

# **UQ WiMAX Gaining the Wireless Broadband Market**

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**UQ Communications Inc., Corporate Officer, CTO**

**Dr. Fumio Watanabe**

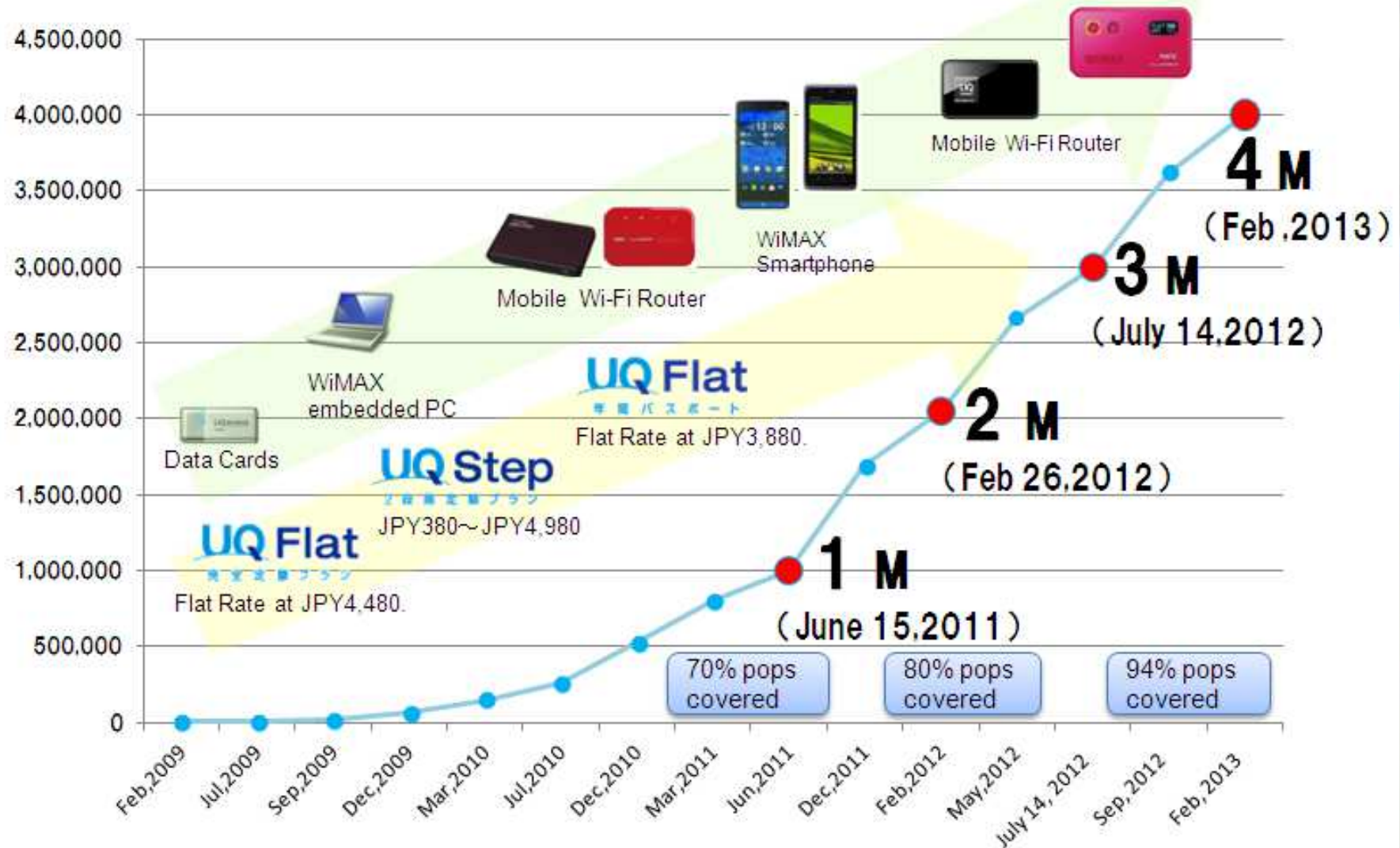
- 1. Successful business model**  
*- Open retail devices & Open Network -*
  
