Multimedia convergence: Breaking the silence

Contents

Editorial

What silence? It might seem absurd to many to address the question of multimedia convergence as the process affects workers in terms of breaking the silence. For such silence has become strident, and surrounds all the issues connected with the process of convergence.

The columns which follow are part of the ILO's efforts to ensure that the discussions which took place during the ILO Symposium on multimedia convergence (27-29 January 1997) be addressed in further depth by experts who are close to workers' everyday experiences of convergence. The very nature of the workforce and its contingent character; its growing isolation as a result of more and more institutionalized teleworking; the mismatch between the old forms of trade union organization and the new work processes and the urgent need to develop new forms of worker protection; novel concepts of industrial relations; the need for vigilance in terms of situations brought about by convergence which may lend themselves to exploitation of vulnerable groups; the question of authors' rights; and of course the need to adopt a cultural policy with regard to the implications and spread of multimedia convergence are all questions which, needless to say, have not been addressed or even posed at the same pace at which the multimedia convergence process has been spreading. These matters are only just starting to be formulated properly and placed on the trade union agenda, if at all.

Workers find themselves shouldering greater and greater burdens of hidden costs. Although the evidence that history repeats itself is only too abundant, there can hardly be any justification for marking time and shelving the issue of the protection of workers' rights. Trade unions today face new challenges in terms of organizing teleworkers and all those who make up the contingent workforce in multimedia industries and services. The work processes involved in convergence pose serious challenges to conventional employment relations, collective bargaining, legal regulation and communications between the parties involved in the labour market.

Apart from our intention to sum up in a nutshell and disseminate for the benefit of our constituents the thinking of experts who are in daily contact with the twists and turns in the different tableaux of convergence, it is our hope to pin down a fast moving target and to study it at close range for the purpose of coping with its immediate and long-term effects on the workforce. Above all, as with all new technology, however all-embracing or revolutionary – and the question of who enjoys access to it is far from settled – the worker must find himself or herself again at the centre of the work process rather than the fringes or even in the shadows. Production must not be left to take precedence over any worker's full sense of belonging and sharing in a productive process. In other words, multimedia convergence processes must be placed at the service of society rather than be made to drag humanity down in an abyss of lost identities and a poorer and poorer sense of citizenship.

In the same way that regional integration has so often revived local cultures and development, it is to be hoped that globalization, largely facilitated by multimedia technologies, will paradoxically restore society to human proportions. However, workers the world over can hardly afford to relax their vigilance with regard to the application of international labour standards, and the shaping and adopting of new and relevant ones, since new technology now invests work as such with a new meaning for both workers and employers.

I extend special thanks to all the International Trade Secretariats who pooled their efforts in support of this project, in particular the International Graphical Federation (IGF), the International Federation of Journalists (IFJ), as well as the International Committee of Entertainment and Media Unions (ICEMU).

I also pay tribute to all the experts who have so faithfully contributed to this modest effort which, I have reason to believe, only marks the first stirrings of an international thrust to bring society, through its workforce, back on an even keel.

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In memoriam

The Editor and all the staff of the ILO Bureau for Workers' Activities pay tribute to the memory of Chris Pate, former General Secretary of the International Graphical Federation (IGF), who passed away last September after a short period of illness. This issue of our journal on the theme of multimedia convergence had been carefully planned in June 1997 in direct consultations between our Bureau and the IGF. *Labour Education* is deeply indebted to Chris Pate for the advice and expertise he extended in the production of the articles which follow. He had expressed the wish to publish in this issue a joint IGF-IFJ-ICEMU round-table discussion, but events were to take another course. This edition therefore remains incomplete, as if a cornerstone has been forgotten. It can only be hoped that all those who remain faithful to the memory of Chris Pate will before too long mend the broken link in the chain by fulfilling his project, so that his proposed round table takes us a stride forward in coping with convergence in the same spirit of commitment to the cause of workers for which we all remember him.

Sounding the depths of convergence

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The redistribution of knowledge

The new electronic technologies have spread like wildfire through our daily lives. Words which until recently meant absolutely nothing to ordinary people are invading our vocabulary: cyberspace, information superhighway, Internet, World Wide Web and others – and which "initiates" must use – are being adopted daily by a circle which, small at first, is constantly growing.

Marshall McLuhan has already explained how any new technology gradually creates a totally different environment in which human relationships are profoundly affected. We graphics workers are only well aware of the process.[1]

The "invention" of printing in Europe by Gutenberg in 1440, which made it possible to produce books cheaply, was an unprecedented revolution in the way human knowledge began to be spread. Until then, a tiny group had a monopoly on information and knowledge and that same tiny group could refuel itself and increase its capacity for control, precisely through their control of the store of knowledge. The press was to democratize access to knowledge, although the process was not immediately of benefit to most people since only a few could read and write.

The first divide, which separated the masters of written information from those unable to accede to most of it, began to be bridged with the arrival of the press.

The second divide, which drew the line between those who could read and write and those who could not, unleashed a debate on the redistribution of knowledge and information which, although still not resolved today, led to profound economic, political, social and cultural changes.

Robert Fulford, a Canadian expert in culture analysis, refers to the process as "book ideology" and says that it is characterized by a commitment that knowledge should be universally available. According to this ideology, knowledge is public property and the extent to which it can be spread is critical for the cultural, economic and political development of people in a democratic and open society.[2] The spread of knowledge is ensured by universal public education, support for the dissemination of all forms of written matter, and the development of policies to protect authors' rights, which take into consideration in a balanced manner, among other measures, the interests of both consumers and creators.

The debate on the redistribution of knowledge still rages, nor has there been any lull in the row over what shall be channelled through the millions and millions of printed pages which are in circulation on the face of the planet.

Added to the foregoing is the fact that millions of illiterate people still remain beyond the pale of the revolution which took place four centuries ago: hundreds of groups have not found their rightful place in the panoply of written literature which abounds the world over, inasmuch as the predominant values borne by this literature are those of the dominant sectors; and the contours of the divide twist and turn according to different patterns: and this gap has been and still is made up of more illiterate women than men, more Black people than White, more indigenous peoples.

It is true that any major stride made by mankind does not mean that all groups enjoy immediate access to it; this is a process in which different forces, embodied by the various social actors, endeavour to ensure that the largest possible number of people can enjoy and benefit from the redistribution of resources of any type. The history of mankind is also the history of such tension, sometimes expressed in antagonistic ways, sometimes in more enlightened ways.

What is clear at this stage is that mankind's revolutionary strides are being concentrated in fewer and fewer hands.

And this concentration is undoubtedly an offshoot of the awesome development of new technologies which, like all those which converge in the multimedia industry, have been the cause of the breakdown of frontiers. In the

global market there are already no frontiers between countries, and frontiers between different enterprises and different types of work are also fading fast.

The repercussions that these technological innovations have had in the various areas of social intercourse are far-reaching and are anything but over. The starting point is that in the production processes the predominance of human labour has had to give way to the technological factor which thrives strategically on information and knowledge. This drift, in turn, has given rise to new forms of organizational logic, not only in the area of production but also throughout society (and societies are organized on the basis of how their method of production is organized), in step with the globalization process.[3] Trujillo holds the view that, when all is considered, power which is daily more concentrated and in fewer hands, frontiers which are boundless, the lack of regulatory mechanisms for the collective interests of mankind, and unprecedented scientific and technological progress (mankind has acquired divine power: the capacity to create new forms of life or to destroy all existing ones, including itself, to cite the Cuban philosopher Juan Antonio Blanco) in an economically polarized world will, if the present inequalities between the industrialized and the developing countries are maintained, shift from mere injustice to inhumanity.

And here we return to the question of the great divide: as frontiers recede, chasms yawn wider and wider.

This paradox cannot fail to generate substantially critical situations for the collective interests of mankind.

The central issue is, again, to determine how these unprecedented strides in knowledge will be spread; but the more burning one is to know how the progressive social forces will organize themselves to intervene and promote these redistribution processes, despite the declarations which proclaim "the end of history" or "the end of Utopias", and are part of the set of values which surround the process of the development of information technologies, and which reflect the thoughts and priorities of those who invent and develop them.

Men and women workers in the mass media industries, of which entertainment is a substantial part, must be at the centre of these considerations which embrace both concrete, everyday trade union issues and others associated with our commitment as citizens, men and women, in the defence of pluralist and democratic societies.

Workers dealing in knowledge

"Knowledge-based industries, such as today's entertainment and mass media industries, will be among those which surge to the forefront of tomorrow's economy. The changes now occurring therein may thus serve as harbingers of developments in the twenty-first century, revealing to us what it means to live and work, produce and consume in the information society".[4]

It is clear to us all that information and its handling by "workers dealing in knowledge" will lay the ground for the economy in the next millennium. But which workers – men and women – will have access to vocational training to enable them to acquire the competence necessary to cope with the demands of the enterprise? What jobs will be created and where? What will be the most suitable skills for entry into the labour market? How can this fragmented labour force, without an identity of its own, defend its interests? And, consequently, will these same men and women be able to continue to identify with common interests?

Seemingly, most of these questions should be answered only by the trade unions, since they relate to their ability to survive as relevant social entities. And yet, although it is clear that we in the trade unions must reflect – and are so doing – on how we must represent the interests of our members in times of intense change, these questions do not involve only workers' organizations.

As the ILO paper states, we are asking questions about the future, about work, about the survival of mutually supportive relationships, about collective identity, and about a future which, as the Mexican writer Carlos Fuentes affirms, lets us believe that "progress can continue progressing".

The reality before us today, in the context of technological progress regulated only by market needs, is that the concentration among the various business groups and the subsequent tertiarization of a major part of production have given rise to production lines with highly qualified workers at the top and a labour force at the bottom turning out, for example, computer components. This latter labour force consists largely of women who most often work in very poor conditions, unprotected, and without any possibility of organizing in unions.

There are few men workers – and even fewer women – at the top of the pyramid; as the pyramid widens, jobs are worse, pay is poor, and insecurity and exclusion are the

order of the day. Below is the assembly line on which thousands and thousands of workers, especially women, labour long, hard days, for a pittance, with no hope of forming unions to obtain better living and working conditions. At the end of the line are teleworkers who do their jobs in far-flung places, connected to centralized production and marketing sites.

The entire production line is involved with the same product and it is therefore essential to establish legal priorities and collective bargaining for all those who are part of the information society, if not the base of the pyramid will become even wider, and the wages and living and working conditions of the better qualified will be dragged down.

To prevent the fissure caused by mass media convergence from becoming a yawning divide, it is essential to know "which jobs may disappear, where new jobs will be created and what will be the best way of adapting to change and promoting increased employment and better living standards (…) The social impact of the information society should be subjected to critical analysis. **Legal priorities and collective bargaining must be established:** (a) **to provide** a legal and normative framework to protect the social and labour rights of teleworkers and outworkers in isolated locations, connected to centralized production and marketing sites; (b) **to ensure** that all employees – part-timers, full-timers or those with an atypical profile – are allowed to benefit from national, European or international social legislation; (c) **to provide** that trade unions represent the interests of all employees, including those who work in remote places; (d) **to ensure** that changes in training or labour organization are conducted through negotiations with trade union representatives and that the necessary training programmes incorporate a development focus".[5]

A new literacy process

What is certain is that the computer revolution is giving rise to new fissures and making it impossible to bridge the old ones. In practice, it calls for a new literacy process: what is not yet clear is whether the battle for redistribution will be won by those of us who maintain that the technological revolution must be a universally shared asset, or whether the profit motive will prevail, exacerbating marginalization and exclusion to hitherto unsuspected levels.

So far, it is undeniable that access to communication and information technologies has been extremely uneven among the various geographical regions and different social groups, both in regard to its use as a source of information and to the development of ability and skill in using it.[6] It is obvious that the developed countries will little by little claim ownership of these breakthroughs. But even in the richest nation's appropriation, the claim to ownership will not take place equally if the expansion of communication networks is carried out solely on the basis of free competition. Such an approach will result in nothing but further exclusion for the most vulnerable strata of society, an increasing concentration of power in urban/metropolitan society, the progressive isolation of people in far-flung areas and a widening of the gap between rich and poor.[7]

In this respect, if multimedia convergence is to lead to stronger democratic societies, we shall have to build a broad social consensus which supports the close interrelationship linking the right to information and communication, the right of access to technology and the infrastructures which support it, and the right to education, as a collective asset.[8]

A new paradigm

As we have said, communication and information technology reflects the thinking and priorities of its inventors and developers. Ultimately, its outcome is, among other features, a growing concentration of mass media, more and more takeover of information and culture, an attempt to impose "one-track thinking", further job cuts along with the creation of new jobs in extreme conditions of exploitation and unregulated by any protective measures whatsoever, virtually complete redefinition of the concept of work and the workplace which implies, inter alia, the transfer of jobs to other countries and to different areas within a country, and the tertiarization of various production sectors.

But it also poses a brave challenge for those of us who must and can formulate a new social pact designed to construct another paradigm, one to counter the attempt to impose "one-track thinking". Such a paradigm would in policy and economic matters call for participation in culture pluralism, responsibility in the area of ecology, solidarity in ethics, and justice in the social sphere.

The breach produced by convergence can only serve to aggravate exclusion and inequality, which imperil mankind's very future.

But convergence also implies building bridges, if we can still place trust in the profound rationality in which solidarity, justice and pluralism are steeped.

Notes

[1] Marshall McLuhan: *Understanding media – the extensions of man*, London, Routledge and Kegan Paul, 1964.

[2] William Birdsal: Lecture at the Dalhousie University of Canada on *The Internet and the Ideology of Information Technology*, 15 April, 1997.

[3] Osvaldo León Trujillo: Alai, Ecuador, Servicio Informativo (Information Service) 248-249, March 1997.

[4] *Symposium on Multimedia Convergence*. Discussion paper, ILO, Geneva, 1997.

[5] *The Information Society: Policy statement by the International Committee of Entertainment and Media Unions (ICEMU), Geneva, 8 June 1995.*

[6] Data published in *El Diario Clarín* of Argentina shows: 80.5% of Internet users are from the United States, 7.09% from Canada and Mexico, 6.84% from Europe, 3.1% from Oceania, 0.63% from South America, 0.37% from Africa, and 0.16% from Central America. The same research reveals that 91.84% of users are English-speaking. While the United States has 1,248 daily newspapers on line, the rest of the world has a total of 1,154; the United States has 1,108 periodicals on line, the rest of the world has 565. (Research carried out by Patricia Kolesnicov and Marcelo Moreno, published in *El Diario Clarín*, Argentina, 7 October 1997).

[7] ICEMU, op. cit.

[8] See paper of the Confederation of Communication Workers' Trade Unions (CSTC), Argentina, presented at the Symposium on Multimedia Convergence, ILO, Geneva, 27January 1997.

Convergence and content in the information society: The Canadian experience

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The construction of a Global Information Infrastructure (GII) and the emergence of a Global Information Society (GIS) are creating a linked and interdependent world. In such a world, products and services which have traditionally flowed through physical creation, production and distribution are rapidly being replaced in many sectors by the digital transfer of data and information within and across borders.

The GIS is, however, much more than a mass of technological developments which create new ways of doing business: it holds the potential to transform fundamentally the way we live, work and play. Governments have recognized the importance of this change: in 1995, the G7 member countries agreed to the following Eight Principles for the Information Society:

- promoting dynamic competition;

- encouraging private investment;

- defining an adaptable regulatory framework;

- providing open access to networks;

  while

- ensuring universal provision of, and access to services;

- promoting equality of opportunity for the citizen;

- promoting diversity of content, including cultural and linguistic diversity;

- recognizing the necessity of worldwide cooperation with particular attention to less-developed countries.

These principles have since been supported in spirit by the Action Programme for Economic Cooperation (APEC) and over 30 countries at the Information Society and Development Conference in South Africa (May 1996). The issues they raised have also come to form the foundation for ongoing work in many organizations facing the challenges of technological convergence, such as the Organisation for Economic Co-operation and Development (OECD), APEC, and the World Bank which followed up with the Global Knowledge Conference in June 1997. Their common vision recognizes that in order to realize its full potential, the Global Information Society must be inclusive as well as reflective of all people. Technology is not a neutral or independent force – it is a tool which can be harnessed to achieve economic, social and cultural ends. The GIS is characterized by three key factors:

- *Deployment of information and communication technologies (ICTs)*. The rapid diffusion, development (i.e. digitization), and convergence of communications technologies (broadcasting, cable, satellite, telecommunications) are increasing the technological capacity and capability around the world.

- *Global economic integration*. Trade liberalization combined with the burgeoning of new economies are together engendering highly competitive world markets and shaping both national and international policy and regulatory environments.

- *Cultural diversity*. Accompanying the strong forces of economic integration is worldwide concern for the maintenance of cultural sovereignty and diversity.

The content industries – harbinger of the future

The traditional arts and culture industries which constitute the source of content for the information society are also considered in many countries to have, in addition to their economic significance, a unique role as creators and conveyors of cultural identity, and are perceived as a force contributing to social cohesion. It is broadly acknowledged that in order to participate fully as producers and consumers in the information society, people must see themselves reflected in its content. The creation and dissemination of locally originated and relevant content will encourage the usage of on-line services by geographically based communities and bring together communities of interest. Similarly, the growth and development of indigenous content industries will have a significant impact upon our ability to achieve the cultural and linguistic diversity in the Information Society envisaged by the G7 Principles.

It follows, therefore, that the evolution of the industries which make up the content sector are a harbinger of the future. They are, by their very nature, knowledge-intensive and based upon the ICTs whose deployment is so rapidly increasing the capacity and capability of countries around the world. Digitization and convergence are globalizing these somewhat ephemeral industries at a rate which far outpaces those based in more physical production. It is widely acknowledged that the content (the value-added products and services) provided through the infrastructure will be the strongest source of future growth in the information economy.

Examining challenges facing the content industries as a forerunning "case-study" will provide important indications for the emerging post-industrial, information-based economy, showing us what it means to live and work, produce and consume in the GIS. This article will attempt to provide an overview of the Canadian approach to the information society, and of the role of the content industries as it has been developing in Canada.

Canada's cultural policy framework

Canada is a small and geographically dispersed market, in very close proximity to the world's strongest international player whose "entertainment" sector is the dominant player in all of our cultural and content sectors. The objectives of the policy which promote Canada's cultural sector have always been to:

- ensure the presence of Canadian voices and Canadian choices;
- facilitate cultural expression, participation and exchange to build and share common experience and values among Canadians; and
- foster an environment in which Canada's arts and heritage are preserved and appreciated by audiences at home and abroad through access and support to creators, cultural organizations, industries and institutions.

To achieve these objectives, Canada has set in place a framework of institutions, policies, laws and regulations, programmes and tools to ensure a Canadian presence in the creation, production and distribution of cultural products. Within this framework, partnership operates as the key principle to ensure the involvement of provincial and local governments, private business people and the non-profit cultural sector.

This policy framework, together with its geography, history and diversity, have helped to make Canada one of the world's most open markets for cultural products. Foreign cultural products have widespread access to Canada's retail stores, distribution systems, film screens, theatres and airwaves. In 1994:

- more than 80 per cent of English language magazines on Canadian news-stands were imported;
- 88 per cent of new releases in record stores were foreign content recordings;
- foreign films occupy about 95 per cent of Canadian screen time; and
- in 1995, foreign content made up 61 per cent of total programming available on Canadian television.

The essential objective of Canada's cultural policy framework, that of promoting cultural and linguistic diversity of content, is now considered a cornerstone of the GIS and remains a fundamental element in creating the Information Society in Canada.

The content industries in Canada

The growth of vibrant, creative and competitive indigenous content industries will contribute strongly to the information econ-

omy. Creative talent manifested in its diverse forms – be it as painter, computer programmer, or actor – will be integral to the production of web sites for rock bands which incorporate text, sound and video images, to the 3-D imaging and digital cataloguing of cultural artifacts, or to the construction of attractive user-friendly on-demand banking services over the Internet. These new products must be produced, created and developed. They must then – like all goods and services – be distributed, marketed, retailed and purchased. However, all this will take place in a new value-added network, linking players from many different traditional sectors as they come together to deliver new products and services.

The GIS will offer creators and entrepreneurs around the world the opportunity to develop information and content products and services for domestic and international markets. Today's producers of cultural content such as broadcasters and audiovisual producers are entering new markets and offering opportunities whenever they create complementary products to their traditional activities, develop new content-based business and successfully face the challenge of cultural diversity. These new forms of content and information are already starting to exercise a certain impact on innovation, investment, economic growth and job creation.

If the arts and culture sector, as traditionally defined and including new content industries – like multimedia – is to become a catalyst for cultural and linguistic diversity of content, it will also serve as an important economic and employment engine for Canada. According to 1993-94 Statistics Canada estimates, in Canada:

• The direct impact of the arts and cultural sector reached $29.5 billion, with direct employment totalling 900,000 jobs.

• Expanding the above definition to measure Canadian content in the information society (culture and information services) – including relevant aspects of the telecommunications and computer services sectors – the value increased to more than $50 billion or 9 per cent of the total economy, and employing some 1.25 million people.

The broadcasting and cable industries

In 1993-94, Canadian broadcasting created 54,700 jobs and contributed $3.5 billion to the GDP. Including indirect impact, this increases to some 81,000 jobs and $5.5 billion. The broadcasting and cable industries provide broadcasting services to households. Ten years ago, this meant that broadcasters created, produced or acquired television and radio programming that was scheduled and provided to households over the air or through cable. Today this sector includes programmes and services: conventional; pay; pay-per-view; and specialty programming distributed over the air, by cable, through direct-to-home satellite, or other communications technologies. In five years, broadcasting and cable technologies may define a range of audio/video/digital programmes, services and transactional undertakings from around the world that can be accessed by households through a selected technological link.

