod Touch.

Developer: Digital Chocolate
Platform: Facebook
Launched: 2010

At the same time, it has been argued that many recent social games "may not be nearly as intensely or deeply social as has been assumed" (Stenros et al. 2009). The detailed forms of sociability associated with Facebook games are further examined in the first case study of this report. It can also be questioned whether one should expect very deep and intensive social ties from these games:

> *Do those people playing in Facebook want some terribly profound social interaction? Mostly it's just that if Facebook's goal is to get people using Facebook for 15 minutes a day and doing various things, like posting photos or something, then Zynga and others try to grasp that five minutes of it. What is there left then? If you'd like to have deeper social interaction, you'll probably start to play WoW or something similar.*

It has been argued that Facebook use in general is characterized by a playful mood (Rao 2008). Various applications that are not games in a traditional sense borrow characteristics and mechanics from games.

> *Facebook doesn't only have applications profiled as games but also all kinds of amusing little applications. It's such a playful environment from the very beginning.*

Mäyrä (2011) uses the term "contextual gaming" to describe how playful behaviours are increasingly rooted in social relations and exchanges of

information that are used to maintain and expand such networks of relationships. It is, however, questionable whether the occasional playful interactions can be converted into more demanding (and chargeable) forms of play.

> *During the early phase [of Facebook games] [--] the big crowd kinda used games as an excuse for social interaction. And now the game developers wish to develop the game towards the situation that, in fact, social interaction would be stronger within the game rather than around it. And I am not convinced whether big masses want to go in that direction or whether they only want to casually compare something like their Bejeweled-points or their Farms.*

Of course, sociability is not limited to so-called social games, but something that has been inherent in games and game cultures for as long as they have existed. The advent of remarkably popular social games has, however, importantly highlighted the on-going change in the forms of play. In the following, we further examine this ever diversifying field.

4.2. Changing player cultures, diversifying forms of play

Games, playing and players are often divided into the so called casual and hardcore groups. The term casual refers to small, easily approachable games of short duration. Casual games are typically considered to be easy to accept and learn, and not to require specific skills. A casual player is not considered to be a game enthusiast, but she is most likely playing to kill time, rather than out of passion. (e.g. Kallio, Mäyrä & Kaipainen 2011.) The term "hardcore" refers to the "traditional" PC and console games. The player of these games is typically ready to spend money on them and to reserve significant amounts of time on playing. A hardcore gamer is further characterized as an enthusiast who feels passionate for games, always tries to develop into a better gamer and whose hobby often takes visible forms also outside the immediate gaming sessions.

This division, an oversimplification from the outset, becomes more complex as the forms of play diversify. As discussed, easily accessible games played in short periods have gained tremendous popularity, but at the same time they spawn passionate and devoted gamers. Casual play does not necessarily mean random or less serious play. In addition, "casual" should not be seen only as a property of a game, but it relates to the whole service experience from accessing the game to playing it and the after game activities (Kuittinen et al. 2007).

At the same time, the hardcore audience is far from homogenous as well. There already exists a public who expects the games they play to share the same depth and complexity than any other cultural products they enjoy, and it is rather safe to predict that their amount is not decreasing. This evolution is closely tied to the narrative and aesthetic shifts in games but also to the ways in which games are consumed.

And then [talking about the future prospects of games] there's this, what's been called interactive drama, that the characters start to act much more multidimensionally and be more life-like and follow psychologically a more nuanced script

I think that the larger people's TV sets get, the more home theatres become common and games become 3D, the more they compete with movies as a participatory entertainment.

As we have tried to explicate, players come in many forms. In many cases, the traditional player classifications may not be sufficient for explaining the diversity. As Jesper Juul (2009, 146) aptly puts it:

There is a common stereotype of casual players, but players rarely match this stereotype or the stereotype of hardcore player. The many different ways in which we can be game players are better understood via the simple model [--]: we have different fiction preferences; we have different levels of knowledge of video games; we are willing to commit different amounts of time; we have different preferences for difficulty in games.

Design-wise this development has particular consequences. One school of thought suggests that a single game can be designed to serve very different player mentalities.

I'd guess that they [different forms of play] will converge. Social gaming is currently so must, you just have to do it. So if you have a social game, then, in the best case scenario, you will have everybody there, both hardcore ones and casual ones.

At the same time, there are reasons to believe that the different motivations and situations of digital play begin to be so detached from each other that these mentalities deserve to be taken as the very starting point of game development. When asked to name the key audience segments, one of the informants listed the following forms of play:

First of all, the traditional hardcore gaming in which you try to optimize the resolution and generally acquire all the top gadgets around it, PC / console gaming. That's one, and as a close second has now emerged this social gaming, and mobile gaming is partly related to this as well, in other words this sort of ease and convenience. And well, as the third, perhaps this emerging dimension so far represented by Singstar and buddies, that is playing with friends in the evening in the living room. And in addition as a fourth segment, still a bit undeveloped segment but may spread to all the others, is this 3D and motion detection gaming, which is partly just technology but it may be so "revolutionary" that it probably spawns different types of games.

Consequently, more nuanced outlining is needed to better take the contexts and mentalities of play into account. In order to obtain a more holistic approach to players, we shall borrow a model that Kallio, Mäyrä and Kaipainen (2011) have created based on their empirical player study. We believe that this model both clarifies the range of players and can act as an inspiration when designing games to be more sensitive to player's needs and situation.

The intention of the aforementioned study is to develop a general model of player mentalities that is not dedicated to a certain domain or genre of games. The proposed model (InSoGa) pays attention both to the intensity, sociability and the characteristics of the games played (Figure 2).
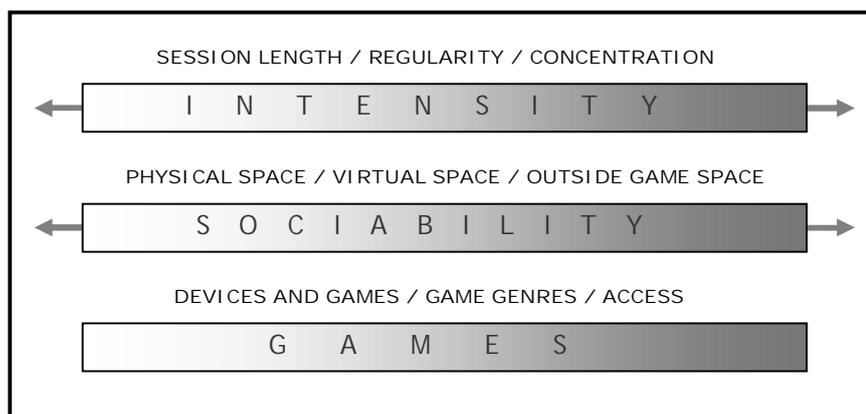

Figure 2: Re-defining the components of gaming mentalities

The three main components are all elaborated from three perspectives. Intensity of gaming covers the length of gaming sessions, the regularity of gaming, and the level of concentration. In terms of intensity, gaming mentalities form a continuum from heavy to light gaming. The sociability of gaming is also understood to be a continuum, ranging from (solely) lone gaming to (entirely) sociable gaming. The third component, games, consists of three separate indicators: individual games and devices, game genres and accessibility. According to the authors, any of these can become an active shaper of gaming mentalities, different from but related to the aspects of intensity and sociability.

On the basis of the analysed dimensions, the authors create nine profiles to describe the different ways of playing, which even the same player may implement at different moments. Social mentalities include Gaming with Children, Gaming with Mates, and Gaming for Company. Casual profiles are as follows: Killing Time, Filling Gaps, Relaxing. Finally, the authors list three committed mentalities: Gaming for Fun, Immersive Play and Gaming for Entertainment.

All in all the study reveals that, "in contrast to common belief, the majority of digital gaming takes place between 'casual relaxing' and 'committed entertaining,' where the multiplicity of experiences, feelings, and understandings that people have about their playing and digital games is wide ranging" (ibid., 1). The authors emphasize that their categorization is not exhaustive and does not cover all the possible ways to play per se. We believe that the model, however, pulls together a set of well identified ways to play and it can also be utilized when considering to whom games are currently being designed.

4.3. Developer/player relationship

It has been reported that game designers still often rely on "an intuitive sense of market demand built upon a personal knowledge of competing products on the marketplace and personal preferences in the initial design and prototype stages" (Kerr 2006, 97). This strategy is, however, getting increasingly challenged as evermore larger and diverse player populations appear in the market. We argue that players actually have quite a few roles in the development of games and there are reasons to believe that the relationship between developers and players is getting increasingly intimate.

Sotamaa (2007) points out that while the dominant perceptions of player are still relatively abstract, a list of possible relations between players and designers can be sketched. The player can become a muse, a patient, an adviser or a co-worker for the developer. The roles and relations correspond to different design ideologies and traditions. The online features further accentuate how games need to be outlined as profoundly co-produced entities which can be only understood if both the contributions of developers and other industry bodies and the investments of players are taken into account.

There is a wide spectrum of user research methods and participatory design approaches that can be utilized as part of the game development process. The latest trend in player analysis is related to quantitative data analysis and so called metrics. » See: Case 1 » As the current games produce and store huge amounts of play data, developers have an unparalleled chance to get feedback from the player communities. Unparalleled in the sense that the relationship is immediate and it works both ways:

> *We can test the game with greater audiences, collect that data, and automate the feedback. All of it will enhance the quality and understanding, how the players play the game. I think it'll affect the quality, frankly, rather much.*

> *You can do quantitative research nobody else has previously been able to do: to really see what the different user masses do. At the same time the user comes directly to you to scream that the game doesn't work...*

In their overview of the benefit of metrics, Drachen et al (2010) highlight how they have quickly become a vital tool for developers, marketers and others to enhance the game's performance. In general, the term metrics is used to cover all research of players from the smallest in-game action to how they act in the player community. The collected data can reveal how players act within the game, how the game mechanics are used, where the design hinders the play progression. Overall, metrics provide immediate feedback for the developers to improve their product. Metrics are used for example to diminish malicious play behaviour and to point out which players in which situation could create revenue. At best, each player can be served with a customized game that suits one's play style. In addition,

metrics can be utilized to create and maintain player communities and thus prolong the player's involvement in the game. While metrics are very useful in telling what is happening among the players, they rarely tell us why these things are happening (Brathwaite & McWilliams 2011). In other words, metrics are best utilized when accompanied with design intuition and more traditional game design skills:

> *And it [WoW] is done purely by looking at their logs. [A part of the] players dropped before level 10. Nowadays there's apparently a character that guides you by the hand through the first ten levels, so that you won't drop.*

The quote not only exemplifies the power of player data analysis but it also presents an example of a player service. These services spawn around digital games, importantly define the ways of playing, and provide opportunities for entrepreneurs. Stenros and Sotamaa (2009) divide player services into the following five subcategories (Figure 3):

Figure 3: Player Service categories

All the categories are crucial to the player experience. While they are often controlled by the game provider, they can also be outsourced to individual service providers.

As discussed already in chapter 2, the on-going evolution drives digital games into constantly updateable services. The new paradigm also forces developers to re-think their relationship with players. While the collected player data is invaluable in tweaking the existing design, it also provides a change to implement more advanced player services. Medler (2011) suggests that player dossier services have multiple functions. As these dossiers in short are presentations of a play history, they can work in a personal and social context. While for the player it is a way to study her own playing habits and how to improve play performance, it can also become socially relevant as the dossiers are often visible to other players within the game community.

4.4. Conclusion: identifying the many sites of play

Decoding the cognitive, affective, social, cultural, and spatial processes that characterize different play styles and cultures is one of the key challenges of game studies. The issue is not entirely without commercial value: both designers, developers, publishers and marketers ought to understand the particular attraction and holding power of games. New audiences provided by social and casual games have further highlighted the importance of understanding the diverse motivations and practices around games.

We doubt that any static categorization can really help us to us to identify the various reasons why people play digital games. Therefore, we have introduced the mentality model developed by Kallio, Kaipainen & Mäyrä (2011). While the model as such can already act as an inspiration for developers, we believe that connecting the different mentalities to the actual sites and situations in which play takes place can spawn entirely novel modes of play. Then the key challenge for game developers is to find the most suitable platforms to provide these experiences.

In addition, entirely new openings (and associated business opportunities) can be expected from co-productive models (user-created content in new platforms, crowdsourcing), innovative use of metrics and the variety of player services that spawn around digital games.

5.   The characteristics of the Finnish industry

As discussed in the beginning of the report, the informants were interviewed during the year 2010. The period witnessed quite a few promising successes among Finnish game developers, the meteoric rise of Rovio's Angry Birds being the most notable one. In this respect, it is no surprise that the starting points for the future of the Finnish game industry were considered to be relatively promising by most of the interviewees.

This chapter examines the future of the Finnish game industry through the opportunities and challenges identified by the interviewed specialists. Most of the observations are related to business issues, whereas technological and cultural developments provide supplementary perspectives to many issues. As the specialists represent various approaches and backgrounds, a few contradictions in opinions concerning the future visions can be identified. We consider these ruptures key points of entry and use them to highlight the particular nature of the Finnish industry.

5.1. Funding the business - just a question of money?

The Finnish business angels aren't accustomed to investing in social media, even less in the game industry.

The quote above crystallizes the dissatisfaction with the volume of funding that the gaming industry is dealing with. The concern is mutually expressed by our interviewees, as well as the interest groups of the industry. If we take a closer look, the industry seems to lack domestic private financing in particular. The history of risk financing in Finland is short and one can argue that the burst of the IT bubble a decade ago is still casting a shadow over the present. The lack of domestic funding has often been seen as a key reason why many promising enterprises have been sold too easily to foreign investors. The dilemma has at the same time emphasized the role of public funding.

The Finnish funding agency for technology and innovation, shortly Tekes, was seen, if not as the most important single enabler, then at least a great supporter of the Finnish game industry. For example, in the period of 2006–2009, Tekes' funding compared to the overall industry turnover was 5 %, the annual amount increasing to 4.3 million euros (Neogames 2010). Even the critics admitted that similar funding instruments are difficult to find in other countries. The allocation of public funding, however, raised criticism and improvement ideas. For example, the ability of public organizations to evaluate the potential of promising game companies and projects was criticized, as it is difficult even for those who have a lengthy history within the industry. Streamlining the financing process was frequently proposed. It was also somewhat provocatively suggested that if a game company is able to collect funding from the private sector, the public funding bodies should automatically invest their share to the project.
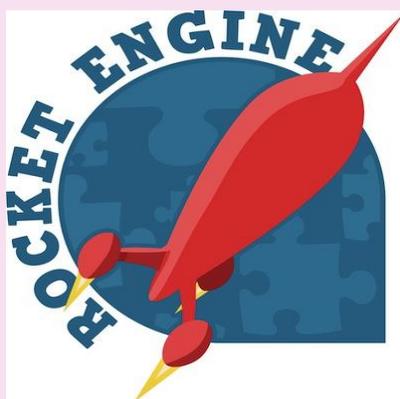
Rocket Engine is a game development toolkit that runs plugin-free in a web browser, on iPhone and on Android. The idea is to enable game developers to prototype quickly. In March 2011, the developer Rocket Pack was acquired by The Walt Disney Company, when the engine was not even published yet, sparking speculation over Disney wanting to develop apps independent of controlled ecosystems like App Store.

Developer: Rocket Pack
Platform: HTML5
Launched: --

Alongside the direct financial support, other functions for the public actors were discussed. Some of the informants suggested that they should take a bigger role in bringing together developers and potential clients. This was especially highlighted when discussing the emerging markets related to gamification and playful incentives within related sectors, like other media industries and education. The need to establish these kinds of contacts is also related to the larger objective of improving the overall image of the game industry.

The past 12 months have witnessed quite a few positive signals coming from the private funding sector. Lifeline Ventures has invested in a couple of projects (Grey Area and Applifier), and Mediatonic Fund has also made a few investments (Recoil Games, Nitro Games, Housemarque). Lifeline Ventures operates mostly as a start-up accelerator, typically supporting promising companies in the early phases of their career. Mediatonic's investment model is a little different. They put money directly to the game product and take a share of the sales margin in proportion. The model is created specifically to retain the intellectual property (IP) within the company.

As for example the case of Applifier's shows, public and private funding can at their best work hand in hand. Actually, as one of our interviewees points out, the joint investments of Tekes could be more actively used to attract other forms of funding:

> I feel that Finland is quickly developing into an attractive target for foreign investments. I've been involved in two cases where we raised the capital almost completely from abroad. And Tekes is something of a god given gift to these foreign capital investors when they realize it.

Altogether, while the Finnish game industry has been successful in creating a handful of international hits, many companies still have a lot of work to do in acquiring public recognition in the eyes of investors and potential partners. In the following we discuss more closely some of the prerequisites for successful companies.

5.2. The characteristics of successful companies

Already a quick glance at the digital game production life-cycle reveals the diversity of the involved actors. Platform manufacturers, publishers, investors and license holders often figure in the early phases of a game project. Engine developers, middleware developers and localizers can become crucial in the later phases of production, whereas distributors and retailers traditionally have a key role in getting the games to their players (Kerr 2006). In this light, it is worth pointing out that the major players like platform manufacturers and publishers do not actively operate in Finland. Instead, the Finnish game industry consists mostly of game studios. Consequently, the local industry can be characterized mostly as a game development industry.

When speaking of the individual game companies, the most common argument among the informants was related to the proportions they are – or are not – able to grow to. As will be discussed below, the notions on the scale of healthy growth and the means for achieving them vary. In any case, if the industry is seriously craving for growth, a few key factors can be identified. Supportive activities, including a more wide-ranging palette of funding, were already mentioned. In addition, the informants demand professionalism from the industry and ability to take risks.

Minigore is a good example of an all-around marketing thinking needed to thrive in the new business ecosystem. Developer Mountain Sheep has worked tirelessly on multiple marketing channels to promote the game and has pushed the game into a service mold by introducing regularly new characters and game features. Distinct and polished presentation helps too.
Developer: Mountain Sheep
Platform: iOS, PSP
Launched: 2009

As discussed in chapter 2.1, one can argue that the variety of platforms and accessible channels of digital distribution have provided a better competitive edge to smaller self-publishing game development teams. The main reason why the interviewees find the self-publishing model so tempting lies in the structure of the Finnish industry. The small developers have up until now found it difficult and time-consuming to access the publishing and distributing channels ruled by the major players from physically far away locations. The challenges posed by the remote location were highlighted, for example, as follows:

> *If you started a mobile gaming company seven years ago, of course it was worthwhile to set it up in Helsinki 'cause Nokia was here and it was really close to that sort of technological core. Well, now it really isn't so anymore. Neither Facebook nor Apple are here but in the Silicon Valley.*

We already noted that Finland does not have much tradition when it comes to venture capital. This means that companies only seldom experience rapid growth, and thereby the game industry is traditionally characterized by small scale companies. The downside of this is that many of them often end up serving as mere subcontractors in order to fund their ambitious original ideas. Some of the interviewees criticized the Finnish industry precisely on the lack of courage and risk-taking. Studios rather play it safe by only doing things they already know best. It is important to note, however, that the situation has not necessarily come into being purely as a result of the developers' free choices, but instead due to practical necessities.

As in the following quotes, the call for business ambition was further connected to the national perspective.

> *From the business perspective, there are still too many people just wanting to make good games. [In other words, there is] much more ambition on that, should we say artistic side than in the business side. Of course, there's nothing wrong with that [--], but if we want to create companies to employ a lot of people in Finland, it's a weakness.*

> *It doesn't benefit anyone if Finland only has 500 two-employee companies. It has no significance for the national economy.*

Furthermore, companies should move away from their comfort zone if the potential opportunities are to be utilized:

> *But I do think that the Finnish game enterpriser's level of ambition is way too low. I mean ludicrously low compared to the level of talent.*

> *I'm actually rather disappointed: there's this huge gold rush in social gaming and then no one really had the balls to go and try it out, we're so deep-seated in our old ways of working.*

> *I think we're too attached to the things we already know. It puts bread on the table, that's ok, but in a way those possibilities are also kinda left behind, and so the new ideas only come when already descending the stairs of death.*

And yet the slow growth paradigm typical of many companies should not be condemned as a mere fear of failure. One can also argue that this rather represents a safe and controlled process where the aim is in something else than unrealistic hopes, big risks of fast profit.

