KPMG

The interactive culture industry

Background paper

For the Danish Ministry of Culture
4 July 2002

In 1905, a feature film consisted of a single piece of colourless celluloid, lasting less than two minutes. The technology was new, the business model was uncertain and the content was primitive. The potential was difficult to see.

Three years later, 80 million tickets were sold in the USA alone. 35 years after that, Charlie Chaplin's *The Great Dictator* was praised and debated as a visionary, political and esthetic work of art. Today, 97 years later, the film medium is acknowledged as one of the twentieth century's primary means of expression. We watch colour movies in Surround Sound, with photo realistic computer graphics - and the medium of film is able to contain fine art as well as documentary subjects and popular entertainment.

Today, interactive cultural products are in their yearly youth. The technology is new, the business model is uncertain and the contents are often primitive.

This document is an appeal to the reader to imagine the development of interactive media within the next 20 years. It is an invitation, also, to participate in positioning Europe in a completely new field - both economically and culturally.

Content

Front-page illustration from the computer game "*Civilization III*"
and Pieter Brueghel, "*The Tower of Babel*"

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1. Executive summary

1.1 Current situation and potential

Interactive cultural products are gaining ground all over the world. With content spanning from entertainment to education, and from art to advertising, they are expected to play a major role in the cultural, technological and economical development of the knowledge based society.

Interactive cultural products are presently moving from a niche stage to becoming a wide-ranging, culture-carrying phenomenon. It is no longer enough to view these media as sub cultural artifacts: If the full potential of interactive cultural products is to be realized, they must to be looked at in a completely new way.

The potential:

- Interactive cultural products can become the frame of reference as well as an instrument of enlightenment for the 21st century.
- Interactive cultural products contain enormous commercial perspectives.
- Interactive cultural products can contribute to the citizens' adoption and use of new technology. In this way, interactive cultural products can promote modern democratic development.

1.2 Barriers

A new approach to interactive cultural products will require viewing them in a way that is similar to the other cultural spheres – in line with literature, music, theatre, film, and so on. This raises a number of questions within cultural politics – mainly regarding talent, creative competences and content development methods.

Today, interactive cultural products are often born and bred by market forces that are controlled by global companies. It is important to address the question of ensuring financial incentives for new and innovative developers.

The market for certain kinds of interactive culture (i.e. computer games) is already entrenched to such a degree that an innovative product or developer will require substantial economic and competitive muscles, in order to manifest itself. If cultural politics are to make a difference, commercial perspectives will have to be taken into consideration.

The following points sum up some of the barriers that lie in the way of ensuring the best possible framework for the European interactive culture industries:

- In many ways, Europe is lagging behind Japan and the USA. This holds true for content, market and technology. In addition, Japan and the USA hold extremely valuable strategic positions in the market – particularly with respect to the placement of "gaming consoles" in the home. Access to venture capital can help European companies to build a stronger market position.

- Europe lacks professional leadership competencies as the primary driving force for the creation of competitive products. The needed competences include the ability to think across the respective fields of (1) culture, (2) technology and (3) marketing. This trinity is an essential and distinctive feature of interactive cultural products.

- Based on the fragmented structure of the European market, it is difficult for European players to achieve widespread success across the continent. A number of cultural and regulatory differences still exist, and it is crucial that the players become able to unite cultural diversity with the ability to penetrate the global market. A target could be the establishment of a Pan European network, geared to ensure that successes, experience and competences are spread across Europe. The public broadcasting network could also be part of the answer to this problem.

2. Introduction

The goal of the Danish presidency's initiative, regarding interactive cultural products, is to discuss with member countries and the Commission, whether an enhanced effort should be initiated to promote interactive cultural production in Europe. It is, also, a goal to identify specific issues and action areas to be included in such an effort.

The initiative aims to launch a process, focusing on the cultural and commercial potential of interactive media in Europe – perhaps in the form of new analyses and surveys.

This document is a background paper. It will:

- Provide an overview of interactive cultural products.
- Serve as an inspirational basis for the work to come.
- Document the relevance of the subject.

Focus on the user

Sid Meier, the American game designer known for strategic games such as *Civilization*, *Alpha Centauri* and *Gettysburg*:

"There is a key difference between games and movies. In a game, the more attention that is focused on the player, the more successful it is. In a movie, you're really watching somebody else's story, so the better the story or the better the actor, the more interested you are in the movie. In a game, the more interesting you are as a player, the more successful the game is. I think the idea of the focus on the player is something we have that is very different from other forms of entertainment."

(I*nterview in online magazine Gamespot UK, 2001*

2.1 What is an interactive cultural product?

This document views interactive cultural products as a new means of expression - in line with literature, film, music and theatre. Consequently, the document does not deal with interactive content in a broader perspective, but solely in relation to culture-bearing products distributed digitally that allow the user to make choices, affecting the end experience.

In the years to come, interactive content will gain further cultural acceptance as well as increasing market shares. New media will grow to contain art, communication, education and much more. In this sense, interactive issues will become a large part of the foundation for any knowledge-based society.

Interactive cultural products are big business. The Americans and the Japanese have taken an early lead, but due to the relative youth of the medium - and the direct focus of market forces on certain types of product - the market is still open for both commercial and public endeavours.

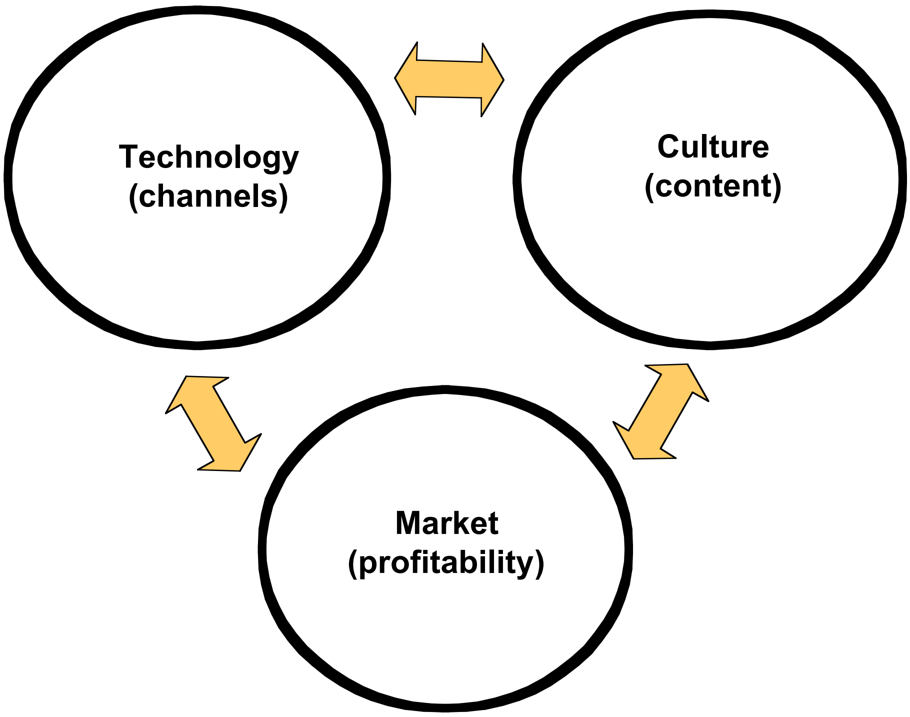
Traditionally, when new media have been introduced, Europe has taken the lead. The talent exists, the technology sector is strong and the competitive will is present. The challenge will be to relate culture to industry through new technology.

2.2 What drives interactive cultural products?

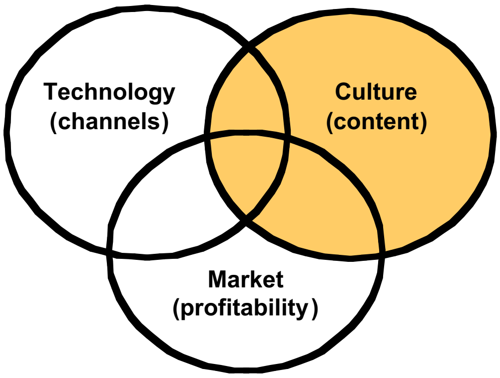
To win the battle for the content of the future, three areas must be fused together: the first area is culture, the second area is technology and the third area is the market.

These three target areas form a trinity. It is vital that all areas function individually, as well as in concert. In the following chapters, each of the three areas will be described in detail. Within the cultural section, five aspects of interactive content will be outlined: entertainment, education, documentary, art and advertising.

The work to come will concern the balance between the three focus areas in order to ensure a forward-looking development of interactive cultural products in Europe.



Figur 2.1
The three focus areas



3. Culture

From the viewpoint of cultural policy, the digital revolution holds a huge potential within the following areas:

- *Individual enlightenment.* As with other cultural products, interactive content may contribute to the personal development of the users.

- *Innovation of the public service sector.* The public sector has the opportunity to continue its traditional functions within the new media.

- *The cohesion of society.* Interactive cultural products may contribute to citizens' experience of living in a community.

- *Cultural diversity.* The capabilities and possibilities of the new media can and ought to be utilised with respect to the communication of cultural differences and distinctions to a large audience.

In this chapter, we will first look into the current status of interactive cultural products, secondly we will describe their potential and thirdly we will discuss some of the barriers that stand in the way of achieving this potential.

3.1 Current situation

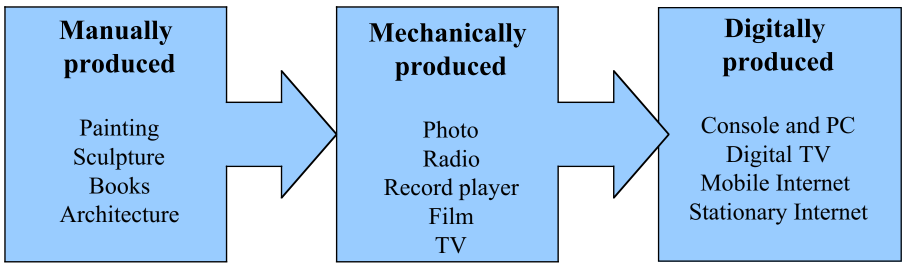
There have been computers in European homes for approximately 20 years, and interactive media have long since passed the sub cultural stage. The younger generations have been influenced by computers, Internet and mobile telephones, in much the same way as earlier generations were influenced by cinema, radio and gramophones.

This section will look into the technological status and the spending habits of the recipients - but it will first and foremost look at the forces that create interactive cultural products.

