



# IT Securities as a Critical Enabler in Achieving Transport Securities

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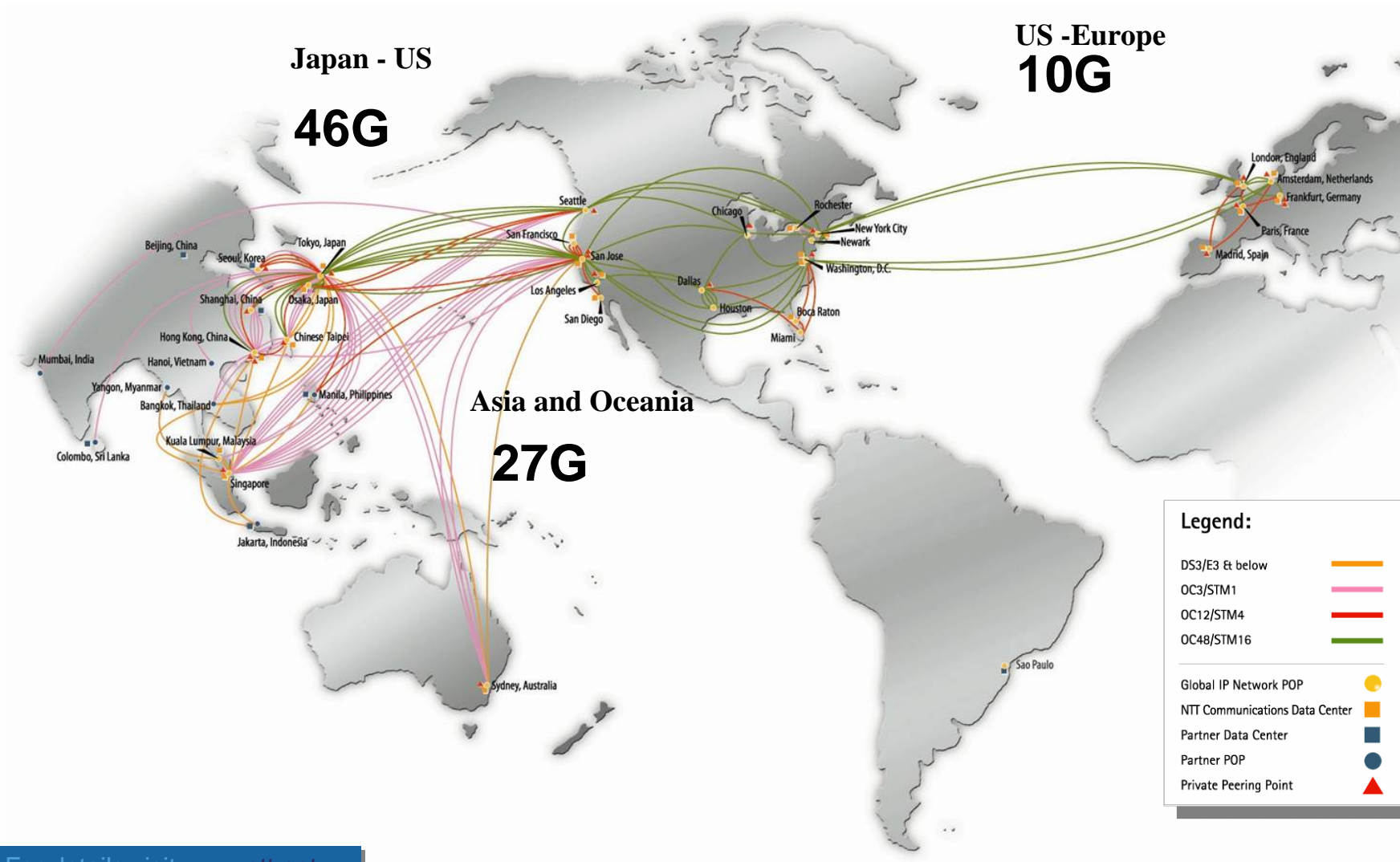
Vice President, Corporate Strategy Planning  
NTT Communications Corporation

