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INFORMATION INFRASTRUCTURE ADVISORY COMMITTEE WORKING GROUP ON DIGITAL ENTERTAINMENT

Scope and Potential of Digital Entertainment in Hong Kong

Introduction

This paper sets out the scope of digital entertainment, international trends and invites Members' comments on the potential of Hong Kong to develop into a digital multimedia content provider.

Digital Multimedia Content

2. Digital entertainment in general refers to entertainment that involves the application of digital technologies such as computer graphics and interactive techniques. For the purpose of discussion of the Working Group, we shall focus on the development of the following three major areas of digital entertainment in Hong Kong –

(a) the use of digital graphics and visual effects in the production of films, videos and television programmes;

(b) computer animation; and

(c) games and edu-tainment software (including console games, Internet games, games for hand-held devices as well as games and edu-tainment software for personal computers).

3. The digital entertainment industry is a new, evolving industry

cross-cutting various service and production sectors, cross-breeding new and traditional media. There is no standard definition of "digital entertainment"[1] as the subject itself is changing rapidly. With the continuing convergence of various media and the new possibilities opened up by the Internet, we should aim to focus on digital multimedia content.

International Trends

4. In January 2002, the consultant firm Arthur Andersen released a report on the future trends of digital entertainment and media[2]. Andersen predicts that, rather than merely displacing traditional or pre-existing media at their expense, the appearance of new technologies, new forms of entertainment and new distribution channels more likely than not will create even a greater overall demand for content. As consumers prefer convenience, interactivity and personalised services, they tend to be more "device agnostic" and indifferent to the technology used to deliver the service as long as it is delivered at the right time, right price, and suits what they want.

5. Andersen's observation of a trend toward an unsaturated demand for digital multimedia content is corroborated in a paper recently presented to the Telecommunications Research Project, Centre of Asian Studies, University of Hong Kong.[3] The main theme of the paper is that hardware manufacturers of consumer electronics are transforming themselves into service providers as a model for continuing growth. Manufacturers are attracted to the service model because of the higher profit margin and lower capital cost of providing services as compared with manufacturing hardware. The stable revenue streams, customer binding and brand effects of selling services and software promise to

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[1] There is no standard statistical definition of digital entertainment industry in Hong Kong or in other statistically advanced countries. In Hong Kong, establishments engaging in the business of digital entertainment come from different industries. For instance, computer graphics production houses dealing with animation are classified under the broad group of "motion picture film processing", design of edutainment software is under "printing, publishing and allied industries not elsewhere classified".

[2] See the press release issued on 8 January 2002, "Anderson forecasts top trends of the digital landscape" (http://www.arthurandersen.com/website.nsf/content/MediaCenterNewsReleaseArchiveDigitalTrends010802!OpenDocument).

[3] Wyss, B. and Vong, M., "From Hardware Manufacturers to Service Providers" (http://www.trp.hku.hk/trp-papers.htm).

be an antidote to the volatility in customer demand for hardware and the downward pressure of competitive pricing in the consumer electronics market.

6. The possibilities opened up by new digital technologies are endless. Many predict that DVD will soon take over from VHS in the home video market. The doubt concerning digital format eventually replacing analogue in the production, distribution, storage and retrieval of audiovisual data is not about whether it will happen, but when. Some figures and facts to illustrate the market potential for providers of digital multimedia content are set out below -

- all of the top five global box-office hits in 2001, namely "Harry Potter and the Sorcerer's Stone", "Shrek", "Pearl Harbour", "The Mummy Returns" and "Jurassic Park III", featured digital effects prominently and they grossed more than US$2.3 billion in total[4]. And the second most successful film of the same year, viz. "Shrek", is a computer animation feature film;

- the sale of video games and other leisure software products and game consoles in the UK in 2001 shows a massive increase of 36% over the previous year to a record high of £1.6 billion[5];

- at the end of 2000, about 46% of all American households owned at least one video game console. And 60% of all Americans aged six and older, or about 145 million people, play console and computer games on a regular basis[6]. In fact, the game industry has been growing faster than any other sector of the entertainment business (e.g. music and movies)[7];

- new game consoles like Sony's PlayStation 2, Microsoft's Xbox and Nintendo's GameCube are evolving to become a "digital home

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4 ***City Entertainment***, #593.

