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Working Party C
Information & Communication Technologies (ICT)

Creation of New Economy and Society by ICT

C-EJ-1: Broadband Investments and ICT as Key Drivers for Economic Recovery

The ICT sector's role for economic growth and the creation of jobs has been widely described and acknowledged. Last June, the OECD Ministerial Meeting in Korea published the Seoul Declaration for the Future of the Internet Economy, which advocated that "the Internet economy, which covers the full range of our economic, social, and cultural activities supported by the Internet and related information and communications technologies (ICT), will strengthen our capacity to improve the quality of life for all our citizens by providing new opportunities for employment, productivity, education, health, and public services" and "act as a key driver for the creation of enterprises and communities and stimulating closer global co-operation."

In these difficult times, governments in the EU and Japan can again rely on the tremendous potential of ICT and services to overcome the global economic crisis and to fight the challenges of climate change. A policy of continuous investment in ICT will be essential to get over the current crisis. As ICT serves as the infrastructure for most of the segments of our economy, the strategic applications of ICT must be studied in shaping economic policies for all kinds of industry.

In response to the current situation, we acknowledge that the Japanese government has published its new ICT policy this April, investing 3 trillion yen in 3 years to create about 500 thousand jobs to promote advanced usages of ICT, as well as the further deployment of the ICT infrastructure. The European Council, in its conclusions from March 19-20, underlined the fundamental role of telecommunications and broadband development in terms of investment, job creation, and overall economic recovery. From the EU budget an additional 1 billion euros were made available in order to speed up

broadband-rollout in the 27 member states. These funds seem to be of symbolic value but will come on top of various national recovery programmes launched by the EU member states.

However, public funds should only be used in areas where viable economic solutions of private investors are not possible. Public funds can help as an incentive but cannot bridge the capital cap to finance the future communication networks of a modern information society. Independent studies have confirmed that investments with a volume of 300 billion euros are needed in Europe to develop a modern, fixed, and mobile high-speed fibre infrastructure in the EU.

Nevertheless, the acceleration of Next Generation Networks (NGN) deployment should not only be considered as a short-term remedy to overcome the current economic crisis. A modern fibre access infrastructure will improve the long-term competitiveness of industries in the EU and Japan. Broadband and innovative ICT solutions are essential to further develop a dynamic society and to address social issues such as the aging population, medical care, security, and disaster prevention. NGN will enable new services like remote medical care, telepresence, and life-long-learning through e-learning programmes and help to ease the administrative burden in the lives of citizens through new measures of e-governance. In these fields broadband will also facilitate cooperation between industries and institutions of various sectors.

In that context, both governments should continue their cooperation to create regulatory and economic incentives for the utilization of NGN. Along with the development of such infrastructure, we must deliberate on the most effective fields for economic and employment measures, such as e-government, healthcare, education, green IT, local revitalization, digital content, and agriculture, in order to promote strategic investments in those fields. At times institutional reforms may be needed to enlarge the application fields of ICT. Under turbulent conditions, even existing information systems require innovative and continuous overhauls.

We expect governments to promote the deployment of high-performance networks and next-generation ICT infrastructures as well as developing technologies which will be the foundation for our future society. Recently, new ICT infrastructures called SaaS, or Software as a Service, and cloud computing are emerging in the market. They are providing an efficient business environment for small and medium-sized enterprises, as well as start-ups that have been at the heart of jobs creation, and potentially will lead to recovery of the economy.

The EU and Japan are strong partners that account for 40% of global GDP and advanced users of ICT, accounting for nearly 40% of global broadband subscribers, although the EU and Japan account for below 10% of the world population. The EU and Japan should therefore take a leading role by deploying pioneering ICT applications, in order to help economic recovery and create a dynamic society through innovation.

C-EJ-2: ICT Solutions Toward the Achievement of a Low-Carbon Society

Climate change continues to be one of the biggest challenges to both industrialized and developing modern societies. The use of ICT will be fundamental to achieve the objective of a low-carbon-society. Through ICT solutions and services, greenhouse gas (GHG) emissions can be reduced considerably and various other sectors will be able to reduce their own carbon emissions footprint.

