computer and video games industry age ratings and codes of practice

Contents

How to tell what you are buying

The format

This is how you check whether the game is for a PC or a console – PlayStation, PlayStation 2, Nintendo GameCube, GameBoy, Xbox.

The game in pictures

These pictures are taken from the game and give you an indication of the graphic quality.

The descriptor

This icon lets you know the type of content in the game – violence, fear, bad language, drugs, sexual content and discrimination – although the levels will vary depending on the age rating. For instance violence in a 7+ game would be very different to violence in an 18+ game. You may see more than one of these icons on a game, most probably none.

Violence
Game contains depictions of violence

Sex
Game depicts nudity and/or sexual behaviour or sexual references

Drugs
Game refers to or depicts the use of drugs

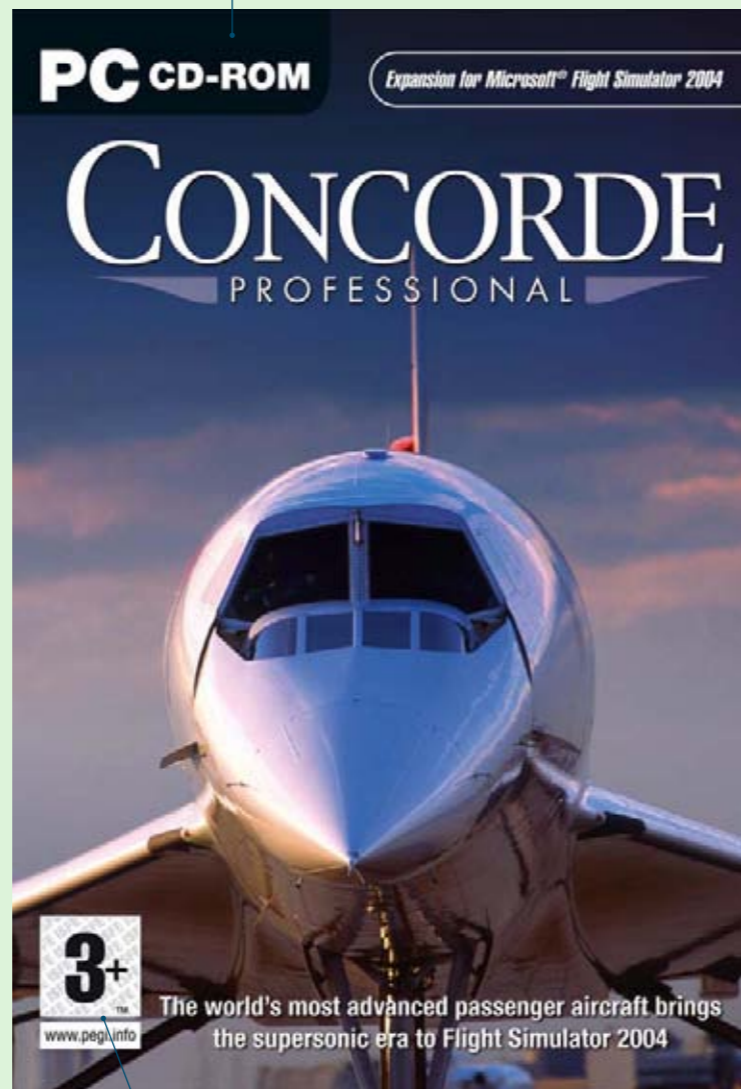**Fear**
Game may be frightening or scary for young children

Discrimination
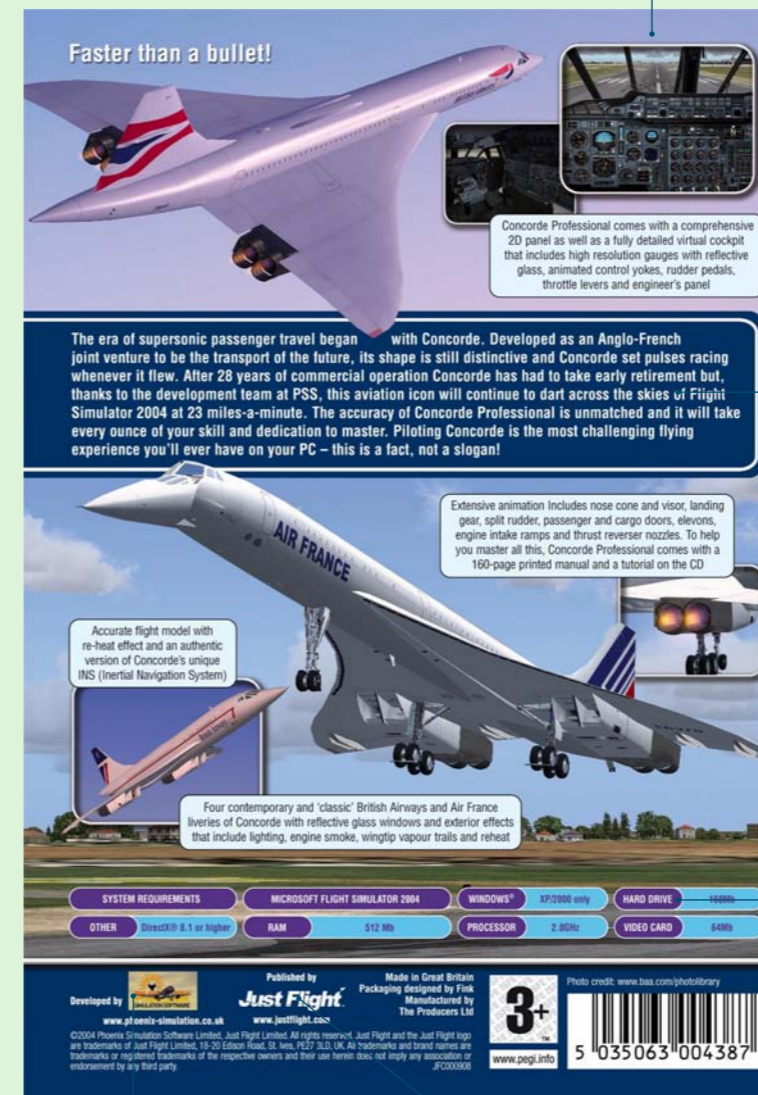Game contains depictions of, or material which may encourage, discrimination

Bad Language
Game contains bad language

The game in words

This gives you a brief description of the game content (the type of game it is and what the game is about).

Technical specifications

These are the minimum technical parameters that your PC or console needs in order to play the game.

The age rating

This tells you the minimum age the game is suitable for, based on the content of the game.

The developer

The name of the studio that created the game, similar to a movie production company.

The publisher

The name of the company that publishes the game, similar to a record label.

The computer and video games industry is a thriving, significant, creative and economic force in contemporary Britain. The UK industry is the third largest interactive entertainment market in the world with the highest number of games development companies and publishers in Europe, grossing £1.34 billion per year. It consistently leads the way in technological innovation and world class products, stretching the imagination of consumers and the people that create the games around the world.

Computer and video games are enjoyed by millions of people across the UK.

Games enhance the lives of a vast number of people, from as young as five to 95 years old. Herein you will find everything you need to know about games and gaming including, most importantly, detailed information on the way age ratings work and how the computer and video games industry is regulated.

In order to place these issues in context, we have included prominent sections on the global market, the UK's role on the world scene, demographics of contemporary games players, research into the effects of games on violence, health and learning and the ongoing active relationship between the UK Government and the computer and video games industry. Also included is a brief history of the international industry, a description of the UK industry's structure, details of software piracy and intellectual property regulations and industry forecasts. There is also a list of key contacts for further information.

Games are enjoyed by millions of people across the UK. We want you to know about the industry, the products it produces, the codes of practice to which it adheres and how much it contributes to the entertainment of so many.

