



Introduction of Information Security Research Division

2005. 5. 13.

Kyo-il Chung, Ph. D.
Information Security Infrastructure Research Group



Contents

- Overview
 - Secure u-IT KOREA
 - Organization of ETRI

- Information Security Research Division
 - Network Security Research Group
 - Information Security Infrastructure Research Group



Secure u-IT KOREA

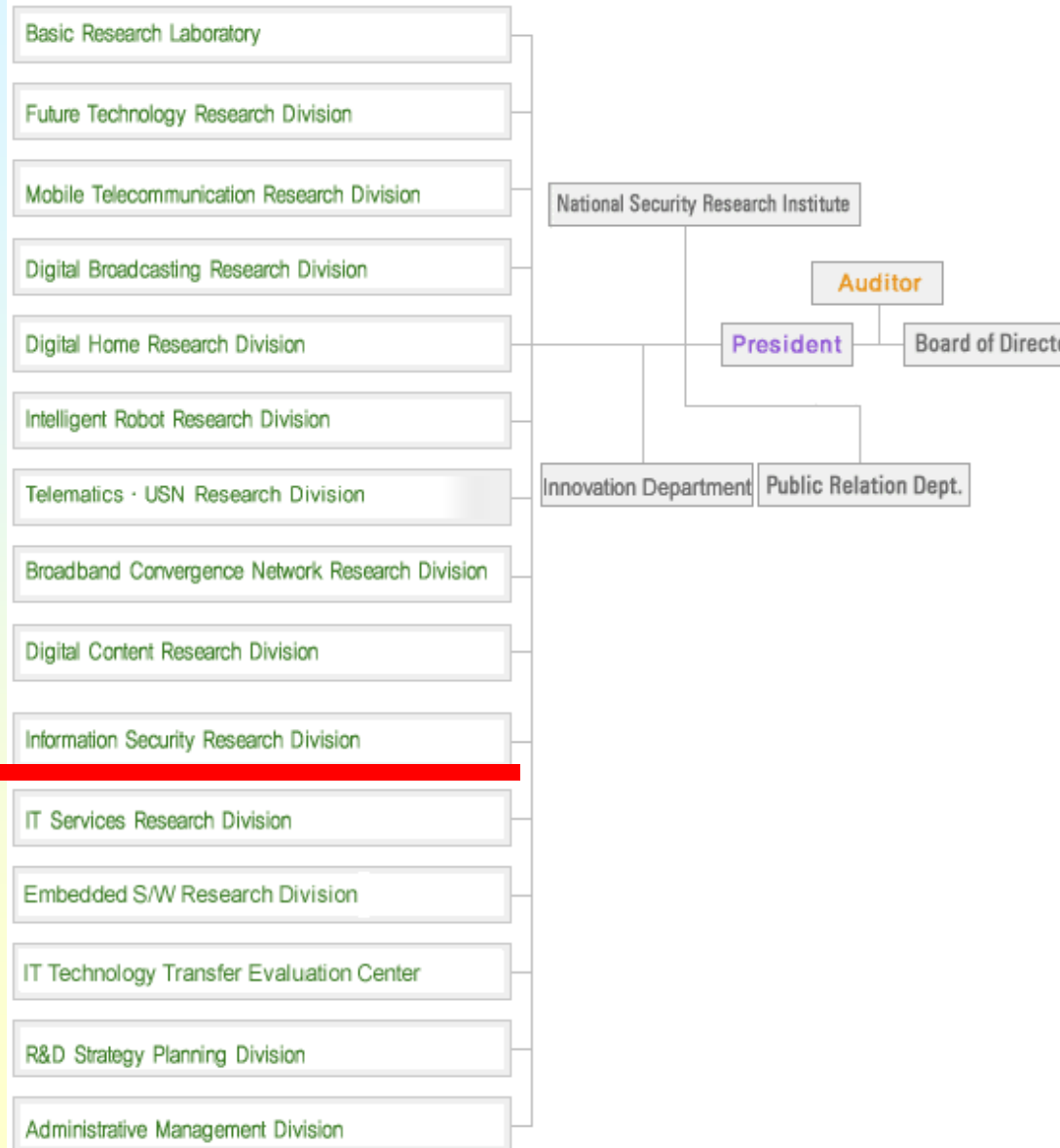


Organization of ETRI

- Established in 1976

- Korea's largest government funded research facility in the fields of IT & Comm.

