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Developing In IT And The Impact On Newspapers

By

Volker Illert
Development in IT and the impact on newspapers

The new Information Society is re-shaping most of the basic aspects of our economy and society. The transition from an industrial society to the Information Society is accelerating, as a result of a process involving the progressive convergence of telecommunications, computers, consumer electronics and interactive media.

Several technologies have now reached the stage where their application will deeply affect our lives. The means to create, process, access and transfer information are remodelling the basic relationship in our societies. A new society is emerging in which services and applications provided by the Information and Communication Technology (ICT) industry change human activities as well as the economy. Productivity growth will be enhanced but at the same time new services are emerging. So the Information Society is linked to the diffusion of innovative services and products in the private business sector, in public administration, in public utilities and at individual level. This means that every economic or social actor is involved in this new challenge.

To be competitive, companies are forced into rethinking their organisation of business processes in order to exploit better the potentialities offered by ICT. The real change is not only technological; the introduction of new forms of integrated and distributed ICT is coinciding with sweeping changes in the organisational structure of the enterprises towards more flexible organisations, able to respond more quickly to the competitive environment. This is changing the role of ICT from a supportive infrastructure to a fundamental part in the delivery of major new added value. Close links between buyers and suppliers systems, as well as between groups and related firms are an important part of this new approach.
The supply side has caught gold fever. Everyone - from telecoms and information technology companies to cable, media, and entertainment outfits - is rushing to combine interests and business efforts.

Leading global corporates in these sectors believe they must be in the forefront of the convergence movement to capitalise on the decade’s premier growth opportunity. One result: the wave of telecommunications and media mergers and acquisitions over recent months.

Noted commentators say that the implications for virtually every segment of our society are dramatic. They forecast that new products and services generated by convergence of the IT, telecommunications, consumer electronics and media industries will change lifestyles and working methods.

In Europe today the adoption of ICT technologies plays a crucial role in developing economic competitiveness. The Trans-European Networks project, which includes a major ICT component aimed at creating Europe-wide information highways, has moved centre stage in EU plans to stimulate growth. Looking to the next century, EU leaders recognise that powerful ICT networks will be essential to drive competitiveness, innovation and job creation.

IT (Information Technology) and ICT (Information and Communications Technology) Market Size

This section looks in detail at the current state of Europe’s IT and ICT markets, noting important trends over the last year.
The European ICT market was worth 262 billion ECUs in 1993. Of this, 121 billion ECUs came from core information technology categories - office equipment, electronic data processing equipment, software, professional services, processing services, network services, hardware maintenance and support. The remaining 141 billion ECUs represented telecommunication equipment and services.

With recession freezing growth since 1991, the weight of Europe's ICT market within the world ICT total has fallen slightly. In 1993 Western Europe accounted for 33.8% of total world market: 34.5% of total IT and 32.9% of communications.

Five consecutive years of falling market growth culminated in unfavourable currency variations in 1993. This reduced European ICT market size compared in homogeneous currencies to the other worldwide regions. By contrast the ICT markets of the US and Four Tigers (South Korea, Taiwan, Hong Kong, Singapore) continued to gain share of the worldwide market.

The US IT market recovery, while moderate by historical standards, shines in contrast to other developed economies. In 1993 the US IT market grew by 7%, a similar pace to 1992 (7.7%). Its ICT market overall grew by 6.7% in 1993.

The combined Four Tigers ICT markets continued to be among the fastest growing businesses in the world. Korea and Taiwan dominated the scene. Their combined ICT market growth was 11.6% in 1993. Due to the relatively low rate of penetration of ICT technologies, potential for market growth in this area remains strong longterm.
Japanese share of the world ICT market decreased. Following 1992's sharp fall in the domestic IT business, came 1993's still negative growth rate (-3.8%), due to persistent economic recession and price erosion.

**Hardware: awaiting return of growth**

Hardware revenues declined by -2.4% last year. Moderate growth of 1.3% looks likely for 1994. Both positive and negative factors are shaping current demand trends for hardware products.

**Main negative forces are:**

- Recession, which has frozen corporate investment plans for IT hardware.
- Downward pressure on prices, exerted by heightened competition, increasing commoditisation and lack of product differentiation.

**Main positive factors include:**

- Emergence of new markets such as the small office/home office (SOHO), comprising business and consumer buyers attracted by falling prices.
- Rising demand from the traditional business market for more processing power and performance. Corporate users are seeking to run either more powerful software, or distributed end-user applications, or both.
- On the positive side, several favourable events also brought unit growth at the desktop level. The most significant are extensive new product announcements and downpricing, accelerating demand for hardware upgrades and take-off of alternative channels. However, price falls offset the high volume growth.
As a consequence the following trends are emerging in the hardware market:

- A sharp drop in the multi-user system business, especially large and medium-scale systems. Driving the fall are reduced IT investment programmes and accelerating price declines. Also the reengineering of business processes favours use of smaller systems.