The broadcasting and cable industries have a critical strategic advantage for the information society: the technological link into the household. Technology, which traditionally used to provide one-way programming, is becoming the household connection to a range of products and services. This strategic advantage will not last long: the broadcasting and cable industries must be organized to meet the challenge. To compete effectively in the GIS, Canadian broadcasting and cable industries must have the human and financial resources to: exploit the potential of new technologies (i.e. digital video compression); face increasing competition from existing and new distribution technologies; adapt to a revenue base changing from advertising to subscription revenues; and diversify into new markets, both geographic and those created by new technologies and new market segments. The GIS provides a particularly critical opportunity for the Canadian broadcasting industry which has traditionally faced the challenges of a small, sparse population base over which to spread high costs and risks of programme production. Companies, particularly small and medium enterprises (SMEs), will need to define, identify and access the skills and expertise necessary to develop export and investment readiness.

The multimedia sector

"Multimedia" is the name given to the space where creative and cultural content are being brought to bear in "non-traditional" areas and new product extensions. For example, the new global broadcaster WETV worked with Apple Computer to provide interactive coverage of the Habitat II Summit from Turkey

in 1996 via television and the Internet to permit ongoing coverage of the conference to reflect the input of viewers and "surfers".

In Canada, this young industrial sector is growing at a rate which outpaces the general economy. To illustrate:

- In 1993-94, the direct impact of computer services and of cultural and communications sectors on the economy totalled just over $1 billion and created some 123,000 jobs.

- In the five years ending 1993-94, the traditional cultural industries most closely involved with CD-ROM production – book publishers and exclusive agents (distributors with exclusive Canadian rights) – have shown revenue growth of 16 per cent, and film producers reported a 71 per cent increase in revenues during the same period.

- 1994 estimates for Canadian households showed that two-thirds of computer owners had a CD-ROM, with an average of 4.2 CD-ROM titles. Among Internet and on-line users this number more than doubles.

The dynamism of this sector is exemplified by the Canadian software company Corel Corporation. In 1994 Corel accounted for some 80 per cent of its sales from "Coreldraw" software. Since then it has added new products ranging from interactive children's entertainment to computer-aided design. When asked what the common thread was, its chairman replied "multimedia software tools anyone can use to communicate creatively".

Research on Canadian multimedia companies has only recently begun, but preliminary results show that Canadian multimedia companies are:

- Relatively young (60 per cent under 5 years).

- Privately held (86 per cent).

- Involved in a wide range of activities, and are marginally profitable (53 per cent indicate profits, although profit may also come from other than multimedia activities).

- Multidisciplinary project-based consortia bringing together traditional content industries and new players (e.g. computer industry).

- Focused on business, education or government markets.

In questioning these companies, the following key success factors have been identified:

- Ability to conduct research and development to ensure early access to rapidly evolving underlying technologies.

- Domestic and international market research and intelligence (e.g. digital literacy, awareness, available infrastructure).

- Perception of product in meeting needs, and of "Canadian" products (domestic and international).

- Access to production financing (i.e. investment capital, strategic alliances).

- Qualified and skilled technical and managerial personnel.

It is interesting to note that the multidimensional and project orientation of these companies – bringing together creative, technical and administrative talents – are similar to that of traditional Canadian cultural industries. This new segment of the content industry is not very different from its predecessors.

Convergence and the Canadian worker in the content sector

This complex and dynamic environment is reflected in the increasingly professional and highly skilled broadcasting workforce. In 1996, preliminary work was undertaken by the Government to examine employment in the ICT industries. This pioneering work, based on the most recent available census data (covering the period 1986-91) crosses traditional sectoral lines and, while not definitive, indicated that over the period 1986-91:

- The number of people working in the broadcasting field grew by 14.5 per cent.

- Employed workers without training beyond high school dropped from 44 per cent to 38.5 per cent of the workforce.

- Employment of those with college certificates grew by 26.4 per cent and of those with university qualifications by 24.6 per cent. This growth in employment of those with more than secondary-school training was felt in both the management and clerical fields.

Similar employment and environmental trends are evident in the emerging content industries. The content industries are looking for skilled, educated and flexible workers who will contribute effectively to the projects at hand. Knowledge – current, and strategic knowledge of ICTs and their implications for

the content industries – is a key attribute, and independence and flexibility the required approach.

The cultural workers appear to meet the required profile according to an analysis of the 1993 Canadian Cultural Labour Force Survey undertaken in 1996. The survey questioned a sample of Canadian cultural workers (including the full range of artistic and cultural employment categories) and found that:

- 22 per cent more cultural workers have post-secondary education, and 24 per cent more have degrees, than in the general Canadian labour force (55 per cent of working Canadians have some post-secondary education, 17 per cent have degrees, whereas in the cultural labour force 77 per cent have post-secondary education, 41 per cent have degrees); and

- 30 per cent of cultural workers work exclusively as self-employed, and 25 per cent do some work on that basis.

However,

- 65 per cent of the cultural workers surveyed reported that technological change (e.g. in the form of the computer) had affected their involvement with the cultural sector, but 30 per cent had not received any training in response to the change;

- two-thirds of the respondents did not report a need for training;

- the most effective training forums were cited as: on-the-job, professional development and university;

- the primary reasons for not pursuing training were the constraints of cost and time; and

- in many cases, the occupational groups most likely to have expressed a desire for training, but did not receive it, were the same groups who are most often self-employed (musicians, writers, painters, actors, directors/producers, crafts people and designers).

These findings, although preliminary, highlight critical issues for employment in the information society: there is a clear requirement for a strong academic foundation and a broad range of technical and interpersonal skills which are continually honed and updated. Among the challenges to be faced will be reconciling these requirements with the increasing incidence of contingent forms of work. How can the self-employed worker with no training budget or time allowance, and with little access to "on-the-job" training, remain current?

A new partnership

The traditional value-chain describing production in the industrial society, in which each linear step in the process added value, is being replaced in the information society by a complex, open and constantly changing "value-added network". The keys to success will be:

- **effective individuals** able to participate actively as citizens, consumers and employees using and producing with new technologies, their knowledge and skills continually updated and honed;

- **high-performance teams** which bring the right people together from many disciplines acting flexibly and innovatively at the right time to serve the needs of clients or accomplish a task; and

- **organizations as a platform for innovation** who flexibly and innovatively recreate themselves through extended enterprise linking to achieve and maintain strategic competitive advantage.

These innovative organizations and high-performance teams arising in or between companies, or involving self-employed workers, will only be effective for all participants if they occur within a working environment which respects and fulfils the needs of all. Realizing the three objectives for achieving the desired employment environment will depend upon a framework which includes:

- **access to information and technology**, including physical and technical access to products and services; affordable access to information networks and indigenous content; education, skills and aptitudes (digital literacy);

- **recognition and support for non-traditional forms of employment** which relate to the information society; and

- **collaboration between business, workers and their unions, and government** to explore opportunities for training and continual skilling.

Lastly, this framework also demands another success factor:

- **an enabling policy and regulatory environment, domestically and internationally**, which creates a balance between consumer and citizen values while protecting basic rights.

It is clear that successfully meeting the challenges of the GIS can only be achieved through unprecedented levels of cooperation and partnership, and may require a rethinking of traditional roles, responsibilities and structures.

Moving Canada into the twenty-first century

The Canadian Government is actively addressing the multidimensional challenge of the emerging information society. In 1994, it established the "Information Highway Advisory Council", a high-level group of experts to provide advice on creating an information highway in Canada. IHAC issued its report in 1995. It contains over 300 recommendations and a minority report on workplace issues. In 1996, the Government responded with an action plan for the information society (Building the Information Society: Moving Canada into the 21st Century) which includes four major thrusts:

- **Building Canada's information highway** – creating a competitive consumer-driven policy and regulatory environment in accord with public interest and conducive to innovation and investment.
- **Growing Canadian content** to strengthen our national cultural dialogue and creating economic growth and jobs.
- **Realizing economic and social benefits for all Canadians** through maximizing access and full participation.
- **Getting the Government right** – ensuring better services and a more affordable, accessible and responsive Government and making the Government a model user and catalyst.

At the same time, the Government announced a second mandate for IHAC to provide specific advice on key issues identified in the Government's Action Plan, namely: *Internet, Access, Growth and Job creation, Lifelong Learning and Workplace, and Canadian Content and Cultural Identity*. The report of this second phase was released in September 1997.

The IHAC reports and the Government Action Plan both recognize that content is critical to Canadian sovereignty and cultural identity, and should not be treated as a mere commodity. IHAC has recommended that measures be taken to strengthen Canadian cultural policy and that government policies should stimulate the creation and production of new content, including learning and multimedia products and services.

IHAC further recognized that Canada's cultural industries are also economically important and technology-related, and concluded that their future was largely dependent upon commitment from the Government towards Canadian content. Although there is a need for attention to all parts of the value-chain which bring products to the market, success will continue to be dependent on visionary entrepreneurs and artists. The Canadian Government is committed to the development of a strategy for Canadian content which will expand opportunities for economic growth and job creation; employ measures to support production, distribution and promotion of content at home and abroad that reflects our linguistic and cultural diversity; foster an ongoing national cultural dialogue; and promote the dissemination of the Government's public information holdings.

No access means no participation

A second key area of focus addresses the question of access to the information society. In the GIS, no access means no participation, either as employee in this economic engine, citizen in this source of social cohesion and community, or consumer of new products and services. Hand in hand with this commitment to the information society is the development of a national strategy for access to essential services involving policy, regulatory and other measures to ensure affordable access and respond to the evolving needs of Canadians in all regions.

In order to realize Canada's cultural objec-

ing to the Minister of Labour. Although the process was not designed to provide recommendations, several common themes emerged in the two reports issued in 1997:

- Investing in people is the key to Canada's future, and the responsibility of all social partners.
- The social impacts of new technologies must be understood and addressed to ensure a common base and the delivery of basic human rights.
- There is a need for national vision and to ensure that public policy and regulatory instruments facilitate the achievement of objectives.
- There is no single, universal solution as interests and needs are diverse and sometimes conflicting. Ongoing mechanisms for dialogue among all social partners on issues related to the changing workplace are required.

Conclusion

The GIS is all about linkages – the linking of networks, content and people through a variety of technologies and in a variety of new ways. In the GIS there is also a link between the smooth functioning of the workplace and productivity, competitiveness, and the profitability of corporations.

The needs of all social players must be addressed in a global context in order to develop an information society in Canada which achieves the Government's strategic objectives to: create jobs through innovation and investment; reinforce Canadian sovereignty and cultural identity; and ensure universal access at a reasonable cost.

Nowhere is the GIS "appearing" either fully operational or integrated. The movement towards a Global Information Society in which the full potential social, cultural and economic benefits accrue to all who seek them will involve significant structural and organizational adjustment, and a rethinking and recasting of the roles of all actors in society. The challenge for the Government is to find the balance to stimulate this new cross-sectoral economic activity while advancing social and cultural policy objectives. Linkages are also the foundation of the way forward – linkages among industrial sectors, governments, the social partners, companies, institutions and individuals.

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Multimedia convergence and changes in the production system and in working conditions for musicians: Implications for adopting a cultural policy. The case of Japan

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It has been said that multimedia will stimulate the artistic and cultural sensibilities of people and create a new world of communication, that it could become the key industry for the twenty-first century in Japan. Today, digital technology makes it possible for musical performers to use and enjoy multimedia. Before the 1970s, it would have been normal for 50 performers, including soloists, to assemble for the purpose of making a recording in a hall or a studio at the same time, to perform simultaneously under the baton of a conductor, and to interpret a piece of music. Such music was the joint creation of a composer, singers and performers, communicating with one another and sharing time and space. Even a sense of solidarity reigned among them because they collaborated with one another in performance and production. At that time, studio musicians were commonly employed by recording companies, while broadcasting companies engaged their own orchestras under exclusive contracts.

The whole dissolves into parts

However, as technology advanced, the practice of such simultaneous recordings began to decline. Gradually, recordings came to be made by each instrumental group separately: percussion, strings, wood wind or brass group, for instance. After such partial recordings were made, sound engineers merged them to make an accompaniment track on which song was then recorded and the performance was completed. As a result, performers started to convert the score of their own parts into sound without necessarily getting hold of the whole partition. At the same time, musi-

cians under exclusive contracts were replaced by freelance musicians.

Today, the means of producing records has changed far more dramatically with the introduction of an electronic device, the synthesizer, which arrived on the market in the mid-1960s and made it possible for the producers of records to exploit digital sources of sound. Performers who once had to be present and perform in the studio ceded place to the synthesizers and disappeared from the recording scene: the new form of talent required came in the form of the new skills of synthesizer programmers who took part in producing records. They made full use of synthesizers to express today through digital sounds what composers wrote yesterday. Physical instruments which produced simple sound pulse were almost all replaced by synthesizers as sampling technology developed and sounds created by synthesizers became more diverse. Synthesizers drew the curtain on the old musical world. Nowadays, acoustic instruments are just used to flavour synthesizer sounds or in order to add to the depth of tone.

Professional status of performers threatened

Moreover, performers are now exposed to an even greater menace since MIDI[1] standards were developed and computers have started controlling synthesizers. As performers, they had spent a lifetime acquiring skills, investing immense effort. Now, overnight, people without any professional musical skill can produce sounds and harmonies easily by putting data into computers and can take part in producing

musical recordings, with the result that the professional status of instrumental performers is increasingly threatened.

Today, sound tracks of cinema films, music in commercial films, dramatic performances, computer games and sound sources for karaoke are all produced in the aforementioned circumstances, although productions using synthesizers or computers as substitutes for acoustic instruments figure poorly among the best-selling records. Many studio musicians therefore find themselves at a loose end with dim prospects for employment.

Synthesizers items of household furniture

Meanwhile, the few synthesizer programmers who had initially superseded performers did not keep their privileged status for long because synthesizers became cheaper and started featuring as a common item of household furniture, so easy to be handled by everyone. So within a short space of time the programmers' function, too, has also become "de-skilled".

The working conditions of studio musicians have been enormously influenced by these changes, which in turn have led to three problems which may be identified as follows:

1. Recording fees have depreciated as a result of both union and individual negotiations to safeguard jobs. Although the annual income of orchestra players increased by 53 per cent on average during the last decade, minimum scales for studio musicians in producing broadcasting programmes and records rose only by 35 and 20 per cent respectively.

2. Freelance musicians never benefit from social security systems or provisions, nor from unemployment insurance which other workers enjoy, so they cannot make a living when they lose their job.

3. The third problem involves the question of "neighbouring rights", i.e. whether or not it is possible to define the synthesizer programmer and the sound producer making use of computers as performers in copyright law, and as beneficiaries on the basis of neighbouring rights.

Poor employment opportunities

It is also essential to examine how performers' jobs have changed in the era of multi-channel broadcasting making use of multimedia and satellite. CD-ROMs have been produced above all to be used through computers. All multimedia products dealing with information are involved, ranging from phonograms to images, texts and graphics, but as far as performers are concerned, this convergence does not increase employment opportunities.

That is to say, it is almost always the case that Compact Disc (CD) sounds are used for the sound component of CD-ROMs, but if only sounds need to be specially created for a CD-ROM, the work would be done by a small number of persons making use of the applications of new technology.

Just re-broadcasts of run-of-the-mill

Moreover, digital television broadcasting on telecommunications satellite has come into practice but almost all of the programmes are re-broadcasts of usual TV programmes or broadcasts of foreign films or programmes purchased from abroad. From the musicians' perspective, the only good news is that the number of concerts broadcast has increased slightly.

Multimedia producers and broadcasting enterprises maintain that the contents of the products are very important, although their strategy is not to encourage creating new works but instead to make use of former products as cheaply and easily as possible, or acquiring products made in foreign countries. As a result, neighbouring rights granted to performers have come under attack. It very often occurs that producers of broadcast programmes bring pressure to bear on performers to transfer their rights at the time of concluding contracts so that they sign them over for all future uses of the programmes in which they perform only once.

These practices are not unique to Japan but widely prevail all over the world.

Fell short of expectations

The new World Intellectual Property Organization (WIPO) Performances and Phonograms Treaty, on the agenda since 1993, was adopted by the Diplomatic Conference held in December 1996. The new treaty fell far short of expectations: although performers all over the world expected the Treaty to be an instrument for protecting their rights in the era of multimedia, they found it both anachronistic and void of any provisions for securing any rights regarding performances accompanied by other multimedia affiliations.

What is indicative in the recent phenomena is that social communication has changed drastically. Instead of reflecting on social issues and spending the time necessary to develop the different arts and cultures, the most pressing goal today seems to be to find ways of saving time and money rather than enjoy cultures in their essence. Furthermore, technological innovations do not always contribute to the development of human ability.

On the other hand, research and dissertation are made far easier by searching various data through easy access to Internet or CD-ROMs, importing them into a word processor and merging them.

To expedite business

No one will challenge the claim that new technology holds infinite promise and that humanity has been galvanized into a new era of civilization as a result of the electronic chip. Yet a nagging doubt remains: is human intelligence really being marshalled to serve the upliftment of the moral and social condition of mankind, or merely to expedite business and cheap forms of entertainment?

Similarly, the psychological consequences of computer games on children are still to be measured. A spate of media reports over the past five years have justifiably aroused alarm, in particular about the ability of young children to distinguish between the real world and the virtual world. It is not yet apparent whether the computer generation in the making will be equipped with the same perception of their role in society as the previous generation. In other words, the scales may tilt in favour of strictly temporal values as opposed to the subtle and spiritual energies from which spring lasting creativity.

It can hardly be claimed that morals in Japan draw any particular inspiration from religion; nor that democracy has shaped Japanese culture in any depth.

Glued to the screen

Such a society makes light of life itself as well as the dignity of individuals. Recent evidence shows that many Japanese people have been developing the attitude that those who cannot make full use of the latest computer and multimedia technology can hardly be classed as "human beings". Such an attitude is becoming more and more widespread in a society where an alarming proportion of Japanese chil-

dren have stopped communicating with their family and friends and, glued to keyboard and screen, are wholly and solely devoted to the virtual world. It is urgent to reflect on the full cultural implications of this attitude: what kind of adults are being prepared for tomorrow's world? Are adults today inculcating them with lasting human values or will they be left to drift morally and spiritually?

Learning from history

When the television and the telephone were invented, much had been staked on them as instruments of education, culture and democratization. No doubt there are lessons to be learned from an audiovisual history that have not yet been fully placed at the service of policy-making at the highest levels. It might still not be too late to recover lost opportunities.

We face a paradox: as time-space barriers fall with the daily advance of computers, we acquire the illusion that our horizons are receding and that our playing-field is transcending all frontiers. The humble reality may well be that we are caged in computers in such a way that artistic and cultural growth are restricted within the confines of the computer and its software, producing an environment which stifles sensibilities and where creativity cannot flourish. The result is a flat, monotonous society where every object is a replica of the other.

Too outward-looking

Preserving traditional cultural form is not solely a cause for concern by our counterparts in the developing countries. Originally, Japan also tended to assimilate foreign culture and technology unconditionally. Recovering rapidly from the effects of the Second World War, Japan has prospered economically because it has been keen to adopt technology and innovative know-how from foreign countries, commercialize them and export the commercialized products.

As in the case of developing countries, our efforts to create our own arts and culture are hardly visible, while many of us enjoy music from abroad as well as feature films. As far as music is concerned, half the number of CDs published yearly in Japan are produced in foreign countries. A quarter of the number of classical concerts held in Japan each year are performed by foreigner ensembles, and half the total amount collected in admission fees is taken out of Japan.

Japanese swamped
by foreign culture

More recently, with the advent of Internet, foreign cultures are being imported more and more massively into Japan. The opportunities for Japanese musicians to perform in order to let Japanese culture flourish have been decreasing steadily because of insufficient support for cultural activities from the Government and a market dominated by foreign culture, a situation which represents a far more serious problem than that of mechanical unemployment.

Like any other technological development, the computer needs to be acknowledged as an instrument at the service of communication and information, but to envisage a society where interpersonal face-to-face communication has ceded place to communication with virtual interlocutors rightly sounds the alarm.

Technology no substitute
for human activity

Performers have throughout the ages been appealing to people's artistic and cultural sensibilities. Musical performances have nurtured people's urge to live; those very people in turn have encouraged musicians to keep on creat-ing. Centuries of such effort have produced artistic works which have contributed to the advancement of civilized societies. So technology, however sophisticated, should not be perceived as a substitute for human activity. Life itself could not be lived without artistic forms of expression. Artistic activity is one of the main distinguishing factors of mankind. I believe multimedia society will not mature unless the emotions of human beings are restored to their rightful place as humanity's most valuable possession.

We must not be controlled by any form of new technology, however powerful or attractive. We must demand social standards with human beings at the centre. Social policy must be shaped so that new technology is only a resource to be drawn on and is by no means tendered as a substitute for individual human creativity.

Note

[1] The Musical Instrument Digital Interface (MIDI) standards decribe how to build electrical interfaces to interconnect different musical instruments and sequencers, which are devices to store and replay music information. The MIDI standards describe a file format for how sequencers should store music information so it can be transported among sequencers: that format is the usual MIDI.

Information Society 2000. The German experience of multimedia convergence

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The path leading to the information society

New information and communication technology is a key generator of radical change in economic structures and of increasing globalization. On the information superhighway, national boundaries as barriers to the forging and expansion of business relations have faded into insignificance. The meteoric pace of technological progress and rapidly falling prices in the information and communication technology branch promote the emergence of new services and far-reaching changes in the technical and organizational structures underlying the production of both goods and services. New technology will also change the consumption structure of private households – in interaction and combination with traditional media such as print, sound and image data (multimedia).

This structural change is compounded by the fact that all actors involved in the information business are aware of existing opportunities to amalgamate communication, information and entertainment items in a multimedia package. Although efforts to integrate diverse individual markets seem – as yet – to be proceeding along less than revolutionary lines, all actors – both globally and, for example, in Germany – are engaged in a process of securing their territory for future operations. This is true not only of services, for example the combination of traditional information and entertainment packages with added-value services, but also of the output of commodities, as reflected in the contest to produce a television set or multimedia PC incorporating specific new functions that is destined to become the ultimate in standard equipment for future multimedia households.

All these circumstances with their associated synergies and enhancement of efficiency are bound to have implications for employment, entailing substantial changes in working conditions and exerting a major impact on the way in which activities are structured in the workplace. Impressive evidence of these trends in Germany has been provided by the Labour-Market and Occupational Research Institute in Nuremberg, which estimates that 50 per cent of the German workforce is currently employed in information-related activities. With the advent of the new millennium, this percentage is expected to increase further, reaching about 55 per cent by the year 2010 (see Fig. 1). Similar estimates exist for the United States of America.

