

The rapid and sometimes bewildering growth of creative industries linked to digital technology has been ascribed to two phenomena: the integration of the world economy in which the sharing of creative ideas and processes becomes easier and the global growth in disposable income. In order to make sense of developments and trends in a rapidly moving and volatile environment we asked key players working in the computer games industry, interactive television, trade organisations, public funding agencies, university research departments and the big market forecast companies what they thought about current opportunities and trends; here's what they told us.

Where the action is...

Market for mobile content is rocketing:

As 3G rolls out, the market for creating content for mobile phones becomes more and more attractive. Mobiles have all the advantages of portability, a proven payment mechanism, and mass distribution. There are currently 1.6 billion mobile phones being used around the world. Digital content through handheld devices will move from niche markets into real mass-market products. The mobile games market is set to increase by more than tenfold in Europe in just two years

Broadband is always on...

Exposure to broadband has hugely increased the amount of money spent online. As people lose their reservations about using their cards over the net, the enormous success of EBay has introduced a whole new or rather older generation the so called silver surfers to the joys of shopping, gambling, chatting and playing without leaving their living rooms. UK is now 3rd within the G8 countries for broadband connectivity. One of the results is that people are using their computers for day-to-day activities like stocktaking and till systems, so the profile of Internet users is diversifying, and so is their range of interests. Digital Content Forum makes the point that content providers need to take onboard this growth market and "grow up a bit" themselves. On the down side, UK broadband is in real terms not very broad compared with bandwidth in other countries.

"We shouldn't look at iTV as just the red button" - Peter Cowley, Director of Interactive Media. Mainstream broadcasters are beginning to open their wallets for iTV. The big boys of iTV like Endemol have interactivity at the core of the majority of their UK output. PACT estimates that about 20% of their production company membership is involved in interactive production. Endemol also report that the market for interactivity is increasing with advertisers and corporates too. For pay-TV companies the iTV honey pots are casino and bingo style games.

Could online herald the end for shoot'em up games?

The global market for PC and console games was \$18.2 billion in 2003. No other new media sector has witnessed such rapid growth. The global console software market is forecast to grow 15% per annum until 2007. UK is the 3rd largest market for games in the world after the U.S. and Japan and the industry is worth an estimated £2 billion a year. The value has doubled since 1995, and there is still scope for expansion but there is some question as to whether the UK can maintain its market share under pressure from new players particularly China and Korea.

There has been a huge rise in online game playing over the last two to three years, and players tend to be more "casual" than hardcore games enthusiasts. The online games market is split 50/50 male/female although they demonstrate different preferences. Dr Jim TerKeurst from University of Abertay believes that the rise of online gaming and downloads will lead to conventional games retail disappearing. The retail games market collapsed in Korea in just three years. There is an expanding market on multiplayer games e.g. the new Nintendo DS (Dual Screen). However it's to the casual player that most analysts are looking in terms of expanding markets.

And some other trends

The roll out of film downloaded to your PC has been slow because major content owners have two dilemmas; the amount of revenue generated by video on demand doesn't offer the same big returns as DVD retail sales, and continuing concerns about piracy and content security. Interesting technological trends include the development of film iVods and Interactive Media Players; Columbia are beginning to release films on Playstation discs, and the major content providers like Warners and Disney are developing interactive deals, whilst mobiles phones are now designed for video playback.

DVD, digital channels and pay per view rather than traditional cinema box office and video rental revenues have fuelled the continued growth in film revenues. But at the same time UK cinema box office revenues grew by almost 300% in the decade to 2002.

Television and radio market size increased by more than 100% during the 1990's mostly as a result of digital technologies and continued growth is forecast. Digital television offers new and expanding income generation streams. By the end of 2003 there were 82.4 million digital pay TV subscribers in Europe, forecast to rise to 94.4 million by the end of 2008. The growth in the global market is expected to outstrip UK growth due to market expansion in lower income countries. Threats to the UK industry include the consolidation of industry ownership into the hands of a very few large firms which could lead to consequences such as increasing homogenisation of output, increase levels of imports and syndicated broadcasts.

What's driving things forward?

50% of Sky's revenues for interactive services come from gambling

Consumer demand for interactive content is extremely strong in certain areas, big sporting events like the Olympics and the huge growth area- gambling.