You can view trailers for games in each of these age rating categories by visiting our interactive guide

www.elspa.com/rating

Age Ratings

Computer and video gaming is now a mass-market leisure activity for millions of players throughout Europe. In the last few years the age profile of those playing games has increased, and their average age is now in the mid-20s. Publishers have responded by releasing games for these more mature gamers, many of whom are over 18 years old. The average consumer, however, is not yet aware of this trend and still tends to believe that most games are designed for young children. Consequently they may be ill-informed about the nature of games they buy for under 18s.

While 'mature' games receive most of the media attention, it is important to remember that they are a relatively small proportion of the software released each year. As an example, in the 18 months from January 2003 to end July 2004, 1208 games were released in the UK, of which just 16 received a BBFC18+ certificate (1.32 per cent) (source: Video Standards Council). In order to maintain consistency for the consumer, these are clearly marked using the same symbols as those employed in film and video sales.

In the UK, age ratings are determined by a unique two-tier system that works within voluntary European guidelines and mandatory BBFC regulations as determined by the Video Recordings Act (1984) (VRA).

In 1993 the UK computer and video games industry trade body ELSPA called in the Video Standards Council (VSC) to set up a voluntary age rating system to cover the rating of games exempt from legal classification under the VRA. To date, 90 per cent of all titles released are exempt from legal classification because they are considered appropriate for under 18s.

The system was replaced in the spring of 2003 by a pan-European voluntary scheme that is owned and administered by NICAM (Netherlands) and by The Interactive Software Federation of Europe (ISFE), the industry's European body. The new Pan European Games Information system (PEGI) provides a unified content rating system that has been adopted in most states of the EU (for every audiovisual sector). The game rating appears on the front and back cover of interactive games and retailers reiterate the same information in their consumer spaces.

Designed to ensure that minors are not exposed to games that are unsuitable for their particular age group, the age rating system in the UK comprises two separate but complementary systems. The first is the PEGI age rating, determined by publishers. Similar to other existing systems (eg DVD and video), the PEGI age bands are 3+, 7+, 12+ and 16+. In continental Europe, there is also a PEGI 18+ rating. In the UK, the software titles expected to be suitable for an 18+ audience under the VRA are submitted for certification to the BBFC, where they may be given either an 18+, 15+ rating and so on, as appropriate. Both of the ratings systems are monitored in the UK on behalf of the computer and video games industry by the VSC.

The PEGI system is one of the most robust in Europe and, in terms of rating criteria, is the strictest.

The second element of the system is a library of six game descriptors. These are symbols, displayed on the back of the game box, which describe the content to be found in the software.

The combination of age rating and, where applicable, game descriptors, informs parents and anyone else purchasing games for children that the product content is suitable for the player's age group.

The computer and video games industry trade bodies carry out public education programmes and campaigns to ensure that consumers and retailers are aware of the content of games in each of the age bands. Furthermore, retailers who sell BBFC rated products to consumers under the age for which they are intended are liable to strict legal penalties under the Video Recordings Act. If convicted, they can face a £5000 fine and up to six months in prison.

In addition to games purchased through conventional retail channels, PEGI ratings also apply to games bought through the internet, played or downloaded within an online gaming environment, or provided on magazine cover discs.

The PEGI system is one of the most robust in Europe and, in terms of rating criteria, is the strictest. It is in the interests of all parties that games are rated accurately and therefore it is supported by the major console manufacturers (Sony, Microsoft and Nintendo), by publishers and developers of interactive games throughout Europe and by all retail outlets. PEGI has the enthusiastic support of the European Commission, which considers it to be a model of European harmonisation in the protection of children.

Violence
Game contains depictions of violence

Sex
Game depicts nudity and/or sexual behaviour or sexual references

Drugs
Game refers to or depicts the use of drugs

Fear
Game may be frightening or scary for young children

Discrimination
Game contains depictions of, or material which may encourage, discrimination

Bad Language
Game contains bad language

In 2004 it was estimated that the retail equivalent of counterfeit games in the UK was in excess of £2 billion. That year, ELSPA's Anti-Piracy Unit took part in 538 raids on counterfeiters.

Piracy

Pre-empting concerns expressed by consumers, media and Government, the computer and video games industry has been involved with anti-piracy measures since 1994, when the Entertainment and Leisure Software Publishers Association (ELSPA) set up a dedicated Anti-Piracy Unit. ELSPA works closely with the Department of Trade and Industry (DTI) to police the illegal distribution of unlicensed software. It regularly assists trading standards officers, police and HM Customs & Excise through free services investigating piracy.

ELSPA understands that agencies occasionally have limited resources to allocate to anti-piracy work and their investigators therefore respond to information provided by enforcement agencies, businesses and the public. They conduct full investigations and surveillance, make test purchases from alleged offenders and provide enforcement agencies with an Evidence Pack containing all the information necessary to obtain a search warrant and to effect an arrest.

The Anti-Piracy Unit also offers the following free services:

• Attendance at searches carried out under warrant, inspection visits and interviews
• Assistance with test purchases
• Witness statements and court attendance
• Forensic examination of software and hardware
• Copyright and Trade Mark information
• Storage for large quantities of seized product
• Training courses to suit requirements

As with film and video piracy, game piracy makes it impossible to police the sale of over 18 content to young people.

It also:

• Responds to information about illegal software received from members, consumers, the retail trade and other enforcement agencies
• Conducts investigations of alleged offenders
• Routinely makes test purchases from alleged offenders
• Regularly visits car boot sales and markets to monitor product being sold
• Assists in the execution of warrants at offenders' premises
• Assists in the seizure of infringing products
• Assists enforcement agencies such as trading standards officers and police authorities in investigating software piracy
• Maintains close liaison with HM Customs & Excise over the importation of illegal software
• Supports legal action against those found copying and selling illegal software
• Attends trade shows and conferences to speak to consumers and traders
• Operates a 24-hour confidential hotline for anyone wishing to give information about software pirates - 08705 133405

Recognising the increasing use of the internet by pirates to sell illegal products, ELSPA's Anti-Piracy Unit has its own dedicated internet investigator, who tracks down internet pirates and provides the relevant agencies with the evidence they need to take legal action.

The UK market on a global scale

Marketing Size

Maintaining its unprecedented bullish trend, the UK entertainment and leisure software industry totalled £1.34 billion in 2004, an increase of 6.6 per cent over 2003's record figures. The UK 2003 market had risen by nearly 7 per cent over that of 2002 to £1.152 billion, the highest value ever reached. When combined with the value of hardware sales of the key gaming systems, this contributed to a total 2003 UK market of over £2 billion (excluding PC). According to Screen Digest estimates, the world market has almost tripled in value since 1995 and few, if any, other media markets can show comparable growth. *(See fig 1)*

The global interactive leisure software retail market was worth £9.8 billion in 2003, up 10.8 per cent from 2002. Looking ahead, Screen Digest predicts that the global retail market will grow by 16 per cent to reach £11.31 billion by 2007.

Since 1995, over 25 million dedicated gaming devices were sold in the UK (not including PC), which is enough for one in every UK household. *(See fig 2)* In addition, almost 280 million units of leisure and games software have been sold in the UK during the same period; enough for every household in Britain to own 11 titles each. In volume terms, nearly 170 million units of software were sold to British consumers in 2003-2004, generating £3.68 billion in software sales revenue. *(See fig 3)*

Europe is the second largest entertainment software market in the world. *(See fig 4, Page 14)*

The UK console software market is the largest in Europe, dwarfing the second (France) and third (Germany) largest markets combined. *(See fig 5, Page 14)*

British-developed games generated more than £1.1 billion in retail sales outside the UK in the year 2000, with 33 per cent of PlayStation® products purchased in Europe originating in the UK. UK-developed games continue to maintain a strong presence across all territories. In 2004 they accounted for four of the UK's top 10 best-sellers.