3.1.1 A new medium

The development of cultural forms has always relied on technological progress. Around year 1400, the invention of printing meant that learning and reading - and rebellious ideas - were disseminated to the whole population and that the development of science and philosophy could accelerate. The rotary press turned newspapers into mass media and played a part in ensuring the freedom of speech as a modern democratic principle. The gramophone and cinema are also based on technological breakthroughs – and around 1900 they created a completely new entertainment industry. In the twentieth century, electronic mass media, radio and television have spread with astounding speed. In the twenty-first century, a new breakthrough is making itself felt - i.e. digital technologies, adding a new and interactive dimension to cultural content. We have illustrated the development in the figure below.

Culture bearing technologies



Figur 3.1
The digital media gives the content a completely new dimension: Interactivity

Like the other technological breakthroughs, digital technology changes the way we live and work. The traditional media will not disappear - but the new media are already coming into focus - and we do not yet know in which direction they will carry us.

Interactive media habits

60% of all Americans over the age of 6 years play computer games.

43% of the players are women.

Adults over the age of 18 buy 90% of all computer games.

34% of all Americans choose computer games as their favourite entertainment activity, 18% choose television, 15% Internet, 13% books and 11% the movies.

The average age of game players is 28 years.

Source: www.idsa.com

3.1.2 Changing media habits

The traditional media “viewer” or "audience” takes a passive role. The interactive user is active, seeking and communicative across media platforms. Concurrently with the above, most media genres - news, debate, culture, entertainment and sports – engage in still closer, cross-media combinations, e.g. through Internet portals, communities and search functions.

The digital media create a new - interactive - hybrid between traditional mass communication (one-way communication to an anonymous audience) and the electronic communication instruments such as telephone and fax.

3.1.3 A new industry

The problems, opportunities and barriers that are characteristic of the production process for interactive media are unique, compared to those of other media. The competences and skills required - as well as the technologies - differ highly from corresponding processes within movie and television production. The interactive culture industry is still in its childhood, and as such consists of many, independent production units, tied together through large publishing houses and distributors.

With the interactive content industry still in the start-up phase, cultural policy can play an important role. For instance, European public service broadcasters could influence the development of interactive media and provide a well-acknowledged gateway for interactive media to a mass audience.

The Bafta award

Every autumn, the BAFTA award is granted in London by The British Academy of Film and Television Arts. Publishers, developers, television stations and other players in the interactive industry participate in the competition by sending their contribution for evaluation in categories ranging from art installations, mobile phones, cd-rom and DVD for games, homepages and interactive television.

3.1.4 Awards and exhibitions

International awards and exhibitions are a way of drawing attention to interactive cultural products and establishing connections between developers and distributors of interactive content. Since the middle of the 1990s, a number of different international awards and exhibitions/conferences have emerged for the interactive media. Both awards and exhibitions are important, as they prove the degree of a professionalisation of the industry and the acknowledgement of the cultural qualities of the interactive media. Awards like BAFTA, Europrix, Ars Electronica and Webby are valuable for developers and designers in drawing attention to and recognition of their work. The exhibitions give developers the opportunity to establish direct contact with publishers and television channels, for the purpose of distributing their products. The trend-setting exhibition for interactive entertainment is E3 (Electronic Entertainment Expo) in Los Angeles. At E3, game developers, publishers and distributors from all over the world meet and try examples of the thousands of computer and video games produced every year. The most important exhibition in Europe for interactive content is Milia, which takes place in Cannes every year.

3.2 Potential

Interactivity means that the user engages in the narrative in a participatory and active manner. The user can navigate and make decisions that influence the course of the story. The interactive media's unique focus on the player is sowing the seeds for a whole new narrative form, which over time can achieve a level of sophistication in line with existing art forms, such as cinema, literature, music and theatre.

Potentially, interactive narratives may contain everything from extremely commercial forms to the most avant-garde forms of art. In this section, we seek to provide an overview of the potentials inherent in the new narrative form: first in the form of actual features, then in the form of the four issues relevant to the European society: the potentials for individual enlightenment, cultural diversity, public service and social cohesion.

3.2.1 Features

Since any kind of cultural product will stem from a variety of sources and sport a variety of features, categorization is difficult. If we should, however, attempt to categorize the possible features in the notion of interactive cultural products, the tentative categories could be as follows:

- *Interactive entertainment*
- *Interactive education*
- *Interactive documentary*
- *Interactive advertisement*
- *Interactive art.*

Obviously, the terms will overlap. A work of entertainment may contain artistic innovations – just as an educational program may make use of documentary features. We have described the five concepts below:

An enlightening game

Some of the games for children are reaching the cultural level of the best children's books.

In *ICO*, a Japanese game, the user acts as a boy who has been expelled from his village. Exiled to a haunted castle, the user has to find his way out, whilst saving a girl, banned by previous generations.

Through the game, the young user is confronted with complex feelings such as intolerance, loneliness and nurturing.

ICO

Interactive entertainment (including games) comprises both fine and popular culture. That hard-hitting action is presently dominating interactive entertainment is partly due to the novelty of the form, partly due to the enormous financial requirements facing the interactive industry. Massive investment in infrastructure and production formats have to be taken in order to get Internet, broadband, game consoles and high-end computers into as many homes as possible. Consequently, there has so far been only very little room for the more culturally refined and experimenting games. Another limitation is the relative youth of the interactive narrative form.

Interactive education uses new technologies to communicate learning content. Interactive education is also known as e-learning. By combining stories with learning through interactivity, the foundation is being established for entirely new educational tools. Basically, the process of "interacting" can be characterised as a learning process; in order to succeed, the user must learn the rules for success. If the rules of the computer game are based on learning content, learning the "game" suddenly implies gaining real knowledge. The potential of letting computers and networks assist teachers in their work is enormous.

Interactive documentary communicates facts. Interactivity between the sender and recipient outlines a wholly new journalistic genre, where the recipient is invited to explore the actual events, and where the recipient mainly controls the exploration. The objective is to obtain insight through exploration and participation. So far, this genre has been created for the Internet, but the technological development will ensure that the interactive narrative form is unfolded through other media platforms, too. Experience shows that the interactive narrative form is capable of holding the attention of the recipients for a long time. This genre may represent immersion and depth in a media picture which is dominated by superficiality.

Interactive documentary

Asylum Tours is a graduation project from the interactive line at the Danish School of Journalism.

Via the Internet, the user is invited to flip through an interactive tourist guide, advertising for illegal entryways into Europe (complete with prices and risk factor).

The project makes use of interactive and dramatic measures in order to communicate actual information on criminal organisations' exploitation of the European asylum legislation.

www.djh.dk/pub/semesterprojekt/2001e/projekt07

Interactive advertisement communicates commercial messages. The genre is related to interactive education as well as interactive entertainment. Within the marketing of films, an interesting trend can be seen, in the form of games or stories based on elements from the universe of specific films. The Internet campaign for the film *The Blair Witch Project,* from 1996, was an example of this - and an example, where the interactive marketing campaign became more famous than the film itself. Another example of interactive film marketing is "community" web sites, where the audience is encouraged to bring forward their ideas for dialogue or scenes.

***Interactive* art** explores feelings and trends that have so far not reached the surface of society's awareness. Art, furthermore, comprises the creation of new esthetical forms. Interactive art is so far having a difficult time. This is due to the technology being young and therefore placing a heavy financial demand on the content. There have been a number of successful examples of interactive works of art – only time will tell whether they will last.

Irrespective of features, each individual product may influence the users' values and abilities, their understanding of other people and their perception of society. The next three sections will deal with these potentials.

3.2.2 The enlightenment of the individual

It is hardly a coincidence that the cultural and educational ideals have turned from passive perception to active problem-solving within the last 30 years. Society has become *interactive* and, accordingly, so has our attitude to the world.

Culture has always had an educating function. An illustrated book enables us to discuss feelings with our children, and television news informs us about the world. By way of different technologies, culture mediates basic values and deals with problems common for everybody. This also counts for interactive cultural products: They mediate feelings and vocabularies, as well as competences within problem-solving, visualisation and the like. Such competences may all be developed through participation in an interactive product of sufficiently high quality.

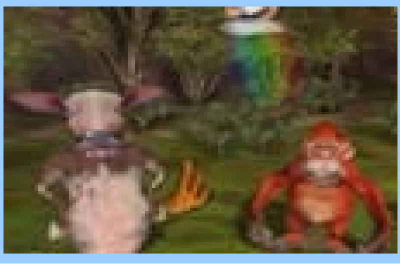
The media, also, holds a function in itself. By letting us experiencing our universal problems and feelings through new technologies, the interactive cultural products teach us to understand how these same problems and feelings can be dealt with in a digital and interactive society.

Black & White – a game of power

Black & White is one of the games that fuses “art” and "entertainment" together with new technology.

During the game, the user holds the position as god of an island. The citizen need to be convinced that the user is the perfect god for them.

The user is challenged both with respect to ethics, resource management and nurturing.



3.2.3 Cultural diversity

The European countries can be characterised by their strong national characters. Many different cultural traditions can be seen - and this is a crucial part of Europe's strength. The cultural and linguistic diversity in Europe can and should manifest itself in the interactive media content of the future, for the benefit of the continued development of the European cultures.

3.2.4 Interactivity and public service

Europe holds a strong tradition for *public service broadcasters* with large audiences and a serious image. For the public service broadcasters, the changing media habits mentioned above result in new and more complex conditions: The broadcasters now have to engage in cross-media production and the development of new, interactive programs and formats. This means increased production costs. But at the same time, the public service stations are given the possibility of becoming market leaders in certain parts of the production and distribution of interactive cultural products in Europe.

By virtue of their resources, network and specialised knowledge, the public service institutions can act as hothouses for new ideas and talents - partly under their own auspices, partly through co-operation with private production companies.

As for distribution, the public service stations may act as "icebreakers" for the interactive media, by making a large and new audience familiar with new kinds of cultural products. Large parts of the audience still regard interactivity as unaccustomed and unsafe - recommendation from a well-established and reliable media institution can make a big difference in this respect.

The traditional role of public service broadcasters is to serve the general public and at the same time develop and strengthen culture and identity – as well as facilitating dialogue and context for all citizens. Exactly because public services are not obliged to make a profit, it is possible to experiment and to build experiences about developing new interactive program formats.

Interactive public service in The Netherlands

An example of co-operation between a public service station and a private content producer is the online game, ”Crisis” in The Netherlands.

In the television program, a number of well-known politicians are placed in a crisis situation, where they have to make prompt decisions with dramatic consequences. In the accompanying online game, the audience is put in the place of the politicians.

The result indicates that the politicians were far more cautious in risking the citizens' lives than the online users were!