- 2. Expansion of WiMAX market**
  - ✓ **WiMAX as Wi-Fi Backhaul**
  - ✓ **Transportation Systems**
  - ✓ **Digital Signage**
  - ✓ **Remote Camera Monitoring**
  - ✓ **Smart meter network**
  - ✓ **WiMAX Campus Network**

# Successful business

*- Open retail devices & Open Network -*



# Rapid Growth (Number of Subscriber)



# Getting the Best Service Awards

## The best Customer Satisfaction in mobile data services

### Mobile Award 2012 by “RBB TODAY”



Mobile Communication  
Service



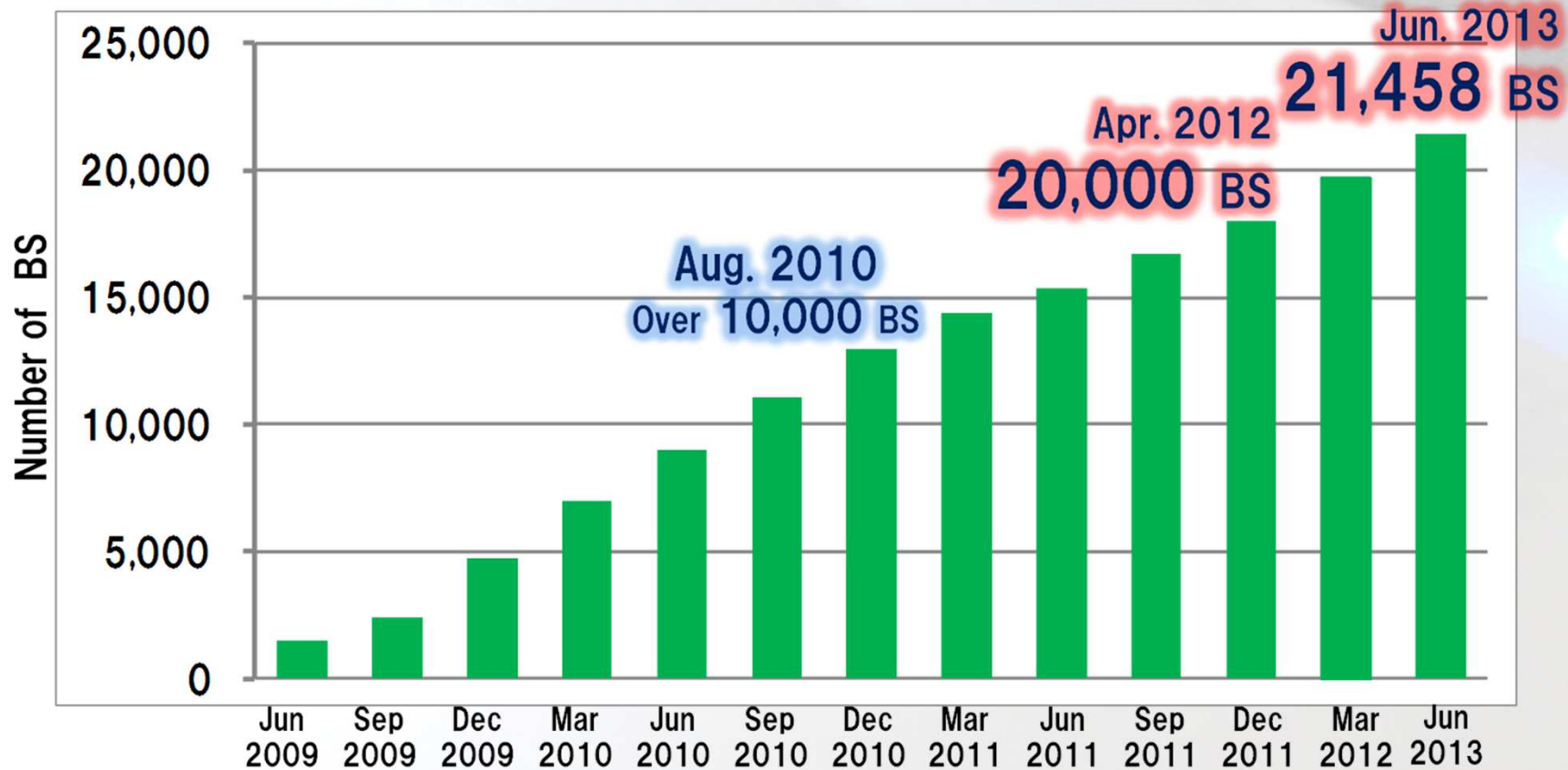
Mobile Router



Public Wi-Fi  
Service

# Rapid Growth (Number of Base Station)

- Nationwide Population coverage : 94%
- Covering 1,186 cities in the nation
- Population covered in major cities : 99%