On the other hand, it is recognized that the consumption of energy by ICT equipment such as network equipment, servers, and storage will be increased along with expanded use of ICT. In addition, the materials and design choices of equipment have an impact on their overall environmental impact and, therefore, both industry and government should continue to strive to promote innovative technology development toward next-generation environment-conscious ICT products, as well as continuing to promote a social system in which recycling of second-hand ICT equipment is practiced to reduce their environmental burden. In response to these concerns, the Ministry of Internal Affairs and Communication has been promoting discussions for the reduction of GHG emissions of ICT equipment and services, and the 3Rs (Reduce, Reuse, Recycle) of mobile phones since last year.

Nevertheless, very positive research results regarding the reduction of GHG emissions through the use of ICT have been reported worldwide.

According to the Report from the Survey and Evaluation Committee of the Green IT Promotion Council in Japan, the committee has developed its own measures that quantitatively visualize reduction in energy use and GHG emissions of IT equipment itself, as well as reduction by IT solutions. The committee performed a quantitative forecast of the spread of green IT and its effects in 2025 and 2050. According to the report, energy saving through the use of IT equipment itself including servers and storage in 2025 will contribute to the reduction of GHG emissions by 20 million to 40 million tons in Japan, and by 380 million to 760 million tons throughout the world. Furthermore, energy saving by IT solutions including videoconferences, SCM, and ITS in 2025 will contribute to the reduction of GHG emissions by 100 million to 200 million tons in Japan, and by 2.2 billion to 4.4 billion tons throughout the world. Industry-academia-government collaboration of the Green IT Promotion Council should be continued and promoted toward the further introduction of green IT.

Governments and industry should continue to support initiatives like the Global e-Sustainability Initiative (GeSI) which has published the study SMART 2020 on the low-carbon economy of the digital age. This report found that the ICT sector's current contribution to GHG emissions of two percent is set to double. At the same time ICT solutions could reduce global emissions by

a significant amount by enabling reductions in other industry sectors. By 2020 emissions could be reduced by 15 percent.

The study identified four key applications through which these considerable emission savings could be achieved: smart motor systems, smart logistics, smart buildings, and smart grids. According to SMART 2020, using ICT in managing private and industrial energy consumption could lead to savings in the order of 600 billion euros by 2020. This demonstrates clearly that ICT applications can deliver energy savings and carbon emission reductions, and do so in a way that drives even greater economic growth and productivity.

In the short term, ICT will be a key enabler of global energy use measurement and accounting, whilst in the long term it will play a critical role in process management and optimization in increasingly complex systems. Technologies to facilitate human-to-human communication are the traditional domain of ICT applications, but machine-to-machine communication used to optimize and automate processes and human-to-machine communication to measure and monitor processes and improve decision making will be at the heart of ICT's role. Collaborative technologies such as videoconferencing and telecommunications applications can help offset emissions through avoided travel and saved building space.

Another strength of ICT has been streamlining and power saving by promoting the introduction of e-government/municipality, e-carte, ITS, telework and others, which enable us to enhance existing operating efficiencies and processes, and optimize the performance of energy use. The European digital industry has been active and communicated widely the opportunities the ICT can provide for reducing environmental impact (EICTA Report: High Tech/Low Carbon, 2008)

ICT has the potential to help us to change our way of thinking and behaviour and to reduce overall GHG emissions and energy consumption by making our environmental activities measureable, reportable, and verifiable and by enabling us to better control ourselves.

In order to expedite the introduction of solutions, we continue to request the governments of both the EU and Japan to support the development of common metrics and processes for the measurement of GHG reduction by ICT, such as the ongoing efforts in ITU which visualize reduction effects in terms of the environmental burden, thus improving persuasiveness in the market.

