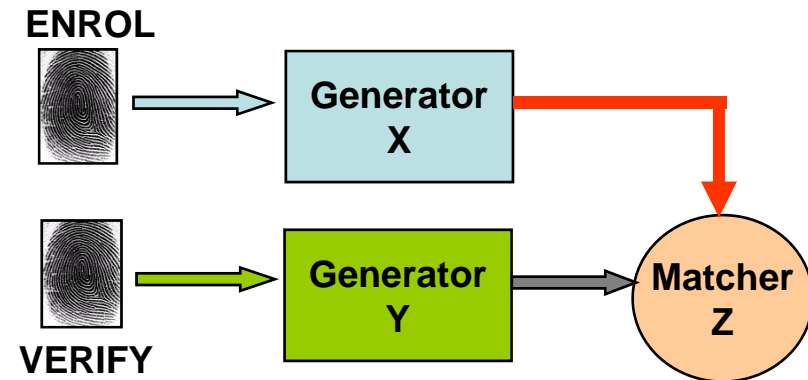


European Standards for Biometrics

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Presentation Plan



- **Status of the ISO standardization Biometrics**
- **European Union Background on Biometrics**
- **Why European Standards on Biometrics**
- **Conclusions**

Biometrics Standards: Big Picture



Topic	ISO SC17 WG4	ISO SC17 WG11	ISO SC27	ISO SC37	CEN Focus
Match-on-Card	7816-11	ISO 24787 CD to FCD			
Interoperability Biodata Format & BioAPI			ISO 24761	ISO 19794-X ISO 19785-X ISO 19784-X ISO 19795-X	
Enrollment & Issuance			ISO 24745		ECC part 4 Section 5
Application for ID Management				ISO 29144 (bio IDManagement) ISO 24713-2 (Profile Airports) ISO 24713-3 (Seafarers)	D1 Specific Biometric Profile for Cross-Border Interoperability
Certification of Biometric Devices			ISO 19792	ISO 19795-7 (Minex II) ISO 19795-4	D2 A European Consensus on Conformance and Interoperability Mechanisms
3					

Standard Rationale



- **When the card is central , the standard is to be developed by ISO SC17, in the two working groups**
 - WG4 was the pioneer with the 7816-11
 - WG11 was created to standardize Match-on-Card scenarios
- **When the biometrics standard involves strong cryptography then it's up to ISO SC27 to drive**
- **The Interoperability standardization domain, technology agnostic, is under the ISO SC37 leadership**
- **Finally, to discuss how to apply for European Use cases the above standards and provide recommendations CEN Focus Group on Biometrics applies**

ISO 24789 Match on Card



- **Currently in third CD for a FCD ballot**
- **Focusing on real Match on Card rather than in the sharing mechanism at the origin of the NWIP**
- **Many comments submitted for third CD anyway**
- **The concern remains the security breaches**
- **Cross-industry: it will serve as a basis to specify biometrics for ID applications, then mobile, banking**
- **Active members in ISO JTC1 SC17 WG11 also participate in CEN Focus Group**