December, 2005





# NTT Communications' Global IP Network



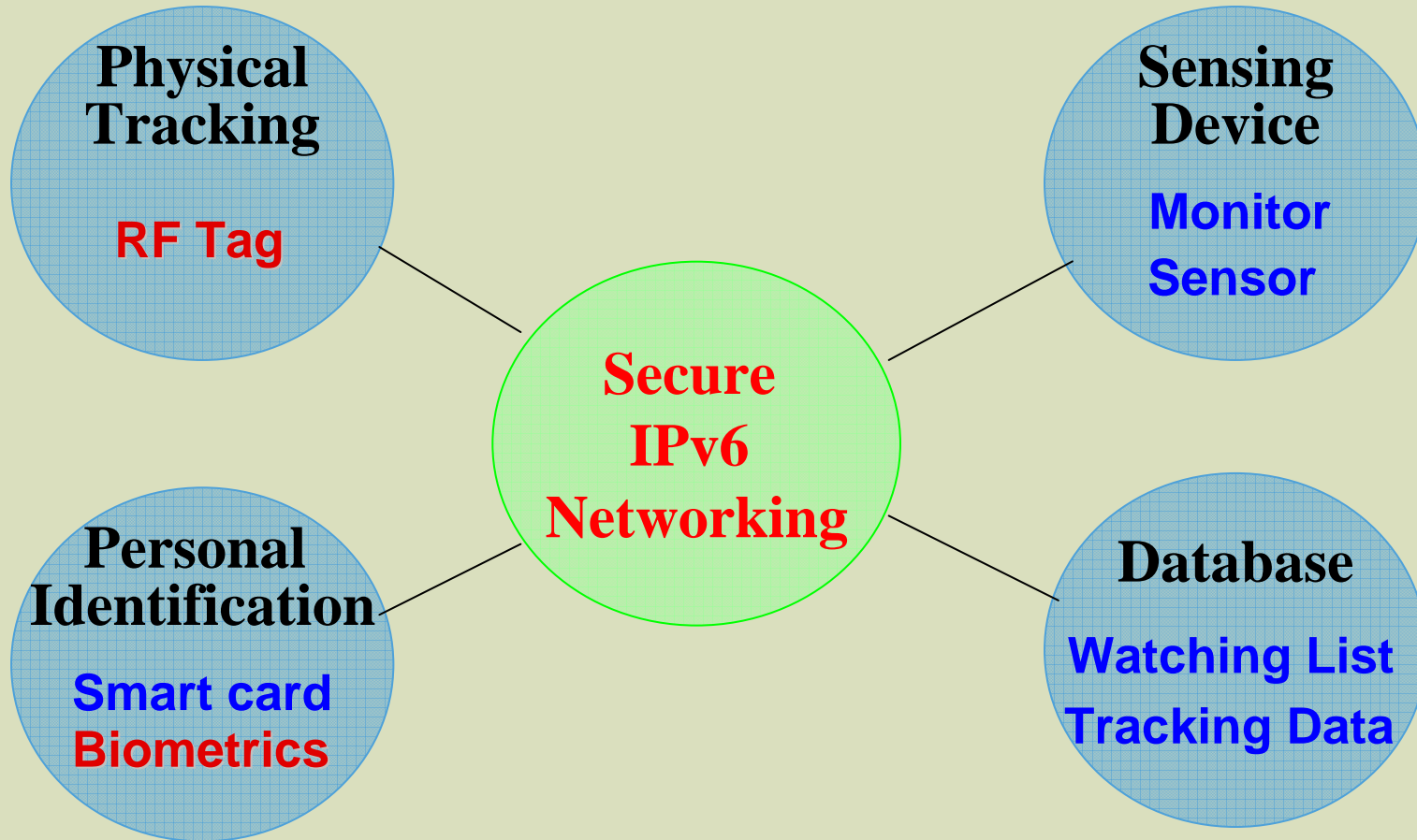
For details visit [www.ntt.net](http://www.ntt.net)

# Cyber Security: Strategic Business Domains

- **Global IP network services**
- **Government, Corporate Intranet/ Extranet**
- **Applications Servers co-location and hosting**
- **Integrated cyber security management of IP networks, and applications**
  - **US\$1 billion revenue**
  - **Intranet/extranet security consulting and management**
  - **Internet security against cyber attacks**
  - **Smart card, RF Tag, biometrics and PKI solutions for both cyber and physical securities**

