# Digital Identity Trends for citizens of the world

Fulup Ar Foll, Sun Microsystems
fulup@sun.com

ID Technical Facets

- ## Nothing new
  - French ID card 1920
- ## Too many informations
  - fingerprint, father name, ...
  - age, personal address, citizenship, ...
- ## Authorization not so much Authentication
  - allow to drive
  - allow to enter a country
- ## Often use outside of original context
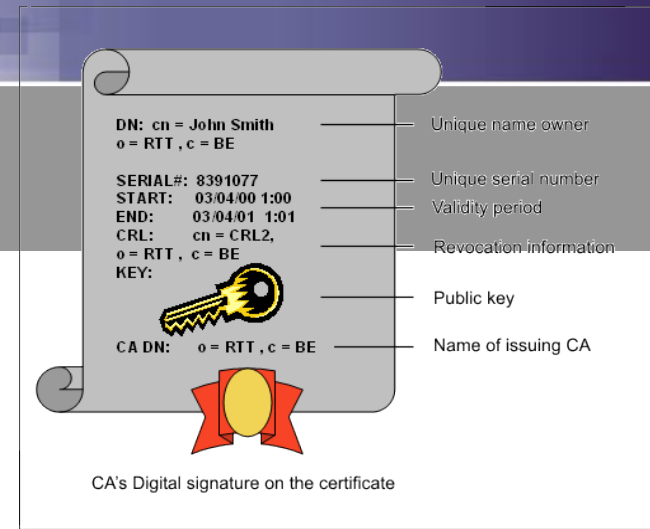 - Telecoms invoice for residential address proofing.
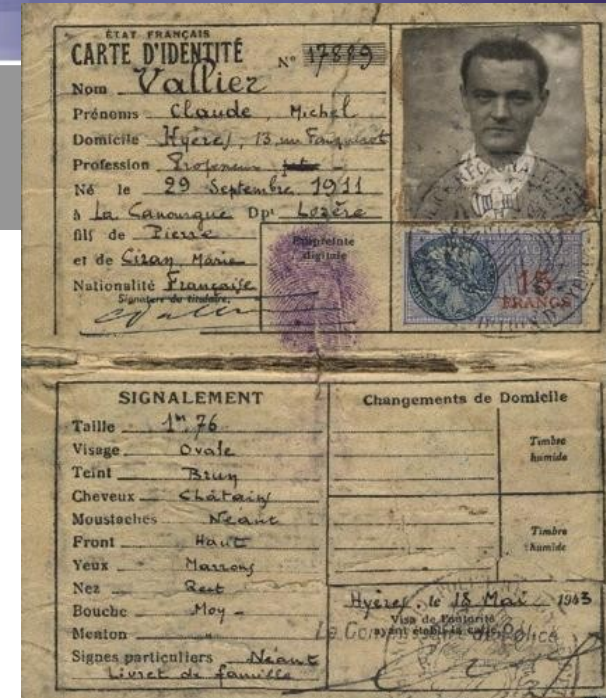
Digital versus Paper

- ## Same fundamentals
  - usually not so many secrets.
  - when collected usually never deleted.
  - want to keep information usage to what it has been collected for.
- ## Key differentiators
  - easy & cheap mass analysis simple correlation research
  - lack of stability: change too fast for basic human brain and legal framework.
  - unlimited capabilities: Moving from what we can, to what is acceptable.

DN: cn = John Smith
o = RTT , c = BE

SERIAL#: 8391077
START: 03/04/00 1:00
END: 03/04/01 1:01
CRL: cn = CRL2,
o = RTT , c = BE
KEY:

CA DN: o = RTT , c = BE

Unique name owner
Unique serial number
Validity period
Revocation information
Public key
Name of issuing CA

CA's Digital signature on the certificate

- ## Authentication: *proof you're the one you claim to be*
  - Biometric: picture, fingerprint, voice, ...
  - Secret: login/passwd, certificate, pin code, ...

- ## Attributes: *define what you are*
  - Authorization attributes: allow to drive a motorbike
  - Personalization attributes: preferred color, speak French
  - Group attributes: French citizen, Manager, ...

- ## Verification: *proof this document is valid*
  - Signature + Certificates
  - Date and place of issuance.
  - Validity time stamp.

Limits toward digital ID?

