VALUE ADDED SERVICES ON DIGITAL TELEVISION PLATFORMS

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Abstract

This paper examines the acceptance and use of value added or interactive services by viewers on digital television (DTV) platforms. These services like the electronic program guide, enhanced background information on programs, internet access, video-on-demand, near video-on-demand, walled garden services have certain business value. The hype formulated in the mid-1990s gave them a priority over the good old television broadcasting service as main value drivers but due to viewers' unfavorable reaction to iTV the hype had not met expectations and incomes generated by value added services on different DTV platforms remained rather modest up till now. Nevertheless, the huge popularity and the high penetration of mobile phone use in Europe combined with special television show formats led to fast-growing uses of text messaging recently as a new way of interacting with television. The success of SMS demonstrates that viewers will change their coach potato habit if there is some real trade-off, some consumer surplus to get, and if the way of interacting is really user friendly. It's worth mentioning yet that text message revenues do already represent an important element of proceeds generated by many shows on the screen.

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Introduction

Digital television can be defined as a television platform for which content is transmitted in digital form. Digital television (DTV) platforms whether satellite, cable or terrestrial are capable of carrying not only traditional television programs in a linear way but provide a couple of other services as well. Parts of the services are attached to the programs themselves (background information on programs or program associated data) parts of them are not (non-program associated data).

The hype that DTV is much more than a large bouquet of television services and that digital technologies are to revolutionise both media consumption in general and television viewing in particular began to proliferate in the mid-1990s, although the whole concept of multichannel television relying on different DTV technologies had already been questioned before DTV platforms entered the scene. The doyen of online media gurus, Nicholas Negroponte, argued some years earlier that instead of having hundreds of channels, the viewer in the future needs only one that fits her or his preferences. Wired networks take over broadcasting in providing media services[1] and the wired customer takes the command position in the media supply chain, by selecting among digital contents (text, audio, video, multimedia) available online. Anything, anywhere, anytime, easily available, so says the famous 3As mantra. Content editing and/or packaging practised by traditional off-line media outlets are to become more and more irrelevant to users who will personalise their own media consumption by editing their own newspaper ("The Daily Me"), and packaging their own television program ("My Channel"). Negroponte went so far as to argue for change in the basics of media economics as well: "The economic models of media today are based almost exclusively on "pushing" the information and entertainment out into the public. Tomorrow's will have as much or more to do with "pulling," where you and I reach into the network and check out something the way we do in a library or video-rental store today. This can happen explicitly by asking, or implicitly by an agent asking on your behalf." (Negroponte 1995, 170).

If the contemporary media world and the realities of media consumption show only a slight resemblance to this hype, it is mainly due to two things. First, the digital revolution in media technologies has upgraded broadcasting technologies, too, and these changes have not left much room for the so-called Negroponte switch. The unquestionable success of digital satellite broadcasting and the proliferation of digital DTH (direct-to-home) satellite services world-wide, coupled with the less successful but emerging DTT (digital terrestrial television)[2] services have brought hundreds of channels into the market, offering the audience a very broad choice. The pick and mix principle in program choice introduced by digital DTH broadcasters in the late 1990s gives power to the consumer to bundle her or his own bouquet of channels and television programs. The use of EPGs (electronic program guides) from the beginning of the twenty-first century provides help to the consumer in selecting program items at will. Personalisation of television viewing utilising digital broadcasting technologies is emerging steadily, making it possible for DTV services to compete successfully with online video services.

Secondly, we have to consider consumer habits. There is currently little evidence that the majority of television viewers want more than a fairly passive viewing experience, such as involvement in television program editing, or searching

for detailed background information, just because the new technologies make these possible. Consumer habits are certainly changing but it is also true to say that such changes take much longer than had been predicted, especially the development of the traditional passive viewer into a more active participant in the mass communication process, into a kind of "*viewser*" (*view*er + u*ser*).