# Enabling Technologies

## Cyber securities technologies for transport securities

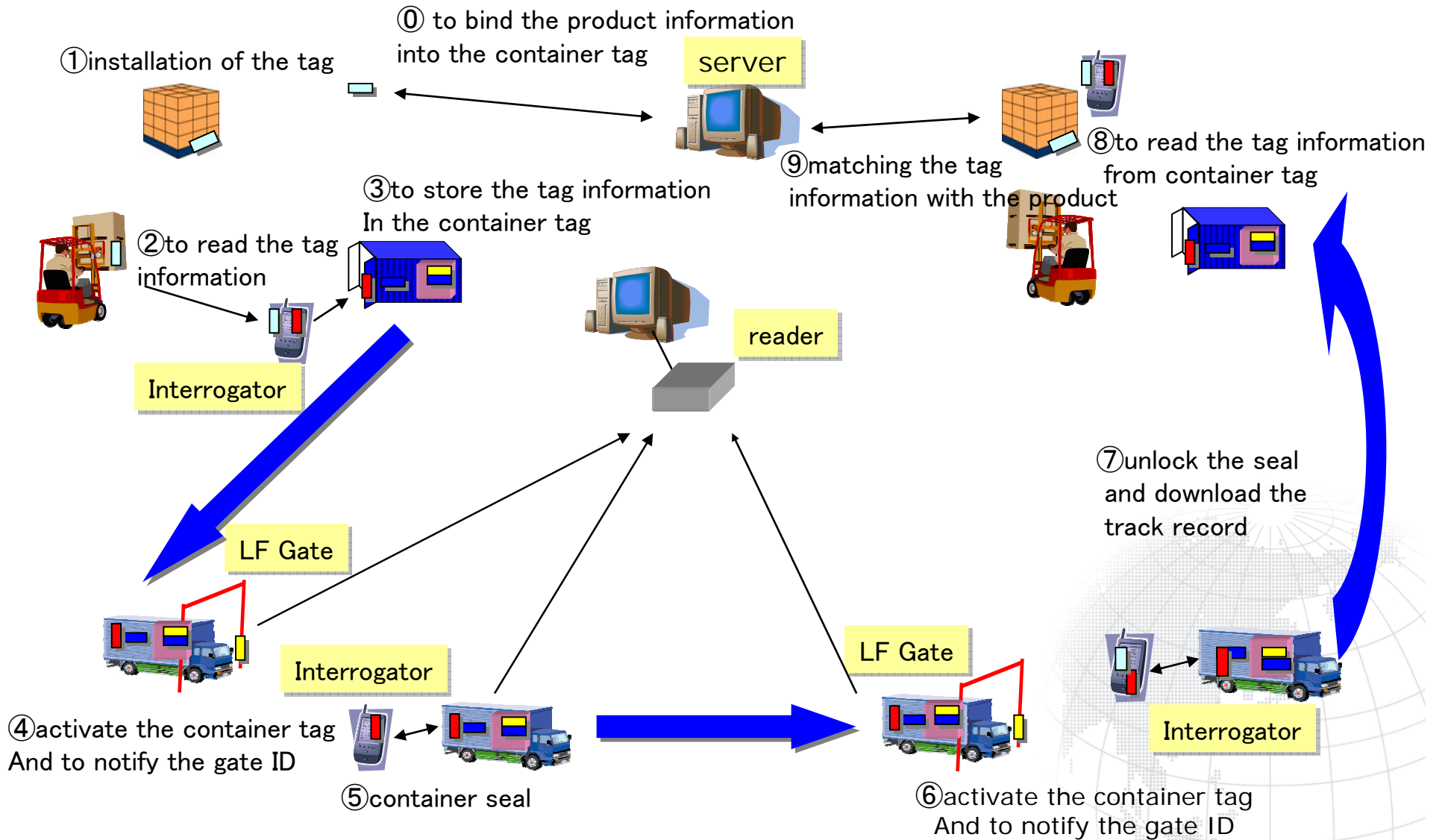


# 433MHz Active Tag

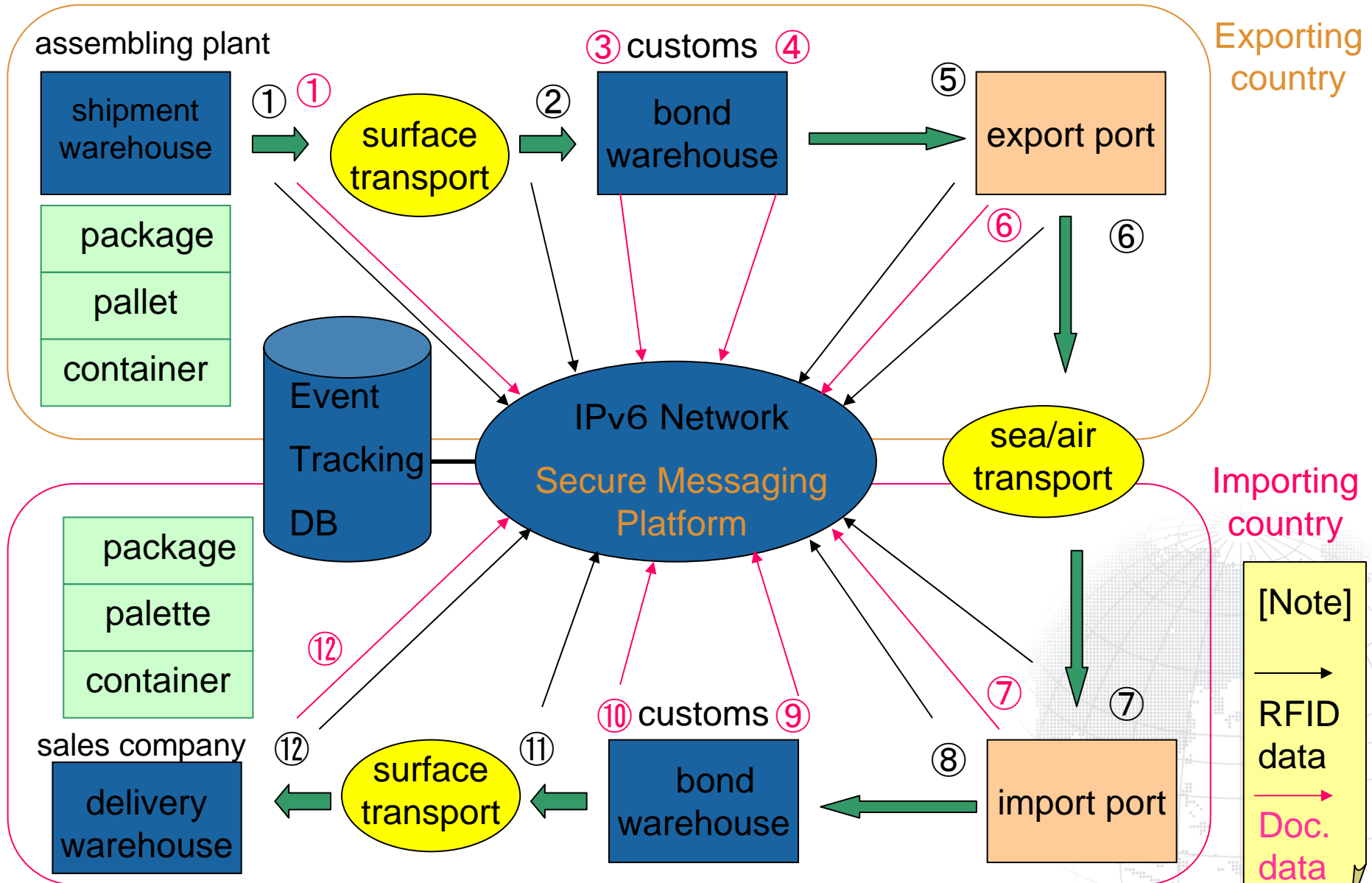
- **Active Tag Container Tracking**
  - Long-life battery/returnable
  - Common spectrum for US, Japan,.....
- **Container Security**
  - Door/vibration Sensor
  - Tracking data storage
- **Supply Chain Management**
  - Tracking data storage
  - Temperature/humidity monitoring



# Container Tracking System



# Overview of International Logistics Tracking



[Note]  
 → RFID data  
 → Doc. data

# Transportation quality monitor

Sensor tags record the quality from origin to terminal.  
Retailer can show customers the real quality.