> *We still don't have a single title with our own IPR in any distribution channel. And there are clear reasons for this. It's such a hit-driven business that if you make ten games then one of them could pay off. We didn't want to start by putting all the eggs in one basket, meaning that if we make a hit, only then we'll be able to make money out of it.*

It is easy to recognize the benefits of pursuing sustainable continuity and keeping the key team together from one project to another. Furthermore, the Finnish companies have at least so far been pretty good at taking care

of their employees. While omnipresent overtime and high burnout rates have been reported to characterize the North American industry (IGDA 2004), problems of this scale have not been in sight within the Finnish companies. Finally, small-scale studios are also fit to operate more flexibly and quickly than mammoth-size companies, which means that they are in some cases more adjusted to the ever-changing circumstances and new platforms.

Overall, the spirit of new entrepreneurs was seen as encouraging. Although the premises for starting up a company in Finland were judged even depressingly laborious, the interviewees still had positive experiences concerning the newcomers:

> *There's a younger generation doing business, has actually been there from the beginning, and they don't have, how to put it, the burden of the "traditional" Finnish entrepreneurship. They don't think that if you get bankrupt the shame will follow you for the rest of your life and so forth.*

Various informants seemed to agree that birthing new entrepreneurs is a lifeline to the industry. The more diverse projects are started, the better the possibility to set off success stories. As the past year shows, Finnish companies have so far handled the change relatively successfully. There is, however, no time to rest on one's laurels, as the success stories are unlikely to repeat themselves as such. The key for future success is an open attitude towards all kinds of companies – from rapidly growing innovators to steadily advancing developers.

5.3. The changing skillsets

Many of the informants agreed that the technological know-how and the conceptual game development skills of the Finnish developers are of very high class.

> *Well, first of all I think there's a really good workforce here [in Finland] in many different areas. So that's definitely a strength, and the Finnish labor has a price-quality ratio just top notch among the global industry. You won't get people as good as these from too many places with that price. If you look at the overall costs, they're cheap compared to say the UK or the Silicon Valley. And that's definitely one of the strengths.*
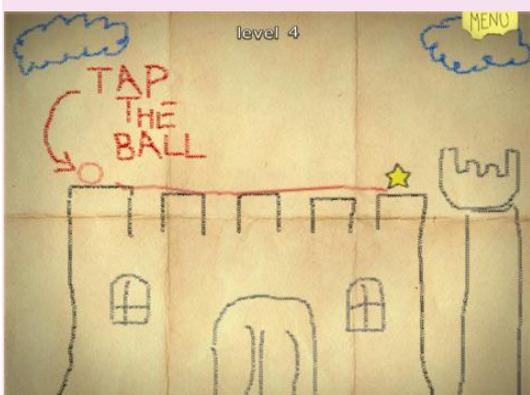
Crayon Physics Deluxe is a puzzle game using high level physics simulation. This one-man project has garnered multiple independent game awards, thus presenting an alternative way to fame in game business. The goal is to move a ball object from its starting point to the goal by drawing physical objects to create movement. Players can also share and download custom content.
Developer: Petri Purho / Kloonigames
Platform: Windows/iOS
Launched: 2009

The Finnish high level education system has been very good at producing technologically savvy workforce. The lively computer culture, including for example home computer hobbyists, a demo scene, Assembly and indie game development has familiarized generations of hobbyists with the tools of the trade. As a result, being a "nerd" has become perfectly acceptable, and the skills cultivated in pursuing the hobby in the hobbyist circles have later become useful in the more serious projects.

Several of the interviewees emphasized that Finland cannot compete in tasks that that are increasingly carried out in countries with inexpensive labour. This is why Finnish developers need to keep on top of the value chain and focus on "non-mechanical brain work". There were, however, different views on what this actually means. While things like designing alluring game mechanics, scripting multidimensional characters and narratives or coming up with very basic franchise ideas was most often seen as the most advanced part of the work, producing quality game engines was also mentioned as something that can provide a competitive edge and should not be outsourced.

Some shortcomings can also be identified. One can trace some of the reasons back to the nature and limits of the projects that have been carried out.

Very few internet consumer services have been made here, I mean Habbo Hotel is probably the only one that has really broken through. So we don't have that much experience of how to make services for millions or dozens of millions of users. [--] So it's hard to find people who'd be able to do the server technology running these services. That I think may be the only large-scale weakness on the implementation side.

Furthermore, the often mentioned self-publishing model challenges Finnish game developers also to realize the importance of marketing and public relations and to adopt them in their business plans. The benefits of digital distribution are lost if the product does not stick out from the crowd.

It [digital distribution] will offer the route for them [game start-ups] to get their games on the market, but it will also set up quite a lot of pressure on the PR

side, marketing, all the supporting activities needed overall, getting the game published, certifications, localizations etc.

One more important area of improvement is related to utilizing the spectrum of known user research methods.

They [game start-ups] are often doing this world's biggest thing but still don't know to whom or in what way or at which point players should be brought into the development process.

I think that there are pretty many kinds of unmapped territories when it comes to this type of real user studies where a lot more time is spent listening to people's thoughts and finding out their ideas and amongst this type of player-oriented game design. So there aren't that many game companies I know of that would actually do that sort of large-scale field studies amongst different people. Instead, the business often just turns to that certain inside group and their own intuition and that I think is a pretty big weakness at the moment.

As discussed in chapter 4, the ability to collect, store and analyse large amounts of player data has become a prevalent feature of online gaming during the past years. Social games have accentuated the key role of so-called metrics that allow the use of modification of in-game components according to the player data in real time. Utilizing metrics in an efficient way obviously necessitates specialized skills. This does not, however, mean that traditional user research and player-involving methods become obsolete. Instead, it becomes increasingly important to identify the right tools for every single case. There are good reasons to argue that this area – player research and game experience analysis – can spawn both fruitful industry-academia collaborations and possibly also a basis for individual businesses.

Somewhat related, the need for quality education aimed for the games industry is met only halfway. At the moment, the employees mainly come to the industry from more general or related fields and only learn the special requirements of game developing via the work itself. One concrete example of this is the Rovio Academy, which recently announced to be seeking 10 new talents to their new training program. Securing the flow of skilful workforce in the future too requires rethinking of how to set up collaboration between the industry and the educational system. This will be further discussed in chapter 6.

5.4. Local culture, global markets

Overall, the Finnish games industry is seen as very open and cooperative. As the circles are rather small, they are also informal. Instead of seeing each other as competitors, the developers like to share experiences and take newcomers under their wings.

And the best of all, if you ask me, is how openly many of these blokes who have achieved something significant are ready to share it with others. [--] For

example, Matias Myllyrinne from Remedy has very generously provided his know-how to everyone who has asked for it.

On a general level, the low hierarchy is an oft-mentioned national characteristic. In connection to games, the openness has its roots in the way the Finnish game industry has spawn from computer hobbyism and the so-called demo scene. One could argue that in terms of games, the national innovation ecosystem has been importantly defined by bedroom coders, dabblers and game hobbyists.

The overall informality can have its downsides as well; there simply is not enough organizational structures to utilize. The interviewees wished that there were more structures especially for bringing promising talents from different areas together in an environment in which they could also easily start a business of their own.

> *Sometimes it feels that everyone's a bit scattered and alone. These creative environments – like art school students' and engineers' and nerds' sort of good bubbling associations in which ideas are constantly competing with other good ideas, and talented people are actively networking – creating them still seems to be quite challenging.*

Both Aalto Venture Garage and Tampere's New Factory were mentioned as sites that already realize some of these objectives by allowing both students, professionals, companies and even regular citizens to share projects and to experiment with fresh ideas without worrying too much about the paperwork yet. The inspirational roles of IGDA Finland and the Neogames centre were also discussed by many participants. Yet, none of them were seen as influential enough when it comes to lobbying the industry towards the society and the policy-makers.

Traditionally the Finnish cultural industry – be it books, movies or music – has focused on creating compelling products mostly to the home market. From this perspective, games have been very different from the beginning. Nearly all commercial games have been designed with the international audience in mind. The smallish home market can, however, also have its benefits: Finland can easily be used as a testing field for innovations in need of experimental technological and ludic solutions.
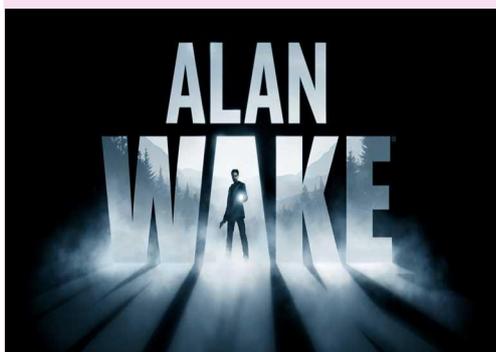
Psychological action game Alan Wake is heavily story-driven and renowned for its atmosphere. Chosen by Time Magazine as the best game of 2010 it was praised for its adult character battling with adult problems. The game's plot is divided in episodes, knowingly echoing TV-series like *Twin Peaks.*
Developer: Remedy Entertainment
Platform: Xbox360
Launched: 2010

While the overall focus is on the global markets and the Finnish industry makes most of its profits from abroad, the labour making these games is almost entirely Finnish and workers from abroad are still a relatively small minority. This was seen as a potential problem, and according to some of our informants, Finland should try to actively lure both starting game developers and financing from other countries. In the end, they would profit the whole society by bringing jobs and export income. On these accounts, internationality was seen as a means in itself, something to produce multicultural, crucially new patterns of thinking.

> *So a guy flew to Helsinki from Toronto, I think Toronto, and gave me a two-hour sales pitch about why we should establish a game studio in Toronto. And he laid all of their subsidizing instruments right there on the table, saying please do come, we're ready to do anything if you just put up a studio there. And to my mind, it shows the kind of spirit we should have as well.*

Several interviewees especially mentioned the particular "Canadian model" as something that Finland or even the EU as a whole should take into account. What this would mean in practice was not specified in detail, but for example the state of Ontario gives tax credits for funding the development, marketing, and distribution of games. Moreover, Canada actively persuades game companies to settle in its area and offers free consultation to newcomers (Boyes 2007). The earlier mentioned Canadian research points out that Ubisoft was offered a tax incentive of 37.5 % credit on labour costs by the Quebec government. In addition, for example the region of Quebec is rich with digital entertainment related middleware companies and universities and colleges with programs in new media arts (Douglas et al. 2010).

5.5. Conclusions

> *Add one or two Rovios more and we're starting to have a pretty good setup. [--] The goal should be that if a beginning entrepreneur wants to create a game company, she will move to Helsinki from abroad to do it, cause this is where it's profitable to set it up. That of course would be the dream situation.*

The Finnish game industry is a compelling combination of local history and practices and global markets. The recent boom has highlighted the exceptional growth potential of the field. At the same time, the specialists express some concerns. The disruptive influence of new platforms and new audiences requires special focus and may necessitate bringing in entirely new skills related to marketing, audience research and global markets. Once the key processes in the development companies are professionally run, the ability to collect funding, take risks and nurture creativity is also improved. Finally, while the skilled workforce provides a solid basis for the growing industry, it is somewhat questionable whether the local education sector can currently respond to the market need.

6. Proposals for action

In this chapter, we present some practical points of consideration. Many of our recommendations rise directly from the interviews with the game industry experts. We have also consulted similar reports from other countries, and suitable proposals from these documents have been adapted to the Finnish environment. The proposals are divided into three categories: 1) Governmental actors and public institutions, 2) Game companies, and 3) Research and education.

6.1. Governmental actors and public Institutions

Remodel the start-up and growth company financing.
The complex ensemble of public support instruments needs a reform. A variety of instruments, including tax breaks for R&D activities and incentives for seed funding, have been successfully implemented in other countries. These methods need to be seriously considered in order to provide a competitive edge for the Finnish game industry.

Boost direct funding for products.
The current funding instruments poorly support the direct development of competitive game products. Specific grants to help small studios to reach the production phase are needed. In order to provide a versatile ecosystem of games, different funding criteria need to be applied. One option would be an autonomous gaming fund to support the development of artistically ambitious games and innovative independent productions.

Bring actively together game developers and potential customers.
The hit-driven customer market is not the only source of revenue for game studios. Actually, a variety of sectors can benefit from the skills of game developers. The advent of gamification offers new exciting prospects, but service providers and potential customers still meet too sporadically. Supporting initiatives that highlight what the game industry has to offer to the governmental and provincial actors would be of high importance.

Promote ways of attracting foreign investments, companies and workforce.
While the Finnish game industry is full of 'born global' firms that make most of their revenue from abroad, there are still steps to take in order to make the game development scene inherently international. Importantly, luring foreign investments and companies would produce jobs and export income. A multicultural workforce would provide important diversity, new connections and fresh ideas.

Include more game experts in governmental institutions.
Governmental institutions and programs seldom acknowledge the specific economic and cultural needs and affordances of digital games.

Furthermore, the key public operators – both on a national and provincial level – seldom hold up-to-date knowledge on the games sector. More game-savvy people are needed to instigate the national research and development programs and to participate in key grant adjudication panels.

Increase the overall promotion of gaming in society.
While the Finnish game industry has in the past years improved its overall visibility, the potential of digital games is still too often overlooked. Therefore, governmental actors should provide incentives for the development of games festivals and promotional campaigns. After European Cultural Capital (2011) and World Design Capital (2012), Finland should establish an initiative for World Games Capital (2013?).

6.2. Game companies

Embrace entrepreneurship, take risks and do not be afraid of failure.
The attitude towards entrepreneurship in Finland is too often lacking in ambition. The companies need to think globally from the beginning and aim boldly for the top. The hit-driven nature of the industry means that the companies are bound to meet unprofitable projects on the way to success. These failures should be seen as a welcome possibility to learn from one's mistakes.

Study the new ecosystems and boldly take advantage of them.
Companies should actively seek the benefits provided by constant market change. Digital distribution lowers the cost of game development and opens new possibilities for retaining one's own IP. The power of retailers and publishers may be diminishing but new gatekeepers are quick to take their place. Understanding the technological, economic and cultural nature of emerging gaming platforms becomes a key asset for any game developer.

Focus on high level expertise.
It needs to be openly acknowledged that when it comes down to mechanical implementation of things, Finland cannot compete with countries of cheap labour. The key asset of the Finnish game industry is its highly educated and creative workers. More attention should be paid to nurturing, cultivating and rewarding the skilled work force.

Network with everybody.
Game development is a global business and managing the right connections is a key source of success. In this respect, the large-scale industry get-togethers like GDC, Game Connection or Nordic Game are places to be. At the same time, one should not underestimate the value of local networks. As the overall atmosphere within the Finnish games industry is very open and cooperative, newcomers should actively seek guidance from industry veterans. IGDA Finland gatherings are a good place to start.

Consider hiring or developing talent in the following key areas:

a) Marketing expertise.
The new platforms force game companies to consider marketing aspects already in the early phases of development. Marketing professionals focusing on merging game design and marketing are now high in need, as companies need to get up and close with the players through all the possible channels.

b) Organizational development.
Compared to the level of expertise, many Finnish game studios could still be run more efficiently. Establish a culture of continuously developing and testing new models and methods for managing innovation and development processes. Along with a professional outlook and practices comes credibility.

c) Player research.
Knowing your players is increasingly the key to success. Many studios should use significantly more resources on knowing who they are developing games for and how fun those games actually are. Consider applying a full spectrum of user studies, player-involving approaches, metrics and QA methods.

6.3. Research and education

Respect strong and thorough expertise.
While market-driven training courses may seem a tempting path to take, universities should rather stick to their strengths. University teaching should be research-based and assure that students also acquire basic research skills. Companies should support students to finish their degree and encourage employees to take part in supplementary courses, workshops and conferences throughout their career.

Promote interdisciplinary education.
University-level games programs should be built with a strong interdisciplinary focus. Key game development skills should be complemented with up-to-date knowledge from design management, business models and user studies. Technology-wise, options should be kept open. Instead of specific technologies that will become obsolete sooner or later, the focus should be placed on the general-level development theories and models.

Foster sustained and consistent ways of collaboration.
International examples indicate that mutually beneficial collaboration between educational institutions and the game industry requires long-lasting relationships that are actively maintained and evaluated. Trust is often based on personal relationships and it can be built only over time. A variety of methods can be applied to enhance collaboration: industry-

academia workshops, master classes, in-house researchers in game studios, and university-organized developer-in-residence opportunities.

Establish a game research and development centre with adequate funding.
Finnish game research is widely considered to be of high quality. Still, the field is somewhat scattered and permanent positions are a rarity. In addition, the scale of games-related education is not sufficient to promote the anticipated boom. Governmental support should be directed to a specific research and development centre that would boost collaboration between game industry representatives, researchers and students and coordinate international co-operative projects.

7.   Case 1: Free-to-Play on the Frontier

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Takeaway: The following case takes a closer look at Zynga's Facebook game *FrontierVille*. A close reading of the game allows us to illustrate how and why a popular social game seeks to attract and retain large player populations. The reader will learn about the principles for creating compelling and long-lasting experiences that adapt to the everyday life of players.

Object of study: *FrontierVille* is a farm simulation game developed by Zynga, the market leader in social games. The game was released in June 2010. Starting with a small piece of land in the middle of wilderness, the player is guided through a variety of tasks ranging from clearing the land, seeding plants, harvesting crop, planting trees and tending animals to constructing buildings, visiting neighbors and completing more elaborate missions. As the player performs these activities, she earns experience points and levels. Proceeding in the game unlocks more missions, rewards, buildings and other objects.

Case objectives: In the following, we first outline the rationale behind the free-to-play economy based on virtual object sales and examine how also the non-paying players are affected by the system. Second, we consider the forms and functions of sociability within *FrontierVille* and with its players. Third, we examine how and why the game manipulates the rhythm of play in a variety of levels and time cycles.

7.1. The nature and consequences of free-to-play

The free-to-play model has, in many ways, fundamentally changed how digital games business works. In the following, free-to-play games are examined as a distinct design model affecting not only the revenue model, but also the game development and the ways the play structures itself around the game. The mechanics surrounding the central revenue component, virtual goods, are first examined. Focus is then moved on the ways that the observable changes in gaming affect the wider, non-paying segment of gamers.

Design as marketing

The pervasive connectedness and the unmediated access to gameplay data have allowed game developers to optimize their systems promoting virtual goods in ways earlier undreamed of. Because the players are not required to pay for the service and because the vast majority of free-to-play games are reported to be in an open beta testing stage seemingly indefinitely, the games can be altered in any way the developer sees fit. Thus, the launch

of the game is only the beginning – the crux of the business model is now in managing the game, which itself has become a full-time job of data mining and optimizing the design of the game to align it with its marketing.

Free-to-play social games like *FrontierVille* create revenue through selling virtual goods. The key challenge for the designer is to create goods that sell. It has been argued that rather than concentrating on the items *per se*, the desirability of virtual goods depends on the context the items are situated in (Hamari & Lehdonvirta 2010). In other words, the designer of a virtual economy not only designs the products but also the market conditions from the ground up.

In general terms, marketing is about identifying customer needs and fulfilling them. Additionally, marketing can be seen to create new needs. According to Hamari and Lehdonvirta, "[w]hen designing a virtual world, its rules and internal economy can be regarded as marketing activities". The value of the goods is created through designing an appropriate context. Context can mean 1) the game environment (backstory, surroundings), 2) the relational position to other items (i.e. 'large tent' is better than 'tent', 'hay stack' is better than 'hay bale'), or 3) the social environment (i.e. what is valuable to the player depends on what is valued by the community).

