

Personal National Identification System National Population Registry Mexico

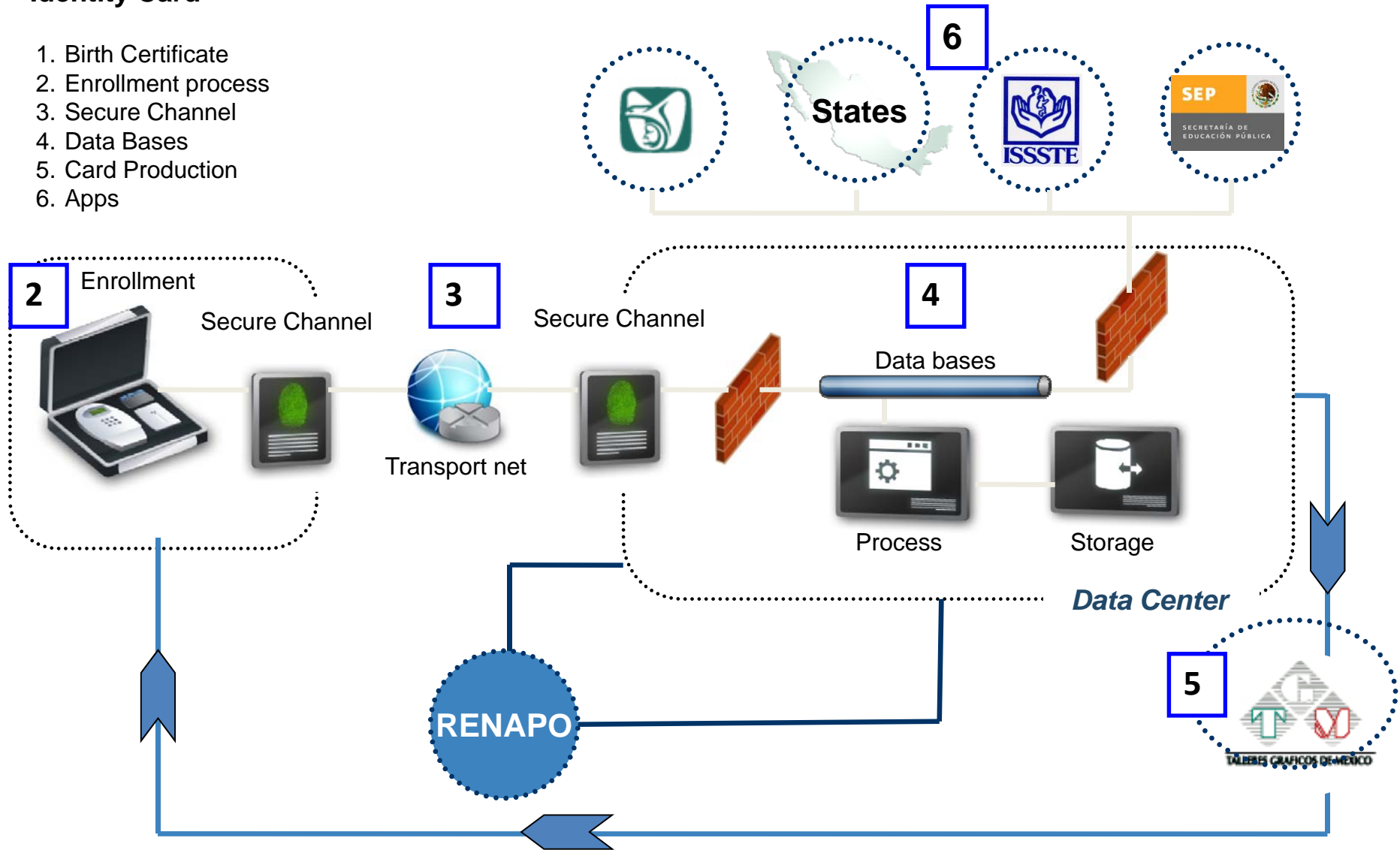
January 21st, 2010



Operational Diagram

Identity Card

1. Birth Certificate
2. Enrollment process
3. Secure Channel
4. Data Bases
5. Card Production
6. Apps

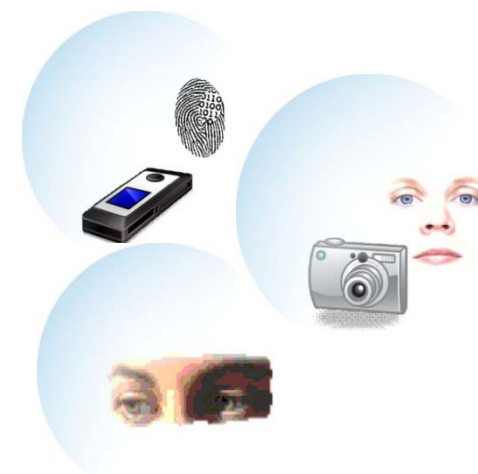


People attend the enrollment office (or mobile unit), where the identity of the person is confirmed by webservices accessing the databases of:

- CURP (Code to the Population Registry) (RENAPO validates the identity of people by the use of webservices, achieving over 1 million consults a day)
- Birth Certificate (Today RENAPO has over 96 million birth certificates on database)

The information considered for the enrollment process is:

- Facial picture (2D)
- 10 fingerprints
- 2 iris
- Digitalized signature
- Scanning of CURP or birth certificate



The recognition rate for each biometry is*:

- Facial picture:71.5%;
- 10 fingerprints; 95%; and
- 2 iris; 97.4%.

**Data calculated with a basis of 0.01% FAR (False acceptance rate)*

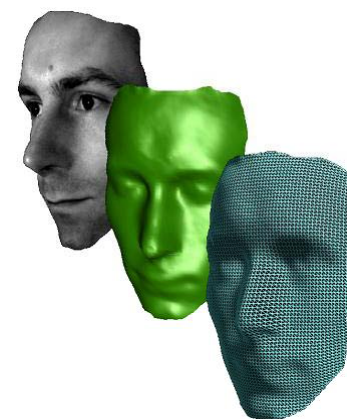
On November 23rd, RENAPO published the manuals for registration of people, which are based on the standard published by the National Institute of Standards and Technology (ANSI NIST ITL 2008).

In recent years, face recognition systems, have improved their accuracy mostly because of the power of search engines, the 3D modeling applications, and the devices used for enrollment.

Eventhough, enrollment process for a population over 100 million people is a challenge for many reasons:

- Non – controlled conditions for enrollment process (illumination for instance), which directly impacts the quality of the file (this will happen when using mobile enrollment units)
- Time used for the enrollment (for 3D applications, certain conditions have to be met, which takes more time enrolling people)

Despite these conditions, face recognition systems is one of the most accepted technologies, due to its link to ID cards and the need of a picture in almost every biometric recognition system.