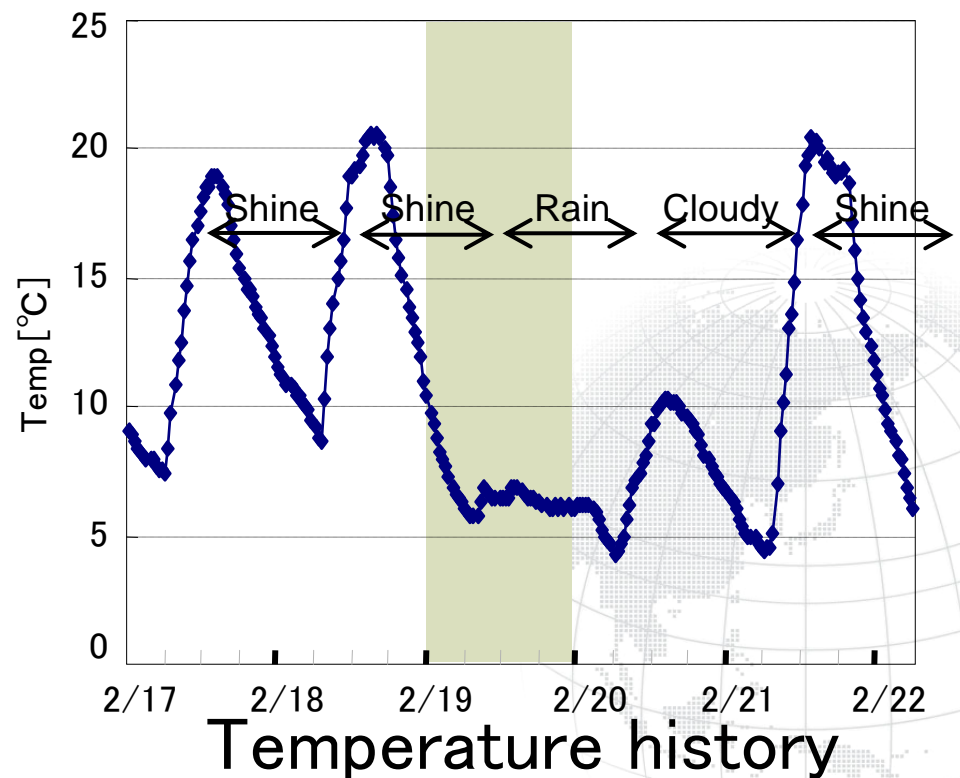
Temperature Monitor Tag for Container



Fake Squid

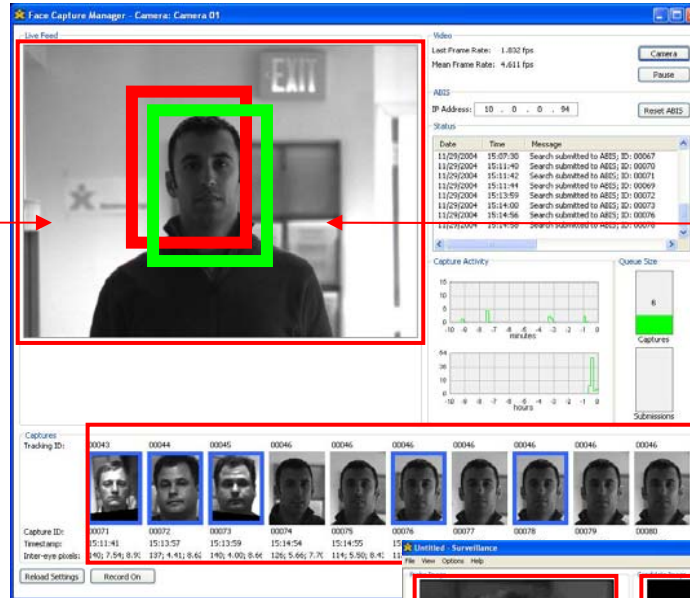


Crystal Apple



# Face Recognition System overview

Camera frame  
LiveCaptureImage  
(1600 × 1200 × 15  
Frame/sec)