The virtual economy and business in FrontierVille

In *FrontierVille*, two currencies are used, 'coins' and 'horseshoes'. A dual currency helps Zynga to differentiate high revenue actions from low revenue actions more easily, so that in case of inflation (i.e. the player has more than enough of one of the currencies), only one of them is affected (Kelly 2010). Early stage players worry about 'coins', while advanced players move on to hunt 'horseshoes'. Essentially, you have an easy-to-earn currency you collect from most of your actions, and a hard-earned one for high value transactions. As in other Zynga games, the hard-earned currency is really hard to get and the most advertised virtual item on sale. The player is usually offered a direct price in 'horseshoes' for instantly completing missions. These are the situations that the precious currency is usually saved for, too. Although many items in the game are free in the sense that they can be bought with 'coins', 'coins' too can be bought. This, essentially, connects all the items in the game directly to real world money and economics.

Whereas 'horseshoes' are mainly bought to progress in the game, most items on sale are for homestead customization. In order to incentivize players to purchase virtual goods, circumstances are created to make players need certain things and to drive the desirability of virtual goods up. As in traditional economy, different ways are used to evoke needs in the customers and to make virtual goods seem more valuable. The main method for this is to drive player segmentation. The ample opportunities for player customization are targeted to create multiple customer segments for decoration sales. In *FrontierVille*, different identities are

'advertised' by showcasing contrasting scenarios in the loading screen of the game. Lead designer of *FrontierVille,* Brian Reynolds, talks about offering players distinctive styles, such as 'cowboy' and 'little home on the prairie', and further categories such as 'confederate soldier' and 'backwoods redneck' can be identified by closely reading the decorations (Reynolds 2010b). By offering not only varying products, but also products of different price and quality categories, multiple buyer identities are supported.

Making virtual goods more desirable

In the real world, items exist in fixed numbers. Some things become coveted rarities while others are reduced to inflated junk. Both the abundance and rarity of virtual items, however, are entirely in the hands of the game designer. Giving the customer an *impression* that virtual items are in limited supply can be an efficient way of boosting sales (Hamari & Lehdonvirta 2010). In *FrontierVille*, many items in the marketplace are specifically advertised to be on sale for a limited time only, and for example Independence Day firecrackers were available for a couple of days only. Strategic rarity is also used when *FrontierVille* players are made to gather items to complete thematic collections of five. In each collection, one of the five items is programmed to be rarer than the other four. While these items do not bring the developer any revenues *per se*, players might spend money on other articles in order to obtain these items. Here, the implementation follows a slot machine philosophy: infrequent items can constantly be seen in the collection screen -to "whet the appetite"- but rarely drop.

In order to sustain sales, products should not fulfill needs too effectively. For example, the useful lifetime of a product can be designed to run out. A new product might regularly come out making the old one obsolete, often in functional but potentially also in social terms. In *FrontierVille*, special occasions such as Christmas can be celebrated with matching decorations. These items can be seen to be 'in fashion' only during the holidays. The next Christmas, new decorations will inevitably go on sale, devaluing the old. Game fiction can also be used to establish completely made up occasions, which, while worthless to outsiders, can entice players to spend a lot of money on the associated items and decorations. In addition, it is possible to design virtual items that have a limited amount of uses – the aforementioned firecrackers, for example, depleted after one use.

The game can also be designed to limit player actions in order to justify the purchase of useful items. All kinds of aids and extensions, such as user interface enhancements, can be sold to better the game. This can be compared to selling a regular product with some kind of limitations, to which augmenting products are offered as a solution. In *FrontierVille*, this method is closely tied to limiting player moves with timers and energy restrictions: impatient players are offered energy refills and instant completing tasks for a fee. Sometimes these kinds of enhancements are

contextualized as proprietary items, such as in the case of a special axe that allows the player to work faster.

Non-paying players are significant, too

Even if only the goods exchanged for real money turn immediate profit, players who never pay for their playing are just as necessary for the free-to-play model to work. A large number of players creates a feeling of a populated community. According to Wohn et al., exchanging favours and virtual goods gives social game players a feeling of belonging (Wohn et al 2010). Ducheneaut et al. suggest that in online community games other players have an important role beyond co-operation and communication – "they also provide an audience, a sense of social presence," and even "a spectacle" (Ducheneaut 2006). This feeling of community is, of course, important for those who *do* pay. The player population as a whole can be considered to form the social context in which the play takes place. Together, the community also creates a sizeable amount of the *play content*, i.e. a farm or a town for players to wander about. This content acts as a playfield for the paying and non-paying players alike.

From the business perspective, a large quantity of active players keeps the franchise fresh in the minds of the audience. Game requests and wall posts serve as a regular reminder of the game being there and that other people are playing it. "[Non-paying players] are bringing people to the game, posting things on other people's walls and doing a lot of advertising for you that game-makers can't do any more," argues Jimmy Zimmer, co-founder of Threshold Games (Edge 2010). As more and more friends join in, the player network grows exponentially in its social influence towards the player (Kelly 2010). For Zynga, there's also the possibility of leveraging large player masses into its other games through cross-promotion, cross-linking, and inter-game missions. For new games, having a strong start, i.e. a critical mass of players quickly after the launch, can mean a world of difference. This is especially relevant nowadays, when the notifications in Facebook have been toned down, and the only game publications for non-playing Facebook users are the ones announcing that a friend has begun to use a new application.

Developers may also divide a large pool of players into test group segments. Planned features – even for entirely separate games – can be tested unobtrusively or secretly. Reynolds tells of an example, where Zynga had seven different tutorial flows for *Mafia Wars* and the one that was chosen was the one initially deemed most counter-intuitive (Reynolds 2010a). Since Facebook provides game developers with unmediated access to the player data, developers "own" the players, that is, the players as an audience are theirs to sell, perhaps to advertisers or even to competition.

According to Reynolds, only 3-5% of Zynga's players ever pay for the game (Reynolds 2010a). Thus, a staggering 95-97% of players play the game for reasons other than what the paid content offers. Because all the players are needed, a delicate balance between a sufficient amount of free

content and an unobtrusive revenue system needs to be created. A game has to be *fun enough* even in its free form and, at the same time, leave the players hungering for *just a little bit* more. Every now and then, somebody is liable to give in and proceed to pay for a quicker service. So integral are the non-paying players that a successful free-to-play game cannot prioritize any part of the system on account of another – instead, the designers need to trust that catering to everybody's needs produces the best outcome in the end.

And yet, for those who do not pay, the revenue mechanisms are a nuisance. All the players are included in the same system of timers, energy, and pay-to-proceed, but only those spending money have the luxury of options. Inevitably it is the business model that sets clear boundaries as to how the actual play takes shape.

Virality

Instead of collecting direct payoff, the free-to-play system appropriates the non-paying players as tools for viral marketing. Free-to-play games both benefit from and are burdened by virality. More than anywhere else, free-to-play games need to have immediate appeal. According to Reynolds (Reynolds 2010a), a significant number of players are lost during the loading bar and they simply abandon the game due to zero commitment. First impressions also count on notifications, as Facebook games nowadays get only one public announcement – when a new player first installs the game.

"[D]esigning viral growth for a social game is leveraging whatever communication channels the network platform affords, and integrating this set of constraints and possibilities with gameplay", argues Järvinen (2010a). Here, again, game design and marketing are merged. "[U]nless the marketer understands the details of gameplay, the viral features are in danger of turning into tacked-on messages that only take advantage of the standard communication channels of the network" (ibid.). Conversely, the designer of a free-to-play social game *cannot* ignore the integration of viral mechanics to the design of the game.

Comparing *FarmVille* to *FrontierVille*, steering players towards virality has increased. For Zynga, the viral spreading happens through cross-promotion across all their games. *FrontierVille* players were first coaxed to play Zynga's *Mafia Wars* to obtain the 'Sharp Axe', a special item for cutting trees more efficiently. As with the axe, cross-promoted items are usually loosely tied to the theme of the respective game (cf. an attack shark from *Treasure Isle* to *Mafia Wars*). Later, a special 'horseshoe pit' was introduced in *FrontierVille*. While yielding relatively good in-game prices, players had to play five other Zynga games in order to gather materials for the 'horseshoe pit'. Conversely, other Zynga games have goals that lead players to play *FrontierVille* – *CityVille*, for example, ties some of its narrative frame to that of *FrontierVille*'s in the form of old frontier letters

that *CityVille* players find. Thus players are 'poured', or 'decanted', into other Zynga games (Kelly 2010).

For quite some time already, Zynga has been attempting to create a game network that rises above any single game, a kind of "Zyngaversum". Logically, this network would serve to take back some of the lost virality of Facebook and act as a separate platform within which players could be moved around. At the time of writing, Zynga is about to introduce the RewardVille program. In the program, the players earn Zynga points, which are used to gain Zynga levels and to earn Zynga coins, which can be then used in all Zynga games for various rewards. In its meta-structure, the system resembles console achievements.

The need for virality exists in a close relationship with the inherent sociality of free-to-play Facebook games. The two terms clearly point to different things, but as much as virality is a necessity for these games, so is sociality. "[P]opulation is a prerequisite for any viral phenomenon", Järvinen notes, "and it is through social interaction viral growth can take place" (Järvinen 2010a). The aim is to make the player invest herself. What this means is that in order for the player to use viral mechanisms, to spam her friends, she needs to have some kind of a special relationship with the product. In Järvinen's words, "[i]f there is ever to be an incentive for an individual player to virally spread the word, it needs to be about a personal achievement or decision in the game, not the game product as such." In order to better understand free-to-play games and their inherent virality, we will turn our focus to the social substrate of *FrontierVille*.

7.2. Frontierville as a social game

As mentioned earlier, Zynga has publicly announced that *FrontierVille* is designed to be "more social" than their previous games (Reynolds 2010b). Largely related to the asynchronous nature of the game and the entire lack of in-game communication tools, there are no real possibilities for team playing or detailed cooperation between players. Thus, it is intriguing to examine how the sociability is constructed.

In this chapter, we first take a look at the in-game features that allow the players to interact with other players. Then we extend the view on the ways in which the game is presented and played on Facebook, outside the immediate game world. Finally, we elaborate the interrelationship between the designed sociability of *FrontierVille* and the social relationships among *FrontierVille* players. It is worth mentioning at this point that our analysis is not built on extensive empirical data, but rather relies on a close reading of the game mechanics.

Sociability in the game

The most visibly "social" part of the basic user interface is the bottom bar that shows a dedicated selection of the player's neighbours. Neighbours

represent the other people playing the game and they are presented in a strip that consists of their Facebook profile pictures. At the beginning of the game, one may not have very much use for other users, but as the game proceeds, the significance of the neighbours' increases. A certain number of neighbours is required to unlock advanced features and special missions in the game. Players can also send various kinds of gifts to their neighbours and thereby help them to proceed with particular tasks.

The player can visit her neighbour's homestead and perform simple tasks there. This provides resources both for the player and for her neighbour. Compared to *FarmVille*, helping neighbours is mutually more valuable as the player saves energy when others do the tasks for her. In addition to the other resources, the player gains reputation points. There is no direct use for these points, but they are visible to the player's neighbours and to a certain extent indicate the degree of sociability. A player with high reputation points is bound to be useful for her neighbours. She is proved to be active in helping her neighbours and she is also likely to send gifts and accept requests.

When visiting a neighbour, the player can also see how her friends have decorated their homesteads, what aspects of the game they value, and what missions they are conducting. The player also sees who has visited her homestead. One can decide not to do any visiting, but she then has to skip particular quests, as they require the player to pay a visit to her neighbours. The mutual visits can also further encourage the players to decorate their homesteads, as the players can expect a daily audience for their accomplishments. Put together, these small operations build the feeling of playing together.

While the game mechanics of *FrontierVille* support helping and other "friendly" activities, competition can become a highly significant part of the game. Whenever she wants, the player can easily check how her level ranks among her neighbours. If the player wants to earn levels quickly, she must optimize the flow of experience points. As previously discussed, the player can ease her burden by buying horseshoes that allow her to complete quests instantly. Whichever investment one chooses, the constantly updated ranking list incites the player activities as it communicates in real time whether the chosen strategy works or if the other players are quicker to gain levels.

Alongside with the competitive incentives, *FrontierVille* encourages self-expression. Players can both customize their avatars and buildings and decorate their homesteads. Completing missions remains a significant part of the game even if the player wants to focus on the expressive aspects of the game, as completing missions unlocks entirely new options to decorate, build and personalize the homestead. To some extent, the player can also personalize the narrative of the game by choosing particular missions and skipping others.

The game starts with the avatar customization. Quite soon, after the required missions are completed, the player earns a spouse. Some time later, the couple is blessed with a kid. The developers suggest that customizing the family allows players "to express who they are" and that seemingly innocent or random choices are bound to generate a lot of debate (Reynolds 2010b). While this feels a bit exaggerated, the simple choices of name, gender and colour of each avatar can already produce a variety of social dynamics, including for example interracial relations, same sex marriage and adoptive children.

As mentioned earlier, encouraging competition can operate as a powerful way of driving players to real-money investments. As the variety of decorations available practically only for real money indicates, supporting self-expression is probably at least as important a channel in familiarizing players with monetary investments. Both of these mechanisms are inherently social and make the players come back day after day.

Just based on the in-game features, it is not yet very clear what the promise of games becoming "more social" really means. Things the player can do with their neighbours are practically the same with *FarmVille*. Possibly the player of *FrontierVille* is more dependent on other players, as many quests necessitate gifts from neighbours. Interestingly, it seems that the advent of *FrontierVille* has actually made *FarmVille* more social, as some of the features tested in the new game have also been introduced to its predecessor. Then again, in Zynga's most recent game *CityVille* the player can already establish franchise businesses in the neighbours' cities and trade coins and goods with them by sending trains to their cities.

So far it is clear that the game supports different play styles and succeeds in providing a feeling of playing with others. We, however, need to move outside the immediate game world in order to get a grasp of the social interaction taking place between the players.

Game pouring to Facebook

Practically all Facebook games, including *FrontierVille*, utilize Facebook wall posts, requests and even the user's status updates as a central part of the game. Due to the lack of in-game communication tools, these features are vital to the sociability of the game. As already discussed, they are also highly essential from the viral marketing perspective. The strong reliance on Facebook's communication features extends the frontier outside one's homestead. The player can and must perform game-related actions also when not logged into the game.

In *FrontierVille*, the player can post various announcements of her actions in the game to her Facebook wall. By clicking these notifications, the friends of the player can both gift particular in-game goods to the player and gain advantage like experience points or energy themselves. During the first months of *FrontierVille*, these wall posts formed a powerful mechanic of attracting new players. A significant transition was witnessed in October

2010 when Facebook restrained the workings of its viral mechanisms and made the posts visible only to those who have installed the game. With this change, the focus of the wall postings was moved from acquisition to retention.

The significant changes in the operations of the Facebook viral mechanisms have not left *FrontierVille* untouched. In the past months, the number of gifting-based quests has increased. When the player of *FrontierVille* needs certain items for the mission, she can either post a public request to her wall or send a personal request to some of her friends. The latter encourages her to post a request also to friends who are not playing yet. The more one needs different items that she can get only from other players, the more likely she is to draw new players to the game. At the time of writing, gifts sent by the player appear as Facebook game requests. They are less visible than the posts on one's news feed. At the same time, they can be seen to be more personal, as the requests are always addressed to a specific friend. The requests further appear in one's notifications alongside Facebook status comments, and this is bound to add some personal feel to the interactions.

At first glance, both the posts to feed and the game requests leave "sociability" mostly at the level of spamming. This, however, may not be the whole truth, as the wall postings also include snippets of game narrative. These short fragments remind the player of the on-going events in the game world. While the posts cannot be personalized, the players can frame them with a comment. *FrontierVille* posts often use raunchy humour to make the announcements more appealing and to generate comments. Active commenting raises the post to the top of the user's news feed and increases its visibility. To someone who does not play the game, the game-related postings provide very little delight. Irritation is bound to rise when the same posts begin to appear in one's feed time after time. In this respect, the constraints to the game postings' visibility are understandable. The selectivity can also have a positive side to it: the player no more needs to ponder whether she is bothering her non-gaming friends with the posts.

All in all, seeing friends' game posts and clicking them maintains the relation to the game even when the player is not "truly" playing. The posts also allow the player to follow who of her friends are playing and how they proceed. It has been argued that Facebook use in general is characterized by a playful mood and it is easy to see how games like *FrontierVille* contribute to this (Rao 2008). Playing the game is both temporally and socially intermingled with other activities on Facebook.

FrontierVille and social relationships

Previously, different ways of playing FrontierVille as a social game were discussed. Playing together can focus (at least) on advancement, competition, customization, or self-expression. The decision to use or not to use real money can also significantly define the focus of the game. At

times, it feels as if the players actually are not playing the same game. For instance, any cosmetic decoration obtainable only with real money ends up becoming something more: while to some it may signal wealth or perhaps commitment to the game, to others it is a message of "cheating". Here, playing by the "shared rules" means playing "around" the revenue model, without paying. Thus, playing by different rules means playing two different games.

By making a large and active neighbourhood desirable, FrontierVille persuades the player to exploit her existing relationships. Friends form a powerful capital in the game, as in many cases active neighbours can be used as a substitute for money. As discussed, this can lead to non-playing users becoming annoyed. At the same time, success in the game can have wider value for the player's social relationships. Alongside admiration or jealousy, active players can become friends and sought-after co-players for other games. While the game forms just one way of the many ways to interact with one's Facebook friends, it can also be the only shared interest. It may for instance feel convenient to play with some old buddies, although one may otherwise have very little in common them (Wohn et al 2010).

While FrontierVille is admittedly a social game, one could also consider it a single player game played in a social environment. Stenros et al. have analysed the ways in which a single player game can be social and many of the characteristics they found match those of FrontierVille and other Facebook games (Stenros, Paavilainen & Mäyrä 2009). Instead of playing simultaneously, the feeling of sociability and of a shared experience is mainly based on being aware that others play the same game as well. While FrontierVille, and Facebook in general, provides an opportunity to be in contact with others without really needing to communicate with them, playing the game can, however, provoke all kinds of communication via different channels, including wall posts, chat or even the telephone (Wohn et al 2010).

It is no secret that Facebook, and thereby a game like FrontierVille, is often used simultaneously with other activities, including work, homework, watching TV, paying bills or searching information on the Internet to mention but a few. This further accentuates how playing social games is intimately tied to other everyday activities in the gamer lifeworld. In the following, we take a closer look at the ways in which Frontierville taps into the daily rhythms of the player.

7.3. Towards rhythm design

The emergence of social games has illustrated what happens when games are increasingly designed to fit into people's everyday rhythms. In the following, we will move on to discuss the importance of overall rhythm design. While temporal aspects like time limits, loops, cycled actions and the tempo of the game are crucial for most of the digital games (Wolf

2001), social games have a very particular relationship to time. While the temporal aspects are closely related to supporting retention, we feel that this perspective does not fully explain the rhythms typical of social games. Thus, we use examples from *FrontierVille* to highlight how the game actively both supports and creates different kinds of rhythms in a variety of levels and time cycles.

Adjusting the tempo begins from fine-tuning the simplest of clicks. Related to the "clickability" of *FarmVille*, Järvinen argues as follows: "As in any kind of rhythm, this play activity also creates a rhythm that can be very pleasurable in itself, regardless of what happens in the game. Therefore I see the craft of designing such a flow as a key part of game design in social games" (Järvinen 2010b). *FrontierVille* develops this idea still a little further, as one of the original design drivers of the game is to allow the player to click on basically anything, also on her neighbours' homestead (Reynolds 2010b). As already discussed, this has particular consequences for the sociability of the game. Furthermore, and just as importantly, it is also likely to affect the duration and the dynamic of a single play session.