Lately, many countries have realised the importance of meeting better standards, and getting as much information as they can in order to improve the accuracy of the recognition systems. For example, US Visit program, has almost completed migration from 2 to 10 fingerprints in order to have more control over the visitors to American soil.

The use of 4-4-2 devices help to control the enrollment process, and dramatically decreases the chance of a persons faking an identity (fingers can be replaced when enrolling 2 fingerprints).

Fingerprint recognition systems have some disadvantages in open population:

- Construction and farm workers may not be correctly recognised because of the usage of the fingerprint
- Children under 10 years old may not be correctly recognised



Iris recognition systems are one of the technologies with more expectancy of development, because of its accuracy, and the difficulty to fake an iris scan (iris is protected by a transparent membrane, inside of the eye).

Despite the cost of iris scan devices, it would be more expensive to re-enroll people, mostly for a foundational population registry such as RENAPO.

Other advantage of iris recognition systems is the fact that it is not an intrusive identification method, fact reported in the Privacy Impact Assessment to RENAPO (December 2009).



The National Population Registry is integrated by:

- National Citizen Registry (18+ years old)
- National Youth Registry (under 18 years old)
- Foreigners Catalog (living in Mexican soil)

- Personal Information from birth certificate (migratory form for foreigners)
- Biometric Information (face, fingerprints, iris)
- Parents data in the case of children

- ID Card (Mexicans only)
- Acces to government services
- Acces to private services (such as banking system)

•Information for both Citizen and Youth Registry is integrated and used by all units in public administration

•Foreigners Catalog information is integrated by the National Migration Institute.