3.2.5 Social cohesion

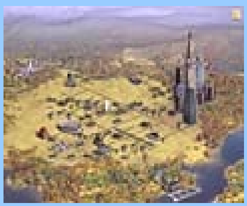
Society is about shared values, frameworks, objectives and knowledge. Cultural products can contribute towards creating cohesion across borders, age groups and

A socialising game

In the American game *Civilization,* the user is given the responsibility for leading a tribe through the times.

The user leads his/her tribe from stone age to space age by taking care of hunting, construction, resource-consumption and research.

The user gets a historical overview of the evolution of human being over time. At the same time, the game communicates a typical American world picture. The invisible rules of the game are laid down so that the republic is the best system of government.



Creative trade

In Denmark, the institution "Louiz" was established with the purpose of promoting growth potentials and product ideas. Louiz amalgamates creative abilities with sustainable business.

Louiz participates in the design of new products and services in the cultural trade through the establishment of interdisciplinary Innovation Teams. Each team consist of six to eight people with different specialist skills. During a managed innovation process of six months, Louiz facilitates the idea and product development of the team. The result is presented to an industrial screening board.

If the board finds that the idea hold a business potential, the idea will be developed further.

political convictions. Since the ages of the caveman, art has supplied people with heroic legends, understanding of cosmos, and so on - and this role can be carried on in modern time through interactive stories.

Again, the public service broadcaster can make a decisive difference - and interactive cultural products can take the lead.

No potential, however, without obstacles. The next section will look into the obstacles.

3.3 Barriers

Which barriers hamper the development of interactive cultural products in Europe? Which problems are to be solved, before we can harvest the obvious potential?

It is a question of creativity, technology and business. In this chapter, we will deal with creativity.

Whether we are talking about fine arts or popular culture, the production of a cultural product depends on the interaction between the people possessing the required competences and the institutions working with them.

This section will look into three human barriers and one institutional barrier.

3.3.1 Creativity and efficiency

If the goal is to create innovative, interactive cultural products, which possess depth, personality and class, then it becomes necessary to include artistic skills in the production process. Sheer professionalism cannot foster such qualities to a sufficient degree.

However, the exact same aspects that make artists so valuable also make them problematic in relation to a technically and economically demanding production process. Digital media are both technically complex and cost-intensive, which again places heavy demand on the common understanding for the necessity of deadlines, budgets and so on.

Artists who are traditionally trained to work independently and uncompromisingly are difficult to fit into a specific production framework.

It is, therefore, a huge challenge to unite artistic quality and innovative ability with the financial and technological requirements. It is a matter of attitude, of discipline and solid working methods.

3.3.2 Management skills for the production of culture

Contrary to a painting, an interactive cultural product requires the coordination of many different professional groups. The road from idea to finished product goes through scriptwriters, animators, systems designers, programmers, fundraisers, salesmen and much more. Foresight and insight are required in order to unite creative working processes with technical considerations in a market-related framework. We are facing insurmountable problems, if the respective actors within culture, technology and business continue to have very different working methods, values and objectives. Competent interdisciplinary management is a scarcity.

3.3.3 The gatekeeper problem

Interactive cultural products depend on the presence of high-technological platforms. This struggle can be compared to previous centuries' struggle for owing the cinemas that decided which movies the audience were allowed to see. Right now, *Microsoft, Sony* and *Nintendo* are fighting for dominance within the console field. A similar fight is going on between the many providers of mobile telephony.

The result for both user and developer are obvious; the big companies become "gatekeepers". This means that *Sony* – for example - decides on the content to be distributed to the PlayStation console. Likewise, *Microsoft* and *Nintendo* decide on the conditions for distribution to the *Xbox* and *GameCube* consoles respectively. Seen from a marketing viewpoint, there is little that is odious in this procedure, as the companies invest huge sums in placing these sophisticated, interactive technologies in the homes of the users. But seen from a content and user-oriented viewpoint, this highly centralised, top-down managed system inevitably leads to commercial interests being put above considerations of quality, multiplicity and innovation.

In addition, it becomes more and more difficult for the minor developers to break through, as the market promptly consolidates around the winning gatekeepers.

3.3.4 The dilemma of public service

Public service in Europe

Radio and television stations exchange experience in the European network of public service institutions, EBU (European Broadcasting Union).

Since 2000, EBU has arranged for a yearly conference for the members - *The Multimedia Forum* – the purpose of which is to shed light on problems and solutions within new media.

EBU has set up a committee (The On-Line Services Group) of CEOs from multimedia and Internet services at the European public service stations. Experience is exchanged regarding the process of the internet-based services and activities are co-ordinated for large events offered via the Internet.

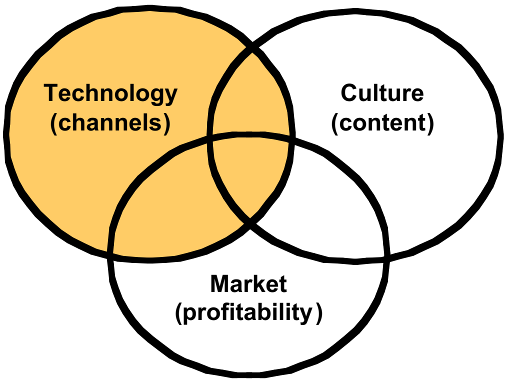
In section 3.2.2, we mentioned the possibilities for public service stations to take the lead in development, production and distribution. There is, however, a dilemma: On one side, licence fee financing and budget restrictions are an issue. On the other side, the objective of taking part in the exploration of the future media is an issue – especially in competition with fast-moving, commercial forces.

The stations are obliged to show certain radio and television programs: they have to deliver all-round, high-quality content to everybody, and serve minority groups and interests. At the same time, they have to be interactive, innovative and present on all technological platforms.

If the stations are to join in the interactive experiments in a major way, the dilemma is that the ordinary television viewers - the number of whom is still the highest – will feel that they do not get what they pay for. If - on the other hand - the stations concentrate 100% on the traditional public service tasks, they stand to loose the younger viewers, and in the end to become marganinalized in the media picture.

The dilemma raises a number of interesting questions:

- What is the size of investments by public service stations in interactive cultural products?
- Are these investment directed specifically towards content?
- Is it necessary to discuss the necessity for public service to communicate and provide interactive culture?



4. Technology

Technology is the second of the three focus areas for interactive cultural products. Our choice is based on digital technology being a pre-condition for the development of the products. At the same time, interactive cultural products may support the development, distribution and prevalence of existing technologies - and even inspire completely new technological innovations. In this way, interactive cultural products can contribute to the development of Europe as a knowledge-based society.

In this chapter, we shall illustrate the existing prevalence of interactive technology, and some future perspectives. The future holds interesting developments – on specific platforms, as well as across several different platforms, simultaneously.

Broadband gaming

Your television works pretty well today: there are a lot of channels, you can get movies on demand, and people are able to choose channels perfectly well. So how can you justify the investment in two-way cable or two-way DSL? It's hard to believe that more of the same - more channels and more pay-per-view - will make the experience so much better that consumers will be willing to pay substantially more for them.

I think that what does pass this test is interactive entertainment. It's the sweet spot that makes the whole thing profitable enough to move quickly. We will be a key part of any true broadband solution rollout that hits the mainstream.

John Riccitiello, COO, Electronics Arts, Interview McKinsey Quarterly, 2002

4.1 The current situation

Certain technologies are necessary for the development of interactive cultural products. In this section, we discuss the perspectives comprised in the technology, in relation to interactive cultural products – and, correspondingly, how interactive cultural products can promote the technological development in the society.

The technology can be perceived as a remedy to strengthen the cultural perspectives, but also as an independent target, which can only be promoted by means of the development of attractive content. The demand for content can create a need and thus form the foundation for the citizens' acceptance of the technology.

The technological development is related to two main areas: development within *networks* and development within *terminals*.

Networks are the physical infrastructure and transmission standards that transport the digital product or service from the provider to the end user. Above all, the development within networks is characterised by increased transmission speeds and the possibility of two-way communication – and, consequently, by interactivity. Finally, the digitalisation of networks opens up the possibility that services are no longer bound to a pre-defined infrastructure, but can be offered on many different kinds of networks.

Terminals are the units that decode the product or service for the end user. The development within terminals has meant that users presently have many new terminals at their disposal, such as digital television, mobile telephones, gaming consoles and computers. Likewise, terminals are a precondition for the user to be able to receive interactive cultural products.

In the following section, we will focus on the most important developments within networks and terminals. These features have established the technological basis for the interactive cultural products known today. We shall, furthermore, point out the most significant development perspectives of the future. In each section, terminals and networks are combined under the phrase ”platform”: As an example, the term “mobile platform” deals with both transmissions and mobile telephones.

4.1.1 The computer platform

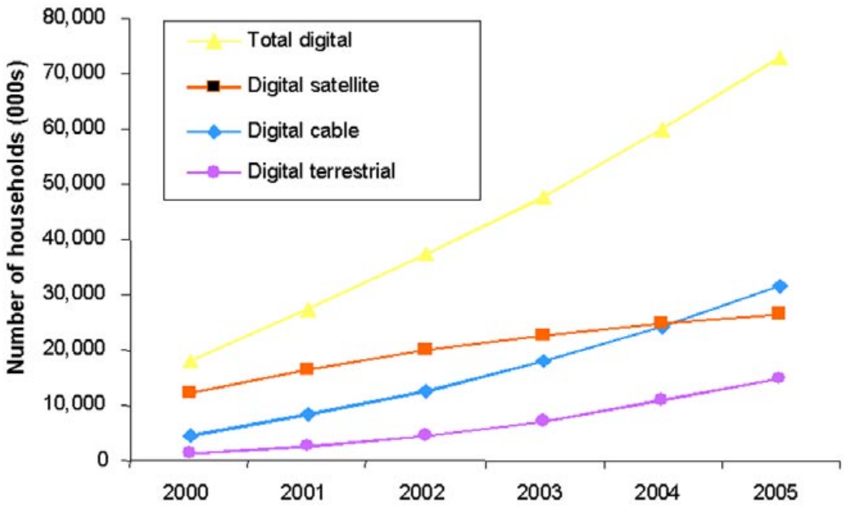
The computer or PC has so far been the most important terminal for interactive cultural products. Exponentially increased processor power, hard disc capacity and memory, together with declining prices, have turned the computer into something that everybody has. At a price of approximately £1,000, it is possible to buy a so-called multimedia computer with enough capacity to deal with even very detailed animations, run DVD movies, play computer games, CDs, and so on

In many homes, it can be said that the computer penetration is driven by the demand for attractive content, and by the wish to send e-mails.

