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Global Information Infrastructure and Global Information Society (GII-GIS)

STATEMENT OF POLICY RECOMMENDATIONS
MADE BY THE ICCP COMMITTEE

OECD

**GLOBAL INFORMATION INFRASTRUCTURE -- GLOBAL INFORMATION SOCIETY (GII-GIS)
STATEMENT OF POLICY RECOMMENDATIONS MADE BY THE ICCP COMMITTEE**

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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STATEMENT OF POLICY RECOMMENDATIONS

1. Introduction

This statement is an initial response to the OECD Council, meeting at Ministerial level, in May 1995 to provide a policy report on the Global Information Infrastructure - Global Information Society (GII-GIS), at its meeting in May 1996. As such, this statement, and its recommendations, are addressed to governments and international organisations, and suggest policy directions that they might take to enable the private sector to take the lead in the development and implementation of the GII-GIS.

The Global Information Infrastructure (GII) can be defined as a seamless web of interactive communications being deployed at world-wide level to provide the infrastructure for new services and activities based on the strategic use of all types of information. The world community will need to adapt accordingly in all the political, economic, social and cultural dimensions, thus establishing the basis of the new Global Information Society (GIS). Several countries have already outlined their vision with respect to the Global Information Infrastructure, but fewer with regard to the emerging Global Information Society.

Progress towards the development of the Global Information Infrastructure and transition towards the emerging Global Information Society are likely to be very rapid. There is ample evidence of the rapid evolution of events. Although the situation differs from country to country, the OECD Member nations, and indeed countries outside the OECD area, are reshaping their policies and regulatory regimes in order to favour development of competitive domestic information and communications infrastructures that, when interconnected, constitute the GII, speed its deployment and exploit the potential it offers in terms of investment, job creation and growth. Investment primarily by the private sector, supplemented by public agencies in their own spheres, is an essential driving force.

Technological breakthroughs and development of networks have continued apace. Competition has driven down prices of services, though much progress remains to be accomplished in this domain, and has encouraged the development of new offerings. Applications, real and potential, in areas ranging from businesses and households to public sector and governmental institutions have multiplied. The results of these developments lead to: growth in the number of host computers; users being connected to numerous information and communications networks; an increase in the range of new services, products, content, and applications; and reductions in the price of many existing information and communications products and services. The recent technological, economic and regulatory developments in the information and communications industries and related systems and networks (including the Internet) have raised the level of awareness of the importance of the GII-GIS among the general public in developed and developing countries, in particular regarding new mass consumer and business market opportunities.

The key element underlying these developments has been increasing competition within an exceptionally vigorous and successful private sector in many previously regulated areas. A competitive environment is evolving rapidly in certain countries, most notably in the telecommunications sector, while other countries are in a transitional environment of introducing more competition.

The development of the GII-GIS depends on international collaboration. A common vision is based on a small set of principles, first enunciated in this form at the G-7 Ministerial conference on the Global Information Society in Brussels in 1995, and to which most OECD countries have agreed¹:

- 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 to the citizen;
- promoting diversity of content, including cultural and linguistic diversity;
- recognising the necessity of world-wide co-operation with particular attention to less developed countries.

The recommendations set out below embody these principles. However, full and detailed consensus on some aspects of the essential principles and their implementation remains to be achieved by Member countries, e.g., the balance between the respective roles of the private sector and governments. In this respect, governments may have a special role in promoting new forms of dynamic co-operation with the private sector, as illustrated at international level by the pilot projects launched by the G-7.

2. Recommendations

These recommendations not only address the above principles, but also represent areas of concern that may enhance or, conversely, impede the benefits from the GII-GIS. Thus, the recommendations that follow cover a wide spectrum of topics, some of which often have both national and international dimensions so that their various aspects should be addressed at the appropriate levels by individual countries or international organisations such as the Organisation for Economic Co-operation and Development (OECD), World Trade Organisation (WTO), World Intellectual Property Organisation (WIPO), International Telecommunication Union (ITU), etc.