According to Screen Digest, between 1997 and 2003, the interactive leisure software market in the UK grew by over 100 per cent, far outstripping performance of cinema box office receipts (30 per cent growth), VHS/DVD rentals (14 per cent growth) and music retail sales, which actually fell by 4.5 per cent over the same period. *(See fig 6, Page 14)*

The UK's best selling series (FIFA Soccer, Grand Theft Auto, Harry Potter) now sell close to one million copies each in a year across all games hardware formats. Some titles, such as the recently released Grand Theft Auto: San Andreas and Halo 2, sold one million copies within weeks of release. Such selling power can bring gross retail revenues approaching £50 million for each title, making the best-selling games' earning potential comparable to that of the biggest films, around half that of video/DVD best-sellers and twice as lucrative as that of music's biggest earners. *(See fig 7, Page 14)*

(fig 1)

UK leisure software market value
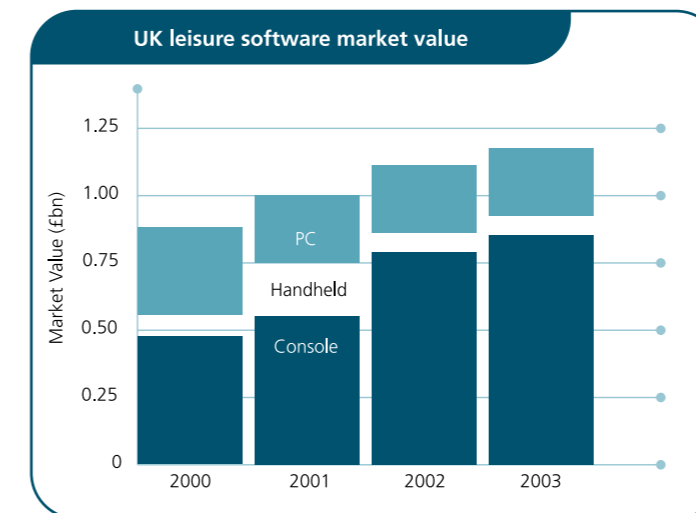
Source: ELSPA/ChartTrack

	2000	2001	2002	2003
	£m	£m	£m	£m
Console	491	569	759	832
Handheld	97	142	90	87
PC	258	256	232	233
All Leisure Software	846	967	1081	1152
Change (%)	0	14.3	11.8	6.6

(fig 2)

UK hardware sales volume
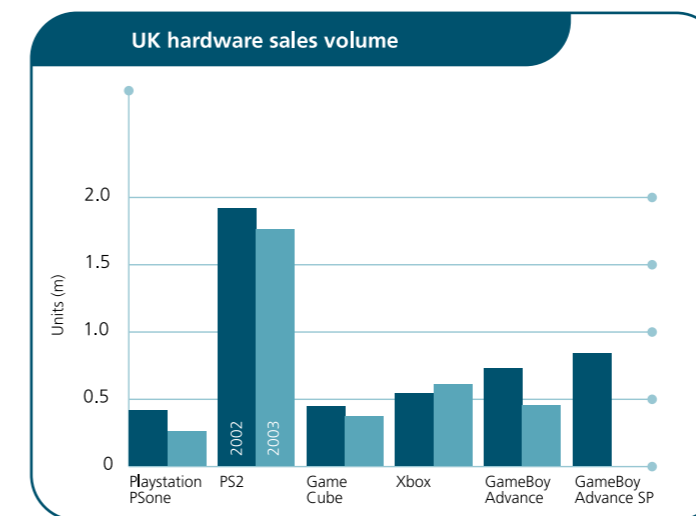
Source: Screen Digest from industry sources

(fig 3)

Total number of games and edutainment / reference software pieces sold 1995-2003

UK	279m	USA	1,659m
Europe	1,118m	Japan	502m
PAL	1,252m	World*	3,413m

*includes PAL regions plus Japan and USA only

Source: Screen Digest

(fig 4)

Comparative total leisure software market sizes 2003

Market Value ($m)

2,000	
1,500	6,411 (Europe) · 7,585 (USA)
1,000	
500	2,677 (Japan)
0	Europe · USA · Japan

Source: Screen Digest

(fig 5)

European comparative leisure software market sizes 2003

Market Value (£bn)

2.0	
1.5	UK · France · Germany
1.0	Spain / Portugal
0.5	Nordic · Italy · Benelux · Austria / Switzerland · Ireland
0	

	£m
UK	1,677
France	1,098
Germany	1,067
Spain/Portugal	435
Nordic	418
Italy	389
Benelux	279
Austria/Switzerland	254
Ireland	107

Source: Screen Digest

(fig 6)

UK entertainment market comparison 2003

Spending (£m)

2.5	
2.0	2,421 (VHS/DVD Retail)
1.5	1,152 (Leisure Software) · 1,672 (Music Retail)
1.0	
0.5	742 (Cinema Box Office) · 464 (VHS/DVD Rental)
0	Leisure Software · Cinema Box Office · VHS/DVD Rental · VHS/DVD Retail · Music Retail
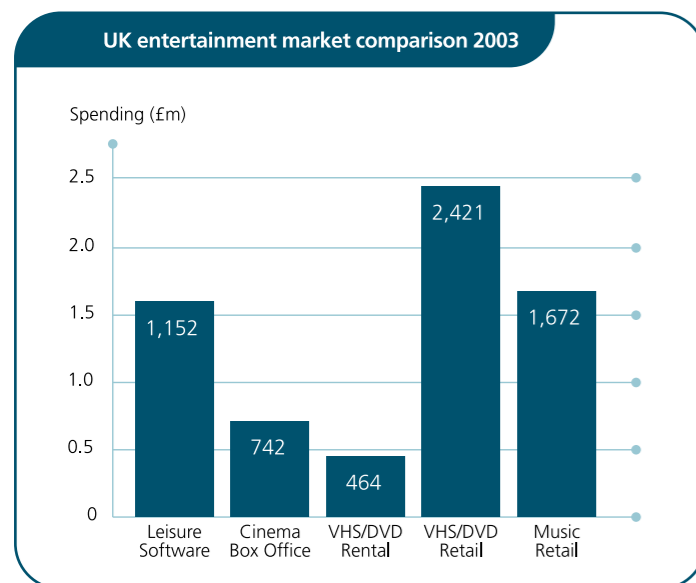
Source: Screen Digest

(fig 7)

Individual product comparisons

Sector	Best-Selling Titles	Units Sold	Gross Revenues
Cinema	Finding Nemo	8.4m	54m
Video/DVD	LOTR-Two Towers	3.8m	101m
Music	DIDO-Life for Rent	1.2m	21m
Games	GTA: Vice City	1m	50m

Source: ISFE

Demographics

Computer and video gaming is now a mass-market leisure activity, with millions of players throughout Europe. In the last few years the age group of those playing games has increased, and the average age of gamers is now in the mid 20s.

The UK is the third most active games development and consumer power in the world after Japan and the United States. A huge installed base of 51.2 per cent of British men and 25.1 per cent of British women aged 10-35 play games regularly (SomeResearch). (*See fig 1*)

According to 2003 figures, 21.3 per cent of French people and 16.25 of Germans have a games platform available to them (Gamevision) and just 18 per cent of all Europeans are games players (SomeResearch). The UK's population, by contrast, has a far higher proportion of gamers at 38.2 per cent. What's more, they spend significantly more than their continental counterparts. (*See fig 1*) (*See fig 2*)

British games players are active consumers of software products, spending on average £116.60 on hardware and software over six months in 2003 (Gamevision). Research also indicated that players intended to spend more in the next six months (click research). (*See fig 3, Page 19*)

The average gamer spends 11 hours a week playing computer games and has been playing for 10.4 years – a period of time that roughly coincides with that since the release of the first Sony PlayStation®. It follows that younger players have spent a greater proportion of their lives with interactive entertainment. (*See fig 4, Page 19*) (*See fig 5, Page 19*)