ISO 24745 Bio Template Protection



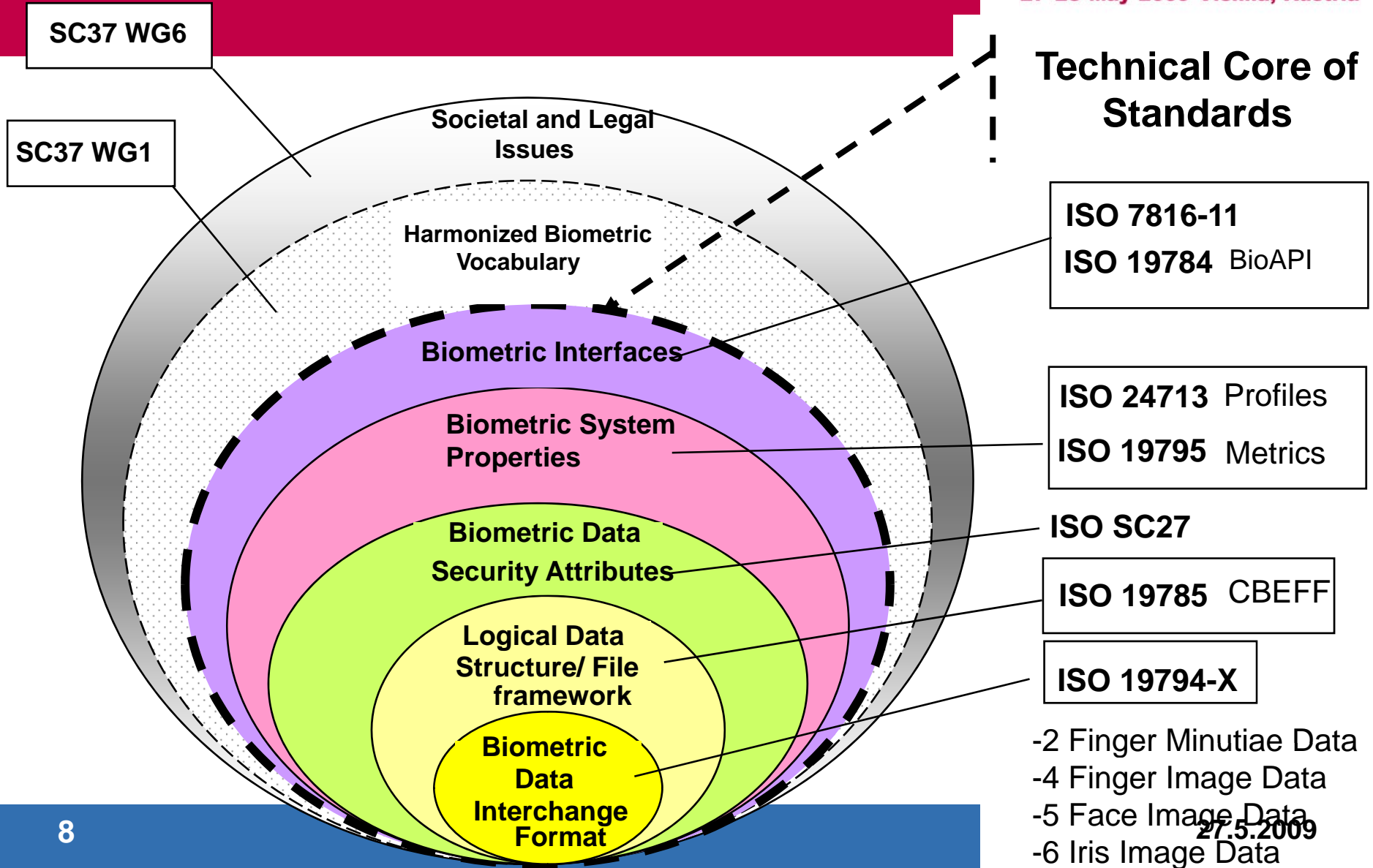
- **At the cross-road between security-interopability-privacy**
- **Basically dealing with the cryptographic protection of biometrics information, initially for storage and retrieval in databases**
- **Targetting enrolment procedures**
- **Outcome of the Turbine Project, meaning this is an ISO standard of European origin**
- **Considered at CEN Focus Group on Biometrics as a core component of the European Standard Framework for Biometrics**
- **Under ISO SC27 / WG5 along with other Privacy/ID Management Framework standards**

ISO SC37 Rationale Breakdown



- **WG1: standard terminology what we mean by the words**
- **WG2: how data is transferred in a biometric system**
- **WG3: how biometric data are encoded for transfer**
- **WG4: defining profiles, selecting the suitable options in the standards for a specific application**
- **WG5: testing, making sure that bio-systems will do well**
- **WG6: understanding and taking care of the legal and societal aspects**

ISO SC37 Onion



EU legal background

- In May 2003, the ICAO adopted the integration of biometric identification (facial recognition) into passports and other MRTDs
- November 2003, the Council agreed to aim towards the inclusion of biometric data in visas and residence permits that EU countries issue to non-EU citizens
- 18 February 2004, the EC adopted a proposal for a Regulation harmonising security standards, including biometrics

 digital facial images (within 18 months) and
 fingerprints (within 3 years).

for EU citizens' passports.