- Slight unit growth in midrange system shipments, driven by increasing popularity of distributed computing and aggressive marketing campaigns. Nevertheless, competition from PC server architectures and PC LANs put strong pressure on prices.

- Significant growth in unit demand for personal computers, especially in UK and Germany. The PC segment’s price/volume profile is changing. Price falls are slowing. This in turn is weakening demand from Europe’s highly price-sensitive replacement market. The pressure for stable pricing from the chip manufacturers justify expectations of slower price erosion, at least for the next year or so. Meanwhile, the emergence of new market segments is increasing both the number of PC users, and the ratio of PCs-per-user. One new product type might dramatically increase the penetration of PC and digital communications technologies. This is the PDA (personal digital assistant). Both US and European companies launched models in 1993, forecasting a potential mass market for the handheld devices. Here, PDAs will benefit greatly from new pan-European digital communications standards.

- Continued sluggishness in the office equipment market. There, new sales generated by replacement life-cycles in photocopier technologies have not offset generally low demand from the segment. These technologies include colour copying, network interface chipsets and four imaging techniques (photographic, electro-photographic, thermal transfer, Ink-jet).
Software products: strong upward trend

Software products are among the strongest drivers of European IT market growth. The market grew by 7.0% in 1993 and is set to grow by 7.2% in 1994.

However, despite strong positive trends, this market cannot escape downward price pressure. Most important positive factors are:

- rising use of graphical user interfaces, local area networks, system management software and middleware software;
- spread of personal software users in the enterprise, relying on sophisticated applications to perform sensitive business tasks;
- growth of suite marketing and bundling for desktop software. This is increasing volumes faster than revenue growth;
- uptake of more cost-effective application development tools, such as CASE tools and 4 GLs;
- steady increase in the number and functionality of distributed software products;
- reduced levels of software piracy due to strong action by anti-piracy bodies.

The negative side features both demand and supply forces. Hardware price drops have brought expectations of similar price cuts on software. Suppliers are answering these with new licensing schemes designed to cap software costs. Desktop software vendors are pursuing aggressive trade-in policies.
Services: a European strength

IT services are another high-growth for European suppliers. Notable bright spots are professional services (growing by 6.6% in 1993) and network services.

Positive factors driving growth in this segment include:

- spread of business process reengineering;
- increasing demand for consulting services and systems integration;
- increasing use of outsourcing and facilities management services.

- Again, this segment is seeing price competition and user caution holding back growth. Significant trends are:
  - declining demand for custom programming services; they are suffering from increased use of modern software development tools and off-shore programming services;
  - increasing user demand for fixed price contracts;
  - increasing number of suppliers competing for market share, alone or through alliances;
  - high dependence of service revenue on large long-term contracts that increasingly risk postponement or cancellation.

Trends by product segment

The fastest growing segments of Europe's communications market are wide area network services, LAN services and mobile equipment. Spending on LAN services
increased by 27%, and on mobile services increased by 31% in 1993. Mobile equipment grew by 17% last year.

Growth in the data communications and telecommunications segments was much slower. Spending on these products and services increased by 6% and 5% respectively in 1993.

The two different growth trends highlight the movement away from traditional data communications solutions to local area network technology and distributed computing. Falling unit values for hardware are also a factor.

**Intensity of IT penetration**

Between 1982 and 1992 the Scandinavian countries led Europe in IT adoption. These markets have seen the level of IT penetration (the ratio between value of IT expenditure and value of GDP) almost triple, reaching ratios between 2.6% to 2.7% of GDP. Finland is the exception, reaching a ratio of 2.0%.

Switzerland and the Netherlands have followed a similar development trend. In these countries penetration levels relate to the structure of the economy itself, rather than industry policy. Both countries have powerful finance and services sectors. These areas have led in adoption of IT over the past ten years.

Germany, France and UK - historically the most advanced countries - have slightly more than doubled their IT penetration, reaching levels between 1.9% and 2.4%
The countries in which IT penetration was less than 1% in 1982 (Italy, Spain, Portugal, Ireland) have also seen big increases. Their IT penetration levels have risen to 1.2% - 1.7%.

General economic problems - lack of demand and rising interest rates - have weakened the traditional drivers of IT penetration. IT adoption has slowed in all European countries over the past few years. 1992, in particular, saw a fall in IT market growth steeper than the decline in GDP growth. As a result, IT penetration has suffered a setback Europe-wide. A clearer picture comes from looking at European countries ranked by level of economic development.

EU and Other Worldwide Areas

Key features of European trade continue to be dominance of intra-European exports (that is, between EU states) and increasing dependence on extra-European imports. In the computer and office machinery segment, Europe’s trade deficit was about 19 billion ECU. In the telecom equipment segment the trade balance was positive, at 252 million ECU.

Imports from the USA contribute some 17% of total ICT imports to the EU, imports from Japan contribute some 13% and Imports from the Four Tigers contribute some 11%. Imports from other EU countries contribute 51% of the total, while exports to other EU countries contribute some 66%.