# WiMAX Devices

## 【 Mobile Wi-Fi Router 】



Wi-Fi WALKER  
DATA08W



AtermWM3600R



URoad-SS10

## 【 Home Wi-Fi Router 】



URoad-Home



AtermWM3450RN

## 【 WiMAX embedded PC 】



dynabook  
R631



Let's note  
SX1



LIFEBOOK  
SH76



VAIO  
Z series

## 【 WiMAX Embedded Tablet 】



EeePad  
TF101-WiMAX

## 【 WiMAX Digital book 】



BookLive!Reader  
Lideo

# Various WiMAX devices for variety of needs

# WiMAX / 3G Dual-Mode Devices (by KDDI)

エリアの 3G

×
スピードの WiMAX


## Smart Phone












ISW13HT      ISW16SH by SHARP      ISW13F by FUJITSU      by KYOCERA      ISW11SC by SAMSUNG

## Wi-Fi router

**Wi-Fi WALKER**  
 DATA08W by HUAWEI













ISW11F by FUJITSU      ISW11K by KYOCERA      ISW12HT      ISW11M

## Tablet

**ビジネスタブレット・TOUGH・ETBW11AA**



Provide Wi-Fi Tethering



# Retailers (Mobile Virtual NW Operators)

**60 MVNOs provide with various business models**



# Expansion of WiMAX market



# WiMAX as Wi-Fi Backhaul

To offload 3G phone data traffic, UQ provides WiMAX backhaul for KDDI Wi-Fi APs