Moment-to-moment, day-by-day

In *FarmVille*, the player will initially have a "clean" 5 min session of clicking. Later this would grow to longer and longer sessions leading to "click fatigue", a negative play experience according to Reynolds (Reynolds 2010b). With this in mind, two things were changed when designing *FrontierVille*. First, the actual clicking was made more fun by introducing a system where the player can create chains out of bonus drops. For those who are interested, these "click combos" become almost a mini game in itself. Second, *FrontierVille* aims to manage the session length by implementing two kinds of timers: a general timer in the form of an energy bar and specific timers on the majority of the gameplay elements, which indicate for example when a specific fruit tree can be harvested or when a cow can be milked. Specific harvest times vary between different crops and animals from a few minutes to several days. As almost every click spends energy, the energy bar displays the combined action points available. It replenishes slowly, at the rate of one action point per five minutes, keeping the play sessions in tolerable lengths and at the same time driving the player to come back after a couple of hours.

The system is very effective as player progression is constantly slowed down by some timer, and while waiting, players turn to other tasks of interest. As a result, there always seems to be something to do, and most of the pleasure is derived from the delayed gratification, having always something to be finished just around the corner. For most, it quickly becomes a game of optimizing timetables. Adopting for example a rhythm of once-a-day, it is easy to see how visiting twice a day would gain coins or experience points much more efficiently. While varying harvest times let the player fine-tune her play rhythm to sit conveniently with her daily life, the game still tries to impose rhythms of its own on the player. The various

frontier buildings yield a once-a-day bonus and the players can hire their friends or work on neighbour farms within daily limits.

Week-by-week

As discussed, Zynga acknowledges the connection that free-to-play Facebook gaming has to work places. Reynolds describes how new players many times get so enthusiastic that they play even on weekends, but later on settle over the five business days, as "people play these games at work". Launching new *FrontierVille* features is regularly timed on Mondays, at the start of the work week. This way the feature gets the widest reach, as Zynga wants the players to be able to discuss "this week's episode" at their work place (Reynolds 2010a & 2010b). Also, players new to the game are programmed to catch up with advanced players a bit quicker: working on the same missions at the same time gives better opportunities to reciprocity and shared topics at the water cooler. Many mission arcs have been limited with three day timers, driving players to start early in the week in order to finish before the weekend. In Zynga's latest hit, *CityVille*, logging in on consecutive days even creates daily bonus chains. The longest of these chains, conveniently, is five days, the length of a business week.

Introducing new game content on a weekly basis prompts comparisons to TV episodes. "What I feel like we're doing with *Frontierville* is... we're in the TV business. We're making episodes every week", Reynolds describes (Reynolds 2010b). The shift in the paradigm reaches further than that, however. One of the characteristic pleasures of video gaming has traditionally been the opportunity to progress at one's own pace. Missions available for a limited time can only be seen to move digital games away from the traditional on-demand gaming and towards a rhythm familiar from broadcast television. The move from upfront monetization of traditional gaming to on-going monetization of free-to-play supports the TV rationale. Missing weekly content is like missing an episode of a TV-show – in the days when recording was not possible.

Longer cycles

Compared to the quicker daily and weekly rhythms, seasonal content, overarching even several months, exemplify a much slower time cycle. The game world of *FrontierVille* starts to prepare the players for the coming winter early in the fall. Trees turning first yellow and later white create a representational frame meant to keep the players curious: the game world is changing and the players want to see how. Special missions and decorations anticipate the coming of Christmas time and this way are tied to a real world context relevant to the players. At the same time, they create a rhythmic arc players want to follow through.

Even longer rhythm cycles can be detected in the narrative frame of the game. From time to time, when the player starts the game, a loading screen is shown depicting distinct game scenarios of for example soldiers advancing through wilderness, or a camp in the middle of the woods. The

scenarios act as showcase pieces of advertising but also raise questions of whether any of the events are made playable at some point. In the game, many quests are placed in longer story arcs, or quest trees of consecutive missions, in which a recurring character is first introduced and might appear later on the homestead, adding to the populace of the frontier town. Partly consisting of these smaller quests, there is a larger quest tree in which the open ended narrative of the player character, or the frontier pioneer, is moved forward. Ever since the launch of the game, there have also been road signs on the homestead promising new play areas such as 'Rattlesnake Canyon' and 'Goldrush'. Even though these areas are promised to be "coming soon," over half a year later none have been introduced. Together the evocative loading screens, the story arcs and the road signs create a mesh of expectations as to what lies ahead for the player. How much of this is intentional and how much is just the developer leaving openings in the hope of success is anybody's guess. Still, these grand-scale narrative arcs with no end in sight remind of the fact that games like *FrontierVille* need to keep the game endlessly changing and evolving. As discussed previously, this built-in necessity emerges already from the monetization logic of the free-to-play model.

7.4. Conclusion and discussion

The analysis of our case study, *FrontierVille*, paints a compelling picture of the present situation in the ever-evolving field of social games. At the start of the study, our hypothesis was that the free-to-play model affects significantly not only those who buy virtual goods but also the other players, and the very play culture surrounding these games.

We hope to have shown that the dozens of millions of non-paying players form an all-important component in the free-to-play ecosystem. They bring lapsed players back to the game and serve as much as a marketing tool as a captivating social context in which Facebook gaming takes place. Catering to these initially inconsequential players and building chiefly upon the social play mechanics yields the best outcome in the end, it seems.

Besides other players, also the orchestrated play rhythms can be seen as a marketing act for the game. For players, the effect of rhythm design is twofold. The players are free to choose play rhythms suitable for them, but at the same time they are urged to return to the game at regular intervals. Consequently, alongside supporting "casual" approaches, the game also promotes more intensive and time-consuming styles of play. Furthermore, as other daily tasks both mix with and potentially conflict with play incentives, negotiating the suitable time for play becomes a crucial part of the gaming activity.

Not all the results conform to the initial hypothesis. The study shows how the perceived sociability of these games is only partly true. Instead of allowing the players to truly co-operate with each other, the game rather focuses on creating a feeling of playing together. To some extent the

players are, however, able to bypass the limitations of the in-game interactions, as play activities extend to Facebook and other communication channels.

The social potential of these games should, however, not be decided based on a single game. Every major instalment of the 'Ville' series – *FarmVille*, *FrontierVille*, and *CityVille* – has improved the game mechanics driving social interaction between players. Befitting the always developing nature of free-to-play games, this iterating process affects not only the new and upcoming games, but also the ones that came before, as successful social mechanics are imported in those too. This way, instead of traditional sequel thinking, the Zynga games can be seen as an always developing family of products, swapping features on the fly. In the light of the mentioned RewardVille project, this symbiosis of games shows itself as a mega structure larger than any single instalment, capable of capturing gamers' attention in itself.

8. Case 2: How downloadable add-on content keeps the player on the rail

Heikki Tyni

Takeaway: The following case takes a closer look at the console game *Skate 3*. A close reading of the game illustrates how downloadable add-on content (DLC) is used to channel sales and guide customer behaviour in the modern console game environment. The reader will learn about the reasons behind the phenomenon and what kind of effects these strategies have on the surrounding game culture.

Object of study: *Skate 3* is a skateboarding sandbox game published by Electronic Arts (EA) in May of 2010. Players skateboard around the fictional town of Port Carverton, competing in various challenges while building a successful skateboard label. Since its release, nine DLC packs have been released for *Skate 3*. Skateboarding is a fitting theme for DLC, as there are several categories from equipment and skaters to environments to update regularly. Whatever is going on in the real world of skating can be imported quickly to the game and made to mirror the real-world events. The skateboarding culture also gives ample opportunities for marketing deals – something DLC is perfectly suited for.

Case objectives: The aim of this study is to shed light on what kind of dimensions DLC gets in the techno-economic console environment. We first briefly discuss the cultural and economic conditions that have given birth to the DLC model, and how EA as one of the biggest publishers of the day uses it to answer some of the uncertainties presented by the modern game industry. Second, the corporate ideology behind DLC is examined by outlining some of the major strategies DLC is used for. In order to gain an understanding of the consequences the DLC model has on gaming culture, the player expectations and criticism are then examined. Finally, a brief taxonomy is created to gain a better understanding as to how players could be further catered for with DLC.

8.1. Introduction

As the largest game productions nowadays cost up to tens of millions of euros, fewer and fewer game companies have the capability or the willingness to compete in the market sector. The biggest publishers focus their publishing efforts on a few hit franchises, cancelling projects and cutting down costs elsewhere. Following this, the industry has turned to smaller, low-risk game projects for help. Instead of a high-cost sequel or a high-risk new intellectual property, publishers go increasingly often for smaller downloadable games or choose to extend their existing games with downloadable add-on content (DLC) distributed through proprietary online stores. Via DLC the players can be sold additional story content, avatars,

equipment, and game modes, to name just a few examples. During the last couple of years, the games industry has found DLC to be useful for various things: to mitigate financial risk, to bridge the gaps between bigger franchise instalments, and to better answer the needs of the fragmented niche markets.

Focusing on the ways downloadable add-on content is used and received, this case study is first concerned with the development, distribution, and marketing of console games. On the other hand, it tries to find ways the fans deal with media and exercise their agency in the cultural sphere. The attempt is to "trace processes by which corporations routinize, commercialize, and commoditize both cultural expression and cultural consumption" (Meehan 2000). The skateboarding game *Skate 3* serves as a case study, illustrating the ways DLC is used to exploit franchises, build service relationships with the gamers, and guide their consumption habits. Published by the industry giant Electronic Arts (EA), *Skate 3* is a good example of robust serialisation, tying the game horizontally, vertically, and diagonally to the surrounding franchise.

I will first detail the trajectory in the business culture that has led to the adoption of the new strategies and the emerging service mentality. Second, the case game, the DLC accompanying it, and the publisher EA are given a look. I will then go on to describe a set of DLC business practices used with *Skate 3* and compare them to the ways that can be used to better serve the player needs. Finally, attitudes towards DLC are given a brief look.

8.2. Franchising in the age of digital distribution

As a marketing practice, the roots of commercial DLC can be found in franchising. As a business strategy, franchising has been a norm in the entertainment industries for decades. The *star system, the movie genre, and serialisation* were all welcomed and subsequently supported by the film studios, as it was discovered they could be used to create lasting interest among fans and continuity beyond a single movie. (Hesmondhalgh 2002; in Nieborg 2006) While nowadays a dominant franchising strategy in the game business, serialisation was not needed in the time of the first digital games, as no endings were created for them. As games became slowly commoditized, the use of a game story was adopted to justify sequels and the continuation of the game series (Stenros & Sotamaa 2009).

Throughout the 80s and the 90s, the game industry discovered new ways to exploit serialisation. Particular to the digital game industry, the code of the game could be re-used by creating new content on top of the existing game engine — a possibility harnessed by game fans through the use of game mods. Short for modification, mods were created *pro bono* and shared by fans on the Internet. The games industry soon discovered the tendency to extend games this way on the part of the audience, and thus

the commercial expansion pack was born. Limited to the PC gaming culture, these add-on packages came in many shapes and sizes, and were distributed both through physical and digital distribution channels. Due to their small size and subsequently faster development cycle, expansion packs made serialising games an increasingly fast-paced affair (Nieborg 2006). This practice of "branched serialisation" can be seen as the starting point for the modern DLC strategies of exhausting intellectual properties through as many franchise instalments as possible (ibid. 20).

Coming into the present day, the latest console generation has standardised the online connection and the hard drive, thus enabling digital distribution of additional gaming content also for consoles. To some extent, this has allowed developers and publishers to cut out distribution and retail out of the video game value chain. Digital games suit perfectly for online distribution, and at the same time investing money on virtual commodities has become increasingly common. The play habits of modern gamers are getting more casual, and subsequently bite-sized games played on a browser and on smart phones are becoming increasingly popular (cf. Juul 2010). Unlike in the earlier "economics of scale" (stocking large amounts of wares due to low margins), it has now become profitable to develop and publish game content that costs only around 1-10€. Designing smaller games and add-on content has had many benefits: due to small investment, companies can take more risks and try out things, and the game content can be both attuned to wider spectrum of demographies and be better personalised for individual players. DLC has also allowed more flexibility with "branched serialisation" than ever before.

Game design on most platforms can now take for granted the possibility of patching, updating, and changing games when needed. This is also increasingly often expected by the audience, as the most celebrated applications seem to be those which constantly improve the experience they are offering with a stream of new content. According to Stenros and Sotamaa (2009), "business-wise the objective behind the flow of upgrades and add-ons is not only to create some additional revenue but perhaps even more importantly to create a long-term service relationship with the customer". Moving away from single expansion packs towards distribution of content how and where ever, it is this service mentality that clearly is the next logical step in the evolution of franchising and serialisation.

Much of large-scale game development depends on uncontrollable trends and user taste. Much of it is also highly seasonal, as even the smallest delays can practically sink a game. Thus, the largest game companies have to strongly focus on creating sustainability to their business (Nieborg 2006). This is why services like *World of Warcraft,* which create their revenue by charging a monthly subscription fee, seem economically much more safe investments. Both building a franchise and turning a product into a service increase the predictability of the business. As one of the premier publishers, EA has made a name for itself for releasing yearly instalments of its major sports franchises updated with yearly player rosters and the like. The company readily admits that franchises are a major part of their

strategy since they allow them to publish new titles on a recurring basis based on the same property (EA, 2010). We now turn to look at how EA has used DLC to create serialisation within the *Skate* series even in the absence of yearly instalments.

8.3. The case of *Skate 3*

Skate 3 is a skateboarding sandbox game developed by EA Black Box and was published by Electronic Arts on May 11, 2010. It is the third game in the popular *Skate* series, which emerged in 2007 as a competitor to the dwindling hit franchise *Tony Hawk's Pro Skater.* It was initially profiled as a more serious, almost simulator-like alternative to *the* arcade play style of *THPS*, but during the years it has evolved into a more accessible and casual direction to accommodate all kinds of players.

Skate 3 is set in the fictional town of Port Carverton, a large area for free roaming and competing in various skateboarding challenges. The players take on a career mode centred on creating a successful skateboard label while unlocking new locations, challenges, boards, clothing, and other apparel. There is also a skate park creator to create your own stages, which can then be shared through the online functions of *Skate 3*. Players can also create a team, play online alone or co-operatively, and shoot videos or take photos, both of which can be posted online – videos even straight to YouTube through the game menu.

Being a service, a console game is not limited simply to the act of playing: the developer has space 'around the game' — the in-game menu, the digital store front — to provide players with additional services such as recommendations. Like Toivonen and Sotamaa note, unlike on the fragmented PC side, the console marketplaces are easily accessible and difficult to miss (2010, 27). In *Skate 3*, game add-ons can be browsed through the in-game menu, turning the game itself into a distribution channel. The first thing to come up on the screen when the game is turned on is the 'skate.Feed' news feed, where, among other information, new DLC packs are advertised. This can also be seen as turning the game into an internal and controlled market for oneself.

The DLC packs

Since the release of the game in May 2010, nine DLC packs have been released for *Skate 3*:

Time Is Money Pack (released May 14, 2010) – Immediately unlocks all locations, skaters, equipment, and 'Skate.Park' objects that otherwise could be earned by playing through the career and online modes. (6,45€)

Skate Share Pack (released May 14, 2010) – Enables the ability to share skate creations (videos, photos, parks) as well as access to 'Skate.Reel' footage and custom 'Skate.Parks' created by the Skate community.

Available for free as a one-time-use voucher code for players who buy a new/sealed copy of the game. (8,95€)

Filmer Pack (released May 14, 2010) – Gives the player more options to control the camera during video editing and adds the option of uploading videos in high resolution. (Unavailable in PSN Store as of March 2011)

Maloof Money Cup 2010 NYC Pack (released June 12, 2010) – A re-creation of the custom street park built for the 2010 Maloof Cup, a real life skateboarding prize contest. (3,95€)

Black Box Distribution Skate Park (released June 22, 2010) – A small extra skate park originally available for free for players who pre-ordered the game and now available in the online store as paid content. (2,95€)

Danny Way's Hawaiian Dream (released July 6, 2010) – A large skate park with a lot of new skate ramps and other features. New equipment and a new Danny Way avatar. (6,45€)

After Dark Pack (released July 27, 2010) – Two new night-time areas and subsequently the ability to skate at night. Available free-of-charge, but only for players who activate the 'Skate Share Pack' one-time voucher code included in a new game box.

Skate.Create Upgrade Pack (released August 17, 2010) – Two new 'skate.Park' lots to build in, and a host of new building pieces for skatepark creation, two old characters from *Skate 2*, new Create-a-Character items, and new features to the replay editor as well as new Miracle Whip sponsor themed items unlocked with a cheat code. (6,45€)

San Van Party Pack (released September 21, 2010) – Party Play game mode, party style challenges, a large part of the Urban Rez area from the original *Skate* game, one new skatepark, a large new skate.Park lot to build in, and new skate.Park pieces. (6,45€)

The skateboarding theme emerges as a perfect opportunity to update the game regularly. There are several categories to update, from equipment to skaters and environments. The skate culture is happening right now, meaning whatever is going on in the real world of skating — such as the actual Maloof Money Cup — can be imported quickly to the game and made to mirror actual events. The skateboard culture is known for always seeking new areas to appropriate for their own uses. In a way, this act of repurposing is remediated in *Skate 3* through the regular introduction of new skate arenas in the DLC packs.

The skateboard culture is, and has been, a very trendy segment of the entertainment industry. This, combined with the fact that the skate culture is certainly no stranger to advertisers, presents ample opportunities for marketing deals - something DLC is perfectly suited for. Lastly, *Skate 3*

features an editor mode, which can be updated through DLC, a strategy poignantly exemplified by games like *LittleBigPlanet*.

Electronic Arts

Over the past decade, the digital games industry has seen extensive conglomeration, consolidation, and vertical integration. (Kerr 2006a, 77) Industry giants Nintendo, Sony and Microsoft have outsourced large parts of their production from developed countries to places like Mexico and Brazil "in an attempt to exploit cheaper labour, shorter distances to major markets, and just-in-time inventory management structures" (Herz 1997, 113-117; Kline et al. 2003, 205-209; in Kerr 2006a, 77). In the light of these efforts, it is easy to see why the games industry is gradually moving towards distributing software digitally. In particular, one of the two largest publishers in the world, Electronic Arts, has been experimenting with various new strategies concerning digital distribution and downloadable content.

Besides being a publisher, EA develops games both in-house and through the development studios it acquires. It has further consolidated its operations by buying physical distributing channels and establishing online storefronts for digital distribution (Dyer-Witheford & De Peuter 2008). Perhaps a downfall due to its massive size, the company has been the target of many accusations over the years. During the 2003 "EA Spouse" incident, a wife of an EA worker brought to light how the company was exploiting its work force to exhaustion without any compensation (ibid.). Known for its ubiquitous sports franchises, EA has also been criticised for shamelessly re-releasing its sports games every year with only one or two essential improvements.

During the last couple of years, EA has seemingly both revised its old strategy and shifted its business to second gear, however. The misconduct with work force abuse has allegedly been taken care of, and the company has clearly started to fund more experimental projects, buying successful and innovative development studios such as BioWare. EA has persistently entered the Facebook gaming scene and it is also one of the most diligent users of DLC, experimenting a lot with different tactics and building cross-promotion between its games. A lot of the online functionality in its games has been tied under an 'EA Account', and now the company plans to create persistent player profiles that work in all of its games regardless of genre and platform (Nelson 2011), perhaps drawing comparisons to how the Facebook gaming giant Zynga operates in that eco-system.

Next we turn to examining the specific practices of how DLC is used for further franchising and how the evolving service paradigm is changing the development and marketing of games.

8.4. The DLC strategy

As described, DLC can be used to captivate the audience until the next main instalment in the series. Besides the obvious benefits of digital distribution and "branched serialisation", five other strategic functions are outlined in the following. This list is by no means a definitive account of the subject, but an attempt to draft some of the ways that business rationalises the use of DLC.

1) Directing and controlling sales. There are various ways that DLC can help mitigate risks and create sustainability by directing sales. First, as it is important to make as big an impact as possible at the launch of the game, pre-order bonuses can be used to increase first day sales. The players of *Skate 3* were offered an exclusive 'Black Box Distribution Park' DLC free-of-charge for pre-ordering the game. A robust DLC support can be seen to spread the critical launch period over a wider time scale, creating several "micro-launches", and in this way moderating the risk that otherwise would be solely tied to the launch of the game.

