



ITU  
and  
Climate  
Change

**ITU Symposium on ICTs and Climate Change**

15-16 April 2008 Kyoto, Japan



MIC

**Report on  
the Symposium on ICTs and Climate Change  
15-16 April 2008 Kyoto, Japan**

**June 17, 2008**

**Masahiko FUJIMOTO**

**Director, Information Applications Promotion Office,  
Information and Communications Policy Bureau,  
Ministry of Internal Affairs and Communications (MIC), Japan**

# 1. Outline of the Symposium

(1) Dates: April 15 to 16, 2008

(2) Venue:

Kyoto International Conference Center (Kyoto city)



(3) Organizers:

MIC of Japan, International Telecommunication Union (ITU)

(4) Participants:

Approx. 260 representatives of the private sector, research institutes, international organizations and governments of 23 countries

(5) Chairman:

Mr. Takashi Hanazawa, Senior VP, Director,  
R&D Planning Dept, NTT



(6) Opening Ceremony:

Welcome address by H.E. Mr. Satoshi NINOYU,  
MIC Vice-Minister

Keynote address by Mr. Malcolm Johnson TSB Director,



## Session 1: Climate change: ICTs to the rescue?

Session Chair: **Mr. Art LEVIN**,  
*Head, Corporate Governance  
and Membership Division (ITU)*

### Speakers:

- **Dr Luis NEVES**, GeSI chairperson and Head of Sustainable Development and Environment, Deutsche Telekom (Germany)
- **Mr Tetsuo YAMAKAWA**, Director-General, International Affairs Department, Telecommunications Bureau, Ministry of Internal Affairs and Communications (Japan)
- **Mr Jeff HURMUSES**, President, China and Japan, Tandberg (Norway)
- **Prof. Jun FUJIMOTO**, Research Centre for Advanced Science and Technology, University of Tokyo
- **Dr Tim KELLY**, Head, Standardization Policy Division, ITU-T



## **5 Climate change: ICTs to the rescue?**

5.1 The ICT sector is experiencing rapid growth.

5.2 The use of ICTs can help reduce GHG emissions, both directly, in the ICT sector itself, and indirectly through their application in other sectors of the economy.

5.3 To promote the best use of ICTs, the following points were recognised:

- the positive economic benefits for the ICT sector that can be gained through an environmentally-friendly approach to business
- the need for exchange of views/information on policy development at national, regional, and global levels
- the establishment of common approaches at the international levels to evaluate CO2 emissions
- the development of policies to create an appropriate incentive mechanism, and
- the importance of awareness and pro-environmental behaviour on behalf of individual ICT users.

## **Session 2: Corporate responsibility: Towards a climate-neutral ICT Sector**

Moderator: **Mr. Kenn CUKIER**,  
Journalist, The Economist



### Speakers:

- **Mr Mitsuo KOBAYASHI**, Manager, Corporate Environment Affairs, Asia-Pacific, IBM
- **Mr Dave FAULKNER**, ITU-T Study Group 15 Q2/15 rapporteur, BT (UK)
- **Mr Tetsuo TAKEMURA**, Corporate Officer, Global Business, Information & Telecommunication Systems, Hitachi, Ltd (Japan) Hitachi, Ltd., Japan
- **Mr Atsuhisa TAKAHASHI**, President, Corporate Environmental Affairs Unit, Fujitsu Ltd (Japan)
- **Ms Joanna GORDON**, WEF (Switzerland)

## **6 Corporate responsibility: Towards a climat-eneutral ICT Sector**

- 6.1 Each country should promote initiatives toward energy saving for ICT equipment and systems and encourage the adoption and use of energy saving.
- 6.2 There is also a corporate responsibility to achieve climate neutral status, in which public-private partnership is essential. Creating the right environment, with appropriate incentives, is an important part of this process. To get this process moving, the following points were recognised:
- a positive outlook on environmental issues: not as a cost but as a business opportunity, and
  - respect should be given to Corporate Social Responsibility (CSR) and increased awareness among company executives.