- 13 December 2004: Council regulation on standards for security features and biometrics in passports and travel documents issued by Member States
- 28 February 2005: Commission decision C(2005) 409 [409] laying down the technical specifications on the standards for security features and biometrics in passports and travel documents issued by Member States,
- 28 June 2006: Commission decision C(2006) 2909 [2909] laying down technical specifications on the standards for security features and fingerprint biometric data in passports and travel documents issued by Member States.

Establishing European Standards on Biometrics



Objective  **Identify requirements for interoperability at EU level for applications and biometrics sensors**

Complete  **by Establishing EU evaluation and certification practices**

Consider  **Privacy Protection issues early**

Avoid  **Duplication of ISO effort**

On which grounds ?

- ➡ **Technology-oriented** : look for synergies with other european complementary technologies
- ➡ **Legal**: standard solutions for collection and use of biometric data comply with legal provisions
- ➡ **Improve Acceptability**: of citizens in biometric and to avoid social exclusion of those with disabilities
- ➡ **Reinforce competitive position**: Europe security industry could benefit greatly from being at the forefront of biometric technology

First step: CEN Focus Group on Biometrics



- **Objectif: To Identify new topics and areas of interest for European Standardization on Biometrics**
- **Inputs: ISO SC37, ISO SC17 WG3 and WG11 , ISO SC27**
- **Three contractual deliverables:**
 - D1: Specific Biometric Profile for Cross-Border Interoperability
 - D2: A European Consensus on Conformance and Interoperability Mechanisms
 - **D3: Roadmap for Short/Medium Follow-up CEN standards activities**

Interoperability: Current status



- **For each biometrics EU deployed scheme, analyse**
 - The level of identification / authentication defined
 - Identify whether the biometrics verification is used for cross-border purposes or not
 - Describe and compare the architectures
- **Then look for commonalities and provide recommendations for further harmonization**
- **But no real interoperability without conformance testing**

What's next



- **Identify new areas for standardization not currently covered by ISO :**
 - Certification and evaluation, Spoofing and fake resistance, Attack resistance level, Interactions between biometric sensors and terminals, Aging impact, Implementation for privacy
- **Identify Short-term / Long-term priorities for new standards**
- **Provide with recommendations to start the work**
 - Align with ISO SC37/ WGs roadmap
 - Identify gaps in ISO standards
 - Reflect decision makers ideas and opinion from industry
 - Identify discrepancy between standards and in-field real applications
 - Cover different application domains Automatic Border Control, e-ID, Consumer/Banking

How to proceed in practice

- **CEN TC224 is developing a core of EN Standards on Digital Signature / Applications requiring digital signatures with legal background (ECC, EN 14890, EN 14169, EN 14170)**
- **European Standardization on Biometrics may be part of the business plan of either :**
 - A new WG under CEN TC224
 - A new CEN TC
- **Still one or more justified NWIP proposals are needed**
- **The Debate for CEN / ISO standards is an old one !**
 - ISO standards enable for global interoperability, facilitate exportation
 - CEN EN standards have to be endorsed as national standards
 - Wien agreements to avoid competition

- **Decided not to initiate work on Biometrics but collaborates with the CEN Focus Group experts**
- **Currently ECC-2 , under revision**
 - Refers to Match-on-Card as an option.
 - If used the ECC shall comply with both ISO/IEC 7816-11 and SIO/IEC 19794-2
- **On-going drafting process for ECC part 4**
 - Describe practices for Biometrics Enrollment
 - Address Privacy and societal Issues
 - Application profiles may mandate Match-on-Card authentication

