iDTV Gamers:
The Emergence of a New Community?

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Abstract

If digital games are to continue to grown as important cultural form they must move into new platforms and environments that appeal to a broader cultural demographic. Interactive Digital TV (iDTV) is developing rapidly in Europe and is providing platforms where games are popular among communities quite unlike the traditional PC or console gamer. In addition, communication is becoming possible through multi-player games, TV based mail, chat, message boards and leader boards which show the scores of the top players. This paper looks at the development of iDTV games, the current gamers, and explores the issues surrounding their relationship to traditional television, games, and the family.

Keywords

Games, Interactive TV, Digital TV, community

INTRODUCTION

The value of the global games industry will reach $50 billion for 2001 and is forecast to grow to $86 billion by 2006, up 71% on 2001. Much of this growth comes from the Internet, iDTV and mobile, areas that accounted for less than 2% of the industry total in 2000 but will grow to 27% (529 million people) by 2006 [1].

Until recently digital games were confined to technically advanced multi-purpose platforms and arenas, such as the PC and the Internet, or platforms designed specifically for gameplay, including consoles such as the Playstation and handheld devices such as the Gameboy. The slow convergence of industries around digital technologies has opened up two interesting new platforms that have mass appeal. One of these, centered on mobile telephony, is relatively new. The other is centered on what is arguably *the* mass medium, namely *television*. The games market has never been a *mass* market in the way that television has but we are beginning to see the first signs of what happens when games and traditional television compete and merge on the same platforms.

The games industry is naturally dependant on the installed base of devices on which games can be played with each emerging device fragmenting the market and creating cycles of boom and bust within the industry. iDTV promises a standardized technology platform and a massive installed base for a games industry striving to become a mass-market industry, just like TV. Vincent Scheurer, who specializes in Digital Media and Games with the law firm Osbourne Clark, believes that, if the games industry can rise to the challenge in a fair competition unhindered by regulation, then "iDTV games will significantly outperform what is now viewed as "ordinary" television." [Scheurer, personal communication].

The UK is widely considered to be the world leader in iDTV in terms of market size, technology, service development, and the range of games available. This paper naturally focuses on the UK but it should be mentioned that the lead has been built on major investments leaving the key players in some financial difficulties and with a mix of standards and technologies that may soon prove limiting.

HISTORY

The history of Interactive TV (iTV) games in the UK began with a number of cable TV trials in the early 90s. The driving force for these experiments came from cable TV companies seeking new ways to differentiate their service from both Satellite and Terrestrial TV [2] neither of which could at this time provide true two-way interaction as they lacked a *backchannel* through which data could be passed from the TV to the broadcaster.

Videotron, an experienced US cable company with subscribers in the London area was, in 1991, the first to offer games (including puzzle and board games, and the ability to make sports bets) as part of its analogue service.

The Cambridge Digital Interactive Television trial started in September 1994 and by January 1996, when the trial ended, the number of its user sites (homes, schools and businesses) approached 100. ATM networking technology was employed throughout the system, with two-way digital data being carried alongside cable TV signals over fiber optic links to Set Top Boxes (STBs) connected to the TV.

The system was developed primarily to test a system for Video On Demand (VOD) but other interactive services such as shopping and banking were also considered important. The trial provided an environment for partner companies to try things out and get feedback from viewers. It should be remembered that there was hardly any commercial use of the Web at the time, and few people had home Web access.

The trial was a collaboration between Cambridge Cable (later to become part of NTL) and Online Media, an offshoot of Acorn Computers. The dozen or so games available were those that already existed for the Acorn RISC PC including educational games, space-invaders and rocket raid type games and the *Doom* predecessor *Wolfenstein*. Multi-player networked games were planned but never implemented.

Brian Knight, an engineer who worked on the trial and was the first to be connected, recalls, "We tried out everything, but I think the educational games were the ones that got played for longest. I'm not sure what proportion of the trial homes had other computers. It was probably higher than the national average at the time, as quite a few of the trial users were families of employees of hi-tech Cambridge firms!" [Knight, personal communication].