EFTA countries’ trade has the same high dependency on non-European states for imports, and the same higher volume of exports to European states compared with other regions worldwide.
Higher mutual dependency on imports characterises trade in US and Japan. US imports come mostly from Japan and vice-versa. This pattern creates a trade deficit for the US, while bringing an export surplus for Japan. Both regions have a similar portion of exports directed towards EU and EFTA countries: 40% from US and 33% from Japan.

The Emergence of New Markets:

the Merging of Computer, Consumer Electrical, Media and Telecommunication Industries

The most far-reaching opportunity emerging in the ICT industry is the development of a new breed of market.

Computers, telecommunications, consumer electronics products and media are converging into a single new medium: the electronic highway. This convergence promises to create a revolution as profound as the Industrial Revolution of the last century.

Building the new digital media infrastructure involves not only a range of industries. It also demands both expanding the functions of existing products and building completely new products. Different trends in each industry are coinciding to drive the new concept:

Information technology industry: Computer companies have strong positions for winning a large number of home-customers.
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Information technology industry: Computer companies have strong positions for winning a large number of home-customers.
(£25bn). During 1992 more than 92m newspapers were bought every day in the European Union and European Free Trade Association. In Austria, daily newspaper sales rose by 14.6 per cent between 1988 and 1992, reflecting the launch of a new national newspaper. During the same period, however, sales of Greek dailies fell by 34.7 per cent, mainly, it is believed, because publisher tried to raise cover prices too high.

The two biggest markets by far in western Europe are Germany where 26m copies are sold every day, followed by the UK with 20.7m. France is third with 8.8m.

Most investments in eastern Europe by western publishers have been in Poland, the Czech Republic and Hungary but the first moves into Bulgaria and Romania are expected this year. The largest newspaper publisher in Europe measured by newspaper sales is Germany's Axel Springer, followed by Mr Rupert Murdoch's News International and the private German group Holtzbrinck.

Media Development

As a result of all the issues we have discussed until now the media world is changing. Although this sounds very simple, in fact it is very complicated. It is particularly complicated for the newspaper industry which mostly still sees itself as a print information business. However, there are two more developments which have to be taken into account. Alongside the print-oriented information business of the newspaper, developments are progressing in the multimedia environment and also in the television area. With progress from a volume-oriented and a conventional layout-oriented environment the information business is progressing into an access opportunity for individual access purposes, optimising convenience and offering spontaneity. Further progressing quality, information content, media design and the
media mix are becoming important. In the years to come distribution will become independent of any location and distribution will be offered anywhere, at any time. Later, most probably about the turn of the century, delivery close to real time will have further improved, information optimal media will have been achieved. However, all that not only related to the newspaper, but complemented by the multi-media and TV environments.

On the way to the progress just discussed the newspaper will become a much more convenient product for ads, computer to film will be achieved and, as a next step, in about 1995 to 1997 computer to plate will be introduced. In the meantime newspaper presses will be able to generate text and image on the cylinder not even using plates. And at a later stage, around the year 2000, printing on demand will become an interesting new feature for targeting of information to well-defined target typologies.

Similarly the multimedia business now just starting is progressing. Data banks, text and image integration are becoming routine operations just at this point of time. In the next steps through CD-ROM products the newspaper will be complemented more and more. Finally around 1995 multimedia CDs will pave the way for combined products, complementing printed newspapers, the electronic media and HDTV operations.

This is the new multimedia environment newspapers are working on in the US and in Europe and, since recently, in South East Asia, not to mention Japan. Progress will be faster than we at this point of time are able to believe. Technology is moving like Germany's high speed train which speeds through the countryside at more
than 250 km per hour. Either you buy this train and you are in, or you stay outside and the high-speed train is out of your sight after a fraction of a minute.

Thank you for your patience and attention to my paper.
Technology (ICT) Market by Product, 1993

Total value=318 Billion US$

Management Consultants to Media, Printing, Packaging
Worldwide ICT Market by Region 1993

Total Value 939 Billion US$

管理顾问到媒体、印刷、包装
Western European GDP, Investment and IT Market Actual Growth and Forecast, 1989-1995

- Investment
- GDP
- IT Market

Management Consultants to Media, Printing, Packaging
Western European IT Market by Country

- Germany: 14%
- UK: 17%
- France: 11%
- Italy: 5%
- Spain: 12%
- EFTA: 11%
- Other EU: 5%
Western European IT Market Value Growth by Product Segments

1993/92

1994/93

Management Consultants to Media, Printing, Packaging
Western European Telecommunications Market Value Growth by Product Segments
European Total ICT Equipment Imports/Exports by Region, 1992

Imports 1992: Total Value 83 Billion US$

Exports 1992: Total Value 55 Billion US$

- 4 Tigers
- Japan
- US
- Rest of World
- Europe

Rest of World

Management Consultants to Media, Printing, Packaging
European Information Business Areas 1992 in Billion US $

- Info Vendors / Professional Services: 167
- Media Publishing: 218
- Consumer Electronics: 65
- Computers: 118
- Office Equipment: 11
- Telecom: 159

Distribution: 28

Medium
Message

Services
Products