An intensive debate has been taking place in recent years, both globally and within countries, on the impact of the information society, inter alia at a Conference of Ministers of the Group of Seven Countries (1995) and in the context of an European Union (EU) Task Force headed by Commissioner Bangemann, whose 1994 recommendations have served as the basis for a European programme of action.

Policy-making bodies in Germany are also aware of the structural task confronting them. In 1996 the Federal Government issued a report entitled *Info 2000 – Germany's path to the information society* and the German Parliament has set up an Investigation Committee on *"The Future of the Media in the Economy and Society."*

Notwithstanding persistent uncertainties regarding future developments, particularly in employment, a consensus has developed among representatives of political and economic circles and trade unions concerning the need for an industrial nation to face up to the challenges of the information society if it wishes to defend its competitive position, thereby creating new employment opportunities and securing existing jobs. In a nutshell, countries that move at full speed into the infor-

Fig. 1. The four "sectors" model (1882-2010). Share of the "sectors" in overall employment
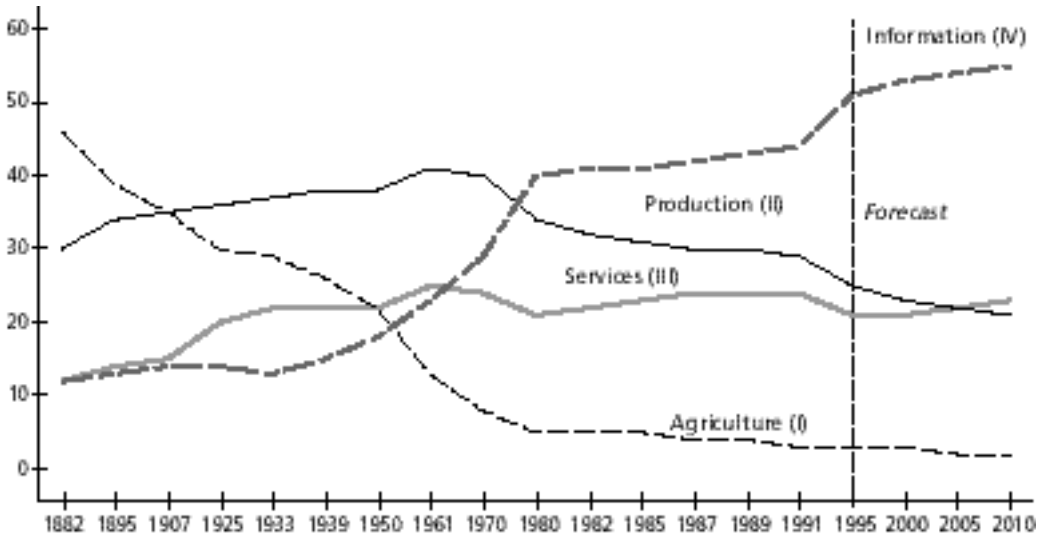
Source: IAB (Institute for Employment Research)

Relative figures (percentage of employees)

Year	Sectors			Information sector	Total
	I	II	III	IV	
1882	46	30	12	12	100
1895	39	34	14	13	100
1907	35	35	15	14	100
1925	30	36	20	14	100
1933	29	37	22	13	100
1939	26	38	22	15	100
1950	22	38	22	18	100
1961	13	41	25	23	100
1970	8	40	24	29	100
1980	5	34	21	40	100
1982	5	32	22	41	100
1985	5	31	23	41	100
1987	4	30	24	42	100
1989	4	30	24	43	100
1991	3	29	24	44	100
1995	3	25	21	51	100
2000	3	23	21	53	100
2005	2	22	22	54	100
2010	2	21	23	55	100

Editor's note: Slight total differences due to rounding of figures.

mation society will enjoy a higher-than-average share in its prospective benefits in terms of growth and employment.

We shall briefly describe below the areas in which the German Federal Government is cur-rently seeking to support progress towards the information society, specific requirements for action in the fields of educational, labour and social policy, and areas in which successes have already been scored.

The Federal Government's "Info 2000" action plan

The transition to the information society presents policy-makers with two challenges:

- Appropriate basic structural conditions must be created;
- Policies should assist in turning scientific and technological advances to account in the form of practical innovations at enterprise level and in securing acceptance on the part of the individuals concerned (speeding up rates of dissemination).

The measures proposed under the Federal Government's "Info 2000" action plan (see Fig. 2) focus on the following two objectives. (The plan itself is the result of extensive analysis designed to achieve progress along the path into the information society as swiftly as possible in order to enhance international competitiveness.)

1. With a view to establishing basic structural conditions, a multifaceted *potential for legislative investigation and action* was created. This relates, inter alia, to legislation on competition, the media, data protection and security, and protection of consumers and young people.

An important milestone on the journey into the information society was reached in July 1996 with the passage of a Telecommunications Act. The communication network market has now been opened to all service providers for more than a year. From 1998, the market for voice services, i.e. telephone services, will also be opened up to private operators. A large number of actors are currently taking up positions in the expanded markets through company restructuring processes and the formation of strategic alliances. National frontiers are disappearing at an accelerated pace. To ensure that the transition from a regulated to an open market occurs as smoothly as possible, a newly established independent regulatory authority will begin to operate in 1998. It will be responsible, inter alia, for ensuring through its licensing policy that the supply fulfils high-quality criteria and safety standards.

A further important milestone was the passage this summer of an Information and Communication Services Act which came into force on 1 August 1997. The Act is intended, in particular, to eliminate obstacles to the free play of market forces in the new information and communication services sector. Providers of on-line services and information of all kinds in the electronic business are to be offered a reliable context in which to operate. In addition, regulatory action was necessary in the areas of data protection, digital signatures and other areas. The clarity thus created in the situation for investors in the new markets was generally welcomed.

Fig. 2. Federal Government Action Plan. "Germany's path to the information society"

Areas of action	
1. Strengthening of the market-based regulatory framework **Development of the legal framework**	**4. Promotion of research and development**
1.1 Liberalization of the telecommunication sector	**5. IT strategy in public administration**
1.2 Legal framework for new information and communication services	**6. Norms and standards**
1.3 Regulation of competition	**7. Applications**
1.4 Data protection	7.1 Business activities
1.5 Labour law	7.2 Applications in industry and the public sector (e.g. telecommuting, tele-cooperation; communication networks for education and science; telematic applications in the transport system; preventive health care and health services)
1.6 Consumer protection	
1.7 Protection of young people against illegal and harmful contents	
1.8 Protection of intellectual property	7.3 Private applications
1.9 Security of information technology systems and telecommunication infrastructure	7.4 Pilot projects in the area of multimedia services
1.10 Crime prevention	7.5 Transnational projects
2. Dialogue with business and other sectors of society	**8. Intergovernmental cooperation**
	8.1 European and international organizations
	8.2 Group of Seven States
3. Education and training system	8.3 Bilateral action

The drafters of the action plan also investigated the need for action in the area of labour and social security legislation. However, no provision has been made for labour and occupational safety and health regulations in the above-mentioned framework legislation. The Federal Government sees no need for legislative action under these headings for the time being since the existing provisions of labour legislation are – still – sufficient to provide an adequate framework for working conditions in the case of multimedia providers and users. This does not mean, however, that remedial action will not be necessary in individual areas if we apply a broader definition of the workplace. But this need for adjustment must be discussed in the first place between unions and management or at company level and this is where the search for solutions must also be initiated. The Federal Ministry of Labour and Social Welfare is therefore engaged in intensive discussions with employer and employee organizations and business circles with a view to stimulating vigorous action to regulate the situation.

2. A second – and at least equally important – task for policy-makers consists in promoting the spread of practical exploitation of emerging opportunities in the economy and their acceptance by the individuals and employees concerned. The action plan proposes numerous initiatives to this end, of which we shall mention only a few by way of example:

- Action will be taken to intensify the existing dialogue between scientists and policy-makers. The Federal Government has already been engaged for several years in discussions with leading industrialists of topical issues relating to information technology. To ensure that the transition to the multimedia era proceeds as smoothly as possible in social terms, representatives of employer and employee organizations have also recently been drawn into these talks.

- In the context of an "Info 2000" forum launched in autumn 1996, the Federal Government has been promoting dialogue in society in general and in the workplace on the impact of the use of modern communication technology. At an inaugural event, over 150 leading voluntary associations in Germany expressed an interest in participating. Representatives of these bodies are currently involved in discussions of existing practical models with experts and practitioners in diverse working groups, in which they also examine blueprints for active shaping of the information society of the future. The working groups address topics such as:
  - Working in the information society;
  - The information society and structural change in the economy;
  - Training and media skills;
  - Application of telematics in the health system.

- The relevant federal ministries support the development of new scientific and technological options and their rapid implementation in the workplace as part of their action to promote innovation and through special promotional programmes in the area of information and communication technology. In particular, they seek to provide small- and medium-scale enterprises with the means of survival in the face of domestic and international technological competition.

- The federal, Länder and local authorities play an important catalytic and multiplier role along the path into the information society through pilot projects (e.g. telecommuting, tele-cooperation) and their own demand (in public administration or the health system).

- Any comprehensive strategy to speed up the spread of new technology must, of course, also involve the dissemination of information. A responsive attitude on the part of the general public to the new information and communication technology is a basic prerequisite for a successful move into an information society. To that end, a large number of public information initiatives have been undertaken. The Ministry of Labour and Social Welfare and the closely related authority dealing with occupational health and safety and health protection have also contributed through the publication of brochures. Their aim is to assist in dispelling misgivings and also to draw attention to the need to preserve standards of social security protection as the new technology is introduced into the workplace.

It would be presumptuous for any country to endeavour to address the problems single-handedly at a time of increasing globalization

of trade. As it is particularly clear that effective state action cannot be confined within national boundaries in the case of information and communication technology, the Federal Government is endeavouring, for example through intensive dialogue or joint events with the EU Commission, to promote early and efficient coordination of its activities at the European level as well as international cooperation. It is a welcome development that the European Commission and Council of Ministers – taking their cue from the Bangemann report – have launched a whole range of initiatives and focused on the impact on employment and the social and cultural implications of the use of modern information and communication technology in their discussions on the fifth EU Framework Programme for Research and Development. The EU Commission has produced a Green Paper on Living and Working in the Information Society, emphasizing in the title that a people-centred approach to the subject should be adopted at all times.

Against this background, intensive discussions are also under way in Germany on the implications of the transition to an information society for the employment system, the organization of work and the social security regime.

Impact on employment and jobs

Nobody can yet predict with certainty what kind of impact on employment may be expected from the transition to an information society. Optimists – for example industrialists – assume that large-scale new job creation will be possible through the opening up of new markets. They are contradicted by those who – undoubtedly with some justification – point out that job creation through the opening and expansion of new markets by suppliers of information and communication technology and new service providers may be offset by lay-offs in traditional media industries (e.g. printing) and rationalization-induced job losses in other sectors of the economy. In this connection, mention should certainly also be made of possible synergy effects through convergence, in other words the amalgamation of hitherto separately operating producers of goods and services in multimedia conglomerates.

For example, recent scientific studies estimate that only between 150,000 and 180,000 new jobs will be created in Germany by the year 2010 (see Table 1). However, these forecasts are based on the status quo. If we start from the assumption that an acceleration in the

Table 1. Employment in the media and communication sector (1992-2010)

	1992	2000	2010	Increase/Decrease	
	(in 1000s)			(in 1000s)	(percentage)[a]
Print media	416	393	366	-50	- 0.7
Electronic media	93	127	151	58	2.7
Media as a whole	509	520	517	8	0.1
Media and communication technology[b]	554	585	623	69	0.7
Communication services	845	870	950	105	0.7
Media and communication sector	1 908	1 975	2 090	182	0.5

[a] Annual average change.   [b] Production and distribution.

Source: Forecast of the German Institute for Economic Research (DIW) 1996; Institute for Information and Research calculations.

Employment situation and job impact by industry 1995-2010 (Figures in 1000s)

Industry	Employment situation 1995	Job impact 1995-2010
Telecommunications	380	30
Information technology	260	80
Media	530	75
Electronics	130	-33
Total	**1 300**	**152**

Source: A.D. Little (1996).

Table 2. Production and employment scenarios in the EU (12) by 2010 [a]

EU(12)	1992	Rapid spread [b]	Slow spread [b]
GDP (billions of ECUs) (at constant 1992 prices)	5 421	8512 (+2.6%)	8314 (+2.4%)
Workforce (millions)	154	180 (+0.9%)	180 (+0.9%)
Employment (millions)	139	166 (1.0%)	160 (+0.8%)
Unemployment (millions)	15	14.4 (−0.2)	20.1 (+1.6)

[a] In brackets: annual average increase/decrease.   [b] Spread of "advanced communications", comprising both traditional telecommunication services and new networks services.

Note: Eurostat is the source of the figures for 1992.

Source: METIER Consortium (1995).

process of dissemination of modern information and communication technology will occur and that changes in private and business demand will impart an additional stimulus to growth and lead to an expansion of market shares, the picture may look different. A Europe-wide study estimates the potential for job creation through new information and communication technology in Europe at 6 million, including 1.5 million in the Federal Republic (see Table 2).

It should thus be clear that, despite existing uncertainties, there can be no alternative to speedy exploitation by industrial states, including the Federal Republic, of the opportunities offered by information and communication technology.

Impact on qualifications and skills

The use of new information and communication technology will call for considerable additions to and changes of emphasis in existing occupational skills. With the introduction of increasingly complex technological systems, employees will be required in many cases to address abstract problems.

It is unlikely that this change in demand for occupational skills can be met solely through vocational training and further training. The foundations must already be laid at school. A number of initiatives have been launched in the Federal Republic ("Schulen ans Netz", in-service teacher training) with a view to enhancing media skills and adapting the education system to the new media by making it more flexible and interlinked. Under the "Schulen ans Netz" project operated by the Ministry of Education and German Telekom, over 6,000 schools have already received advice and financial assistance

for the installation of their first hardware and software equipment. Schoolchildren are to be offered the best possible opportunities to familiarize themselves at an early age with the potential and technology of electronic communication, for example through the Internet. In addition, steps are being taken to provide students with the widest possible range of educational material through the development of an electronic market in courseware.

Specific action to promote initial and further training is, of course, also necessary, as follows:

- Against the background of changing requirements, decision-makers in the Federal Republic are endeavouring to revise or redevelop existing *career profiles* as swiftly as possible. In the past two years, a number of entirely new career profiles have been created, for example media organizer, computer specialist in systems integration or applications development, and information salesman/woman.

- The range of instruments available under "*further training and retraining*" can be of major assistance in adapting qualifications to the requirements of the information society – not just to secure individual employment prospects but also to promote a speedier transition to modern technology in the workplace.

- Business and employee organizations must develop joint approaches to *lifelong learning*. On the employee side, the aim under this heading is to enhance potential and motivation and the role of the State consists basically in stimulating dialogue to that end. The Federal Government is doing so at various levels, particularly in the context of the Info 2000 forum.

Impact on work organization

New information and communication technology can provide effective support for organizational restructuring and the implementation of new business and entrepreneurial concepts. There is a close connection between technological and organizational innovation, which calls for action at different levels.

- It is important to ensure continuing observance of occupational health and safety criteria and to adapt existing regulations to new circumstances in the workplace. Implementation of the EU Screen Directive is a topical example.

- At the same time, it is possible through the use of new information and communication technology to sever the spatial and temporal link in traditional forms of employment between job and workplace. In addition, the concept of the employee is being increasingly undermined. Both phenomena call for reflection in the medium term on the implications for labour and social welfare legislation.

Telecommuting, currently a hotly debated topic, is a good example of how new information and communication technology can change the organization of work.

Telecommuting will undoubtedly assume greater importance in the years ahead as an employment category of the future. Several million people in the United States are already employed externally on a full-time or part-time basis and are linked to the employing company by modern communication networks. This type of employment is gaining ground in Europe too, although for the time being – with the exception of the United Kingdom – relatively few employees fall into this category. In Germany the number of teleworkers is currently estimated at several hundred thousand. It may be assumed that many employees already represent their company externally (as buyers and customer-service employees). For this large group, it is only a small step to full-scale telecommuting (mobile teleworkers).

The German Federal Government is currently developing action to identify and eliminate remaining obstacles, thereby making telecommuting more acceptable.

A publicity campaign is the first step towards generating awareness. It will consist largely of an advisory package designed to address the technological, business and organizational issues involved in telecommuting. The package will also review legal aspects of telework and include the findings of an official report on the subject.

The Federal Government has, however, adopted a firm position on one point and is backed up in this by the empirical findings of the report. Various legal approaches to telecommuting are conceivable: it may be subject to the normal conditions governing genuine home-based employment or to the conditions governing persons in the self-employed or freelance category. The most promising option under present circumstances seems to consist in treating telecommuting – as far as possible – as a normal working relationship with the corresponding familiar structures. Job security and hence the acceptability of telework are thereby enhanced.

Recommendations to employers, employees and their representative bodies must be formulated jointly by employer and employee organizations so that misgivings, particularly in small- or medium-scale enterprises, can be dispelled. Only then can we really begin to mobilize the employment potential inherent in telecommuting. We must strike a satisfactory balance between maintenance of health and safety standards on the one hand and of competitive freedom for companies on the other. An international consensus on this aspect would obviously be helpful.

In a normal working relationship it is also easier to take more vigorous action to address misgivings vis-à-vis telecommuting. Attention is drawn, for example, to the solitary circumstances of the teleworker, who is deprived of the social environment of an office or other workplace. Alternating telework, i.e. employment in the office on certain days and at home on other predetermined days, is clearly a particularly sound solution to this problem since it allows employees to keep in touch with the company and their colleagues. Experience in implementing this special category of telecommuting has already proved favourable.

Others criticize the fact that teleworkers escape supervision. The proper response to such criticism is that the view of the world of work it reflects is oldfashioned. It is unnecessary to place employees under constant supervision. As a growing number of skilled activities are performed through telecommuting, it is no longer a matter of whether teleworkers are properly supervised but of whether a project is completed, subject to specific quality criteria, within the prescribed

time. Teleworkers themselves have a strong interest in ensuring that this is the case.

In conclusion, attention should be drawn to another related issue. As a concomitant of telecommuting and of the increase in other forms of tele-cooperative employment and production – also referred to as the automation of the world of work, there is a tendency for the "traditional" concept of the employee to disappear. Employees who are no longer – permanently – associated with company-based jobs, who decide on their own working hours and who in some cases work (perform services) for several different employers will gradually tend to acquire formal self-employed status. Practical relations of dependence will not, however, disappear in all cases: hence the risk of pseudo-self-employment. Political decision-makers must keep an eye on this trend. Every individual should have the opportunity to offer his or her skills and ideas – e.g. involving the use of modern communication technology – on an independent and personally profitable basis. However, all persons must also – if they so wish – be given the possibility, in the event of continued dependence on an employer despite formal self-employment, of falling back on a system of social security.

Convergence and flexibility in the media industries call for a new organizational logic of businesses and social actors

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In no other industry is the transformation of work as pervasive as it is in the media industries. The growth of an informational economy entails no less than the emergence of a new techno-economic paradigm (Castells 1996; Freeman and Soete 1994), and the media industry where information is the core business exemplifies this paradigmatic shift par excellence.

The changes are flowing from the converging set of information and communication technologies (ICT), which operate in interaction with economic, political and institutional processes, i.e. globalization, liberalization/deregulation and decentralization/flexibilization. Their combined effects may be very disruptive, which is a good reason for a prudent approach by social actors; but even those authors who take a more optimistic view agree that the potential benefits are highly dependent on institutional adaptations, for instance in training systems, in the management of companies, and in labour relations.

This article will first focus on the wider process of convergence of the media industries and then examine the occurrence of the networking logic and flexibility at the organizational level, which are both regarded as primary effects of ICT. The article then proceeds to discuss the issue of the regulation of the effects of the transformation process and argues for a flexible type of regulation which strikes a balance between efficiency and equity.

Convergence in the media industries

Convergence in the media industries is often taken to be equivalent to the emergence of a "multimedia" industry. It is true; recent years have seen a growth of conglomerates which run different sorts of media. Capital Cities/ABC is an example; this conglomerate ran magazines, newspapers and TV stations when, in 1995, it took over Walt Disney, which exploits film production companies, cable operators and entertainment parks. For most multiple media groups, however, their activities are separate operations (Leisink and Van Dijk 1994). Thus the term "multimedia" conglomerate in a broad sense does not mean much more than a corporation operating different sorts of media.

However, with ICT a process of convergence has begun which has the potential of really integrating traditionally separate sectors of the media industry. In addition, ICT has also facilitated the creation of a series of product innovations – multimedia products – which are in themselves an integration of the various media forms. In order to be able to produce these multimedia products, companies which have their origin in different sectors of the media industry have either engaged in strategic alliances with companies who have core competences in other disciplines of a multimedia production or they have recruited their own specialists. At this stage the profile of a multimedia company starts to emerge: it stands for the integration of previously separate disciplines and activities.

Multimedia convergence can be understood to be a converging set of information and communication technologies, one feature of which is digitalization (cf. Baldwin et al 1996; Castells 1996; Freeman and Soete 1994; Van Dijk 1994). Through the digitalization of all sorts of data, these data – be they text, sound, still images or video – can be manipulated and integrated on the basis of their common informational structure. In addition, the development of optical fibre and satellite technology creates the possibility of rapid transmission of increasing amounts of bits per second.

It is because of the convergence of these technologies into an integrated system that the term "network society" has been introduced (Castells 1996; Van Dijk 1994). The attractive-

ness of this term is that it indicates that the integration of information technologies goes along with a convergence and integration of economic activities. Castells (1996, p. 372) gives the example of the ending of the separation and even the distinction between audiovisual media and printed media, entertainment and information, which he attributes to the advent of the Internet.