Where the Cambridge trail was primarily a test of technology, a trial by BT, started in the summer of 1995, also aimed to investigate the user in more depth. About 5,500 users in 2,000 households in Colchester and Ipswich were recruited by market research to achieve a representative demographic sample of the UK population, and a wide range of data was collected about them before service was connected.

The service offered movies and television programming on demand, education, High Street (home shopping and home banking), Adland (an interactive advertising service), and games on demand. These games were ordered and controlled via a standard remote control, and delivered to a normal television over copper telephone lines for the majority of homes and over fiber to the remainder.

Games provided by Nintendo and Sega were available individually, with users paying a fee for 24 hours use, or as by subscription to all titles. Purchases could be made online by keying credit card details into the remote control handset.

The average use by consumers was five hours per week with games proving reasonably popular. However, the most popular service was one that prereleased episodes of TV soap operas.

THE VBI

In the UK the vertical blanking interval (or VBI) – the space between analogue terrestrial broadcast television frames – has been used to send data since 1970 when BBC technicians first used it to send messages between transmitter sites and initiated a technology that was later developed into teletext. The company Teletext now claims around 50% of TV viewers as

users with 14.2m users a day [3] and long experience with this service may partly explain the viewers openness to iDTV.

In 1993, Teletext used the VBI for a simple quiz game called *Bamboozle* and it was the use of the VBI that formed the technological basis of the most ambitious iTV games development in the UK to date.

TWO WAY TV

Between 1992 and 1996 Two Way TV developed technologies that enabled it to send games over the VBI to a proprietary STB. Viewers could then *play along* with their favorite quiz shows or make predictions during sporting events. The ethos of Two Way TV was to observe the behavior of TV viewers and design games accordingly. People tend to shout out answers when watching quiz shows so the games would give people simple multi-choice options to select. This approach was also applied to live sporting events, allowing viewers to predict a games outcome and to guess when they think a player is about to score.

As well as playing individually viewers could, with up to four handsets, compete with each other in the home. In addition to this scores would be sent back via a modem to be compared to other households that had played. Players with the highest score would be rewarded with prizes either of relevant merchandise or cash.

The commercial analogue service was launched in 1997 and reached 3,000 homes in the Midlands region of the UK. These subscribers gave some early indications of the types of iTV games that would be popular and how they may affect viewing behavior.

The average use of Two Way TV services was 10 hours per week with an average of 14 games being played. TV programs enhanced by the service saw ratings rise by an average 70% against BARB viewing figures. Daytime shows saw the largest increase, by a factor of 2.4 compared to 1.3 for evening shows.

Feedback from viewers showed that they enjoyed playing as a family and particularly liked the leader boards where they could see their names on TV. One family even cancelled a holiday in order to play along with the quiz show *Fifteen to One* and maintain their leader board position. Many commented that they communicated more as a family instead of watching TV in silence as they had done previously.

In late 1997 the UK TV industry began to focus on the move from analogue to digital, and Two Way TV closed down the analogue service to concentrate entirely on a digital proposition.

One of the strengths of the Two Way TV system was its support for up to 4 handsets. The community of gameplay began with families playing with each other but most current iDTV systems do not support multiple handsets and this valuable feature has been lost. Fortunately, a recent deal between Two Way TV and Casco, a handset technology company, seeks to bring this feature back.

THE CURRENT UK IDTV GAMES MARKET

With the 1998 launch of both BSkyB's 140-channel Digital Satellite Television (DST) and the OnDigital (now ITVDigital) Digital Terrestrial Television (DTT) television service the UK TV market entered the Digital age. By the turn of the century consolidation in the Cable TV market had reduced the number of companies from 24 in 1995 to just two, NTL and Telewest. Both of these provide a Digital Cable Television (DCT) system that includes games.

The Digital TV (DTV) market is growing fast and may represent 50.8 million European households before the year 2003 a growth from 11.3 million in 2000 [4]. If this figure is accurate there will be more digital set top boxes than PCs in European households.

Into a UK of 24.2 million households PC penetration is around 36% and iDTV penetration at around 40% [5]. Whereas PC penetration is predicted to level off at around 54% [6] iDTV penetration will continue growing with the penetration of DTV which is driven both by the multi-channel TV market and by a government which has committed to an early switch off of analogue TV in order to reap the profits of a bandwidth auction. The iDTV market is potentially much larger and broader than the PC market and is predicted to grow to half of UK homes by 2005 [7].