Second, with advertised post-release support, developers can combat the harmful used game sales, as continuing DLC support can be seen to aim to stop the player from selling the game. The used games market is one of the key areas where game developers feel they are losing money, as all the profits from there go to retailers. Compared to new games, the profit marginal for used games is twice as high, so it does not come as a surprise that retailers are more and more aggressively accentuating on the second-hand market (Kane 2009). Reacting to this, *Skate 3* players who bought their games new were able to download the 'Skate.Share Pack' DLC free-of-charge through a one-time-use voucher code shipped with the game box. Additionally, players renting the game need to actually buy any DLC pack they wish to play, thus profiting the developer.

2) Initiating a service relationship. As described, turning games into services has many advantages. Thus, it is in the developers' interests to coax the player into a service relationship, by placing anticipated game content or game elements into a DLC pack, for example, as DLC in itself requires the player to use a service. 'Skate Share Pack', described in the previous section, while free for the buyers of a new copy, charges others 8,45€ for sharing and accessing the skate parks created by the community — a huge caveat for many modern players focused on community play. In some other EA games, notably in many of their sport franchises, a feature called 'Online Pass' provides buyers of a new copy with a one-time-use access code to online features of the game. Those without the code – presumably renters or buyers of a used game copy – are charged $10 for the connection.

3) Maintaining the service relationship. A steady DLC line-up can significantly increase the lifespan of a game. The shelf life of videogames is getting shorter, and in their annual report, EA proclaims to "mitigate this trend" by offering their consumers "new direct-to-consumer services such

as additional content to further enhance the gaming experience and extend the time consumers play our games after their initial purchase" (EA 2010). Those *Skate 3* players who activated their one-time-use voucher code received later yet another DLC pack free-of-charge, perhaps signalling that those who buy their games new are viewed as premium 'subscribers' by EA. While *Skate 3* was supported for four months with nine DLC packs, for example *Mass Effect 2,* another game published by EA, got its latest DLC in April 2011, well over a year after its release in January 2010. It is also customary for well-supported games to eventually package all the DLC packs in one 'Game of the Year' edition, and this way gain one last sales spike for the game.

4) Extending and enriching gameplay. Perhaps most obviously DLC can be used to improve, augment, and extend the gameplay experience in various ways. By offering more stages, challenges, characters, and equipment, to name but a few, the player can be allowed to create the kind of package she wants — essentially the value proposition behind creating an expandable service. The game experience can also be augmented more profoundly, for example by introducing new conditions, as was done with the night-time stages of the *Skate 3* DLC 'After Dark'. The 'Maloof Money Cup' DLC, in which the actual New York based street contest was transferred to the game, was used to react to a current event in a way that was meaningful for most skateboard fans. Further, 'San Van Party Pack' re-introduced a 'party' gameplay mode already familiar from *Skate 2*.

Players can also be sold many kinds of gameplay enhancements. In *Skate 3, the* 'Filmer Pack' DLC provides the player with advanced video editing tools and better options for uploading them. 'Skate.Create Upgrade Pack' increases the options in building your own skateparks and characters. Notably, both of these are more or less socially contextualized, as both packs can be seen to help the player create more impressive — and shareable — content in the eyes of the Skate community. Finally, time, too, can be sold. Players who prefer to cut some corners can unlock all locations, skaters, and equipment through the 'Time Is Money' DLC, perhaps reflecting the game industry's need to also accommodate the more casual players.

5) Advertising, sponsor deals, and cross promotion. Compared to complete games, DLC is cheaper and quicker to develop, as there usually is no need to develop new technology for it — only content. This way it gives strategic agility to react faster to changes in the business environment. In *Skate 3,* new editor pieces were distributed in cross-promotion campaigns with the soft drink brand Dr.Pepper and the salad dressing brand Miracle Whip. In the latter campaign, specially themed props where made available for downloading, and a contest for cleverly using these props was opened. In the winning video, a human sized steak skateboards in a giant kitchen, finally ending up on a hot stove and starting to fry. While somewhere else this would seem ridiculous, the context of the skate culture instantly turns it into a hilarious, self-conscious sensation.

The use of a star system is one of the premier formatting strategies and an EA hallmark (cf. e.g. the *John Madden* series, the *Tiger Woods* series). Despite not using a name of a real life skateboarding celebrity in the title of the *Skate* series (like in *Tony Hawk's Pro Skater)*, the 'Danny Way's Hawaiian Dream' DLC does exactly that. In a behind-the-scenes video released by EA, the DLC pack was framed in a way that gives the impression of Way not only endorsing the new Hawaiian stage but even partly designing it. In the video, a fan question posed to Way asks whether he has "a DLC in the works", to which Way answers: "The Hawaii compound [...] it's pretty much my dream compound. [...] They took elements from the drawings we had into that, but then they refined those and added some new things". Thus, it seems as though DLC presents itself as a perfect vehicle to introduce "visiting artists" for the mutual benefit of the artist and the developer. Because DLC is optional, those who want to keep their games sponsor-free are allowed to do so.

DLC can also be used to cross-promote other games by the developers/publishers. The character 'Isaac' from another EA hit game, *Dead Space*, can be unlocked in *Skate 3*, and while the heavily armoured sci-fi character looks laughable in an ordinary city environment, he has been warmly welcomed by skaters eager to fool around. Finally, characters and stages from the previous two games in the franchise have been introduced to part three via different DLC packs, perhaps eliciting those feelings of 'classic features' and nostalgia.

8.5. The reception

Examining user comments on popular gaming sites, such as *Joystiq.com* and EA's own *Skate* forums, reveals a wide spectrum of opinions and attitudes concerning *Skate 3* and DLC. The possibility of add-on content is widely acknowledged by the players and many were vocal about the things they would like to see. New brands, equipment, and skate culture characters are not only warmly welcomed but expected additions. Even before the launch of *Skate 3*, would-be-players were suggesting which locations and skaters should be released as DLC. "[Y]ou should have the Berrics as a DLC and have Koston there just like u did with Rob and his Fantasy factory", proclaimed one user on ea.skate.com comments (referring to the DLC released for *Skate 2*).

Here the DLC model presents conversational possibilities: players are vocal about what they want (on discussion forums, etc.), and DLC is indeed a very fitting tool for the developer to address these wishes. User 'Occolla' on ea.skate.com comments: "I would throw easily throw [sic] down big money for EA to release entire Classic San Van and New San Van maps. Like seriously, if I could do underflips and darkslides in all of New San Van I would gladly pay $30." Later, the 'San Van Party Pack' DLC added large parts from the original Skate game to Skate 3. User 'PhishBones JV91' as well as user 'RoathGhetto' hoped for a day/night cycle for the game: "Game looks awesome, would love day / night cycle in the future though

(DLC?)… hitting up downtown in the night would be a blast, I'm sure." Following this, the 'After Dark' DLC pack added two night stages to the game.

Analysing gaming site rhetoric, Nieborg (2006) shows how sequels and the continuation of the franchise are now seen as inevitable. As described, fans were wishing features from the inevitable DLC packs and further sequels even before *Skate 3* was released; the notion of including that material into *Skate 3* apparently did not enter their minds. This "certainty" of future instalments is precisely one of the things many gamers love. The problems, however, seem to arise with single instalments, as players may feel that content will be held back because of a forthcoming instalment.

Additionally, some seem to be unsure what to do with the continuous flow of game content. While some players wish for DLC instead of sequels, others want sequels instead of DLC. Before the release of *Skate 3*, many commentators on the *gametrailers.com* forums felt negatively about another instalment in *Skate* series. "[S]ame copy every year….the name should be SKATE 2010 like FIFA….", one entry lamented. Here, EA was accused of releasing franchise instalments too often, and a clear advocacy on the forums trumpeted for releasing the new material as a DLC pack for *Skate 2*, instead of a full sequel.

Product clashing with service?

The overwhelming popularity of various app stores has started to slowly change the consumer habits, and paying through online transactions has become more and more common. One of the emerging problems, however, is that the immaterial nature of virtual commodities such as DLC combined with the new service models makes it sometimes hard to see what is actually being bought. An analysis of the discourse among gamers and on popular gaming sites reveals that DLC is a constant target of sometimes-heated conversation. It seems as if there exists a discrepancy between the traditional gaming culture and the more modern notion of turning a product into a profitable service.

One of the most usual concerns about DLC is that the game the players once bought is already being sold to them again. As one user put it: "I am so sick of this new trend in every game now to put or rather remove stuff from the full game and sell it for another $30-$40. They are ripping us off[.]" Here, the DLC model is accused of removing pieces from a complete game and selling those pieces to players when they should have been a part of the game to begin with. This feeling is not helped by the fact that increasingly often games have DLC packs on sale already on the launch day. Similarly, based on a yearly skate event, the *Skate 3* DLC 'Maloof Money Cup' appeared already in *Skate 2*. This lead to protests, as some players felt that they should not be charged the "entry fee" twice, but instead receive the DLC for free since they bought it the first time around.

Dividing story content across multiple releases is also frowned upon. User 'smit90' frowned on the *Skate 3* pre-order bonus DLC 'Black Box Distribution' prior to the game's release: "Wow, a lot of games are pushing pre-ordering down our throats. Pre-order now and get THIS, THIS and THAT! Also, you need THIS and THAT to get a full comprehensive storyline…". While *Skate 3* is not exactly a story driven game, for example EA's popular *Mass Effect* series openly uses DLC packs to bridge the story between main instalments. Perhaps familiar to many from TV, this kind of a serialisation practice clearly seems to clash with the sensibilities that some players traditionally connect with game development. Here DLC shows itself, not as an endless pool of possibilities, but as a disruptive annoyance, dividing what used to be whole. Hamari and Lehdonvirta (2010) have written about how in the context of virtual good sales marketing should be unobtrusively integrated with game design. With DLC the situation is the same. Rather than blatantly chopping games into pieces and selling them in parts for greater profit, DLC should be better tied to a fitting context the same way that many free-to-play games are doing.

Another way in which the modern game service clashes with traditional players is offering options for casual gamers. The 'Time is Money' DLC unlocks all locations, skaters and gear, and Skate.Park objects that could otherwise be earned by playing through *Skate 3*'s career and online modes. While convenient to casual gamers with little time to spare, the function of this DLC can also be seen very differently: "So, basically, you're paying for access to content that's *already in the game*. Or, to put it another way, you're paying five bucks for a *cheat code*", a journalist on Joystiq.com sarcastically remarked (Nelson 2009). For him, evidently, buying a cheat code seemed like buying nothing at all.

Furthermore, criticism has risen over the fact that some of the items sold on online marketplaces are not downloadable content at all, but rather content keys, used to unlock content already on the game disk. This has made some players to feel as if they are paying to unlock content they already purchased when they bought the game itself. Toivonen and Sotamaa (2010) have described how it is surprisingly important for many gamers to feel concrete ownership over their games. It seems that this feeling of ownership, already diminished by the absence of a physical game copy, is in danger of vanishing completely if the player cannot actually *see* the DLC pack being downloaded from a server.

It seems that increasingly often, instead of buying a product, we are in fact being sold a service. Not limited to MMOs and free-to-play games anymore, some console games are now implementing a form of constant service, where the user has to check in to a game server before or even during a single player game. For example, in EA's *Dragon Age 2* the DLC that the user buys is linked to the mandatory EA account. In order to play the DLC, the user must sign in to a dedicated EA account. When one user was banned from the EA forums, his EA account was made unavailable, which in turn resulted in him being incapable of playing the single player campaign of the game in the privacy of his home. The user outcry that ensued after

the incident seemed to stem from the fact that users dominantly see games as products — not as services, for which the physical copy is only the access key to.

As with virtual goods, DLC can be seen as an area lacking established ground rules. Sometimes it seems almost as if DLC is introduced because "well, you are supposed to also have DLC". It is clear that developers need to carefully consider user sentiments when implementing, for example, launch day DLC or regularly re-introduced add-on packs such as *Skate 3*'s 'Maloof Money Cup'.

Towards understanding the player perspective

It seems that the games industry is still in the process of defining how DLC should be used. It might be that the players are more annoyed with how DLC is used, rather than lamenting the actual add-on content, but it seems clear that there is much untapped potential in how the player could be serviced with DLC. If the role of DLC and its direct benefits to the player were more pronounced, as a service the model could rise to a new level.

One way to improve the situation might be that the developers would acknowledge better what the players want. Previous research has shown that players have different motivations for playing computer games (Bartle 1996, 2004; Kim 1998; Yee 2002). Like play preferences, there are varied and sometimes conflicting reasons to buy DLC as well. One way of conceptualizing the DLC player perspective is to map out the functions that DLC could have for the players. Although there is no research on the subject of DLC customer preferences, a loose taxonomy inspired by the player motivation research can be made. Sidestepping play motivation, the categories here are a first attempt to map some of the different reasons for choosing to download additional game content. The main proposition is that the two obvious reasons to add content on a game are to either extend it, or to somehow change it:

Continue: The player wants more of the same. The player likes the game as it is and wants DLC to extend the existing game. This could mean new stories, stages, maps, or anything else that continues the game within the same formula. Episodic games are based solely on incentivizing the player to repeatedly continue the game.

Add: The player likes the game as it is, but wishes that new elements were added on the side of the existing ones. This could mean adding a completely new game mode that expands the options the player has, or a new character for another playthrough. Most ordinary DLC packs are based on this philosophy.

Customize: The player likes the game, but would appreciate it if it could be customized more to her liking. From the business standpoint, DLC can be used to relatively quickly attune the main game to different audiences, and to personalise the product for individual customers. As the player may

play the game differently from the play styles that the game is designed for, DLC should be recognized as a possibility to accommodate a wider spectrum of players. This could mean incorporating microtransactions into the game design, but the whole game would need to be designed from this standpoint.

Reform: The player wants something new. The player used to like the game, but now wants some kind of change. This could mean retaining the game system, but changing the game world in a fundamental way. For example, *Red Dead Redemption*, a realistic western game, used its 'Undead Nightmare' DLC to turn its setting into a zombie splatter. In the same way, the party mode of 'San Van Party Pack' with its big-head characters changes *Skate 3* from a realistic skate career game to wacky amusement.

Creating this kind of taxonomy for DLC functions is very difficult, as the very idea of *ad hoc* additional content is that it can be anything, based on whichever craving needs to be fulfilled. Besides these more general categories, supporting different play motivation categories should translate at least partly to establishing distinct DLC customer segments. However, depriving the player of the community modes, and then selling them to her in a DLC pack seems just the thing to aggravate players.

Most major DLC packs fulfil two or more of these functions, *Skate 3* included. Clarifying what is being sold with DLC could in some cases improve the service for the player. Creating this kind of a more pronounced categorization could help in improving the rhetoric surrounding DLC. Framing the content better by creating some kind of standardised segments could create a more sustainable eco-system for DLC sales. Distinct DLC could be better matched with distinct target audiences, and categories like 'Continue', 'Add, 'Augment' etc. should then be better framed in the digital marketplace and advertised to a particular audience.

8.6. Discussion

Historically, the production and consumption of digital games have been remarkably close to each other (cf. Jenkins 2006). Often players have started to develop games themselves, and the majority of developers have always been gamers as well. A discursive relationship has existed between the two, and many traditional gamers are used to following closely the game development process and getting excited over all the open possibilities that games have. At the same time, developers have been excited to cram games full of features and this way pay "fan service" to loyal followers.

The introduction of online connectivity and a hard drive has changed things somewhat, as it is now possible to patch, update, and publish more content after the game is released. As described, the commercial add-on has led to the move from a single product to a multifaceted service. Game companies

no longer put everything they have in one game, but instead reserve material for a larger franchise, consisting of the serialised game and the service build around it. In reality, game studios of the old most probably have had material put aside for a sequel, too. Now, however, the serialisation process seems to be much more see-through. Traditional gamers, who have actually seen the change from product to service, seem to struggle getting over the fast monetization of the service model. This seems to be the very paradox of the DLC model. On the one hand, the most important value proposition behind it is the continued service, the fact that the game is not finished and there are still things to come. On the other hand, it is this same incompleteness that most aggravates some players. One can never know if something more needs to be bought in order to get the full story.

A gaming experience built on a continuous flow of new content is also familiar from free-to-play games. Looking from a wider angle, DLC and free-to-play have been slowly but steadily approaching the same service model of endless updates and virtual items. The pace that the game industry uses to divide and serialize game content has become increasingly fast. First physical expansion packs were used to fill gaps between main game instalments, then digitally distributed add-on content filled gaps between the larger add-on packs, and finally the game as a service erased the gaps altogether. This way, the franchise does not stop at all, but is rather available all the time through microtransactions, increasingly often also on the console side. Both the free-to-play-game and the console-game-as-a-service rely more and more on the integration of game design and marketing in incentivizing virtual goods purchases — both also benefit from the direct or partial connection to the end-user in improving and innovating their services. Finally, in both cases a clash between the traditional product and a more modern service can be evidenced: as with free-to-play games, the outlines of the game-with-DLC have become blurry. It is hard to see where the actual game ends and where the monetized service starts, aggravating those looking for a traditional game product.

9.   Invited contributions

The last section of the report consists of short contributions from appreciated experts in the area. The invited texts go deeper into selected topics and provide alternative perspectives to topical themes. The invited texts are presented in the following order:

Koopee Hiltunen, Finnish games industry, status

Author bio: KooPee Hiltunen is the Director of Neogames, the Finnish Center of Game Business, Research and Education. KooPee has been working in the digital media industry since the beginning of 90s and with games in particular since 2004. KooPee is specialised in games industry development, the games business and games exports. KooPee Hiltunen is also the spokesperson of Finnish Game Developers Association and treasurer and board member in EGDF (European Games Developer Federation). As director of Neogames, KooPee is also a member in many strategic work groups of many different ministries.

Frans Mäyrä, About the future of play, in the light of the past

Author bio: Frans Mäyrä is the Professor of Hypermedia, Digital Culture and Game Studies in the University of Tampere, Finland. He is the head of the University of Tampere's Game Research Lab, and has taught and studied digital culture and games from the early 1990s. His research interests include game cultures, creation of meaning through playful interaction, online social play, borderlines, identity, as well as transmedial fantasy and science fiction.

Vili Lehdonvirta, Digital labour in online games

Author bio: Vili Lehdonvirta is a Researcher at the Helsinki Institute for Information Technology, a joint research institute of Aalto University and the University of Helsinki, Finland. During 2010-2011 he is a Visiting Scholar at the Interfaculty Initiative in Information Studies of the University of Tokyo. Dr. Lehdonvirta holds a PhD in Economic Sociology from the Turku School of Economics and a MSc (Tech) from the Helsinki University of Technology. He has authored over a dozen peer-reviewed research papers on virtual economies and digital work and consulted for game companies and public organizations in the United States, Europe and Japan.

Jussi Ahlroth, Games with artistic ambition need support

Author bio: Jussi Ahlroth is a staff journalist and critic at the daily newspaper, Helsingin Sanomat, the largest newspaper in northern Europe. He has written widely, concentrating on the marginal, the alternative, the popular and emerging new forms of culture. In addition to covering literature, music and film, he has written widely on digital culture. He has often been the first in the Finnish mainstream media to write to about such

issues as the politicization of the pirate movement, virtual worlds and virtual consumption, avantgarde gaming and augmented reality technologies. He holds a BA in comparative literature from the University of Helsinki.

Aki Järvinen, Networked play is here to stay

Author bio: Aki Järvinen works as the Lead Social Designer at Digital Chocolate's Helsinki studio in Finland, where he contributes to the design and development of social games for various platforms. He has a decade of experience, from designing and producing mobile games, online gambling, and browser-based games. Järvinen has also written a Ph.D. on academic methods of analyzing games from the perspectives of design and psychology. He blogs about the design and business of social games at http://games4networks.posterous.com

Riku Suomela, The next big change in game development

Author bio: Riku Suomela is working as the Director of Innovation Portfolio and Process in Symbian Smartphones at Nokia. Prior to his current role, he was a producer and roadmapper in Nokia's Cross-Media Solutions, where he was a lead producer in several games and a large transmedia experience. Throughout his career, Dr. Suomela has worked with a focus on innovation and his experience ranges from long term research all the way to developing and introducing products to the market.

