

Nippon Keidanren (Japan Business Federation)<sup>1</sup>  
3<sup>rd</sup> IGF Position Paper

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Nippon Keidanren (Japan Business Federation)

At the third IGF five themes are established for the main session: “Reaching the Next Billion,” ”Promoting Cyber-Security and Trust,” ”Managing Critical Internet Resources,” ”Emerging Issues” and ”Taking stock and the way forward.” We outline below our position on each of these themes.

## I. Reaching the Next Billion

### 1. The Role of Developed Countries

Bridging the digital divide requires that developed countries continue to support improved internet access in developing countries. In particular, it is important to create an environment in which private sector investment, including international investment, is able to contribute to helping build-out developing countries’ infrastructure. Where telecommunications networks are state monopolies, improvements in internet access are often unable to be achieved because of insufficient competition.

Introducing market principles is an effective method for connecting private investment with improved internet access. Developed countries should therefore proactively work to transfer their experience and know-how regarding competition policies to developing countries, and to others.

In a short period of time Japan built-out infrastructure for broadband that is cutting-edge in global terms. It did this by introducing an appropriate competition policy, including through measures such as promoting unbundling of land lines. This stands as an example of the type of governmental best practice that can be presented to countries working to promote the development of broadband.

Furthermore, support for improved access to the internet should not only focus on the provision of technological or financial assistance. Instead, assistance with training should be implemented simultaneously in order to educate users about the appropriate

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<sup>1</sup> URL: <http://www.keidanren.or.jp/index.html>

and effective use of the internet.

On the other hand, there is a tendency in the developed countries for debate to be based on the assumption that lines refer to land-lines, and terminals refer to PCs. This reflects the process of internet development in these countries. The rapid spread of mobile telephony in developing countries, however, suggests that discussion should include the possibility of lines being provided through wireless means, including by satellite, and mobile telephones being used as terminals. In terms of the electricity supplied to telecommunications equipment, consideration should also be given to the use of solar cells, wind power, or rechargeable batteries, rather than simply assuming the use of electricity generated from power stations. This would lead to the development of hubs with better environmental performance.

## 2. Building Original Business Models

It is imperative that the internet continues to be accessible in a greater number of languages, and can also be accessed by users in a stress free environment, in order to ensure that economic development and improvements to internet access occurs independently and sustainably. By achieving this, information that is both original and expresses the differences between different national cultures will be disseminated, and it may also enable developments such as online shopping for fair-trade goods.

Given this, developed countries should respect the cultures and languages of developing countries, while also assisting them by proposing business models that enable these countries to achieve self-sustaining economic development that makes use of their language and culture.

## II. Promoting Cyber-Security and Trust

### 1. Responding to Increasingly Advanced Forms of Cyber-Crime

Cyber-crime refers to the theft of personal information from computers, the creation of phishing sites, DDoS attacks, and other such activities. Criminal methods and goals are becoming increasingly diverse and sophisticated, meaning it is crucial to increase standards of computer literacy and develop a culture of security among individual users.

Further, as it has been pointed out before, it is possible for countries or regions with lower levels of internet security to become breeding grounds for cyber-crime, given

these crimes are perpetrated across national borders. This means it is necessary for international society to join together not only to promote National CSIRTs, but also to engender public-private cooperation on a global basis. Doing so increases the ability of government bodies, firms, and other organizations to respond to new security threats, and also promotes internet risk management practices globally.

## 2. Establishing Common Criteria for Cyber-crime

Countries currently respond to as copyright and privacy infringements, spamming, and child pornography, and other such problems through national laws and regulations. The world of the internet is borderless, however, meaning that efforts to develop a joint response to cyber-crime internationally are hampered by differences in national laws concerning which activities are defined as illegal or criminal.

It is extremely important to respect the cultures and customs of other countries, even though doing so may lead to significant problems in establishing globally shared standards and criteria. That is why it is important to debate how to reach harmony on questions of standards at meetings of stakeholders from across the world, such as the IGF.