A recent study conducted by the Entertainment Software Association (ESA) in the US highlighted the fact that 79 per cent of players who spend more than 6.8 hours per week playing games engage in regular exercise and take part in team sports activities for 20 hours per month. Ninety-four per cent follow current affairs, 50 per cent write, paint or play a musical instrument and 45 per cent get involved in voluntary work for an average of 5.4 hours per month (ESA).
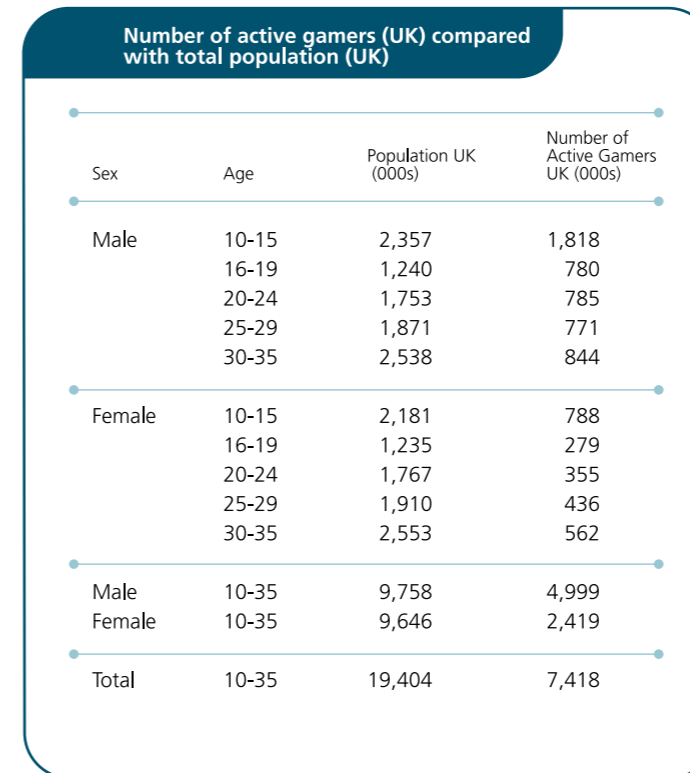
In the decade since the PlayStation® was launched in 1995, when the vast majority of titles were simple simulations or adventures, publishers have exploited the vast library of play styles available which are attractive to a broadly adult demographic. Today there are more than 15 genre categories, ranging from action adventure series such as the international best-sellers Tomb Raider, Prince of Persia and Ratchet and Clank to life simulations, such as the tremendously successful title The Sims, to sports games such as the extremely popular FIFA Football.

As a result of the more demanding demographic, game plots have developed added depth, elements of self-expression and personalisation and are now expected as a matter of course to feature social interaction as part of the experience. That applies to games using multiple input devices as well as online titles that encourage teamwork and friendship development.
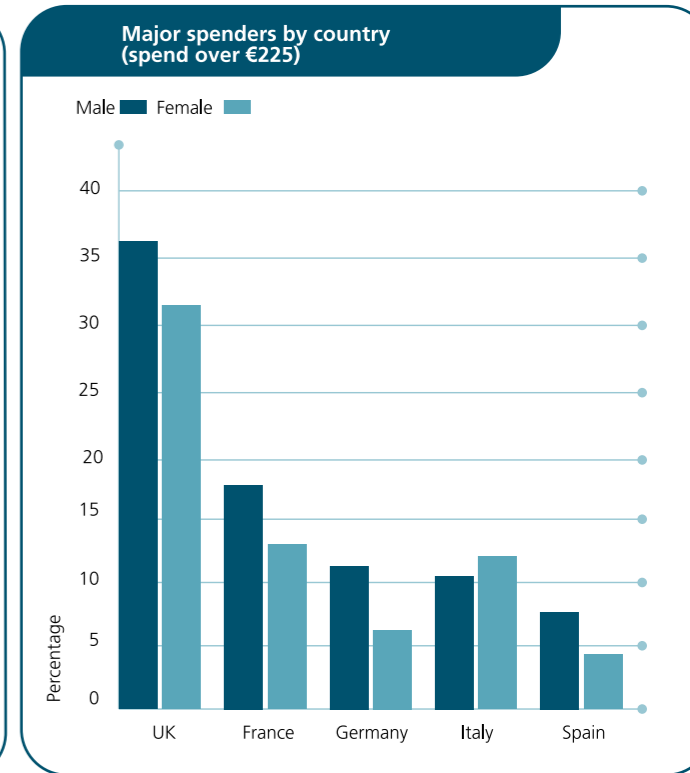
Game playing is a cognitively active pursuit. Games are celebrated for their emergent storylines and problem-solving exercises. Designers are responding to consumer demand by creating virtual worlds that are infinitely personalised and encourage lateral thinking, offering as rich an experience as reading a book and certainly a more challenging activity than watching television. Perhaps this is the reason why gamers generally are more successful academically.

(fig 1)

Number of active gamers (UK) compared with total population (UK)

Sex	Age	Population UK (000s)	Number of Active Gamers UK (000s)
Male	10-15	2,357	1,818
	16-19	1,240	780
	20-24	1,753	785
	25-29	1,871	771
	30-35	2,538	844
Female	10-15	2,181	788
	16-19	1,235	279
	20-24	1,767	355
	25-29	1,910	436
	30-35	2,553	562
Male	10-35	9,758	4,999
Female	10-35	9,646	2,419
Total	10-35	19,404	7,418

(fig 2)

Major spenders by country (spend over €225)

Source: Elspa Game Vision 2003

(fig 3)

Average spend for active gamers in the last six months (at December 2004)

Sex	Age	(£)
Male	10-15	101.0
	16-19	123.8
	20-24	144.6
	25-29	135.6
	30-35	124.5
Female	10-15	73.3
	16-19	85.8
	20-24	81.8
	25-29	107.7
	30-35	97.4
Male	10-35	123.6
Female	10-35	90.7
Total	10-35	116.6

(fig 4)

Length of time playing games % total respondents

Average Number of Years Playing

	10.4	9.0	10.8	12.2	10.6
10 or more years	53.8%	37.3%	58.5%	73.9%	57.7%
6-9 years	22%	33%			
3-5 years	14%	19.9%	19.6%	11.1%	16.3%
			11.1%	5.6%	14.8%
1-2 years	4.8%	5%	4.2%	4.6%	5.2%
6-12 months	2.7%	2.4%	2.8%	3.5%	2.3%
less than 6 months	2.8%	2.4%	3.8%	1.2%	3.9%
	Total	13-17	18-24	25-34	35+

(fig 5)

