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**Convergence :
Impact And Issues For The Media**

By

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CONVERGENCE : IMPACT AND ISSUES FOR THE MEDIA

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SYNOPSIS

- * Briefly examines the concept of convergence and the development of multimedia services from the viewpoint of the consumer. Describes the key technological developments fuelling the growth in multimedia services and what services could be available in the future. Traces recent developments in America, Europe and Asia.
- * Analyses the role and position of the print and broadcast media and how it will have to adapt to the emergence of multimedia services. Although the focus is on the users of the services, examining how in particular multimedia would impact consumers, public policy issues will be discussed.
- * Concludes that though multimedia services have great potential, its success will lie in its ability to offer useful complementary services to the existing media.

1. INTRODUCTION

1.1 CONVERGENCE

1.1.1 There is a technological shift taking place that is blurring the lines between computer and consumer electronics. The merger between telecommunications, computer and broadcasting is going to change the way people will work, play and live.

1.1.2 The "convergence" of these technologies has given birth to the prospect of multimedia services which will offer interactive computer based applications that will combine text, graphics, audio and animation features into a media experience for users.

1.2 TECHNOLOGY

1.2.1 Three technical advances will prove vital to paving the way for the grand vision of interactive communications. (2) They are :

- i) The ability to cheaply translate all audio and video communications into compatible digital format.
- ii) The ability to transmit large volumes of digital signals.
- iii) And finally, new compression and mass data storage methods.

1.2.2 The development of interactive computer technology will offer usually passive users greater control over what they see, when they see it and what they do with it. Since most computers allow two-way textual interaction and television broadcast one-way images with sound, when they are combined, we get the best of both worlds, a two-way computer-like interactivity with text, graphics, and sound.

1.2.3 The infrastructure required for multimedia services is the so called information superhighway. The phrase refers to the union of digitisation and telephone/television networks. In practise, any copper wire (telephone line), cable, wireless, fibre-optic or microwave communication network capable of transmitting digital information - the code understood by computers - can be part of it.

1.3 MULTIMEDIA SERVICES

- 1.3.1 With the information superhighway comes the potential for homes and offices to communicate with each other in new ways : TV and PC's will be interactive. As shown in Table 1, a wide range of multimedia services will become available. (6)
- 1.3.2 The value of multimedia will not only be in its ability to offer diverse sources of knowledge and easier access to information. It will lie in its interactive ability to offer its user the option to retrieve, evaluate and act on the information. (14)

1.4 INDUSTRY DEVELOPMENTS

- 1.4.1 In the U.S., although interactive multimedia services have been available since the early 1990's, it has been confined to a handful of test markets because of costs.
- 1.4.2 European telephone companies are reported to have spent billions of dollars on multimedia research over the past decade, partly subsidised by the European Union's research programmes. Most concluded that it was previously too expensive to commercialise. (6)
- 1.4.3 However, recent technological breakthroughs have brought down the cost of offering such services commercially. First, is the ability to squeeze down a standard copper telephone wire, the torrent of electronic signals needed to convey a decent video picture. This means that existing telephone lines can be used as pioneering information superhighways. Second, is the computer technology to manage such a complex nationwide service. (6)
- 1.4.4 These developments have caused the telephone and media companies in the U.S. to reassess the commercial viability of offering services on a larger scale.
- 1.4.5 In light of the recent technological developments, U.S. media, computer and telephone companies have started forming new intra-industry alliances and joint-ventures to exploit opportunities in multimedia to bring affordable interactive services to homes and businesses.

- 1.4.6 In 1993, under the umbrella of digital technology, America's giant media, telecommunications and computer industries were coming together to form a single business - the bit business. All told, there were more than 500 alliances formed last year. (15)
- 1.4.7 The implications for Asia of multimedia are immense and odds are that this booming region will not be far behind in adopting the new emerging technologies being developed in the West. Table 2 shows some of the activities that are already taking place in a number of Asian countries. (4, 5)

2 THE MEDIA

2.1 IMPACT

- 2.1.1 The focus of this paper is on the effect the emergence of multimedia services will have on the existing mass media in Asia. How should the traditional print and broadcast media, being the main suppliers of news, information and entertainment, react to this phenomenon?
- 2.1.2 The issues to be looked at to answer these questions include, the role of the media and what it offers its users. To get a clearer picture of the future for media, it would be useful to look at how the Asian media can position itself with the impending arrival of multimedia services.