- **Cost:** cheaper and cheaper every days
- **Legal:** uncompleted or no support.
- **Technology:** constant evolution, wait or not ?
- **Interoperability**: will the other follow me ?
- **Complexity:**
  - level of change user can absorb
  - level of manageability

SIMPLICITY
the art of complexity

Tsuyoshi Ozawa, Vegetable Weapon: Saury fish ball hot pot/Tokyo, 2001 courtesy: Ota Fine Arts, tokyo

What is acceptable ?

Differ from place to place, from user to user. ...

- D.N.A. for what ?
- Video cameras, where, how many ?
- National ID mandatory ?
- Patriot Act ?
- Unique ID in every files?
- Global repository ?

The Acceptable Sacrifice

PURITAN PAPERBACKS □ JOHN BUNYAN
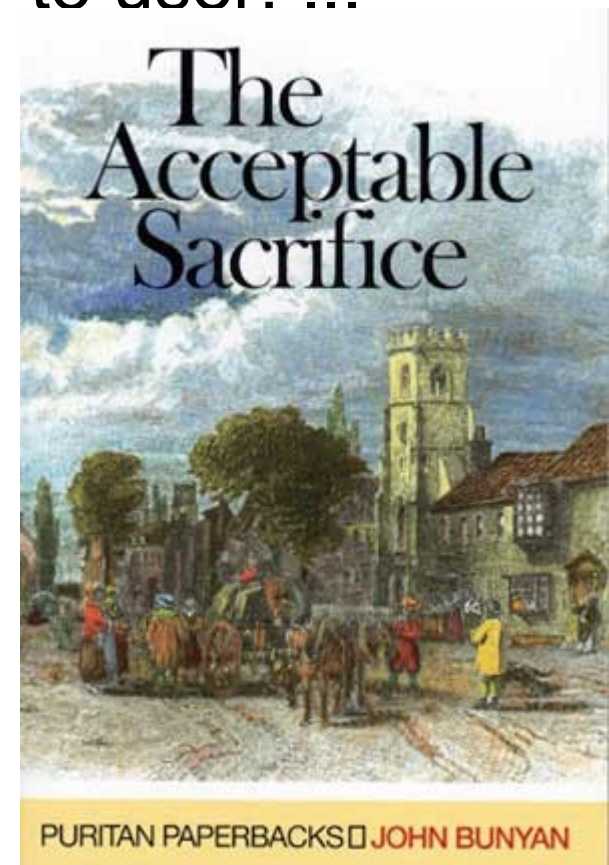
Standards why and what ?