Sonja Kangas, Urbanization is shaping the future forms of gaming

Author bio: Sonja Kangas is an independent media researcher and game developer. She has published books like *Mariosofia – The Culture of Electronic Games* and *Youth Culture Year Book - Technologizing Youth and Communication Acrobatics*. She is currently carrying out a comparative study between Japanese, Korean and Finnish social networking and gaming culture at the Finnish Youth Research Network and working towards a PhD at Aalto University in Helsinki.

Janne Paavilainen, Some Notes on Player Experiences in Social Games

Author Bio: Janne Paavilainen is a games researcher and independent consultant from the Game Research Lab at the University of Tampere, Finland. Currently focusing on Facebook social games, Paavilainen has also studied casual, mobile and educational games. His research interests are in usability, playability and player experience and in design and evaluation heuristics. He holds a Master of Science in Economics and is currently planning his Ph.D. thesis on the design of first-person multiplayer shooter games.

Finnish games industry, status

KooPee Hiltunen

The video game industry has been the fastest growing branch of the entertainment industry since the turn of the century. In 2008, the value of video game industry sales worldwide were estimated to be over 50 billion US dollars, while movie receipts were 83 billion and music receipts 29 billion. In light of these figures, the video game industry has thus clearly outpaced the recorded music sales and is gaining on the film industry by a few billions a year. With these growth figures, games sales will overtake film sales in just a few years.

The video game industry in Finland has developed along similar lines as well. One indicator of this is the fact that video game industry employment has grown from four hundred persons in 2002 to around 1,150 in 2008. A significant portion of Finnish cultural exports have actually come from the video game industry during the last decade. Due to the small size of the domestic market and the global nature of the overall game market, as much as 87% of the Finnish video game industry output is for export. The monetary value of video game industry exports in 2008 was around EUR 75 million, according to a study conducted by Neogames, the Finnish national centre for game business, research and development.

Games industry, expanding to every direction

There are at least three significant factors behind the strong international and domestic growth of the video game industry. On average, each Finn plays digital games at least once a week. This trend is the same elsewhere in the world as well. The number of players is growing in all demographics. Younger generations were born within the game culture, but at the same time video game playing is drawing in new players from older generations as well.

Another factor influencing this trend is the introduction of new game devices, game content, and the increasing use of internet. For example, the launch of the Nintendo Wii in 2006 and the introduction of the Apple iPhone have expanded the world of game play. Video game playing no longer only takes the form of sitting in front of a computer excitedly banging on a keyboard. Nowadays game playing can also be exercise, karaoke, or playing along with a rock band. Playing a game can also be done with location sensitive smartphone in the form of a mobile MMO.

The third factor influencing the growth of the video game industry has been the rapid spread of network play and digital distribution of games, and the linking of game playing with people's strong need for social interaction. The best example of social game play of this kind may be the many Facebook games and the tremendous popularity they have achieved. On the other hand, the strength of digital distribution is clearly seen in the

case of the Finnish iPhone game "Angry Birds". During 177 months from its launch, the original Angry Birds and its successors have gathered 20020 million downloads, and the game has expanded from iPhone to other mobile platforms, game consoles, and to the internet. It is only fair to say that if we think of the games business and the position of the developers in the value chain, digital distribution has created a significant change compared to the traditional model.

Because of all these trends, the future of games and gaming seems to be full of possibilities. All these trends offer the games industry an opportunity to develop the art of gaming even further.

Finnish games industry, next steps

From the Finnish games industry's point of view, the main question at the moment is how to utilize this golden opportunity offered by all these favourable trends, mainly through digital distribution. The Finnish games industry is doing well, but is there something more we could do to do even better in the business? Yes, there is. According to the Finnish games industry strategy paper published in 2010, there are at least three significant things that could be done:

Education and research. At the moment, the Finnish education system is not able to produce professionals to meet the needs of the growing games industry. The need in the industry is estimated to be 200 professionally educated games industry employees / year. Also, the extent of game research, especially research focused on the marketing and economical side of the industry, should be increased.

Financing. When the role of the publisher in the value chain diminishes, also the amount of publisher investment decreases. From the games industry's point of view, it is essential that this "funding gap" can be covered through other sources of funding, private or public.

Gathering digital marketing know-how and sharing best practises. Today, and even more in the future, the "marketing war" takes place via digital channels. In the digital realm, everything is moving fast. Actions effective yesterday might prove non-effective tomorrow. In order to survive in this marketing chaos, smaller studios also have to be able to follow the trends of digital marketing. This requires co-operation and sharing of best practises.

Further in the future, there seem to be many more interesting trends to come. For instance, gamification, intelligent industry services based on games industry know-how and provided to other industries, use of AI and game based UI design also in traditional software are some examples of such trends. However, all this requires a strong games industry "core" to be present. The next few years offer us a possibility to create that core.

About the future of play, in the light of the past

Frans Mäyrä

The history of play is long, and no doubt it will also reach far into the future. In order to see into the future, we need to first understand some of the key trajectories that can be derived from the past.

As Yrjö Hirn, the founding father of Finnish play studies, has put it: In many cases, play and toys have preceded important innovations, even by centuries, as in the case of flying toys and real aeroplanes. The significance of play is, when broadly considered, the same as the significance of art (Hirn 1916). What can we expect from the future of creativity in play?

One of the persistent misperceptions of play is that it should be approached from the perspectives of play either being of instrumental utility (as in promoting learning outcomes) or then of it being morally detrimental. The playing human does not, however, primarily play for the reason of becoming a better or worse person. Play is engaged in for its own sake – or, as game designer Greg Costikyan has formulated it: In play we find "endogenous meaning". A game's structure creates its own meanings (Costikyan 2002).

In the past we have played with words, toys, rules and other people. No doubt we will continue to do so in the future as well. There are signs of the space of play simultaneously expanding, and, on the other hand, being put under ever tighter constrains. At the time of writing, circa 100100 million people had suddenly started to play a small city simulation game called CityVille (Zynga 2010). With an addictive simplicity and rapid rewards from investment into buildings, businesses, roads, urban decorations, farmland and ships used for exports, CityVille is yet another example of how fascinated we become with our own life and society when their likeness is brought under the spell of toys and play. Here the play favoured by millions is a colourful, miniature version of the daily, rote work and circulation of money (both real and play money) in the processes of production, consumption and service provision. Leisure and labour effectively mix together and even become transformed into each other. Simulated drudgery is suddenly great fun.

The mixture of work and play is an ancient trend and something that we can be rather confident will continue to develop in new forms in the future; it has been argued that the entire work-leisure dichotomy is a rather modern invention (Thomas 1964; cf. Burke 1995). In the past, it might have been riddles, puzzles or outdoor sports that interleaved with the daily chores; today it may well be the Facebook game, open behind the Excel worksheet. In the future, we can expect to see even more varied and more multidimensional "windows of opportunity" becoming available for

both immersing oneself in play in a separate reality and for adding some (non-immersive) playfulness to our work practices, study, and social life. The reasons for this are multiple: play enhances human flexibility in a changing world in which the speed of technological and societal change has been accelerating (Rosa 2003) and play is also deeply interactive and, therefore, naturally suited to information-rich lifestyles embedded in the hybrid realities of hi-tech cultures.

The future of play is also faced with certain key challenges. The increasing colonization of leisure time by work, or work-related concerns, is one. The increasing intermeshing of play time with work time (involving the related muddling of the workplace with the domain and sites of non-work) only suggests partial solutions while increasing problems related to this intermeshing. It may well be that, in the future playfulness gains a more prominent position in professional, and even societal, levels of life as a success strategy (see e.g. McGonigal 2011). Large scale social change is nevertheless, generally, a rather slow process. As post-industrial society increasingly equates time with money, the time commitments required by games, ostensibly reserved for play, come under a different light. No longer are only massively multiplayer online role-playing games built upon the premise of a gamer who invests dozens of hours per week into gameplay. Also casual games, in expanding social network services like Facebook, try (apparently rather successfully) to hook their players into endless loops of resource gathering, expansion, upgrades and quest rewards.

No doubt there are positive outcomes of virtual world escapism that will only become apparent in the future; there are also philosophical grounds for seeing the investment of time in virtual realities as creative and fulfilling our essential human capacities (Castronova 2007). Nevertheless, the counter-reaction also needs to be taken into account: part of the involvement in play and games can be interpreted as a compulsive and negative reaction towards the pressures and discontents of daily life. The pervasive and ubiquitous play forms that will provide opportunities for avoiding uncomfortable real world challenges, almost anywhere and at any time, will most likely become special targets in the ensuing debates.

There are also certain notable challenges ahead for digital play, in which we can perceive particular positive potential for playful solutions. One major factor to take into account is the social fragmentation that has been an increasing concern of modern societies from at least the nineteenth century onwards. Play is a powerful force in bringing people back together, even while various digital divides (e.g. inter-generational divides, gender divides) appear as prominent obstacles. The increasing popularity of "social games" is not a sufficient answer (much of these are pseudo-social games in any case; see Stenros & al. 2009). The main benefit of information and communication technology in stimulating social play is in the creation and maintenance of social awareness. As user cultures develop more savvy and become more demanding, and as the borderlines of private and public information become defined with greater social and psychological

sensitivity than is possible with the current generation of social networks, then there is no impediment to extended family and friend networks developing their own cultures of flexible, daily interactions – ranging and alternating freely from playful to serious.

Other major developments of play will include those that relate to the responses to the increasing obesity and other health problems that are the common side effects of technological lifestyles. The pursuit of being physically active and energetic should not stand out as an isolated element from other daily concerns; rather, if this development is to be truly successful, we should look for solutions that integrate the stimulus for movement with other life interests in a meaningful way. Location-aware social network games, like Foursquare (2009–) or the social fitness service HeiaHeia.com (2009–), are already interesting steps in such a direction. Foursquare attempts to transform daily shopping or work trips into gaming quests, rewarding the user who keeps on the move with badges and some visibility on one's Twitter or Facebook networks. HeiaHeia even allows housecleaning or playing with children to count as "exercise", thereby potentially expanding the ways of thinking about an active life and physical wellbeing.

To sum up, our past suggests that we have always been negotiating, and constantly revising, the role of play in our societies, and the future is likely to be similar on this fundamental level. The points of tension and excitement that relate to the changes in play's cultural role are where the major changes will eventually take place. Hybridization of time and space is a major trend that networked, pervasive play forms will further stimulate and it is, consequently, also the one in which the most positive and negative expectations are currently placed.

Digital labour in online games

Vili Lehdonvirta

Work and play are conceptual opposites, but in practice, they are often intertwined. Striking examples of this are so-called 'Chinese gold farmers': professional gamers who harvest virtual resources to sell them on to wealthier players. In this article, I argue that game publishers are finally putting gold farmers out of business by catering explicitly to time-poor, money-rich players. But in the future, digital work could make a comeback in games in the form of microwork: tiny jobs conducted by time-rich players in order to pay for their play.

The World Bank's program on information technologies and development, infoDev, recently published a report on the "virtual economy" of online games and digital work (Lehdonvirta & Ernkvist 2011). It contains a number of new facts and figures about the third-party gaming services industry that has emerged alongside the original gaming industry. Hit products of this industry are gold farming and player-for-hire services that gamers use when they themselves are too busy to play. Another hit product of the third-party industry is player-for-hire services that gamers use to develop their characters when they themselves are busy. The report estimates that the total revenue of this industry was approximately 3 billion U.S. dollars in 2009. During the same time period, the revenue of the online game industry was approximately 12 billion dollars. The third-party industry is estimated to have employed as many as 100,000 game labourers and thousands of managers and customer service staff.

Unfortunately, the third-party gaming services industry also causes various negative effects for the game industry. These have been discussed by both the industry and academia since real-money trade of virtual goods in MMOs first became a topic of concern in the early 2000s. For example, the MMO players' game experience suffers when professional gamers monopolize virtual resources and use in-game chat channels to advertise their products. Many of these problems have since been mitigated by game designers with suitable solutions, but one fundamental objection to real-money trading remains: it gives an unfair advantage to rich players.

Life is not fair: some people are born with more money and better career prospects than others. Edward Castronova (2004) argued that the value of MMOs is in how they provide an escape from this cruel reality by offering a level playing field whereby anyone can prosper. Real-money trading destroys this by tilting the playing field back in favour of the rich. Joshua Fairfield provided a counterargument (Lehdonvirta 2009). He pointed out that MMOs are ruled by the time-rich: students, pensioners and the unemployed, who can afford to spend countless hours in repetitive gameplay. Ordinary time-poor middle-class corporate slaves find it hard to find fulfilment in MMOs. It is this time-poor segment, neglected by

traditional MMO design, that forms the core customer base of the third-party gaming services industry. Buying third-party services is the only way for this segment to fulfil the goals the game socializes them into.

Yet the future of the third-party gaming services industry seems uncertain. Online gaming itself has grown rapidly, thanks to the social gaming boom and the popularity of free-to-play online games and smartphone gaming. But the World Bank report indicates that the third-party industry seems to be stuck in catering to traditional subscription MMO players, a waning market. Efforts by gold farmers to develop products and services for social gamers have not met with notable success. Social game publisher Zynga's virtual poker chips and virtual items belonging to the Japanese mobile publisher DeNA's mafia game Kaito Royale have been traded for real money between players, but there are no signs of professional gamers mass-producing them.

The reason for the absence of the third-party industry from the latest generation of online games is clear: these games explicitly target the previously neglected money-rich, time-poor player segment. The segment no longer needs third-party services to prosper – the publisher is happy to sell them what they need directly. One analyst estimates that publishers sold 7.3 billion U.S. dollars worth of virtual goods to players in 2010 (Reisinger 2010), more than double the sales of the third-party industry.

What happened to the time-rich, money-poor players in these new games? To those players who felt that real-money sales were unfair? In many free-to-play games, entire countries and regions are blocked because the average citizen will not spend enough to justify the expense of offering the game. In most social games, the money-poor are allowed to tag along, as sort of second-class players. Dual currency systems allow them to earn some recognition through raw time and effort, while ensuring that they can never threaten the dominance of the big spenders, the "whales". They provide content that may have some value to others and also play a part in viral loops. The publisher tolerates them, but there is no pretension of it being a level playing field.

Would it be possible to design a commercially successful game that caters to both time-rich and money-rich players? Advances in another field covered by the virtual economy report, the so-called microwork industry, could make such games more common in the future. The microwork industry consists of companies that take clients' business problems, such as digitizing hand-written insurance claims, and turn them into a series of tiny microtasks that can be completed without any training. The tasks are then distributed digitally to the clients' own staff, outsourcing companies, crowdsourcing platforms or any other labour source. The San Francisco based startup CrowdFlower has partnered with game monetization companies Gambit and TrialPay to explore the use of online games as a labour source. They allow cash-strapped social gamers to pay for virtual goods with work, rather than with a credit card.

The exchange rate between work and cash payments depends on how much the game publisher gets paid for the microwork, which in turn depends on its supply and demand. Currently there is a bottleneck in demand: turning real business problems into microwork is challenging. But if the microwork industry overcomes this challenge, Finnish game companies are well positioned to take advantage of it: one of the leading microwork startups, Microtask Ltd, is based in Helsinki.

Microwork is easy but takes time to complete. If microwork eventually becomes one payment method among others in online gaming, time really starts to equal money, games can cater better to both time-rich and money-rich players, and publishers earn revenue from both. It is even possible to imagine a scenario where microwork is cleverly disguised within game mechanics, so that what seems like mere play to players is, in fact, productive work.

Games with artistic ambition need support

Jussi Ahlroth

When the prestigious Time Magazine listed the top ten games of 2010, number one was Alan Wake, created by the Finnish game studio Remedy Entertainment. According to the writer Evan Narcisse, no videogame had ever "felt as mature as Alan Wake does". The game is a psychological tale of a horror writer battling with his inner demons and a mystical external force that seems to be related to his internal crisis. "Its mix of meta-awareness and Hitchcockian suspense make Alan Wake a unique and fun experiment", Narcisse wrote.

Two months later, in Helsinki, the Finnish gaming industry gathered to celebrate the previous year's best games at the annual Finnish Game Awards. The winners were chosen by a jury, whose members work in Finnish game media and the game retail business. Alan Wake was nominated in two categories. It did not receive a prize in either one of them, nor even the prize for the year's best Finnish game.

The prize for the best Finnish game of the year went to the game Time Magazine had chosen as the year's second best game, which coincidentally was also a Finnish product. The two products couldn't have been more different. Angry Birds, by Rovio Mobile, is a mobile game in which the player slings birds at structures of blocks, with the intention of destroying the pigs hiding underneath, or on, the structures. Michelle Castillo of Time Magazine describes it as "deceptively difficult" and "incredibly addictive". It has been downloaded more than 200 million times worldwide.

The choice made between these two games is symbolic of many polarities within the gaming industry. The most obvious polarity is that the Finnish Game Awards jury chose profitable entertainment over artistic merit. Angry Birds is entertaining and addictive, but it has very little – if any – artistic merit. It represents the simplest form of gaming, gaming as a diversion, a mere distraction, something to tap away at while commuting. It is the type of game which reinforces the false perception that the cultural contribution of games is comparable to that of yo-yoing; potentially fun, but obviously shallow, devoid of any emotional depth, unrelated to real human experience and instantly forgettable.

On the other hand, Alan Wake is a hugely ambitious game which does not shy away from its aim to be nothing less than a work of art. It is a prime example of how the present day digital game has risen to become a form of culture, equal to film, music and literature. Games can provide an immersive audiovisual experience which takes you inside the narrative. No other form of art can offer this experience. Gaming is the artform of this century and the defining cultural mode of our time.

Alan Wake is a prime example of this. It is a carefully crafted interweaving of form and content which manages to tell a story particular to its own medium. It borrows heavily from literature, film and TV, commenting on how the gaming medium differs from these other media. The game weaves an immersive experience, which none of the other media could provide. Its only shortcoming is that it did not sell as many copies as expected, thus, it was deemed a failure.

Game productions such as Alan Wake involve great risks. They are massive in scale, employ professionals from a variety of fields and take years to produce. Remedy is an unusually small studio for the market they operate in, with a core team of forty-five at the time of the release of Alan Wake. The studio is devoted to one project at a time, and the company's future rests solely on the success of that single product. "You are only as good as your latest product", a game developer once said to me.

Game studios, unless nested within a game publishing company, are basically at the mercy of publishers. Publishers fund the games the studios make and release them when they are developed. Competition is hard, with the bar for studios to get their games accepted getting higher. Games are expensive purchases for consumers at around sixty euros for a new title. Consumers flock to the hit titles and often very good games do not sell just because they are overshadowed by another product. This is what happened with Alan Wake which was released at the same time as Red Dead Redemption, one of the last year's biggest successes, aimed largely at the same customer segment as Alan Wake.

The game publishers decide what they want to publish on the basis of demos they receive from the studios. The demo has to convince the publisher to invest millions in the production and marketing of a title. Consequently, the demo has to be of very high quality. The cost for an acceptable demo is currently around half a million euros. It is therefore quite natural that we do not see many startups trying to get into the field of high production value immersive console games. Most of them decide to work in the field of mobile games, like Angry Birds. Mobile games are much cheaper to produce and consequently involve much less risk while potentially still yielding large profits.

To support the development of artistically ambitious, immersive audiovisual works of art, Finland needs a gaming fund. It should be along the same lines of the Finnish Film Foundation and geared to support high production value game projects. It is vital that game companies get support in order to take the necessary steps to rise from the mobile game framework of producing addictive mass entertainment to creating real works of art in an artistic medium which is not only the latest medium, but also that which is most eagerly consumed by young people all over the developed world.