## Session 3: ICTs for monitoring climate change

Moderator: **Dr. Hiroshi KUMAGAI**,  
National Institute of Information and  
Communication Technologies (NICT, Japan)

Speakers:

- **Mr Hiroyuki ICHIJO**, Chairperson of the WMO Expert Team on the WMO Information System (WIS) and Global Telecommunication System (GTS) Communication Techniques and Structure
- **Dr Hiroshi KUMAGAI**, National Institute of Information and Communication Technologies
- **Mr Muhammad HELMI ABDULLAH**, Director, Corporate Communications Division, Malaysian Meteorological Service
- **Mr Alexandre VASSILIEV**, Study Group Counsellor, ITU-R



## **7 ICTs for monitoring climate change**

- 7.1 ICTs play a vital role in monitoring and addressing climate change and in facilitating the basic science which has helped to bring the issue of global warming into the public domain and to raise awareness of future challenges.
- 7.2 ICTs—used for instance in remote sensing, climate forecasting and environmental monitoring—can also help in mitigating and adapting to climate change.
- 7.3 To promote remote sensing utilizing ICTs, the following points were recognised: a cooperative relationship including the private sector at the international level, the efficient use of spectrum, and the greater use of observational data and a focus on efficient ways to distribute information such as disaster warnings.



## Session 4: ICTs as a clean technology

Moderator: **Mr. Yoichi MAEDA**, Chair,  
ITU-T Study Group 15 (Optical and other  
transport network infrastructure)

### Speakers:

- **Mr Yoshiki KAWAKAMI**, Director of Enterprise Operations,  
CISCO Japan
- **Mr Hiromichi SHINOHARA**, Associate Senior Vice  
President Executive Director, Information Sharing  
Laboratory Group, NTT Japan
- **Mr Robert SHAW**, Head, ICT Applications and Cybersecurity Division, ITU-D
- **Dr Yutaka YASUDA**, Vice President, General Manager of Core Technology Sector,  
KDDI (Japan))



## **8 ICTs as a clean technology**

- 8.1 Each country should consider promoting the use of e-government at national, regional and local levels, as well as the implementation and adoption of ICTs in various social systems, such as medical care, education, business and employment, in order to achieve a further reduction of GHGs through the use of ICTs.
- 8.2 ICTs can also be used by companies and individuals, for instance to substitute for travel, or for “dematerialization” of goods and services requiring transport of “atoms” by the transport of “bits”.
- 8.3 The importance of establishing monitoring systems, using ICTs, to forecast and monitor the impact of natural and manmade disasters, particularly in developing countries, LDCs and small economies is recognised.
- 8.4 Strengthening the capacity of developing countries to use ICTs for sustainable development is acknowledged.

## Session 5: Towards a high-bandwidth, low carbon future

Moderator: **Mr. Charles DESPINS**,  
President PROMPT Next Generation  
Internet Initiative (Canada)



### Speakers:

- **Mr. Gareth JOHNSTON**, Director of Corporate and Government Risk, Climate Risk Pty Ltd (Australia)
- **Mr Hans-Otto SCHECK**, Senior Specialist, Nokia Siemens Networks (Finland)
- **Dr Yuji INOUE**, President and CEO, Telecommunication Technology Committee of Japan
- **Mr Nigel HICKSON**, Deputy-Director, EU ICT Policy, Dept for Business Enterprise and Regulatory Reform (UK) Dept for Business Enterprise and Regulatory Reform (UK)

### **9 Towards a high-bandwidth, low carbon future**

- 9.1 ITU should study initiatives that may be required for energy-saving systems and applications where there is a requirement for standardization and the development of ITU Recommendations.
- 9.2 The positive benefits of ICTs with respect to climate change should be actively promoted to other sectors of the economy.
- 9.3 ITU should also work on the standardization of methodologies for the analysis, evaluation and quantification of the GHG reductions that may be achieved through the use of ICTs. It was proposed that ITUT establish a Focus Group open to nonmembers, under the procedures set out in ITUT Recommendation A.7 to facilitate this process. The Focus Group may establish targets for reduction in GHG emissions to be achieved through the implementation of ITU Recommendations.
- 9.4 Energy Saving measures are imperative in the development of ICT, specifically for next-generation networks, both wireline and wireless, and for terminals and network infrastructure.
- 9.5 The possibility of applying the Clean Development Mechanism (CDM) under the Kyoto Protocol to the GHG reductions using ICTs could be studied.