2.1 Policy framework for the global information society

Progress towards a global information society will be slow with many frictions until there is a common vision, or nearly common vision, regarding the main features of such a society. At present, while a great degree of consensus exists on general principles, a common OECD vision on how they should be applied is lacking, reflecting perhaps different modes of approach with regard to the GIS concept. Countries differ in their perceptions of the desirable and undesirable features of an information society; the respective roles of government, market forces and consumers; the economic and social benefits and disadvantages; the importance to be attached to social policies as elements towards the transition to the GIS; etc. Countries differ, too, in respect to how far they have moved towards an information society, with some well in the lead, while others are only beginning to discuss the basic infrastructure to be deployed and the extent of competition to be applied to it. Finally, the firms of some countries are more globalised than others in terms of investing, marketing and production and, thus, better placed to provide services to many countries.

¹ G7 Ministerial Conference on the Global Information Society, Chair's Conclusions, "A Shared Vision of Human Enrichment", Brussels, 25 and 26 February 1995. European Communities, 1995.

We recommend that the Information, Computer and Communications Policy (ICCP) Committee study and compare Member countries' visions, ongoing initiatives and planned future measures with respect to the GII-GIS, and develop a policy framework for the GII-GIS. Taking into account the conclusions of the OECD work on jobs, productivity and growth, the aim would be to identify the main features and impacts of GII and GIS as seen by consumers, governments and businesses in each country, as well as the similarities among countries. The focus of this effort should be to outline views on the key elements to be considered in a policy framework for the Global Information Society.

2.2 Regulatory framework for the global information society

The realisation of a global information infrastructure and society can be facilitated by explicit and updated domestic and international “rules of the game” based on market competition. Separation of operational and regulatory activities has taken place satisfactorily in most countries and should be continued. The focus of the debate is now turning to new principles that might be required to advance GII and GIS. The principles should be flexible, acknowledge the rapid evolution of the GII, GIS and globalisation that seems to be partly driven by economies and corporations becoming more competitive, trade barriers being removed, global operations becoming more feasible, transnational alliances developing, and new communications networks being deployed. Governments should endorse the principle of competition across the various facets of the information sector. However, they should also adjust the regulatory environment accordingly in order to minimise distortion of the competitive environment that governs demand and supply of goods and services, user prices, private investment, the choice of technologies, etc. Finally, impartial and transparent regulatory processes should be established, tailored to each country’s specific context, which can provide appropriate conditions for a socially and economically dynamic environment. Their primary tasks are to prevent abuse of all types of dominant positions, ensure open economies, and advise on competitive ways of merging and interconnecting networks, as well as the provision of services. With respect to content, these regulatory processes should safeguard cultural and linguistic diversity as well as the development capacities of the applications industries.

We recommend that OECD countries determine the extent to which the present national regulatory frameworks and international arrangements support the emergence of the global information society. We also recommend that governments support flexible regulatory frameworks which encourage the introduction of new markets and new technologies, services, products, content and applications.

2.3 The catalytic role of government in research, education, training and procurement

In some areas, market forces alone will not suffice to meet objectives that need to be pursued in the GII-GIS context. Governments should play an important role as catalysts to promote and encourage investment by the private sector. They also should promote strategic research and development (R&D) programmes, launch user-oriented pilot projects and promotional activities, provide test-beds for experimentation, promote international co-operation in these areas, etc. Both public and private spending are required for R&D, training and education to ensure necessary skills are available for the information and communications technology (ICT) area. These represent “intangible” investments that are vital for the future. Expenditures for ICT-related research and development have been expanded recently in many OECD countries, but the period by which a return on investment is expected has been considerably shortened. An increase in applied research and support for pilot projects such as in health care can stimulate the development of the GII and the GIS; however, a decrease in long-term research may reduce the “public good” aspect of the total R&D performed. More effective efforts -- including appropriate

incentives -- by governments and firms in training and education are needed to close the gap between labour supply and demand, adapt to changes in skill requirements, and to foster movement to sectors that offer better employment prospects. Governments can also play an important role as users and purchasers of products and services.