# Visual Information System in trains

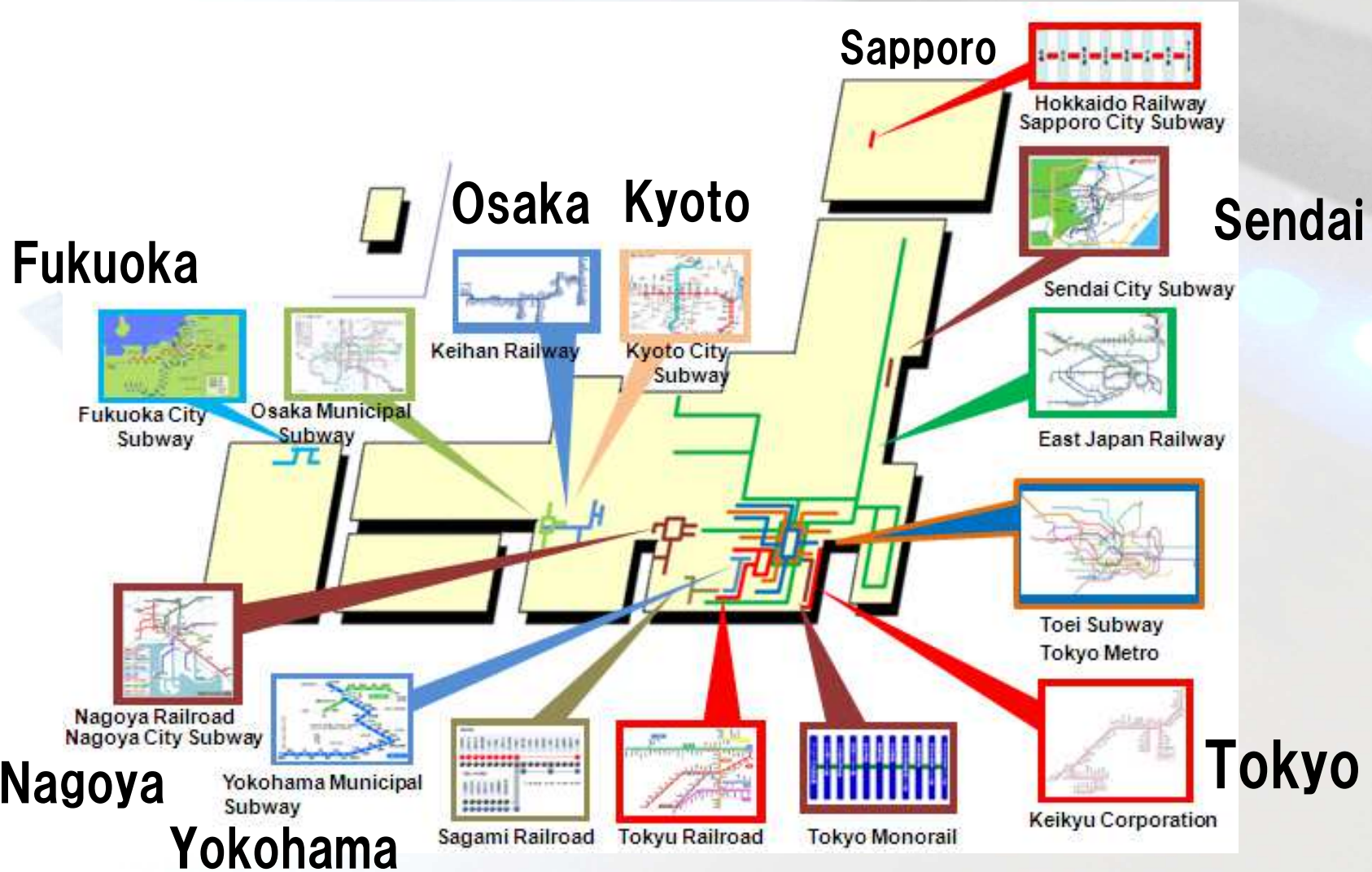
## ■ VIS (Visual Information System)

- VIS provides with information such as flight information, news, weather report, advertisement and etc..
- WiMAX is best backhaul circuit between data center and train.
- WiMAX has made it possible for passenger to get valuable real time info even in the train.



# Metropolitan Transportation Systems

Strategic alliance to provide WiMAX in major cities



# Metropolitan Subway Systems

Strategic alliance with subway, bus to provide WiMAX in stations, subway, bus.

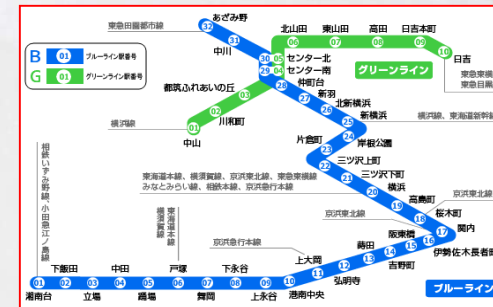
## SUBWAY



TOKYO



YOKOHAMA



## BUS



# Tokyo Metropolitan Subway



Bipolar antenna



Omni-directional antenna



Base station

Pico BS	
RF	10MHz × 1RF
TX power	1W/Unit
size	≒ 6 ℓ
weight	≒ 6kg
Input power	AC100V