## Session 6: Adapting to climate change

Moderator: **Dr. Tim KELLY**, Head,  
standardization Policy Division, ITU-T

### Speakers:

- **Ms Sangeeta GUPTA**, Director, IT and Services Division, TERI – The Energy Resource Institute (India)
- **Mr Mahabir PUN**, (Nepal) winner of the 2007 Ramon Magsaysay award for community leadership
- **Mr Makoto KAJII**, Associate Executive Director, the Japan Aerospace Exploration Agency (JAXA)the Japan Aerospace Exploration Agency (JAXA)
- **Mr Akira ARUTAKI**, Associate Senior Vice President, NEC Communication Systems, Ltd JapanNEC Communication Systems, Ltd. Japan
- **Prof. D.M. TOTEV**, University of BotswanaUniversity of Botswana



## 10 Adapting to climate change

10.1 ITU should assist countries, particularly developing ones, in preparing for the risks associated with climate change, for instance in rising sea-levels, extreme weather conditions, droughts etc, and should show how ICTs can help with disaster-preparedness.

10.2 The following issues were recognised as being of importance for adaptation:

- disaster preparedness
- actions on food insecurity
- use of remote sensing
- assistance to rural communities
- coordinated actions to assist the most vulnerable countries

## 2. Closing Remarks by Director of TSB

Mr. Malcolm Johnson, Director of TSB remarked at the close of the meeting.

One message is very clear, and that is that there is not, as yet, any internationally agreed common methodology for measuring the impact of ICTs on climate change, either in terms of the direct emission of greenhouse gases or the savings that can be generated in other sectors of industry through the application of ICTs.

He expressed his belief that this is important and urgent work that needs to be carried out in an open, rigorous and multidisciplinary way. It needs to involve not only the whole ITU membership, but also the work of nonmembers, especially those who have so kindly contributed to this event. **He fully supported the meeting's recommendation that an ITUT Focus Group is an appropriate vehicle to take forward this work and said he would make this proposal to ITU's Telecommunication Standardization Advisory Group (TSAG) at its next meeting in July.**

Please see:

<http://www.itu.int/ITU-T/worksem/climatechange/index.html>

Thank you for your attention.



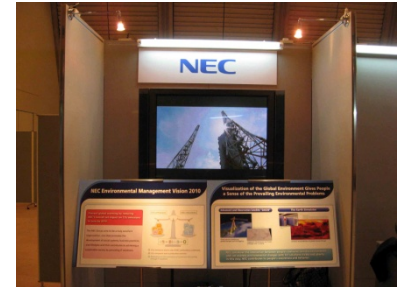
## NEC

The major operations of NEC Group's are IT / Network Solutions Business, Mobile / Personal Solutions Business and Electron Devices Business. NEC declared three goals to aim the global "innovation company in the beginning of 2008,

- TO realize our customers' "dream"
- TO build flourish ubiquitous society for "earth and human friendly"
- TO contribute by an advanced "technology"

To build an environmental sound society, NEC has announced "NEC Environmental Vision 2010" in 2002 to aim to take a good balance between the environmental impacts produced by our business operations and the environmental contributions through our ICT products together with NGN solutions.

NEC website; <http://www.nec.com/>

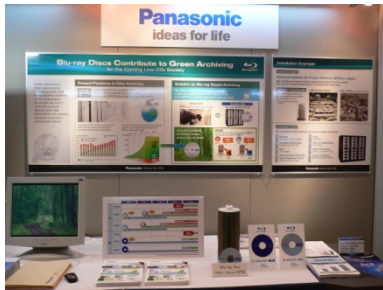


## Panasonic

Matsushita group aims to become a top global company by 2010, by pursuing the management objectives of realizing a ubiquitous networking society and coexisting with the global environment through cutting edge technologies.