## III. Managing Critical Internet Resources

### 1. Internet Management and Operations

The ongoing management of the internet by the private sector, which is able to respond flexibly to technological innovation and changes in environment, has significantly contributed to the development of the internet. If an international body led by national governments becomes responsible for internet management and operations, it could have a significant effect on people's lifestyles, and on business. This is because rapid decision-making would be obstructed by differences in political interests. Given this, the management and operation of the internet should remain under the current system, while parties should continue to work to increase the transparency of ICANN, the organization responsible for management and operations.

### 2. Responding to Limited Availability in IP Addresses

Estimates vary as to when the availability of IPv4 addresses will become significantly constrained, however it is clear that this will occur at some point in the future. If developed countries are the first to obtain IPv4 addresses, this could become an obstacle to improving access amongst developing countries. Developed countries

should therefore take the initiative in promoting the use of IPv6, and building an environment in which all users are able to gain access to internet communications.

IPv4 and IPv6 are not compatible, however it is possible to communicate between terminals using IPv4 and IPv6 if operations are carried out through an IPv4/IPv6 dual stack. It is possible some developing countries are only compatible with IPv6 from the outset. In the short-term, developed countries should therefore promote dual protocols to respond to this problem, while also working to manage issues associated with the introduction and security of terminals and applications that utilize IPv6. This will ensure that any effects on global commerce that emerge from its introduction are minimized.

Also, as noted above, if IPv6 is adopted only by those developing countries that are unable to obtain IPv4 addresses, then this will limit its spread. By promoting the use of dual protocols, therefore, developed countries will help development of an environment that encourages the utilization of IPv6. It is also important to assist in the training of technicians able to utilize IPv6. Finally, developed countries should identify new businesses or ways of using IPv6, and propagate these internationally.

#### IV. Emerging Issues

##### 1. Responding to Problems Associated with the Environment

###### (1) Expectations towards ICT on Environmental Problems

Awareness of environmental problems is increasing globally, beginning with the global warming issue. In the Summit Declaration of the Heiligendamm Summit ambitious long-term targets were considered, including committing leading countries to seriously examine halving global emissions of greenhouses gases by 2050. Achieving this target will be difficult using current technologies, however, meaning that promoting innovation will be crucial to success. High expectations are held for the use of ICT, which holds the possibility of ensuring economic development can occur alongside the respect for environmental needs.

The share of carbon dioxide emissions generated to human activity, and attributable to the ICT industry, currently stands at 2% of the total. Promoting efficiency improvements by the adoption of ICT in the innovation process, and in other ways, will enable emissions from other industries, which represent 98% of the total, to be reduced significantly.

It is also the case, however, that electricity consumption associated with the use of ICT equipment is projected to grow rapidly in tandem with the development of high information societies and increases in internet telecommunications traffic, reaching 15% of global electricity generation. This raises concerns about increases in carbon dioxide emissions. On the other hand, ICT equipment represents just 30% of electricity consumption within data centers, as opposed to air conditioning at 45%, and UPS, lighting, and other types of electrical equipment at 25%. Given this, it is necessary to increase the energy efficiency not only of ICT equipment, but rather of the infrastructure as a whole.

## (2) Industries' Environmental Response through ICT Use

The internet and other types of ICT have been adopted across industries, making it possible to improve the efficiency of energy consumption and reduce environmental impacts. Within this trend, the use of sensor networks is particularly noteworthy. Sensor networks can be used for a wide range of applications. They are systems made up of multiple sensors that collect a wide range of information, from temperature, sound, location, speed, or weight, to oscillation, IC tags, finger prints, gas, or heat. By connecting sensor networks to the internet, services can be provided that meet user needs based on this information.

The spread of services using sensor networks will increase the uptake of IPv6, and will provide examples to developing countries of how IPv6 can be employed.

Japan has identified twenty-one "Innovative Energy Technologies," including BEMS/HEMS<sup>2</sup>, to be promoted through public-private partnership, with the goal of further improving the efficiency use of energy.