- R&D Fields :
Semiconductors, Mobile Communications, Networks, Security, etc.



Organization of ISRD

Information Security Research Division

Project Administration
Team

Network Security
Research Group

- Network Security Architecture Team
- Security Gateway System Team
- Secure OS Research Team
- Active Security Research Team
- Privacy Protection Research Team
- P2P Security Research Team
- Home Network Security Research Team

Information Security
Infrastructure Research Group

- Cryptography Research Team
- Digital ID Security Research Team
- RFID/USN Security Research Team
- Biometrics Technology Research Team
- Biometrics Chipset Research Team
- Bio Sensor Research Team
- Wireless Security Application Research Team

- ✚ Next Generation Security System Tech.
 - Security Gateway System
 - Secure Router System
 - Security Management System

- ✚ Harmful Contents Detection and Filtering Tech.

- ✚ Network Security Tech. for P2P Overlay Networks over Wired/Wireless IPV6 Infrastructures

- ✚ Authentication and Authorization Tech. for Home Networks

Research Areas of Information Security Infrastructure Group (1)

- ✦ Cryptographic Algorithm and Protocol
 - Next Generation Cryptographic Algorithm Design & Analysis
 - High-speed Cryptographic Processor Design
 - Privacy Enhancing Technology

- ✦ Digital ID Security
 - Internet ID Management Technology
 - Autonomous Identity Federation Bridging Technology

- ✦ RFID/USN Security
 - Light-weight Crypto Algorithm for RFID & Sensor Network
 - Low Power & High Speed Processor
 - Security Mechanism for RFID/USN Environments

Research Areas of Information Security Infrastructure Group (2)

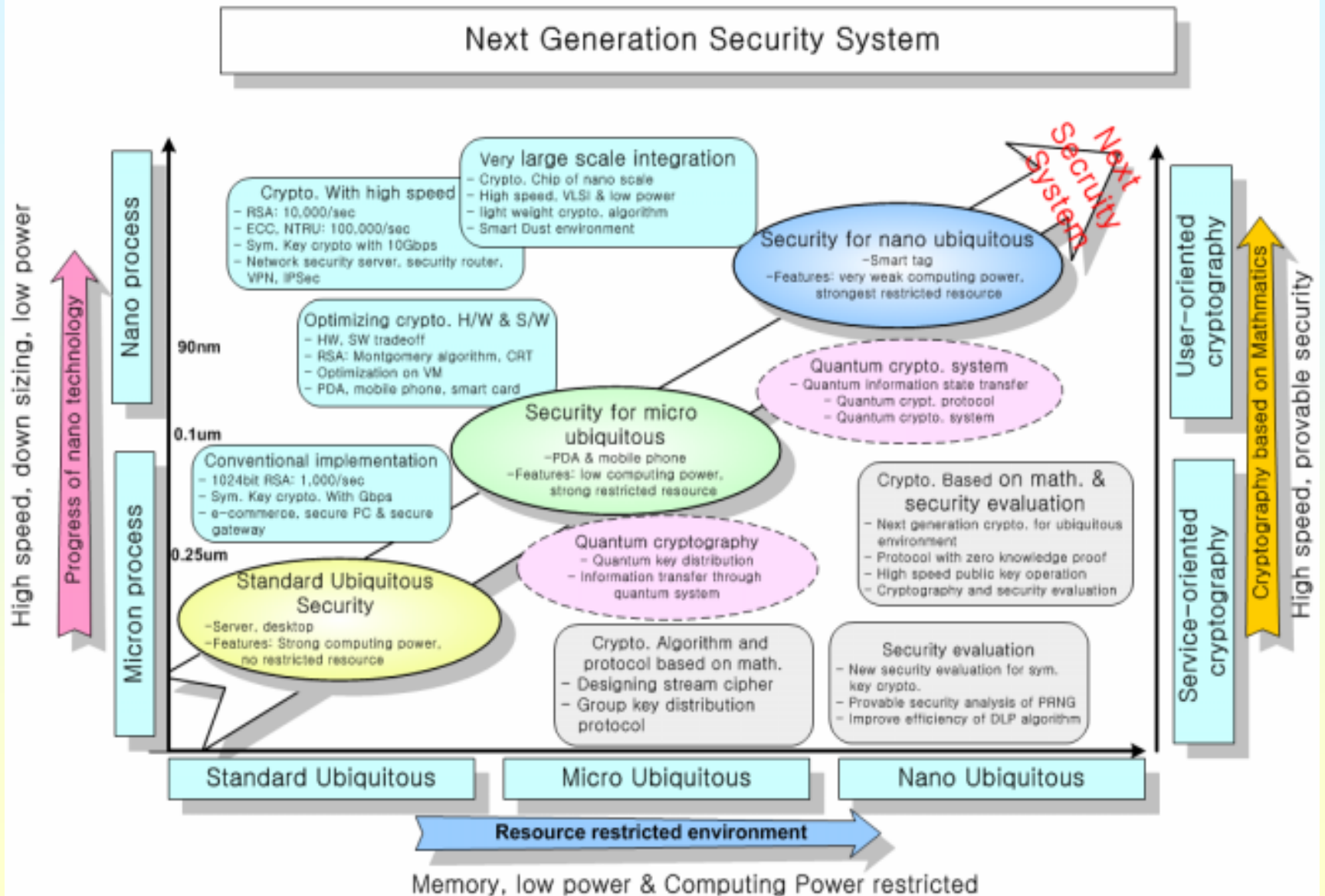
+ User Identification Technology Using Biometrics