We recommend that governments play a catalytic role to promote and encourage private sector investment. OECD countries should work to increase opportunities to acquire information essential to promote life-long learning and improve health services for all citizens. It is suggested that country surveys, complemented by Science and Technology Statistics and Indicators, be carried out to gauge the effectiveness of this effort and to compare across countries government and industry programmes in investment, R&D, training and education in information and communications services, products, content and applications and the emergence of the GIS.

2.4 Global information infrastructure issues

2.4.1 Market and product competition

Open international competition among countries and among providers of information products and services is a pre-requisite for the rapid development and diffusion of new technologies and applications. This requires governments to review and, if necessary, to modify existing policy in order not to hinder entry of domestic and foreign firms; to eliminate restrictions on cross-sector services; and to maintain transparency in regulation. The aim is to develop efficient markets in all segments of information and communications industries, ranging from content to hardware, through competing technologies, services and networks. Special efforts will also be needed to overcome barriers and obstacles to GII- and GIS-related developments in specific industry sectors, such as education and business services, financial services, transportation, tourism, manufacturing, etc. Restructuring and removing entry barriers can be a relatively long process before full competition emerges. The private sector, rather than government, should in many cases determine the pace of implementation as well as the kinds of technologies, services and networks based on competition. However, the development of international competition should not take place at the expense of cultural and linguistic diversity. Governments need, therefore, to be in a position to take appropriate measures.

We recommend that OECD countries continue to implement open and transparent competition in the provision of facilities, products, services and markets in the GII and the GIS. The state of competition in each country needs to be assessed. In addition, an assessment of barriers to the diffusion of information and communications technology should be completed.

2.4.2 Electronic commerce and digital payments

Advanced information and communications tools support the development of electronic commerce practices to increase the efficiency and effectiveness of all types of relationships among business partners, households and governments, and the emergence of new types of markets. Electronic commerce facilitates established business-to-business commercial relations, sales by companies to consumers, as well as transactions between consumers. It, thus, potentially affects the business environment at national, regional and global levels, and generates major opportunities for market growth and development of jobs, industries and services. Increasingly, there is a need for internationally agreed upon and reliable mechanisms for making payments electronically for goods and services which are electronically traded. Governments will need to adjust their policy and regulatory frameworks to account for these new ways of conducting transactions, for example, in areas such as customs and taxation, which result in global trading

information systems and digital payments. If the objective is to facilitate the development of electronic commerce and digital payments, a number of policy areas need to be explored and a large number of regulatory obstacles need to be eliminated, for example, when the unit value is small, or when payments are to be made through internationally accepted and secure card systems. Such work would in particular need to highlight the broad policy implications in the area of privacy, security and intellectual property. Efforts should also be made to ensure that the security required for electronic payments not be misused to serve other ends that could threaten the domestic and international security of states or prevent legitimate control of financial flows by governments.

We recommend that the work of international organisations on electronic commerce and digital payments, including that of the OECD, and of national organisations, be continued in consultation with representatives of major business users, in order to clearly define the policy and regulatory requirements and clarify the economic implications in light of the interests of users and the concerns of governments. This work should be carefully co-ordinated with other governmental and non-governmental organisations active in this field. Special consideration should be given to identifying activities by the government and private sectors that would reinforce the economic value of electronic commerce and digital payments as an important building block of the information economy and the GIS.

2.4.3 *Interconnection, open access, interoperability and standards*

There is general agreement that interoperability and common standards are desirable, even essential, for the GII and the GIS. The question, however, is whether they should be left to industry or mandated. Experience suggests that most standards should be voluntary and set by industry, in a competitive environment, with safeguards against abuse of dominant power on the part of companies and countries, and with mandatory and publicly set standards kept to a minimum. Interoperability and standards can enhance global-level innovation, the spread of technology and can lower the price of services. Government, on the other hand, should encourage industry to accelerate the production and adoption of standards that ensure interconnection. Open access to networks and content for service providers and information suppliers is essential to encourage firms to provide services and content. Again, this should take place within a framework which guards against risks of abuse by all types of dominant actors. Competition may be preceded by co-operation in some aspects of the market process, with both government and the private sectors playing a role in fostering international technology co-operation, in particular through the appropriate international bodies.