4.1.2 The digital television platform

Digitalisation is a recent development which adds new functionality to the television medium, and which has already revealed new opportunities for interactive cultural products. An example is the possible transfer of content from the computer to the television. This takes place by means of a so-called set-top box, which is a simple computer, which connects to the television. Combined with the traditional media experience, interactive cultural products on television can create new opportunities for interactive entertainment. In "Who wants to be a millionaire", it is possible to participate in the vote from one’s own sofa.

The figure below shows a forecast of the penetration today and in future, for households in Western Europe. It appears from the figure that 51% of all households in Western Europe will be equipped with digital television by 2005.



Figur 4.1
The development in digital television households in Europe, source: Datamonitor, 2001

I-Mode

NTT DoCoMo, the Japanese telecom operators became a major success when they launched the so-called I-Mode service in Japan.

I-Mode makes it possible for the user to send and receive e-mails and entertainment - e.g. film clips - on their mobile phone, with a small colour screen. The service was launched in Japan two years ago, and has since then established itself all over the country. Today, I-Mode has more than 20 million users and is the most successful, wireless Internet services in the world.

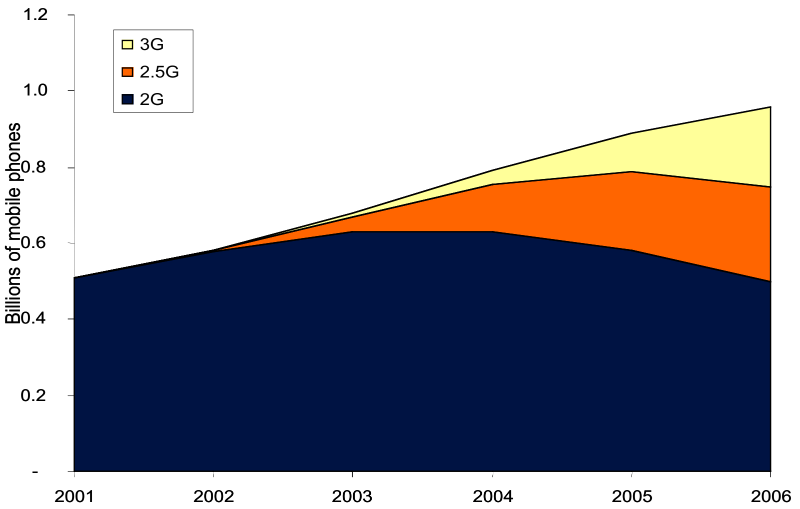
I-Mode is presently being introduced in several European countries.

4.1.3 The mobile platform

The mobile platform is an area that has experienced rapid development in recent years. In the course of a few years, the mobile penetration has risen to 70% in many places. The development has been especially positive in Europe.

Today, the mobile phone is primarily used for transmission of speech and - to a limited degree - for transmission of text (SMS messages). SMS has also established itself as a feature in interactive television programmes, such as music programs with viewer voting. It is expected that the upcoming introduction of networks with significantly higher speed (generation 2_ and third generation mobile networks) will place interactive cultural products among the main attractions. The 3G technologies are expected to deliver a transmission speed that permits *rich media content* such as complicated games, video cuts, e-mail etc. In the next section, we look into the services and income flows which are anticipated to dominate the new mobile networks.

The figure below illustrates how the new mobile technologies are expected to penetrate the market on a global level. Most mobile operators agree that the procurement of the correct content is of vital importance to the success of the technologies.



Figur 4.2
Global mobile phone penetration by technology, 2001-2006, source: Datamonitor, 2002

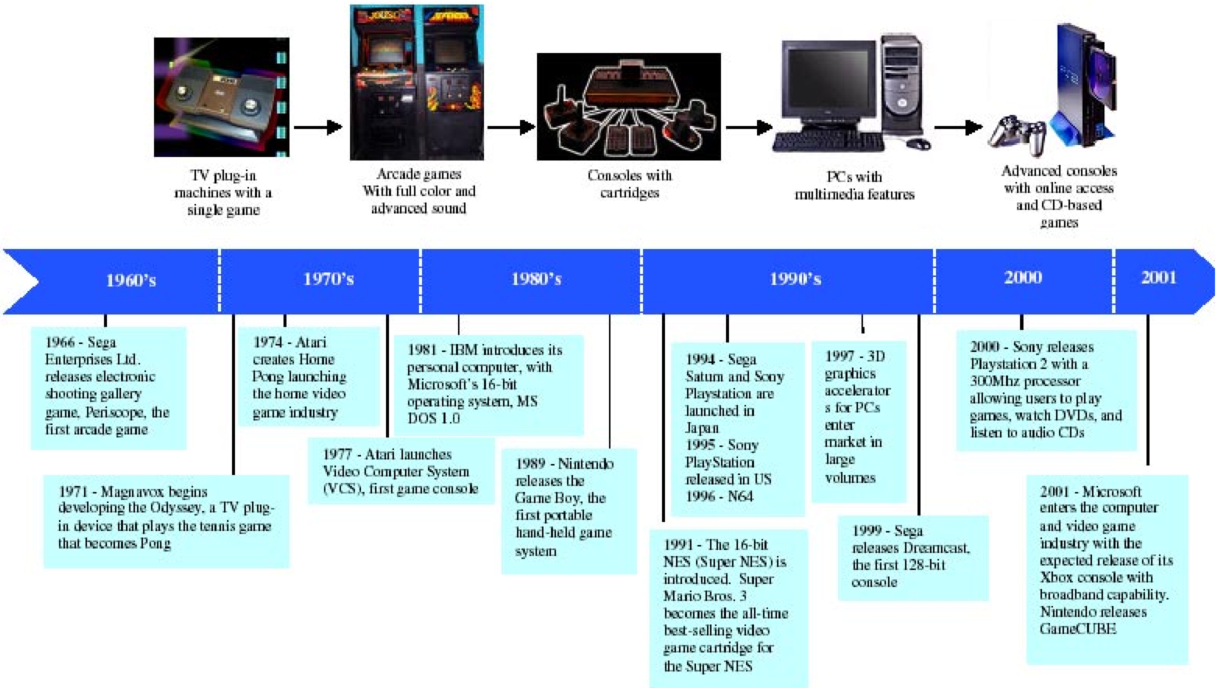
Apart from mobile phones, a number of other mobile units are available, such as cameras, portable game consoles (*Gameboy*) and PDAs (*electronic calendars)*. We predict that these units will melt together with mobile telephones and become a single, powerful multimedia terminal.

4.1.4 Game consoles

Game consoles are the designation for game-oriented machines designed to display demanding graphics and sound - but which have a relatively primitive functionality. Consoles are connected to the television set in the home, allowing games to move from the office into your living room - a more social and comfortable environment.

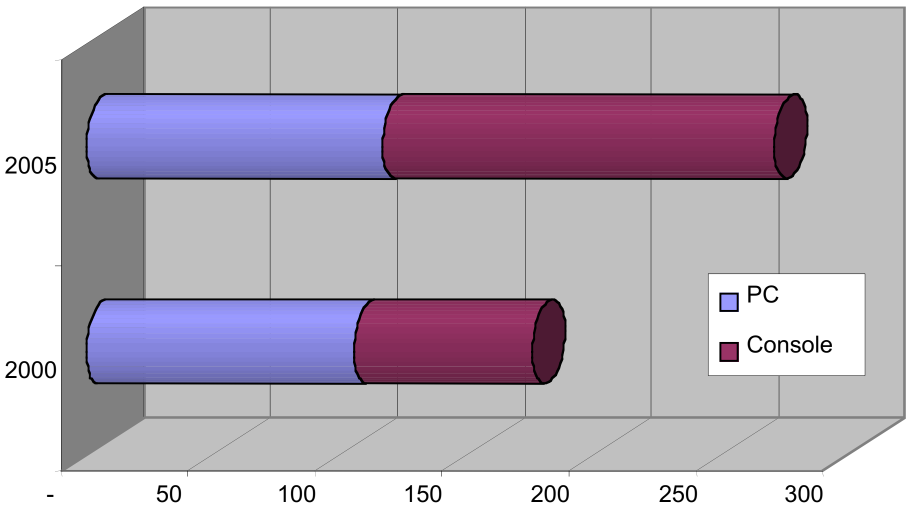
Three players dominate the console market - *Nintendo, Sony* and *Microsoft*. The first two of these are Japanese, whereas Microsoft is from the USA. Out of the three console providers, Sony leads the market with the brand *PlayStation* (one), of which more than 70 million units have been sold, according to *Financial Times*. Historically, the distribution of new console generations takes between four and six years. The introduction of *PlayStation 2* in 2000, *Nintendo's* subsequent introduction of *GameCube* and *Microsoft's* introduction of *Xbox,* in 2001, marked the start of a new console wave. Correspondingly, each new wave has brought along increased marketing activities, as the new functionalities of the products appeal to a broader audience - at the same time as many of the "already converted" users have chosen to upgrade their products. Common to this generation of consoles is increased functionality in different forms, such as built-in DVD player, hard disc and Internet access.

Below is an illustration of the historical development of gaming consoles.



Figur 4.3
Video game industry timeline 1960-2001, source: ISDA, Company

An explosive penetration rate of gaming consoles is predicted. In time, gaming consoles may mutate into all purpose devices, that in time can become the central, personal server in the home controlling all other electronic devices. This would certainly validate the astronomical investments of both *Microsoft* and *SONY*. The number of consoles installed in Europe and the USA is expected to reach almost 200 million by 2005.



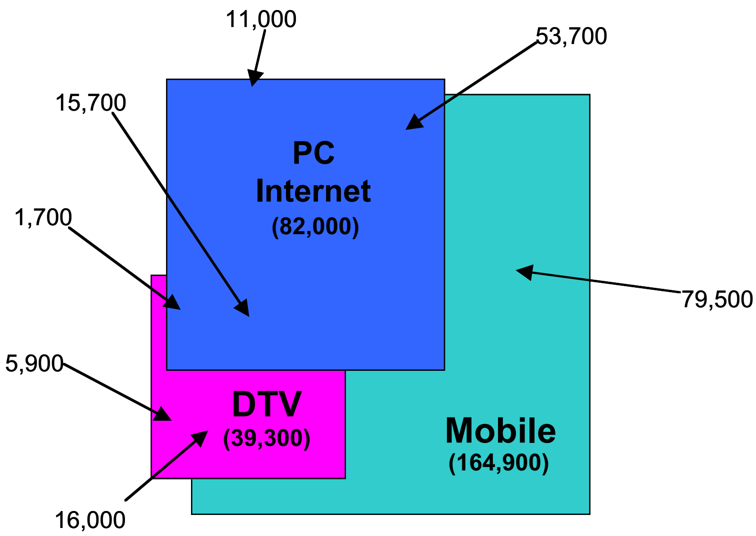
Figur 4.4
The installed base of PCs and consoles, source: Datamonitor, 2001

4.2 Potential

The trends described above clearly show that the technological possibilities and consequences are far-reaching.