Interactive Television (iTV)

The term interactivity has been used widely in communication literature. Most scholars do not bother to define it and when definitions are found they are often contradictory (Downes and McMillan 2000). Nevertheless, the term is a part of the communication process in a tacit way, if we accept the definition of communication as *social interaction through messages*. Mass communication differs somewhat from this, being a technology-mediated, institutionalised, mostly one-way process with little or no interaction between the sender, the mass communication institution, and the receiver, the large, heterogeneous and dispersed audience. Interactive television (iTV) is at least as hard to define, but it generally includes "two-way TV, in which the viewer can make programming choices and produce user input" (Van Dijk and De Vos 2001, 446)]. iTV is both a new way of providing television services to viewers and a new way of consuming television programs. It involves not only the core activity of providing a television program service, but it also allows the hitherto passive media audience to talk back, to make choices in this new environment and to influence the mass communication process itself. Degrees of interactivity differ widely, if we look at the range of services available to viewers/users: "The more interactive media are, the more they allow continually motivated choice and response by users" (McQuail 2000, 33).

Interactive television has its own past and it is far from being a brand new 'high-tech' phenomenon. Carey (1994) gives a brief history of iTV in the US, going back to the roots of early television experiments of the 1920s and describes the first interactive television program that was created in the CBS children's series "Winky Dink and You" in the mid-1950s. The low-tech interaction was created through the use of a special plastic sheet attached to the TV set. In the program, Winky Dink, a cartoon character, encountered many problems and children were asked to provide help by drawing pictures on the plastic sheet interface.

Later, in the 1970s, many interactive television trials using cable television infrastructure were launched but they could not compete with network programming. In the early 1990s telephone companies also entered the scene, offering interactive television for display on household television sets, but from a business point of view, early iTV trials in cable and telephone environments were failures, in that they could not reach a mass audience and were not able to change radically enough the nature of television viewing for the audience.

The digital revolution in the media commencing in the early 1990s, with the diffusion of new online media, has brought a genuinely new dimension to media consumption. More and more media services are offered in the World Wide Web environment for Internet users, and the Web provides a new platform for interactive television on household PCs. Nevertheless, Internet television content presently is qualitatively very different from what broadcast television provides. Short films, documentaries, news and soaps are regarded as successful Internet televi-

sion formats limited in length to between one and six minutes (Konert 2002). The fast household penetration of broadband Internet in developed countries may help to ease content distribution problems as far as bandwidth requirement is concerned and may give the green light also for distributing other formats, but it seems now that unsolved content copyright and ownership questions for the time being block the development of online distribution of high-quality video content with mass appeal.

Some leading industry analysts (Bernoff et al. 1998) predicted in the late 1990s that interactive television based on digital cable infrastructure would succeed, blending Web content with video in applications that require minimal consumer effort. The triple play of voice, video and data services provided by broadband digital cable networks will lead to interactive television. So-called "lazy interactivity" implies a user-friendly approach to iTV for consumers, a kind of soft landing into the previously threatening world of high-tech media applications. Industry leaders were convinced that television viewers would become remarkably active if only they could experience the content surplus in the new services.

iTV on Digital Television Platforms

The emerging threat from the Internet and the step-by-step advance and popularity of video streaming technology made television broadcasters face the challenge of interactivity once again. They realised that there was sure demand for the kinds of interactive television/video services that were provided earlier by the Internet and that new DTV technologies should make room for traditional television companies to roll out interactive services. Digital television now provides traditional linear television services in higher quality, with more channels, better picture and sound quality and 16:9 aspect ratio and it also serves as a platform for interactive television. These consist of EPG, enhanced broadcasting services (which include interactive graphical content overlaid on regularly displayed video content, interactive content that may be synchronised with video for, say, an advertisement, or available on command), digital teletext or extended information services, Internet access, video-on-demand (VOD), near video-on-demand (NVOD), walled garden services, etc.

EPG has become the first popular and really successful "lazy interactivity" application in digital television. Subscribers to DTV services can be deluged literally with hundreds of channels and therefore forced to use EPGs if they really want to exploit the value of program variety. Advanced new generation EPGs support more sophisticated searches and the ability to probe more detailed program information, eliminate channels that are never watched, make recommendations for future programs of interest (including pop-up reminders when favourite shows are on) and automatically record previously selected choices.

