



JavaCard Technology in Citizen ID and ePassport

Koh Hong Eng

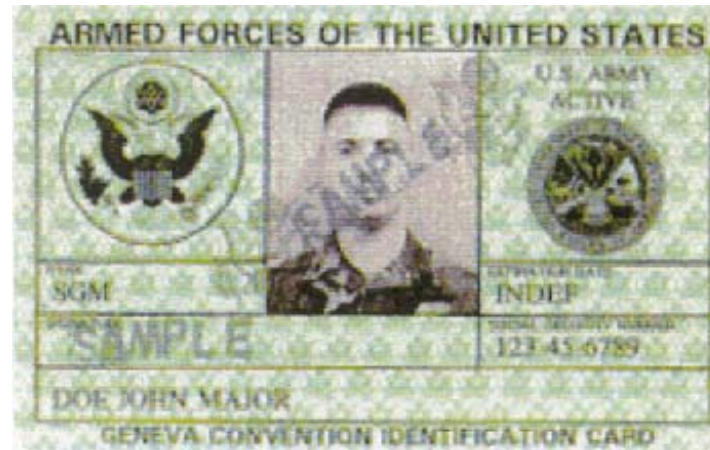
Industry Sales Director (Government)
Sun Microsystems, Inc. (Asia South)



My Identity...

- Singapore Police Force
 - > Investigator
 - > Head Operations, Crime Prevention
 - > Police Spokesman
 - > Head Operations, Police Division
 - > Head Computer Systems Division
- New Media/Internet company
- Major Government Systems Integrator
- Sun Microsystems

Fakes on the Internet



Military ID Card (\$75)



Social Security Cards (\$40)



Birth Certificates (\$79)

Fakes come as a package ...

UNITED STATES UNIFORMED SERVICES OVERSEAS ONLY

	EXPIRATION DATE 2001NOV29
	SPONSOR SERVICE / STATUS USA/RET
	SPONSOR RANK / PAY GRADE SFC/ E7
	SPONSOR SSN 561-17-3261
SOCIAL SECURITY NUMBER 561-17-3261	RELATIONSHIP SP
SIGNATURE <i>mi S Olson</i>	SPONSOR OLSON, WILLIAM H.
AUTHORIZED PATRONAGE EXCHANGE MWR COMMISSARY	

OLSON, MI SUN
IDENTIFICATION AND PRIVILEGE CARD

DATE OF BIRTH 1959MAY05	WEIGHT 130	HEIGHT 60	HAIR COLOR BK	EYE COLOR BR
DATE OF ISSUE 1999JAN29	MEDICAL DIRECT: YES	CIVILIAN YES	EFF DATE 1998FEB12	EXP DATE 2001NOV29

DD FORM 1173 OCT 93 PROPERTY OF US GOVERNMENT OUSD(P&R) DEC 97

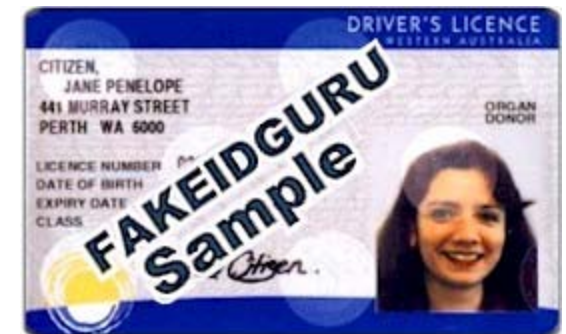
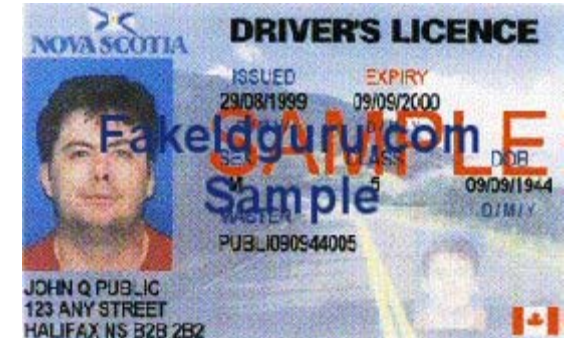
USFK