We recommend that the competitive sector play the major role in setting standards that foster interconnection and interoperability. Further, we suggest that a review be made of OECD countries to determine the extent, areas and ways in which inadequate interconnection, interoperability and standards delay and distort development of the global information infrastructure and society. It is further recommended to support the work of international organisations responsible for facilitating international technology co-operation.

2.4.4 *Universal service*

It is generally agreed that an objective of public support of an information society is to avoid a society of “information-rich” and “information-poor”. Some countries are reluctant to broaden the scope of “universal service”, since the financial contributions expected from operators would raise the threshold for newcomers to enter the market. However, a number of governments have called for an expansion of the concept of “universal service” in view of the new and multiple technologies, networks, services, etc., that are now available and in order to prevent risks of unequal access to information. National experiences

have not yet yielded sufficient guidance as to practical elaboration of the basic concept that seems to be evolving, in particular with regard to the range of services and the means of paying for them. In this connection, recent OECD work has suggested several different approaches to universal services: geographic access; affordable access; quality of services; access by the disabled; and tariffs for such service, as well as access to certain types of general interest information (in particular in the administrative and medical areas). Measures to be considered could also involve mandatory clauses resulting from linguistic and cultural considerations and extending to the training area.

We recommend that the Committee study and discuss the issue of universal service in the context of GII and GIS. To assist the Committee, the above approaches (and others) would be elaborated.

2.5 Global information society issues

2.5.1 Content and growth

The GII and GIS will give creators and entrepreneurs everywhere the opportunity to develop information and content products and services for domestic and global markets. Existing software and computer services industries are already experiencing significant growth as a result of this trend. New knowledge-based industries developing products and services, such as multimedia and courseware, and a range of other information providers and packagers are emerging quickly and growing at a startling pace. Existing producers of cultural content such as publishers, broadcasters, audio-visual and sound recording producers, are entering new markets and exploiting new opportunities as they create products which are complementary to their traditional activities, and develop new content-based businesses. At the same time, other businesses, from telecommunications, to manufacturing, to resource companies, are expanding into the information field, creating new profit centres that have a powerful synergy with their core businesses. These new forms of content and information are already starting to make a significant contribution to innovation, investment, economic growth and job creation.

We recommend that the ICCP Committee explore whether there are barriers to maximising opportunities and enhancing the contributions which information and content products, services and applications can make to the growth of economies and the creation of jobs.

2.5.2 Cultural and linguistic diversity

Diversity of content, including cultural and linguistic diversity, should be promoted. Diverse cultural and linguistic content, which consumers will demand if they are to embrace the GIS, will play an essential role in attracting the investment necessary to finance development of the new technologies. The first task is to provide incentives necessary to create and disseminate diverse content in different languages and to assure content providers unimpeded access to the new technologies that will offer vast market opportunities to all content providers to disseminate their content world-wide. Diverse content can also become a vehicle for education, information and entertainment, for building a sense of community through expression of common social and economic values, and for enhancing the development of democratic institutions. At present, however, the content on networks reflects primarily the culture and language of countries that lead in programming, software and equipment. The interplay of competitive forces alone may not be sufficient to achieve broad public policy objectives in matters relating to content. Content reflects numerous elements including cultural identity and linguistic diversity. Therefore, countries face several challenges, revolving around the adaptation of existing content providers, including cultural industries, to new markets. The challenges include the development of new content industries based on emerging technologies, and the conversion of cultural products and holdings to new media and formats

brought about by digitisation. In terms of demand for content, there is a need to maintain high levels of diversity and access to foreign content, while at the same time, finding new means to stimulate production of and demand for local content without unduly distorting market mechanisms.

We recommend that OECD Member countries should explore, according to their respective environments, the need for actions to ensure that the benefits of the information infrastructure will be available to all members of our societies, and to promote diversity of content, including cultural and linguistic diversity. We recommend, in particular, that the ICCP Committee discuss the linkage between cultural and linguistic diversity and the development of the GII/GIS, with the aim of identifying the steps that might be taken in promoting diversity of content and participation of all actors.