This analysis explains why convergence in the media industries is now qualitatively different from the more or less arbitrary conglomerates of entertainment and media activities. Every "sector" will be affected by these information and communication technologies: the most fundamental effect is that the borders between the different sectors of the media industry have been dissolved. Therefore there will be an increase of "multiple media companies" – the term I prefer to use to designate those companies which engage in activities which used to belong to traditionally different sectors of the media industry – and there will be an entirely new range of multimedia companies – the term I use to indicate companies which specialize in off-line products (CD-ROM, etc.) and on-line information services, which fully integrate text, data, sound, still images and video and which allow for interactive use.

The convergence process is gradually recognized by the traditional sectors (cf. ILO 1996 Multimedia Convergence Symposium). An interesting case is the printing industry. In the 1980s it was reluctant to recognize the effects which Desk Top Publishing (DTP) would have, particularly on the pre-press area, but now the printing industries have become sensitive to the impact of convergence. Both the American and the European printing industries have held major conferences in the 1990s at which the effects of ICT were high on the agenda. Their analyses of the long-term trends clearly recognize the convergence of the media industries (cf. PIA1994; PIRA1994).

Although the convergence process is evidently an uneven development, instances of convergence can be observed throughout the media industries. Pre-press shops which have survived the DTP shake-out have innovated and offer graphical design services, digital photography, database management and also offer their clients hardware and graphical software consultancy and training. Publishers of scientific and professional information have moved into electronic publishing of materials such as scientific dictionaries on CD-ROM and articles on-line. Newspaper and general interest magazine publishers have allied themselves with commercial broadcasting stations and are preparing for all kinds of commercial services (teleshopping, video-on-demand, pay TV, etc.). Nevertheless, the diffusion of multimedia applications has not been half as quick and massive as their prophets had expected and even major companies such as TCI and Philips are postponing their investments.

The networking logic and flexibility

A fundamental effect of ICT in combination with organizational and managerial innovations is the development of a new techno-economic paradigm of which the networking logic and flexibility are key features (Castells 1996, pp. 60-63). The first characteristic of this new paradigm is that information is its raw material, which explains why this new paradigm impacts on the media industries in particular.

Over the past two decades, a transition from mass production to flexible production has taken place in a growing number of industries. The mass-production model was based on productivity gains by economies of scale in an assembly-line based, mechanized process of a standardized product. This presupposed conditions of control of a large market by a corporation, which itself was structured on the principles of vertical integration and institutionalized division of labour. However, when demand became unpredictable, when markets started diversifying worldwide and thereby were difficult to control, and when the pace of technological change made single purpose production equipment obsolete, this mass-production system became too rigid and too costly. The answer was, generally speaking, enhancing flexibility in production, management and marketing with the view of coping better with the uncertainty caused by the fast pace of change in the environment of the firm. This is where the networking logic comes in, because "the morphology of the network seems to be well adapted to increasing complexity of interaction and to unpredictable patterns of development arising from the creative power of such interaction" (Castells 1996, p. 61). Through the newly available information technologies, this networking logic can be implemented in all kinds of processes and organizations. One organizational form of the networking logic is known as Toyotism, a model with well-known elements such as just-in-time supplies, total quality control, workers' involvement through team work and a flat

management hierarchy. Other organizational forms are interfirm networking (well-known examples are Benetton and Nike) and strategic alliances of large corporations.

Examples of this networking logic and the related feature of flexibility manifest themselves in various parts of the media industries. Telling illustrations of the vertical disintegration of mass-production companies and the creation of a flexible specialized production system operating through network alliances are provided by the US film production industry (Storper 1994) and the culture industries of Australia and the United Kingdom (Campling 1995; Lash and Urry 1994; Markey 1996).

Book publishing

The publishing sector might appear to contradict the networking trend. The mergers and acquisitions of publishing multinationals such as Reed-Elsevier and Wolters-Kluwer appear to corroborate the concentration trend, which MacDonald (1990) presented as the overall trend of the communication industry. However, the autonomy which characterizes different publishing divisions and subsidiaries illustrate the same network-model, not between firms in this case but within a single corporation. Book publishing is a sector in which the effects of flexibility have emerged along with a process of restructuring. A survey by Celia and John Stanworth (1995) of the book publishing industry in the United Kingdom shows that publishing houses have increasingly externalized proof-readers, indexers and editors, who, now self-employed, (net)work as home-based teleworkers.

It is evident, however, that not all parts of the media industries are equally confronted with this trend towards flexible production of diversified quality products, as happens to be the case in national and provincial newspaper publishing. Newspapers are mostly still a standard product for a mass market. In such circumstances, newspaper publishing firms may still have the vertically integrated bureacratic organizational form. However, the other key effect of the ICT revolution, the increase in flexibility, can well be observed in the newspaper industry (Leisink and Van Dijk, 1994). Multifunctional labour has been introduced simultaneously with direct text input and electronic page make-up. For instance, functional flexibility can be observed by way of the integration of commercial and composition tasks at the advertising departments.

Labour relations: striking a balance between efficiency and equity

The media industry is undergoing a transformation process and its effects on business and labour are enormous, entailing substantial quantitative employment shifts. While the printing industry will suffer a job loss of 12 per cent, employment in electronic media is predicted to increase sustantially by 62 per cent in Germany between 1992 and 2010 (Seufert 1996). There are also qualitative employment effects in terms of requirements concerning skills, flexibility and innovation. These quantitative and qualitative changes call for a new organizational logic of social actors and a flexible type of regulation of employment conditions.

Free market does not mean absence of rules

The media industries have always included sectors in which company culture was more or less alien to collective bargaining, for instance advertising agencies and graphical art studios in the Netherlands (Leisink and Spaninks 1994). In fact, the last decade has seen an increasing individualization of employment conditions, notably in the United Kingdom (Milward et al, 1992; Smith and Morton 1990, 1991). I think there is a mistake at the heart of this type of anti-regulation approach. This mistake equates free markets with the absence of any rules. However, markets, including the labour market, can operate effectively, even in purely economic terms, with a certain set of regulatory institutions only. This may be illustrated by an example of vital importance to the media industry: the issue of skills and competences, which requires a system of training and education that adapts to the demands of the industry and the workers.

When the Dutch entertainment and audiovisual industry began operating increasingly on a European market, the major production companies discovered that in order to be competitive they had to be not only cost-effective but guarantee quality production. While in 1990 they had turned down an offer by the Dutch Ministry of Economic Affairs and the state-funded Manpower Service Agencies to invest in an encompassing training system, in 1993 the time was ripe for the foundation of a joint institution of employers' associations and unions aiming to set up such a comprehensive system of vocational training[1] (Leisink 1996).

The joint institution underlines Streeck's observation (1992) that collective investments in training are more rational than single employer investments. This example illustrates the mutual interest of both sides of industry in "resourceful cooperation". Thus, as the entertainment and media industries become increasingly knowledge-intensive, there is a growing mutual interest in developing labour relations of resourceful cooperation which are conducive to creating, producing and exploiting cultural products.

Once it is acknowledged that some sort of regulation is required, the question arises as to which sort of platform would be adequate. Traditional platforms such as the industry based patterns of collective bargaining in the printing industry appear objectively inadequate because of the nature of the convergence process itself. This evidence was borne out in the 1980s by DTP and the simultaneous spread of copiers. The latter has created a low-investment-cost entrance into the printing industry for copyshops and DTP-studios and have also offered many business clients the opportunity to do graphical work themselves. While traditional organizations initially thought they could solve this "problem" as it was then perceived to be by simply expanding the scope of existing collective agreements (ILO, 1990, p. 53), they eventually failed on account of their very adherence to the detailed and costly kinds of arrangements regarding manning, job demarcations and overtime payments. However, apart from the cultural differences between the traditional "manufacturing" industry and the new commercial services which contributed to the failure of this approach, the recognition was lacking that digitalization amounted to an erosion of the printing sector as a viable entity for collective agreements.

On the other hand, the idea of attempting to arrive at an alternative platform for collective agreements on the basis of the new "sectors" themselves or on the basis of the company level would not have come off either. First of all, in the case of the new *sectors* approach, it still remains to decide how to define the *sector* in question in order to distinguish it from the traditional (sub)sectors, a difficulty compounded by the fact that in most cases representative employer associations with which unions could have started negotiations do not exist. Nor can the other alternative of a company based collective bargaining platform be considered a viable basis, given the predominance of small and medium-size businesses in the media industry and the sheer impossibility for unions to negotiate on a company-to-company basis.

Thus, addressing in earnest the multimedia convergence process implies recognizing the need for a media-wide arrangement of some basic employment conditions. Only a media-industries encompassing agreement would not suffer from the aforementioned problems. Evidently, a media-wide agreement should not specify all employment conditions in a uniform way for all sectors: although there is convergence, there also exists and will continue to exist differences between *sectors* and companies and between different categories of workers. Therefore the type of multimedia agreement in mind should restrict itself to some basic employment conditions, each module of which should lend itself to adaptation to the specific circumstances of the *sector* or the company or the category of workers involved. This means that ultimately employment conditions will be negotiated on the basis of multi-level interaction between employers' associations and trade unions and between management and the workers themselves.[2]

Lastly, the flexible character of the type of regulation to be adopted must be examined. The fact that some sectors of industry, such as advertising agencies and graphical arts studios in the Netherlands, have traditionally not engaged in collective bargaining does not imply that they are completely opposed to joint regulation of employment conditions. However, the universal standard characteristic of collective agreements which requires that they spell out for every type of job in a uniform way the levels of pay, hours of work, etc., conflicts not only with the flexibility which agency and studio managements are striving for but with the culture of the workers in these sectors.[3] However, joint regulation of employment conditions would not be unthinkable in the sectors of industry referred to under the following conditions: if selectivity were possible; if certain items – for instance training or invalidity and pension schemes – were the issue of joint regulation, and others – for instance working hours – were not; and if joint regulation were to take the form of agreements which offer scope for tailor-made agreements at workplace level that may deviate from the sectorally agreed norm, pending the workers' own approval of such agreements.

The conditions referred to recognize the cultural specificity which distinguishes the advertising and creative sectors from the traditional

industrial culture of the printing industry. This cultural difference also surfaces in workers' opinions on the regulation of employment conditions. In a survey of workers in advertising agencies (Spaninks 1992; Leisink 1995), no less than 86 per cent of all workers preferred to arrange their wages on an individual basis as they were used to doing, and there was little difference between lower paid secretarial and administrative staff on the one hand and art directors and account managers on the other. Nevertheless, about two-thirds felt the need for collective organization and joint regulation, some in relation to the area of social security and twice as many concerning issues such as training and career policies.

When all is told, it must be acknowledged that if unions are not willing to experiment with forms of à-la-carte collective agreements they will increasingly be out of touch with the culture of the multimedia workforce.

Convergence, in combination with the specific requirements and cultures of each component of the multimedia industry, lends more urgency to the demand for flexibility. In addition, the pluralization of lifestyles calls for a destandardization of the regulation of employment conditions. Collective agreements which offer some degree of selectivity and scope for tailor-made regulation are in the interest of business flexibility and efficiency. By including procedural rules in the collective agreement concerning, on the one hand, the rights and obligations of employer and workers' organizations at industry and sector level, and, on the other, the rights and obligations of management and workers at workplace level, a balance can be struck between efficiency and equity.

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Notes

[1] The platform commissions annual training and labour-market scans and on that basis can anticipate the skill requirements of companies by initiating new training courses. Thus the 1996 survey indicated that about a quarter of audiovisual companies had job vacancies in the area of editing, operational production and commercial jobs which they find hard to fill because applicants lack adequate skills or experience (ABC 1996).

[2] This approach to a structural modernization of collective bargaining has to some extent been followed by the Dutch printing industry's employer organizations and unions. The Grafimedia collective agreement which they have concluded will initially cover various graphical sub-sectors such as pre-press, newspaper publishing, general printing and silk screen printing. However, while the structure may accommodate other sectors of the multimedia industry, its attractiveness, for instance, to advertising agencies and graphical art studios must still be proven. Indeed, apart from a structural modernization of collective bargaining, the culture of an industry must also be conducive to joint regulation.

[3] It may seem as if unions are not at all considering the kinds of flexible arrangements that I refer to here. However, interesting initiatives have been taken by the Danish actors' and artists organization which has concluded an agreement on commercials with the film producers, which includes various provisions for arrangements which fit the specific needs of the production. Another example is FNV KIEM, the joint project of unions of artists, information makers and media workers in the Netherlands, which developed a model employment contract which workers can use when they negotiate their individual employment conditions with their employer and which also offers administrative and fiscal services to self-employed persons.

A casual observer at the ILO's Tripartite Symposium on Multimedia Convergence which took place in January 1997 might have been somewhat surprised to hear the performers' trade union representatives in the Workers' group talking about the intellectual property rights – that is the creative rights – of performers in the same terms as other more familiar workers' concerns like changing contractual and employment relationships, pay and working conditions and the freedom to organize trade unions and to bargain collectively.

The truth really is that for performers, intellectual property rights are closely related to their other employment rights and are a critical element in terms of their bargaining relationships with employers, the nature of their livelihoods, and therefore their ability to work in this very specialized and insecure field. This fundamental connection has long been recognized by the ILO and in 1961 resulted in the adoption of the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (known as the "Rome Convention") at a Diplomatic Conference convened by UNESCO, WIPO (the World Intellectual Property Organisation) and the ILO.

Not only glamour and wealth

The working life of the professional performer is all too often very different from the popular conception. Indeed, it has sometimes proved a handicap to performers in their dealings with the world outside their own industry (including their dealings with legislators and government officials) that they are perceived variously to be glamorous, rich, frivolous and having fun rather than working in a real job. Such images do a considerable disser-

vice to a group of workers who are highly skilled and trained, survive in a very competitive and precarious environment with endemic unemployment and whose work touches the lives of us all.

Rights like authors

It is also necessary to understand that performers, as well as putting in hours and doing a job of work, bring to that work a creative contribution that is recognized through rights, like those of authors, and which must be obtained

Exclusive rights

These rights are known as "neighbouring" rights to copyright (the author's right). They protect the fixation (i.e. the recording) of "live performances" (i.e. "unfixed performances") and certain use of audio recordings. (Actors in films and television were not given similar rights due to opposition from film producers' organizations.) Explained briefly, the performers were given the possibility to prevent the recording of their live performance without permission, and the recording (or reproduction) itself from being reproduced or broadcast and communicated to the public without consent. These are known as exclusive rights. In addition, a collective payment system known as equitable remuneration was awarded to the performer and the producers of commercial sound recordings to compensate for the increasing use made on radio, television or other venues of recorded music. This collective approach to the management of rights has characterized the development of performers' rights – through union agreements and the establishment of "collecting societies" to distribute the equitable remuneration to individuals.

Balance of power between producer and performer

It is perhaps important at this point to note that rights conferred upon performers do not make conventional collective bargaining unnecessary – indeed the only way that performers can enjoy any practical benefit from having intellectual property rights is through the negotiation with the producer for the transfer, assignment or licence of those rights. The nature of the balance of power in the relationship between the producer and performer makes it impossible for all but the biggest star to negotiate such conditions individually. The existence of performers' rights is therefore not a substitute for collective bargaining, but is in fact an extra feature of bargaining, in addition to more conventional working conditions, health and safety, hours of work, etc.

The Rome Convention was subsequently adopted into national legislation in a number of countries (currently 53). On the basis of the rights given, performers were able to negotiate collective and individual contracts with the producers who had ensured that the various necessary consents were obtained for the recordings they wished to make. Performers and record producers also received and continue to receive "equitable remuneration" for the uses of their records as previously described.

Contractual solutions

In some other countries in which performers were not given this level of legal protection, unions of performers still managed through collective bargaining based on comprehensive representation contracts and collective agreements to ensure that adequate remuneration was paid and "consents" obtained for the recording and subsequent use of the work. This is true, for example, for actors who were not given rights (except the right of fixation) under the Rome Convention, but who joined together to protect themselves using contractual solutions.

Nearly forty years later, the Rome Convention remains a useful and important international instrument for the protection of performers, continuing to attract new adherents in different parts of the world. That world, however, has changed enormously since the Convention came into existence, and as technology has developed, so too has the concept of performers' rights.

Unemployment a constant feature of life

The success or otherwise of the original notion of performers' rights as a solution to technological unemployment is probably impossible to quantify statistically as reliable official employment figures for performers are rarely, if ever, available. What is certain is that unemployment for performers remains a constant feature of life in the profession (because of, or even despite, the changing technology involved in such work) which in many countries is characterized by short-term, freelance contracts.

Recognition of their creative contribution

Most importantly, the Rome Convention did embed internationally acceptance of the principle of the performer's right to have a measure of control over the basic recording of his or her performance and its subsequent use. The rights can then be obtained by the producer in exchange for payment and in this way performers have managed to negotiate payments for themselves that permitted them to maintain careers in this uncertain profession. As the years have gone by, those rights have come to

be seen not only as a compensation for something lost (i.e. employment in live performance), but also as a recognition of the creative contribution – the application of the performer's talent – to the work, whether it be recorded in audio or audiovisual media. Performers' rights are now widely seen not as being subsidiary to or even in competition with those of authors, the copyright holders, but as standing alongside the copyright of authors. Performers are seen now as having individual creators' rights and this is an important new dimension not only to the rights themselves, but also to the way that they are viewed in terms of cultural policy and labour relations.

Moral rights

A key part of this recognition has been the inclusion in certain legislative provisions of moral rights for performers. Moral rights, unlike the other so-called economic rights contained in the Rome Convention, give the performer as creator the right to have his or her performance credited and the right to object to any distortion of that performance in a way that might be prejudicial to his or her reputation. Such rights are only justifiable if it is acknowledged that the performer does in fact invest his or her individual creative talent in a production.

WIPO Treaty

What should perhaps be borne in mind is that the Rome Convention provided a baseline for the development of performers' rights legislation throughout the world, and only in December 1996 was a further International Convention established that exceeds the Rome Convention in terms of the level of protection it provides to performers in sound recordings and to the producers of those sound recordings. That Convention is known as the WIPO Performances and Phonograms Treaty (WPPT) and it adds to the existing protection of performers under the Rome Convention by giving them moral rights and exclusive rental rights, distribution rights and, not the least, the exclusive right to control the digital "making available" of recordings of their performances.

An absurd distinction

The continuing opposition of film producers to the notion that performers in audiovisual should also have rights meant that in 1996, just as in 1961, an international convention was adopted for sound recordings only (but this includes, we think, the sound part of audiovisual). The performers and their unions, both nationally and internationally, completely reject the continuing discrimination between audio and audiovisual recordings, and it is clearly a distinction that is not appreciated by the consumers who enjoy musicals as actors, dancers, etc., and which is increasingly absurd in an increasingly "audiovisual" world.

It is, however, interesting that despite the many years intervening between the developments of these Treaties, national legislation has in fact run ahead of international conventions and in many countries performers' rights are recognized and provided for in legislation at a much higher level than in the Rome Convention or the new WIPO Treaty. That includes, in many countries, the acceptance of performers' rights for audiovisual recordings. In the European Community, for example, directives harmonizing performers' rights have been implemented including performers' rights for audiovisual recordings. Other compensation schemes have also been widely adopted from which the performers benefit along with producers and performers – in particular the adoption in a number of countries of "private copying schemes" to compensate the rights holders for presumed loss of sales of records and videos occasioned by the home video and audio taping from TV and radio. The concept of performers as workers who make a creative investment in the productions in which they appear is therefore widely recognized internationally.

The purpose of the 1997 ILO Multimedia Symposium was to attempt for the first time an examination in a tripartite discussion of the group of industries that, through the engine of digital technology, are converging and increasingly overlapping in their activities. The convergence of the telecommunications, broadcasting, computer, consumer electronics and media/entertainment industries is transforming to different extents the working lives of all those employed within them, and none more so than the performers, in particular in terms of their rights recognized in legislation and through collective bargaining agreements.

Digital technology is already making possible the production of perfect second-generation copies, the compression and manipulation of information and its dissemination over networks through cable and via satellite, giving consumers the ability to access specific material of their choice at a place and time of their

choosing. It is already apparent that in terms of the specific provision of entertainment, digital technology is revolutionary, creating new markets and possibilities for production, use and multiple re-use in a wide range of formats, interactivity – and all this increasingly without geographical limitation. And like any new industrial revolution, it presents a huge challenge for performers who, while recognizing the potential opportunities inherent in the new services and products being created, can also foresee their rights and their traditional collective bargaining models being severely tested.

Unlimited demand

In one way, one might imagine performers reacting to the new technology with unbridled enthusiasm. After all, one of the mantras of the new digital age is that "content is key": it is said that in order to fill up hundreds of digital broadcast channels, to meet the demand for multimedia applications including video and music on-demand and to accommodate the myriad other technological possibilities, an immense amount of production will be required, as well as the massive exploitation of existing material held in broadcasters' and producers' archives throughout the world.

Extend concepts of intellectual property rights

It is still hard to foresee exactly how the various services now possible – let alone the taste of current and future consumers – will develop, but it is nevertheless clear that the production and broadcast industries have a critical interest in producing more material and in exploring new markets for their original production. The challenge to the performers (and other rights holders) will be to extend their existing concepts of intellectual property rights protection to comprehend the new technological possibilities and also to negotiate to adapt collective agreements which were almost invariably promulgated on a very different industrial model, at a time when few additional uses of recorded performances were possible or even envisaged.

Keep pace and match new uses

If performers are unable to adapt their legislative protections and bargaining demands to the new uses made of their work, the result may well be a severe diminution in their earn-ings and possible digital "abuse" of those performances without any possibility of redress. Performers' remuneration in collective agreements should ideally not take the form of a one-off payment, but permit the individual to receive a proportion of the receipts for the different uses made of the production in which he or she has appeared. Therefore it is clear that if performers' unions do not keep pace with the changes or if they fail to persuade legislators to update intellectual property rights to match new uses that are possible, the performers' working conditions will fall behind.

So, what do performers need in terms of rights?

- They need to keep the control of the recording and the communication to the public of their "live performances", and to keep the control of the content of their fixed performances, especially in the digital context.
- They need to identify all over the world, through their unions and their collecting societies, the users of their performances.
- They need an appropriate and equitable remuneration for every use of their performances.
- They need, on occasion, the possibility of preventing uses of the recordings when such uses directly replace live performance.