- Multi-modal Biometric & Searching Technology
- Biometric Chipset & Bio Sensor Technology
- Biometric Data Protection

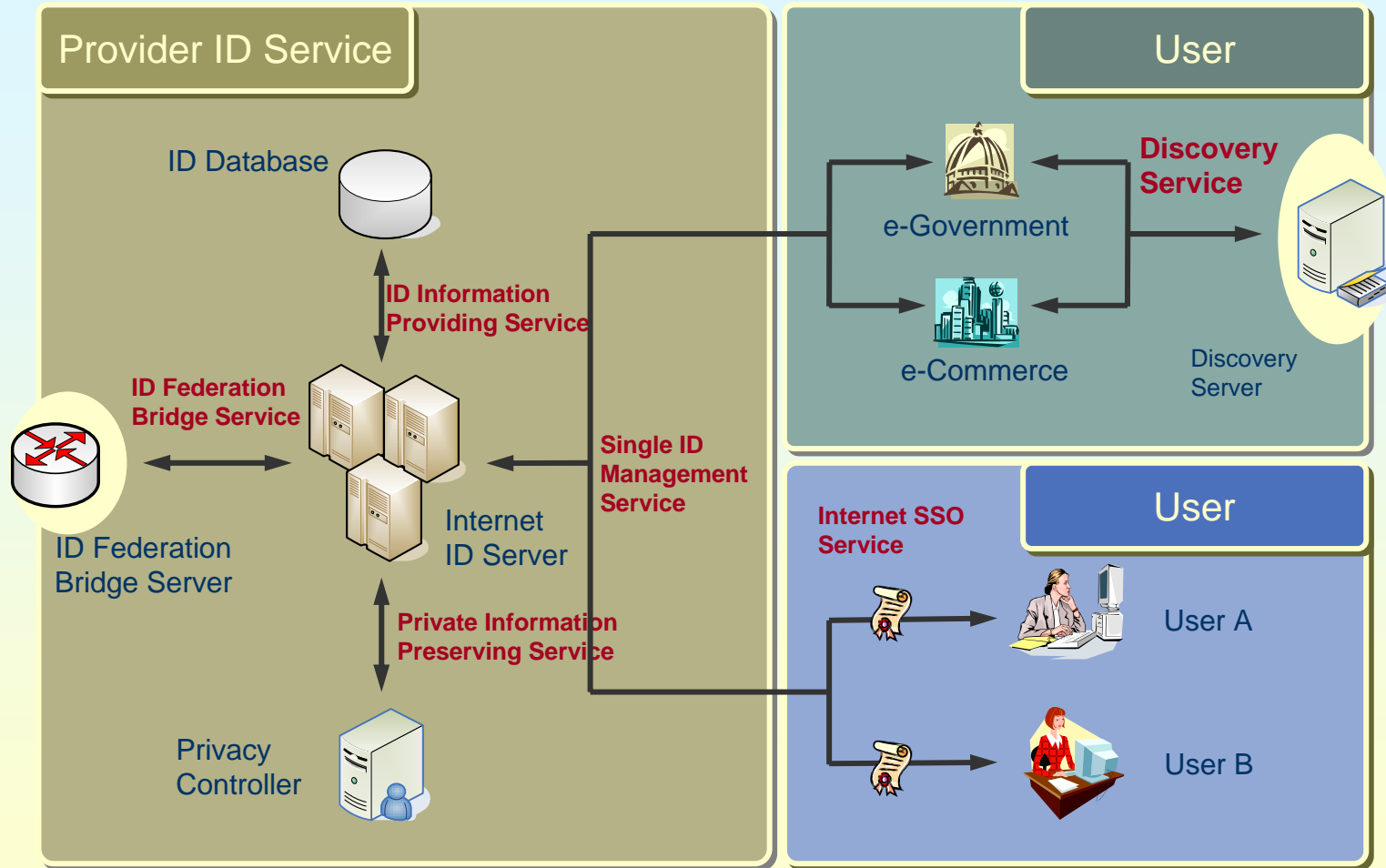
+ Development of Secure Platform for Wireless Network

- Inter-working Security Technology for USIM based WCDMA, WiBro & WLAN Security Platform