## (3) Cyber-crime and Environmental Problems

It is estimated that approximately 90% of global email traffic is spam. In addition to telecommunications carriers and ISPs (internet service providers), internet users are also consuming a great deal of energy dealing with spam mail, cyber crime, and other illegitimate uses of the internet. Cyber-crime is therefore not only an issue of security, but also significantly worsens environmental problems.

International society should make themselves aware of the negative environmental impact of cyber-crime, and should continue to work together to exterminate such

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<sup>2</sup> BEMS: Building Energy Management System, HEMS: Home Energy Management System

activities.

#### (4) Assessing Contributions to the Environment

Greater use of the internet and ICT will lead to ongoing reductions in the burdens imposed on the environment by society. It is also the case, however, that electricity consumption by ICT industries will increase. Further, it is possible that carbon dioxide emissions will increase even if highly energy-efficient products achieve high levels of sales, because of the need to manufacturing these products.

In order to assess the contribution of products to positive environmental outcomes, therefore, it is necessary to develop a method of appraisal that also takes into account reduced emissions associated with their deployment. This will determine which products truly contribute to the environment, and will create a virtuous cycle that continues to provide incentives for lowering environmental burdens.

## 2. Spreading a Model of Electronic Governance

Increasing the use of electronic communications in corporate, government and regional administrative bodies' operations will reduce the amount of paper documents, and will shorten administrative processing times. This, in turn, will make it possible to significantly increase efficiency and reduce energy consumption. Further, the introduction of electronic tendering can be expected to reduce procurement costs by promoting inter-firm competition.

Corporations are working to computerize firm operations through the introduction of the internet and other measures, because it serves to strengthen their competitiveness. For governments and regional administrative bodies, on the other hand, the motivation to computerize operations is weaker, meaning their efforts tend to lag. For corporations that have computerized operations, the use of paper becomes necessary for processes that could be completed through the electronic exchange of data, if governments and regional administrative bodies have not computerized operations. This not only significantly reduces efficiency, but also increases social costs. Given this, national governments and regional bodies should promote the computerization of operations as much as is feasible in order to limit the increase in social costs. Further, when carrying out this task operational processes must also be reviewed under the assumption that they will be computerized.

If this kind of model of electronic governance is developed, then citizens will become able to confirm the status of applications and other administrative procedures through the internet, regardless of the nature of the request. This will significantly

increase the transparency of governance, and will contribute to increasing trust in government and regional administrative bodies.

Finally, countries implementing models of electronic governance should utilize the examples provided by countries that have already completed this process.

## V. Taking stock and the way forward

### 1. Creating a System for Communicating Results

Results achieved at the IGF, such as the building of dynamic coalitions or the definition best practices, should not only be shared amongst the closed group of IGF participants. Rather, consideration should be given to creating a system for sharing results with stakeholders other than IGF participants.

One example of such a system would be to create a database in which results achieved at the IGF are recorded, as well as newly identified problems and other kinds of feedback obtained from stakeholders that have moved to the implementation phase. This would represent an extremely useful source of information, as it would enable developing countries and other interested parties to more easily implement detailed plans based on actual results.

Further, a network should be built including other international organizations, such as the OECD and Council of Europe, in order to ensure that agreements obtained at the IGF lead to concrete action.

### 2. Future Role of IGF

This year marks the third convening of the IGF. It is therefore an appropriate time to consider the future direction of the debate on internet governance.

For example, until now discussions at the IGF have revolved around four to five themes. As well as deepening debate on these themes, new issues should be considered in addition to governance issues, such as global issues emerging from the use of the internet, or the sharing of best practices. One possibility is to add the theme of “Internet and Environmental Problems,” in response to the increasing importance of the shared global problem of climate change.

Further, the IGF should develop into a pioneering meeting by reflecting the internet age. Enabling multi-stakeholders to freely participate would allow a diverse range of

opinions from a diverse range of participants to be heard. The IGF could then summarize debates and strengthen the spread of its message.