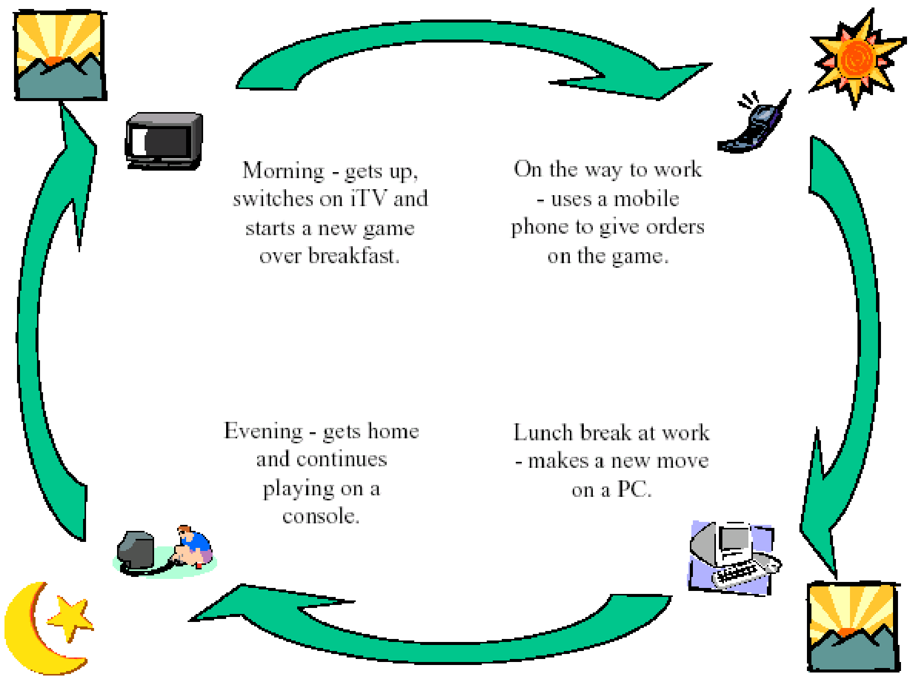
The technological potential and possibilities of interactive cultural products seem almost infinite, but the potential will not be exploited fully before the different platforms become integrated with respect to the transmission, decoding and display of content.

In the figure below, we have listed the number of users at West European level for the three overall platforms and the overlap between them. It is important to highlight the relatively large overlap, which is already a reality today. Many interactive cultural products run on several platforms at once. As an example it can be mentioned that it is becoming typical for services on other media, such as radio, Internet and SMS, to support a television programme.



Figur 4.5
Penetration and overlap between computer, DTV and mobile in Western Europe, source: Datamonitor, 2001

Future developments will see an increasing occurrence of cross-media interactive cultural products. We have given an example below, where the user is part of the same story on several different terminals. The majority predicts that these cross-media products will become one of the cultural forms of the future.



Figur 4.6
Illustration of cross media concept, source: Datamonitor

Position-based game

In so-called position-based games, the game is not only played in a virtual world. The players e.g. use mobile phones to follow the users' movements in the real world.

An example is *Botfighters,* a game from *It's A Live*, a Swedish firm. It is a kind of paintball game, where the participants shoot each other with e.g. SMS messages.

In continuation of the integration of the technologies, we may ponder over the development of the future home. Blow we have illustrated a possible future home. The drawing illustrates how various terminals - both for practical tasks and for entertainment – will colonise our lives. The prospects of mutual communication increase concurrently with the penetration of the terminals.

Figur 4.7
The future home

Through a broadband link the home is linked to the surrounding world.

A so-called "Home Gateway" acts as centre and links the many terminals in the home with broadband, source: KPMG

Combined with new high capacity distribution channels, the possibility of delivering highly sophisticated services and products emerges. There is a wealth of different forecasts on how the technology of the future can develop and become integrated in the home. A common denominator for all of them, however, is that the technology and interactive media will play an important part in our lives - including both work and entertainment as well as education.

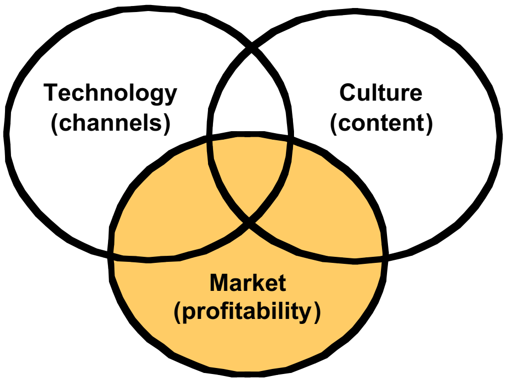
4.3 Barriers

Apart from a few exceptions, we do not see the technology as a barrier. If the framework terms, requirements and willingness to invest are present, historically the technology comes with it. There may be certain areas where the technology does not meet the requirements set up by the content. We have assessed that the development of these certain areas is secondary, when considering the promotion of interactive cultural products.

If we choose to regard the technology as a barrier, the barrier is first and foremost to be found in the availability and user-friendliness of the technology.

If we do not focus on the user-friendliness of the technology, the risk is that the technology can become elitist and preclude a less competent part of the population from participating. For persons of limited means, the technology may be rather expensive, which increases the risk of an IT competence gap.

Other barriers that can be mentioned are the availability of the broadband of both mobile and stationary networks, which may play a role in relation to delivery of sophisticated content over the medium term.



5. Market

Content sells technology

The sales of *Xbox*, the game console from *Microsoft*, have experienced a huge boost on the Japanese market, after the introduction of the shooting game *Halo*.

The highly popular game has so far sold more than one million copies in the USA, and after its introduction in Japan, sales of the *Xbox* have increased by 70%.

Mediawatch, 2 May 2002

In chapter 3, we divided interactive cultural products into possible genres: entertainment, education, advertising, documentary and art.

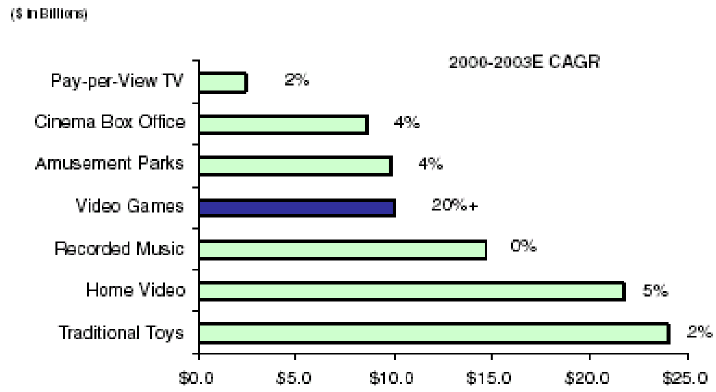
In this chapter, we will deal with the market prospects for these interactive cultural products. Since the criteria for success in any market is the potential for revenues, the cultural and technological aspects will take second place in this chapter.

This chapter, therefore, takes its cue from the interactive entertainment products which presently dominate the market for interactive content. The mature business models and market structures within interactive entertainment can serve as inspiration for other areas. We shall, however, briefly touch on the areas of interactive education and advertising, as these aspects contain highly interesting commercial perspectives, too. We shall allow ourselves to disregard the aspects of documentary and art, as the business basis for these is unclear at present.

We shall document that interactive entertainment contains extremely attractive market prospects, that the demand is there - and that there is little doubt that interactive media are moving towards the broad and very profitable mass market.

5.1 Current situation - a market in continued growth

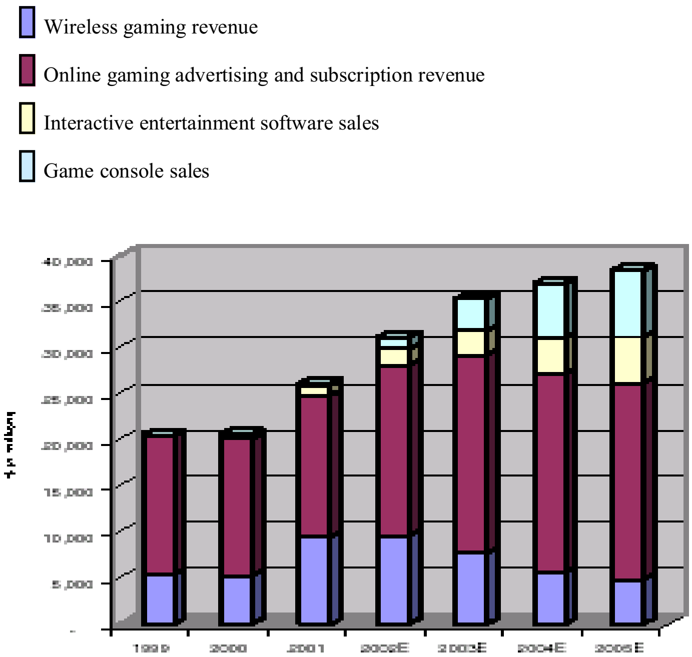
Generally, the market for interactive cultural products has been experiencing rapid growth for many years. The size of the game industry in North America has tripled in the last five years - with a growth from 3 billion USD in 1995 to 10 billion USD in 2001. In order to put the computer entertainment market into perspective, it should be pointed out that it is at present larger than the market for films.



Figur 5.1
Video game industry size and growth rate vs. other industries, North America, 2000-2003E, source: Salomon Smith Barney and`NDP, 2002

Computer games are the part of the entertainment industry, which is predicted to hold the highest growth rates. In a comparison between the most popular entertainment industries, computer games account for yearly growth rates of 20% in the period 2000-2003, whereas traditional toys, for example, will experience a growth of 2% in the same period. Many companies and investors have lately turned their attention to the potential and are rapidly strengthening their engagement in the field of games.

Above all, growth is to be found for software or for genuine cultural products. At a later stage, we expect that both online games and wireless games become important growth contributors to the industry, from year 2004 and onwards.