In every medium, culture can be either instantly forgettable entertainment or potentially life-changing art. A fund, functioning on principles of artistic

relevance, is necessary to counter the incessant trend in all culture for art to succumb to the demands of entertainment, sales and lowest common denominators. This is the very same trend we sadly witnessed in The Finnish Game Awards in 2011.

Networked play is here to stay

Aki Järvinen

Anyone who dares to make predictions for a hotly contested business area, let alone one that falls under the categories of technology and entertainment, risks making themselves ridiculous to future readers. The risk is even more prominent when writing for a publication that will not be published the very instant I take my hands off the keyboard. Predicting the long-term future of gaming requires a degree in clairvoyance, because for someone working in the online gaming business in 2011, even short-term predictions are shots at a moving target.

Therefore, it is more relevant to cast our eyes back to historical examples and set the seeds for extrapolating future directions there. History tells us that games have always been social. That means playing games has always centered on communication and the common presence of men. A curiosity to develop various means of communication, and for enjoying the presence of others, has been something humans have always engaged in. Social network services, with Facebook leading the way in this field at the time of writing, have become hubs for such activities, which include play.

Social games are ancient

Online networks are social substrates; they facilitate social interactions via the Internet. Layers of history precede them, and games have figured in the fabric of social networks for centuries. Game entrepreneur Jon Radoff has visualized historical developments in social games. His interpretation of history traces social networking games back to early board games, tactical war games and sports, through various developments in communication technologies, such as play-by-mail games re-appearing as play-by-email games. At the time of writing, these paths have culminated in platforms such as Facebook where, according to studies from 2010, 55% of users were playing games.

This boom of social gaming on said networks, starting in 2009, it has been contested as a fad among bloggers and game industry experts. Certainly, the Facebooks of the world may come and go (personally I do not think they will), but the needs that social networks facilitate - to belong, communicate, share, and play - will not go anywhere. For instance, human play is constantly seeking new avenues, and this is where technological evolutions come into the picture. They transform the ways we play but do not take away the fundamental pleasures from, e.g., the competition and mastery that play facilitates in a safe environment.

In fact, as a futurologist among game designers, Jane McGonigal has argued that players seek to fix the 'broken' reality of everyday existence by taking refuge in the empowerment and satisfaction games provide. Even if games have always figured in social networks - and they always will, regardless of the media the network uses, regardless of technology – it seems that today their holding power is more ubiquitous than ever before.

Universal themes

If seen in such a light, Radoff's interpretation of social games' historical origins sketches out the history of human networks as constellations of war, agriculture, trade, religion, and sports - similar to those the historians McNeil and McNeil outlined in their opus *Human Web.*

Given this, it is not surprising that games inspired by the above mentioned themes have dominated the social games sphere. If one is seeking new themes for a casual game that broadly appeals across various demographics, look no further than anything of a positive or spectacular nature that history scholars have named 'Great', 'World', or 'Golden': the wars, the outdoors, the journeys, and so on. These themes can also be found in the most popular board games. They will frame play in future social games as well, transcending the technological and business bubbles that keep on bursting.

Less social can be more

It would seem that one of the key aspects that factor into this historical persistence is the social aspect of play. Still, sometimes less social is more, at least in terms of attaining mainstream popularity. The current formula of the most popular games in social networks posits one's friends as a strip of 'neighbours' in the game. All of you are working for the same goals in the game, but not in cooperation with each other, but rather, in parallel to each other. The goals are not common but everyone has their own duplicate of the same goals and sub-goals.

This type of play structure has been identified as similar to what is known as 'parallel play' among children. Parallel play refers to children playing independently besides each other but checking on the others' progress from time to time. Drawing is a common example of a playful activity in which parallel play emerges. It has found a popular online counterpart in adults playing popular social games. Therefore, instead of fully realizing the meaning that the established term 'social games' implies, games on social networks more accurately work like 'Massively Parallel Single Player Games' – millions of players playing in parallel, at different stages of progress.

It would be tempting, especially as a game developer, to predict that there is lots of room for innovation with social gameplay in social networks. Yet the development of the social games business, for instance in Facebook, presents evidence that innovation is not what mainstream social game

audiences expect. Therefore, a more viable prediction would be that such innovations would take place in online networks focused on gaming to start with. The more mainstream networks where people come to socially interact firstly and play secondly will inherit some of the more daring forms of social play in incremental doses.

Yet building and facilitating such game 'subnetworks' is not an easy task, for example for small Finnish game developers who traditionally excel in technology rather than business models and merchandizing. Nevertheless, despite the breakthrough being touted for years and years already, I believe smartphones and social networks have paved the way for mobile media finally going all-in with social.

The new standards

An aspect that Facebook games have redefined in the context of browser-based games is user interface conventions: how interactive elements are presented to players, whether it is via tutorials, quest trees, or various feedback indicators. The solutions that successful social game developers have proven to work within Facebook testify to their success in converting individuals who have not traditionally played games into gamers – well, at least into Facebook gamers.

If there is to be any development in where these newly-christened players will spend more time with games outside of Facebook, it is through the conventions they have been introduced to at the origin of their gaming pastime, e.g. those of Facebook. For developers trying to reach millions of players via their browsers, keeping to the interface design conventions of computer games from the 1990s and 2000s is the quickest way to fail. The alternative, i.e. adapting the new conventions, needs humble, yet smart, business sense combined with knowledge of what makes games tick, both emotionally and socially.

The logic of social is fundamentally human logic and therefore the need to emphasize creative aspects of game development, in the ways Finnish game-related education and business operates, is going to be crucial for success. For example, Finnish game education is desperately missing substance drawn from design management and creative industries on a broader scale, i.e. perspectives on the current state of game design and development, combined with acute knowledge of business models and trends and how they set constraints for creative game design and development.

The next big change in game development

Riku Suomela

Game development has gone through some radical changes in its history and, by many accounts, the speed of change is increasing. The most recent, and largest, change relates to the rise of mobile gaming and social gaming. At the moment they can be seen as two separate areas. Of course there are many ways to combine the two, but the next radical change will make the transition seamless.

The two areas have different characteristics. Mobile devices have multiple platforms to develop for and the games are not compatible with other platforms, while web, on the other hand, is standardized. Any game written using HTML or Flash has a very large addressable market that is an order of magnitude larger than the largest single mobile device market size.

Developing applications and games for a mobile device is very different from developing a social game on the web. Mobile games are run on a single device with decent processing power and good graphics performance. The games are usually developed on a native platform maximizing the performance. In many ways it is a continuation of the traditional game development.

The web is an available distribution platform that can be reached by over a billion people. The web is not designed to be as powerful as native development, but because it can reach such a large number of people, market penetration is more pronounced. The market situation is highlighted in Figure 1.
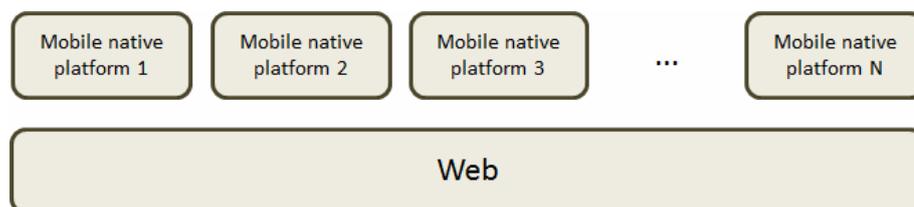
Figure 4: The web is available on every mobile platform, offering the largest customer reach. All native platforms offer greater application performance, but all have a different development environment.

In short, if we look at the situation now, mobile game development offers a high performance platform, whereas the web offers the largest market size. The question is - how can these be combined in a way that benefits from both aspects?

HTML5, the next web standard, now in the final phases of development, is bridging the gap between native applications and web applications in

certain areas. But when combined with advanced technologies such as WebGL, and later WebCL, the web is becoming a very powerful platform from a traditional game development perspective as well.

WebGL offers OpenGL Application Programming Interface (API) to the web applications and WebCLmakes the Graphics Processing Unit (GPU) programmable. These are radical changes, as they essentially offer the power typical of native development to the web platform.

Technology in itself is often not valuable and one could argue that these advancements are not game changers as social gaming on the web is very different from traditional gaming where a lot of performance is required. However, when we think about it from the developer's perspective – everything changes.

With these technologies we can get high performance applications written using web standards. Even if it were not to change web development, it will change mobile game development: suddenly one application written with open web technologies is compatible with all of the mobile development environments. There are already successful experiments in this area with games such as Quake II being implemented on HTML5. This, however, presents the current situation: native games are ported to HTML5 as a proof of concept. In a possible future, Quake 7 might be built using HTML5 and that same codebase is then offered both on the web and as an application.

For developers, everything can be reduced to Return on Investment (ROI). With web technologies the Investment can be lowered, as there is no need to invest in separate platforms. The potential Return is based on the number of people the developer can reach with the game, so this is ultimately increased as the number of people who can be reached just increased. So the mathematics is fairly straightforward – it will benefit the developer.

All this leads to a situation where the developer develops a game once. The game can then be deployed on the web, on various mobile channels, on personal computers all with one build - so in a sense the developer acesses all possible markets with less effort. Of course the retail laws will not change. The channel remains dominant, as can be seen in mobile application stores and Facebook.

When will it happen? WebGL implementations already exist in several browsers, so we are taking the first steps in this direction. It will take a lot of time before the developers will be capable of building applications that would run in all environments, but to emphasize one thing again: the speed of change is increasing.

Urbanization is shaping the future forms of gaming

Sonja Kangas

Urbanization and the development of various types of locative games are giving hints of the shape of things to come. Research projects have piloted locative, pervasive and urban games (e.g. Magenkurt et al, 2005, Ballages et al 2007) for years already. Lately, locative games have become commercially available. Strengthening this trend is not only urban development, but also games' software.

In his article, Hiltunen (2010) identified three contributing factors to the strong growth of the video-game sector: 1) demographic change in consumer groups, 2) the introduction of new gadgets, content and distribution channels, enabling proliferation of online playing and game distribution and 3) social playing facilitated by them. Introduction of new gaming gadgets, improved content and social playing are the factors linked with more general cultural and industrial development.

One such global development is the urbanization that is both a driving force in the current business environment and also moulding the future shape of the game industry and culture. According to statistics, just 100 cities account for 30% of the world's economy and almost all its innovation. Many of these engines of globalization, which gain their enduring vibrancy from money, knowledge, and stability, are world capitals that have evolved and adapted over decades of dominance (Foreign Policy, August 2010). Urban areas – not only capitals - are currently driving this development around the world.

Urban areas also play a key role when looking at consumers' spending habits and the foundations for novel consumer cultures. To give just a couple of examples, according to Ericsson's recent research report (2010), the lifestyle of urban Chinese consumers has changed from a survival mentality to a pleasure seeking mentality, with 54% now pursuing a more pleasurable lifestyle. Similarly, research carried out by Bundle (2010) highlights that the average Manhattanite household spends 59% of their food budget on dining out, compared to the 42% of an average American household.

Urban consumer culture has changed, and will change, the way people spend time and entertain themselves. Terms like *urban hustler*, coined by Harris Research, or *flâneur*, defined by Charles Baudelaire when describing a modern person "who walks the city in order to experience it" (Benjamin 1997), both refer to a person strolling leisurely through either the Parisian arcades of the nineteenth century or in contemporary cities, as an aimless shopper with no intention of buying anything, an intellectual parasite of the public space. The traits that mark out a flâneur or an urban hustler are wealth, education and idleness. This type of cultural change has an impact

on consumption and entertainment. People are not only able to have pleasant experiences but are also looking for ways to further entertain themselves by seeking out social experiences having already got used to operating socially and sharing experiences and moments on the move.

But what is even more relevant is that, consumption-wise, the fast pace and ever-changing nature of urban life guarantees an endless number of social connections, experiences and commercial services. This evolution provides rich possibilities for the digital games industry that, during the last 10 years, has moved from marginal to mainstream, offering various types of experience to an increasing and diversifying group of players.

So far, the strongest development within the game industry has come from within, as an organic growth and evolution of the industry. Game genres founded in the 1970s and 1980s have slowly matured. This evolution was firstly driven by technical evolution and, secondly, by cultural and contentual development. Lately, technical development, both within the mobile sector and overall in consumer electronics, has made advancements verging on the phenomenal with location based gaming using mobile handsets and social party gaming, represented by motion tracking devices like Nintendo Wii, Microsoft Kinect and Playstation Move. Only recently, due to the development of mobile technologies, location tracking and trends like gamification that refer to the utilization of game mechanics as a motivational factor, we have seen signs that significant developments can come from outside the game industry. Diverse companies and parties are currently participating in formulating the future of the game industry and culture.

When looking at the future trends in game culture and urban consumer culture, mobility, public environments functioning as social interactive spaces and entertainment driven information and leisure consumption are becoming increasingly central. Mobile and social location specific gaming trends will be key drivers in which the motivation to participate comes from outside the game itself. 'Snack size culture', 'always on' and 'always with' and participatory content development are just a few indicators of this development.

Mobile games have been commercially available for over 10 years and have matured into an easy to use and easy to find form of entertainment. Social gaming - referring here to massively multiplayer online games (MMOs), all manner of quiz show, karaoke, music and sports party games in which practically anyone can play and playing is a socially acceptable way of spending time – has shaped the game industry for several years already. Finnish companies like Uplause and Grey Area offer very different services from each other but both provide their own answer to urbanization and the social mobile trends described here. One believes in massively multiplayer audience games in public places and the other in using locational technologies and a local attitude in gaming. The next big thing in gaming could very much be a big story or shared location specific experience instead of a typical game.

A relevant fact is that both of these examples focus on issues that are valuable for players from outside the game world. Uplause's game provides new, playful social experiences for festival audiences and ice hockey fans. Grey Area has realized that people are proud of their 'hoods' and find it motivating to compete against other suburbs. People become motivated when something valuable to them is at stake. This is something different from previous digital game offerings that provided virtually generated experiences in which the generated values, if not social or related to self-expression, were relevant only within the context of a game.

According to trend reports, urban consumers are addicted to here-and-now experiences, choice and freedom, flexibility, rawness of service and unrestricted opportunities. Based on this reasoning, I claim that urban culture is the main branch of contemporary culture, providing rich possibilities for game developers. Instead of simply generating virtual experiences, game developers could start development from motivational factors and issues already valuable to the players outside of game worlds. This links the game industry more closely to global trends, such as urbanization, and opens up a whole range of new possibilities for game developers.

Besides the usual examples, such as location-based games (LBGs), there are also various city projects in which the city itself becomes an arena for play. Festivals and art events, such as Come out and Play, as well as companies like Google, have experimented with urban games. In late 2010, Google installed digital screens into 20 bus shelters across San Francisco with which commuters could play video games against each other. Passengers identified which neighborhoods they would like to represent when playing, and that which won the two month long contest was rewarded with a block party. Also in late 2010, Adidas launched a game challenging footballers to capture cities. Connecting via Facebook, players pick their city and then try to claim each segment of it through one-on-one battles (Trendwatching 2011).

Experiments like these offer new experiences and values to urban gamers on the move. By bringing gaming into natural living environments, it normalizes gaming as a way of spending time, not only for gamers but for anyone. Similar to the Finnish examples, these two instances are originated in location and a feeling of belonging to something, and then these values are bundled into a game. The motivation comes from outside the game itself.

Even if the population, or flow of traffic, is not as dense in the Nordic capitals as it is in the big cities of China, Japan or the USA – similar trends arise, even if on a different scale. Instead of production, location is relevant, when thinking of distribution models, new ideas and interesting game experiences to broaden the range of potential gamers. Location, changing social situations and mobility give gaming one future direction.

According to industry analysts, mobile gaming for smart phones and handheld devices will continue its strong growth in the future. Urban dwellers, hustlers or flâneurs represent ever-increasing wealth and power, as well as participatory urban culture and the specific values related to it. Location, when it comes to development, becomes less relevant. Instead location as functionality, or feature, in a game is becoming more and more crucial. In this sense, urbanization is the key enabler for new kinds of gaming innovations, normalizing game cultures by being an integrated part of urban life.

Some notes on player experiences in social games

Janne Paavilainen

Social games, i.e. games played on social networking services such as Facebook, have become increasingly popular. According to market research companies, such as Newzoo and GP Bullhound, the social games business was the fastest growing game industry segment in 2010. Currently Facebook has 600 million users and it has been estimated that over half of them play social games.

Academic games research has studied social games from various perspectives, such as social games design, virtual goods and user behaviour based on statistics. Relatively little, if any, qualitative research has been done on the user experiences in social games. In the *SoPlay* research project (http://soplayproject.wordpress.com), we have studied social games through play, analysis, observation, surveys and interviews for over two years. In spring 2010, we interviewed 18 Facebook users (14 male, 4 female, with an average age of 31), who had encountered social games. In this article we present some of their experiences.

Player Experiences

Social games were mainly perceived in two different ways. The few who had a long history with traditional video games saw them as "non-games", or had an otherwise dismissive attitude towards them. These respondents considered social games merely as toys, because they were too simple and had no challenge or real gameplay. They didn't consider Facebook as a gaming platform, although they were interested in the possibility of playing classic video games like *Quake*, *X-Com* or *Master of Orion* on Facebook with their friends.

The other respondents saw social games as casual games, played with friends, where little or no effort was required to play, producing a few minutes of fun every now and then. Killing time, relaxation and playing just for fun were popular reasons for playing social games. One respondent noted that social games were comparable to completing a crossword puzzle in the tram while travelling to work. Among the respondents, social games were considered easy to access and also readily disposable if the game failed to be interesting. Game mechanics, such as organizing, collecting, building and growing, were considered interesting. Game progression and leveling were also mentioned as interesting and addictive features.

As expected, most of the respondents were acquainted with social games through their friends; by either receiving a request or seeing an interesting post from the game on a wall. Many emphasized the role of friends, although some said that social games could, paradoxically, also work purely

as single player games. Interestingly, most the respondents who actively played social games considered them more as single player games rather than as a multiplayer experience. Beating friends' high scores was an important aspect, though a few respondents did not care for such competition. It was stated that a good group of friends could even make a slightly boring social game more interesting.

The major source of frustration in social games was spam from games, which constantly filled up notifications, walls and news feeds. Two other reasons for bad experiences were awkward neighbour requirements in order to progress in a game or constant pop-ups prompting the use of real money in the game. The use of real money for social games was generally disregarded, or even considered to be cheating. Considering game design, many respondents stated that social games easily become boring and then they would switch to another game. The feeling of boredom is manifested when the user feels they have "seen it all" and the game can no longer provide new, meaningful experiences. Diversifying the content, in the form of introducing new creatures, plants, buildings or suchlike, fails to help as the game mechanics do not change. Another design issue was click fatigue, as some social games expand considerably and, for example, tending a huge farm becomes a tedious task.

Interestingly, technical usability problems, such as crashes, white screens etc., were not considered as frustrating because the games were considered "unfinished" beta versions and recovering from errors simply required refreshing the browser window. However, some respondents noted that if they had paid real money for social games, they would expect better technical stability from them.

Considering sociability in social games, sending and receiving gifts was considered fun, but also became a burden sometimes. For the more hardcore social gamers, reciprocity in general was a very important element of gameplay experience and they expected such behaviour from their social gaming friends. Other social mechanics, like assigning your friends to different roles in the game world, was considered a nice feature but, ultimately, not a very social one. Overall the level of sociability in social games was considered rather low. Playing social games with friends is one form of communication in itself. Although the sociability through game mechanics might be low, the knowledge of others playing the game makes it feel more like a community, "I am a farmer and so is my buddy from elementary school".

Towards Greater Experiences

Most of the respondents wished for deeper, more complex experiences with social games. This would conform to the natural chain of events as the traditional video gamers are used to more challenging games and the newcomers have been initiated into social games and are now looking for more.