Cryptography Research

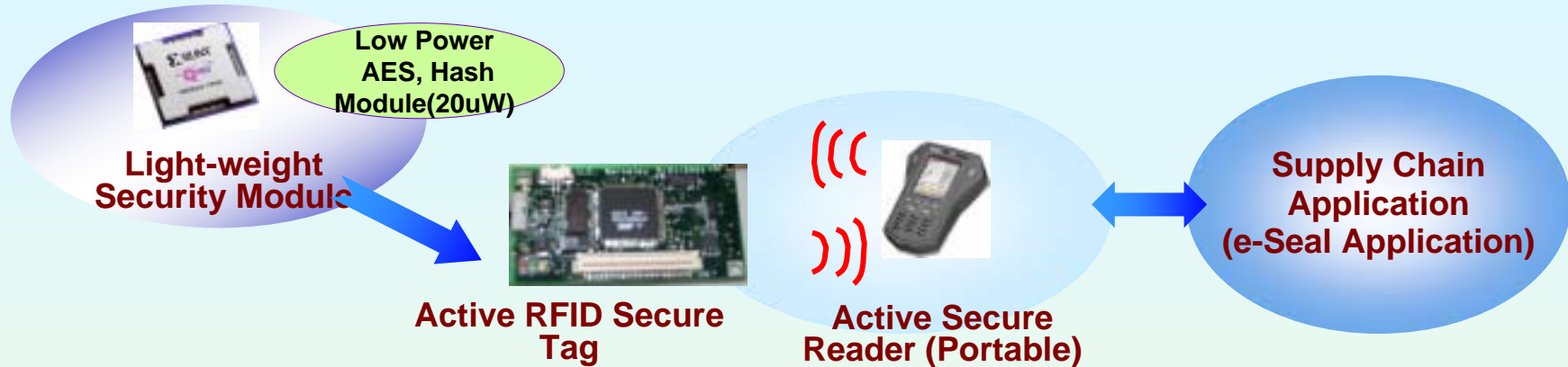


Digital ID Security Research

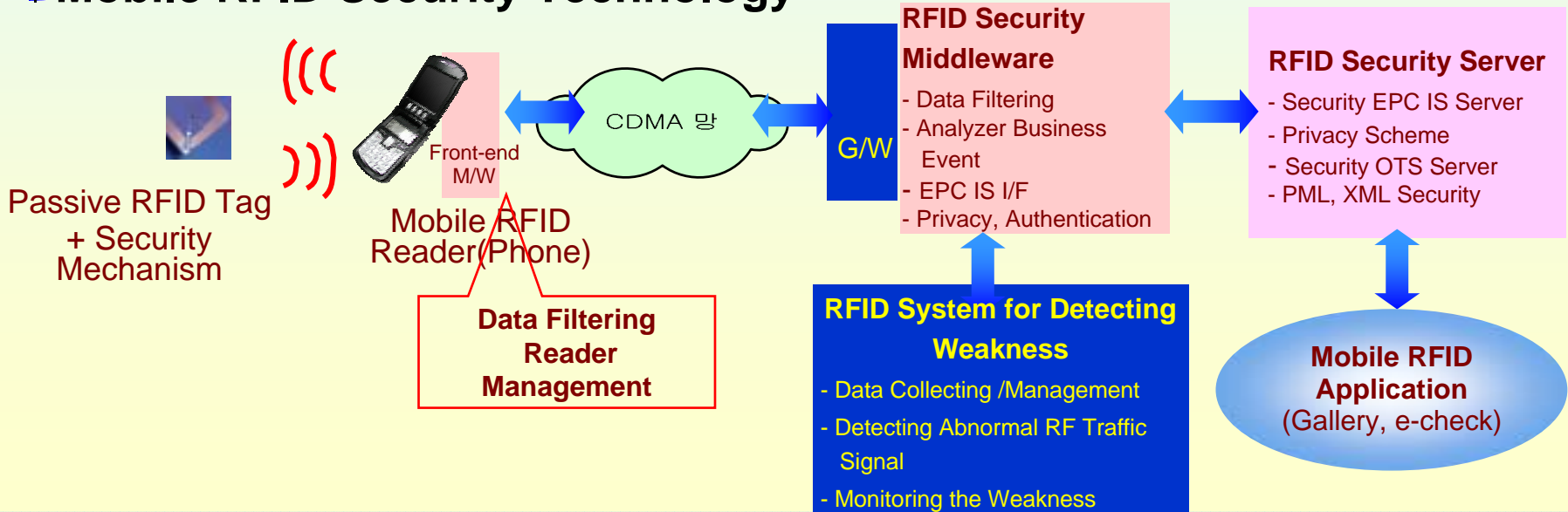


RFID/USN Security Research

Active RFID Security Technology

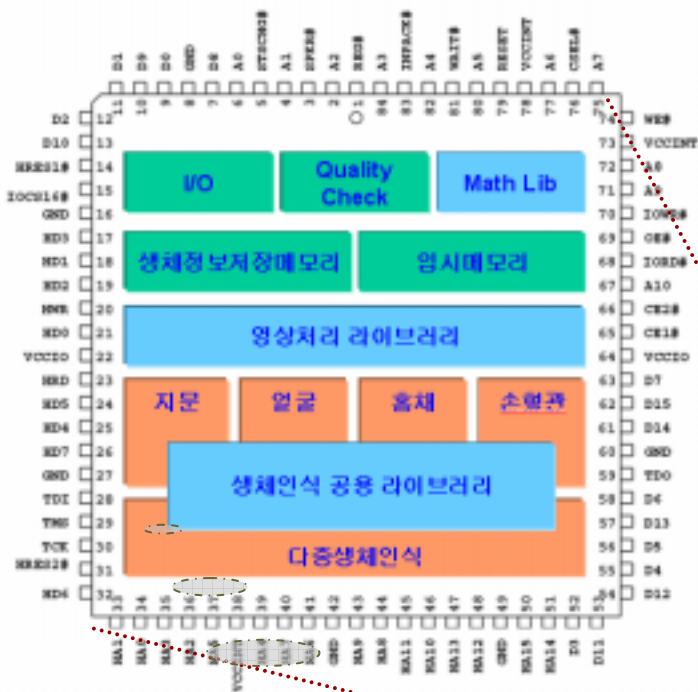


Mobile RFID Security Technology