DEPARTMENT OF DEFENSE
CSK 793

USFK
EXPIRES
7/00
SAFETY
896751

USFK
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SAFETY
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More Fakes on the Internet



Underground-Review.com

Underground Fake ID Reviews

FAKE ID SITES Reviewed

[Home Page](#)

URL	Location	Price	Rating	Comments
Fakeidguru.com	DK	\$99.00	GOOD	This is a new site many of you are raving about. This site offers US, Canadian and Australian fake IDs. The reports have always been outstanding. Every report is that the IDs are flawless in every aspect. UV markings and holograms are perfect and the cards swipe correctly. They even recently put up a page of pictures sent in from customers partying.
Noveltyidsite.com	UK	£15	GOOD	This site offers UK ID cards. All reports are that they are very reliable and send the product shown.
Fakeidgroup.com	EG	\$99.99	GOOD	Longtime established provider of US fake id. Always positive reports from customers. UV markings and holograms are perfect and the cards swipe correctly. Probably the most popular and solid provider online.
Getintheclub.com	CA	\$199.00	Neutral	Lower quality US fake IDs and very slow shipping and customer service. Ids do not scan and holograms are generic. (UPDATE: Site has closed down for now.)
Fluxcard.com	UK	£10	GOOD	Best UK site online from all reports. Wide range of UK ID cards and good customer service. If you reside in the UK this is the place to go.
Id-shop.co.uk	UK	£10	GOOD	This site offers UK ID cards. All reports are that they are very reliable and send the product shown. Fast shipping and customer support.
Identity-solution.com	UK	\$149.00	GOOD	Use to be a good review site for identification, but they stopped updating and closed the review page. Now just a few links already covered here.
Silvatek.com	UK	£10	Neutral	This site offers UK ID cards. All reports are that they are very reliable and send the product shown. If you reside in the UK this is the place to go. (UPDATE: Site has closed down for now.)
Myoids.com	UK	£10	GOOD	Good source for fake ID templates and other ID templates of all types. Requires you to purchase a membership, but it is well worth it, if you have the skills and printer equipment to work with.
21overnight.com	UK	£15	NEW	Another novelty ID review site like this one. They gave me a link, so I'm giving them one.

Benefits of Smart Card ID

- Minimize identity theft
 - > In applying services/goods and claiming benefits
- Carry important medical information
- Make it easy to prove who you are
- Minimize illegal immigration
- Easier to detect and arrest criminals
- Have one card to act as ID
- Able to prove your age
- Minimize terrorism



Before JavaCard

- Applications in assembly language or C
- Difficult to write and debug applications, leading to long time to market
- Applications not portable between cards
- Typically one application per card
- Static model: applications loaded at creation, not updateable, usually masked in ROM

Why JavaCard?

- Interoperable
- Secure
- Multi-Application Capable
- Dynamic
- Open
- Compatible with Existing Standards
 - > ISO 7816, ETSI 03.19, GlobalPlatform, EMV, etc
- Choice
 - > Cost of exit
 - > 80:20 rule

GLOBALPLATFORM



JavaCard is Key to Authenticated Identity

- One size does not fit all
- JavaCard provides positive identification and strong multi-factor authentication
- Microprocessor-based
 - > Ability to process and store information
 - > Multi-application support
- Certifications
 - > U.S. National Institute of Standards & Technology FIPS 140-2
 - > Common Criteria EAL 5+ Certification
 - > Visa, MasterCard, AMEX Security Evaluations