•Over 2000 enrollment stations will be set by July 2010

- ID card will have fingerprint minutia encoded in a 2D barcode for offline identification.
- Webservices will be available for online identification (Code of Population + fingerprint)



Mexican ID Card (Sample)



National Citizen / Youth Registry

Target

Over 70 million Citizens
Over 35 million youth



Identification

- Driving Licence
- Passport
- ID Card

Services

- Health system
- Subsidies & Social Programs
- Banking system

Federal and
local
government

Mexico

Over 20
million
mexicans

Outside
Mexico

•Webservices will be set in Embassy and Consulates, in order to validate the identity of a person to get an ID card outside of Mexico

Embassy
Consulate

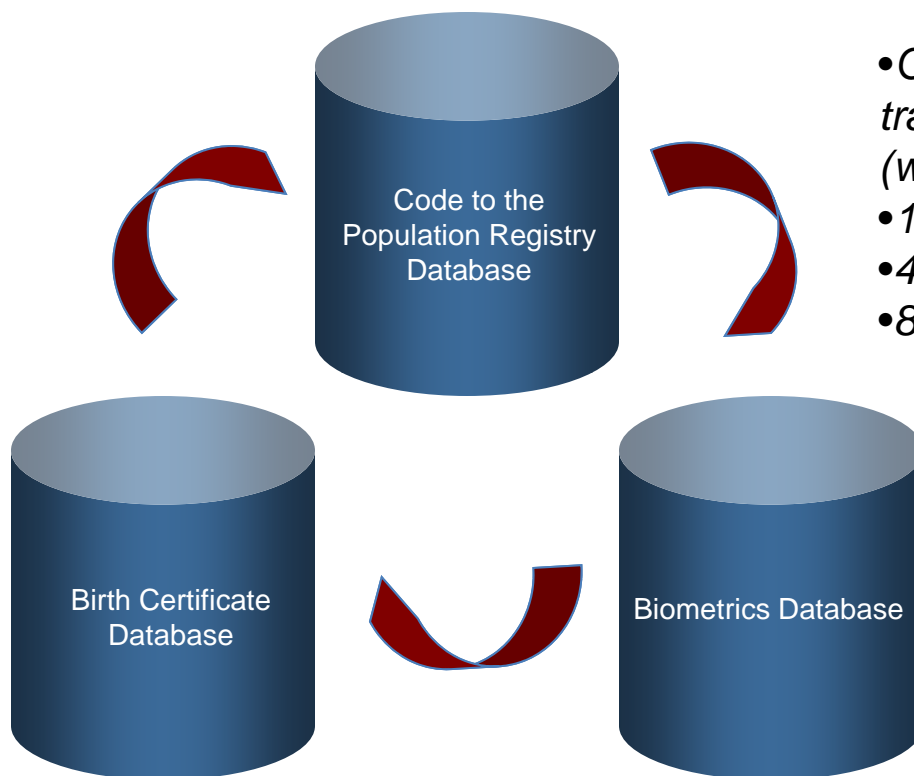
Where are we now?

SEGOB



SECRETARÍA
DE GOBERNACIÓN

- 96.5 million birth certificates
- 7 million death certificates



- Over 1 million transactions a day (webservice)
- 1,629 offices
- 4,429 operators
- 80 websites

- 14 million registries (10 fingerprints and face picture)
- On November 23rd, RENAPO published a new manual for enrollment (ANSI NIST ITL 2007) including iris.

Southern Border: The objective is to strengthen migration management policy to better regulate the border immigration flows

Description:

- *Issue a new Border Worker Card (BWC) to allow individuals from Guatemala and Belize to work as temporary workers in the states of Campeche, Chiapas, Quintana Roo and Tabasco*
- *Increase the security components of the Local Visitor Card (LVC) and BWC to meet international standards by including biometrics*



- Technology is a tool to implement public policies, which means that we have the responsibility to choose between technologies in order to implement those policies. Technology by itself is not the answer to government obligations.
- Protection of personal data and Privacy Impact Assessments, are practices to be considered in order to have the trust of the population in registry projects. Furthermore, each country has its own policy to personal data protection which has to be complied. (Not every government agency has the attributes to have this information).
- The use of 3 biometrics is set to guarantee that every person has only one single record on the database; to identify a person a single biometric and the Code to Population Registry (CURP) can certify the identity (one to one match). This identification can be done by webservices (online), or by the usage of an ID card.