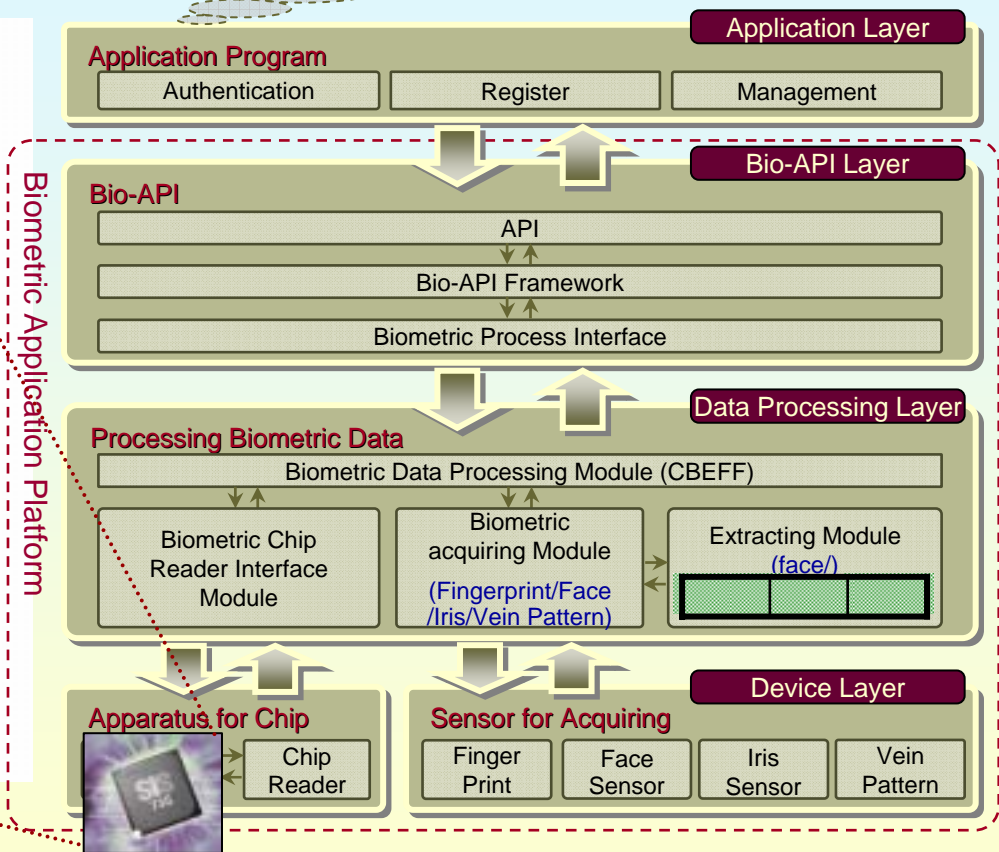
Development of Biometric Chipset

Biometric Process

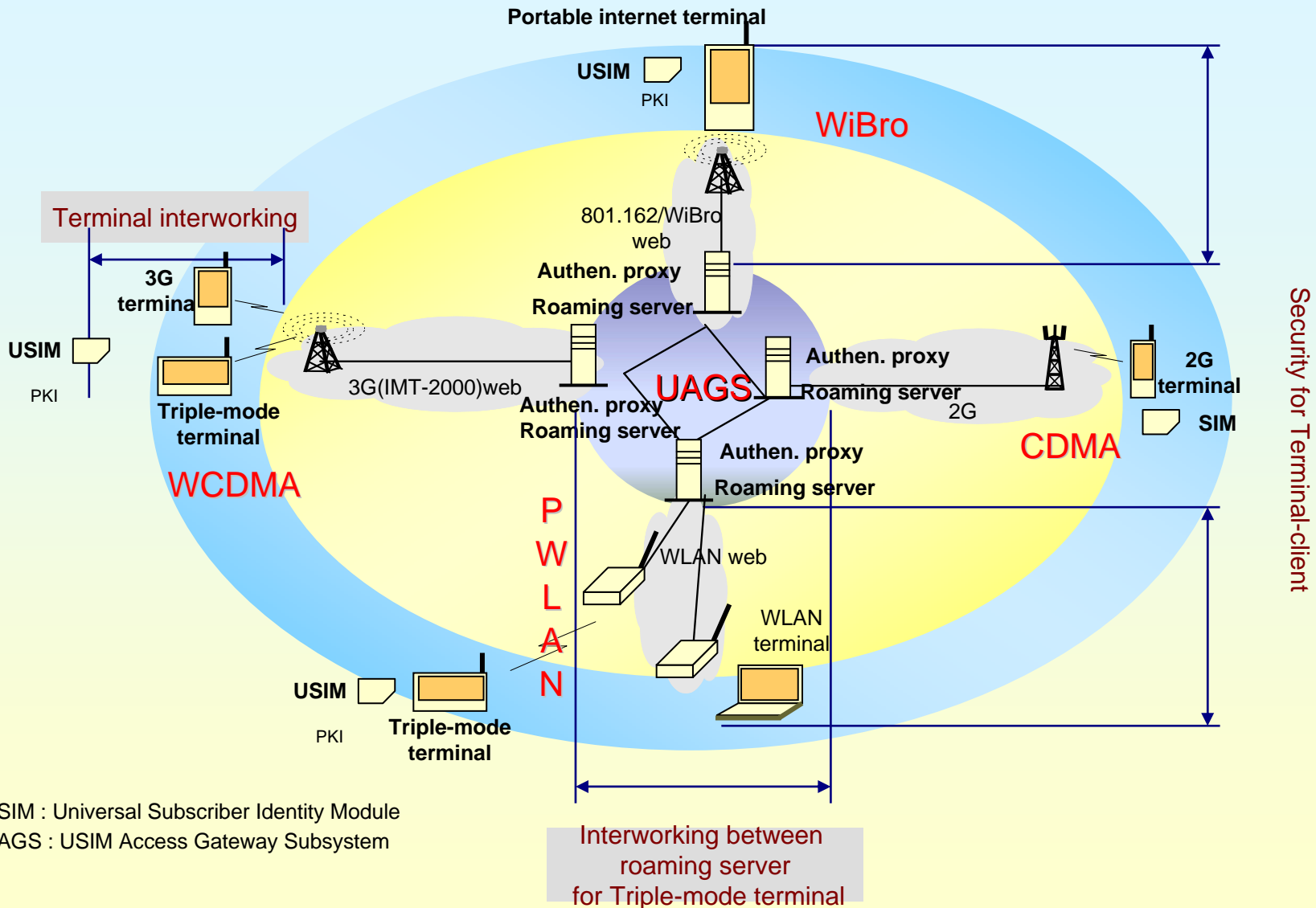


- Single/Multi-modal Processing
- Within Biometric Data

- Standard based Application System such as Bio-API
- User Register/Auth. Service



Secure Platform for Wireless Network



USIM : Universal Subscriber Identity Module

UAGS : USIM Access Gateway Subsystem

Future R&D Plans in Information Security Infrastructure Group

Powerful Initiative

Information Security



Privacy Preserving Tech.

Next Generation Cryptography

- + PETs
- + Cryptographic Protocols

High-level Service for Ubiquitous Environments

- + Efficient Digital ID Management
- + Wireless Network System
- + RFID/USN Service

Conversion of BT & IT

- + Multi-modal Biometric Identification Tech.
- + Biosensor



***Thank You
for your
Attention!***