# Asia Wireless Infrastructure Seminar

Package Strategy for Disaster Risk Reduction with Wireless Infrastructure ~

#### **Co-Organizers**

World Bank Tokyo Development Learning Center (TDLC) Asian Disaster Reduction Center (ADRC) Ministry of Internal Affairs and Communications, the Government of Japan (MIC)







### **Asia Wireless Infrastructure Seminar**

Package Strategy for Disaster Risk Reduction with Wireless Infrastructure~

#### 1. Purpose of Seminar

Having suffered from various natural disasters such as the Great East Japan Earthquake in 2011, Japan has learned many lessons and accumulated knowledge and know-how in disaster risk reduction. These Japanese experiences would be useful and applicable to all disaster-prone countries, particularly to developing countries which suffer great damage from natural disasters according to their economic development. In Japan, wireless infrastructure has been utilized effectively and efficiently for disaster risk reduction, and such infrastructure includes various functions from information gathering such as radars and sensors to information distribution or sharing such as early warning systems to communities.

This video conference seminar, co-hosted by the World Bank Tokyo Development Learning Center (WB-TDLC), Asian Disaster Reduction Center (ADRC), and the Ministry of Internal Affairs and Communications of the Government of Japan(MIC) with the cooperation of world-leading private Japanese companies, will introduce lessons learnt from the Great East Japan Earthquake and advanced efforts in disaster risk reduction, focusing especially on wireless technologies/solutions. In addition, the importance and significance of wireless infrastructure for disaster risk reduction as a packaging approach will be emphasized since the whole system from gathering disaster information to warning people and communities must function harmoniously.

The seminar will provide useful ideas and updated technology information to those who intend to strengthen their disaster risk reduction systems utilizing leading wireless technologies. Furthermore, the participants will benefit from these opportunities by strengthening mutual relations with relevant stakeholders in this field.

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#### 2. Co-Organizers

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1 The World Bank TDLC (Tokyo development learning center) is a project unit of the World Bank East Asia Oceania area head office, and is also the Japanese base of GDLN. It was established as a remote partnership project of the Japanese government and the World Bank in 2004, and 200 to 300 remote education programs are held every year.

#### 3. Dates and Times (JST)

(1)1st Seminar

March 11, 2014 from 11am to 12:40pm

(2)2nd Seminar April 15, 2014 from 11am to 1pm

#### 4. Expected Audience

Government officials and others from ICT companies or organizations related to the ICT industries or disaster reduction.

#### 5. Venue

GDLN center in each country

#### 6. Language

English

#### 7. Registration

Please send e-mail to (jointokyo@worldbank.org) by February 28, 2014,

- Name
- Organization Name
- Present Post (Title)
- ·E-mail Address

# 1st Seminar Program

### March 11, 2014

Time(JST)	Program		
11:00-	[Opening]		
12:40	World Bank TDLC		
	[Presentation]		
	Ministry of Internal Affairs and Communications,		
	the Government of Japan		
	Lessons of the Great East Japan Earthquake		
	and importance of wireless infrastructure for		
	disaster risk reduction as a package		
	NTT		
	Anti-disaster wireless systems and their		
	application		
	Panasonic		
	Integration of infrastructure and the utilization of		
	wireless-technology for construction of disaster		
	resistant city		
	Weather surveillance and disaster risk reduction		
	system		
	Questions and Answers (systems of eninions)		
	Questions and Answers (exchange of opinions)		
	[Closing]		