- **Portability versus Interoperability**
  - Posix, Java, PHP,...
 - TCP/IP, HTTP, SOAP,...
- **Cost of adoption**
  - legacy applications
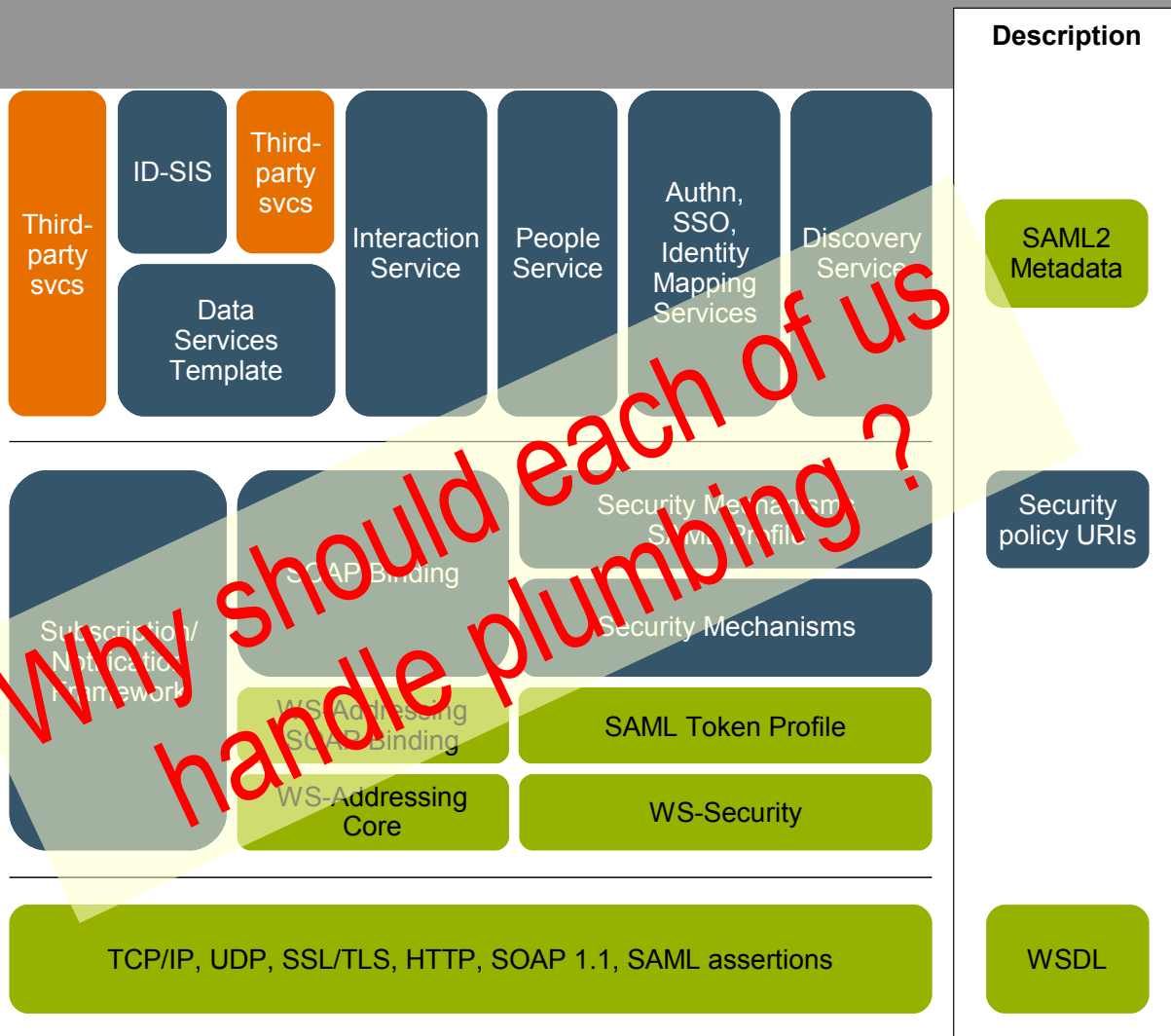 - end-user adoption
- **Level Services provided**
  - transport: end to end, point to point, stream, broadcast
  - security: encoding, authorization, authentication, legal compliance
  - infrastructure: user schema, group management, discovery mechanism
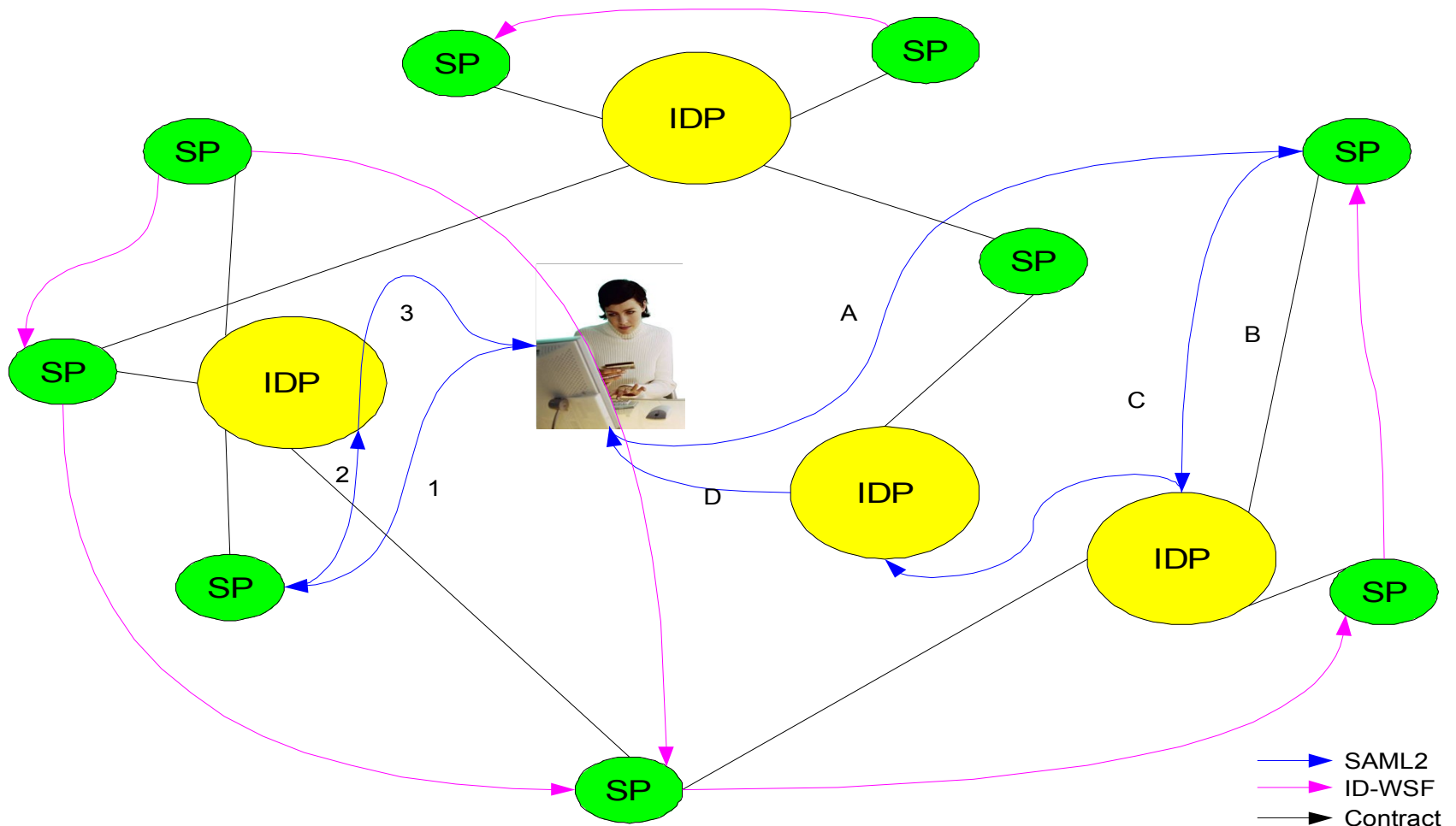 - Compliance to legislation
- etc.