Furthermore, the next-generation supercomputer will bring innovation for climate change mitigation. It is said that the time required to design more efficient solar cells can be incomparably reduced by the simulation performed by the next-generation supercomputer. It is also expected that the mechanism of photosynthesis can be elucidated by the next-generation supercomputer, enabling us to develop new devices that create clean energy from sunlight. We must also pay attention to such roles of ICT as a catalyst for innovation.

Both the governments of the EU and Japan are recommended not only to promote R&D and field trials for innovation, but also to share the results to enable others in developed countries and developing countries, where we foresee that the use of ICT applications will be expanded in the future, to contribute to the development of a low-carbon society.

C-EJ-3: Striking a Balance Between Security and Facilitation of Trade

Since the terrorist attacks in the United States on September 11, 2001, a global trend of stricter security measures has been imposing burdens on the management resources of companies, and is also becoming a hindrance to a smooth international supply chain. Based on the WCO SAFE Framework on Standards, institutions are being developed around the world such as Authorized Economic Operator (AEO) programs and the advance cargo manifest declaration rules. However, their content is not always the same and some of them sometimes invite excessively tight regulations. The multinational companies of the EU and Japan share concerns about further burdens on businesses and unwanted hindrances to smooth trade, as a result of such regulations. Particularly in this time of economic downturn worldwide, such negative effects can work as a non-tariff barrier that clogs global economic activities.

Amid such an environment, the EU and Japan must lead international harmonization of trade institutions to strike a balance between security and the facilitation of trade, while realizing efficient public-private operations. A secure and innovative international supply chain should be pursued, especially through the use of ICT that will support institutions and public-private operations, and also through the dissemination of usage models.

More specifically, governments are expected to:

(1) Exchange electronic information such as customs entry information and manifest information between governments;
(2) Implement the mutual recognition of AEO programs between the EU and Japan, and launch an initiative of the EU and Japan for the international single AEO standard as a next step;
(3) Disseminate models for ICT use that contribute to the security and operational efficiency of the supply chain;
    * For example, RFID tags, sensors, biometrics authentication technologies, and UCR (Unique Consignment Reference) numbers can build a secure and visible international supply chain.
(4) Promote the deployment of ICT infrastructure by SMEs to minimize digital divides; and
(5) Use a strong incentive policy to promote the deployment of ICT systems.

The economic slowdown is prompting the EU and Japan all the more to contribute to the facilitation of trade, and to bring innovation to the international supply chain, by launching their initiative for striking a balance

between security and the facilitation of trade, and by proactively deploying ICT as an effective tool for policy goals.

New Regulatory / Institutional Framework for Promoting Innovation

C-EJ-4: Maintenance of the WTO's Information Technology Agreement (ITA)

We express strong support for maintaining the Information Technology Agreement (ITA), one of the most successful trade agreements of our time. The increased access to IT products generated by the ITA has led to greater innovation, consumer welfare, productivity, trade, investment, and economic growth worldwide. The ITA signatories are obligated to bind and eliminate customs duties on ITA-covered IT products. However, it is noted that there are concerns around the world over ITA-covered products being reclassified as dutiable. In fact, some new convergence-technology ITA devices have already lost their zero-tariff status.

We strongly believe that the ITA signatories should be providing more, not less, market access opportunities for IT products. The letter and spirit of this market-opening agreement must be maintained and the ITA commitment to "bind and eliminate" duties on covered products must be respected. As a priority, both governments should do their best to ensure that the maintenance of the current ITA is achieved as soon as possible. In addition, we encourage governments to work towards the wider global adoption of the ITA.

C-EJ-5: Accelerating Innovation by Convergence / Federation of Communication And Broadcasting

Along with the rapid innovation of ICT technologies, new services are arising beyond the existing framework of communication and broadcasting. We recognize that both governments are addressing a fundamental review of legal frameworks at this moment in response to the demands of this era of convergence / federation of communication and broadcasting. We hope for an institutional environment in which flexible business operations are allowed, in view of the reinforcement of international competitiveness of the ICT industry through emergence of new markets with the technological progress and innovation that we pursue.