# Machine to Machine adoption

Accelerate WiMAX adoption to various machines



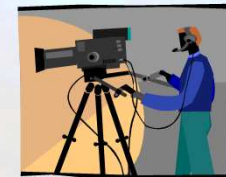
Digital Camera  
Photo Frame



Surveillance  
Camera



Karaoke



Live Broadcast



Digital Signage



Vending Machine



POS



Sticker Printing



## Contents distribution through WiMAX



**Shinagawa Station (Biggest Signage with 44 displays)**



**Tokyo station**

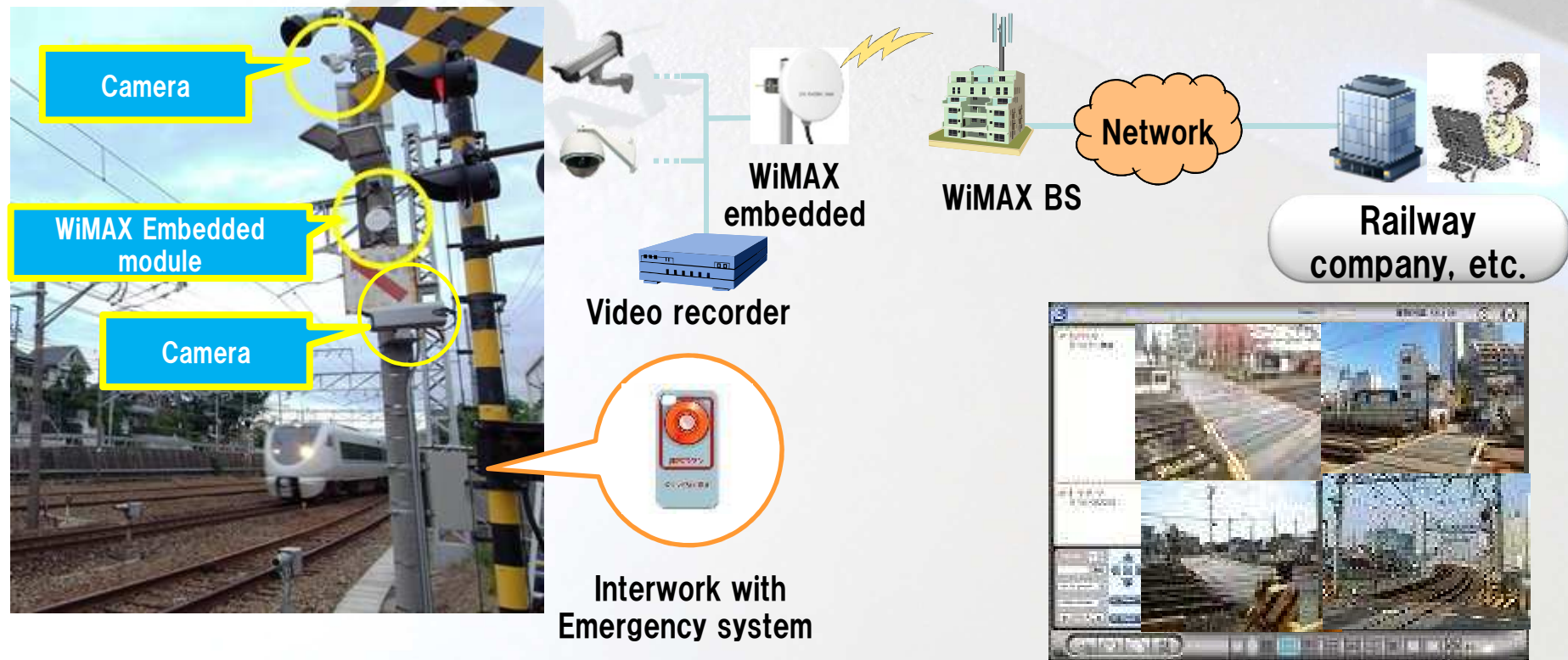