2.2 ROLE AND FUNCTION

- 2.2.1 Television and newspapers have always been regarded as very good avenues for fast information distribution. However, they each have their own drawbacks. Newspapers are seen to lack the dynamism of video & film. Television, on the other hand is seen as inherently passive. Users are unable to change the fixed ordering of the information nor able to easily manoeuvre through the information presented.

2.2.2 In the emerging environment of multimedia services, the existing media can participate as content providers. The mass media's worth has always been that it offered its users the service of packaging its product in a manner that is acceptable and easily understood. It adds value to the massive volume of raw news, information and entertainment it gathers by screening and synthesizing it before presenting it to its users. It plays the role of gatekeeper, using the filters of local cultural and social values. In Asia, the media is often seen as a key element in upholding the cultural, economic and political values of the nation.

2.2.3 The added-value that the media provides is in its vision, professional skills and collective staff expertise. With so much data and so little time available within a day, the mass media's value to consumers is that it distils and disseminates useful information quickly, accurately and in an easily understood manner. Ultimately, what the media offers is informed and objective judgement.

2.2.4 The print media will try to make profit on electronic publishing without losing money on traditional print sales. The portability advantage of print as an "anywhere, anytime" information and news medium will still be a strong selling point.⁽¹¹⁾ For broadcasting services, there will still be a mass audience that simply wishes to sit back and relax for their entertainment needs. The local media though should still ensure that the news and entertainment it provides is appropriate to the culture and values of the society within which it operates, whatever the means of distribution employed.

2.3 COPING WITH THE ARRIVAL OF MULTIMEDIA

2.3.1 The arrival of multimedia will provide opportunities for the media to enhance its traditional gatekeeper role. What will drive multimedia will be the content. Therefore selling data and information may turn out to be one of the most lucrative spin-offs of the multimedia world. On the other hand, the proliferation of multimedia services will reduce the attractiveness of mass media as advertising vehicles. Whether the new source of revenue, will make them make up for this is left to be seen.

- 2.3.2 For the broadcast media, the emergence of multimedia is of even greater significance since the very essence of multimedia involves adding a video dimension to many types of information services which will revolutionise the way people process information. The broadcast media can build on its strengths and offer its expertise in communicating with pictures. In fact, a live TV broadcast, such as a News or sports programme, is a very fast paced, closely coordinated multimedia exercise.
- 2.3.3 The promised onslaught of information services will create many options for users to deal directly with information sources. To some this spells trouble for existing media. I am more optimistic. The sheer increase in the accessibility of information will increase the value of judgement to reduce this volume to meaningful and digestible portions. This has always been the case, throughout history, as printing developed; public libraries proliferated and newspapers, radio and television took seed. As an example, even as radio and television bred its own gurus, this in no way affected the growth of newspaper columnists.

3 THE OUTLOOK FOR ASIA

3.1 MULTIMEDIA PROSPECTS FOR ASIA

- 3.1.1 Unlike the more developed countries though, where the bulk of multimedia activity is taking place, there are a number of factors, shown in Table 3, that are particular to Asia that will affect the penetration level of multimedia services in the future. (1,10,16)
- 3.1.2 These figures give an indication that despite being a region of high economic growth, Asia is home to countries that have vastly varying levels of income, education, economic development, language, culture, values, standards of living and size.
- 3.1.3 These facts have implications for providers of multimedia services. The majority of Asians are poor, live in rural areas, have limited access to telephone and television and are only literate in their own languages.

3.1.4 TV viewership surveys have consistently shown that Asian viewers prefer programmes that are locally produced, reflect their cultural affinity and that are broadcast in their own languages, even when these programmes are technically inferior to the more polished imported products, with their high production budgets.