Therefore, we recommend that the governments of both the EU and Japan create an institutional framework in each country and conduct dialogues and collaboration to ensure international consistency. Specifically, we suggest having discussions on the promotion of international distribution of digital content, and the principle of nondiscrimination concerning content regulation regardless of countries.

C-EJ-6: Adapt Regulation to Promote Investment in Next Generation Networks

The current economic and financial crisis has had negative effects on investment in high-speed infrastructure and has led to declining growth rates of the sector. In order to ensure a sustainable recovery of the sector, which would allow the industry to play a key role as a driver for the global economy, the regulatory environment must be adapted accordingly.

We recommend that governments continue to take into consideration the telecommunications industry's rapidly changing economic and technological landscape. The shift to Internet Protocol-based services is going to be a major step of innovation, which will create new business models and user expectations for innovative services. Governments are strongly recommended to create a regulatory climate that supports businesses and investments.

By promoting various fixed and mobile broadband technologies, consumers will be able to enjoy additional benefits. Broadband fixed and mobile traffic over the networks is already growing exponentially. In order to prevent congestion and to preserve the quality of services, the future Internet will need a new architecture so that it can respond to future services and user demand.

Therefore it is necessary to ensure that there are appropriate conditions for investment and that further infrastructure-based competition is stimulated. The substantial investment needed in network deployment and updating carries high economic risks due to uncertain future demand, as well as high regulatory uncertainty. Therefore, we repeat that the regulatory environment should provide incentives for network investment, allowing proper return on investment. Policymakers play a key role in determining the future of ICT investments and innovations.

Note: Recent Development in the EU

In the European Union governments and lawmakers have reacted to these economic and regulatory challenges by agreeing on a new regulatory approach for NGN. In March the European Council stated in its conclusions that cooperative agreements between investors and access seeking parties to diversify the risks of investment should be permitted. Consequently, in the legislative review process of the regulatory framework for electronic communications, policymakers introduced for the first time the model of risk diversification between market participants.

C-EJ-7: Fundamental Review of the Copyright Levy System and the Compensation System for Audio and Video Private Copying / Improvement of the Current Levy System

In order to promote further lawful use of digital content, it is necessary to implement dialogue/cooperation between the EU and Japan concerning preparation for a thorough stakeholders' discussion on the compensation

system for private copying. Currently compensation is paid by means of copyright levies, a system which dates back to the analog era (at least in Europe). Copyright levies are a way of compensating for revenue loss caused by private copying, but they are not intended to fight piracy.

This move is based on already common business models utilizing DRM, as well as other emerging business models, including the on-line distribution of content on the basis of contracts with individual users, which is also expanding. In these cases copyright levies may impose a double payment for consumers. In reviewing the systems, we should take into consideration in a comprehensive manner the methods available to secure compensation for right holders and creators while respecting the current system of exclusive rights. Furthermore, new distribution practices, where the collection of payments for economic benefit is more directly related to the use of copyrighted work, are feasible with the support of advanced technology and appropriate contracts. The goal should be to enable the establishment of a system which is transparent, fair, and equitable to such interested parties as consumers, right holders, and equipment providers.

The current system should be improved to attain the above-mentioned goal with due consideration to technological progress, actual use of content, and competition in the market. The method of calculating levies based solely on memory capacity without taking into account the actual usage of the product for private copying and thus the damage to right holders resulting from private copying, should not be maintained, as it is not in line with the EU copyright directive and would deter the introduction of advanced recording media technology that meets users' needs. The calculation method should be replaced with one that more closely reflects the actual damage to the copyright owner by private copying and will not disturb technological progress and progress towards an information society for all.

C-EJ-8: Personal Data Protection Regime - International Data Transfers

Today, companies spread their organization across the globe in order to respond to the necessity of globalized business demands. Accordingly, the headquarters of these global companies are required to have stricter compliance and governance systems for the whole group structure. Personal data protection is one of the priority issues to be strictly managed within companies.