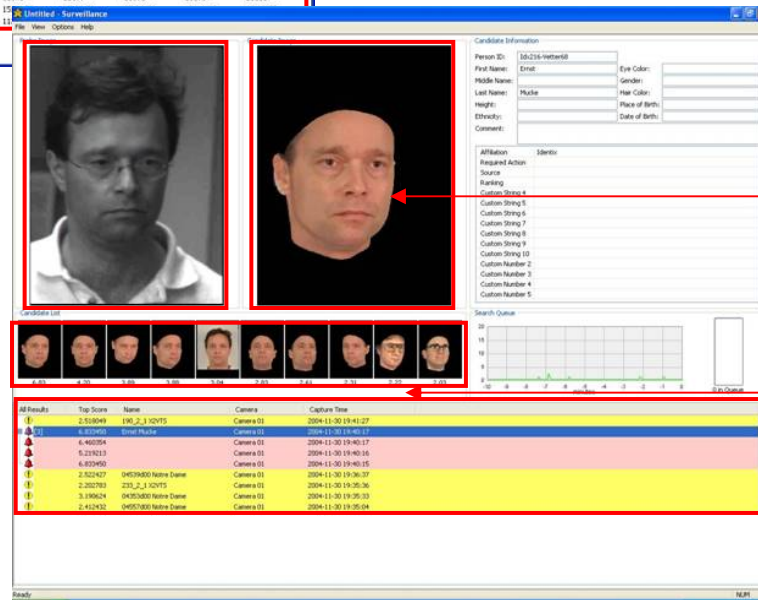
Tacking status  
Green : face capture  
Red : not take the capture