Hours of play per week

	10-15	16-19	20-24	25-29	30-35
Male	14.2	12.7	12.7	10.4	11.7
Female	10.2	8.4	7.8	10.1	9.6
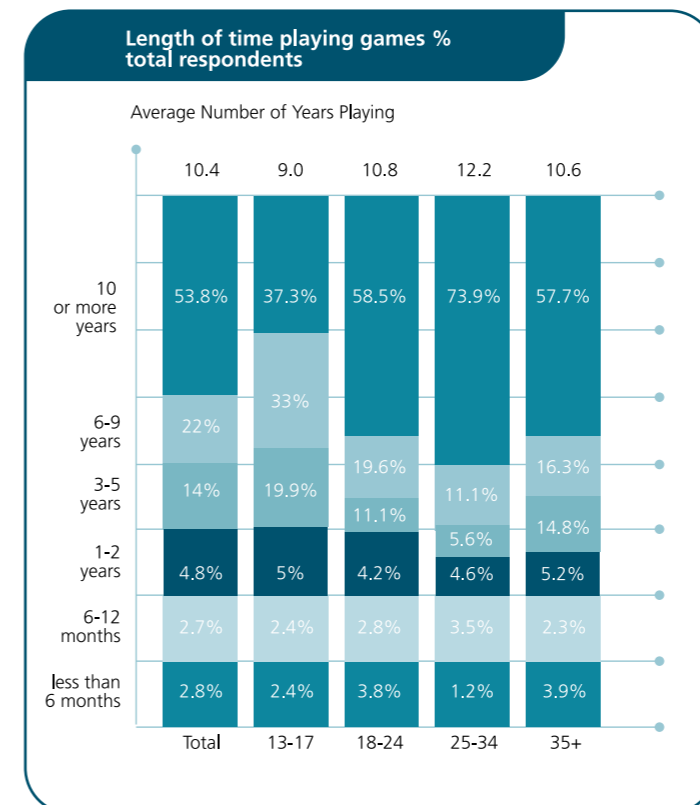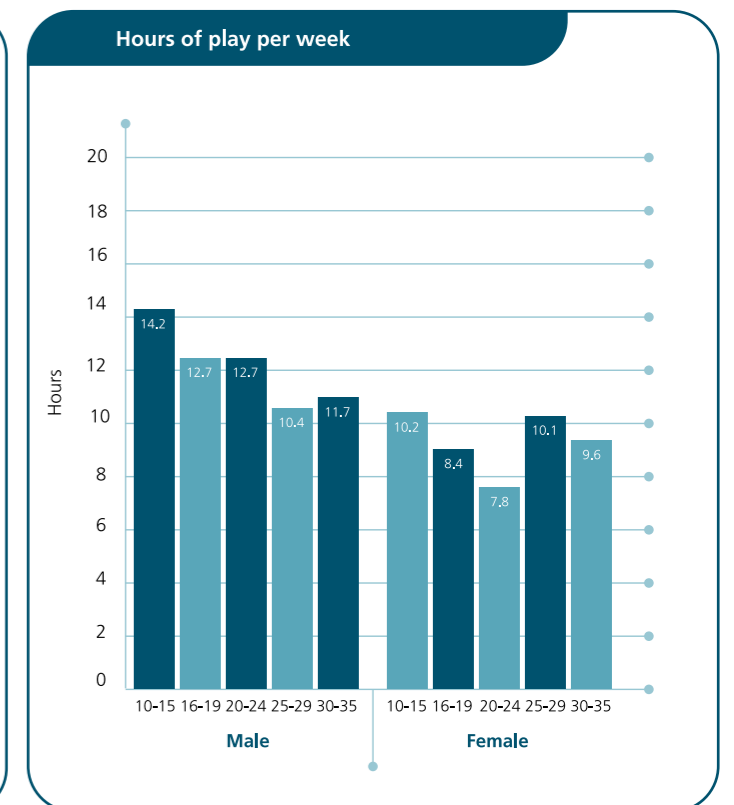
Research

Although computer and video games have been under the academic microscope since their invention, recent years have witnessed an upsurge in three distinct areas of inquiry: their putative association with violence, their potential bearing on health issues and their role in education.

Games are rated so that violent content can not be purchased by children. However it is worth noting that research undertaken by ULTRALAB at Anglia Polytechnic University indicates that children can very clearly distinguish the difference between violence in games and the real violence they hear about on the news.

Over the years, there have been over 3,500 research studies into the effects of screen violence, encompassing film, TV, video and, more recently, computer and video games. This is according to a 2001 meta-analysis (updated in November 2004) conducted by Dr Guy Cumberbatch, Chartered Psychologist and Director of the Communications Research Group, and commissioned by the Video Standards Council. His report concentrates on a relatively recent upsurge in research activity, referring to 52 studies in which games feature strongly as the subject matter. The majority of these were conducted within the last two decades, but the focus is on the most recent. The report criticises the methodology of much of the early work, which characterises the media as catalysts for violent acts, and points out that many of its conclusions are far from objective.

'The evident weakness in the individual studies and the general pattern of inconsistent findings would not normally lead us to expect researchers to make any strong claims about video games. However, this is far from the case. As with other research on media violence, some of the strongest claims are made on the most flimsy of evidence.'

Furthermore, James Ferman, Director of the BBFC and author of the Home Affairs Select Committee's 1994 investigations into the link between the media and violence concluded:

'I do not know of particular cases where somebody has imitated a video and gone out and actually committed a serious crime as a result of what they have seen.' (Home Affairs Select Committee, Fourth Report, 1994, p5)

'The evident weakness in the individual studies and the general pattern of inconsistent findings would not normally lead us to expect researchers to make any strong claims about video games...'

Concerns about media violence are nevertheless persistent. 'New' media inevitably inherited the legacy of anxieties about rising crime and wayward youth that has fuelled moral debates for centuries (Cumberbatch, 1994). In 1776, Joseph Hanway blamed debasing amusements and newspapers for the 'host of thieves which has of late years invaded us'. In 1869, Greenwood complained that 'penny dreadful' comics 'may sow the seeds of immorality among as many boys as a town may produce'. By 1905, Charles Russell did not need to ask whether theatres caused crime among Manchester's youth: '...horrible murders and terrible tragedies were enacted before the footlights [which led to] so many instances of violence on the part of young men in the back streets of the city'. Similar worries have been raised about radio, the cinema, the internet and popular music.

The apparent timelessness of such concerns does not invalidate them but it should alert us to the existence of well-rehearsed frameworks to explain social ills. These seem to be invoked readily when discussing violence in popular culture but not when it comes to more established forms of artistic expression such as theatre, opera, painting or literature. Moreover, it seems clear that some graphic images, such as those in news coverage from Iraq, are perceived as an acceptable portrayal of violence to have on our screens. Some may consider this a hypocrisy but more importantly it makes it clear that representations of violence per se should not be condemned.

Health

There have been many studies conducted to investigate whether playing computer and video games can be addictive. All of them have reached differing conclusions.

From a neurological standpoint there is no evidence of a biological addiction to games - so the industry argues that games should not be judged separately from any other leisure activity that brings people enjoyment. For example, a casual book reader will read books as part of his or her daily activities in a healthy balance with a number of other pursuits. An avid book reader, television viewer, music lover or film buff, on the other hand, may choose to engage in their favourite activity more than any other. Just as, the industry argues, will a keen video-gamer. As with these other enjoyable pastimes, the industry maintains that playing with interactive software is merely one of many daily activities that give people pleasure.

The Consumer Safety Unit of the Department of Trade and Industry, together with the National Epilepsy Society, has carried out exhaustive research into this area, which found that epilepsy cannot be caused by playing games.

The report indicates that a small number of people who already have photosensitive epilepsy may discover their condition by playing games, in the same way as they may discover it by watching television or being exposed to strobe lights. The numbers involved are so tiny that experts are happy to say that games pose no risk to children. However, because of the possibility that playing a game could bring to light a pre-existing condition, all games are published with a standard epilepsy warning.

Studies suggest that any situation in which someone spends a prolonged period of time sitting in one place may increase the risk of DVT (Deep Vein Thrombosis). This is not exclusive to games; indeed DVT may occur with any stationary leisure activity, including watching television, listening to music or reading a book. The computer and video games industry accepts that the nature of game-playing involves long periods of physical inactivity and therefore provides a clearly printed recommendation with each game, advising players to:

- Take regular breaks
- Move around to stimulate blood flow throughout the extremities
- Play for short periods of time

Recent research has suggested that gaming is beneficial in clinical settings, from paediatric wards in hospitals to applied settings with adolescents and adults. Specifically, a May 2004 study argues that leisure software applications may offer patients the opportunity to express themselves in an environment in which they feel safe. Further research (in press) argues for the psychological benefits social gameplay for has isolated players, and players with physical disabilities.

Education

In October 2004 a report was released that praised the positive impact that games have on children, and encouraged their use in the classroom. It confirmed the message that the industry, along with many educationalists, has been promoting for over a decade.

Partly financed by the DTI, researchers at London University's Institute of Education developed the report between 2001-2004. Their findings confirm that games are good for a child's development because they entertain while promoting social development. The research team seeks to promote an understanding amongst parents and teachers that games are as culturally relevant as music, film and literature. Finally, it encourages the teaching of games development skills in schools, enabling children to become game creators as well as game players. Some school boards (eg Long Road Sixth Form College, Cambridge) have embraced the results and have already incorporated the findings into the curriculum for A-Level.

The October 2004 results support a Home Office five-year research study published in 2001, which concluded that those who play games regularly are more likely to be academically successful, are more likely to go to university and consequently have better employment prospects. (Source: Home Office)

In January 2005, the Sector Skills Council for the Audio and Visual Industries (Skillset) announced the development of an accreditation scheme for degree courses relevant to the computer and video games industry. The project, jointly funded by the DTI,

The October 2004 results support a Home Office five-year research study published in 2001, which concluded that those who play games regularly are more likely to be academically successful...