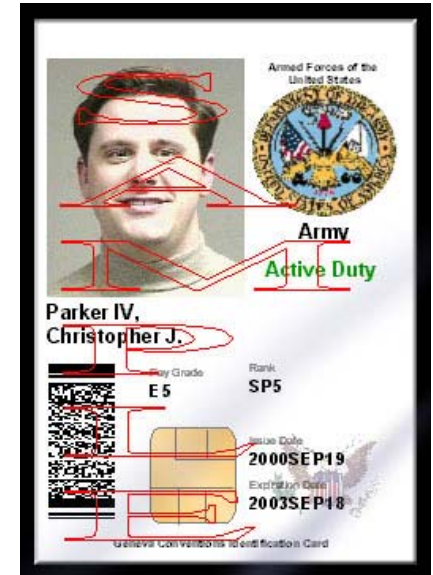


US Department of Defense

- System and physical access
- JavaCard with Biometrics
- Applications on Solaris

“Our decision to deploy the Department of Defense Common Access Card required an open, multi-application smart card solution that met the security requirements of the U.S. Government.”

Robert Branderwie, Deputy Director, Defense Manpower Data Center, US DoD



Korea



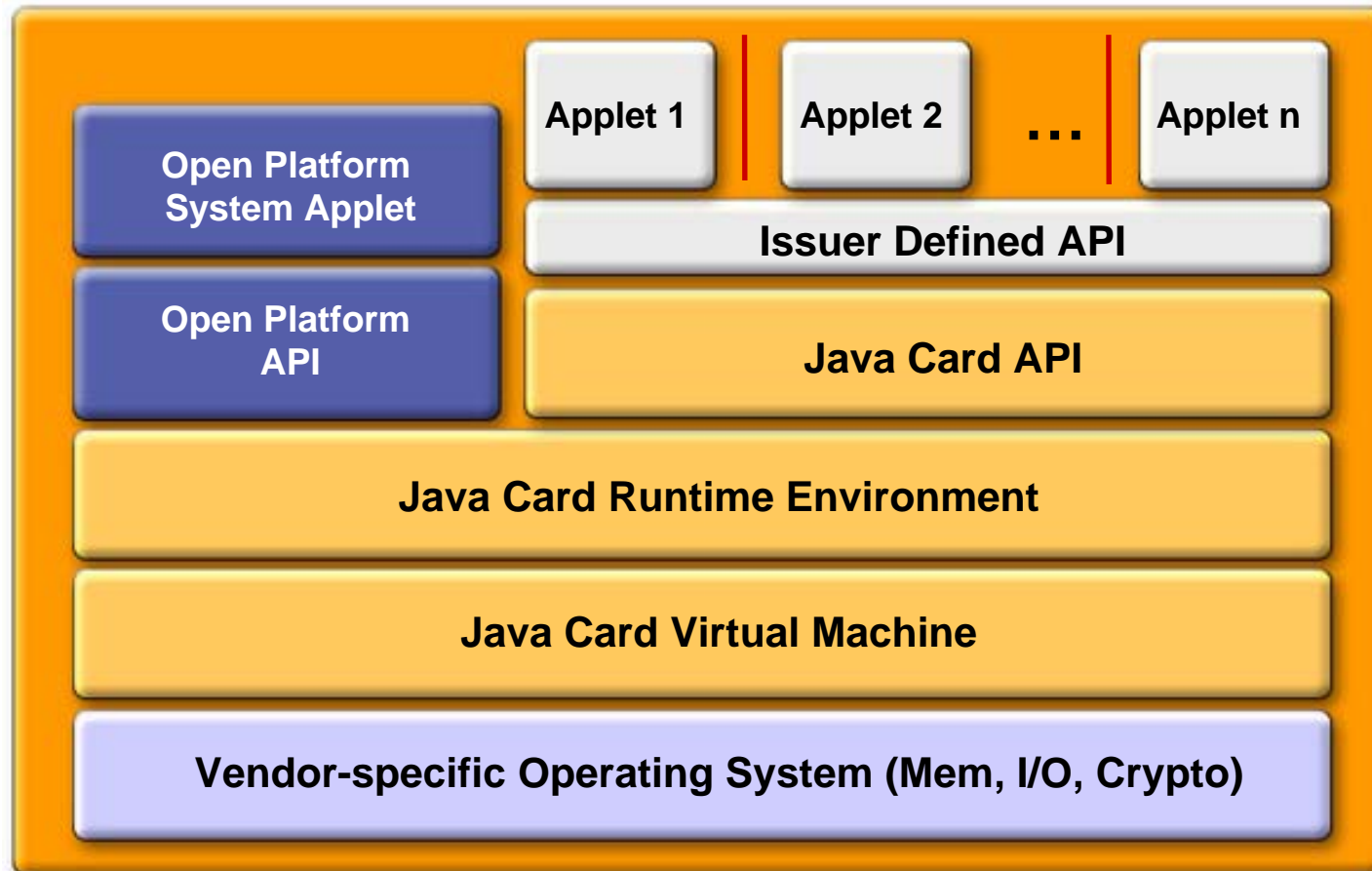
Germany



Kuwait



JavaCard Architecture



JavaCard Adoption



Corporate



Finance

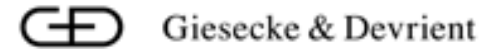


Telecom

Government



JavaCard Partners



And many others...

Java Sharing Success Worldwide



2.5B	Java devices worldwide
708M	Java-powered phones*
700M	Personal computers
600	Handset models from 32 manufacturers
140	Carrier deployments
