Compatibility and the Challenges When Applying e - Passport Infrastructure.

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Agenda

- Current status
- Real life projects as benchmark
- Findings from recent ICAO meeting & Recommendations
Current Status

- ISO 14443 and its associated ISO 10373-6 are in final definition stages
- No specifications on how to communicate and store information
- Manufacturer have their own way of implementation
- ICAO forming interoperability specifications
- Not all manufacturer fully complies with ISO 14443 parts 1-4
- No single reader can read all cards
Learning from Existing Programs

- Bazel – Israel / Gaza is the project with the most experience
- 15,000 people an hour; 2 peak times a day
- Hostile environment
- Mistakes in identity are critical
Requirements Uniqueness

Throughput & User Friendliness

Security

Disneyland

Erez Checkpoint

Financial Transactions

Nuclear Plant
Solution Concept

- **Automatic identification**
- **Automatic permission control**
- **Automatic recording**
- **Automatic transit gateways**
Technology

- Contactless card ISO 14443 Type B
- PKI with RSA 1024 encryption
- Reader supports both Type A and B
- Offline authentication capability
- Image is stored in the data base and on the card
- 9-12 seconds per person
Operational Concept

Information System

Regular Gateway

Control Point Assembly

Processing Unit

Identification

Biometric check

Isolation Booth
Biometrics Criteria

- Reliability and speed (critical factor)
- Operational efficiency, convenience and flexibility
- Population type, handling irregularities
- Environmental conditions
- Simplicity of the enrolment process
- Technological maturity and track record
Benchmark Targets

- **Minimal reliability requirements for qualification**
  (Go/No Go):
  - FAR (False Acceptance Rate) < 1%
  - FRR (False Rejection Rate) < 3%

- **Targeted reliability thresholds:**
  - FAR < 0.1%
  - FRR < 0.1%
Findings & Recommendations

- Performance and interoperability are main considerations
- specific view at e-passport, contactless only
- Operational
  - Define required encryption level
  - Transaction speed, target time, chip type, anti collision
  - Operating volume, reader power, position
- Define personalization process and parameters to assure security
- Add H/W issues that may affect interoperability – antenna size, follow ICAO and WG8
- Define comprehensive and robust test scenarios – ISO 14443, ISO 10373-6
Science – Non Fiction