(Source: Home Office)

is working with the computer and video games industry trade bodies, industry professionals and education providers towards the publication of a roster of standards for the UK's 143+ courses. Its aim is to set occupational standards for the industry that will have a powerful and positive long-term impact on its professionalism and productivity.

History

Every day, millions of Europeans are delighted, inspired and entertained by computer and video games. The simple urge to play is 'hardwired' into the human brain and it's extremely well addressed by the sophisticated yet intuitive designs created by today's games developers. This 'tickling' of the play impulse has created a market worth £3.7 billion across Western Europe in 2003. But this remarkable success story did not happen by accident. It's a tribute to the way in which the industry created simple 'plug and play' products, designed compelling software and crafted subtle marketing programmes that took gaming away from its core young, male audience and made it attractive to all ages and both genders.

The beginnings of gaming

Interactive computer entertainment has its foundations in the work of inventor William Higginbotham at Brookhaven National Laboratory in New York. Far from today's realistic graphics, user-friendly interfaces and depth of plot and character, Higginbotham's paddle and ball game, titled Tennis for Two, resided awkwardly on a large oscillator mainframe. Once an intriguing novelty for visitors to the laboratory, it has since become a footnote in the annals of interactive history.

Most digital historians pinpoint 1962's SpaceWar as the true beginning of modern gaming. While still notably un-portable, programmed by MIT students on a room-sized machine, the game later inspired the 80s arcade classic Asteroids and launched the movement towards interactive play.

Three years later, the US Pentagon adopted the idea and created portable game products designed to teach strategy and reflex skills to the military. A man named Ralph Baer was part of that team and spent his free time working with the machine to develop a rudimentary hockey game. He filed for the patent in 1968 and is commonly considered the 'Father' of gaming.

Games enter the cultural consciousness

Interactive entertainment remained the preserve of high-tech laboratories and academics until the late 1970s, when products like Pong, Defender, Space Invaders and Pac Man entered the public consciousness during the Arcade Era. They were particularly popular in Japan and, at one point in 1978, the Japanese mint was forced to press more 100 Yen pieces because the arcade machines were gobbling them up faster than they could be reintroduced into the public.

Gaming enters the home

Gaming in the early 1980s was still a public entertainment, enjoyed at arcades, bowling alleys and ice skating rinks. However, in 1977, the fledgling company Atari released a home games system. The machine plugged into the family television and brought Pac Man, Asteroids and other arcade classics into the home.

These home-based 'consoles' were particularly popular in the US and Japan, while the UK consumer was drawn to the new home computer systems, like Sir Clive Sinclair's ZX80.

These products allowed the British gamer to play and create interactive applications, laying the foundations for the creative development industry that exists today.

Every day, millions of Europeans are delighted, inspired and entertained by games.

With programming in the grasp of the UK's growing games-playing population, new powerful machines began to permeate the public consciousness. The BBC released their BBC Micro, Commodore released the VIC 20, and Sir Clive updated his product with the ZX81 and later the Sinclair Spectrum. Based on the availability and affordability of the new home computers - and the ease with which they enabled people to create new software - British games development companies began to flourish, importing and exporting products to international audiences. The late 1980s witnessed the hatching in the UK of a fledgling industry that has grown into the third most powerful in the world today, after those of Japan and the US.

Entering the modern age of gaming

The games industry experienced a shift in the mid-1980s, with the powerful Japanese company Nintendo releasing their home-based console. Its launch heralded the new age of gaming, dominated by a few international companies whose hardware is released on a cyclical basis in order to exploit the current trend of technological advancement. Their first machine, the Nintendo Entertainment System, ran on 8-bits of processing power, equivalent to the amount needed to generate a shortcut icon on the virtual desktop of most of today's PCs.

Technology has since fuelled and guided the computer and video games industry's trajectory and because the software for each home console is only compatible with its own hardware, competing companies have historically engaged in fierce marketing and technological battles to drive consumers to their branded machines. Only in recent years has software been made available across the platforms and, in modern times, the primary driver towards a home entertainment system has been each machine's unique special features – such as graphical superiority and internet connectivity. The PC CD-ROM games market has grown in tandem with the console market, similarly surging forward with each new wave of silicone power.

The industry refers to its cycles by reference to the power of the processor inside new computers, which doubles in size approximately every five years. This means that the consoles' capabilities advance in terms of their graphical, audio and memory power with the start of each new cycle. The '8-bit era' was dominated by Nintendo's system and spanned 1984-1989.

The striking feature of the current race for market leadership is the intention of the manufacturers to achieve technological convergence.

The '16-bit era' spanned 1990 to 1995 and saw heated competition for market domination between the Super Nintendo Entertainment System and Sega of America's MegaDrive. It was at this point that games icons Mario and Sonic the Hedgehog leaked into the consciousness of the wider public.

The Sony PlayStation® dominates

The '32-bit era' began in 1995 with the release of the Sony PlayStation®, and the Japanese giant has maintained a dominant position since that time. This machine, and the accompanying marketing drive, created a paradigm shift in the industry and thrust Lara Croft, one of the games industry's most famous characters, into the mainstream. No longer viewed as a toy for children, the software the company launched was directed at the older consumer, targeted at pubbing and clubbing twenty-to-thirty-somethings. In order to compete, the other manufacturers were forced to reassess their hardware and software. Nintendo released its Nintendo 64 (a 64-bit product) in 1996 and Sega ushered in the current '128-bit era' with its Dreamcast, released in 1999, featuring internet connectivity.

The current home console base is at the waning end of the 128-bit era. Sony released its PlayStation® 2 in 2000, Microsoft entered the race with its XBox console in 2001 and Nintendo released its Game Cube in 2002. The saturated market has meant that Sega has had to drop out of the hardware race and the consensus of speculation about the next generation's contenders is that there will be more casualties, or consolidation. Nintendo, Microsoft and Sony intend to release their new home console machines - the '256-bit era' - in 2006.

Games lead the technological convergence revolution

The striking feature of the current race for market leadership is the intention of the manufacturers to achieve technological convergence, with the home console envisaged as a total entertainment machine. Microsoft and Sony already feature online capabilities and DVD playback on their current hardware; and they intend to move away from pure gaming applications into internet and media ports for the household. Nintendo's intentions are to maintain their current thrust of gaming applications and to include WiFi as part of the new console's package.

Games in the hand

Parallel to the contemporary race has been the burgeoning handheld console market. Nintendo has been the primary manufacturer of the extremely successful GameBoy series of machines, advancing since 1985 to the forthcoming Nintendo DS, a touch screen, WiFi device. In the past two years, fierce competition has entered from the mobile phone market, including Nokia's games-dedicated N-Gage, and Sony's forthcoming PSP handheld console, featuring games and DVD and MP3 playback, is expected to counterbalance Nintendo's domination.

The UK computer and video games industry employs over 20,000 people, making it by far the largest software employment field in Europe.

PC games

The final strand of the modern games market is PC gaming. Since the CD-ROM made it possible to store long, complex and graphically rich programmes, gaming has been at the forefront of what is possible on a PC. Games still drive the market for PC peripherals (such as graphics cards, speaker systems, navigation devices and even, to an extent, broadband connections), while stimulating the demand for new and more powerful hardware. Often, PC manufacturers demonstrate games when they want to showcase the capabilities of their new models.

While it's true that PC gaming does not have the mainstream appeal of console gaming, it does serve the older strategists and significant pre-school market. Titles featuring characters such as Teletubbies, Noddy and Adiboo sell well to parents who see the educational dimension of interactive play as a welcome alternative to the TV.

It's impossible to say with accuracy how many PCs in Western European households are actively used for games. However, research shows that millions of consumers do purchase PC games. In 2003 66.2 million units of software were sold across Western Europe – equivalent to £1 billion in value, which is 28 per cent of the games software market.