**Sugamo station**

# Remote Camera Monitoring (Railroad Crossing)

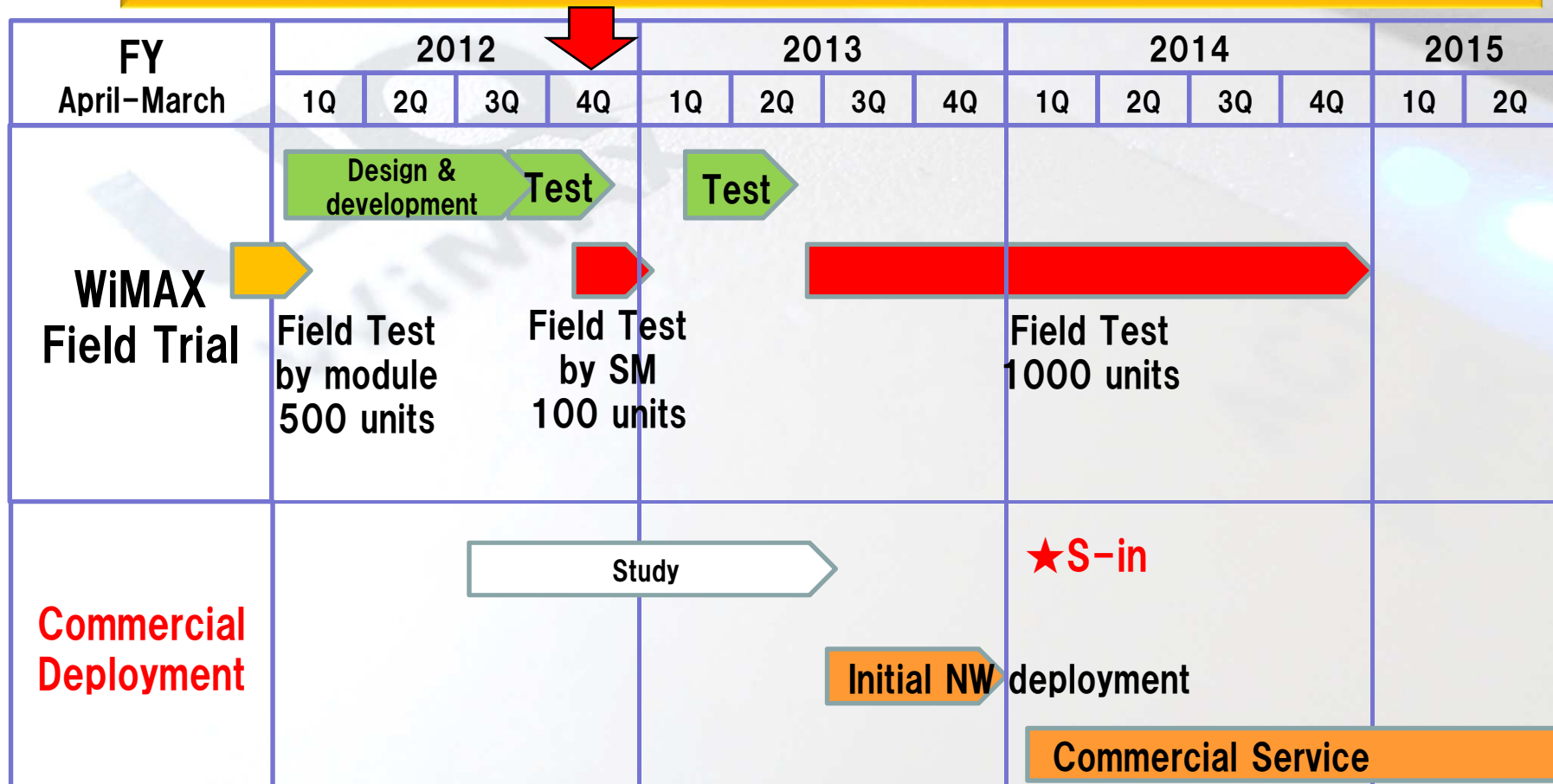
## ■ Remote Camera Monitoring (Railroad crossing)

- Transmits motion pictures at railroad crossing via WiMAX network.
- Real time monitoring of malfunction, physical accident and other troubles.
- WiMAX is easy to install and deploy such system in a short time.