3.1.5 On the assertion that TVs and PCs will eventually merge, it is more likely that even as they become more alike, the two machines will still mainly be used for different things. Technically, a digital TV set can be made to function as a PC and vice-versa. (13) However, in Asia, TV is an entertainment driven medium and watching it is often communal and family activity. People will therefore continue placing the TV set in the family room, varying its use only for services such as video-on-demand. PC use on the other hand tends to be individualistic and work-driven, making it more appropriate for one-on-one transactional purposes. Hence, even with the eventual convergence of technology, there will probably be a "TV set" on one side of the living room and a "PC" on the other, just like they may be today. Though the two will be technically similar and are connected to the same network, they will essentially remain dedicated to separate applications. (13) This means that lower income users need not be denied access to multimedia services, if the network is available, as the personal upfront investment cost need not be exorbitant.

3.1.6 My prediction is that the development of multimedia services in Asia will have the following characteristics:

- (a) Vastly differing rates of development, depending on the economic development and demographic make up of the country.
- (b) Multimedia services will be offered mainly in largely urban areas to serve the needs of very specific audiences.
- (c) Much like TV programming, the usage pattern will show a bias towards local content and language services.

3.2 POLICY ISSUES

3.2.1 Multimedia services to be successful in Asia, will have to come to term with the reality of the Asian market that has been outlined above. Much like programming tastes, to be successful in Asia content providers must be able to ensure the following :

- (a) Multimedia services that recognise that there are language and cultural differences and cater to these different languages and cultures.
- (b) Develop Asian multimedia services that cater to Asian tastes. To build credibility and confidence, multimedia information, foreign news and database services can make their products more attractive if they also develop and provide local views and use local sources of information.

3.2.2

Governments, in particular Asian governments, must also ensure that in the development of multimedia services, precautions are taken to safeguard public interest. Governments will need to see that :-

- (a) Standards are prescribed for multimedia services to ensure consumers rights are protected and they are able to use multimedia services with confidence.
- (b) Fair legislation is written to encourage cooperation between all the parties involved in providing the infrastructure and content of the multimedia services, such as the cable, broadcasting, telephone, publishing and entertainment companies. (7)
- (c) Particularly in urban areas, governments must take a long term perspective and ensure that multimedia network developers do not bypass lower-income areas on the pretext that they have low market potential. The goal should be universal access. (9)

3.2.3

I would like to build on the last point. A potential concern for Asian policy makers is that the early promoters of multimedia services need to invest in new hardware and systems software. That means that there will be a natural tendency to build on existing information sources. Examples include marketing a CD-ROM version of the Encyclopedia Britannica, offering access to recorded famous performances of operas and symphonies. In the early days, much that multimedia services, even in Asia, may offer are Western "software". Unless conscious efforts are made to correct this imbalance, this may be a permanent bias.

There will be exceptions e.g. big and rich countries like Japan will have a lot of their culture available in multimedia services. What I fear will be a scenario like this. An Asian child becomes interested in the history of Dance. She uses the system to explore this subject and finds no reference to her country's traditional dances. She will form the impression the topic is of little significance since it is not recorded, and start to question the value of her own culture since it does not exist in cyberspace. Therefore the public policy debate about the need to promote and ensure local content programming must continue, even in the multimedia world.

4 CONCLUSION

- 4.1 The increasingly competitive environment in the multimedia industry promises tremendous user benefits through increased savings in time, greater choice and an explosion of innovative services and products. This is the promise. To date, though, truly interactive services, allowing the viewer to descend through a series of levels of information are still at the experimental stage.
- 4.2 The development of multimedia services, will not replace the judgement value that is provided by the traditional media. Hence the traditional media will still have a large role to play in the new multimedia world.
- 4.3 However, the onslaught of the new technology reinforces the public policy need to ensure that there is adequate means for audiences to have continued access to local content and information sources.
- 4.4 Multimedia has the potential to vastly increase the range of services available and offer its users a larger choice of applications. But new technology alone will not ensure success; it is the people who will use the technology who will decide the future of multimedia. The users' wants, their needs, how they will manage the flood of options, and above all, whether or not they will pay for the freedom of choice are what counts.

TABLE 1

- * 500 or more TV channels.
- * Video-on-demand(VOD) which would turn the telephone or cable TV company into an electronic video rental shop.
- * Time-shift TV, which allows viewers to watch a TV show whenever they want rather than only when it is normally broadcast.
- * Personalised programmes, which allow viewers to watch various angles of a sporting event.
- * Multimedia shopping, which allow viewers to browse on-line video catalogues of merchandise.
- * Home-banking.
- * Interactive games, which allows viewers to play games against a computer or with each other.
- * Educational/Informative programmes that are "customised" to the viewers tastes.
- * Communications services, from video-phoning to teleconferencing to electronic messaging.