Agreed minimum term for all

Given the inequality in bargaining strength, performers will often end up accepting terms in order to get the job. So the producers will make a profit on the performances, often for decades, without ever having to pay the performer any remuneration; and it isn't that performers are not prepared to be flexible. Our union agreements are often based on the possibility that the individual can negotiate specific conditions but with agreed minimum terms for *all*. This means that even big stars can work under a union collective agreement and accept the basic conditions they contain.

Deals for fixing prices low

Further compounding matters is the phenomenon of problematic vertical integration in the converging entertainment industry which is causing problems for performers. When a company controls not only production but also distribution, chains of movie theatres, sound-studios, publishers and even television satellites, rights become much more difficult to

enforce. One striking new feature for performers' unions is the non-arms-length deals between producers and broadcasters (who will often be owned by the same company) allowing programme prices to be fixed artificially low, which in turn affects the performers' royalties. Another feature is the subcontracting of production to numerous small entities. The rights picture now is very complicated to understand and even to identify.

ILO support sorely needed

Governments must also understand this, and must set some standards for protection of the performers. It is absurd that a new WIPO treaty has been concluded without covering most audiovisual rights, when we all know that the future is audiovisual! The International Federation of Musicians (FIM) and the International Federation of Actors (FIA) insist that the ILO must continue its longstanding work in this area which is more appropriate than ever now, and we thank them for their continuing support of these rights at WIPO.

Not a commodity

Finally, the dialogue that exists, within the ILO itself, is extremely important. The workers whom FIM and FIA represent are ready for the multimedia future, but they are also extremely vulnerable. Producers can just dip into a pool of flexible and motivated talent and then drop the performers back in when they have finished with them. The responsibility must not be allowed to end there. Performers need respect for their rights by employers and protection of their rights by governments. Only by working together to this end shall we establish an acceptable *modus vivendi* in the digital era.

Authors' rights and multimedia convergence

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There is an extremely important link between the moral and economic intellectual property rights of authors and the ability of each individual author to live up to the high professional and personal standards that are the preconditions for high quality, authenticity and good press conduct. For this reason alone, journalists, writers, screenwriters, photographers, instructors, composers, cartoonists, actors, musicians – in short all the authors and performers who create the content of multimedia – are sharply focused on authors' rights in the information society.

The development in information technology (the common digital platform) has led to print, broadcast and electronic media converging into a new multimedia landscape offering citizens unprecedented choice and access to a greater amount of information and entertainment than ever. At the same time the digital information highways such as the Internet has made global transmission of such works easy, at least from a technological point of view. However, the impact of authors' rights on European culture and competitiveness in the information society, to cite only a few areas, is one of many important issues that the European Commission has been examining for some years now with a view to passing legislation that will secure a level playing field in the internal market competitiveness within the European Union (EU) and foster European cultural values.

Publisher and producer campaign against authors' rights

EU publishers and producers have launched a campaign against authors' rights: they claim that authors' rights' protection must be lowered because of the need to compete in a global multimedia market. The campaign focuses on three major points:

- full ownership of the author's rights of employees and freelances who "work for hire";

- moral rights that can be signed over to the producer; and

- individual management of rights (by the individual authors themselves) as opposed to collective management of rights (through collecting societies set up by authors and performers alone or jointly with publishers, producers, etc.) In short, the publishers and producers want continental Europe to adopt the Anglo-American copyright system.

This approach on the part of publishers and producers denies the strength of the marketplace of each individual country where differences in culture, language and social tradition provide the best opportunities for commercial development. Furthermore, it overlooks the fact that competition in the digital age will focus on content, the benchmarks of which will be originality, quality, authenticity and integrity.

The demand for high quality and standards is in fact the strongest argument for preferring the continental European concept of authors' rights as the system that is best suited to meet the challenges of the information society.

The continental European concept of authors' rights

According to the continental European concept of authors' rights, the rights originate with the author. The moral rights (the right to be named as author and the right of integrity) remain with the author always and can as a general rule not be signed over to publishers and producers. The rights to control reprography and distribution, public display and performance, broadcast, on-line transmission, etc., are called economic rights because these are the rights that enable the author (or performer) to be paid for his or her endeavours. One could say that these rights are meant to be signed over by the author, but at a price.

However, when an author enters into employment, some rights are transferred to the

employer by tacit or explicit agreement. In most European countries it means that rights are transferred to the employer to the extent necessary for the employer to make use of the work of the employee in the media in question. The same applies to freelance, although a tacit agreement between a freelance and a buyer will normally be interpreted more narrowly.

Publishers and producers in continental European countries have no difficulties obtaining further rights from employees and freelances; but they are required to ask either the individual author or the organization that represents the type of author or performer in question. Any number of rights (or all of them) can be signed over either at the first contact or later.

The combination of moral rights that the author cannot be pressed into signing over and a system where the rights are not automatically transferred to the publishers and producers from authors who work for hire is what makes it possible for authors to set conditions for the proper further use of the works. Authors who are willing to risk not getting a job by demanding that certain conditions be met are usually also the ones who are personally liable for the material they create and who feel a strong obligation to uphold a high professional and personal standard. This is often the case with journalists, television photographers, documentarists, scientists, academic researchers, etc. People who create intellectual or artistic works, whether during employment or when commissioned as freelances, should not by law be forced into accepting unknown and unimaginable future uses. Publishers and producers are by far the stronger party. If they want future rights of use they must be openly negotiated between the contracting parties.

This demand on the part of authors and performers in Europe does not block further use: when publishers ask for further rights the normal result is an agreement, either individual or collective. There are already many agreements in place which cover all forms of transmission. They are proof to consumers that dialogue between employers and creators is possible to safeguard against unethical use and infringement by third parties. (Readers interested in cases instituted by journalists and photographers concerning infringements that have a link with breach of good press conduct will find a description of such cases at the end of this article.)

As substantiated above, there is no need to erode the protection of authors' rights because of the advent of multimedia convergence in the information society, on the contrary.

The need for centralized clearance and a joint approach

The new multimedia uses, however, call for a centralization of existing clearance and administration structures and the establishment of some new ones. Traditional differences between media outlets are disappearing. As a result, traditional systems of administration of authors' rights, each suited to the old divisions of media into different sectors, will have to change. The organizations representing individual creators and performers are fully aware of the process and agree that it must be made easy for multimedia producers and users of multimedia works to acquire rights.

European authors and performers call for a joint approach between publishers and producers on the one side and authors and performers on the other. Such an approach should build upon the systems of collection and management already in place. Without a joint approach there is little possibility of consumer friendly and trustworthy access to the enormous amounts of material that will be made available.

Until now publishers and producers have not been disposed towards a joint approach. Lobbying for EU legislation on sole ownership has been given priority. In the meantime, authors and performers all over Europe are working nationally and internationally to set up one stop "information shops" and other initiatives that will facilitate rights clearance both for multimedia producers, consumer groups and individual creators.

Collective licensing counteracts media concentration

One further and very important advantage of a joint approach and collective administration of rights is that it counteracts media concentration. Collecting societies license rights to everyone at the same price and on the same conditions, as distinct from the practice of licensing through individual (sometimes multinational) media enterprises who may monopolize the rights and hinder free and equal access to culture, science and information.

Extended collective licence schemes could facilitate clearance of rights for further uses of special importance for public purposes. These schemes presuppose a joint approach between producers and publishers and their creative and/or intellectual employees and freelances as a basis for entering into a joint agreement

with groups of consumers. Once such an agreement is drawn up between a major and relevant group of rights holders and consumers, the agreement is extended to cover non-organized and non-national authors who have created similar works and made them available to the public. This is why legislation is needed. These authors are treated on equal terms with authors who are directly covered by the agreement.

However, individual or collective agreements between publishers and authors or trade unions representing authors remain the best solution on the use of first rights.

The European Commission on authors' rights in the information society

The European Union is presently following up on the Green Paper on Authors' Rights and Related Rights in the Information Society with special focus on the possible need to harmonize authors' rights' legislation of member countries. A draft directive is currently the object of consultations at Commission level. Among other things the draft is expected to harmonize the authors' rights of reproduction, of public communication and to introduce a common definition of the right of making works available to the public on demand and online. The draft is also expected to harmonize the free scope for exceptions to these exclusive rights.

The draft directive does not interfere with existing legislation and practices concerning ownership of rights, which means that publishers and producers have not been granted their wishes. On the other hand, authors who are employed or otherwise work for hire in Great Britain, Ireland and to some extent Holland as well, must continue to suffer the negative consequences of statutory transfer of rights to the employer and a significantly lower protection of moral rights as well. Nor should any future directives drift away from the continental European system of authors' rights. Indeed, if anything, there is a need to strengthen authors' moral rights in the few European countries that have adopted the Anglo-American copyright system.

The key to success in Europe

Europe must avoid the confrontation and chaos which threaten those who follow the United States standard. Many creators in the United States and the United Kingdom are now fighting courtroom battles to resist violation of their rights and to enhance moral and economic authors' rights in the digital age.

To create harmony in Europe it is essential that the following requirements be met:

1. Authors must be guaranteed a legal framework within which they can freely negotiate the rights of use of their works whether the contract concerns employment or freelance work.

2. Existing agreements should be maintained and enhanced to take account of new communications technologies.

3. Harmonization of authors' rights in the European Union should be brought into line with continental law.

4. Existing collection arrangements systems of collective management of rights must be strengthened and developed for the future – cooperation is essential and it can work.

If, as many predict, the twenty-first century will focus on the individual, individual rights and democracy, then there will be an enormous demand for independent sources of information and for the highest level of professionalism and integrity of information. Europe's greatest strength lies in the commitment and creativity of its citizens and in the quality and diversity of its culture. Authors' rights give journalists and all other creators and performers the opportunity to work with confidence, professionalism and integrity in the new digital environment; but this will not be the case if publishers and producers succeed in destroying Europe's intellectual property traditions.

Ultimately, the key to success is to invest in creativity, to protect what is best in Europe's rich cultural tradition and to put quality before profits in the exploitation of new information technologies. Strong protection of authors' rights is a precondition for integrity of information and the future of media freedom. It is also the key to high quality and standards in literature, research, music, art and media entertainment.

Summary of cases involving infringement of authors' rights and press ethics

The legal proceedings in the cases below have been instituted by the individual employee or freelance author in order to protect his or her personal and professional integrity, and in order to protect sources from being portrayed/quoted in ways or

circumstances other than those to which the sources originally agreed.

Legal proceedings concerning damages for non-financial claims are most often combined with claims for compensation for financial infringements.

One of the reasons why publishers and producers do not take the initiative to pursue such cases themselves is that media management do not have the same personal involvement as the employees and freelances in question, and that the media managements may be worried about ruining a good relationship with advertisers or other third parties who may be guilty of the infringements concerned.

If the employees in the cases below had not had residual economic rights and strong moral rights they would not have been able to institute them.

The examples which follow are taken from legal rulings in Denmark in recent years.

1. Ruling of 21 February 1992 by the Danish Eastern High Court (U92.549)

A press photographer had taken a photograph of a person during a reception held to celebrate this person's appointment to a new position. Over one year later, the person was accused of sexual abuse of minors in the previous job. A tabloid newspaper published the photograph from the reception (the person was smiling broadly and having a drink) several times over the course of several days, using a large-scale, somewhat blurred enlargement. The photograph had also been cut so the original context was no longer apparent.

The municipal and high courts both agreed that there had been an infringement of the integrity of the press photographer (editorial and press photographer integrity), and awarded DKK3,000 compensation and DKK2,000 damages.

2. Ruling of 4 July 1991 by Glostrup Court

A journalist had written an article about various offers made by banks to young people and a cartoonist had illustrated the article. A branch of the bank offering the best terms to young people, according to the article, enlarged the article and drawing, changing the caption to its own advantage.

The court ruled that the enlarged article and drawing clearly constituted an advertise-

ment for the bank concerned, thus representing an infringement of the integrity of the journalist and cartoonist (editorial integrity, etc.). A total of DKK25,000 damages was awarded.

3. Legal settlement of 7 October 1991 by Odense Court

A journalist who was a member of the Building/Cultural Committee set up by the Danish Ministry of the Environment had written an article under the headline "Forbyd plastvinduer i gamle huse" ("Plastic windows in old houses should be banned"), which was published in a national and regional Danish newspaper respectively. A company that sold wooden windows printed the article using its own notepaper and used it in a sales catalogue, giving customers and competitors the impression that the journalist had recommended the company's products.

The case was settled by the ruling of the court following payment of DKK10,000.

4. Legal settlement of 22 October 1992 by Helsingør Court

Two journalists had described pension pools in banks and car insurance policies respectively, emphasizing the name of one particular insurance company. An insurance agent from the insurance company then drew up some sales material for pension schemes and car insurance policies, using the two articles as appendices.

The case was settled by the ruling of the court following the payment of DKK5,000 compensation plus the same amount of damages to each journalist. The case tended to give the public the impression that the editorial material in question had not been independent of the company's financial interests.

5. Ruling of 22 April 1993 by the Municipal Court of Copenhagen

A wine expert contributing to a national Danish newspaper had mentioned one specific vintage of a named type of wine. A wine merchant then used a quotation from the wine article in his price list.

The court ruled that this was not a legal quotation, and that the quotation tended to raise doubts about the independence of the wine expert. The court awarded non-financial damages amounting to DKK3,000.

6. Ruling of 4 February 1993 by the Danish Eastern High Court

As part of an election campaign leading up to the municipal election in 1989, a town mayor inserted a full-page advertisement in a local newspaper, with about two-thirds of the page consisting of a collage featuring nine articles accompanied by a photograph aimed at giving electors a positive impression. The names of the authors of the articles were visible in the case of most of the articles as well as the photograph.

The journalist and press photographer explained in court that they felt their independence had been infringed owing to this political use of their editorial material.

The high court decreed that the use of the articles and photograph could not be regarded as an "authorized quotation", and that even though only small excerpts of their material had been printed, the journalists and photographer were entitled to total compensation and damages of DKK20,000.

7. Legal settlement of 7 July 1994 by the Court in Arhus

In a new year newspaper designed to promote sales, a company published a number of articles in which its name was mentioned in positive terms. The nine journalists won their claim that this use was not covered by quotation rights, and that their integrity as journalists had been infringed on by the use in question.

The company had to pay compensation and damages amounting to a total of DKK50,000 to the journalists involved.

8. Legal settlement of 5 January 1995 by the Municipal Court of Copenhagen

A housing investment company had persuaded a number of customers to invest in French châteaux, among other ways by showing them an article written by a journalist for the Danish newspaper *BT* entitled "Køb fransk slot for pensionen" ("Use your pension to buy a French château") and an article written by another journalist for the Danish newspaper *Børsen* entitled "Frynsegoder kun for aktionœrer" ("Fringe benefits for shareholders only").

The court settled the case by awarding compensation and damages to the journalists amounting to a total of DKK16,000. The company acknowledged that the use of the articles had infringed on the rights of the journalists.

The following are examples of settlements made out of court.

9. Case against election newspaper in 1989

In connection with the municipal election campaign in Aabybro, Denmark, a political party used several articles published by the Danish newspapers *Aalborg Stiftstidende* and *Vendsyssel Tidende*.

The case was settled out of court by the payment of DKK10,000 damages, because the political party acknowledged that this use had infringed on the integrity of the journalists (editorial integrity, etc.).

10. Case against political party for young members in 1994

In connection with an annual meeting, a political party for young members produced a number of T-shirts featuring an editorial/satirical drawing done by a newspaper cartoonist.

The political party acknowledged that this use of the drawing had infringed on the cartoonist's integrity and agreed to pay damages and compensation of DKK6,000.

Health hazards in computer work and new organizational options: Experience in the media industry

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The debate on expected trends in the workplace ensuing from the digital revolution has reached the area of occupational health and safetystandards. To assess the risks, we should focus primarily on changes that are already affecting former structures and which will probably have an impact on future working conditions.The media industry is an appropriate area of investigation.[1] Viewed from the angle of occupational health and safety, the possibilities of a holistic approach to work organization may be explored.

The first step is to examine existing problems and shortcomings in order to stimulate debate on which of the existing approaches to reform in the area of health and safety standards must be developed and strengthened. We propose to base our argument on a series of hypotheses. European Union (EU) legislation on the work environment, particularly the Framework Directive and Display Screen Equipment Directive, constitute a useful starting-point for the discussion. In the Federal Republic of Germany, the EC directives on health protection were implemented with a four-year delay. The new Occupational Health and Safety Act of August 1996 and the Screenwork Decree of December 1996 now provide the legislative structure for implementation in the workplace.[2]

New health risks and ways of handling them

First hypothesis: *Digital technology accelerates the shift in stress and strain patterns to psychomental and psychosocial factors. This calls for a corresponding change of emphasis in occupational health and safety standards, for which the general thrust and methodology of EU work environment legislation provide a sound basis.*

Existing multimedia literature fails to investigate possible health risks or else depicts the technology as in all cases "clean" and "healthy". Admittedly, digitization can eliminate a number of traditional risks such as hazardous substances in printing shops or the preliminary stages of the printing process.

When domestic implementation of the EC Screen Directive was discussed, employers persistently disputed the very existence of risks and health hazards from screenwork and hence the need for regulations. The issue has in the meantime been conclusively settled in legal terms: the Federal Labour Court – the highest legal authority in the area of labour legislation – ruled in its judgement of 2 April 1996 that the EC Screen Directive and the grounds on which it was based set forth "binding arguments for German employers to the effect that screen work places employee safety and health at risk, thereby necessitating the regulations set forth in the Directive".[3] Paragraph 3 of the new Screenwork Decree explicitly includes mental strain among the factors to be ascertained and assessed in the case of screenwork stations.

Specific categories of health hazard must be examined more closely. It may be assumed that the strain experienced by operators at computer work stations is increasing in at least three respects:

- Firstly, the technological ability of digital systems to process increasing quantities of data in compressed form can represent a major source of stress.

- Secondly, increasingly complex systems make growing demands on users since faulty decisions have an ever greater impact. This is also a source of stress.

- Thirdly, the incorporation of diverse media (text, images, films, speech, etc.) in multimedia technology can lead to an increase in *multifactorial strain*. An idea of the structures that generate such strain may be formed from a glance at present-day work

stations for broadcasting staff, for example editors or producers. Following an inspection of electronic vision mixing work stations in a major broadcasting corporation in 1991, representatives of the Federal Institute for Occupational Health and Safety came to the following conclusion: "The stress at an editing work station must be ranked considerably higher than at 'traditional' screen work stations. This increased stress is due to the specific demands of electronic vision mixing. Frequent pressure of time, deficient ergonomic organization of work stations, a probable risk from high magnetic fields in the immediate vicinity of the work station and irregular working hours are particularly hazardous."

Despite these multiple sources of strain, broadcasting organizations held out for a long time against recognition of the applicability of the EC Screen Directive to such work stations.[4] In the meantime, even an informal publication of the Federal Association of German Employers' Federations (BDA) has had to admit that all "screens for the production and processing of moving images in film and television production or adaptation studios" are also subject to the provisions of the new Screenwork Decree.[5]

This example shows clearly that *combinations of stress factors* occur at screen work stations – especially those involving multimedia – and that organizational factors such as work intensity, multiplicity of tasks, pressure of deadlines and many others play a role alongside ergonomic shortcomings. Nervous disorders are often the first warning signs of impending chronic illness. Combinations of stress factors are often also the root cause of traditional physical disorders. The use of new technology has led in particular to increased health risks in the following areas:

Firstly, there is a risk of visual imbalance coupled with diminished physical and manual activity. Screenwork involves focusing on the selective recording of data and signals, while visual skills such as holistic-pictorial perception or relief of eye strain through free-floating observation are impaired. When combined with stress, this may become a fixed pattern of "visual behaviour" leading to asthenopic disorders, muscle and skeletal disease and fatigue and exhaustion syndromes.[6]

Secondly, an increase in chronic disorders in the shoulder-arm area due to repetitive activities has led to wide public discussion of what is termed "repetitive strain injury" (RSI), a concept which originated in Australia and the United States of America and which is also referred to by other names such as "overuse syndrome".[7] Connections with mental stress, social strain, heavy workloads (e.g. intensive data entry) and poor ergonomic conditions are discernible in most cases. Generally speaking, it has not yet been possible to secure recognition of this disorder in Germany as an occupational disease.[8]

Obviously, the single-cause approach that has generally been adopted in respect of the prevention of occupational accidents and diseases is of little use in the case of computer-assisted jobs – a category into which the overwhelming majority of jobs will fall in the future. But such outmoded approaches are still typical of a large proportion of the occupational health and safety regime. For example, duty periods for company doctors and specialists in occupational safety are established, as a rule, on the basis of accident hazards in the company.[9] Areas exposed to "modern" categories of risk and disease are therefore systematically neglected.

In the meantime, a broad consensus has developed among German accident insurance companies – as reflected, for example, in the definition of prevention used by the Union of Trade Associations (*Hauptverband der gewerblichen Berufsgenossenschaften*) – that an expanded concept of prevention, as required by the EC Directive on Occupational Health and Safety, must be developed to serve as a comprehensive shield against all occupational diseases.[10] The new 1996 Social Security Code VII provides a clear-cut legislative basis for the *Berufsgenossenschaften* prevention concept. It also expressly includes topics such as reduction of monotony, lessening of mental strain, multiple job strain and holistic organization of work.

Prevention-oriented work organization calls for participation

Second hypothesis: *Prevention-oriented work organization requires far more than control of basic ergonomic standards. It cannot be achieved without involving employees as experts on their own case. This radically alters the traditional role concept in occupational health and safety: monitoring of compliance with regulations is replaced by promotion of communication and cooperation in the interests of better health.*

Although we may still be far from achieving comprehensive compliance in everyday

working life with the basic ergonomic regulations set forth in the annex to the Screenwork Decree, the most demanding task is clearly contained in paragraph 5 of the Decree, which calls for a form of work organization that allows for changes and interruptions in screenwork-related stress. The response to this requirement for prevention-oriented organization of work will differ from one activity to another. It is precisely in cases involving a high proportion of screen-assisted activity that "mixed work" becomes difficult. On the other hand, variety and quality of screen-assisted activities, individual communication and qualification periods and self-arranged breaks are of prime importance.[11]

At all events, such arrangements can only bring about a reduction in stress if employees themselves are involved in their investigation and organization. In the absence of approval by employees and the development of individual responsibility for healthy behaviour, most efforts – specifically among skilled brain-workers – will prove futile.