1B	Java Card deployed
4.5M	Java developers
912	JCP Members

*Source: Ovum

Singapore Biometrics Passport



- JavaCard chip-embedded passport
- Application system
 - > Biometrics capturing
- Integration with:
 - > blacklist database
 - > ICAO Public Key Directory (PKD)
- Personalization and production system
- Issuance system
- Private sector applications

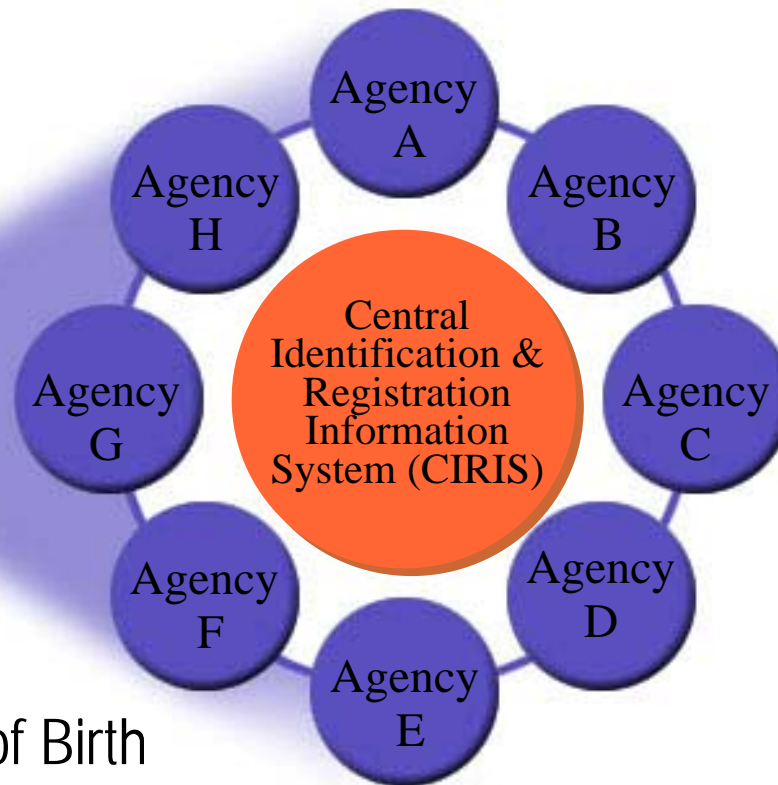
National ID System

- Registration/data capturing
- Backend citizens registry/database
 - > Access services/data exchange
- ID card production
- ID card (for physical identification)
 - > Smart card (for digital identification)
 - > Biometrics for smart card
 - > PKI infrastructure (including the Certificate Authority)
 - > Other smart card applications (eg. e-purse, health records)
- Kiosks to read ID card and offer services