Successive Oftel studies [8] reveal one of the keys to understanding how people play iDTV games, which is to understand that playing games is not the initial reason they buy DTV. Rather they buy DTV for a wider choice of TV programmes and to gain access to subscription programming, especially sport and movies. When asked what they want from interactive services they give the following answers: Shopping – 43%; Education – 36%; Internet access – 32%; E-mail – 27%; Banking – 17%. When it comes to what they actually do it is a different story. Games are the most popular service with up to 44% of digital consumers playing. These games are predictably more popular amongst younger consumers and homes with children, but also amongst the D & E social groups. These groups consist of the semi-skilled, unskilled and unemployed and account for 33% of the UK population.

SIMPLE GAMES

NTL introduced its iDTV games channel in 1999 and it is now its most popular channel on NTL. Subscriber information from NTL shows a different profile to that of the PC or console game player. 81% of subscribers are socio-economic C & D and the age range is much broader where 58% subscribers are families and 57% of subscribers are over 35 [9]. With this audience, family-oriented games such as *Bingo*, Trivia Quizzes, *Hangman* and Puzzles are very popular.

Jamie Macdonald, the Director of Content Production at NTL Interactive, has said that, "No game is too dumb" and when developing games, "Don't overestimate the audience" [9]. One NTL game that demonstrates this

attitude is *Low Number*. A player simply enters a number in the hope of choosing the lowest number for that day. If another payer chooses the same number they both lose. The player remaining with the lowest number at the end of the day wins.

There are, however, more complex games available that are also proving popular. Players of *Fantasy Stock Exchange*, launched in Jan 2001, average sessions of 30 minutes and play repeatedly. This game playing behavior is still a long way from the intense, avid playing demonstrated by some PC and console enthusiasts in which the playing of the game is the main focus of activity. In contrast, iDTV games are used as a supplement to the primary activity of watching TV. Games are *dipped* into during lulls in compelling viewing and *fitted* into in ad breaks and spare moments while waiting for a favorite show to begin. This *dipping and fitting* behavior works well with simple games but less so with intense, immersive games. By this logic, however, complex games where the pace is controlled by the gamer may prove popular. If designed with the TV audience in mind persistent role-playing games (RPG's) would be suitable while also offering more communication between players.

TYPES OF IDTV GAMER

The *Hands On TV* report by Netpoll [10], based on interviews in 50 homes with iDTV, isolated three different types of game players. *Generation I* are the technology savvy teenagers who will play the games but don't demonstrate much loyalty either to a game or to a channel. They surf the games in much the same way as they surf channels, looking for brief entertainment rather than an in-depth game experience.

Early Clickers are described as 3 to 10 year olds raised by parents who believe that mastering technology is crucial for their children (this is a common attitude in the UK with 94% of people in a recent study believing it is essential that children learn how to use a computer [11]). The Early Clickers are encouraged to play with the games, not simply to entertain themselves but in the belief that it is a "training" activity that is good for them. At this age they are less encouraged to use the Internet with its perceived danger of exposure to pornography. With peak gameplay on all platforms occurring between 4pm and 6pm it would seem that co-playing of games is a key part of this use of iDTV as a form of digital *training wheels*.

Finally, *Daytime Dabblers* are almost entirely of women who find the TV far less threatening as a technology than the computer. In fact they do not think of the TV as a technology at all and are happy to experiment with interactive features. They often play the games before trying other services both because they are entertaining and because they are less threatening than commerce services where they may accidentally purchase. These Dabblers are predominantly the same group targeted by gambling games.

Games such as *Beehive Bedlam* on Digital Satellite Television (DST) appeal strongly to this group with the majority of players being female and aged

between 25 and 40 [12]. In this game it is possible to pay a small fee to enter a competition, via the telephone line, if you believe you have a good score. In one week 5% of the population of homes called called. Even though there is an element of skill involved this may be considered a form of *soft* gambling.