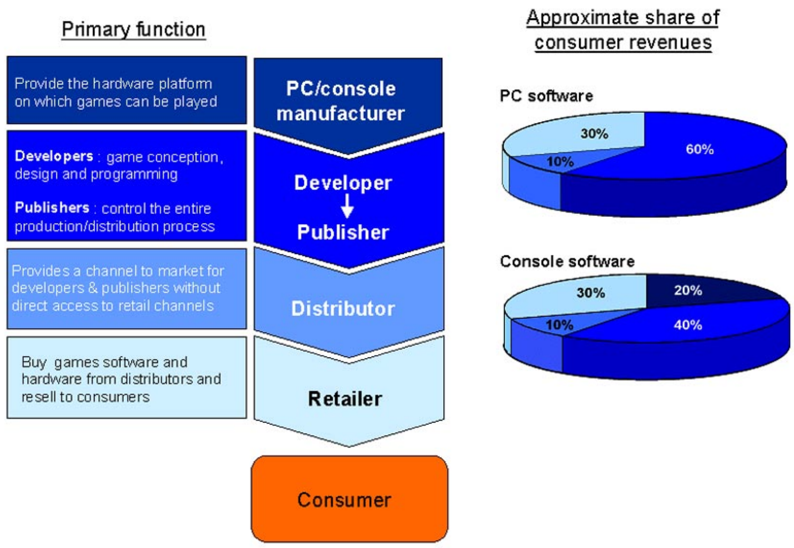


Figur 5.2
Estimated total interactive entertainment revenue, source: Credit Suisse First Boston and company data, 2002

The market for interactive cultural products is thus financially very attractive - and it is important to focus on how the companies are to position themselves in order to gain the most from the growth. We shall now analyse the players on the market.

5.1.1 The value chain and its players

Below, we go through the value chain for interactive cultural products. The value chain angle is not only useful for understanding the individual players' respective roles, but also to understand the dynamism of the industry and its power balance. In the figure below, we have split the value chain into five steps (PC/console manufacturer, developer, publisher, distributor and retailer).



Figur 5.3
The value chain for interactive entertainment

To the right of the figure, an indicative assessment can be seen of the distribution of turnover between the players. As the figure shows, developer and publisher account for the greatest share of the turnover - with a larger share of the PC market than of the console market. Since console manufacturers dominate access to the customer, they charge high margins from the developer and publisher. This is not the case on the PC market, where the distributor has the possibility of gaining a direct and unobstructed access to the end user. Hardware suppliers do, therefore, take 20% of each game sold on the console market, whereas the share of the distributor and retailer remains stable in the PC market and console market with 30% and 10% respectively.

Having analysed the individual players in the value chain, we shall look into the commercial opportunities for the various interactive platforms.

PC/console manufacturers

In this section, when mentioning hardware manufacturers, we are primarily focusing on console manufacturers, as their role is far more important than that of the hardware manufacturers on the PC market.

The console market is characterised by enormous penetration barriers. It may cost up to 2 billion USD to develop a competitive console platform - and return on investment may take several years. Very few companies possess the financial muscle required.

The players on the console market are *Sony* and *Nintendo,* the Japanese manufacturers, and *Microsoft,* the American player. There is general agreement that there is very little room for more players in the market – and hardly enough room the three present players. This is also the reason why it is almost unthinkable that more companies will attempt to establish themselves in this field in the near future.

Console manufacturers' business model typically consists of three income flows: (1) revenue from hardware sales, (2) sale of own software and (3) royalty fees from other software developers. Due to the increasing competition, which has put a constant pressure on the three players to reduce their console prices, the machines are often sold at a loss. Put simply, the hardware manufacturers expect to reach a sufficient volume to establish the commercial foundation for the game manufacturers, and thus get the attractive titles onto their console. The console manufacturers subsequently receive a royalty fee for each game sold exclusively on their console. Such a sequence of events has a self-increasing effect, as the attractive titles attract even more users.

Ubi Soft

Ubi Soft Entertainment was established in 1986 in France. The company is among the largest game publishers in the world with around 1,800 employees worldwide.

Ubi Soft distributes its products in 55 countries, partly based on contracts with distributors, partly through the company's own departments. Apart from its own products, *Ubi Soft* develops and distributes many games under licence from other companies, such as *Dreamworks, Warner Bros. Inc, Disney Interactive, Lucas Learning Ltd.* and *Playmobil®*.

Developer

As mentioned earlier, developer and publisher account for the lion's share of the revenues in the value chain. This fact has to be compared with the high risk factor, when new titles are to be produced and launched: The market is changeable, the competition tough and successes are difficult to predict.

The role of the developer and publisher are not often linked together. In most cases, the publisher has an in-house development competence, whilst other titles are developed by pure R&D agencies and marketed by or in co-operation with the publisher. The settlement terms in such cases, between the developer and publisher, vary a great deal.

Previously, the developer's primary competitive parameters have been the technological. Firms like *ID Software* (developers of the *Doom* and *Quake* games) have gained market shares due to their sophisticated 3D technology. Until recently, the market consisted almost exclusively of so-called "hardcore users" (cf. section 5.3.1). This, however, is changing as the market expands. For the hardcore user, technology - such as advanced 3D effects - is the most important feature. For the mass audience, the emotional and storytelling content is the most important. For this reason, the future competition is believed to move towards talent and creativity. Focus will be placed on the ability to meet the users' wishes and satisfy their emotional requirements.

For this reason, it is vital for the developer to recruit the required resources and to promote talented individuals. At the same time, the contact to professional management skills, marketing skills and general interdisciplinary competences may prove to be decisive success criteria.

Publisher

The publisher's core skills lie in being able to identify suitable titles and market these titles successfully towards distributors, retailers and (not to forget) the end users. The income generated is highly dependent on each title and the marketing of it. Similar to the film industry, the publisher seeks to reduce the risk by spreading the assortment of titles into different genres targeting and in the supply for the different segments of the population. In addition, firms look for strong brands which can benefit from advertising money invested on the long run. Some brands are designed by the developer/publisher themselves (*Sims, SimCity, Medal of Honor*), whereas other titles are on licence basis (*StarWars, Harry Potter, Lord of the Rings*).

	Electronic Arts	THQ	Activision	Acclaim	Midway	Take Two
Number of larger than $1 m console titles (1)	81	30	33	24	25	24
Number of larger than $10 m console titles (1)	20	4	7	2	1	4
Top 3 Console Titles % of Console Rev. (1)	31%	44%	58%	34%	37%	52%
Top 3 Console Titles	Madden NFL 2002 Madden NFL 2001 NBA Live 2001	WWF Smackdown 2 Red Faction WWF No Mercy	Tony Hawk 2 Ton Hawk Spider-Man	All Star Baseball 2002 Crazy Taxi Dave Mirra BMX	Gauntlet Spy Hunter R2R Boxing 2	Grand Theft Auto Max Payne ONI
% Games Internally Developed	66%	30%	60%	42%	67%	
% Revenues International	39%	27%	48%	30%	17%	25%
Genre Focus	Sports	Wrestling	Skating	Sports/Driving	Sports/Driving	Racing
% Revenues from Consoles	52%	83%	80%	96%	64%	49%

Note (1) NPD Data for 2001 U.S. only

Tabel 5.1
Competitive landscape for the entertainment software industry, source: NPD company reports, Thomas Weisel Partners

Electronic Arts - the biggest game publisher in the world

- Publishes games like *The Sims, FIFA-football, Formel 1, James Bond, Medal of Honor* and *Harry Potter*
- 3,600 employees
- Approx. 50 titles have sold more the 1 million examples
- Founded in 1982

Infogrames - the French player

- *Infogrames, a* French company, is today ranked between the five largest publishers of interactive entertainment.
- Publishes games such as *Civilization, Driver, Unreal*, all of which have sold more than 1 million copies.
- 1,800 employees
- Founded in 1983

The strategy for publishers is to publish the same title on several different gaming platforms (e.g. Xbox, PlayStation 2 and PC at the same time). In this way, an even broader target group is reached, and the investment in development is capitalised more efficiently - and as a title proves itself on one platform, the chance of success on another platform becomes bigger, when compared to having to develop a new title for each platform. The cross platform strategy, however, conflicts with the console manufacturers, who aim to have titles exclusively playing on their console.

With the purpose of reducing the distribution costs and getting as close as possible to the users, many publishers intend to launch online games. Online games are characterised as being downloaded and then played via the Internet. The income is single or in combination: Advertisements, sponsorship, subscription, pay per game or one-off fees. Today, there are more than 4,000 online gaming Internet portals. EverQuest, one of the greatest online game successes, has more than 375,000 paying subscriptions.

Below is a screenshot from one of the leading online game Internet portals: ea.com.

Figur 5.4
Screen picture of ea.com

Distributor

The distributor is the connecting link between the retail trade and the publisher/developer. Many international R&D agencies, such as *Electronic Arts* and *Activision,* have in-house distribution for the transmission of titles to retail trade all over the world. Other R&D agencies choose to issue licences for the distribution. *Sony PlayStation* has issued a licence to *Egmont* in a number of countries. The trend does, however, appear to be turning towards the publishers themselves carrying out distribution through acquisition of existing distributors or establishment of own distribution channels. The distributors wish to make sure of exclusive distribution channels and time-to-market has become an important competitive parameter.

Retailer

Due to the launching of numerous new titles for all three consoles, it is vital for the retailer to enter into the best agreements with suppliers, in order to fill the scarce shelf space in the most profitable way. Again, it is a highly important competitive parameter for the console and game manufacturers that their products obtain the best possible display in the shop. The retailer is, therefore, in a positive position when negotiating prices and profits. The development within online gaming is on the other hand a challenge for the retailer, as this type of product is not distributed physically through the shop.

5.1.2 Shifts in the power balance of the value chain

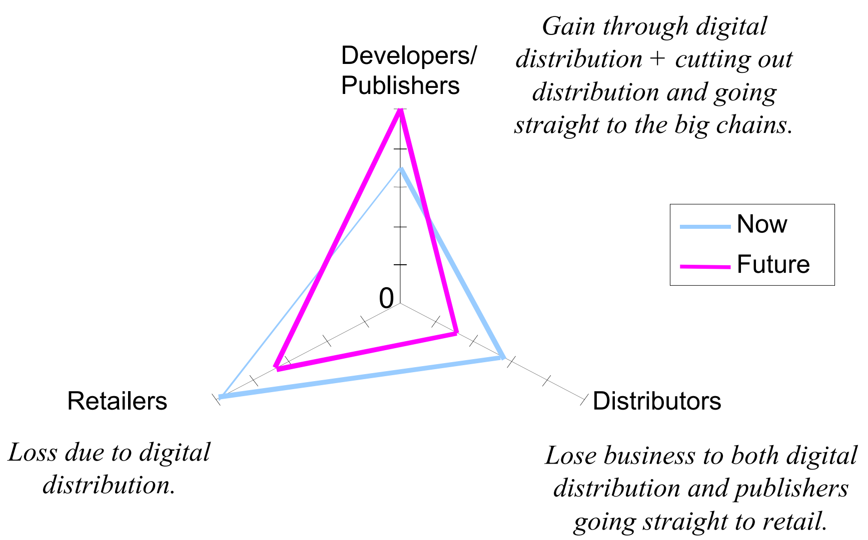
After having categorised the various players in the value chain, it is possible to see the upcoming shifts. Three significant factors are apparent, which can radically tilt the power balance. The first factor is digital distribution, the second factor is the retail trade going directly to the publisher - and the third factor is the importance of developing good content, when the mass market is to be penetrated.