Singapore Experience

Central Identification & Registration Information System (CIRIS)

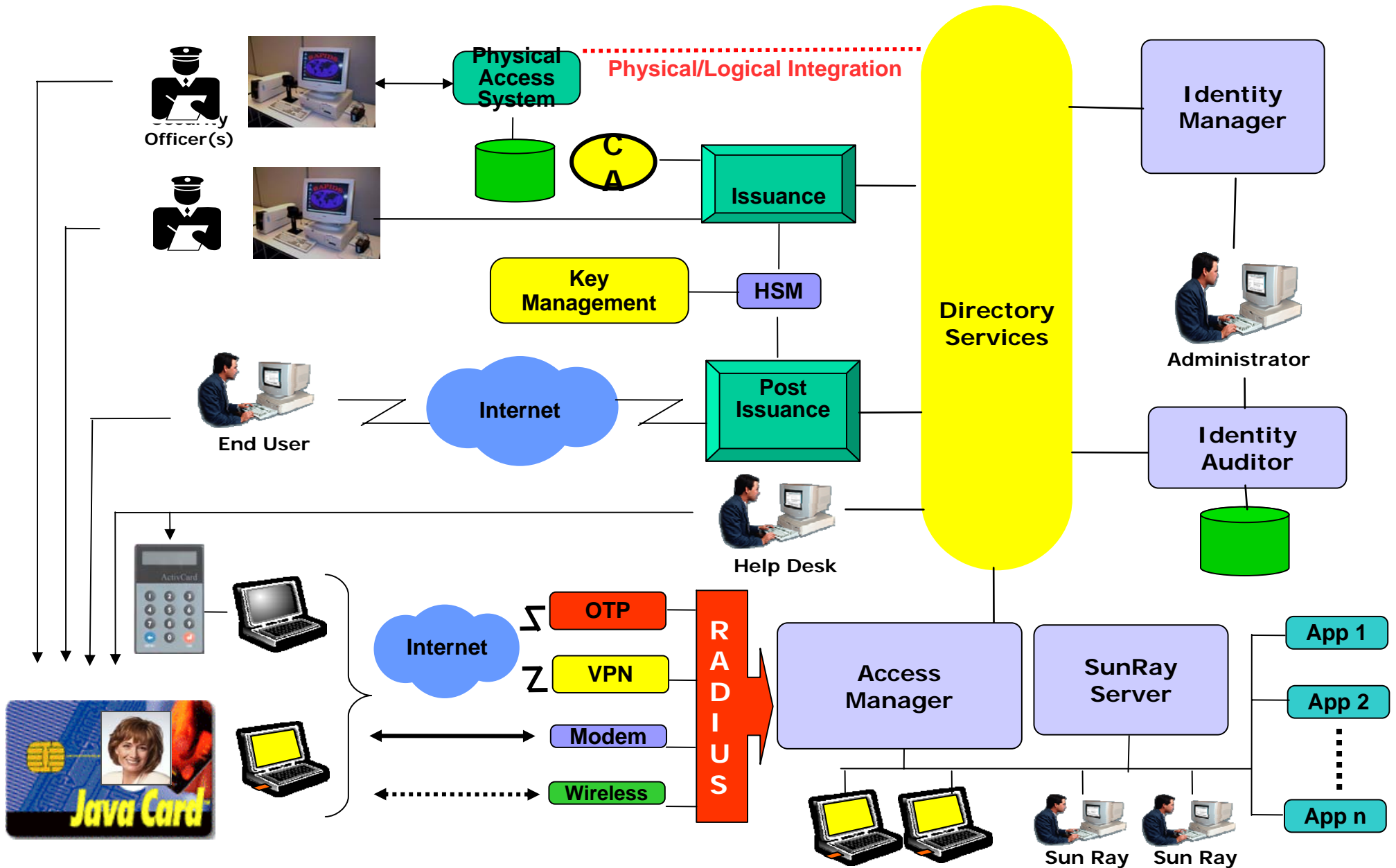
Citizen/Resident



- Registration of Birth
- Registration of Residence
- One-Stop Change of Address (OSCAR)
- Registration of Death