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TABLE 2

- * HK Telecom plans to launch video-on-demand services on a commercial basis by the middle of 1995 if trials in 1994 are successful. The telephone company is also looking at introducing a full range of interactive multimedia products in the future. (5)
- * South Korea is about to start building its own top-of-line system eventually passing 12 million homes.
- * Japan has just announced a major liberalization of its cable TV and telecom networks to encourage the fast start up of a national information superhighway to be completed early next century-just six years away.
- * In Singapore, plans are in progress for Singapore to be fully wired up for cable television in five years. Singapore Cablevision and Singapore Telecom are closely involved in this project with the latter in the process of building the fibre-optic infrastructure.
- * In Bangkok, Thailand, TelecomAsia, a subsidiary of locally listed Charoen Pokphand, also appears set for its own state-of-the art interactive network. Already TelecomAsia has installed 300,000 fibre-optic lines in the city and a national network of two million lines is expected to be completed within five years.
- * China is installing hundreds of thousands of kilometres of powerful fibre-optic wiring in many of its 32 cities with more than 1 million inhabitants.

All information updated at : February 25 1994

(5) updated at : March 22 1994

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TABLE 3

(All in US\$)

- * Per capita nominal GNP ranged from \$35,000 for Japan to \$200 for Cambodia.

At the upper end of the range were the per capita GNP's of Hong Kong (\$18,500), Brunei (\$17,500) and Taiwan (\$10,215). And at the lower end the per capita GNP's of China (\$435), India (\$310) and Indonesia (\$645).

The per capita GNP for the U.S. was \$25,200.

- * Urban population ranged from 100% for Singapore, 95% for Hong Kong and 77% for Japan to 19% for Afghanistan, 13% for Nepal and 12% for Cambodia.

The urban population was 76% for the U.S.

- * Telephone per person ratio ranged from 1.5 and 1.6 for Japan and Hong Kong respectively to 386 for Vietnam, 510 for Laos and 1,212 for Cambodia.

The telephone per person ratio was 1.3 for the U.S.

- * Television per person ratio ranged from 1.6 for Japan, 2.7 for Singapore and 3.1 for Taiwan to 200 for Bangladesh, and 500 for Nepal.

The television per person ratio was 1.2 for the U.S.

- * Literacy rate ranged from 100% in Japan, 98.2% in Maldives and 93.5% in the Philippines to 35% in Pakistan and Bangladesh, and 26% in Nepal.

The literacy rate was 95.5% for the U.S.

- * Personal computer penetration roughly estimated ranged from 26% for Singapore, 18% for Hong Kong and 15% for South Korea to 1% for the Philippines and Thailand (urban), and less than 1% for India. (10)

The personal computer penetration was 31% for the U.S. (1)

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TABLE 4OWNERSHIP OF PC, TELEPHONE & TV IN ASIA

	<u>PC</u> %	<u>Telephone</u> %	<u>TV</u> %
Singapore	26	96	99
Malaysia	4	37	92
Thailand (Urban)	1	11	92
Indonesia (Urban)	6	14	76
Hong Kong	18	-	100
Japan	12	-	99
South Korea	15	-	99
Philippines	1	5	22
Taiwan	16	-	99
Vietnam (Hanoi & HCMC)	1	5	89
India	-	-	45

Source: Survey Research Group

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TABLE 4**OTHER STATISTICS**

	<u>Urban Population</u>	<u>Literacy Rate</u>	<u>Population (m)</u>
Japan	77%	100.0%	125.2
Hong Kong	95%	88.1%	6.0
Singapore	100%	91.6%	3.1
South Korea	76%	96.0%	44.4
Taiwan	75%	92.4%	21.0
Malaysia	45%	78.5%	19.2
Thailand	25%	93.0%	59.4
Philippines	45%	93.5%	65.2
China	60%	73.3%	1,190.5
Pakistan	33%	35.0%	124.9
Indonesia	31%	81.5%	190.3
India	26%	52.1%	899.2
Vietnam	20%	88.0%	73.0

Source: Various as quoted in Asia Week, June 8 1994

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