## Face Capture Manager

After tracking data

Tracking data

## Screening Monitor



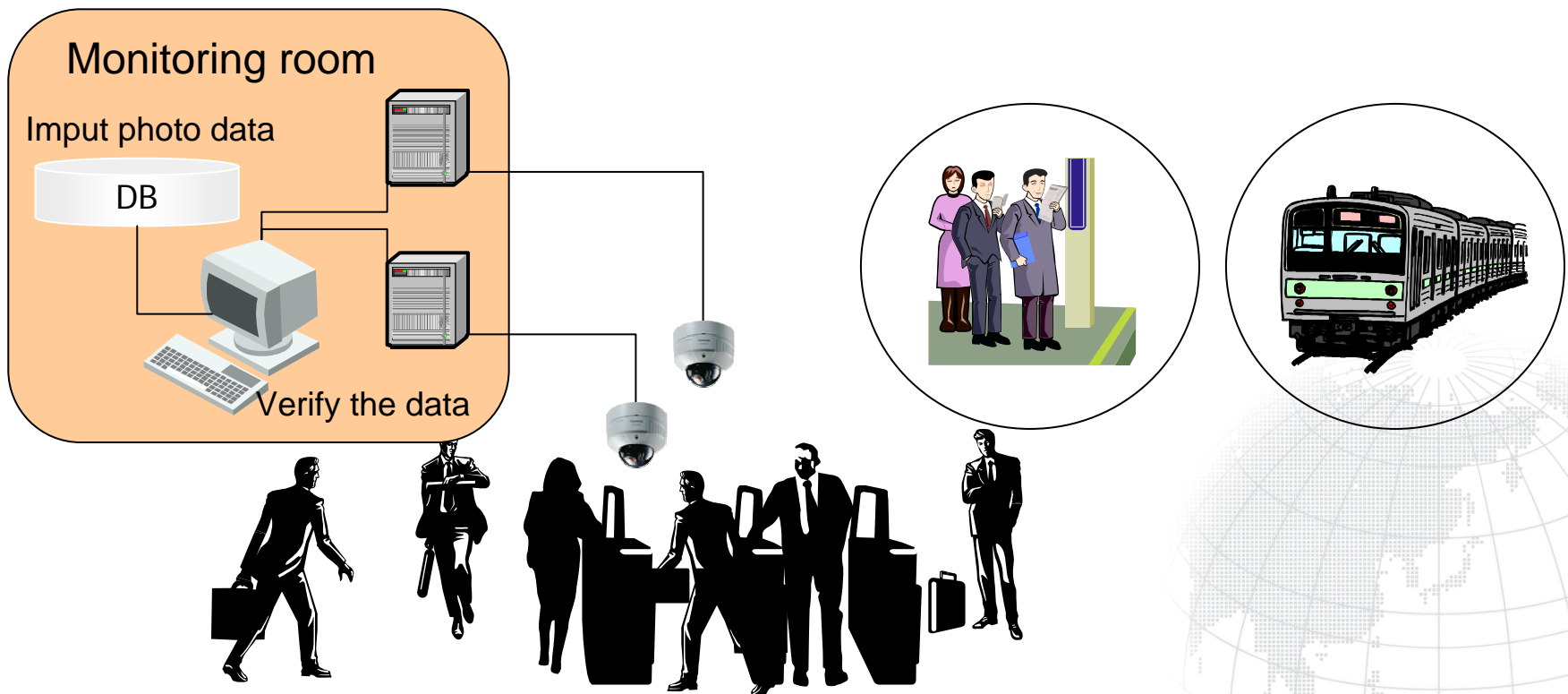
BestHITImage

After searching  
Top10list

Searching list

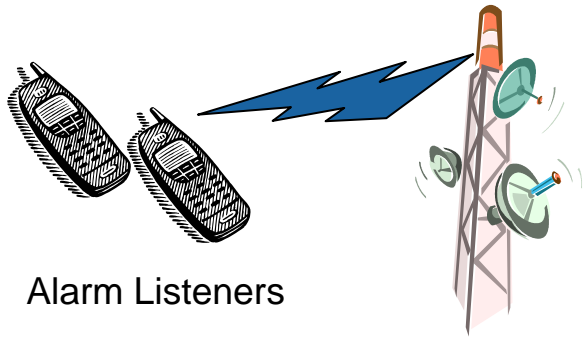
# Railway station Facial Recognition System Solution

1. Verify individuals/passengers using facial information
2. Secure public areas with monitoring cameras
3. Verify individuals/passengers using facial data (e.g., eyes nose mouth etc)

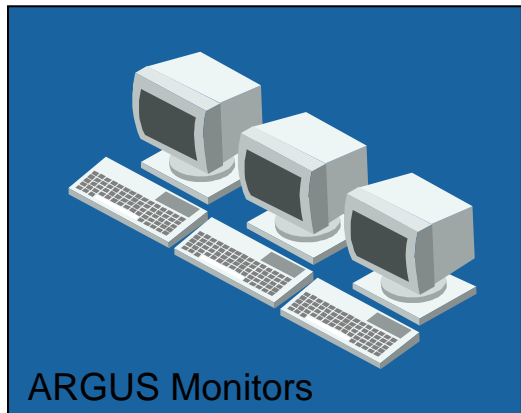


Photograph Individuals/boarding and arriving passengers with monitoring cameras

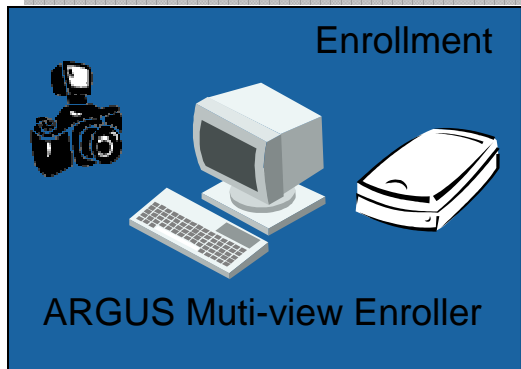
# Total Network Architecture



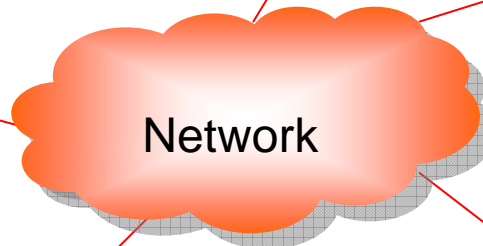
Alarm Listeners



ARGUS Monitors



ARGUS Multi-view Enroller



ARGUS Video Capture



Digital Video Camera



ARGUS Video Capture



Digital Video Camera



Data Center

Abis servers

Watch list DB

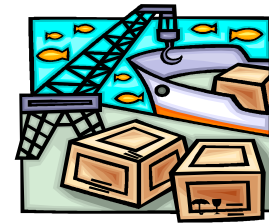
## For Transport security

- Active RF Tag container tracking for both border security and logistics modernization
- Sophisticated detection of suspicious persons using facial recognition
- Further more security enhancement by biometrics, smartcard, sensor, monitor, and database technologies
- Confidential and accurate information sharing among the governments and private sectors over the IPv6 networks
- Leading-edge ICT technologies for cyber securities enhance the physical securities of critical infrastructures

## Aviation Securities



## Container Securities



# Thank You

## Metro Securities