Demand is snowballing rapidly due to broadband uptake which has massively increased the amount of money spent online. People are losing their reservations about the security of using their cards over the net and have more confidence in online shopping. The enormous success of EBay has introduced a whole older generation to the Internet. Older people ('silver surfers') are now discovering the joys of shopping, gambling, chatting and playing without leaving their living rooms.

The Producers

The position of digital content TV producers will shift significantly as the changes in rights retention enable them to retain control of their rights and exploit them. This will mean indie producers will be much more proactive in seeking out international and secondary exploitation opportunities. Broadcasters are now commissioning more interactive content and there is a stated open door for small companies:

"Whilst the desks of TV commissioners continue to buckle under the weight of heaving post bags stuffed with proposals and ideas, there is a lot less coming in proactively to interactive commissioners" - Adam Gee, C4 Education

In computer games, the consoles manufacturers continue to dominate in spite of the development of web based and mobile games, although these markets are growing rapidly. In order to develop games for consoles, a company has to be approved by the manufacturer, which means having a track record, and there are only about 300 approved developers for console games worldwide. Development kits costing in the region of £10,000 have to be purchased to produce a console game. And it's often 5 or 6 per game. PC games that currently account for around 25% of the market don't require a licence or approved development kit like console games.

What's on the box?

The main thrust of technological developments is leading towards a flat screen television in the corner of the lounge through which all digital content is delivered. Whilst Murdoch's News Corps sticks to the set top box based technology, Microsoft's TV division is pinning its faith on IPTV- television delivered over broadband internet lines to a set top box, DVD player, PC or games console all attached to the set. And unlike television over the Internet this will be a secure network so the content delivery is protected. Why is Microsoft so keen to break into the TV world?

PC penetration is expected to tail off at 54% of households, 98% of homes are predicted to gain access to iTV, once the big analogue switch off has taken place.

Getting it on the Big Screen

The long awaited digitisation of cinema content is finally beginning to have an impact. The UK Film Council are launching the UK Digital Screen Network, a virtual network of up to 250 screens located in approximately 150 cinemas. Other digital networks already up and running include the Cinema Net Europe (www.cinemaneteurope.com) bringing digital documentaries to 180 cinemas across 8 European countries who receive the content via satellite. Networks like these can offer the participatory experience of audience spectacle for digital content.

Where's the money Ronnie?

Commercial and broadcasters

In computer games, the key commissioners currently are the 70 worldwide publishers of which the top five control 50% of the market with Electronic Arts at the top with a turnover of \$3 billion and 5000 employees worldwide. In the UK the big four publishers are Codemasters, SCI, EIDOS and Empire International. The crisis at Tomb Raider developer Eidos, currently the subject of a take over battle, illustrates that a well established company is only as good as the last game it developed and that success can quickly come unstuck when the R&D process doesn't continue to produce winners.

Online and mobile games continue to gain ground, particularly with casual gamers. But to date many of the operators have been heavily criticised for offering very low percentages to content providers, who tend to receive a percentage of sales revenues rather than upfront commissions. BBC and C4 are both increasing iTV spend.

Public Sector

One of the surprises in the research and responses was the significance of the public sector market as a commissioner, particularly in commissioning e-solutions. And museums, galleries and other cultural and heritage spaces have embraced interactive digital content as a way of attracting younger and more diverse audiences and fulfilling their educational remit.

Within formal education from nurseries to universities a massive growth in commissioning content is being experienced. With the launch of Teachers TV and the Digital Curriculum, the impact of e-learning now means that specialist press like TES and Guardian Education devote whole sections to evaluating and reporting on new digital and interactive content products. NESTA Futurelab run an Ideas Incubator where ideas for educational projects are transformed into working prototypes by providing both seed funding and in-house expertise

Funding Bodies

UK Film Council hasn't ventured far into commissioning cross platform content. There's the low budget regional digital shorts scheme, but the focus has been on the roll out of the Lottery funded Digital Screen Initiative. But now the New Cinema Fund are launching a scheme with the Arts Council (ACE), the Moving Image Initiative, which will offer R&D for emergent talent to experiment with content for a range of outlets including mobile phones and the web. In addition to a development fund, they hope to encourage the involvement of communications players to produce the successful projects that emerge from the process. Details of the scheme should be announced May/June 2005.

Regional screen agencies funded by the UK Film Council and the RDAs, like Screen Yorkshire, have often been proactive in commissioning digital content, where digital industries are an economic development priority. Individual agencies have different criteria and budgets so check the websites for schemes and support.