# 1st Seminar Presentation titles and summaries

### March 11, 2014

Organization/ Company	Title	Summary
Ministry of Internal Affairs and Communications, the Government of Japan	Lessons of the Great East Japan Earthquake and importance of wireless infrastructure for disaster risk reduction as a package	Reviewing lessons of the Great East Japan Earthquake and introducing importance and significance of wireless infrastructure for disaster risk reduction as a package.
NTT	Anti-disaster wireless systems and their application	Anti-disaster wireless systems utilized after the "Great East Japan Earthquake" will be introduced and an outline of anti- disaster wireless systems will be presented in terms of frequency, transmission distance and applicable services. This presentation will refer to the role of wireless systems and show the possibility of early recovery of infrastructure by the flexible combination of wired and wireless systems.
Panasonic	Integration of infrastructure and the utilization of wireless-technology for construction of disaster resistant city	Introduction of an experimental operation of Disaster Prevention System and Environment Monitoring System utilizing sensor networks in Vietnam and its assessment results. Proposal of the idea and ways of utilizing peacetime information on transportation, flood-control and water utilization at the time of emergency.
JRC	Weather surveillance and disaster risk reduction system	Proposal of a reliable support system for the flood forecasting and warning by applying radar rain-gauge technology which can measure rainfall intensity more precisely. Moreover, an integrated meteorological and hydrological information system can predict floods and landslides more accurately and it can warn those living in affected areas.

# 2nd Seminar Program

### April 15, 2014

Time(JST)	Program		
11:00-	[Opening]		
13:00	Word Bank TDLC		
	[Presentation]		
	Asian Disaster Reduction Center		
	<sup>「</sup> Lessons of the Great East Japan		
	Earthquake and survey report J		
	TOSHIBA		
	<sup>[Weather Observation and Forecasting]</sup>		
	System and its enlargement for Disaster		
	Prevention		
	Hitachi, Hitachi Kokusai Electric		
	Proposal of a Disaster Mitigation System using		
	sensor network technology for Asian countries		
	NEC		
	Achieving "Early warning" by Wireless		
	infrastructure system]		
	FUJITSU		
	Application of high-capacity E-band		
	wireless links as disaster countermeasures		
	Questions and Answers (exchange of opinions)		
	[Closing]		
	Ministry of Internal Affairs and Communications,		
	the Government of Japan		

# 2nd Seminar Presentation titles and summaries

### April 15, 2014

Organization/	Title	Summary
Company		
Asian Disaster Reduction Center	Lessons of the Great East Japan Earthquake and a survey report	Introduction of the lessons learnt from the Great East Japan Earthquake and a disaster reduction survey in Asian countries conducted by ADRC
TOSHIBA	Weather Observation and Forecasting System and its enlargement for Disaster Prevention	Introduction of Solid-State Weather Radars, an ideal system for weather observation and forecasting. Solid-State Radars have various advantages compared with conventional radars. In addition, a disaster prevention system analyzing and forecasting integrated data acquired by multiple meteorological and hydrological sensors will be introduced.
Hitachi, Hitachi Kokusai Electric	Proposal of Disaster Mitigation System using sensor network technology for Asian countries	This presentation will introduce Disaster Mitigation Systems using wireless sensor network technology. A sensor network is a group of sensor nodes with a communication infrastructure intended to monitor and record conditions at diverse locations. The technology can visualize various "Fields" and realize a better society with "High Efficiency", "Amenity", "Safety/Security" and "High reliability". The wireless sensor network technology also contributes progress for feature logistics systems, ITS systems and disaster mitigation systems. We will introduce application examples for road and bridge maintenance and monitoring systems using wireless sensor network technology. Monitoring construction conditions using a wireless sensor network could contribute to safety evacuation in times of severe disaster.
NEC	Achieving "Early warning" by Wireless infrastructure system	Proposed wireless system, by combining with ICT, achieves "Early warning" which informs community resident of disaster evacuation information accurately and promptly, and contributes to preventing the increase of damage to human resources.
FUJITSU	Application of high- capacity E-band wireless links as disaster countermeasures	Newly developed point-to-point wireless solutions will be presented. The proposed solutions provide multi-gigabit data transport over the air using the E-band frequency spectrum (70/80 GHz), only with compact and energy-efficient radio equipment. In the event of natural disasters, timely delivery of information to/from affected areas is critically important, as fiber-based networks may not be available under the circumstances. The proposed E-band radio technology can be useful as a redundancy media to fiber routes and also helpful as an emergency communication network for earliest possible recovery of communities in the disaster area.

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