

Toward one e-ID card for Everything

Takashi Obi

*Imaging Science and Engineering laboratory,
Advanced Research Center for Social Information
Science and Technology,
Tokyo Institute of Technology*

New JAPAN e-ID card

toward Infrastructure of e-Business

- National e-ID card is difficult to widely used in e-business
 - Lack of applications
 - Require specialized hardware
 - No need for high level authentication in the private sector
- **Now we ready to provide “real deal” for citizens**
 - Realize multi functions with one e-ID card
 - New Japanese PKI (JPKI) will be disclosed to private sector under permission of minister of the ministry of internal affairs and communication
 - Plan to support multi-devices, CATV STB, smartphone, etc.
 - JPKI will be accepted by Banks, Credit card issuers, etc.

Use in the House and Don't Leave Home without It



BANK



Shop

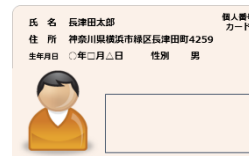


Hospital

Use as alternative cards



ATM



Support Multi-Device



Pharmacy

Health insurance



PC

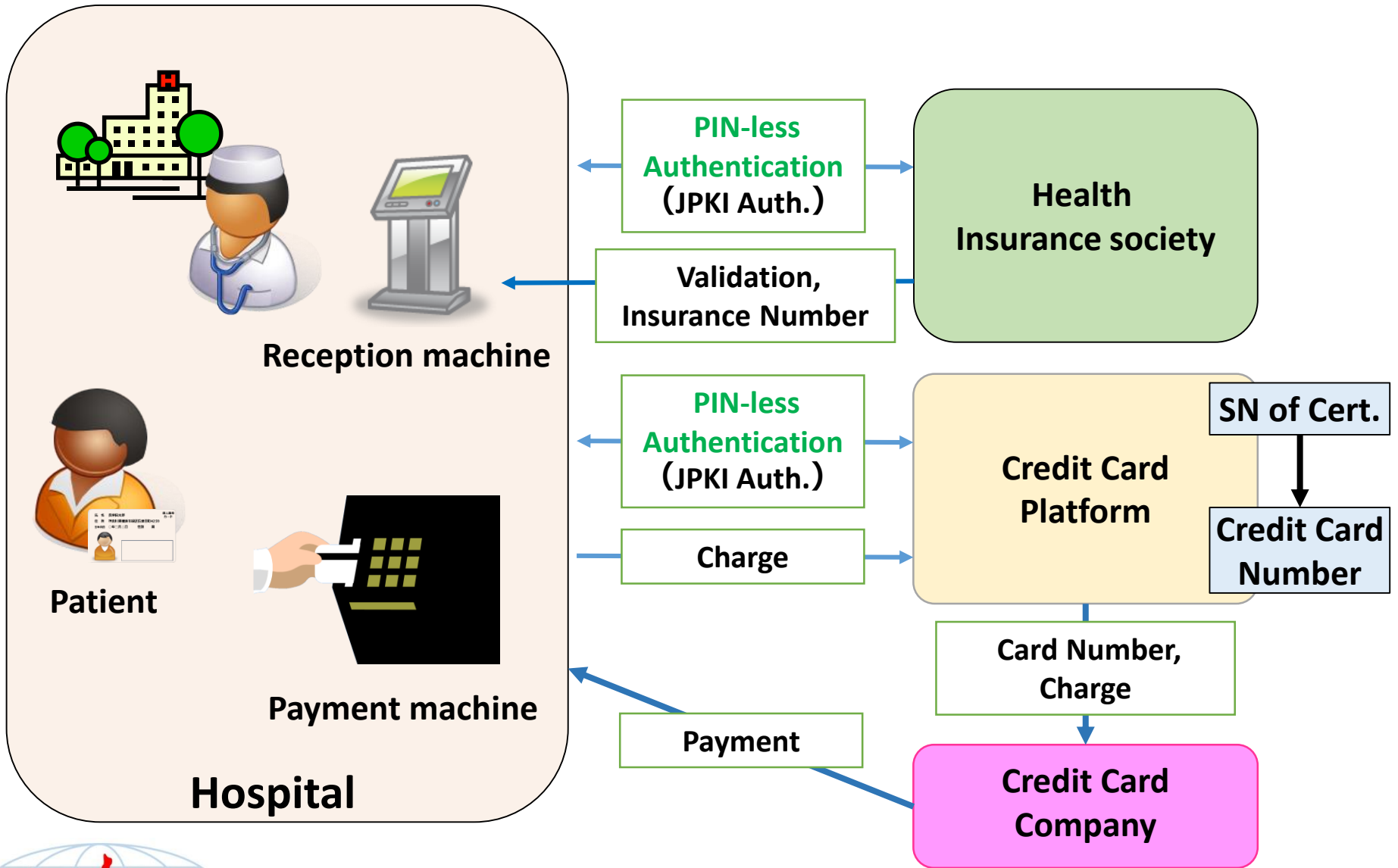


Smartphone

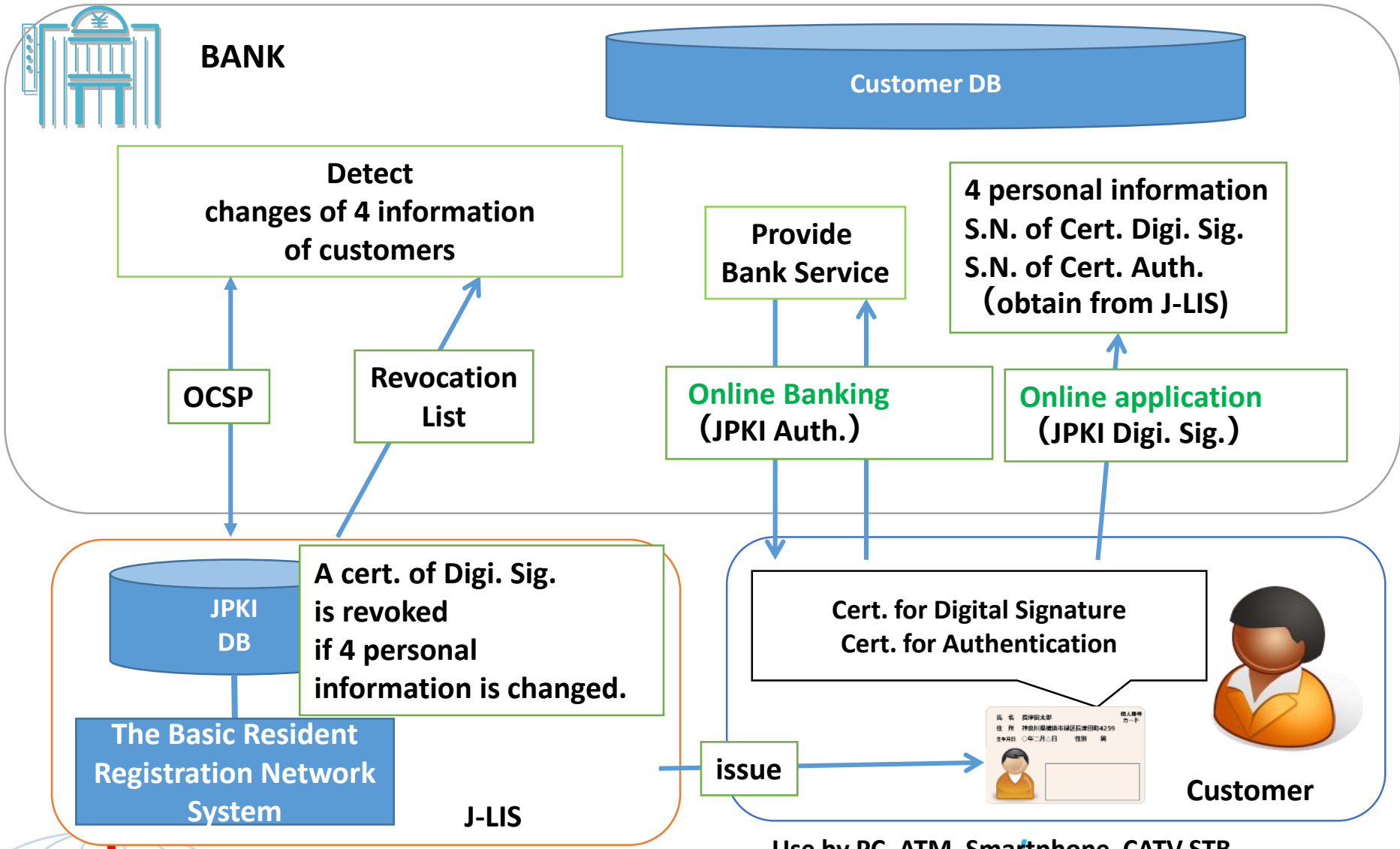


SmartTV, CATV

Hospital-Use case



BANK-Use case



references

New ID Number

- The Number Use act (Act on the User of Number to Identify a Specific Individual in the Administrative Procedure) promulgated on May 31th 2013.
- Based on this act, every resident, Japanese or foreign, will receive his/her 12 digits ID number on Oct 1st 2015 and a Individual Number (called "My Number") will be effective in Jan. 1st 2016.
- The new ID number can be only used in the tax and social security area excluding health, medical and aging care information.
- New e-ID card will be issued from Jan 1st 2016.