Upstream from the task just described, however, another problem, which in many companies is a source of considerable mental strain, disruption of work organization and even loss of productivity, must be addressed: we refer to deficient skills and lack of company training facilities, particularly in the use of installed software. Even where costly training is provided, it may prove ineffectual if it is inadequately geared to practical work station requirements. Here again employees must be involved. Ongoing in-service training is a vital response to rapid technological change, particularly in the interests of prevention-oriented work organization as a means of reducing or avoiding mental strain. These new and expanded tasks call for approaches to company cooperation that transcend traditional responsibilities.

Ergonomic software issues play an important role in the area of stress and work routine. Whereas standard-setting for software ergonomics in a "normal" office-based screenwork station have progressed in accordance with the provisions of EU work environment legislation, the development of multimedia systems is still almost exclusively determined by the concept of the technologically feasible. F. Koller of the Fraunhofer Institute for Work Economy and Organization draws attention to the danger "that the potential range of multimedia may itself lead to the overloading of user surface, thereby confusing instead of supporting the user". Very little heed was paid to issues of software ergonomics. He concludes: "The potential for cooperation between software ergonomists, designers, media experts and computer specialists has hitherto been greatly neglected. It is essential to exploit this potential in the future".[12]

The much-discussed need for a change in the role of employees in the area of occupational health and safety from being passive subjects of protection to "experts in their own right" also points towards the overstepping of bounds. Two comments are called for:

- Many current business concepts in the area of company restructuring and "business re-engineering" are predicated on the "activation of internal resources", in other words on employee skills and efficiency. The fact that they are in turn, as already shown, very closely bound up with appropriate prevention-oriented organization of work should be taken into account in the debate on such concepts.

- In addition, trade union initiatives in the form of surveys and questionnaires can help to set in motion a debate on working conditions at screenwork stations. IG Medien has conducted such surveys in broadcasting organizations and publishing houses and supports appropriate company-specific projects.[13]

The demise of the traditional work environment and the need for new regulations

Third hypothesis: *New forms of "mobile digital work" are undermining existing occupational health and safety standards which are geared to a spatial concept of the workplace. Alongside independent initiatives by unions and management, new regulations are needed to address prospective working conditions in the multimedia age.*

Most organizational claims have hitherto perforce related to the workplace as a spatial concept. But what will happen when the digital revolution leads to an unbalanced acceleration in the already discernible shift in employment to small units, self-employment and/or home-based telecommuting?

Given the enormous shortcomings that already exist in the implementation of up-to-date occupational and health and safety provisions, the very question may sound discouraging. Half of all employees already lack occupational safety and medical coverage and

it will take years for new accident protection regulations based on EU provisions to provide even a partial remedy for these shortcomings.

The key requirement of the EC Framework Directive – equal occupational health and safety rights to begin with for all employees, including home employees and the self-employed – has not been fully realized in the new Occupational Health and Safety Act. For example, paragraph 2.2.3 stipulates, in the face of protests by the German Federation of Trade Unions (DGB), that the provisions of the Act shall not apply to "homeworkers and persons of equivalent status". However, where, for example, telecommuting is undertaken under contractual conditions of employment, the Occupational Health and Safety Act and the Screenwork Decree are applicable.[14]

Instead of deregulation, there continues to be a need for re-regulation of emerging new categories of working conditions so that standards of occupational safety and health protection and basic ergonomic conditions are firmly secured for all employees. W. Dostal of the Federal Labour Institution's Labour Market and Occupational Research Institute predicts that "with the emergence of multimedia the 'normal employer/employee relationship' will virtually cease to exist".[15] Precarious employment conditions, particularly a trend towards "pseudo-self-employment" – reflecting the increasingly nomadic lifestyle of workers[16] – are undermining both social and economic structures. In the United States, a quarter of the economically active population is already affected.

The spotlight is currently on the rapidly growing number of telecommuting jobs, although the burgeoning growth in announcements and press releases is in inverse proportion to the actual increase in such jobs in Germany. The Bonn firm of technology consultants Empirica estimates that there are some 150,000 teleworkers in Germany, whereas the *Deutsche Industrie – und Handelstag* (Germany Chamber of Industry and Commerce) puts the number at no more than 2,000.[17] Alternating telework already predominates, i.e. alternating in-house and home-based employment, while persons exclusively employed in telework is rare and satellite office work more common. A great deal has been written about general impediments and resistance to this mobile type of digital work:[18] it offers both greater potential for controlling work schedules, which meets with resistance from management, and the possibility of extensive self-exploitation, which generates fear among employees.

Experimental models such as the wage and salary agreement concluded between Telekom and the German Postal Union provide material for selective testing of this kind of telework. The following aspects are pertinent to our area of study:

- Voluntary arrangements provide solely for *alternating* telecommuting jobs so that social contact with the staff is not severed. A lower limit is set for in-house employment, the aim being to counteract a trend towards "electronic reclusion".

- Home-based work stations are fully equipped by Telekom, which also provides office furniture and an ISDN connection. Video technology will also be tested in the pilot phase.

- The home-based work station must comply with certain basic conditions and is subject to inspection by representatives of Telekom and the Works Council. The latter has access to the electronic communication system for its own work.

The union negotiators made additional specific demands for implementation of the Screen Directive[19] which are still under negotiation.

In a "Memorandum on the Structure of the Information Society", the Postal Union and IG Medien developed common standpoints on telecommuting, including the need to ensure contractually established working conditions involving mandatory social security provisions and the applicability of wage and salary agreements and occupational health and safety provisions.[20] Similar criteria were agreed in the Multimedia Investigation Committee of the Baden Württemberg State Parliament.[21]

Under a staff agreement on telecommuting at the Federal Ministry of Labour, alongside regulations governing the voluntary nature and contractual nature of such employment, provision was made, in agreement with the staff and with possible Staff Council participation, for an "ergonomic inspection of home-based screen-work stations" with a view to ensuring compliance with occupational health and safety provisions, including the EC Screen Directive.[22]

Notwithstanding the agreement reached in the foregoing examples on rights of access for ergonomic inspections, the problem of how to control and supervise such home-based work stations for compliance with occupational health and safety standards will obviously grow as telecommuting becomes increasingly widespread. In particular, professional and

trade association factory and technical inspectorates, which are already hopelessly overtaxed, especially in small-scale enterprises, continue to be excluded from the whole sphere of telecommuting. Supervision of employment falling under the Homework Act has already proved virtually impossible. Under these circumstances, the duty of employers to inform and instruct their staff, including teleworkers, in accordance with the provisions of EU work environment legislation or the new Occupational Health and Safety Act, is obviously of the greatest importance. In all cases, off-line and on-line assistance for ergonomic and healthy organization of work stations offer effective support. Trade-union based advisory arrangements could play a pilot role in the development of this type of service.

The organization of humane working conditions for all computer work stations will undoubtedly become a key trade-union policy task, requiring a broader definition of the traditional concept of occupational health and safety.

Notes

[1] See Pickshaus, K. 1994. "Medienbranche im Umbruch. Verschlafen die Gewerkschaften die digitale Revolution?", in *IG Medien Forum*, No. 10, pp. 6 et seq.

[2] See Konstanty, R.; Zwingmann, B. 1997. "Die Arbeitsschutzreform. Ruckblick und Paerspektiven", in van Haaren, K. (ed.), *Arbeit im Multimedia-Zeitalter*, Hamburg. See also IG Medien (ed.). 1996. *Das neue Arbeitsschutzgesetz, Schriftenreihe Gewerkschaftliche Betriebsarbeit,* No. 30, Stuttgart, and DPG/HBV/IG Medien (eds.). 1997. *Die neue Bildschirmarbeitsverordnung*, Düsseldorf/Frankfurt/Stuttgart.

[3] Judgement of the Federal Labour Court of 2 April 1996, 1 ABR 47/95 (quotation from the statement of grounds, p. 23).

[4] In 1994, the Deutsche Welle succeeded in negotiating a staff agreement on screenwork containing regulations governing health protection in accordance with the EC Screen Directive which are also applicable to production work stations. See Gäbert, J.; Maschmann-Schulz, B.: "Mitbestimmung bei der Arbeit am Bildschirm", in *Arbeitsrecht im Betrieb*, Nos. 6-7/1995, pp. 418 et seq.

[5] Keller, Karl-Josef. 1997. *Die Bildschirmarbeitsverordnung. Ein Vorschlag zur praktischen Umsetzung*, Bergisch-Gladbach, p. 17.

[6] Forschungsverbund. 1994. A long-term research project is being conducted under the Employment and Technology Programme on these work-related health hazards. See "Arbeit und Sehen, Vereinseitigung des Sehens als Ursache arbeitsbedingter Gesundheitsrisiken – ein neuer Ansatz in der betrieblichen Gesundheitsförderung", in *ErgoMed*, No. 6, p. 172 et seq.

[7] See Pickshaus, K.; Priester, K. (eds.). 1991. *Gesundheit und Ökologie im Büro*, Frankfurt/Main, pp. 70 et seq., and

Engel, M.; Sorgatz, H.; Weissenstein, C. (eds.). 1994. *Prävention von Bewegungsschmerzen bei der Bildschirmarbeit* (report on a technical meeting in Darmstadt on 1 October 1993), Darmstadt.

[8] See Osterholz, U. 1993. "Soziale Wahrnehmung und Bewältigung arbeitsbedingter Erkrankungen: Das Beispiel RSI", in *Jahrbuch für Kritische Medizin*, Vol. 21, Arzt-Konsumenten-Verhältnisse, Hamburg, pp. 100 et seq. On initial successes see "Durch Bildschirmarbeit krank geworden – Erfolgreiche aussergerichtliche Einigung in Berufskrankheitenverfahren", in *Arbeit & Ökologie-Briefe*, No. 3/1995, pp.7 et seq.

[9] See Schmitthenner, H. 1995. *Anforderungen an die arbeitsmedizinische und sicherheitstechnische Betreuung von Kleinbetrieben aus Sicht der Gewerkschaften*, paper delivered at the Kongress Arbeitsschutz und Arbeitsmedizin, Düsseldorf, 7 – 10 November (hectographed manuscript).

[10] See Board of the Union of Trade Associations (Hauptverband der gewerblichen Berufsgenossenschaften). 1995. "Sicherheit unter Gesundheitsschutz bei der Arbeit: Berufsgenossenschaftlicher Präventionsansatz", report in *WSI-Mitteilungen*, No. 2/1995, pp. 137 et seq.

[11] See Köchling, A. 1994. "Der Tägliche Arbeitsablauf (nach EU-Bildschirm-Richtlinie)", in *Arbeitsmedizinische Aspekte der modernen Büro arbeit*, series published by the Bundesanstalt für Arbeitsmedizin, Meeting Report No. 5, Berlin, pp. 97 et seq.

[12] Koller, F. 1992. "Gestaltung von Multimedia-Systemen", in *Ergonomie & Informatik*, November, p. 7.

[13] IG Medien (ed.). 1993. *Gesundheitsschutz bei der Arbeit an Bildschirmen. Ergebnisse einer Umfrage in Hörfunk, Fernsehen und filmtechnischen Betrieben,* Stuttgart 1993, and ZATU (ed.), *Gesundheitsschutz an Bildschirmarbeitsplätzen. Ergebnisse einer Belegschaftsbefragung in 5 Betrieben der Druckindustrie,* 2 vols., Nuremberg.

[14] See the new publication by the Federal Institute for Occupational Health and Safety and Occupational Medicine (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin). 1996. *Telearbeit – gesund gestaltet. Tips für gesundheitsverträgliche Telearbeit*, Dortmund/Berlin.

[15] Dostal, W. 1995. "Multimedia – Arbeitsmarkt von morgen?" in *ibv-Publikationen*, No. 41 of 11 October, p. 3547.

[16] See, for example, the analysis by Welsch, J. 1994. "Zukunft der Arbeit: Neues Nomadentum oder auf dem Weg zum Wirtschaftsbürger?" in *Gewerkschaftliche Monatshefte*, No. 11, pp. 743 et seq.

[17] See Fischer, U. 1995. "Telearbeit in Europa", in *Computer Information*, No. 9, loc. cit., p. 56.

[18] See Welsch, J. 1995. "Multimedia und die Angst vor dem Ende der Arbeit", in *Blätter für deutsche und internationale Politik*, No. 7, pp. 871 et seq.

[19] For more details see Altmeyer, V. "Auf Eigeninitiativen setzen. Die sozialen Folgen von Multimedia in den Betrieben", in van Haaren, K., Hensche, D. (eds.), in *Multimedia*, loc. cit., pp. 111 et seq.

[20] The Memorandum is reproduced in *IG Medien Forum*, No. 6/1995, pp. 11 et seq.

[21] See Schröter, W. 1995. "Innovation mit innovativen Formen", in *Frankfurter Rundschau*, 26 October, p. 12.

[22] See "Blüms Projekt", in Computer Information, No. 9/1995, p. 28.

Media convergence and journalism

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I'm all for progress, it's change I don't like.
Mark Twain

The conundrum of the information and communications revolution is that although it will radically alter the way we live and work, neither citizens nor social institutions nor even most of the business world are really prepared for the changes new technologies will bring. Such a state of unreadiness is also found in journalism and traditional media. Ignorance and uncertainty threaten to handicap our capacity to gain the potential benefits of a converged multimedia environment – higher economic performance, more employment, enhanced standards of journalism and dramatically improved levels of pluralism.

Given the right choices, however, convergence can strengthen professionalism in media and improve the social and professional conditions in which journalists work. Among the potential advantages are the following:

- Citizens' access to many more media outlets, greatly improving the levels of pluralism;

- increased economic activity and more work opportunities for journalists and other media-workers who are currently unemployed;

- an expanded vision of journalistic work into new areas of on-line information services;

- enhancement of the media mission in society and improved levels of professionalism in journalism.

Underpinning democratic values

However, in order to achieve these advantages, policy makers preparing the legal and regulatory environment for convergence must recognize that the media product is not just like any other product: media play a pivotal social and cultural role in underpinning democratic values and, therefore, public policy must reflect democratic and cultural imperatives as well as create conditions for the economic exploitation of new markets. That is why, for journalists in particular, it is important to ensure a balanced approach to convergence – respecting citizens' rights to quality and reliable information sources while elaborating the legal, social and economic conditions for multimedia convergence. The wrong choices can produce undesirable consequences:

- increased concentration of power in rich, metropolitan society and further isolation of people in the regions and a widening of the gap between rich and poor;

- the loss of privacy for all and the exclusion of certain disadvantaged sections of society;

- even greater media concentration;

- undue influence by media and telecommunications groups on political institutions and public opinion; media dominated by commercialized programming of game-shows, sensationalist and violent tabloid television, advertising and shopping.

So far people-centred

The convergence of information technologies is just one element in the process of rapid transformation of economic conditions globally which are challenging community values. This concern has been succinctly expressed by George Soros[1] who, in considering the impact of globalization on human values, has said:

"Unsure of what they stand for, people increasingly rely on money as the criterion of value. What is more expensive is considered better. The value of a work of art can be judged by the price it fetches. People deserve respect and admiration because they are rich. What used to be a medium of exchange has usurped the place of fundamental values, reversing the relationship postulated by economic theory. What used to be professions have turned into businesses. The cult of success has replaced a belief in principles. Society has lost its anchor."

This loss of balance will be reinforced if the process of technological convergence in the

information and media sector leads to a reduction in pluralism and diversity. The history of traditional media – newspapers and broadcasting organizations – is rooted in the defence of democracy and citizens' rights. The public information space has so far been largely people-centred, reflecting the pluralism and diversity of society, and providing a structure for democratic exchange and expression of common values. It may be changing.

New concentration of industrial power

The media world is in a turbulent process of restructuring. Massive mergers and takeovers have created global media corporations richer than many medium-sized countries. They have enormous power. The companies now being drawn together, particularly in the field of multimedia, create a new concentration of industrial power. Concentration is the antithesis of the diversity necessary for democracy.

Danger of unfair monopoly

Journalists today fear that alliances which bring together information carriers and content providers raise serious questions of control of access to the superhighways. The problem of "gatekeepers" – the corporate hand that decides who will or will not have access to information networks – is already causing a headache for regulators. In Europe there is considerable concern over the fact that one or two companies may establish an unfair and potentially dangerous monopoly in the provision of cheap satellite set-top decoders. This advantage could allow one major player to determine which services may or may not have access to home television. Many fear that competitors may suffer discrimination. Although industry leaders say that the market can regulate itself in this area, journalists are among those who believe a new regime of national and international effective anti-trust rules is needed to limit concentration of ownership of media resources to safeguard pluralism.

An avalanche of trivia?

One of the problems facing journalists and media organizations as they wrestle with the magnitude of change overwhelming the industry is that the pace of change is so rapid that few people are truly aware of the implications. Convergence means that society's capacity to be informed is dramatically widened. But interactive television, with 200-plus channels and an ever-expanding Internet may lead to information "overload" whereby the spirit of inquiry is smothered by an avalanche of information, most of it useless, trivial and deeply uninteresting. The Internet, often praised for providing access to information and diverse opinions, can be a hotbed of rumour where discussion frequently degenerates into offensive and tasteless exchanges and where matters of fact are diminished by on-line prejudice and ignorance. Clifford Stoll, author of *Silicon Snake Oil,* warns that the Internet can lead people into a non-existent universe where there is *"plenty of human contact, but no humanity."*

Not yet a force for pluralism and democracy

Studies of current users of the Internet show that the majority tend to be male, relatively young, with high levels of income and education. There is a long way to go before the Internet can be claimed as a force for pluralism and democracy. Journalism, based upon well-established traditions of ethical and reliable information, can provide a professional filter which will help people to navigate through the uncharted waters of multimedia.

Because independent journalism is such a key to professionalism and quality, journalists insist that the case for public service funding of information space in the converged media environment is as compelling as that which established the public broadcasting industry. In a world where the electronic media is increasingly dominated by international channels and producers, it is vital to continue with national public service radio and television systems. The continuation of broadcast and production of programmes of high quality with regard to ethics, responsibility, journalistic versatility and quality must be maintained. Whether or not this will happen remains an open question.

New standards to control content and quality

The problem of content control – whether as a matter of journalistic ethics or the types of services on offer to the public – is one of the thorniest problems facing journalism in the age of the Internet. Journalists and other media professionals strongly oppose attempts to monitor and regulate their work by outsiders, particularly by legislators or others with a vested interest in media performance. A legiti-

mate worry concerns on-line pornography, racism and extremist political propaganda. One of the problems about the virtual world is that the control of content is much more difficult than before. But many governments are looking for new technical mechanisms to ensure that existing standards of regulation concerning content and quality of information apply in the new digital environment. Whether or not this objective is feasible in the on-line world remains an open question. Freedom of choice and freedom of expression require that flexible rather than intrusive systems of content control should be considered.

The urge to collect information is strong within both the public and private sectors, whether for reasons of law enforcement or for commercial exploitation. Media organizations, too, for reasons of legitimate journalistic inquiry, justifiably seek access to personal information. Journalists cannot function unless they can gather information freely. The need for journalists to be able to gather data without interference must be recognized simultaneously with the development of privacy protection in information collection and retention systems.

A wealth of talent in journalism

Within media, the providers of information – journalists, audio-visual producers and other creators – face their own bumpy ride into the new information age. Journalists are producers of much of the media product which is at the centre of the information society. They are concerned with the content available in new converged information services and they have an interest in the social dimensions of this revolution as well as the financial performance of the companies in it. Journalists themselves – well-trained, aware of their ethical responsibilities, and confident in their forms of employment – will play a crucial role in helping to develop new information services. Current mass media contains a wealth of talent in journalism, entertainment and broadcasting which can ensure pluralistic, high quality, and professional programming, as well as news and information services on a scale far greater than currently available.

Now less concern for training and ethical standards

However, the importance of the contribution of journalists and other creators is not always fully appreciated, even within tradi-

tional media. In the chaos of media restructuring and the drive for market prominence, not enough emphasis has been placed on the importance of quality journalism for the future. There is less investment in professional training, less concern for ethical standards and more journalists working in insecure jobs as a consequence of cost-cutting to maintain competitiveness.

At the same time, the development of new on-line services means significant change in the media labour market. There are new qualifications standards required for journalists to maintain existing jobs, while the future holds out the prospect of many new jobs – in preparing CD-ROM materials and in on-line reporting, for instance. Many journalists are already pioneers of the "teleworking" age.

Information seen as a commodity

Journalists are being joined by thousands of others in the information processing business. There is much competition to distribute information on-line. New forms of work are emerging for on-line editing and data collection. This poses serious challenges to the traditional workforce in media. New forms of organization and representation may be needed within the trade union movement to protect the interests of these workers. Many of these new workers are doing journalistic work, but often they are not identified as journalists and they work in companies which lack appreciation of notions of journalistic standards and ethics. While journalism has always been understood to have cultural responsibilities to society, many new multimedia companies see information only as a commodity for sale.

On these points there needs to be a dialogue between the collective bargaining partners in respect of socially acceptable rules to govern the conditions of convergence and the resulting changes in conditions of employment. But who will be the collective bargaining partner on the employers' side in this new industry?

Employer-employee relations not clear

The restructuring of media means that the traditional structures of professional organization are changing rapidly. Broadcaster, publisher, cable company, telephone company, film-maker organizations are having to reassess their positions. The same is true for trade unions and professional groups repre-

senting employees in the sector. The new framework for employer-employee relations is not clear.

One of the first pressing questions will certainly be how the industry will cope with the new generation of employees in journalism, many of whom work in depressing and uncertain conditions. Many media organizations now rely heavily on a part-time or casual workforce. Freelance work is the fastest-growing sector of journalism. Media companies often find it cheaper to contract work out to freelance journalists, particularly where that contracting can be made to low wage areas or low wage countries. Very often these journalists receive few social benefits. It is an insecure environment and not one which encourages forthright or controversial journalism.