Games grow up

As a result of this tremendous uptake of gaming as a leisure pastime, game developers have had to respond to the demands of the increasingly discerning consumer - indeed, the development

and production costs now rival, if not exceed, those of Hollywood films. Furthermore, television companies and other mass media sectors are increasingly becoming aware that their core audiences are substituting viewership for games playing. The cost of games has consequently risen to £39.99 per premier line game. Budget line prices vary from £10-£20 each.

Games are a booming industry

In the decades since home computer gaming became part of mainstream entertainment, small independent specialist retail stores have become multi-national corporations. The UK computer and video games industry employs over 20,000 people, making it by far the largest software employment field in Europe.

None of this could have been possible without the tremendous uptake of gaming in the British and worldwide population, making a game's release a rival to a Hollywood premiere, and the industry in general a serious contender in the international entertainment arena.

At present in the UK there are four major publishers and over 120 developers, the most of any European country.

Industry Structure

The UK computer and video games industry is made up of publishers and developers. The developers create the games with the available creative talent while the publishers finance, market, distribute and make them available for sale.

Publisher consolidation

At present in the UK there are four major publishers and over 120 developers, the most of any European country. The increase in budgets and timescales, the globalisation of the market, the need to pay out for licences and franchises – these are the factors that have caused the computer and video games industry to consolidate over the last ten years. The trade's largest publishers have merged, expanded by acquisition and sought public flotations in order to attain the scale and financial backing to fund expensive games development and market the resulting products all over the world. In this, the market is following the path taken by Hollywood and the record industry. In the UK, the big five record companies, Universal, Sony, Bertelsmann, Warner and EMI account for 70 per cent of all sales. In video, the big six - Universal, Warner, Columbia Tri-Star, Paramount, Buena Vista and 20th Century Fox - also take 70 per cent (ISFE).

The top ten games companies now control around 65 per cent of the world market (ISFE).

The industry is also mimicking the hierarchy of its counterparts in music and film. For example, small specialist music labels are commonly bought by the majors after which they continue to be marketed as independents but benefit from the cash and clout of their new owner. Today, virtually all well-known specialist independents work this way. In hip-hop, Def Jam is owned by Universal. In jazz, Blue Note is a part of Warner/EMI. This trend is on the increase in games as well.

The basic structure of the computer and video games industry can be divided into two types of publishers and two types of developers, topped by the multinational organisations that have created the hardware: Nintendo, Microsoft, Sony and – increasingly – television companies and mobile phone operators. The PC platform disregards the manufacturers.

The multinationals

These organisations are the manufacturers of the games hardware but they also function as publishers. In the cases of Sony and Microsoft, the home consoles (PlayStation®/PlayStation® 2 and XBox respectively) are only one line in their vast range of consumer products. In contrast, Nintendo is a games-dedicated company and its consoles (GameCube and GameBoy) are its primary charges.

The in-house publishers

Within the multinational organisation is a dedicated publishing company for the hardware. These publishers handle the financing, marketing and selling of games software created by in-house development studios and independent development studios who have received a publishing contract directly from the console manufacturer. They only publish the software on the dedicated console.

External publishers

These are independent publishing companies who sell games created by independent development studios or in-house development studios to the manufacturers of the games consoles. They pay a licence fee for each copy of a game sold on the home console. Depending upon the conditions of their contract, they may be able to sell a game to more than one console manufacturer, making it available to players with various types of machine.

Part-owned studios

Some companies have had a certain proportion of their company purchased by a major publisher or manufacturer's publisher. They are financed by the publisher for games, yet they are free to seek other publishers for non-game products under development.

Independent studios

Development studios, like other media organisations, may be wholly independent, free to seek game finances and support from manufacturers or external publishers. The independent sector represents roughly half the number of people in development activity in the UK, and a higher proportion in Europe. Independents are unique cross-fertilisers of development practice because they can develop for any publisher; some 3,500 development employees in the UK are part of publisher-owned studios and can only work for that publisher.

While some focus on huge, technology-led PlayStation® 2 games, others concentrate on the quick turnaround of games for mobile phones or TV. They can be small teams of 10 or large 'super developers' with over 200 staff in varying locations throughout the country. For the latter, the escalating budgets and development timelines of today's console games have made things extremely risky. Creating games like these requires sound management, a massive commitment to R&D, the spread of risk across multiple projects and platforms and, if possible, some control over intellectual property rights. Those that have succeeded have grown into powerful companies capable of assigning multiple teams to work on multiple projects simultaneously.

Focus on UK development

Today the UK is a world centre for computer and video games development, acclaimed for originality, wit and technical ingenuity. It's arguable that games such as the Worms series, Grand Theft Auto, and Black and White, with their dark humour and eccentric ideas, could only have come from the UK where there is less of a factory approach to development and teams are comparatively small.

There are 120+ independent development studios in the UK. One of the sector's great strengths is that these studios exist all over the UK and Europe and are not, as in many other industries, concentrated in London and the South East, or other capital cities. Indeed, the Regional Development Agencies set up by the Government have provided games developers in non-central parts of the UK with substantial support.

In many respects, this foundation has sustained the industry through periods of boom and uncertainty. Current initiatives, such as the R&D Tax Credits developed by the Government with developer body TIGA, benefit the smaller developers in the current atmosphere of multinational consolidation.

The challenges and pressures on independents are great: the fast pace of globalization of the industry, the increased costs of bringing product to market and the greater competition coming from lower cost territories. On the other hand, these threats also present opportunities to those who are open to redrawing their business plans and models to meet and beat these challenges and accommodate the increasing complexity of the industry value chain.

Currently, games development companies employ full-time staff, and rarely rely upon freelance or contract workers. Analysts indicate that this model is set to change, in line with other creative entertainment media models, which rely heavily upon task-specific teams of highly-skilled individuals for the duration of one project. Adoption of such a method would not only give development companies the best group of available individuals for the task at hand, but it would also alleviate the between-project costs of maintaining staff salaries.

Today the UK is a world centre for games development, acclaimed for originality, wit and technical ingenuity.

Each group of workers on a game is highly specialised. Because the hardware manufacturers only support their proprietary programming language with their own development tools, the men and women who are capable of creating games across platforms are highly prized commodities and are eagerly sought. However, the turnover of hardware every five years demands a continuous learning process, for which there's rarely time in the high-pressure hothouses of games development, so employees are often forced to learn current and future computer languages on their own time.

The process of game development for an independent company begins with the genesis of an idea.

What follows is the delivery of a proposal to a publisher in document and early software form. If the publishing company decides to fund the project, it provides funding in the form of an advance or series of advances based on certain development milestones. The design team, typically comprising around forty highly-skilled creative designers, writers, artists, programmers and quality assurance testers, then moves into production, which can take an average of eighteen months to final submission.

At this stage, the developer delivers the final game to the publisher and the console manufacturer for acceptance. Because the consumer outlay is considerable for each product, console manufacturers are keen to provide interactive entertainment of the highest quality. If the submission is passed, the game is mass produced and released to retail outlets around the country. Thereafter, smaller development houses transfer the game into various native languages and formats for release to international markets, or across platforms.

Often these smaller companies are located in Eastern Europe or in other countries outside Europe, the US and Japan. Outsourcing is increasingly attractive as foreign nations enhance the sophistication of their IT capabilities, yet offer their services for a considerably cheaper price. Analysts project that significant portions of game development will soon be outsourced, from art to programming, leaving a hole in the technological sector in the UK. Industry bodies are currently working with the Government to devise methods of supporting the home talent in order to maintain this important creative source of revenue for the UK economy.

Games and Government

The computer and video games industry strategy is to ensure that it is recognised by the Government as being culturally and economically important to UK plc.