# Kyushu Electric Power Company WiMAX Smart Meter

- Announced that WiMAX will be used if field test is successful
- About 7 Million meters for 10 years deployment
- 2013~2015: about 0.3M meters/year
- 2016~ : about 0.8M meters/year



- **WiMAX Smart Meter field trial**
  - UQ WiMAX NW and certified modules
  - Residential area test
  - Urban apartment test
  - Indoor testing



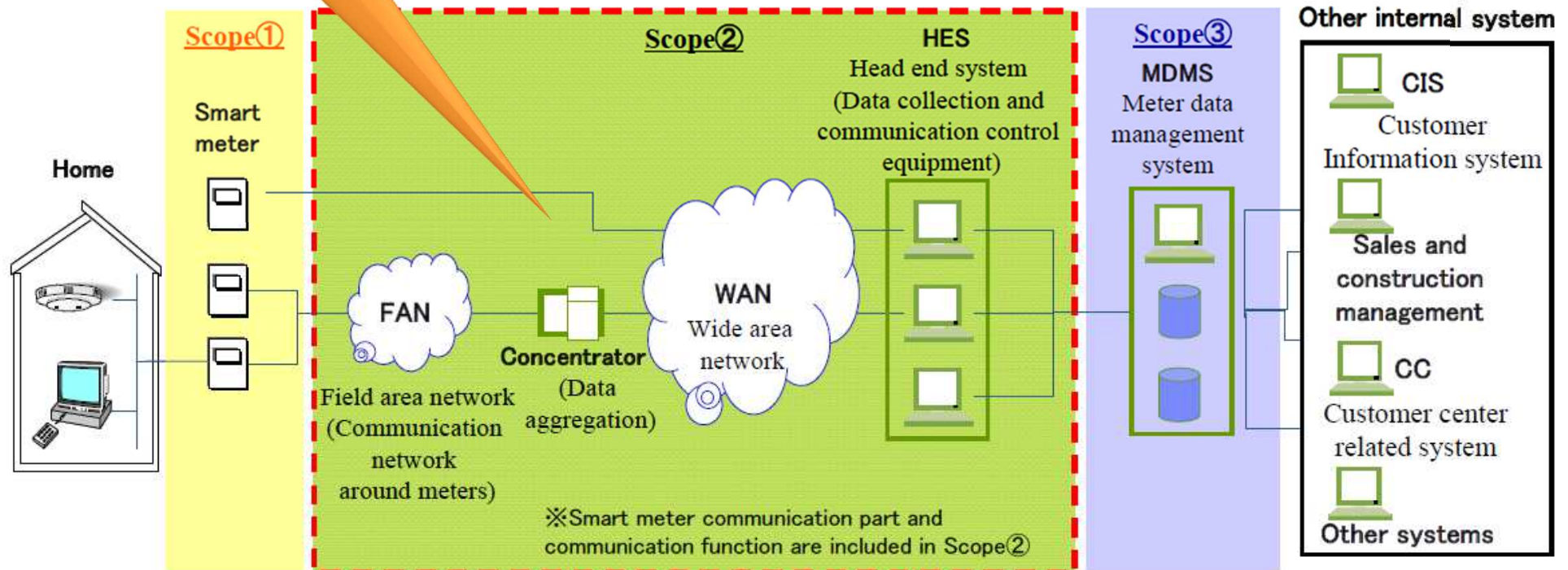
WiMAX testing in an actual meter box



WiMAX Smart Meter

# TEPCO Smart Meter System

- A) Multi-hop Radio (920MHz low-power dedicated radio) with concentrator
- B) PLC with concentrator
- C) 1:N Communication (Public data network, e.g. WiMAX/LTE/3G)



TEPCO "Guidelines for Application of RFP Relating to Communication System for Smart Meters", Nov. 2012

# TEPCO Smart Meter System

- 27 Million Meters for 10 years deployment
- About 3 Million Meters per year from FY2015

FY	2012		2013				2014				2015			
Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Selection	▲RFP		▲Proposal		▲Meter bid (1)		▲Meter bid (2)		▲Meter bid (3)					
	← Evaluation & POC →		▲Contract											
Deploy					▲SM shipment				▲MDMS Operation start					
					← Field Trial →				← Initial Deployment →					
Volume							1.90 Million				3 Million			

# WiMAX Solution in Education

Instant Internet access



demonstrate it in an elementary and junior high school in Wakayama.

