



BRIEFING ON THE UAE NATIONAL ID CARD PROJECT

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SCOPE

- ✘ Project vision, objectives, expected benefits, and timeline
- ✘ Project streams
- ✘ Pilot and mass enrolment phases
- ✘ Technical perspective
- ✘ Implementation challenges
- ✘ Future vision

VISION:

Developing a modern population register and identity management system that provides a secure and safe environment for citizens and residents in UAE while protecting people privacy and supporting the planning of allocation of resources, benefits and services, promoting economic growth and positioning the UAE as a leading nation in the information age

PROJECT OBJECTIVES

- ✘ Build an integrated information database of the UAE population (population register)
- ✘ Provide facility for identification and verification services – through a unified ID and biometrics - to other entities (Ministries, financial institutions, Hospitals, ..etc)
- ✘ Provide a unified smart ID card for Nationals and Residents
- ✘ Interface with other systems (labor, health, justice, police, education,,etc)
- ✘ Guarantee the security and confidentiality of information

EXPECTED BENEFITS

- ✘ Provide viable statistical for strategic decision support on Federal and Local Levels
- ✘ Enhance border control
- ✘ Utilize a single smart ID card for multiple applications
- ✘ Provide infrast. for the e-Government/e-commerce initiatives
National e-Authentication infrastructure
- ✘ UAE nationals can use the ID card for traveling within the GCC
- ✘ A leading step towards the digital economy

PROJECT TIMELINE

- ✘ Phase 1: 2000 – 2001: Initial Study, RFP and vendor selection
 - ✘ Phase 2: 2002 – 2005: implementation
 - + System design, development, logistics, legislations, recruitment...etc
 - + Jan 2005: **Emirates Identity Authority** operates the projects
 - + **June 2005: Start Pilot phase**
 - + December 2005: Start mass-enrollment phase
 - ✘ Phase 3: Integration and other applications
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- MOI

PROJECT STREAMS

New Organization

New business processes

Legislations

Central and disaster recovery sites

14 service points

Technologies (Biometrics, smart cards, PKI, etc)

Integration

Marketing & Community outreach

Recruitment and training

NEW ORGANIZATION: EMIRATES IDENTITY AUTHORITY

- ✘ Independent, Civil, Federal organization
- ✘ core business is identity management; including identification, authentication + other services
- ✘ Tasked to operate the project across the UAE
- ✘ Board of 9 members chaired by H.H. Sheikh Mohammed Bin Zayed Al Nahyan, and H.H. Sheikh Saif Bin Zayed Al Nahyan as a vice-chairman
- ✘ To recruit approx. 1500 staff in 2 years

System components

- Population Register
- Biometric sub system
 - Civil and criminal AFIS
- Workflow and document management
- Smart Cards & PKI
- Network infrastructure
 - Military backbone (Shriyan)
 - Eitsalat ATM
- Security
- Admin tools

POPULATION REGISTER (PR & DI)

- ✘ Centralized DB of UAE citizens & residents
- ✘ Each person is identified by a unique ID number
- ✘ Population records updated by events of births, marriages, divorces, deaths, change of sponsor, etc
- ✘ Each record linked to scanned support documents

BIOMETRIC SUBSYSTEM

- ✘ Automated Fingerprint Identification System (AFIS)
 - + Civil AFIS
 - ✘ Person authentication and identification
 - ✘ Online identification: 1-to-N search
 - ✘ Offline authentication (MoC)
 - + Forensic AFIS
 - ✘ Crime solving and crime linking
 - + Central AFIS DB contains:
 - ✘ 5M Person biometric records (fingerprints, palmprints, minutiae)
 - ✘ Criminal case records

LOGISTICS: BUILDINGS

- ✘ Head Office – Abu Dhabi
- ✘ Central and DRC sites
- ✘ Integration Site (Eitsalat Data Center)
- ✘ Service Centers

LOGISTICS: CENTRAL SITE

- ✘ Built on international data center specifications
- ✘ Hosts the IT and Card production facilities
 - + Production capacity: 7000 cards/day
- ✘ Highly secured: biometric access control and BMS
- ✘ **Disaster Recovery Site (DRC)**: a replica of the central site at a remote distance

LOGISTICS: SERVICE CENTERS

- ✘ 14 sites distributed across the UAE
 - + Different capacity: 12, 6 or 4 enrollment lines
- ✘ Build vs. rent
- ✘ 2 years to establish all sites
- ✘ Secured WAN to connect all sites to the central site