Moreover, these global companies are constantly exposed to international competition and are in urgent need of cost reduction and efficiency, even as they strengthen compliance regimes. Therefore, companies are beginning to outsource some internal operations and functions. Due to the evolution of Internet technology, there is a diminishing need to outsource to the same country. These practices introduce the possibility and necessity of managing and manipulating information and personal data beyond the national borders and laws of any single country or region.

Directive 95/46/EC, on the protection of individuals with regard to the processing of personal data and the free movement of such data, requires member states to permit transfer of personal data to countries outside the EU only where there is an adequate level of protection of such data as the Directive could provide, unless one of several specific exemptions apply.

In its 2009 Progress Report, the European Commission is considering carrying out an in-depth analysis in order to have a complete picture of Japanese data protection laws and possibly launch an adequacy-finding procedure upon the receipt of an official request from the government of Japan. In order to realize the free flow of personal data between the EU and Japan, the European Commission should carry out an in-depth analysis as soon as possible, and the Japanese government should officially request to the European Commission to start this analysis.

At the same time, industry sectors should establish reliable and cost-effective data protection schemes according to the risks of each company or industry sector. Such schemes should be implemented and introduced throughout the entirety of global companies, rather than be guided by location of company units. If a company should adopt such a scheme, international data transfer should be allowed between the EU and Japan, and on a worldwide basis.

Companies need to focus on building and implementing effective personal information protection regimes applied consistently across the whole corporate group. Such schemes should be effective while also allowing companies to keep at a reasonable level the cost of complying with requirements of different regions and countries.

Therefore, in parallel with the start of an in-depth analysis by the European Commission, the governments of the EU and Japan should quickly start the dialogue toward the building of international policy to encourage companies to establish and implement reliable and cost-effective schemes in order to allow the free flow of personal data between the EU and Japan.

Public-Private Partnership for the Advanced Usage of ICT

C-EJ-9: Shaping Collaborative Policies to Assure Dependability and Information Security of Information Systems

In today's information age, every social infrastructure can be supported by ICT. Information systems have become an essential part of the social infrastructures that sustain economic activities in EU and Japan. In light of this situation, the EU and Japan share awareness of the importance of information systems, and have been taking actions to assure the dependability and the security of systems. The EU and Japan also share concerns about the international impact when accidents in these information systems occur.

Meanwhile, as regards the evolution of the ICT infrastructure, the wide reach of the Internet has brought about the rise of new services and technologies such as SaaS (Software as a Service) and cloud computing. The new services enable users to access ICT "on demand", and this is particularly suitable for small and medium-sized companies, as well as start-ups, in that the service will not only eliminate lengthy set-up and installation, but also costly equipment and software.

As the ICT infrastructure undergoes such a new change, the governments of the EU and Japan should continue to closely communicate and exchange their views, and we think shaping collaborative policies by governments and the industry will be essential to encourage the adoption of new service opportunities such as SaaS and cloud computing.

We recommend both governments to start a study of quantitative management indicators and desirable levels of dependability and information security of the system as one of the collaborative policies.

C-EJ-10: Reinforce the Role of Public Private Partnerships

A dialogue between the officials of the EU and Japan on Public Private Partnerships on ICT in the context of e-government was initiated as part of last year's recommendations. However, the responses from officials indicate some unilateral measures to promote e-government, but neither in the context of Public Private Partnerships on ICT, nor as a dialogue between the authorities of the EU and Japan.

We believe that the current economic crisis has magnified the importance of Public Private Partnerships. Since private-sector investment in information, communications and service technologies is three times higher than corresponding investments by the public sector, the benefits through Public Private Partnerships should be significant. The EU and Japan should conduct a dialogue on best practices and joint initiatives on how Public Private Partnerships on ICT can be promoted to advance e-government developments in the current economic crisis.