Social games have evolved considerably since their first appearance and, as we can see in the cases of *FrontierVille* and *CityVille*, more complex social games can be both sought after and successful. There is still a chasm between these new social games and traditional video games when it comes to complexity of game design. The upcoming *CivWorld*, a Facebook remake of the classic *Civilization* strategy game, might fill that gap. For as long as social games have been around, there have been rumours about the next *World of Warcraft* for Facebook that would offer a lightweight 3D MMORPG for the social platform.

However, it would be ill-advised to believe that simple social games will become less popular, and successful from a business perspective, in the future. Although the current social gamer base is increasing its game literacy, and thus looking for more enriching game experiences, there will always be a large number of those who do not care for such things, or have just started to play video games online. Also, we must consider how eager the business world is for the increased development costs that accompany a game's increased complexity. On the other hand, as Facebook is currently evolving towards more vivid experiences as a gaming platform, it is increasingly important to understand how traditional video gamers, who do not care for current social games, could be served.

It seems that social games have tapped into a new player base. Many of these players (re)discovered games through *FarmVille,* which had, at its height, some 80 million players. How will it affect the future of social games when there is such a large player base for whom *FarmVille* is the most important point of reference?

Considering a more complex game experience in Facebook, Cloud gaming services, such as Gaikai, might bring interesting opportunities. Gaikai provides a service whereby the player can access high quality AAA games on a browser through Flash API. Initial tests with the service have been promising and this technology could open up Facebook to a wide selection of different game experiences. Bringing traditional video games into Facebook is one thing, integrating them into the social network is another.

The greatest challenge with social games is the quick, ever changing environment on which they are built. Some consider Facebook's policy changes to have brought good with the bad. Social games do not spam as much as they use to and at the same time virality has been reduced and developers are now focusing on retention and gaining more players through cross-promotion. Another question is the metrics-centric nature of game design in social networks. When everything is measured instantly through the clicks of millions of users, what is the role of qualitative user experience data?

In the end, game design is much more than just analysing numbers. It is an art form of its own in which intuition and craftsmanship play an important role. Understanding why players do what they do is critical in enhancing

the artistic skills of a good game designer. After all, it is the intuition and craftsmanship that count before any clicks have been made.

10. References

Alexander, L. (2011). Hawkins: 'The Browser Is The Platform Of The Future'. *Gamasutra*. Retrieved May 25, 2011, from Gamasutra Web site. http://www.gamasutra.com/view/news/33406/Hawkins_The_Browser_Is_The_Platform_Of_The_Future.php

Anderson, C. (2010). The web is dead. Long live the Internet. *Wired*, Sept. 2010. Retrieved May 25, 2011, from Wired Magazine Web site. http://www.wired.com/magazine/2010/08/ff_webrip/all/1

Ballagas, R., Kreuz, S., Yu, E., Walz, S. P., Fuhr, C, Tann, M., et al. (2007). REXplorer: A mobile, pervasive spell-casting game for tourists. *Proceedings of CHI 2007* (San Jose, CA, U.S., April 28—May 3, 2007)(pp.1929—1934). New York: ACM Press.

Bartle, R. A. (1996). *Hearts, clubs, diamonds, and spades: Players who suit MUDs.* Retrieved May 25, 2011, from Multi-User Entertainment Ltd. Web site. http://www.mud.co.uk/richard/hcds.htm

Benjamin, W. (1983). *Charles Baudelaire: A lyric poet in the era of high capitalism.* London & New York: Verso.

Boyes, E. (2007). Special Report: Crossing borders, part one. *Gamespot.* Retrieved May 25, 2011, from Gamespot Web site. http://www.gamespot.com/news/6183562.html

Brathwaite, B., & McWilliams, L. (2011). Intuition vs. metrics: How social game design has evolved. Presentation in *GDC 2011 (San Francisco, CA, U.S., February 28—March 4, 2011).*

Bundle. (2010). *Our discretionary life: The top-spending cities for travel, cable and entertainment.* Retrieved May 25, 2011, from Bundle research Web site. http://money.bundle.com/article/Infographic-2010-Travel-and-Leisure-Report-12005

Burke, P. (1995). The Invention of leisure in early modern Europe. *Past and Present*, 146(1), 136—150.

Castronova, E. (2004) The right to play. *New York Law School Law Review*, 49, 185—210.

Castronova, E. (2007). *Exodus to the virtual world: How online fun is changing reality.* New York: Palgrave Macmillan.

Christensen, C. (1997). *The innovator's dilemma: When new technologies cause great firms to fail.* Boston (MA): Harvard Business School Press.

Christensen, C. (2003). *The innovator's solution: Creating and sustaining successful growth.* Boston (MA): Harvard Business Press.

Consalvo, M. (2007). *Cheating: Gaining advantage in videogames.* Cambridge (MA) & London: MIT Press.

Costikyan, G. (2002). I have no words & I must design: Toward a critical vocabulary for games. In F. Mäyrä (ed.), *CGDC Conference Proceedings. Studies in information sciences* (pp. 9—33). Tampere: Tampere University Press.

De Prato, G., Feijóo, C., Nepelski, D., Bogdanowicz, M., & Simon, J.P. (2010) *Born digital/Grown digital – Assessing the future competitiveness of the EU videogames software industry.* Seville, Spain: European Commission, Joint Research Center.

Drachen, A., Hagen, T., Sørensen, C., Canossa, A., & Heiberg, M. (2010). *Introduction to game metrics. AGORA Informatics.* Retrieved May 25, 2011, from AGORA Informatics Web site. http://www.agorainformatics.com/wp-content/uploads/2010/12/Introduction_to_game_metrics3.pdf

Ducheneaut, N., Yee, N., Nickell, E., & Moore, R.J. (2006). Alone together?: Exploring the social dynamics of massively multiplayer online games. *Proceedings of CHI 2006* (Montreal, Canada, April 22–27, 2006) (p.407–416). New York: ACM Press.

Dyer-Witheford, N., & De Peuter, G. (2009). *Games of empire: Global capitalism and video games.* Minnesota (MN): University of Minnesota Press.

Edge. (2010). Social Sciences. *Edge Magazine.* Retrieved May 25, 2011, from Edge Magazine Web site. http://www.next-gen.biz/features/social-sciences?page=0%2C1

Electronic Arts. (2010). *2010 Annual Report.* Retrieved May 25, 2011, from Electronic Arts database. http://investor.ea.com/annuals.cfm

Ericsson. (2010). Chinese consumer trends in a global perspective. *Ericsson research report.* Retrieved May 25, 2011, from Ericsson.com Web site. http://www.ericsson.com/res/docs/2010/chinese_consumer_trends_in_global_perspective.pdf.

ESA. (2010). *Essential facts about the computer and video game industry.* Retrieved May 25, 2011, from The Entertainment Software Association database. http://www.theesa.com/facts/pdfs/ESA_Essential_Facts_2010.PDF

FADE. (2011). *Retail and digital video game software sales over $33 billion in 2010.* Retrieved May 25, 2011, from Forecasting and Analysing Digital Entertainment, LLC Web site. http://fadellc.com/press_17.html

Gouglas, S., Della Rocca, J., Jenson, J., Kee, K., Rockwell, G., Schaeffer, J., et al. (2010). *Computer games and Canada's digital economy: The role of universities in promoting innovation.* Edmonton: University of Alberta.

Hamari, J., & Lehdonvirta V. (2010). Game design as marketing: How game mechanics create demand for virtual goods. *International Journal of Business Science and Applied Management*, 5(1), 14–29.

Hesmondhalgh, D. (2002). *The cultural industries.* London: Sage.

Hiltunen, K.P. (2010). Finland's largest cultural export. *Interactive Age Magazine: The Globalization Issue* (single issue magazine, pp. 51-52).

Hirn, Y. (1916). *Barnlek: Några kapitel om visor danser och små teatrar.* Stockholm: Wahlström & Widstrand.

IGDA. (2004). *Quality of life in the game industry: Challenges and best practices.* Retrieved May 25, 2011, from IGDA database. http://www.igda.org/quality-life-white-paper-info

In-Stat. (2010). *Online gaming and social networking drives virtual goods revenue over $7 billion in 2010.* Retrieved May 25, 2011, from In-Stat Web site. http://www.instat.com/newmk.asp?ID=2918&SourceID=00000652000000000000

Jenkins, H. (2003). Transmedia storytelling: Moving characters from books to films to video games can make them stronger and more

compelling. *Technology Review*. Retrieved May 25, 2011, from Technology Review Web site. http://www.technologyreview.com/read_article.aspx?id=13052&ch=biotech

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.

Juul, J. (2009). *A casual revolution: Reinventing video games and their players*. Cambridge (MA): MIT Press.

Järvinen, A. (2010a). The near future of viral design in social games. *Gamasutra*. Retrieved May 25, 2011, from Gamasutra Web site. http://www.gamasutra.com/blogs/AkiJarvinen/20100407/4577/The_Near_Future_of_Viral_Design_in_Social_Games.php

Järvinen, A. (2010b). Clickability: A design concept for social games. *Gamasutra*. Retrieved May 25, 2011, from Gamasutra Web site. http://www.gamasutra.com/blogs/AkiJarvinen/20100304/4573/Clickability_A_Design_Concept_for_Social_Games.php

Kallio, K., Mäyrä, F., & Kaipainen, K. (2011). At least nine ways to play: Approaching gamer mentalities. *Games and Culture* (forthcoming).

Kane, Y.I., & Bustillo, M. (2009, January 21). Used games score big for GameStop. *The Wall Street Journal*. Retrieved May 25, 2011, from The Wall Street Journal Web site. http://online.wsj.com/article/SB123249378212700025.html

Kelly, T. (2010). CityVille explained. *Gamasutra*. Retrieved May 25, 2011, from Gamasutra Web site. http://www.gamasutra.com/view/feature/6244/cityville_explained_part_1.php

Kerr, A. (2006). *The Business and culture of digital games: Gamework and gameplay*. London, Thousand Oaks & New Delhi: Sage Publications.

Khannam, P. (2010). Beyond city limits. *Foreign Policy Magazine*. Sept./Oct. 2010. Retrieved May 25, 2011, from Foreign Policy magazine Web site. http://www.foreignpolicy.com/articles/2010/08/16/beyond_city_limits?page=full

Kim, J. (1998). *The threefold model FAQ*. Retrieved May 25, 2011, from John Kim's Web site. http://www.darkshire.net/~jhkim/rpg/theory/threefold/faq_v1.html

Kline, S., Dyer-Witheford, N., & de Peuter, G. (2003). *Digital play: The interaction of technology, culture, and marketing*. Montreal & Kingston: McGill-Queen's University Press.

Koivisto, E. (2007). *Mobile Games 2010*. Nokia Research Center.

Kotler, P., & Armstrong, G. (2010). *Principles of Marketing.*(13th ed.). Upper Saddle River (NJ): Pearson Education Inc.

Kuittinen, J., Kultima, A., Niemelä, J., & Paavilainen, J. (2007). Casual games discussion. *Proceedings of the 2007 conference on Future Play 2007* (Toronto, Canada, Nov 15—17, 2007) (p.105—112). New York: ACM Press.

Kultima, A. (2009). Casual game design values. *Proceedings of Mindtrek 2009* (Tampere, Finland, Sept 30—Oct 2, 2009). New York: ACM Press.

Kultima, A., & Stenros, J. (2010). Designing games for everyone: The expanded game experience model. *Proceedings of Future Play 2010* (Vancouver, Canada, May 6—7, 2010). New York: ACM Press.

Kuronen, E., & Koskimaa, R. (2011). *Pelaajabarometri 2010*. Jyväskylä: Jyväskylän yliopistopaino. https://www.jyu.fi/erillis/agoracenter/tutkimus/julkaisut/elektroninen/pelaajabarometri2010.pdf

Lehdonvirta, V. (2009). *Virtual consumption*. (A-11:2009). Turku: Publications of the Turku School of Economics. http://info.tse.fi/julkaisut/vk/Ae11_2009.pdf

Lehdonvirta, V., & Ernkvist, M. (2011). *Knowledge map of the virtual economy*. Washington: World Bank/Infodev (forthcoming).

Lindt, I., Ohlenburg, J., Pankoke-Babatz, U., Oppermann, L., Ghellal, S., & Adams, M. (2005). Designing cross media games. In *2nd International Workshop on Pervasive Gaming Applications,* PerGames 2005 conference (Munich, Germany, May 8—13, 2005).

Magerkurth, C., Cheok, A. D., Mandryk, R. L., & Nilsen, T. (2005). Pervasive games: Bringing computer entertainment back to the real world. *Computers in Entertainment (CIE)*, 3(3).

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world.* New York: Penguin Press.

McNeil, J.R., & McNeil, W. H. (2003). Human web: A bird's eye view of world history. New York: W.W. Norton & Company.

Medler, B. (2011). Player Dossiers: Analyzing gameplay data as a reward. *Game Studies. The International Journal of Computer Game Research,* 11(1).

Meehan, E.R. (2000). Leisure or labor?: Fan ethnography and political economy. In I. Hagen, & J. Wasko (Eds.), *Consuming audiences? Production and reception in media research* (pp.71—92). Cresskill (NJ): Hampton Press.

Mäyrä, F. (2011). Games in the mobile Internet: Towards contextual play in Flickr and Facebook. In *Online Gaming: Production, Play & Sociality*. New York & London: Routledge. (forthcoming)

Nelson, R. (2009, January 22). Underachievement: EA selling 'unlock everything' DLC for Skate 2. *Joystiq*. Retrieved May 25, 2011, from Joystiq Web site. http://www.joystiq.com/2009/01/22/underachievement-ea-selling-unlock-everything-dlc-for-skate-2

Nelson, R. (2011, April 7). EA Sports planning 'persistent' gamer profiles across its titles, all of EA to follow. *Joystiq*. Retrieved May 25, 2011, from Joystiq Web site. http://www.joystiq.com/2011/04/07/ea-sports-planning-persistent-gamer-profiles-across-its-titles

Neogames. (2010). *Suomen pelitoimialan strategia 2010-2015, visio 2020. (The strategy for the Finnish game industry 2010-2015, vision 2020).* Retrieved May 25, 2011, from Hermia Ltd. Web site. http://www.hermia.fi/@Bin/777120/Pelistrategia%202010-2015.pdf

Newman, J. (2004). *Videogames*. London & New York: Routledge.

Nieborg, D. (2006). The expansion pack economy. *Proceedings of Media Change and Social Theory: The Second Annual ESRC Centre for Research*

on Socio-Cultural Change Conference (University of Oxford, UK, September 6—8, 2006).

NPD. (2010). *20 percent of the U.S. population, or 56.8 million U.S. consumers, reports having played a game on a social network.* Retrieved May 25, 2011, from NPD Group Inc. Web site. http://www.npd.com/press/releases/press_100823.html

Oudshoorn, N., & Pinch, T. (Ed.). (2003). *How users matter. The co-construction of users and technology.* Cambridge (MA) & London: MIT Press.

PwC. (2009). Global entertainment and media outlook: 2009-2013. PricewaterhouseCoopers.

Radoff, J. (2009). *A brief history of social games 3100BC—2010AD.* Retrieved May 25, 2011, from Jon Radoff's Web site. http://radoff.com/blog/2010/05/24/history-social-games/

Rao, L. (2010). Zynga moves 1 petabyte of data daily; Adds 1,000 servers a week. Retrieved May 25, 2011, from Techcrunch Web site. http://techcrunch.com/2010/09/22/zynga-moves-1-petabyte-of-data-daily-adds-1000-servers-a-week/

Rao V. (2008). Facebook applications and playful mood: The construction of Facebook as a "third place". *Proceedings of Mindtrek 2008* (Tampere, Finland, October 7-10, 2008)(pp.8-12). New York: ACM Press.

Reisinger, D. (2010, November 15). Virtual goods revenue to hit $7.3 billion this year. *CNET News.* Retrieved May 25, 2011, from CNET News Web site. http://news.cnet.com/8301-13506_3-20022780-17.html

Reynolds, B. (2010a). Social gaming: How do I get me some of that? Presentation at *DICE 2010* (Las Vegas, U.S., Feb. 17—19, 2010).

Reynolds, B. (2010b). Bears and Snakes! The Wild Frontier of Social Games. Presentation at *GDC Online* (Austin, U.S., Oct. 5—8, 2010).

Rosa, H. (2003). Social acceleration: Ethical and political consequences of a desynchronized high-speed society. *Constellations*, 10(1), 3—33.

Rose, M. (2011, April 7). GameStop and adgregate markets launch Facebook store. *Gamasutra.* Retrieved May 25, 2011, from Gamasutra Web site. http://www.gamasutra.com/view/news/33976/GameStop_And_Adgregate_Markets_Launch_Facebook_Store.php

Shea, M. (2010) Social games: (Still) no lightning in a bottle. Presentation at *GDC Canada 2010* (Vancouver, Canada, May 6—7, 2010).

Sotamaa, O. (2007). Perceptions of player in game design literature. *Proceedings of DIGRA 2007* (Tokyo, Japan, Sept. 24—28, 2007)(pp. 456-465). Tokyo: University of Tokyo.

Sotamaa, O. (2009). The player's game: Towards understanding player production among computer game cultures. Tampere: University of Tampere. http://acta.uta.fi/english/teos.php?id=11176

Stenros, J., Paavilainen, J., & Mäyrä, F. (2009). The many faces of sociability and social play in games. *Proceedings of Mindtrek 2009* (Tampere, Finland, Sept 30—Oct 2, 2009) (pp.82-89). New York: ACM Press.

Stenros, J., & Sotamaa, O. (2009). Commoditization of helping players play: Rise of the service paradigm. *Proceedings of DiGRA 2009* (Brunel University, West London, United Kingdom, September 1—4, 2009).

Thomas, K. (1964). Work and Leisure in Pre-Industrial Society. *Past and Present*, 29(1), 50-62.

Toivonen, S., & Sotamaa, O. (2010). Digital distribution of games: The players' perspective. *Proceedings of Futureplay 2010* (Vancouver, Canada, May 5—6, 2010) (pp.199—206). New York: ACM Press.

Trendwatching. (2011). *Citysumers report.* Retrieved May 25, 2011, from Trendwatching.com Web site. http://trendwatching.com/trends/citysumers/

Wi, J.H. (2009). *Innovation and strategy of online games.* London: Imperial College Press.

Wohn, D.Y., Lampe, C., Wash, R., Ellison, N., & Vitak, J. (2010). The "s" in social network games: Initiating, maintaining, and enhancing relationships. *Proceedings of 44th Annual Hawaii International Conference on System Sciences* (Kauai, HI, U.S., Jan 4—7, 2011). Washington: IEEE Computer Society.

Wolf, M.J.P. (2001). *The medium of the video game.* Austin (TX): University of Texas Press.

Yee, N. (2002). *Facets: 5 motivation factors for why people play MMORPG's.* Retrieved May 25, 2011, from Nick Yee's Web site. http://www.nickyee.com/facets/home.html

Zittrain, J. (2008) *The future of the Internet – And how to stop it.* New Haven & London: Yale University Press.

Appendix 1: List of interviewees

The expert interviews were conducted between May and December 2010. The following game industry specialists were consulted during the study.

Wesa Aapro, Yle
Jussi Ahlroth, Helsingin Sanomat
Juho Hamari, Helsinki Institute for Information Technology (HIIT)
Koopee Hiltunen, Neogames Centre
Kari Hintikka, Jyväskylän yliopisto
Aki Järvinen, Digital Chocolate
Thomas Puha, Pelaaja Magazine
Sonja Kangas, IGDA Finland
Sampo Karjalainen, Sulake
Ilari Kuittinen, Housemarque
Jussi Laakkonen, Applifier
Katri Lietsala, Gemilo
Tony Manninen, LudoCraft
Jouka Mattila, Nokia Research Center
Matias Myllyrinne, Remedy Entertainment
Frans Mäyrä, Tampereen yliopisto
Ilkka Paananen, Lifeline Ventures
Juhana Pettersson, Tilt.tv
Jouni Salonen, Tuotantoyhtiö Tuokio
Riku Suomela, Nokia
Ville Vesterinen, Grey Area
Tero Virtala, RedLynx