Arts Council England (ACE) supports organisations and individuals through awards schemes such as Grants for the Arts. ACE officers in the regions have responsibility for developing media arts, digital arts, live arts, interdisciplinary arts, all of which can channel funds to digital content development and production.

Opportunity Knocks

- UK has the largest games software market in Europe, and games are about to become truly mass market. Development talent here is highly regarded in the combination of technical, art and gameplay skills.
- Reaching critical mass: there are a growing number of exciting, creative and innovative digital and interactive content developers able to work with commercial, educational and cultural clients.
- The government are very excited about creative industries in general and digital content and games in particular, with both the DTI and DCMS supporting the Digital Content Forum and establishing a Creative Industries Forum for Intellectual Property Rights.
- Mobiles have the huge advantages of portability, a payment mechanism and mass distribution. Development costs are much lower – a typical mobile game's budget is £15-20k. They offer developers an opportunity to break into games and avoid the console manufacturers in an as yet unconsolidated market.
- Holding on to the rights; The opportunity to exploit digital content internationally once television producers retain more rights. Understanding IP issues is more and more crucial.
- New digital distribution networks such as the UK Film Council's Digital Screen Network and CNE will open up exhibition opportunities for niche products. They could produce the same democratisation and slashing of costs of distribution that Final Cut Pro and desktop editing created for film production.

Problem Areas

- Great idea, poor delivery. Lack of management expertise and inability to scale up were highlighted, as well as an inability to meet deadlines, lack of understanding of markets and demographics. The lack of maturity in the iTV sector and issues of company development were also raised by Claire Scally, the Interactive Media executive at PACT.
- Skills shortages in key areas such as e-learning where there is a growing demand.
- Where are the women? Particularly in the games industry but across digital content production in general, there is under representation of women in key roles. As content becomes less of a boy's toy this makes no sense

So is that it then? Where creative content meets technology the results are often disappointing, and audience expectations aren't met. Audiences are getting more demanding and less forgiving.

- The rollout of 3G phones is still taking longer than expected in spite of multi-million pound advertising campaigns by the UK networks that spent £22.5 billion buying the licences. It's reported that there are currently less than 200,000 3G subscribers on Vodaphone. This means the huge potential customer base downloading videos, games etc. is still restricted. But, after a shaky start 3 had a customer base of 2.5 million by the end of 2004.
- Making it pay; Internet content providers has been slow to sort out the issues of collecting payment, so the distribution of short films, animation etc over the internet has been an exercise in creating new audiences rather than a major source of income generation.
- Loads of R&D but... there is often a gulf in the "food chain" of interactive content where there is no continuous funding stream to take the prototypes into high quality production. Without access to finance for full production many good ideas are never brought fruition

What are the Challenges?

Voice Over IP

Already 40 million people worldwide are using it. The next stage will be the development to use that technology in conjunction with mobiles. This is going to be a real threat to the phone companies as essentially it means virtually free communications.

Wireless network technologies

The real potential benefits will be the reduction in costs especially to the public sector e.g. local authorities and the benefit to groups such as students.

Digital curriculum

The further development of the digital curriculum and interactive educational tools is going to create more opportunities. NESTA Futurelab operates Innovations workshops that bring together experts from research, design and practice to investigate how new technologies will impact upon learning. They've identified "real" broadband communication, wireless devices and AI/pervasive technologies as the key areas.

From PS1 to PS2

For games developers, the transition to the next generation consoles is going to be a huge challenge. The number of people required to make PS2 games will effectively double putting a huge financial and management strain on companies. The challenge for developing content for mobiles is making it work across different handsets, so porting issues are crucial

After Half-Life...

Consumers are now expecting a more authentic experience, better quality of content, more complex interactivity. The success of Half Life 2 (winner of 6 awards including Best Game at the industry BAFTAs) has raised the bar for games in the same way that Pixar did for big screen animation, as the technology enables the creative quality to increase. The biggest criticism of web-based games is that they are "too naff".

Piracy versus Intellectual Property

Within the international world of filmed entertainment, the major challenge to be faced is the imperative to guarantee digital content movement to counter piracy. But with Open Source, file sharing networks and Copyleft Culture, no-one is sure what the future holds for notions of ownership that pre-dated the technology. Will the content owners have to admit defeat or can they plug the holes?

Evelyn Wilson and Gill Henderson. April 05.