Complete Identity Management Platform



Belgium National ID

- *First Country in European Union to Deploy*
- *Large-scale Citizen ID Card to Entire Population*
- *Multi-application Java Card-based Smart Card*
 - > *Identification, e-Government Services, e-Voting,*
 - > *Filing Tax Returns, Birth Certificates, Civil Records*
 - > *Digital Certificates: Authentication, Digital Signature*
 - > *Commercial Applications: e-Banking, e-Ticketing*
- *Common Criteria EAL 5+ Certified*
- *Deployment: 8.2 Million Java Cards (by end 2009)*
- *In Oct 2005, Sun successfully demonstrated the integration/interoperability of the Belgian eID card with Sun's Identity Management Platform*



Thailand National ID

- Creation of a centralized database to integrate residential records database, ID card database, election database, marriage and divorce database, etc
- JavaCard Citizen ID card
- Plan to issue 61m cards
- Plan for kiosks in all villages



“... the platforms and solutions we chose must not only be reliable but they must deliver value from the very start and in the long run”

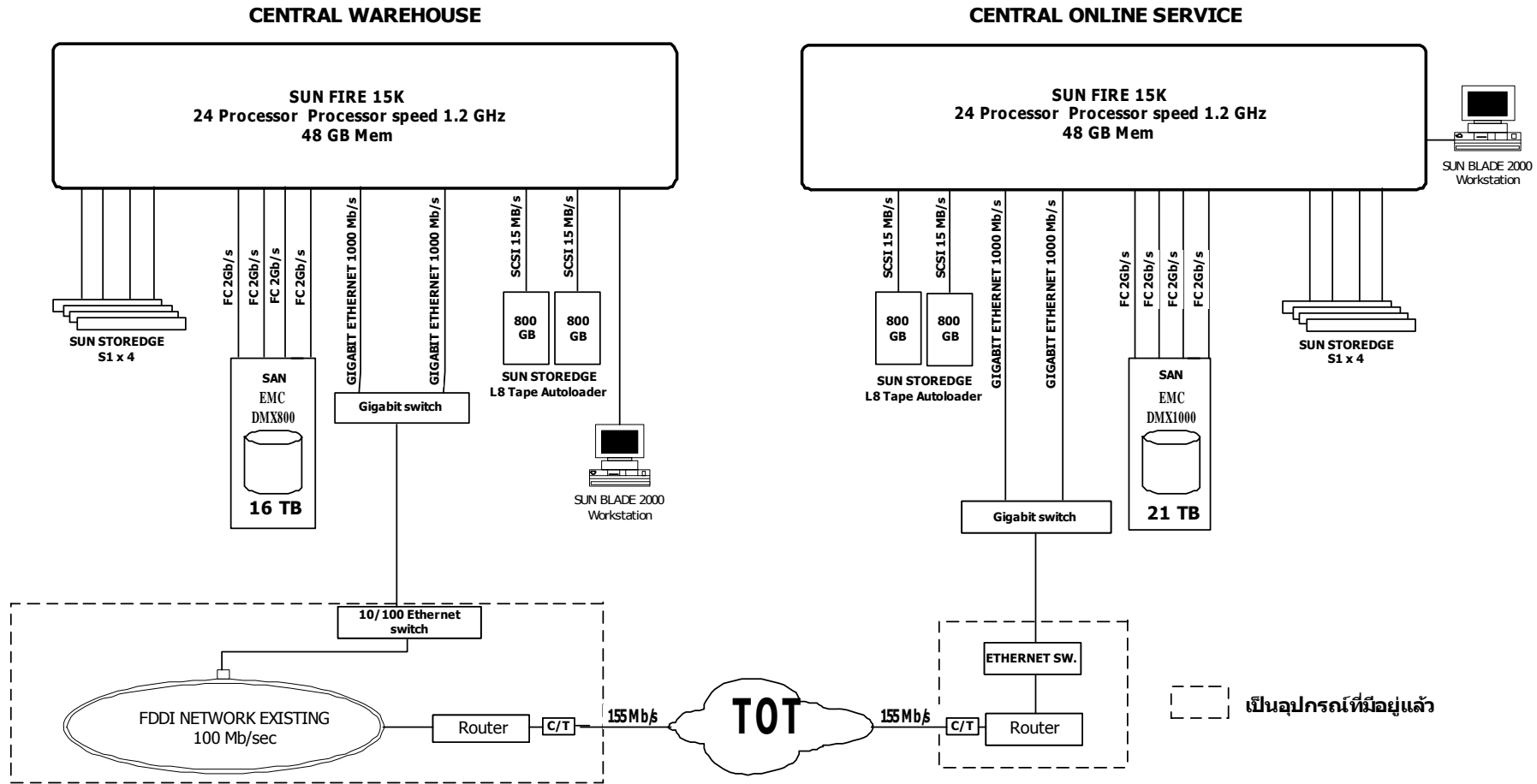
Surachai Srisaracam

