

Korea Perspective on Standardization for PI/PII/LI Protection



Side Event

Cybersecurity

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Problem Statement (1/2)

- ❑ Nowadays, a series of attacks on the web-sites frequently results in a **massive leakage of PI (personal information)** stored in the companies or organizations using web-based applications due to hacking incidents.
- ❑ Some websites/web-portals may request the user to submit the **national PII (personally identifiable Information)** when user signs up for the website/web-portal services, which may result in PII leakage incidents. A **new PII protection scheme** should be developed and deployed to protect user against PII theft or PII misuse.



Problem Statement (2/2)

- ❑ A lot of applications need **geographic LI (location information)** about a target (such a user, resource or other entity). There is a need to **securely gather and transfer LI** for the applications using LI, while ensuring the privacy of the individuals involved.
- ❑ The widespread deployment of **tag-based identification systems** (including RFID tag) may give rise to concerns of privacy infringement of each tag user.



Korea's Structure for Cybersecurity Standardization

- ❑ **TC 5**, a Lead Technical Committee on Information Security under TTA
 - Project Group(PG) 501/5, Information Security Infrastructure
 - PG 502/5, PI Protection & ID Management
 - PG 503/5, Cybersecurity
 - PG 504/5, Applications Security & Common Criteria
 - PG 505/5, Telebiometrics
 - PG 506/5, Digital Right Management



i-PIN Service for PII Protection (1/2)

□ *i*-PIN service

- internet Personal Identification Number
- National PII, a.k.a. RRN (resident registration number), a permanent, uniquely identifiable national PII containing a lot of PI such as birth date/year, birth place, etc.
- Web-site usually requests user to submit the national PII for identification of user in Korea.
- Protect the national PII against PII theft and misuse.
- to replace the national PII with new *i*-PIN which is random, revocable anytime on the Internet.

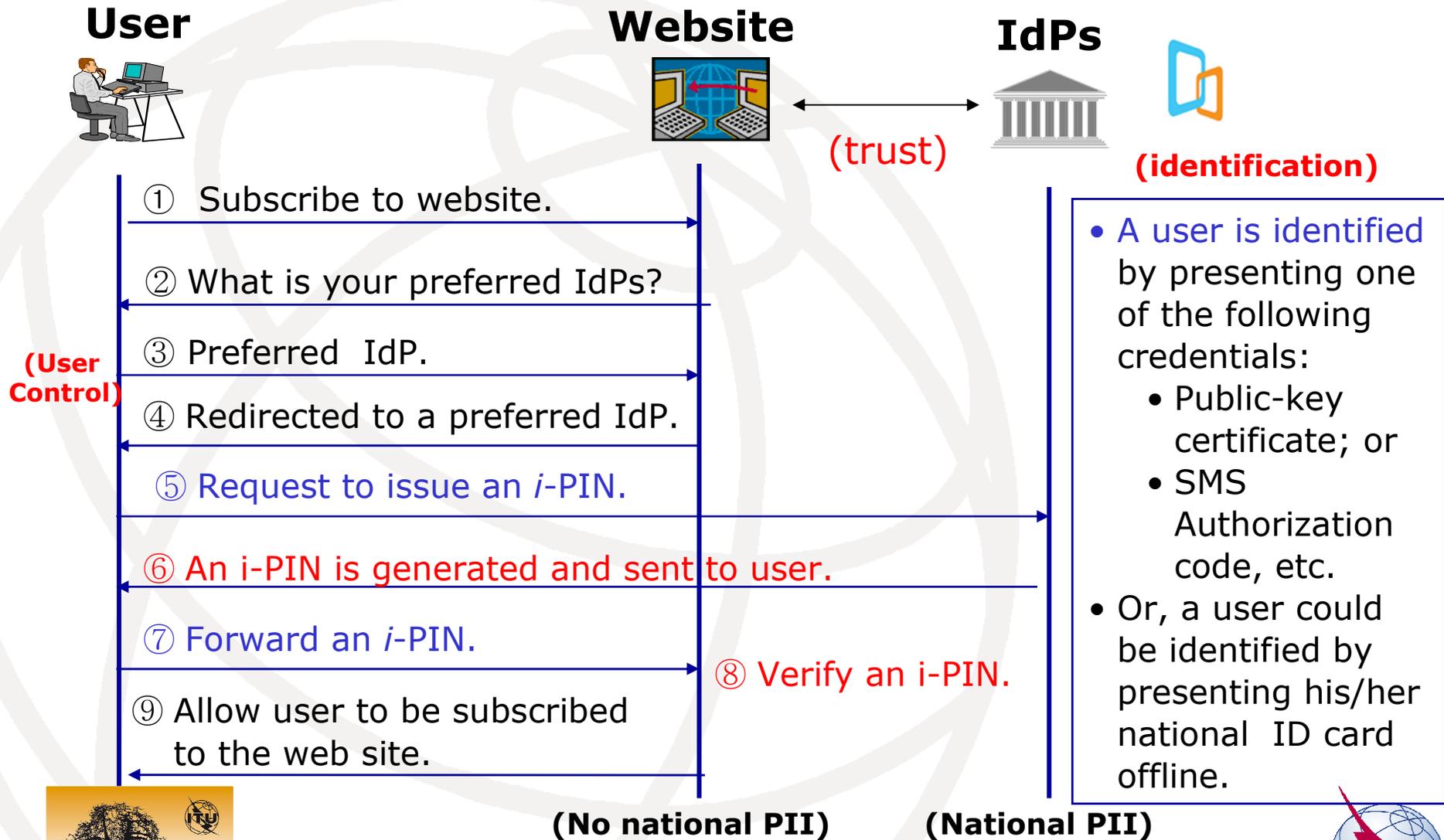


i-PIN Service for PII Protection (2/2)

- ❑ *i*-PIN service was designed in 2005 and has been in place since October 2006.
- ❑ based on a model with three entities: user, website, and IdP (*i*-PIN service provider).
- ❑ A program is underway to develop a next version of *i*-PIN service.
- ❑ The regulation will come into effort to mandate the websites/web-portals with more than 100,000 visiting users per day to adopt the *i*-PIN service as of January, 2009.



Work Flow of *i*-PIN service



Korea's Major Achievements (1/2)

□ Local achievements

- Framework for *i*-PIN Service, **Approved/under revision**
- Message Format for *i*-PIN Service, **Approved/under revision**
- Privacy Management Model based on Life Cycle of Personal Information, **Approved**

□ Downstream adoptions

- The Platform for Privacy Preference, **from W3C**
- Geopriv Requirements, **from IETF**
- Threat Analysis of the Geopriv Protocol, **from IETF**



Korea's Major Achievements (2/2)

- ❑ **Upstream contributions** to the ITU-T SG17
 - ITU-T X.1171, Threats and Requirements for Protection of Personally Identifiable Information in Applications Using Tag-Based Identification, **Under TAP**
 - ITU-T X.1251, A framework for User Control of Digital Identity, **Under TAP**
 - ITU-T X.rfpg, Guideline on protection for personally identifiable information in RFID application **Under development**



Summary / Suggestions

- ❑ Continue to strengthen three kinds of standardization activities: local, upstream, and downstream.
- ❑ Much room for developing global standards to ensure PI/PII/LI protection of user.
- ❑ The focus should be on providing new ICT service/system without raising any privacy infringement about user.
 - The evaluation on privacy influence should be carried out, when global SDOs develop new ICT service.
- ❑ It is recommended that work on PI/PII/LI protection be undertaken in the next study period.



WTSA-08, Johannesburg, South Africa, 21-30 October 2008