GAMES CHANNELS

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iDTV has allowed the development of channels devoted entirely to games. Internationally, the largest of these is *PLAYin'TV*, produced by Visiware and available in 12 countries on 14 networks with over 70 games.

The games channel *FoxkidsPlay* is a joint venture between Visiware and FoxKids Europe. Games are based on FoxKids properties such as *Power Rangers*, *Inspector Gadget*, and *Digimon.* Children's channels such as Fox Kids, Disney, and Nickelodeon already invest a great deal of time and effort into developing a sense of community among its viewer and iDTV games are seen as a new tool in this effort.

The UK has seen the development of dedicated iDTV games channels on all platforms. The Two Way TV games channel, currently offering standalone games, is available to all DCT and DTT homes.

Also available is Playjam, a channel of standalone games carried within the interactive section of SkyDigital DST. The Broadcaster Audience Research Board (BARB) began reporting on Playjam in March 2001. In the initial week Playjam was the 10th highest rated DST channel amongst 16-34 year olds. The daily reach in this age group averaged at 6.5%, which equates to 240,000 viewers. This put Playjam ahead of MTV. 540,000 of 's total 6.2 million audience viewed Playjam on a daily basis with an average session time of 45 minutes.

The channel carries 6 games at a time and changes the games when usage tails off, at around 2-4 weeks on average. The demographics of the players changes depending on the schedule of games but gender averages at around 50-50 and there is a good deal more play by those under 16 and over 45 than console, PC or online games attract. Static2358, which produces Playjam, considers itself less of a games company and more of a TV entertainment company.

As well as pure games channels many iDTV services have their own games areas. The SkyDigital iDTV service, for instance, has its own games area which carries either syndicated games such as *Battle Ship* or close copies of classic games e.g. *King Tuti*, which is based on *Pac-Man.* Their representation of the classic *Tetris* has been a big hit, especially among those who have never played computer games before, and the inclusion of a leader board has proved effective. In one 2-day period *Tetris* generated £43,750 in pay-per-play – 175,000 games were played at 25p per play. Meanwhile in France, the CANALSAT Jeux TV game portal has been receiving 5.4m visitors a month.

Existing channels are also beginning to develop a games element. Cartoon Network has developed a series of games, based its brands such as *Powerpuff Girls* and *The Flintstone,* while The Game Show Network (GSN) are

developing a games channel that will feature GSN-original and classic-TV game shows, as well as original games from Two Way TV.

The availability of games (and games channels) that are strongly linked to TV shows should encourage communities that are a crossover between the, equally avid, games and TV online communities. Directly enhancing existing TV shows is another dramatic development.

ENHANCED TV AND GAMES

In the iDTV industry a distinction is often drawn between Interactive TV, which may include stand-alone services such as home banking and shopping, and Enhanced TV where the broadcast video is an essential component.

Enhanced TV is often a way of making the content of TV itself into a game. Along with the method of enhancing pre-recorded gameshows that companies such as Two Way TV favor there are a number of TV production companies who are developing TV show formats with an integral interactive element. Victoria Real's success in developing the on-line element of Big Brother promoted the Interactive TV game industry by proving that people will interact if the content of the TV show itself is compelling enough.

More recently the surreal, typically British humor of the TV show *Banzai* combines absurd events of a Monty Pythonesqe nature with club-flyer graphics and appearances by D-list celebrities. Viewers using their handsets to guess the outcome of 'challenges' such as, 'Who is better – a one-legged footballer or a one-handed goal keeper?' or 'The Old Lady Wheelchair Chicken Challenge'. Enhanced shows such as this, which tap into rich elements of British pop culture, are driving the public acceptance and use of iDTV more effectively than functional services such as banking and shopping. In contrast to the PC, UK viewers see the TV as primarily a source of entertainment rather than information or services.

Enhanced Sports applications are also popular. *SkyDigital Sports Active* made its debut in August 1999 when viewers of the Arsenal v Manchester United football game could view highlights during the game, access statistics and select different camera angles. Since then Rugby and Cricket have been given the same treatment and the BBC has broadcast a very popular version of the *Wimbledon Tennis Tournament 2001* on DTT where viewers could choose which court to watch.