Director of Registration Administration Bureau, Ministry of Interior



Thailand National ID

ระบบคอมพิวเตอร์ CENTRAL WAREHOUSE และ CENTRAL ONLINE SERVICE

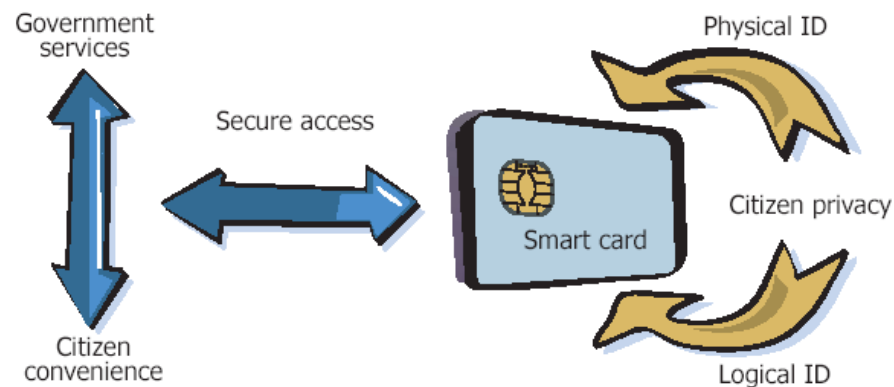


ศูนย์ควบคุมระบบสำรอง
ณ. สำนักบริหารการทะเบียน วังไชยา นางเล็ง

ศูนย์ควบคุมระบบกลาง
ณ. สำนักบริหารการทะเบียน คลอง 9 ลำลูกกา

Sultanate of Oman National ID

- eGovernment services and homeland security
- Personal credentials, digital photo and fingerprints, driving license, medical data
- 1.2m citizens
- Gemplus' ResIDent smart Java card



Finland National ID

- Physical and online identification for government and many private sector services
- Also an official travel document for Finnish citizens in 29 European countries
- 64K-JavaCard



Taiwan Health Insurance ID

- National Health Insurance Smart ID Card
- Multi-application JavaCard
 - > Identification, medical profile and benefits
 - > e-Purse envisioned but not specified yet
 - > Restricted use by other Government agencies because of privacy concerns and expediency
- \$2-card with 32K memory:
 - > Allergy information, emergency contact numbers, medication, and personal insurance
- 22 million cards issued by 2003