مركز تسجيل الهوية والإقامة
POPULATION REGISTER & ID CARD PROJECT

Al Mushrif Service Center – Abu Dhabi

PILOT PHASE

- ✘ Purpose: Learning experience
- ✘ Pilot starts 29 June for 5 months
- ✘ Limited to enroll and produce cards for Police and Military staff
- ✘ Integration with MOI data bases
- ✘ Logistics:
 - + Pre-registration offices in MOI and MOD
 - + Central site and 1 service point ready

MASS ENROLMENT PHASE

- ✘ Starts December 2005
- ✘ 3 year plan to register the population
- ✘ 14 Service points build up in 2 years
- ✘ Portable and mobile solutions

TECHNICAL PERSPECTIVE

- ✘ Design Objectives
- ✘ Technologies
 - + Biometrics
 - + Public Key Infrastructure (PKI)
 - + Smart ID Cards

TECHNICAL PERSPECTIVE

✘ Design Objectives

- + Open system architecture
- + High availability
- + Web-based architecture
- + Proven technology
- + Latest standards



Highly secured

TECHNICAL PERSPECTIVE

× Biometrics

- + Fingerprint biometric

 - × Capture rolled 10 prints and palm print

- + 4 best fingerprints data on card chip

TECHNICAL PERSPECTIVE

× PKI

- + Provides confidentiality, Integrity, non-repudiation, and authentication
- + Infrastructure for CA, certificate repository and CMS
- + Used to authenticate servers and users of the system + PKI services for the population
 - × 2 certificates (authentication and digital signature)
 - × Future use for confidentiality (encrypted messaging)
 - × One user pin
 - × PKI is activated upon user's request on card delivery

TECHNICAL PERSPECTIVE

× Smart Cards

- + ISO 7810, 7816-1, 7816-2 compliant
- + Used as an ID Card to proof the person's identity
- + Each person is identified by a unique number
 - × 15 digit number
 - × Country code (3) Bdate YYYY (4) Rand no. (7) Chk Digit (1)
784 2005 1234567 9
- + To be used for e-commerce and e-government applications using PKI and biometrics
- + The ID Card valid for 5 years

TECHNICAL PERSPECTIVE

× Smart Cards

- + Java-based OS, 32 KB EEPROM, 136 K ROM, crypto co-processor
 - × Multifunction and PKI ready
 - × Applets: ROM: ID+PKI
EEPROM: MoC
 - × more in the future (allow new application download)
 - × Manufacturer: GemPlus Chip: Infineon
- + Contains person's data, portrait, 4 fingerprints data, certificates and private keys
- + Compliant with Java Card 2.1.1 & GP card specs. V2.0.1
- + Four data containers for e-purse, labor, health and defense

The UAE ID Card



SECURITY ARCHITECTURE

✘ Overall system security

- + Multi layer security approach
- + Strong operator and admin authentication
- + Application-level authentication
- + Strong physical authentication
- + Data flow are time stamped and encrypted
- + Distinct databases for biometric data and other identity data
- + Time-stamped audit trail
- + Strong information security policy

SECURITY ARCHITECTURE

× Card Security

- + Multi security features to prevent forgery
 - × Overt: Gulloches, Ghost image, rainbow printing, Special raster, UV Ink, OVI, Variable Fine Lines
 - × Covert: Micro text, hidden text, UV
- + On chip data are digitally signed and encrypted
- + On chip data are protected by the user biometric and pin

IMPLEMENTATION CHALLENGES

- ✘ Many project streams (e.g, new organization, new business processes, legal issues, Logistics,,etc)
- ✘ Nation-wide scale
- ✘ Recruitment and training of 1500 employee
- ✘ Population awareness
- ✘ Limitation with technology (fingerprint biometric FTE=1%)

FUTURE VISION

- × Population Register (PR)
 - + Integrate with other government departments (phase III)
 - + Provide/Sell important statistics to government and private sector (e.g, population demographics, qualifications, occupation, woman fertility, employed people,,,,etc)
 - + Provide added services to individuals (e.g, family tree)

- × ID Smart card:
 - + Add more Java applications → all-in-one card
 - × Driver's license info
 - × e-purse applet
 - × ATM

THANK YOU