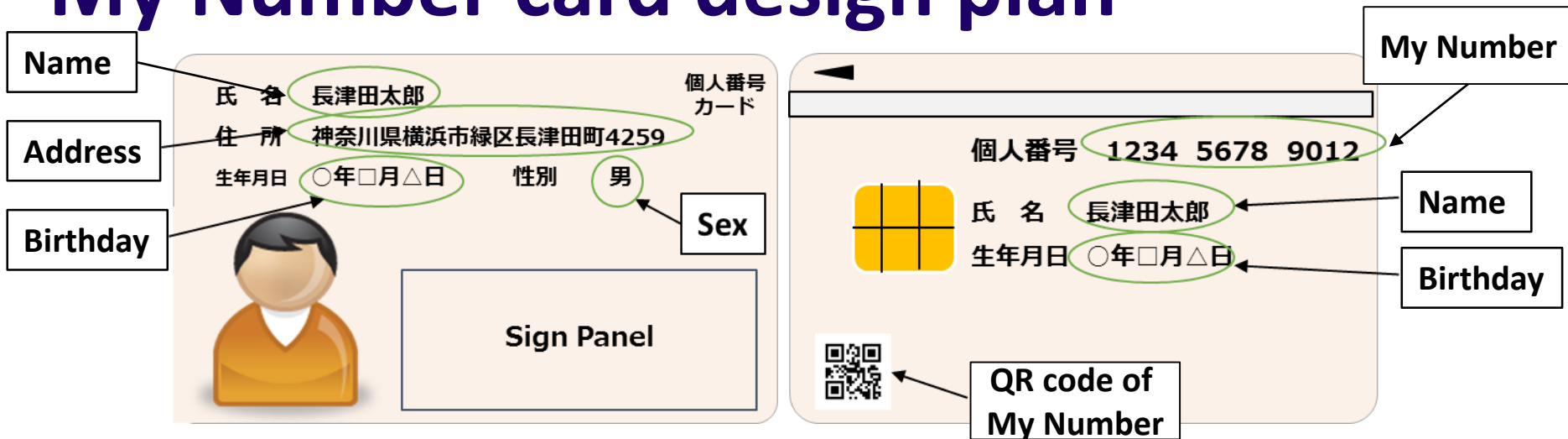
New e-ID card -My number card-

- Replacement of the resident registration card
- My number is printed on the backside of the e-ID card
- New e-ID card have facial photo
- New e-ID card and revised JPKI act will come into reality on Jan 1st 2016
- Revised JPKI will support both digital signature and digital authentication services
- My number card will be issued on request up to 87M per 3 years (2/3 of Japanese population)

vs. Basic Resident Registration Card

	Basic Resident Registration Card	My Number Card
Card Issuer	Local Government (Issuer individually)	Local Government (Issuer by JAPAN Agency for Local Authority Information Systems)
Card face	Facial photo, address, birthday, sex are optionally	Facial photo, name, address, birthday, sex are mandatory
JPKI function	Digital Signature (Option)	Digital Signature (over 15 yr.) Authentication (Mandatory)
Fee	1000 Japanese Yen (7.1 euro)	Free (estimation is several thousand yen)
Valid period	10 yrs. (Card), 3 yrs. (JPKI)	10 yrs. (Card), 5 yrs. (JPKI)
Scope	Limited to the public sector	Expand into the private sector
Card in force	8.8M (2003-2014)	150M (2016), 860M (-2019)

My Number card design plan



Card Applications	Usages
Card Face AP	Store the card face image for tamper detection Use Basic Access Control for read-out
JPKI AP	Digital Signature Authentication Pass Code : 6 to 16 alphanumeric characters PIN1 : 4 digits
My Number AP	Store My Number, Name, Birthday, Sex, Address Need to enter PIN2 (may be same as PIN1) for read-out
Resident Record AP	Store Resident Record code (To ensure compatibility with old card) Need to enter PIN3 (may be same as PIN1) for read-out

New JPKI

- Certificates are issued by JAPAN Agency for Local Authority Information Systems (J-LIS)
- Certificate of digital signature must include 4 personal information (Name, Address, Birthday, Sex)
- Certificate of authentication service does not include any personal information
- CRL and OCSP will be disclosed to **private sector under permission** of minister of ministry of internal affairs and communication
 - Current JPKI is limited to the public sector in order to avoid a potential depression of private business of PKI
- Linkage information of the Certificates of digital signature and authentication is provided by J-LIS
- Support PIN-less Scheme

Enrichment of JPKI services

- Services could be securely linked to my number card through the on-line authentication
 - Attributes such as license and qualification
 - Validation of the health insurance through linking to the insurers
 - Payment services under plan
 - Functions of debit card, internet banking card and credit card (secondary card), etc.
 - Pin-less scheme is supported by my number card
 - Useful for micro payment just like sign-less
 - Statistics tells us that Monday morning, we have 15 M transactions for the validation of health insurance

Promising use case

- Useful scenario; going to see a doctor \Rightarrow health insurance, payment, e-prescription, etc.
- At present
 - Go to a hospital with an medical insurance certificate
 - Receive a paper-prescription and pay 30% of the medical fee by cash, credit or debit
 - Go to a pharmacy with prescription, pay 30% by cash, credit or debit and receive medicine
- In the near future
 - Go to a hospital with my number card
 - Prescription is up-loaded to the medical server and pay 30% by my number card
 - Go to a pharmacy, download the prescription and pay by my number card
- Only use one e-ID card