Open Sun

We Live and Breath Open Standards

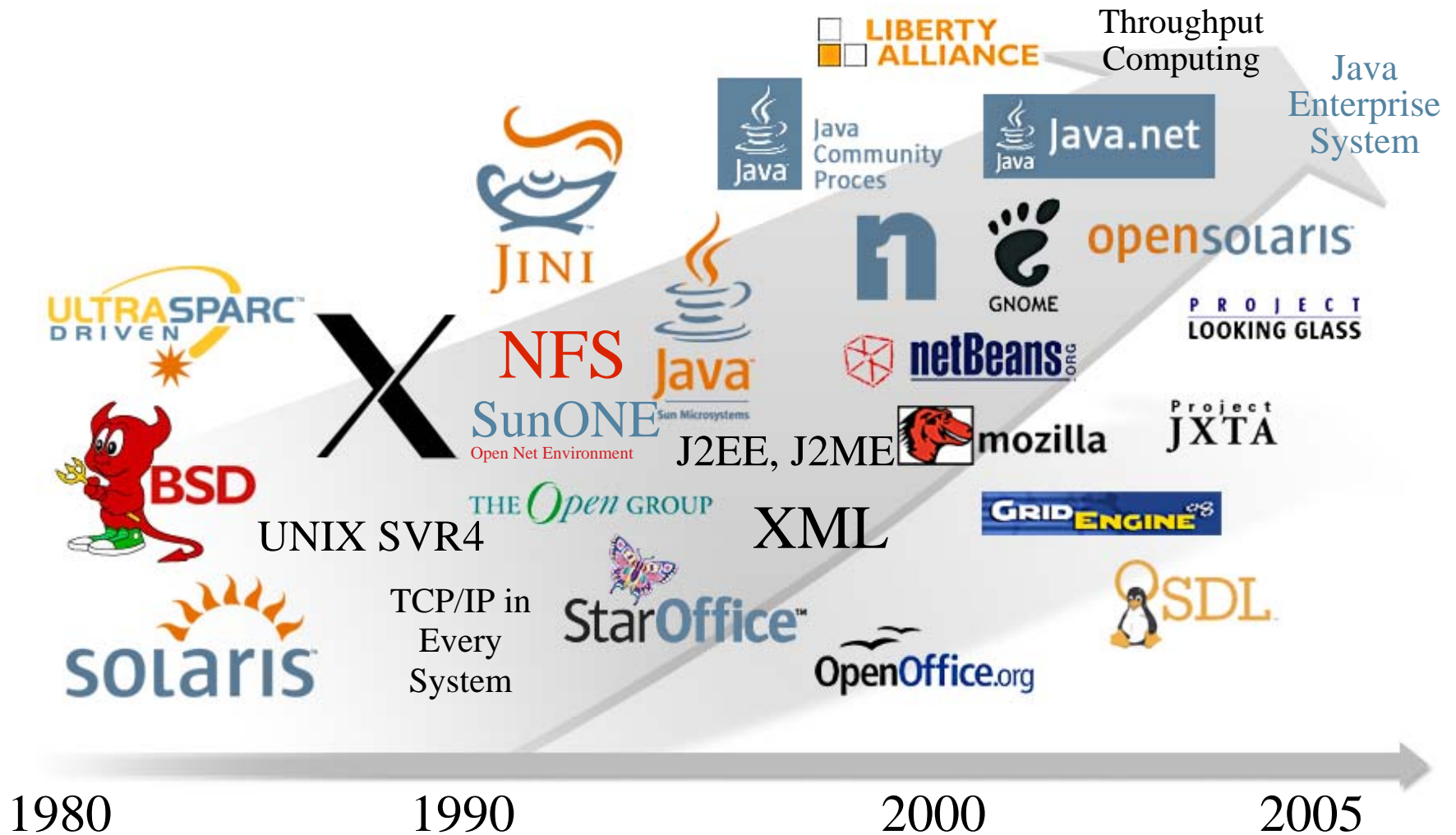


Sun is represented in >70 Standards Bodies, Consortia and Industry Groups.

Open Sun

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\$1/GB-mo



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Application Platform Suite

Identity Management Suite


Comms Suite

Integration Suite

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Java Enterprise System



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Innovation, Security, Investment Protection



JavaCard Technology in Citizen ID and ePassport

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