Viewers using EPGs combined with digital personal video recorders (PVRs) with huge storage capacity can personalise television viewing to the degree that can be compared to the "My Channel" concept formulated by Negroponte a decade or so ago. They can record programs by pre-set preferences and real-time viewing can be reduced to news and live events only. Thus increasingly online media services can be replaced by digital broadcasting services. Pre-planned viewing, however, currently takes up only a tiny share (most analysts say not more than ten

per cent) of all individual television viewing. In the past, VCRs certainly gave viewers the ability to record programs for later viewing but time shifting in viewing patterns was only a modest success. As Owen (2000, 22) points out, television broadcasters had already adopted a mode of operation (counter-programming) that minimised losses in real time viewing. This strategy was based on the belief that for most people, one television show is pretty much a good substitute for another and very little on television is worth the trouble of programming a VCR. Accordingly, VCR use is mostly limited to playing rented or purchased feature film cassettes. This consumer habit has dominated television viewing in multichannel environments and it survived the fundamental changes in television program supply driven by new business models, in the gradual shift from free-to-air (FTA) to pay television. It can not be taken for granted, therefore, that PVRs are about to revolutionise the way we select programs to watch day by day.

As far as enhanced broadcasting is concerned, non-linear news and weather programming, sportscasts, studio discussions, reality programs, game shows and advertisements are iTV-ready now and can be enhanced in various ways. But dramatic content is extremely difficult to enhance. Viewers do not want to interrupt an exciting thriller, drama or soap opera, and they do not want to write the ending of the story they are watching. They want to be entertained by professionals rather than accept the invitation to become "prosumers" (*pro*ducer + con*sumer*).

Internet access on TV is a potential application with limited success at this point in time. WebTV, the most promising technology for access to the Internet via TV, proved to be a business failure in the U.S.: only 1% of TV households have subscribed to this service since 1997. It turns out that most people who want to get on to the Internet decide to buy PCs. Digital television broadcasting represents an alternative technology for household Internet access. Recent surveys (Brodin et al. 2002) in the U.K., the country with highest penetration of DTV, show that more than half of all DTV households have iTV services. The same data suggest a large overlap between households subscribing to iTV services and those with online PCs. Online PC and iTV services mostly complement rather than substitute for each other, although there is a significant minority for whom iTV is the only access device in the home.

From the point of view of consumer access, the two types of terminals, PCs and TVs, have got closer to each other in our brave new digital world. PCs may be used for receiving television programs via a TV card and integrated DTV sets and settop-boxes (STBs) can have large or not so large storage capacity, depending on which technical feature will be developed in future and what the price structure will be. Stored short programs, additional information linked to programs and/or excerpts of programs (highlights, trailers, etc.) can be retrieved by viewers off-line (pseudo interactivity) and a "return path" enables two-way communication with members of the audience (real interactivity).

Near video on demand (NVOD), video content with run times staggered at frequent intervals on multiple channels, is a frequent and successful application of iTV. NVOD is easy to use and offers mostly feature films to viewers, but it can be used in broadcasting live sporting events by extending the borders of consumer choice, as in BBC coverage of the Wimbledon Tennis Tournament in 2001 when five matches were broadcast simultaneously and the viewers could decide which

one they wanted to watch. Video on demand (VOD) services, video content accessible at any time, are far less common than NVOD services because VOD needs a return path linked to consumers' TV sets in order to make two-way communication possible. All VOD services are still in an experimental phase so they are not relevant yet from a business point of view. Walled garden services offer a portal-like suite of internet-TV applications that usually includes communications, video and audio on demand, gaming, commercials, t-commerce, t-banking and other customer-care applications provided through an operator. These services compete with the digital portals on broadband Internet (Picard 2000), and their business potential is substantial if they can boost use of the core service.