The coming of Internet distribution means that the end user downloads the interactive cultural product through a broadband Internet connection, instead of physically purchasing the product at the retailer. In this case, the developer/publisher gets the highest profit, as they can distribute directly to the user, whereas the distributor and retailer end up as the loosing parties.

The distributors are affected by yet another trend, i.e. that the retail trade is increasingly going straight to the publishers and entering into agreements with them. As the retail stage is consolidated, retail chains like *Walmart* and *Toys R Us* enter agreements directly with the publishers. The role of the distributor is thus marginalized. The figure below illustrates that the most favourable place to be positioned is as developer/publisher in the value chain.

Finally, the mass market puts higher demands on the actual content. The original game players were fascinated by technology and functionality. The mass market places greater demands on the story and craftsmanship of the products. Content producers will face new opportunities and challenges, trying to satisfy the mainstream market.

In the figure below, we have illustrated the three trends.



Figur 5.5
Shifts in the value chain for the advantage of the developers/publishers, source: Datamonitor, KPMG

In this context, we shall mention (as described in chapter 3) that apart from being a developer/publisher, a strategically advantageous position is the hardware manufacturer on the console side. This position provides the ownership of the end user – much as cinema-chains and TV-stations. The console manufacturer is the gatekeeper.

We have described the various players' role in the value chain. We will now look at the commercial prospects of the platforms available for the players.

5.2 Platforms

As illustrated in the value chain figure in section 5.1.1, the game market is presently dominated by two platforms: consoles and computer games, each with different features.

Below, we have outlined a few advantages and disadvantages of consoles compared to the computer platform:

Advantages of consoles	Disadvantages of consoles
Low purchase price	Have still not achieved the same penetration degree as the PC
Highly user-friendly	Not the same number of possibilities for upgrading of hardware
Located in the living room, which is best for social and relaxing entertainment	No multi-tasking possibilities, as offered by the computer
Consoles are dedicated game platforms, so far without technical problems and viruses	Lack of standardised formats forces the user to choose platform
Easier to protect against piracy	The platform owner holds the power of the customer

In the forecast below, the expected trends in turnover of both platforms are given. From the forecast, it is apparent that the console will become the most important platform for the users, as the turnover exceeds that of the PC market. It is difficult to predict which of the console platforms will take the lead.

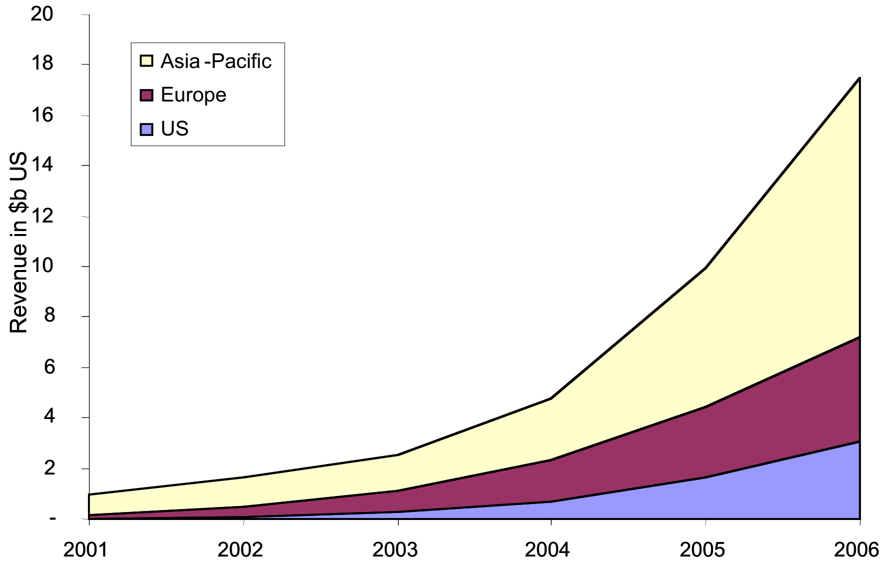
$000s	2000	2001	2002	2003	2004	2005	CAGR
Pc	3,326,900	3,450,300	3,533,500	3,589,900	3,587,000	3,439,300	1%
Console	5,498,300	7,646,900	9,514,000	10,575,000	11,104,000	9,768,400	12%

Tabel 5.2
Software revenue for PC vs. console, source: Datamonitor, 2001

5.2.1 Two new promising platforms for interactive entertainment

Another two platforms should be mentioned, which today hold a relatively small market share of the interactive cultural products. These platforms possess the potential to become very important platforms. We have mentioned both of them in chapter 4: Digital television and wireless gaming.

The market for wireless gaming is predicted as having a significant growth. It is worth mentioning that from the outset, the boost is expected in Europe and Asia. This is due to the mobile penetration and, above all, the mobile technology which is far more prominent in Europe and Asia than it is in the USA.

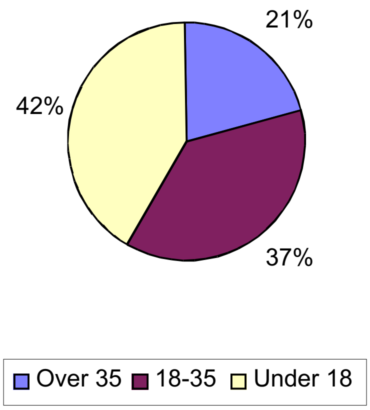


Figur 5.6
Global wireless gaming revenue by region, 2001-2006, source: Datamonitor 2001

Gaming via digital television is also a field with a huge growth potential. These days, the trend is moving in the direction that the set-top box for receipt of digital television will melt together with the game console in front of the television. Under propitious circumstances, digital television is dealt with synonymously with consoles.

5.3 The users - from niche market to mass market

We have experienced and can be expecting in future an explosive growth within interactive entertainment products - a growth which is driven by new demand patterns among the users. Interactive cultural products appeal to a broader audience than ever. Whereas computer games have traditionally been an occupation for “computer geeks" (i.e. for teenage boys), 58% of the users are today males over the age of 18 - and the average age is 21 years.



Figur 5.7
Computer and Video-Game Usage by Age, source: Peter D Hart Reasearch Associates, Credit Suisse First Boston

In the figure below, it is clear to see how interactive entertainment has developed from being a niche segment to appealing to a broader audience. The same figures apply for the women, too. In the figure, it becomes apparent that the target group for interactive entertainment represented 20 million users in 1980 in the USA, and this number has today risen to 140 million.

US Demographics (Males) (000)

Age Groups:	1980	1990	2000	2005
60 to 65	4,522	4,948	5,087	6,762
55 to 60	5,361	5,004	6,461	8,741
50 to 55	5,616	5,521	8,577	10,082
45 to 50	5,428	6,779	9,856	11,264
40 to 45	5,592.0	9,780	11,293	11,412
35 to 40	6,640	9,904	10,956	10,155
30 to 35	8,260	10,905	9,674	9,436
25 to 30	9,499	10,658	8,769	9,207
20-25 years	10,515	9,746	9,531	9,889
15-20 years	10,886	9,113	10,226	10,202
10-15 years	9,484	8,810	10,252	10,069
5-10 years	8,822	9,246	10,070	9,348
0-5 years	9,980	9,648	9,682	9,397

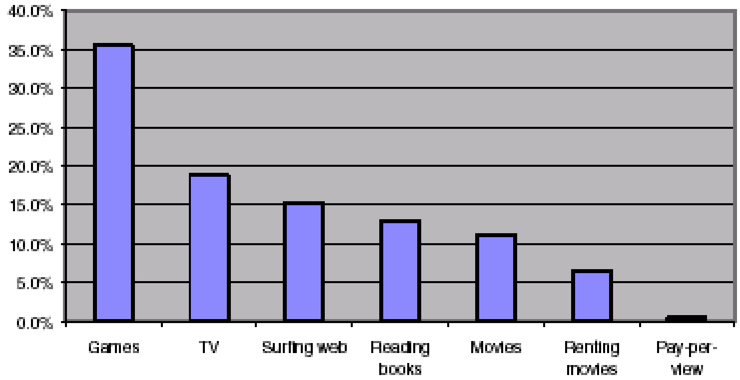
US Demographics (Females) (000)

Age Groups	1980	1990	2000	2005
60 to 65	5,309,138	5,671	5,670	6,086
55 to 60	6,024,207	5,470	6,992	8,101
50 to 55	6,136,743	5,848	9,049	9,578
45 to 50	5,765,797	7,045	10,202	10,965
40 to 45	5,850,825.0	9,014	11,473	11,222
35 to 40	6,890,560	10,078	11,087	9,927
30 to 35	8,476,180	11,008	9,890	9,146
25 to 30	9,632,197	10,578	8,855	9,144
20-25 years	10,532,374	9,389	9,162	10,269
15-20 years	10,609,280	8,652	9,668	10,788
10-15 years	9,101,160	8,388	9, 765	10,654
5-10 years	8,431,405	8,816	9,611	9,774
0-5 years	9,530,636	9,205	9,263	9,815

Tabel 5.3
Expanding Target demographics, source: Census Bureau, Deutsche Banc Alex. Brown estimates.

One of the explanations for the increasing interest in interactive cultural products is that the generation who were the first to adopt the games have maintained their interest as grown-ups. If this trend continues, the market will grow for every newborn baby adopting the technology. As a consequence, *Sony* and *Microsoft* have chosen to turn to their attention to an older segment providing more complex and challenging titles.

Interactive entertainment has become one of our preferred entertainment forms. In an American survey, games were out-and-out mentioned as "most fun entertainment activity".