In October 2001 SkyDigital launched *SkyDigital Play* an enhanced football game, designed and built by Two Way TV. This is a pay-per-play game where viewers make gameplay predictions as the live game plays out.

With planned integration of *Armchair Manager* games into such services will increase the element of competition, cooperation and community.

IDTV GAMES AND ADVERTISING

iDTV Games are already competing with traditional advertising; NTL shows peaks of activity in the game area during ad breaks with the largest activity just before the most popular TV shows.

Interactive advertisements are themselves incorporating small games. Go-Fly, who sell flights, have successfully used games to drive traffic to their iDTV site, games were the core service for Procter & Gamble that promoted the Charmin range of household products, and a "Life Game" was created for Prudential Financial Services.

The games channel Playjam that offers a number of ways for the advertiser to sponsor games: a game sponsored for a limited time; a game made just for them; or the opportunity to sponsor the whole channel for a day. As the Playjam channel is BARB rated advertisers have a clear idea of the demographic their ad will be exposed to. Glaxo SmithKline originally planned to sponsor a game called *Push My Button* with their Lucozade brand, which is aimed at teenagers and uses Lara Croft in its other advertising, but switched to Aqua Fresh Toothpaste when they saw that the game was played predominately by older women in the daytime.

This example illustrates one of the strengths of iDTV, which is the ability to capture and analyze data from players. As the success of advertising is heavily dependent on viewer trust, broadcasters must be careful that this data gathering does not become an invasion of privacy as some believe it will [13]. Such invasions of privacy will have an effect on any developing communities.

GAMBLING

Some of the most complex, close, and passionate game-playing communities have developed around games and sporting events that have and element of gambling. Forms of gambling on iDTV range from betting on fixed odds sporting events (such as those offered by Blue Square) and casino type games, to "soft" gambling on impulse pay-per-play games where players can pay a small fee for the opportunity to win prizes.

On May 1st a UK company called *attheraces* launched an interactive channel on SkyDigital, that shows live horse racing from 49 UK courses. From launch, *attheraces* will allow viewers to place pari-mutuel (pool) or fixed-odds bets via their remote controls. One concern *attheraces* has is under-age betting and it is working to with GamCare, a UK charity which advises and counsels on gambling addiction issues. However, Simon Cooper, Communications Director for *attheraces*, has admitted that "the problem is very hard to police." Especially as *attheraces* hopes for "as big an audience as possible in order to try and maximize the available betting pool." [14]

IDTV betting has already become quite popular in France where the CANALSAT *Pari mutuel* horse racing service has opened 58,200 betting accounts since it started in 2000.

The 2001 Gambling Review Report by the UK Government Department for Culture Media and Sport [15] proposes that 'money-in-the-slot' machine games will be free to enter the Internet and iDTV environments. Serious betting will most likely be kept in the control of broadcasters who have negotiated live TV rights to sporting events. Television has always been more tightly regulated than the UK games market [16], which operates a voluntary but successful age rating system. It will be interesting to see how the new telecommunications regulatory body Ofcom [17] deals with the convergence of games, gambling and TV.

Broadband TV

When considering iDTV games we must also look at Internet access through the TV. Among the devices capable of accessing the Internet, game consoles and STB's have seen the most dramatic increase in usage. Web surfing from gaming consoles increased by more than 1 million gamers in the second quarter of 2001 to a total of three million and access by STB's grew by half a million people to one and a half million [18]. Internet access it is now part of both DCT and DTT services and some games companies are seeking an advantage by designing for both PC and TV.

Between March and June 1999 Two Way TV took part in the Microsoft UK Web TV trial that gave viewers access to both the Web and to a number of services designed specifically for the platform. The game used was based on the TV show *Strike It Rich* and was more than twice as popular as any other service.

Improvements in STB technology are beginning to allow developers to produce 3D games for iDTV. PACE have prototyped a STB with the Sega Dreamcast system built-in and Nokia have produced the Media Terminal with a large hard drive, fast processor chip and support for Linux. In anticipation of platforms of this kind becoming available nGame and NTL have been developing a 3D multi-player networked game called *Berlin Assassins*.