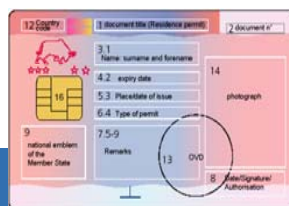
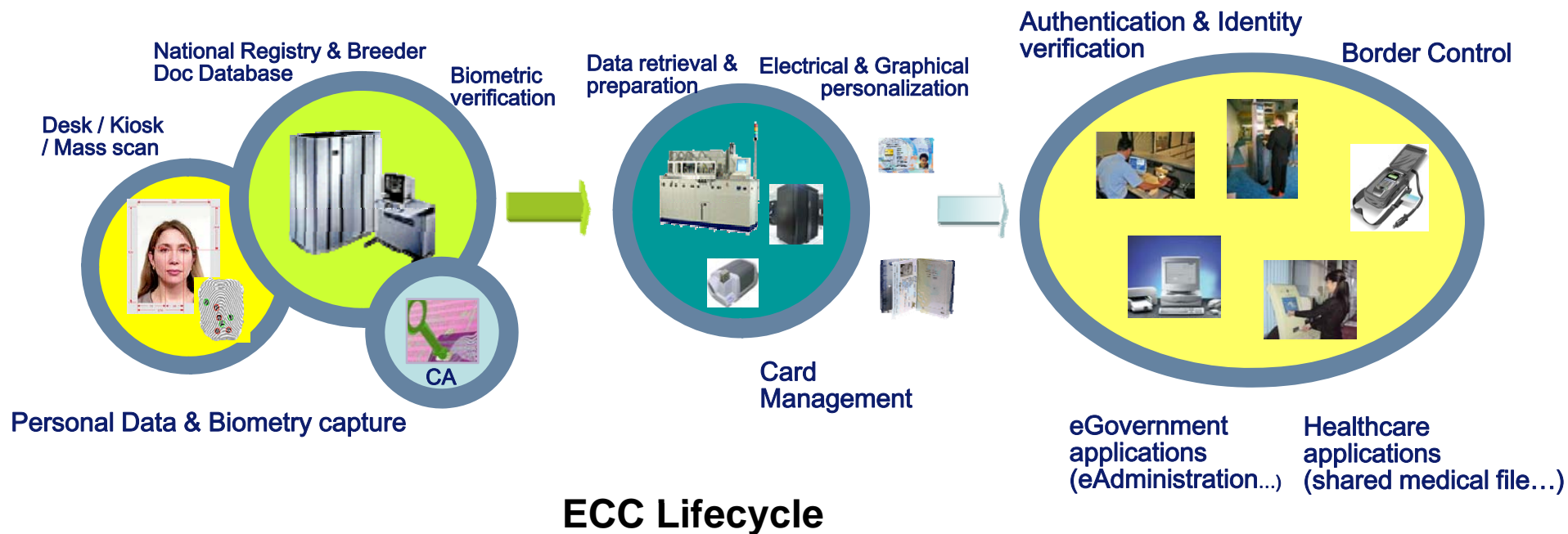
ECC-4 Section 5

EC

Enrolment

Issuance

ECC Applications



Conclusions

- **To launch a CEN Working Group to establish EN standards on biometrics makes sense provided that:**
 - A clear set of well identified issues, covering ISO gaps, justify for one or more CEN New Work Items that can be realistically developed
 - Collaborative paths with ISO SC17, SC27 and SC37 are set
 - Makes possible EU consensus for later ISO standardization
 - Support the technologies with an EU industrial leadership
 - May be referenced in future by CEN application-oriented standards
 - Enable to comply with EU legal constraints
 - Help to address public concerns for adoption
 - Facilitates biometrics system integrators