Figur 5.8
Most fun entertainment activity, source: Peter D Hart Reasearch Associates, Credit Suisse First Boston

5.3.1 Hardcore vs. casual gamers

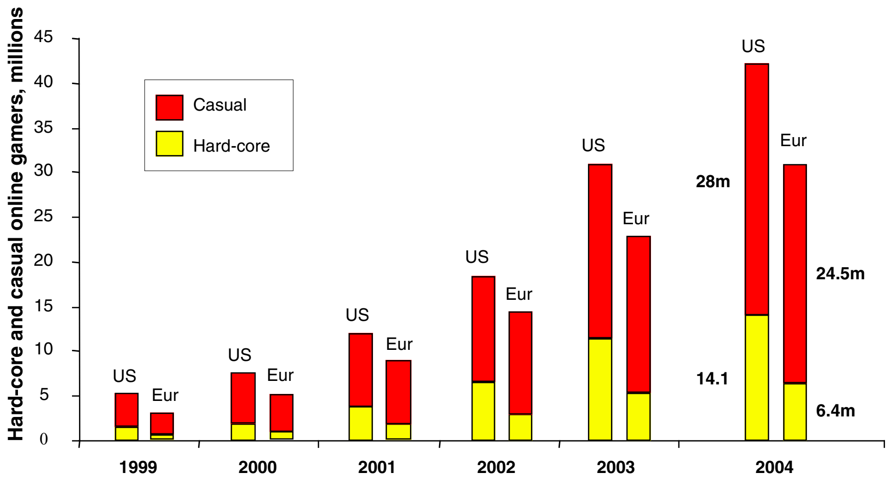
Generally speaking, the game segment can be split up into two qualitative segments: Hardcore gamers and casual gamers.

The stereotypical hardcore gamer is a user - typically a male between the age of 15 and 25 - who spends a great deal of time on media. He is experienced and prefers high functionality to user-friendliness. He spends several hours on games during each day.

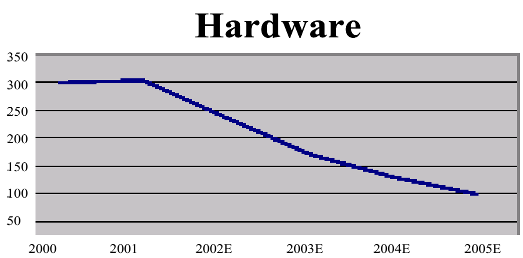
The stereotypical casual gamer is the exponent of mainstream or “the mass market”. The casual gamer may well be a woman, who rarely buys games, but is attracted to brands and concepts of which they have knowledge. She often prefers simpler games, compared to the hardcore gamer. She spends more hours on entertainment during the day, but she is susceptible to interactive cultural products, if the design of these is in accordance with her wishes.

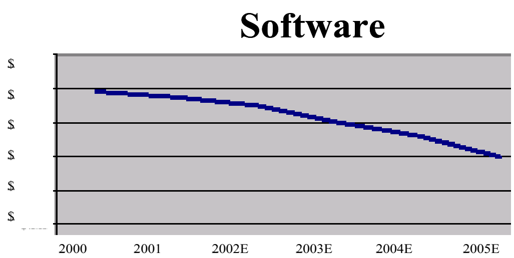
Datamonitor has below prepared an estimate of the mutual sizes of both groups in Europe and the USA, respectively. The figure confirms the thesis that the casual gaming segment is the dominating segment. It is also in this segment that the growth potential is to be found. The figure, furthermore, indicates that the share of casual gamers compared to hardcore gamers is higher in Europe than in the USA.

This table is especially interesting in a culture political context, as the casual gamer segment is the potential target for products with greater focus on culture-carrying elements.



Hardware and software prices increase the demand correspondingly in the casual gamer segment, as the prices are declining for every console generation. In the graph below, we have listed the price trend for hardware and software for *PlayStation 2* on the American market.

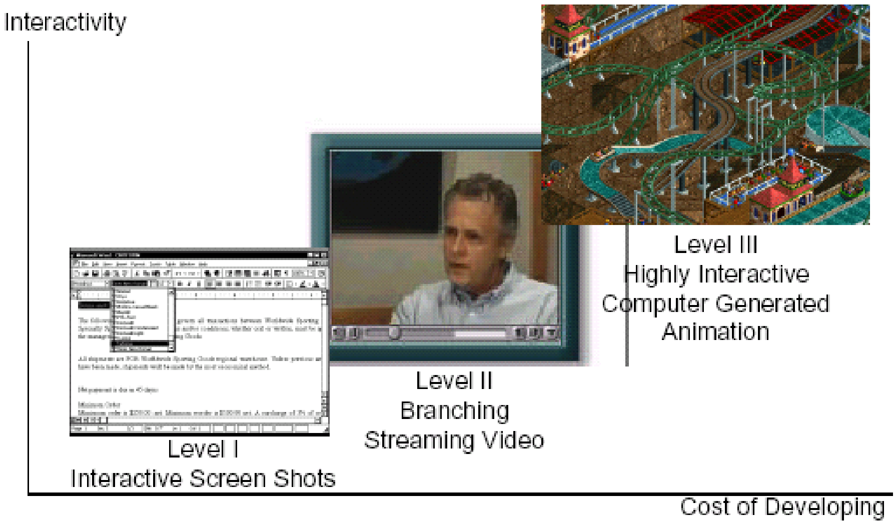




Figur 5.9
Historical and expected prices for hardware and software for PlayStation 2

5.4 Interactive education and advertisements

Interactive education and advertisements are two areas - apart from the entertainment - which attract commercial attention. Interactive education lets the user receive learning content and interact with it. Learning is defined as interaggregating, typically via multi-media aspects (sound, picture and text). Concurrently with the technological development, the training programmes become cheaper and cheaper, and allow a higher and higher degree of interactivity.



Figur 5.10
The trend of interactive education becomes more sophisticated, source: Gartner 2000

Interactive education addresses two main markets; companies and educational institutions. Both markets are regarded as huge markets for interactive education.

Advertising is another field within interactivity. Interactive ads are expected to increase the involvement of the target group, as it is possible to give a personal message and make the user react directly to the exposure, instead of waiting until he/she visits the shop. It is, furthermore, possible to accumulate knowledge of the user in question, by storing his/her reactions. This knowledge can then be utilised in targeted campaigns.

Heavy expectations are placed on interactive advertisements on mobile telephones and television.

5.5 The European game market

Interactive television ads

In connection with the release of a new Mercedes-model in 2002, Daimler Chrysler made use of television application with 3-D animation of the design, interior and road ability of the car.

In this section, we shall point out some of the differences between the European market and the Japanese and American markets respectively.

Compared to the Japanese and American markets, the European market is fragmented. Different language versions are often required, and content legislation differs from country to country. Europe, furthermore, faces piracy problems to a higher degree than America.

The fragmented structure of the European market means that countries often operate in a more autonomous way, and a success in one country expands only very slowly from one country to another.

Finally, it can be claimed that Europeans have a significantly higher tendency to regard interactive entertainment as culture compared to Japan and (most certainly) the USA, where it is regarded as business. At the risk of putting forward too harsh a generalisation, we would say that the Europeans tend to promote the esthetical part of the culture, whereas the Americans tend to regard culture as Big Business. It is also here possible to draw a parallel to the film industry.

Europe is characterised as having strong public service institutions in the individual countries. These institutions may prove to be valuable drivers in the commercial development of various platforms, as the institutions have access to attractive contents, huge market presence and extensive development resources.

5.6 Barriers

A large number of barriers have to be overcome in order to strengthen the European position within interactive cultural products. The tasks of identifying them all - and subsequently ranking them - should be carried out in the form of a separate analysis. Preliminarily, we have below mentioned a few of the areas which should be elaborated further.

5.6.1 Access to the customer

From a European point of view, the American/Japanese dominance may be regarded as a barrier. It is a fact that dominant console producers have exclusive access to the users and are thus very powerful, compared to the remaining players in the value chain. If the firms concentrate their effort on other areas in the value chain, they have to bear in mind that the console manufacturers will act as gatekeepers.

5.6.2 Commercialisation of the industry

As for interactive cultural products, we have a tradition in Europe of focusing on the esthetical qualities of the work, and this conflicts with the commercial considerations. Greater focus on the commercial aspects - and a general professionalisation of the European industry - will provide more profitable conditions for the industry. It is a political decision, whether it is desirable to promote the commercial side of the industry.

5.6.3 Fragmented market structure

Based on the fragmented structure of the European market, it is difficult for the European players to achieve big, extensive successes across the continent. There are a number of cultural and legislative differences. It is a vital point to find a way of linking the protection of cultural diversity with the creation of a coherent and integrated market. An interesting target area may be the establishment of Pan European networks, ensuring that successes, experience and competences spread easily and speedily through Europe.

5.6.4 Risk capital

We have described the market for interactive entertainment products as a firmly based market with high penetration barriers that apply to all areas in the value chain. If a company is to enter a market or strengthen its engagement in the industry, it is important that sufficient capital is available to pay for the establishment of a strong market position.

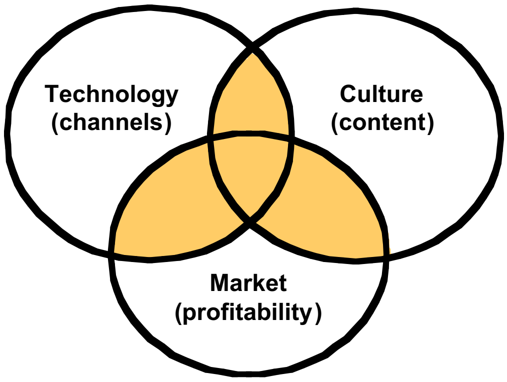
5.6.5 Critical mass

In this section, we have stated that the European market is characterised by many peculiar features and that on the whole the market seem quite fragmented. It must be borne in mind that critical mass is absolutely vital, if economies of scale are to be activated – thus allowing profitability. From a commercial point of view, dismantling regulative and cultural barriers can strengthen the competitive possibilities of European companies.

5.6.6 The fundamental attitude to interactive cultural products

Fundamentally, it is a barrier that interactive products have a bad reputation. Among the young people, computer games have lost their negative, "computer geek" image over the last five years. Among the people wielding political the power today, computer games are often associated with meaningless violence.

This is not without meaning, as it is easier for young cultural forms to apply primitive measures and to communicate with the most primitive instincts. However, games such as *ICO, The Sims* and *Civilization* have proven that the medium is capable of much more. In the end, the largest challenge of attitude will not come from the young – but from the old. It will indeed be a challenge to train the people who have been brought up as passive recipients of culture, to interact, to explore and to actively solve problems.



6. The common ground

6.1 Linking culture, technology and market

So far, we have followed three parallel tracks for interactive cultural products. The three tracks - culture, technology and market – will all have to be faced, understood and melded together, in order to promote the progress of interactive cultural products in Europe. In other words, cultural policy will have to address cultural multiplicity, craftsmanship and depth, combined with market-related competitiveness and technological innovation and efficiency.

There will be both synergies and conflicting interests in the intersection between the three areas. The combination culture and marketing through technology is a major challenge, but may also be the key to placing Europe at the forefront of several different sectors of knowledge based excellence. It is, therefore, a matter of weighing the considerations and striking with the appropriate measures.

We have with this document attempted to take the first step. A dialogue between the countries is a must on the road ahead - both at the political and at the industrial level.