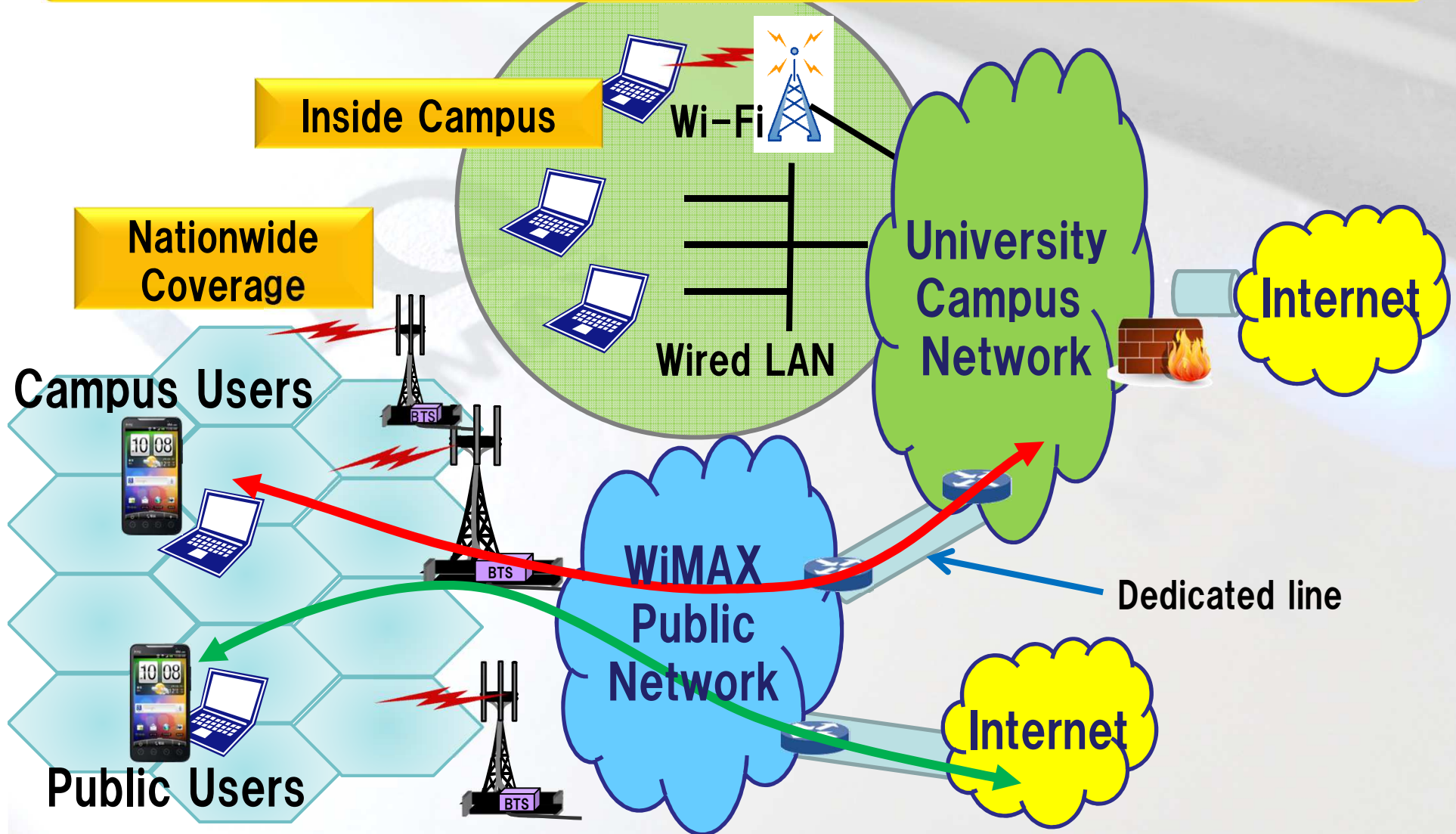


1500 sets of WiMAX embedded laptops are introduced in three years.



# WiMAX Campus Network Anywhere

Direct access to University campus network from anywhere without VPN.





## *Wireless Broadband Internet Mainstream*



*Thank you for your kind attention.*