In addition to this, Telewest plan to develop their broadband service, Blueyonder, to support multiplayer gameplay through the TV. They are running trials with PlayStation2 boxes (with added Ethernet connections and hard drives) bundled as part of a subscription-based online gaming services and are making similar plans for the Xbox.

The generation of the 3D world need not occur within the STB however. Vis Entertainment have developed an "Interactive Virtual World of Horseracing" called *iRace* to be launched on the Telewest DCT platform in 2002. The game is based on a modeling of the "genes" of horses and allows players to choose a horse, plan its training, then enter it for a race. Races run every 10 minutes on virtual tracks with variable weather conditions. Because there is no need for constant interaction the graphics can be generated at the

server and broadcast as normal digital video obviating the need for a high-spec STB.

COMMUNITY TOOLS

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Interactive TV systems can provide the tools needed for gamers to begin developing their own communities. Many software providers offer built in tools for chat, mail, and messaging. In the UK, Yoomedia, who host and manage the chat for the cable companies, have developed a similar system for SkyDigital.

YO-YO" is a new channel, developed by Static and launched at the end of 2001, aimed at building a community amongst 18-35 year olds. The channel combines interactive TV with premium rate and mobile telephony to enable to viewers to interact with each other through their televisions.

Viewers create an avatar by selecting characteristics from an onscreen menu and describing themselves on a profile card, which includes location and star sign. Each member is assigned a unique PIN which, when another viewer wants to make contact, is entered through the dedicated phone line. After listening to a 30 second voicemail message about the member in question, the viewer can leave a message for them. Optionally, each member can arrange for an SMS alert to be sent each time they receive a message.

Around this central chat service YO-YO" carries competitions, polls and editorial content themed around one of 5 core channels – celebrity, soap, comedy, music and a 'late lounge'. Given Static's position as an iDTV games developer the future use of such tools for gamers seems inevitable.

Two Way TV have developed a popular letters page that works well with a demographic more used to magazines than on-line discussion forums. The sense of community is no less because of this, with letters describing how players enjoy the connection they feel with other players.

In 1994 the TV show *Gamesmaster* took messages from an Internet chat room and put them on TV via Teletext subtitles. The MTV show *Video Clash* currently allows viewers to use SMS messages sent from their mobile phones to vote for which music video they wish to see next. Votes are displayed on TV, Web and WAP in real time. In its initial 6-month run the show consistently got more than five million viewers and an average of 25,000 messages a show. *Daily Chart Live*, a more complex show with viewers having to SMS a list of their top 10 videos, proved less popular and usage declined rapidly. Initially the revenue derived from this service went entirely to the telephone company but the introduction of a technology called reverse billing now allows them to share this revenue with MTV. Needless to say, MTV plan more SMS enhancements in the future.

CONCLUSION

Television is not simply a delivery mechanism. Its intrinsic nature alters its content in many ways. In documentary reporting, for instance, television alters the political and professional structures by which we create "news" [19]. Television puts forward, enforces and reinforces social ideals of individuals, family, nation and the world. When we watch television we feel as though we belong to an "electronically constituted society" [20], where television is as much a mediator as a media.

We live life as though we are on television and have gone beyond the situationist society of the spectacle [21] in which life, including ourselves, becomes content for TV and in which "You no longer watch TV, TV watches you (live)." [22] Baudrillard argues that the medium and the message are no longer even discernibly separate and that we are witnessing "the dissolution of TV into life, the dissolution of life into TV" [23].

Television is much more than a technology, an industry or a mass of content. As Roger Silverstone argues, "We need to think of television as a psychological, social and cultural form, as well as an economic and political one." [24]

With improving technology, increasing penetration, and growing use by non-technophiles iDTV is slowly becoming recognizable as a *place* where one can *be*. Not just in the sense of a "dissolution of TV into life" but in a very real way where individuals can communicate, cooperate, and compete.

This changing of the uses of TV is quite different to the newly arrived uses of the Internet that do not carry with them such a long and complex history. TV is a global, near-ubiquitous technology that has played a unique role in shaping modern society. It is now finding a new role as an arena for games and the communities that will play them.

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