Exhibition;

1. "Lifinity ECO management system" is a new energy-saving system with unique built-in current sensors to visualize whole house energy utilization and manage electricity usage with fun animation. (<http://www.mew.co.jp/e/corp/index.html>)
2. In order to reduce power consumption and CO2 emission in the data center, Panasonic proposes a "Cool and Green archive" using No Power Media i.e. Blu-ray Disc. ([http://panasonic.net/pavc/blu-ray\\_disc/archive.html](http://panasonic.net/pavc/blu-ray_disc/archive.html))  
URL: <http://panasonic.net/>



## NTT

The NTT Group CSR (Corporate Social Responsibility) Charter describes communication between people and the global environment. Its basic policies and implementation structure are (1) group-wide implementation of environmental protection activities based on the NTT Group Global Environmental Charter and (2) efforts to reduce the environmental impacts of society as a whole by providing ICT services based on the NTT Group's Vision for Environmental Contribution. The NTT Group reduced CO2 emissions through its Total Power Revolution campaign, which cuts electricity consumption by 124 million kWh. The increased availability of ubiquitous broadband services, which are enriching the lifestyles of our customers and bringing them greater convenience while reducing the environmental impact, will also help us to achieve our goal of reducing CO2 emissions by 10 million tons by 2010, as set down in NTT's Group Vision for Environmental Contribution.



## Fujitsu

Fujitsu is building on its past achievements to initiate the Green Policy Innovation project as a bold measure to assist its customers in reducing their environmental burden.

The project will reduce the environmental burden of ICT infrastructure through, for example, energy-saving, compact ICT equipment, energy-efficient operation enabled by virtualization technology and entire data centers that utilize such technology. In addition, the project will reduce customers' environmental burden through the introduction of new ICT applications, including outsourcing and consulting services. From fiscal 2007 through fiscal 2010, the project aims to achieve reduction of more than 7 million tons of CO2.

In this exhibition, we would like to show the example of environmental e-Learning which we implemented globally. This system can reduce transfer of people and use of text, and reduce customer's CO2 emission.

URL: <http://www.fujitsu.com/global/about/environment/index.html>



## HITACHI

Corporate responsibility toward an environment conscious manufacturer The Hitachi group announced Environmental Vision 2025, which aims to make all products environmental conscious by the year 2025. As a result, Hitachi will control 100 million ton of CO2 emission. Hitachi also promotes CoolCenter50, which aims to reduce 50% of power consumption in a data center in five years. As a tool for ICT solutions, Hitachi developed a system evaluation technique called SI-LCA (System Integration - Life Cycle Assessment), which enables to achieve total assessment for the reduction of environmental loads. You can see some examples of those efforts and results in the exhibition as well as the speech in Symposium. <http://greenweb.hitachi.co.jp/en/>

## NICT

The National Institute of Information and Communications Technology (NICT) is an incorporated administrative agency, and Japanese sole public organization in the ICT field. NICT has been conducting research and development with the consistent objective of supporting the future ubiquitous network society. It has also done research into technologies for the settlement of environmental problems, such as those for the measurement of atmospheric CO<sub>2</sub> concentration distribution using a 2 $\mu$ m wavelength band lidar, energy consumption reduction in ICT systems, including the Bit-Watt Network System for power management through the sensing of electric devices, and ultrafast optical packet communication network technology.  
<http://www.nict.go.jp/>



## OKI

OKI is a key player in the “ubiquitous society.” This society enables users to access services at their fingertips, in their desired style - whenever, wherever, with whatever - in a secure and reliable manner. The company provides products and services that ensure its customers the peace of mind. We also undertake various environmental activities by executing company-wide network-style eco management.

OKI is the one-stop source for ZigBee-based wireless sensor networks – from single chips to total solutions. Here, we showcase our ZigBee technology in a retail store network, where various data, such as temperature, humidity and wind speed that are collected by wireless sensors, are applied to context-awareness. This solution effectively contributes to preventing global warming as it reduces power consumption while maintaining comfort in the retail store.

URL <http://www.oki.com/>