Structural overheads shouldered by employees

Teleworking reduces the costs of office space, insurance and other structural overheads. Many of these costs are passed on to employees who have to set aside space in their apartment or house, sometimes having to pay the extra insurance that is required. The technology involved in teleworking also enables employers to check when people are working and their level of performance. As a result, teleworkers may have to undertake intense workloads. In other words, the discipline of the office remains but without the benefits of social interaction which comes from work.

Industry-wide agreements needed

If traditional standards of journalism and the public interest role of media are to survive in the converged media and information environment, industry-wide agreements on rules and standards of training for journalists will be required for gathering and disseminating information electronically.

Above all, there is a need for reliable, accurate and professional content. New media services which fail to meet the challenge of training in journalism not only pose a serious threat to media standards but they undermine public confidence in information sources. The problem is that, far from investing in the field of training, many media companies are imposing cost cuts which undermine training in the principles of journalism. Journalists are required to be multi-skilled – able to turn their hands to word-processing, sound recording,

camera-work (moving and still pictures) and presentation to camera or microphone as required. Many of these functions are now compressed into one activity as a result of digitization. The business of creativity is being marginalized in the drive to create all-round capacities which suit the converged media environment.

Beyond strictly technical needs

Journalism training, like journalism itself, needs to adjust to take account of new conditions, but should not mean a sacrifice of standards. Journalists require coaching in the tricky business of resolving ethical dilemmas; they need to be able to confront with confidence the pressures facing them in their everyday work. Training focused only on technical needs at enterprise level or that which considers journalism as an adjunct to the academic reflections of mass communication theory will not provide the national infrastructure needed to equip people for the journalism of the future.

Convergence should herald a golden age of growth, employment and equity in journalism, but that will not happen unless the converged industry provides sound employment opportunities and socially-protected jobs for well-trained and confident media professionals. A programme of policy backed up by legislation and regulation at national and international level, both soft and hard, will be vital if everyone – consumers and journalists alike – are to receive the rewards of growth, employment and equity.

Guiding principles

Convergence can benefit both the community and the private sector, but it will only do so if the guiding principles are:

- the right of journalists to work in socially-protected and professional conditions;
- the freedom of information and right of access to networks for public information providers to be on the network;
- the need for pluralism, diversity and quality in information sources.

For journalists, the keys lie in a policy programme of five elements, as follows:

- to identify and eliminate all obstacles to the development of new information technologies and to free existing media from forms of direct or indirect pressure;

- to protect the public interest in plurality by regulating conditional access systems and setting standards for fair, reasonable and non-discriminatory access for all broadcasters and information service providers to distribution systems;
- to provide a framework to protect the social and employment rights of teleworkers and those working from remote locations attached to centralized production and business centres;
- to maintain protection for authors' rights regarding recirculation of information;
- to apply strict ownership rules to all providers of services, whether by satellite, cable or terrestrial transmission.

Finally, there is much that the Government may do to create the best conditions for the development of media, but within the industry there is also a need for action. Media professionals – whether journalists, editors, broadcasters or publishers – all have a vested interest in the information society. However, if it is to achieve its potential for more professionalism, transparency and democracy, structures for dialogue and more co-operation within media is essential.

Note

[1] See Soros, George: "The capitalist threat", in *Atlantic Monthly*, Feb. 1997.

Technological convergence and some of its effects on workers in Brazil

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Multimedia technological convergence in Brazil, now partly effected, has already had serious consequences for workers in the sector, for democratic values and for basic principles of sovereignty and nationality. Clearly, it will continue to have a very positive effect on the capital accumulation process and productivity indices.

There was a time when enthusiastic theorists forecast that technology, in addition to rationalizing and optimizing human labour, would make it possible to reduce working hours and increase the time spent on intellectual pursuits and entertainment. This has not happened. On the contrary, data shows that professionals working in firms involved in communications – beginning with executives and journalists – are on call for longer hours through personal computers or mobile telephones. Furthermore, there is also insecurity and great uncertainty regarding their rights and duties.

If labour legislation and the rights of professionals were strictly observed, only the outstanding positive aspects of these technologies would find expression, to be admired and used intelligently. This is not the case in Brazil, where a journalist can be contacted easily when off duty and has no backing in law to refuse any job given by his or her enterprise, or to discuss the terms of engagement. In fact, the problem of the technological revolution must always be analysed in the social and political context in which it arises. When it occurs in a country where legislation exists and is complied with, protecting the worker and guaranteeing a job, providing the opportunity for vocational retraining to perform new functions, and where the trade unions participate in the process of introducing new technologies, the problem lies elsewhere, and is much less serious. Something very different occurs when these technological innovations are introduced through a general process of abolishing a number of labour rights and altering the constitution in favour of communications oligopolies. Even more serious is the lack of any possibility whatsoever of full trade union participation, as obtains today in Brazil.

Anything goes

In the 1980s, after a period of dictatorial repression when the trade union movement in Brazil was emerging forcefully and adding considerably to its labour gains, the political process in Brazil was readier than ever for the introduction of legal provisions to protect workers. The Constitutional Charter was being developed; there was strong national debate on the technology issue; and many points favourable to workers were enshrined constitutionally.

Even before promulgation of the new Constitution, there was a political climate favourable to the acceptance and conservation of labour rights in respect of the introduction of new technologies in production. For example, we can cite the ruling made in 1983 by the Regional Labour Tribunal of São Paulo, a major industrial and financial centre in the country, which echoed the concern of the trade union movement regarding the potential occupational damage of the technological innovation of the media. The ruling stated that enterprises which intended to install automated systems in their carriers (such as informatics, teleinformatics, word processing, video text, etc.) should ensure that they respected the following:

- the establishment of a joint commission;
- no dismissal of workers from jobs made obsolete;
- redeployment to jobs equivalent to or compatible with those they performed hitherto for professionals whose jobs were made redundant by the automated systems.

Conversely, in January 1997, nine years after the entry into force of the new Constitution and 14 years after that legal ruling, the most that the São Paulo Journalists' Trade Union has been able to obtain in labour negotiations on this issue is a simple recommendation – without any guarantee of compliance – that enterprises will free journalists for vocational retraining courses when new technology is introduced. There is no guarantee that the journalist will be re-deployed or that retraining will be provided by the companies.

Article 7 of the federal Constitution of Brazil provides for "the protection of workers by the law in the face of automation". Nevertheless, for this protection to be effective there must be regulation through enabling legislation which, nine years after the promulgation of the Constitution, has still not been enacted. So the constitutional provision has no legal force. But what does have force is the technological innovation imposed solely in the employers' interests, without workers being allowed to express themselves or defend themselves from dismissal, which is frequent.

More technology, more work

Surveys carried out by journalists' trade unions affiliated to the National Federation of Journalists of Brazil show a drop in the number of journalists in newspaper offices along with a significant increase in workload and rhythm. The increase in the volume of work results not only from the reduced number of journalists but also from the extension of the range of information which is disseminated by the enterprises, facilitated by the new technologies.

Other factors contribute to the increase in the workload of journalists in Brazil. According to the economist Nelson Sato, technical adviser to the São Paulo Journalists' Union, at present recent university graduates greatly exceed the number of jobs created annually in the media market. The total number of journalists who have lost their jobs in the publishing trade, plus those entering the labour market, constitute a growing troop of unemployed. This army of unemployed has resulted in a climate which has made it easy for enterprises to impose a working day exceeding the legal limit, overtime which, of course, is not remunerated. Journalists, fearing to lose their jobs, give in to the employers' demands and work five or six hours more than the legal working day, which is five

hours. So, as more and more new technology is introduced, a journalist's normal working day becomes longer and longer: ten, twelve or even more hours long.

Technological revolution and regression of social and labour rights

In Brazil, the growing process of technological convergence is accompanied by a clear regression in the rights of media workers. As an illustration, here are just two very recent examples of occurrences in São Paulo, one of the most developed cities in Latin America.

In the first case, the São Paulo Journalists' Union had obtained in previous collective agreements that a journalist would receive supplementary remuneration each time an article he or she had written was reproduced. Now, the employers' union has demanded withdrawal of this provision as a "point of honour" to continue the negotiations. Given the high unemployment levels and the weakening of the trade union movement in general, the journalists' union was not strong enough to prevent the withdrawal of this right which had been theirs for many years.

The second example has a bearing on the provision which makes it compulsory for television companies to record on videos the signature of the reporters and film-makers, another long-standing right. This matter is before the courts but we would not be surprised if they accept the employers' view.

Both these examples can be traced to the launching of Globonews channel broadcasting by cable. This new channel will be exploiting and reproducing journalistic material from TV Globo, the biggest television company in the country. These two examples support the conclusion that technological modernization is accompanied by a major step backwards in workers' acquired rights.

New technologies and vocational retraining

Obviously, vocational retraining is essential in this process of very rapid technological change with significant changes in work processes, especially in the communications sector. Meanwhile, shortcomings in the public education system, including the state universities, combined with the weakening of trade unionism, mean that the opportunity for workers to receive vocational retraining for new jobs remains largely dependent on the good-

will of the big companies, since governments continue to cut programmes catering for this need. But the policy line of the companies is to reject or fail to acknowledge the claims of the trade union movement in terms of the need for vocational retraining.

The situation is even more serious in countries such as Brazil where only 12 per cent of the working class in general has completed formal primary education. The tertiarization by the big companies results in placing the onus for updating and training the labour force on the small firms. This is an obvious contradiction since technological progress implies better vocational training but it is precisely the large firms, those with the most modern technology and therefore the greatest economic power, which refuse to shoulder their share of this essential task. It is therefore becoming an additional burden on the trade unions, aggravating their difficulties, since governments are also withdrawing from the provision of vocational retraining programmes.

Technological renewal and scientific development

It is also clear that vast capital expenditure is needed in order to be able to operate with modern communications technologies on a large scale. Technological convergence brings together powerful oligopolies in the sector which, at the same time, promote privatization and deregulation worldwide. In the case of Brazil, though the rhythm is different from Chile and Argentina, it began with the breaking of the state telecommunications monopoly in 1995, has been busy securing the association of national oligopolies with the international giants to win the market henceforth, and ended finally with a package of measures laying down the bases of the country's new telecommunications model.

Some immediate effects have already been noted. One of the most serious of all is related to the disappearance of research centres: as large international groups on the Brazilian market are likely to gain the upper hand, the option of purchasing technology packages from outside will be to the detriment of national technology development. Thus the Telebras Research Centre – CPQD – will become obsolete, placing at risk the jobs of 1,200 researchers who are threatened with unemployment. This research centre, the investment of many, many years, has suc-

ceeded in producing technology for digital telephony – undoubtedly the future of telephony – suitable for tropical climates, and its own optical fibre technology at a significantly lower cost. Abandoning this work means far more than merely purchasing technology packages: in the long run it means continued technological dependence on foreign countries when Brazil has already demonstrated that it has a certain capacity for its own development in the sector.

So not only is Brazilian technology to be transferred to other markets, but jobs, too, will be transferred from Brazil to other technology producing centres, maintaining and extending the country's technological dependence not to mention its chronic unemployment!

Even more serious is the fact that all these measures damaging to the country are being adopted by the Government without the slightest discussion and without any debate involving the sectors concerned, as has been denounced by the Federation of Telecommunications Workers (FITTEL).

Convergence, democracy and cultural identity

Digitalization is causing damage to democratic and cultural aspects. As a result of the world oligopolization referred to, free competition is being replaced by market control in the hands of a few "megacompanies". As Professor Venicio Artur de Lima of the University of Brasilia points out, the liberals and defenders of the view that technology inevitably brings democracy, irrespective of existing forms of ownership, will fall to the force of their own argument since the new technologies and deregulation do not bring greater competition, plurality and diversity but, on the contrary, empower oligopolies by removing legal restrictions on the concentration of ownership.

Again, the case of Brazil is strange: its television has significant production capacity as demonstrated by the Brazilian television serials shown in many parts of the world, but rather than building on this capacity to increase its presence on the world market, it has suffered a heavy blow with the sudden introduction of the many pay-TV channels, especially north American productions, which dominate Brazilian television today.

For Brazil, like many other developing countries, the introduction of new communications technologies and the process of techno-

logical convergence represent a loss of cultural and information sovereignty, with negative effects on the democratic system and on cultural identity. All this requires discussion of a new model for communications, in which the new technologies are assimilated democratically and gradually, with the full participation of society, in such a way that the great strides of science and technology act as a public asset, opening access to information for one and all, humanizing the labour process and benefiting civilization as a whole.

Multimedia – a vocational training opportunity?

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Conditions for a forward-looking educational policy

If we are really to come to terms with the question of the career and qualification profiles that could result from the now highly topical concept "multimedia", a realistic assessment of employment possibilities would first have to be made.

In Germany and many other European countries, there is what at times seems an exaggerated discussion about the creation of new multimedia training courses. Universities are vying with each other to develop high-sounding new study courses for the media and information sector and dozens of mainly private educational institutions are rushing on to the lifelong education market with multimedia courses.

This activity in the educational sector is a reaction to the partly euphoric statements about the job opportunities that should be created by the new information and communication technologies. There is, however, good reason for some doubt.

Since the appearance of the dazzling concept "multimedia", entrepreneurs and politicians have been outdoing each other with sometimes euphoric job creation forecasts.

The "Bangemann Report"[1] envisages some 5 million new jobs in Europe. In Germany, the Government's "Info 2000" Report[2] raises similar expectations.

One of the problems posed by such employment forecasts for multimedia development stems from the imprecise definition of the different branches. In many scenarios, any branch even remotely related to the transformation towards the information society is subsumed under the concept "multimedia" – from mobile telephone manufacturers to any printer that produces blank forms.

But the optimists stop short of drawing up a balance that would set potential job creation over against rationalization induced by the increasing resort to information and communication technology.

Anyone taking even a half-critical look can hardly help gaining the impression that many scenarios are inspired largely by calculated optimism. Despite all the glowing promises, the technological "multimedia" development will not point the way out of the oppressive problem of mass unemployment. Instead, that will require political instruments to stabilize the job market. There is no evidence of a multimedia-driven employment miracle.

The use of information and communication technologies will, however, largely change the face of the world of work – and that is the really important development which will present the framers of educational policy with new challenges.

Precisely those branches belonging to the telecommunications sector are showing pronounced trends towards rationalization. Within the media industry in particular, and this is most evident in the print media and broadcasting, where the creation of multimedia products is leading to increased digitalization of production processes. Digitalization is the key to multimedia production, for example, enabling the content of a printed newspaper to be used simultaneously for its electronic equivalent: an Internet newspaper.

Considerable rationalization is being provoked within the media industry by the use of digitalization. In the German printing industry for example, 25,000 jobs have been lost in two years, though the situation has been further compounded by prevailing economic trends. This represents more than 10 per cent of the total work force. Telecommunications companies are experiencing similarly negative employment trends.

Shifts are also becoming apparent among the different media. For the printing industry, hitherto the undisputed leader in providing

training opportunities, the employment outlook is rather bleak. The picture is somewhat more stable for publishing houses, and an overall positive evolution can be expected in the electronic media.

In a study commissioned by the Ministry of the Economy, the German Institute of Economic Research (DIW)[3] has made the following findings in regard to structural changes:

Employment figures in Germany

	1992	2000	2010
Print media[4]	416 000	393 000	366 000
Electronic media	93 000	127 000	151 000

In overall terms therefore, multimedia is not creating more jobs; instead, the employment potential is shifting among the branches. Educational policy must therefore address the question of the extent to which career profiles hitherto limited strictly to broadcasting, the print industry or publishing houses can be opened up. Rather than narrow branch-specific job profiles, the future will call for integrated, cross-disciplinary profiles.

The information sector will in future involve widely varying job descriptions. These already range from the traditional job situation with a fixed place in a publishing house, printer or broadcasting house, to the different forms of independent work and fixed-term contracts. In any case, less and less importance is being attached to the link between individual employees and companies and hence with their technologies and products. This trend is also being mirrored by the makeup of trade union membership. Already, "freelance" and "independent" persons represent about 15 per cent of total *IG Medien* membership.

The educational implication of this trend is that more than hitherto, the groundwork for high professional mobility will now have to be laid at the training stage. This rules out training courses narrowly tailored to a specific activity or technology. Vocational training will have to impart comprehensive technological and media skills.

Cross-disciplinary qualifications such as the capacity for self-organization, project work and client-oriented dealing will also have to be given more emphasis.

Who are the present and future multimedia producers?

If we look at the "multimedia branches", that is, the firms and agencies that supply multimedia products for the Internet and the off-line media (e.g. CD-ROMs) and the corresponding services, we could classify the qualification backgrounds roughly into three categories. The processes in these multimedia core branches necessitate cooperation among persons from the areas of software/electronic data processing, graphics and design, and journalism. The picture is one of a sector in the making. There is a high degree of participation by academics, many of whom have crossed over into the new multimedia core branches, for example from the arts or by means of teacher training.

At the same time, there are increasing signs that this first phase of emergence of the new sector is almost complete. Initial forms have already emerged of self-organized branches which are keen not only on laying down quality standards for multimedia products but also on drafting standards for lifelong education facilities. The question has therefore been raised as to what future qualification standards in the multimedia branch should look like, whether independent vocational trainers are appropriate for the multimedia core branches, or whether existing alternative career profiles should be further developed.

This question is topical also because there are currently only about 10,000 employment contracts in these "multimedia core branches" in Germany. This figure is sure to increase fur-

Alongside this concept of a universal qualification without regulated training courses is the lobby of private providers of lifelong education. For the most part they offer one-track training courses lasting a few weeks at a time and restricted to individual fields of activity, e.g. screen design. The problem with such commercial training courses, however, is that their content is still not standardized and there is often insufficient interrelatedness among them. Furthermore, commercial training courses with tuition fees often exceeding DM10,000 are beyond the reach of school-leavers in search of further training.

Implications for vocational training

The most important pillar of vocational training in Germany is the "dual system" – in most cases 3-year in-service training programmes in state-recognized occupations, part of which takes place in state-run vocational schools. The creation and adaptation of vocational training within the dual system falls under the responsibility of the Government, employer associations and trade unions. Whereas publishing houses and the printing industry largely perform their social obligations in terms of vocational training under the dual system, broadcasting houses and new multimedia firms still represent uncharted territory on the vocational training landscape.

IG Medien believes that even in the future there will be no "multimedia all-rounders" who will encapsulate in a single job profile (which, in reality, will cease to be one) all the functions ranging from programming, design, all the way to the production of printed material or the pressing of CD-ROMs. Even a fast-converging media and information sector will require skilled professionals and division of labour within a team. That will call for the corresponding job profiles. Alongside university and technical college courses, the existing dual system will retain its importance also in the future. In case of doubt, this form of education will take precedence over training from private academies, as it comprises a judicious mix of in-company and classroom work.

The objective therefore remains not to allow existing career profiles in the printing and publishing industry to become educational dead ends, but to incorporate them in the process of fashioning new job profiles for the media industry as a whole. And there is good reason for this: the core qualifications in the pre-print trades (text and image design, typography, digital data handling) are still of central importance in producing the new electronic media. There should thus normally be no need to create new "multimedia professions", but rather to build upon the existing ones.

The use of information and communication technology is transforming the journalist's job description. The same is true of the creative professions. Yet new applications such as Internet searches or catering to Info-groups with online newspapers are not ultimately leading to new job profiles (multimedia journalists, for instance), but necessitate the further development of already existing journalistic training courses. In addition to this "content" aspect, there is also that of the hardware and software. In Germany, five new job profiles have been developed for the information and communication industry, in an attempt to offer new training possibilities in this largely uncharted area. Courses have been available since August 1997 in these fields. The responsibility for devising these information and communication career profiles was largely that of the Metal Workers and Post Office Unions, in col-

Chart 1. Qualification cycles in the media and information industry

Moving image and sound design and processing	Media design and media product creation	Media consultancy and administration
Media designer – Image/sound film/video editor[a]	Media designer[b]	AV[5]-media salesperson[c]
	Media artwork producer[6]	

[a] These are two newly created job descriptions and, since 1996, vocational training has been available in television and radio, as professions under the dual system. [b] Planned pre-media stage career profile, intended to incorporate existing pre-print occupations (e.g. type-setting and graphics/ reproduction). The profession of advertising and media artwork producer can already be studied as an intermediate step. [c] Already existing as a pilot training project at the regional level, this is scheduled to become a federal vocational training course in 1998.

laboration with the metal-working industry employers and German Telecom. The third field of qualifications – of importance to this study – is media convergence, that is, the creation of media products regardless of whether they relate to "traditional" print and broadcast media, or to the new interactive electronic media. Here again, independent job profiles are emerging and in-company training is already available in some cases.

The field that accounts for the largest number of trainees is media design and media product creation. It also includes the existing pre-print trades such as typesetters. In Germany there are currently some 6,000 in-company training contracts in the pre-print field.

In order to create training opportunities in firms already active in the multimedia core branches producing CD-ROMs or online products, a vocational training course entitled "Advertising and Media Artwork Production" was created in 1996 as a short-term solution. This is a government-recognized, 3-year training course under the dual system. It was developed jointly by *IG Medien* and printing industry employers.

Advertising and media artwork production course content:

- image and text design;
- data organization and preparation;
- media design;
- creation of multimedia products (CD-ROMs and online).

IG Medien regards this job profile as an intermediate step. When training began in 1996, some 300 study places were created for it.

Upon completion of the ongoing initiative by *IG Medien* and employers to fashion a new and comprehensive career profile for the pre-media phase, this job too, like the pre-print trades, will be merged into it.

The longer-term goal is to create this integrated career training course for the entire pre-media stage. The preferred professional designation in worker circles is "media designer". *IG Medien* has been working on this project with the German Federal Institute for Vocational Training and with employer associations for about one year now. Development of this career profile should be completed by early 1998. Its main components have already been agreed with the German Ministry of the Economy, and are described below. Note

should be taken that this development process will not result in the creation of any additional career profiles: the projected new pre-media profession will replace the existing career profiles of the pre-print stage and advertising and media artwork production, the latter having been conceived as a short-term solution.