5 The figures were released by the European Leisure Software Publishers Association (http://www.elspa.com).

6 Surveys conducted by Interactive Digital Software Association (http://www.isda.com).

7 "Play to Win", ***The Economist***, 5 October 2000.

entertainment centre" with audiovisual facilities to play CD and DVD and connection with the Internet, and hence the potential to become the next generation of "networked entertainment server" to deliver Internet-based, real-time and personalised services; and

λ the most promising sign for creators of digital multimedia content perhaps comes from titles like "Lara Croft: Tomb Raider", "Harry Potter and the Sorcerer's Stone" and "Who Wants to be a Millionaire", which all enjoyed trans-media success and each established itself as a brand for a variety of merchandising.

7. The overall picture is that technology per se is no longer the limiting factor to the growth of the digital entertainment market. Rather, content and service hold the key to realise new technological possibilities by making them marketable and profitable. Hong Kong can play the role of a digital multimedia content provider, instead of a developer of new technologies or a manufacturer of hardware, in the regional and global digital entertainment market.

Potential and Challenges

8. Hong Kong artists working on digital entertainment have emerged and gained international recognition. The supervising animator of "Shrek", as well as another Hollywood box-office success "Antz", Mr Raman Hui, was educated and has worked in Hong Kong.

9. The use of digital special effects in film production is getting more and more popular. "StormRiders ( )" in 1998 stunned the audience with its digital visual effects. Recent hits like "Shaolin Soccer ( )", "Legend of Zu ( )" and "Master Q 2001 ( )" also extensively employed digital visual effects. And Hong Kong computer graphics houses have been winning awards locally and overseas with their special effects works in film and advertising productions for years. Recently, some have also ventured beyond the traditional application of digital technologies in advertising and films into the production of computer games and edu-tainment software.

10. While Hong Kong is one of the regional leaders in the field of digital effects, local digital entertainment companies are facing increasing competition from their counterparts in other Asian countries like Korea, Mainland China, Taiwan, etc. According to major players of the local digital entertainment industry, Hong Kong still has a competitive advantage in creativity, flexibility and international exposure. Competition will inevitably be intensified in the years to come and the challenge is to maintain and capitalise on Hong Kong's edge.

11. Some of the difficulties encountered by local digital entertainment businesses can be alleviated. For instance, rather than regarding the Mainland as a competitor, we may try to leverage the advantage of lower labour cost in the Mainland and the advantage of experience in creation, production and distribution in Hong Kong by strengthening partnership between the two sides. Investment costs can be reduced, if parallel importation of copyright computer software is to be permitted. In this regard, the Government has introduced legislative amendments in December 2001. Moreover, the games industry has already implemented its own technological solution to tackle piracy by developing new business models of on-line gaming.

12. While it is necessary to strengthen the competitiveness of the local digital entertainment companies in the regional and global market, digital entertainment is essentially an artistic enterprise which requires a critical mass of practitioners to sustain a viable and attractive career structure. The nurturing and accumulation of a pool of talents is where our competitive edge will lie. A self-sustainable local market would be crucial in building up the digital entertainment industry. In order to expand the local market, appropriate measures can be taken to promote the application of digital and interactive technologies in various spheres of life such as education, communications, etc. For instance, the application of digital and interactive technologies as an instructional and pedagogical tool for the teaching of science, technology and medicine at different levels of the educational institutions, would not only create job opportunities and new avenues of development for the local digital entertainment industry, but also further promote Hong Kong as a knowledge-based society