The French digital DTH operator TPS provides a working model of how an iTV system works. TPS launched a comprehensive suite of iTV services to its subscribers. Its set-top-box includes a phone modem for return path usage and sufficient power and memory for most uses. It carries a 24-hour weather channel, a financial channel developed from t-commerce applications, email, messaging, gaming, betting, general advertising and classified ads, a special women's portal with cooking, fashion and horoscopes. All these are being offered to subscribers in a user-friendly way (Case Study: TPS 2002). In this business model, consumers do not pay for their interactive services: TPS generates revenue by charging provider companies for the number of customers they have, the size of their interactive applications and the level of interactivity utilised.

A recent report on UK consumer responses to iTV suggests that "consumers often have only a vague idea about what kind of interactive services and programming are offered before becoming DTV users. Many early adopters have been disappointed with the reality of interactivity, except for some TV-related services such as Sky Sports Extra, Big Brother and Banzai" (Brodin et al. 2002, 14). But expectations of iTV are soaring, according to the Continental Research Report (2001): although the request for more programs tops the list of priorities for improving DTV in the U.K., there is also demand for more efficient EPG, faster Internet service and full Internet access.

Early predictions about the human appetite for interactivity now look a bit too optimistic. If we take into account the fact that that BSkyB, the most successful digital DTH platform in Europe, had a £347 average revenue per subscriber (ARPU) figure in the last financial year (1 July 2001 – 30 June 2002) and that its revenues from interactive services accounted only £14 out of this huge overall ARPU, we can see the real place of iTV services in the DTV world. It is difficult not to share the main conclusion of U.K. DTV market analysis (Barwise 2002) that interactive digital television is still mainly about television viewing, not surfing the Internet on the television set. One might venture to say that this conclusion is not just confined to the U.K. market but is valid for other DTV markets as well.

Interactive Television via SMS

The huge popularity and the high penetration of mobile phone use in Europe, combined with special television show formats that invite viewers to express choices — such as voting for participants, sending in comments, competing in games — led to fast-growing use of text messaging as a new way of interacting with television. More adults send SMS messages than use the Internet in Europe and more

and more teenagers send messages to TV shows. The most popular reality show "Big Brother" attracts hundreds of thousands of text messages in the U.K., France, Norway, Spain and Hungary, when the show was screened in the Autumn of 2002.

SMS interaction with television programs is two sided, as broadcasting and text messaging services converge even further. Viewers of "Loft Story," a French variant of the hit TV show "Big Brother" can receive news of the latest events in the "loft" by SMS. Vodafone subscribers in the U.K. can receive SMS news alerts and take part in quizzes and polls, all based on the show "Survivor." The BBC periodically devotes an evening's programming to the SMS phenomenon, where viewers are encouraged to send in jokes and messages and take part in a live SMS voting. BSkyB has just launched a new service that will see even further convergence between different technologies as digital subscribers are enabled to send text messages to mobile phones from their TV remote controls or a cordless keypad. It is planning to enhance its suite of television-based messaging services with the introduction of a two-way SMS service. This new service will enable subscribers to receive SMS messages on-screen and reply to them.

Text message revenues are already an important element of the revenue generated by many shows on television. The success of SMS as a tool for interacting with television programs demonstrates that viewing behaviour can change from the purely passive mode if there is some real trade-off in terms of consumer advantage, if the manner of interacting is as easy as sitting on the sofa, mobile phone in hand, pushing buttons on a familiar device used every day. Digital television platforms combined with text messaging technologies in ways that are attractive to viewers and users represents the kind of platform convergence that creates consumer demand in a viable market model, in sharp contrast with some of the more extravagant predictions about convergence popular a decade ago.

Notes:

1. The so-called Negroponte switch formulates that media services formerly coming over the air (broadcasting) will be delivered by wire (cable, telephone line), while services that formerly come by wire (telephony) will be delivered over the air (cellular)

2. Across Europe, it is becoming clear that market forces alone are not able to drive the diffusion of DTT technology and that the state must play an active role in the analogue-digital switch over. This is in sharp contrast to the other two digital television platforms, where digital satellite and digital cable development are driven mainly by the market with little state involvement in the process.

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