Main components of the planned pre-media career profile

The pre-media landscape is a very varied one: it reaches from multimedia agencies producing CD-ROMs or Internet applications and having their roots largely in the domain of software companies, all the way to the traditional print industry companies which provide training in their pre-print departments. This also includes firms which will be confining themselves exclusively to print media for the time being and for which multimedia applications are of no special operational importance. There are also other new fields: digital printing, being as closely connected as it is with preprint, the range of "computer-to" technologies (computer-to-film, computer-to-plate and computer-to-cylinder). In the pre-print and premedia stages, the traditional dividing lines between technical know-how/creativity on the one hand and salesmanship/consultancy on the other, are fading.

If in the face of this multi-layered picture the occupational landscape is not to become atomized into a ferment of rump professions ranging, for example, from "digital print worker" to "multimedia screen designer", the new pre-print and pre-media career profile must be differentiated internally. This is guaranteed in the draft submitted by unions and management, which envisages breaking down the 3-year training course into optional and compulsory modules. After one and a half years of study, the course is further divided into four streams.

The choice of a modular structure for the new career profile does not mean the introduction of training in stages – and certainly not by the back door. It remains a regulated, 3-year vocational training course which culminates in a final examination. Individual modules are not tested on the basis of initial training. The new concept for initial education contains modules, such as "media convergence" or "telecommunication", which can also serve the purposes of lifelong education. They build upon and expand pre-print core qualifications. The advantage of the modular concept there-

fore is that modules are transferable for the purposes of further training.

Even qualification targets are given new emphases in the new career profile. In addition to specialist and technical know-how, which naturally remain just as necessary, more importance is given to cross-disciplinary qualifications such as creative problem-solving, communication skills and team spirit. The field of information and communication technology as a whole is approached much more broadly than in previous career profiles.

The modules and the stream to be taken are decided at the beginning of the course. In the first 18 months of training therefore, all students, regardless of the specific orientation of the training shop, have five course units as common basic elements: work preparation, design, data handling, media convergence and quality assurance. Media convergence means both text and image integration as well as the amalgamation of text and image data with non-print media, e.g. moving image data. In addition, there are two optional modules of eight weeks each, which must be chosen from a specified pool at the beginning of the course. These optional modules could be electronic image processing, moving image and audio signal processing or basic commercial skills, for instance. It is already clear from this list that the system of optional modules goes beyond the pre-print stage as it existed hitherto and much greater importance is ascribed to commercial skills in particular. In choosing an appropriate mix of modules in combination with the "consultancy" stream, for instance, the end result is a training course that is in fact technically based, but which also includes commercial skills, marketing and consultancy on an equal footing. The new career profile thus eliminates the very sharp distinction between the technical and commercial occupations.

The vocational training course is divided into four streams, as follows:

1. Media consultancy

This stream emphasizes commercial skills, marketing, distribution and project management.

2. Media design

Most of the hitherto existing qualifications in the pre-print stage are again present in this stream: the creative transformation of image and text data is in the foreground, but other media forms (video, sound, etc.) are also included.

3. Media technology

This stream covers training in the processing of media data, as well as the editing processes (typesetting and gravure printing).

4. Media operating

This stream broadens the spectrum to include the organization of media data on the respective storage medium and digital printing. It also covers the qualifications hitherto falling under reprographics.

The optional modules make for a considerable degree of variation. Some examples are those modules covering digital photography, storyboarding (for multimedia applications) or technical drafting. The technical drafting module addresses the reorganized approach to newspaper and magazine production, whereby the technical conversion of journalistic content is being done increasingly in the editorial office. In the future, vocational training in the pre-print and pre-media stages will also be possible in the editorial domain.

The system whereby all students have the same compulsory modules, while optional modules depend on in-plant conditions, also requires companies at the lower mid-range of technical development to provide the obligatory modules specified in established future-oriented training courses. Examples of such compulsory future qualifications are: data-handling, media convergence or telecommunication. Should companies be unable to provide these courses in-house, there are facilities for

Notes

[1] Report of the task force "European Information Infrastructure", led by the EU Commissioner Martin Bangemann, 1994.

[2] Report of the German Federal Government: *Info 2000: Germany's Path to the Information Society*, February 1996.

[3] Deutsches Institut für Wirtschaftsforschung.

[4] Printers and publishing houses.

[5] Audiovisual.

[6] Advertising and media artwork production has been a regulation course since 1.8.96.

The contingent workforce and its implications for organized labour

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The rapidly accelerating convergence of the telecommunications, audio-visual and computing industries is often portrayed as a change of historic proportions which presents a myriad of new opportunities and challenges. From a trade union perspective there is much truth in this analysis – the challenge of maintaining representation and collective agreements in the converged industry is already testing the imagination of union leaders in many countries, and the new technologies of computer graphics, the Internet, and sophisticated desktop computing undoubtedly offer new ways of spreading union influence, if they are properly exploited.

In this article, however, I also want to emphasize that many of the so-called "new" challenges of the multimedia industry are in fact the same old problems that labour unions have struggled with since their earliest days. Attempting to win rights to bargain on behalf of workers, and convincing those workers that union membership is beneficial, will be key union objectives in the space-aged multimedia world just as often as they have been in traditional manufacturing and service industries. A prime example of this is teleworking, either from home or from clustered facility centres near residences. Teleworking offers a new avenue into work for a limited number of people whose circumstances prevent regular attendance at a place of work, but for many millions more, it is likely to become another example of new technology being used simply to reduce the costs of production, particularly overheads, with the added advantage to employers that isolated workers are less likely to articulate cost-increasing collective demands.

Although millions of workers could face upheavals in service industries as a result of the introduction of teleworking, I intend to concentrate on the information and entertainment related sector that is emerging as one of the most exciting as well as challenging aspects of the multimedia revolution.

To begin any assessment of union fortunes in a multimedia age, we need to, first, examine the characteristics of the new employers who are drawn from a diverse range of backgrounds, and then look at the expectations and attitudes of the workers who will find themselves engaged in various facets of the converged industry.

Convergence in the multimedia sector is bringing together companies and public institutions that fall into three basic categories, with radically different histories and styles, as follows:

- *Stable content providers.* Among the content providers count many existing broadcasters, film companies and publishers. Without over-generalizing, it can be said that most of them in this category have stable roots, often as part of the public sector (although deregulation in many countries is gradually turning them into private enterprises), and almost always they have some tradition of collective bargaining. Additionally, many of them rank their service commitments as equal to, or more important, than profit-making.

- *Employers with a mixed public and private background.* Existing distributors of information and entertainment constitute the second broad category of employers involved in convergence. They have a mixed public and private background, ranging from government-owned telecommunication companies, private TV and radio companies, cinema exhibition chains and cable TV operators, to publishing houses which are often multinational in scope. Collective bargaining is widespread among these employers, although there is a noticeable trend towards de-recognition of unions in this sector in

several countries, and there is a more focused awareness of the need for profit than among many of the content providers in the first group.

- *New computing and software companies*. Perhaps the most interesting group of employers involved in the convergence process is the third category of computing and software companies, many of whom are relatively new operators – after all the computer industry itself is barely thirty years old. These employers bring with them two characteristics which are pervasive in the North American West Coast computing community: they are often new start-up companies, founded by people who consciously wanted to escape from the rigid bureaucracies of the few long-established corporations like IBM, and they are staffed by highly skilled, mobile, and individualistic employees who believe that remaining in the same job for more than 3 or 4 years will, in their career résumé, be a poor reflection on their employability. For a few years there has been a gold rush spirit in this sector reminiscent of the Klondike, and tiny unproven companies have been bought up by global conglomerates at astronomic prices which have created hundreds of overnight millionaires among programmers and software engineers.

A different approach to employment and work management

A tradition of exclusively private ownership, a hungry drive for quick profits, and practically no history of trade union organization, are the key shared characteristics of this third group of employers, and a common attitude of workers in this sector is summed up by the question: "Why do I need a trade union – I look after myself". These companies and workers are fashioning much of the new software technology that will transform the media world, and their approach to employment and work management is fundamentally different from the other two groups of existing employers involved in the convergence: the content providers and the existing distributors.

Relative immaturity equated with non-collective tendencies

If the non-collective tendencies of the computer software industry predominate in the multimedia world, trade unions in the sector may well face a bleak future. However, in my view, two factors will help unions to maintain their influence: firstly, the relative immaturity of the computing industry. The exponential growth in employment in the information technology sector has mainly been directed at younger workers, and the average age in the sector is much lower than most other industries. It is fair to predict that when the Klondike phase comes to an end, and the workforce has had more experience of company failures and other problems on the way to industry maturity, there will come a greater willingness to resort to collective solutions to problems.

Same old problems arise packaging old material for new media

The second favourable factor for unions is the special circumstance of creative work, which will be a principal activity in the converged industry, as evidenced by the queue of telecommunication companies who want to form alliances with companies that own or create intellectual property. Although a large proportion of material distributed on the converged technical platforms of the multimedia age will not actually be new, and will more likely be "re-works" of existing intellectual products, the process of packaging the old material for the new media will pose exactly the same problem for employers as the old technologies of audio-visual recording and broadcasting. The intended lifespan of the product may be very long – some films for example are still earning money fifty years after being produced – but the sunk cost of investment in the product is concentrated into an extremely short timespan – not even fifty days in the case of some feature films.

Employer highly exposed to risk

Thus, at the point of production, the employer is highly exposed to risk – delays and failures in completing the project can result in losses that take years to recover. In time-honoured fashion, unions in the multimedia sector will inevitably identify this period as a possible pressure point for threats of disruptive action in order to pursue their collective demands. Ironically, with business models that depend on more "long-life" and less "throw-away" products than the existing broadcasting and theatre industries, multimedia distributors may be even more vulnerable than their old-technology

predecessors. If a live broadcaster loses a news bulletin due to union action, there is always the consolation that there will be another chance to transmit a bulletin next day – conversely, if a film company fails to complete a project on schedule, and then loses key artistes or technicians because of their other commitments, it is truly a disaster.

Labour needs hard to predict in multimedia

Apart from the aid that these factors may bring to unions hoping to organize in the new industry, the employment practices inherited from the older groups of converging companies may also help to generate collective awareness among the workforce, not least the legacy of collective bargaining, as well as the workforce experience of insecure employment. The latter is significant because the growth of a contingent workforce on insecure short contracts of employment is becoming a pronounced trend in the multimedia sector. Short-term employment is not only fashionable in many industries at the moment, but is also ideally suited to an environment where the pace of development in multimedia makes it hard to predict what a given company will be doing in the next few years, and impossible to gauge the number of workers it will need.

Unions in creative industries like the old guilds

However, contingent and freelance working is not new to the creative industries: in many regions, actors, musicians, writers, graphical artists and technicians work almost exclusively on a freelance basis, and their collective attitude, which has sometimes been passed down through the generations, is to adopt strategies as did the guilds, via trade unions, to protect their interests. Unions in the creative sector have often secured control of access to employment, insisted on automatic union membership in the sector, and have excercised widespread influence on professional employment matters, in defiance of either the prevailing economic climate, preventive national labour laws, or even common sense.

It is, of course, not certain that the insecure contingent workforce of the multimedia industry will opt for collective solutions to their problems, but the historical precedent of the existing creative industry is undeniable. Once freelance workers realize that they have much to gain by defending their interests collectively, it will be natural for them to organize.

Identifying the real employer

In spite of the foregoing optimistic analysis, the task of trade unions organizing in the converged industry will be immense: the rate of change both in job functionality and in employment relationships is breathtaking; multinational alliances mixed with the small, transient, and start-up character of many participating employers will often make it difficult to identify the real employer, and even harder to apply pressure; the workforce will, on average, be younger than in traditional sectors, and will frequently have no experience of, or faith in, trade unions; and the number of current workers displaced by new technology and techniques will be numbered in millions.

Funding burden more and more on the individual worker

However, the new environment will create fresh issues, apart from the traditional pay and working conditions debates, which may help to make unions relevant to the multimedia workforce. Training, for example, will be crucially important, partly because the funding burden will fall more and more on individuals, and partly because many skills will have a very short lifespan before becoming obsolete in the face of technical developments.

Unions as clearing houses for job opportunities

Entry to work, and the distribution of employment opportunities, have always been important to insecure workers, and can be organized by unions through maintenance of professional standards as a passport to work, and the operation of clearing houses or agencies for job opportunities.

Addressing the information divide

The social implications of information-rich and information-poor societies will be an important arena for trade union activity, as will be the benefits to be gained in terms of equal opportunities in the area of the new technologies. Teleworking and homeworking, as new forms of work organization, are fraught with problems, but they do open up the world of

work to people who are currently excluded – some single parents for example – and may offer the dubious advantage of concealing gender, age, race, or physical disability from co-workers and employers on the other end of the modem link.

Intellectual property rights of growing importance to multimedia workers

The question of intellectual property rights will become important to many more categories of workers than are currently protected by legislation. In the multimedia world, everyone involved in the process of production will create artefacts that will be used and re-used in every imaginable way, and sometimes in ways that have yet to be invented.

Finally, unions are infinitely better placed than individual workers to develop practical strategies to manage change in job functionality and levels of employment. In rapidly changing periods of technical advance it has often been cheaper and easier for companies to force high rates of labour turnover than to re-train and support long-term employees. Collective pressure will be needed more than ever in the multimedia sector to ensure that companies keep faith with their existing workforces.

Accent on individual services to members

All of these issues will serve as fertile ground in which unions can recruit and organize, even if the predominantly non-union culture of the computer industry colours the early years of convergence. Union activity in the sector will include the growing tendency to place just as much emphasis on individual services to members as was once put on collective organization: the younger workers who will feature disproportionately in the multimedia industry belong to a generation that values individual lifestyle, and direct member services are all that unions can offer in companies that initially resist collective agreements.

Using the new technologies to reach potential members

The new technologies themselves offer unions opportunities to reach potential members and to provide innovative services which are of value to workers in the sector. Despite a slow start, many unions, in industrialized countries at least, have started implementing electronic mail systems, and have established sites on the Internet, particularly on the World Wide Web. The technically literate and often dispersed workforce will expect their unions to use this technology as a normal means of communication.

The foregoing analysis may well be credited to the wishful thinking of a trade unionist, but two objective arguments plead forcefully in favour of a new thrust for organized labour in the new era. First, in terms of social organization and cohesion, society now stands at a critical juncture: dramatic technological breakthroughs are expected at any moment, whereas such events, even when they do occur, are difficult to interpret. We are witnessing world-scale enterprises desperately buying into prototype technologies with fists full of dollars in the firm belief that something momentous is happening where none of them can afford to be left out. If they are asked what is at stake, each would provide a different answer. Eventually, many of their predictions will be proved wrong.

Secondly, the new industry will be marked by just as many tensions between worker and employer as the old industry. Unless social safeguards for workers are dramatically improved worldwide (and we are dealing with the moving target of a global and highly mobile business) or our economic structures change so dramatically that multimedia becomes the only activity which provides a living wage, there will always be a role for unions.

Although many aspects of multimedia convergence may truly be new and dynamic and not yet perceptible on the horizon, the slog of unions recruiting, retaining, organizing members and defending their rights is as old as the hills, and whether we are talking Internets or fishing nets, the task is just as difficult whatever the industry.

Teleworking:
a review of recent literature

As late as April 1997, the General Secretary of the European Graphical Federation at the time was deploring the lack of data on the extent and nature of teleworking in the graphical and related sectors. However, the ILO had addressed the question of teleworking and disseminated its first phases of research over the period 1987-1992, and lately, between 1994 and 1997, the International Federation of Commercial, Clerical, Professional and Technical Employees (FIET) has published a few key papers and research reports as part of their active promotion of dialogue and debate on the topic in the trade union movement. ILO and FIET publications, taken together with research undertaken in Finland, the Netherlands, and a smattering of articles in periodicals, now constitute a modest core of recent literature on the subject.

Apart from FIET reports, not all the articles referred to address the question of teleworking in terms of its implications for trade union organization and workers' rights and protection. Some examine the issue in terms of its significance in determining public policy, considering only the benefits accruing to all concerned but seemingly innocent of the reverse side of teleworking.

That teleworking is likely to become one of a number of touchstones for the ability of trade unions to come to terms with deep-seated changes in the labour market was the view expressed in a paper presented to the Conference on Teleworking and Equal Opportunities organized by the European Graphical Federation. In this paper, the real challenge faced by trade unions was first the extent to which teleworking accelerated the transition of graphical work from industry to service and, secondly, the emergence of global labour markets (Pate 1997). The moot issue was raised of the dilemma faced by the European Union, caught as it is between maintaining local employment and social standards and the demands of competitive cost-cutting. In particular, Pate emphasized the need for trade unions to bring their influence to bear on the issue of re-examining labour laws, tax policy, social insurance, health and safety legislation, and the working environment, regardless of whether such re-examination aimed at protecting workers' rights or further deregulating the labour market.

Apart from adopting a strictly trade union point of view, the paper referred to carries the added advantage of unveiling a few hallowed myths and dispelling some confusion surrounding the practice of telework and its definition and nature. Pate observes that teleworking is not the same as homeworking: although teleworkers often operate from their homes, they may work entirely in a non-traditional workplace or partly at home and partly in such a workplace. Contrary to certain erroneous perceptions of the profiles of the actual workers who undertake telework, they are not by any means the monopoly of low-paid, low-qualified workers: highly qualified professionals such as architects, technical designers and news correspondents count in large numbers among the occupational groups involved in teleworking.

In the same paper, Pate challenges the lack of sincerity which too often fosters the notion that teleworking is a result of "free individual choice", when a moment's consideration of the economic realities of the labour market leaves no doubt as to the necessity rather than the choice of turning to telework. Similarly, although teleworking may be used to allow parents greater flexibility in reconciling employment and family time, parents may be forced by economic necessity to combine telework, childcare and housework in ways that are unsatisfactory for all concerned. Lastly, Pate places emphasis on the strides made in regulating telework: although it is certainly difficult to regulate in view of the inadequacies of most of the relevant national laws, the lack of reliable and comprehensive data on employment in teleworking, and of the problems faced by trade unions and employers' organizations in intervening effectively in this sector, the collective agreements signed by Communications International (PTTI) and FIET affiliates and the

regulatory initiatives being undertaken by the Italian Government, are examples of partial successes in the regulation of teleworking.

By contrast, in Japan, the Telework Promotion Council, formed under the leadership of the Ministry of Posts and Telecommunications, has evaluated telework variously in terms of its benefits for individual workers, companies, and society as a whole. Among the benefits listed *for individual workers* count the following:

- less commuting time;
- more time for family life with more time spent participating in community activities and self-development programmes; and
- expanding employment opportunities for those who have family responsibilities, people with disabilities and the elderly.

Companies, however, would benefit as follows:

- optimize human resources (those with family duties, disabilities and the elderly);
- improve job efficiency;
- shift to self-managed workstyles; and
- improve the quality of client services.

Society as a whole would stand to gain as follows:

- less traffic congestion at peak hours, decentralization, and the creation of job opportunities in local areas;
- the emergence of an environment-friendly society and a significant reduction in energy consumption; and
- new life to community activities.

In terms of *natural disasters*, all stand to gain by telework: socio-economic activities need not come to a standstill. According to one survey, after the earthquake in Los Angeles, United States, in 1994, the federal government set up a teleworking centre there in about a month, and 700,000 people are said to have made use of this facility. Before the earthquake, the number of teleworkers in this area was no more than 350,000 (Takayoshi, 1997).

In its report, the Telework Promotion Council described its work during 1996 with the Japanese Trade Union Confederation (JTUC) and the Japan Federation of Employers' Associations: broad-based cooperation allowed for an exchange of opinions and better mutual understanding of telework and its expansion in Japan.

The Council proposed that the government should address a number of policies that would provide an attractive and appropriate environment for company teleworking. Their proposals included the following:

- providing telework information;
- preparing regulations for lowering telecommunications rates;
- designing model projects for companies planning to introduce telework;
- conducting research on "info-telecom" technologies used for telework;
- examining policies for increasing job opportunities for the disabled;
- examining working time management applicable to new workstyles including teleworking; and
- creating official commendations for brilliant achievements in telework.

While such concrete proposals need to be taken into account in adopting policies, Takayoshi sums up in a nutshell the substance of the debates which made up Japan's Telework Day (27 May 1997) when a panel discussion and an exhibition addressed the pros and cons with regard to teleworking.

Some companies in Japan have established satellite offices and spot offices where employees can engage in partial telework. Two types of teleworking seem to be operating in Japan: the urban type, which enables people to work in suburban satellite offices or in their homes without commuting to the head office in the city centre; and the rural type involving teleworking in the community with the aim of revitalizing the local community. The case studies presented brought to the surface three main areas of interest for policy makers. Firstly, a large number of retired workers were able to engage in community activities and different forms of self-enrichment. Secondly, white-collar workers, who are usually too busy writing reports, making contacts and consulting, find more time to sit and think and furthermore not be interrupted by the telephone which can be replaced by E-mail. Looking at the performance of companies that have introduced teleworking, the number of planning proposals and reports is said to have been increased by about 20 per cent. Thirdly, families need not be split up as a result of transfer of a spouse to a different locality thus requiring the other to abandon his or her profession.

Japan's Telework Day focused in no ambiguous way on the problems posed by

teleworking, especially the at-home form: combining domestic and professional duties, loneliness, safety and health and inadequate social protection legislation.

Takayoshi suggests that a more carefully planned campaign might be necessary during which, for example, companies that have taken the lead in adopting teleworking would announce their experiences.

Over the past five years Euro-FIET has spared no efforts to keep abreast of the latest developments in teleworking: an overview of the subject (Bibby, 1996) was published covering definitions, negotiating key issues, back offices and call centres, relocation of work internationally, and trade union responses to teleworking. Pressures to increase productivity and reduce costs are among the powerful economic factors which are influencing businesses in the way they reassess where jobs and work are to be located. Work may be either relocated to back offices in rural areas or neighbouring countries where overheads and labour costs

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Note

Internet users may wish to consult the following web sites:

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http://www.eclipse.co.uk/pens/bibby/telework.html

Ursula Huws:
http://dialspace.dial.pipex.com/town/parade hg 54/surveys.htm
http://dspace.dial.pipex.com/analytica/

Mastering the Challenge of

Globalization

Towards a Trade Union Agenda

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