Key objectives are:

- To ensure that the Government understands the industry's voluntary regulatory procedures and structures, at the moment particularly in relation to age ratings and protection of young people

- To generate support for establishing UK development studios as the best possible source of skill, expertise and talent for global inward investment

- To establish the UK as the gateway to the European markets for games, thus attracting global industry interests, and seek financial assistance for inward missions from global markets

- To expose the UK games sector internationally at global trade events and to arrange outward missions to potential new markets (Korea, Japan, China, Eastern Europe etc)

- To seek to improve the competitiveness of the UK in the global market for games through tax breaks and sources of investment

- To improve and amend laws in respect to protection of IP. Some success has already been achieved with cross-industry lobbies (music, film, video) aiming to standardise penalties for copyright infringement through the alliance against counterfeiting and piracy.

There has been a dramatic rise in the Government's and its agencies' interest in the computer and video games industry in recent years, which has seen industry trade bodies meeting with No 10, the Treasury, the Inland Revenue, the DTI, UKT&I , DCMS, DfES, and two departments of the EU on behalf of developers and publishers. The industry has also briefed overseas agencies and government officials and is working with government agencies such as the Sector Skills Council for the Audio Visual Sector (Skillset), and many of the Regional Development Agencies in England, Wales and Scotland.

Regional Development Agencies have adopted strategies for digital industries since their inception in 1997 and some have invested impressive amounts of effort and attention into games. The Scottish Games Alliance is the oldest and probably the best known, and has been instrumental in the continued success of Scottish games development companies. They have also actively promoted the computer and video games industry's cultural contribution by supporting the annual Edinburgh International Games Festival.

More recently, a number of English regions have put substantial effort and resources into the formation of digital enterprises. Most prominently, Game Republic in Yorkshire has been supported by Yorkshire Forward and has encouraged the creation of new development companies in the area. It is through the support of government-funded initiatives like these that the computer and video games industry remains decentralised and regionally strong, providing invaluable skills development and economic gain across the UK.

Department of Trade and Industry

The DTI is one of the primary government departments with which the industry works closely; it is instrumental in supporting and promoting the computer and video games industry as 'vibrant' and 'invaluable' to the UK economy.

In 2002 it funded the 'Competitive Analysis of the UK Games Software Sector' report by Spectrum, which confirmed that the UK industry 'punched well above its weight' but also warned that the industry was at a crossroads: 'The lack of players with global scale, the comparative immaturity of the industry, its highly fragmented nature and the poorly developed industry-level infrastructure will all restrict the industry's ability to maintain and improve its competitiveness in the face of global competition.'

The report contains twenty-two recommendations of varying urgency, which have been followed up by a grouping of the DTI, ELSPA and TIGA.

The DTI is also instrumental in export and support and, in conjunction with the British Council, put funding behind a British pavilion at international games events in order to promote the unique contribution UK companies make to the global market.

UK Trade and Investment, part of the DTI, has been particularly supportive, encouraging both export and investment, primarily through outward and inward missions created specifically for the computer and video games industry.

The Patent Office, an agency of the DTI, is responsible for framing the law of copyright and trade marks. It also holds primary responsibility for piracy issues in the industry – indeed it has supported the sector by implementing amendments to legislation concerning intellectual property protection.

Department of Culture, Media and Sport

The DCMS is the other government department which has responsibility for and influence on the computer and video games industry. Following meetings with industry representatives and regulatory bodies in December 2004, it has promised to maintain its support for the age rating classification system that is currently in place and will strive to continue working with the industry in this area.

Under the jurisdiction of the DCMS is the BBFC (British Board of Film Classification), which is responsible to the department for rating all videos and games that are not exempt from the mandatory legal classification under the Video Recordings Act (1984).

Home Office

The computer and video games industry works with the Home Office towards law enforcement resolution, both in illegal trade and piracy as well as with online and wireless youth protection issues.

The games industry strategy is to ensure that it continues to be recognised by the Government as an important cultural and economic factor.

Important regulations relating to copyright and piracy include:

- Copyright Designs and Patents Act 1988
  (http://www.elspa.co.uk/piracy/legal/cdapa1988.asp)

- Trade Marks Act 1994
  (http://www.elspa.co.uk/piracy/legal/tma1994.asp)

- Trade Descriptions Act 1968
  (http://www.elspa.co.uk/piracy/legal/tda1968.asp)

- Computer Misuse Act 1990
  (http://www.elspa.co.uk/piracy/legal/cma1990.asp)

- Forgery and Counterfeiting Act 1981
  (http://www.elspa.co.uk/piracy/legal/faca1981.asp)

- Theft Act 1968
  (http://www.elspa.co.uk/piracy/legal/ta1968.asp)

- Advertisements Offering Counterfeit Software
  (http://www.elspa.co.uk/piracy/legal/advertsoftware.asp)

- Advertisement for Computer Chips
  (http://www.elspa.co.uk/piracy/legal/advertchips.asp)

- Seizing Computers As Evidence
  (http://www.elspa.co.uk/piracy/legal/seizingevidence.asp)

  Please visit the ELSPA website for more detail –
  http://www.elspa.com

R&D Tax Credits

R&D Tax Credits allow UK companies doing research and development to claim back 150 per cent of the amount spent on R&D in a year against Corporation Tax or, if not profitable, 24 per cent of costs incurred in R&D from NIC and PAYE contributions. These were introduced in April 2000 by Gordon Brown and in July 2003 the Treasury, Inland Revenue and DTI announced a review of these for all industries involved. TIGA put together a document arguing for many of the aspects of games development to be defined as R&D, which was delivered to the Treasury on October 10 2003. This has led to various meetings with the DTI, the Inland Revenue, the Treasury and, in January 2004, the Chancellor, to discuss the contents of the proposal.

While industry bodies believe that all aspects of game development should be considered eligible for R&D Tax Credits, government has accepted only part of the proposal. It has directed other financial opportunities, including funding, towards existing schemes like Venture Capital Trusts (VCTs) and EISs (Enterprise Investment Schemes).

Digital Content Forum

The DCF is a government-sponsored think tank. It forms a two-way conduit between industry and government to gather views and input into policy-making processes. It goes further to broker relationships, develop shared knowledge and undertake activities to promote innovation and excellence in the content sector.

It operates as a professionally managed network of members, to which it delivers value through representing their interests and views on a broader scale. By aligning complementary activities within the sector, it promotes co-operation amongst trade associations and businesses, enabling them to fulfil their own objectives.

The DCF membership includes trade associations and representative organizations from digital and traditional media industries whose business interests lie in the creation and commercial exploitation of digital content.

Alliance Against Counterfeiting and Piracy

The Alliance's purpose is to raise awareness of intellectual property issues among decision makers, influencers and stakeholders to ensure that, in law and in practice, intellectual property theft is treated as seriously as other types of theft. Members of the AACP include: ELSPA, British Video Association, British Association of Record Dealers, Video Standards Council, British Phonographic Industry, Federation Against Copyright Theft, British Music Rights, British Brands Group, Anti-Counterfeiting Group, Copyright Licensing Agency, Institute of Trade Mark Attorneys, British Jewellery Giftware & Finishing Federation, Federation Against Software Theft, Film Distributors Association, Publishers Licensing Society.

Interactive Software Federation Europe

ELSPA was instrumental in the creation of the Interactive Software Federation Europe (ISFE), the pan-European body based in Brussels which represents the publishing sector within the political, public and administrative infrastructure of the EU, specifically in the European Commission and European Parliament. Its role is to establish a clear and effective identity for the computer and video games industry as an economic and cultural factor in respect of legislative initiatives that may impact on the industry.

Useful Contacts

Industry trade bodies:

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www.tiga.org

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Age ratings:

British Board of Film Classification (BBFC)
3 Soho Square
London
W1D 3HD

t: +44 (0)207 440 1570
www.bbfc.co.uk

Video Standards Council (VSC)
Kinetic Business Centre
Theobald Street
Borehamwood
Hertfordshire
WD6 4PJ

t: +44 (0)208 387 4020
www.videostandards.org.uk

Retail trade bodies:

British Association of Record Dealers
(BARD)
Colonnade House
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Bournemouth
Dorset
BH1 2BY

t: +44 (0)1202 292063
www.bardltd.org

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The National Association of Specialist
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