2.5.3 *Controversial content*

Governments and the private sector bear responsibility for control of controversial material such as pornography, violence and other offensive content or unsolicited communications on both traditional and new media. The issue arises because such materials can be sent over networks easily both within and across borders without identification of senders, and recipients can be exposed either advertently or inadvertently. In some countries, the private sector has taken corrective action and some governments have enacted legislation in this area, e.g. penalising pornographic senders coupled with legal protection of service providers who are unaware that materials of this kind are sent over their networks. However, such decisions taken at national levels may impact on the international availability of content to an extent that may not be desired by other countries.

We recommend that OECD countries exchange views on the issue of controversial content. They should also compare national approaches and seek solutions to these problems on the basis of international consensus.

2.5.4 *Security, privacy and intellectual property*

There are few matters that can slow or distort the emerging GIS and create transnational frictions more than issues of security, privacy and intellectual property, including copyrights. Each is significantly more decisive than in the past because of the new environment of converging technologies, changing regulatory regimes, new products and services, and heightened concerns of the private and public sectors. These concerns involve issues such as international use of cryptography, protection of intellectual property (as well as the cost of ineffective protection) and jurisdiction in “cyberspace”. These “new” issues merit urgent attention, in particular those covering security, privacy and intellectual property, so that national approaches are compared, with the goal of international harmonisation wherever possible.

We recommend, in particular, that the OECD, in close co-operation with private sector experts, should develop guidelines on international cryptography policy and should review the 1992 Guidelines on Security of Information Systems. In addition, a high-level conference should be convened at an appropriate time to examine new issues in the area of security, privacy and intellectual property protection in light of the further development of the GII and the emergence of the GIS. The results of this high-level conference could form the basis of future work of the Committee.

2.6 *Statistics and indicators for the GII and the GIS*

From the perspective of the GII and the GIS, statistics and indicators are needed to assist in formulating policies, monitoring progress, assessing the effectiveness of regulatory reform, appraising applications and impacts and identifying various obstacles to diffusion and use in application areas. The lack of comprehensive and internationally compatible data can be a severe problem in a rapidly changing and increasingly information-based world economy. Therefore, a common framework for indicators and standard definitions needs to be developed, tested and shared among OECD countries for better understanding of equipment diffusion and use, communication infrastructures, and services and content. Because most effort has been devoted to the first two, particular attention should be given to the last element. Without such a structured approach, little credence will be given to indicators or to the area itself.

We recommend augmenting current and planned national and international efforts at the OECD and elsewhere to develop statistics and indicators to include the OECD preliminary framework and definitions as well as its three elements: equipment diffusion and use, communication infrastructures, and services and content. We recommend that the OECD establish a specialist panel to develop new indicators which identify, assess and monitor the emergence of the GIS. The ICCP Committee is also invited to report regularly on progress achieved in the development of GII-GIS, including the production of relevant indicators, standards and regulatory frameworks.

2.7 *Global co-operation*

The GII and the GIS will affect and enhance co-operative opportunities among advanced and developing economies. Both can benefit from an exchange of views and information concerning competition and regulatory reform, problems of different applications, the necessary administrative and social structures, etc. Each can benefit also from an understanding of the limitations placed on users, service providers and equipment suppliers. Furthermore, while OECD Member countries now agree that the information and communications technologies are important elements for social and economic development, some non-OECD countries need to be convinced that competitive markets will provide quicker and more efficient services than monopoly markets, and greater benefits to their economies. The OECD can play an important role in helping countries exchange views, undertake analyses and reach consensus on main issues.

We recommend that the OECD formulate proposals to facilitate inclusion of developing countries in the global information society and to assist in reducing the gap between developed and developing countries. We recommend in particular that non-OECD countries be invited to key OECD meetings concerning the GII-GIS and associated issues. We recommend, further, that the OECD assist developing countries in evolving work in this area, and that OECD countries and developing nations seek to benefit mutually from experiences with different views and approaches, especially with regard to access to networks, universal services and cultural and linguistic diversity.