Applications

ID-WSF - SAML2

SAML-1
WS-Security
SOAP
TCP/IP

Transport

Abstraction

Composability
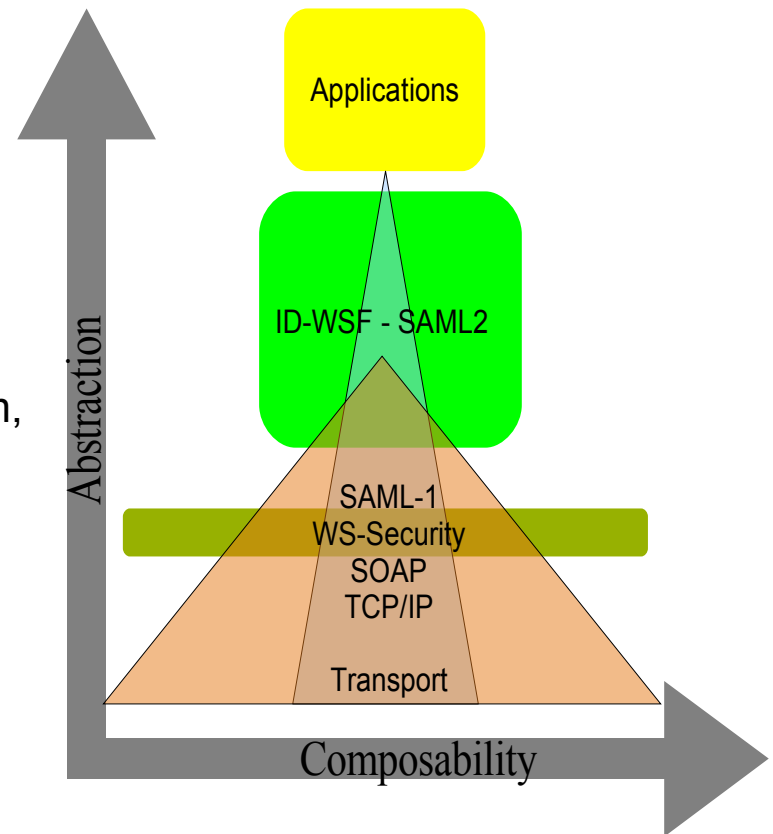
Should we even know about this ?

Fulup Ar Foll, Sun
Microsystems
fulup@sun.com

http://www.projectliberty.org
http://www.sun.com