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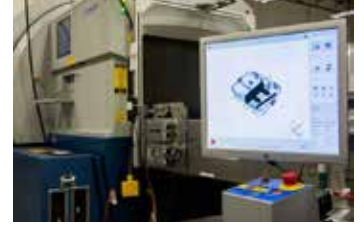
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SMARTER BORDERS IN SPAIN: DELIVERING EFFECTIVE BORDER SECURITY THROUGH A STRATEGIC INTEGRATION PROJECT



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Security is one of the top priorities for the European Union citizens.

The main risks and threats to security facing Europe today, such as terrorism, cross-border organized crime, drug trafficking, cybercrime and trafficking in human beings are rapidly adapting to scientific and technological developments.

Therefore, a “global security”



Communications and Information Systems for Security mission is the procurement of communication and information systems for the Spanish Security Forces.

The primary purpose of these systems is to enable the Spanish Security Corps to exercise its role in safeguarding the rights, freedoms and security of citizens more efficiently and effectively.

The project areas we work in are Communication systems (such as the Spanish Emergency Digital Radiocommunication System), Schengen and Smart Borders, Security Databases, Lawful Interception and Data Retention, Operation Coordination Systems and other projects for the Ministry of Interior

And as a part of their functions, the DEPUTY DIRECTORATE GENERAL has developed the **Smarter Borders project** in Spain.

Our smarter borders project aims at managing the Spanish border through a comprehensive vision, in which we have Border Crossing Points (BCPs) at airports, seaports and land borders. At these control points, we can have both automatic control systems (ABC Systems) and manual control systems, and different physical equipment such as passport readers, fingerprint readers, ID card readers, etc.

approach is required, capable of adapting both to the needs of citizens and to the challenges of the dynamic and global 21st century. In this sense, the Deputy Directorate General of Communications and Information Systems for Security of the Spanish Ministry of Interior plays a fundamental role in reaching these objectives, being one of its strategic lines of work and the impetus for the creation of the Security Technology Center (CETSE).

The CETSE based in Madrid, was inaugurated in April 2016 and is a concept led by the Deputy Directorate General of Communications and Information Systems for Security (SGSICS).

The CETSE also houses the National Center For Critical Infrastructure Protection (CNPIC), as an end user of the CETSE systems and technology, along with other diverse staff of the Ministry of the Interior.

Our position within the Spanish Ministry of Interior gives us a global vision, which allow us from the beginning to integrate: plans, projects, programs, advising, control, coordination, standardization and harmonisation, promotion, research-development and innovation, assessment, and international relationships in the technological security field.

The current complexity of the Information and Communication Systems – in terms of budget,

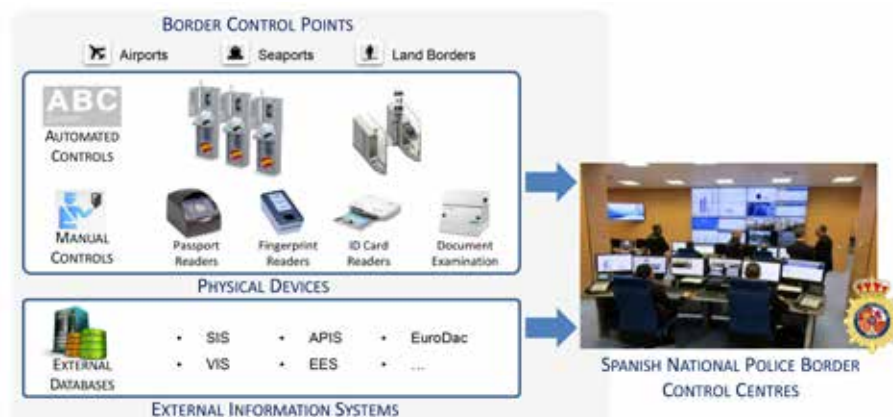
sophistication and sensibility has led to the establishment of a New Technological Architecture in this field, the CETSE Concept.

We are working for the main Security Forces in Spain: Policia Nacional, Guardia Civil, Mossos d'Esquadra, Ertzaintza and Policia Foral de Navarra. We are also working for other end users like: Spanish Army and Navy, Security of Royal House, Security of the President of Government, Intelligence Centre against Terrorism and Organized Crime, National Centre for Critical Infrastructure Protection, Europol, euLISA...

Therefore, we offer the European Union our experience in this "Engineering Reduced Model" to help find a global solution which allows us to build a real European Technological Architecture in the field of Security, a sustainable solution in terms of economics and evolution.

The Deputy Directorate General of





In addition, we have a set of current or future information systems and external databases such as SIS (Schengen Information System), VIS (Visa Information System), APIS (Advanced Passenger Information System), EES (Entry/Exit System), etc.

All resulting data is collected at the different Police Border Control Centres where the information is visualized and analysed, giving support to decision making.

System Requirements and elements include:

The ABC (Automated Border Control) System, which aims to ease the crossing of the outer border of the Schengen area for European citizens, over 18 years old who carry an electronic passport or Spanish electronic ID without prior enrolment.

There are three key components of the ABC system which are the Identification Modules, in which the traveller performs, in an unattended way, the process of document validation and identification through facial and finger biometry. The Access Modules, that automatically allow the border crossing if the previous process was successful. And System Control Posts, from where to monitor the system and attend to those cases in which the border crossing was not

possible in an automated way.

Use of biometrics systems have been employed in a number of different ways. Mantrap configuration where the identification module is located inside a mantrap. Two-Steps configuration, in which the identification is made first and then the traveller goes to an exit door, holding the fingerprint as a token and mixed configuration, where the identification module is integrated in the access module.

For Automated Verification so far, two types of access module have been installed, the main components of which are cameras, electronic mirrors, touch screen, smart card readers and passport verifiers.

In the first instance, the physical validation and verification of the document is carried out.



This consists of reading the Machine-Readable Zone (MRZ) and the Visual Inspection Zone (VIZ) of the passport in visible light, Ultra Violet (UV) and Infra-Red (IR) and then, the security elements are compared through a passport security pattern database. Second, the verification of the chip is performed. Once the algorithms for secure access and authentication of the passport chip have been executed, the system must verify the data read from the chip and verify its authenticity by executing all parts of Passive Authentication following the ICA09303 standard, as well as some additional controls available in 2nd generation passports.

Third, facial biometric verification is performed [3D face recognition]

The system extracts the electronic pattern image stored in the document and compares it with the photograph taken live to the traveller and with the one captured from the biographical page of the document.

Finally, the biometric fingerprint verification is carried out [alive fingerprint recognition]

The system captures the traveller's fingerprint and compares it with the pattern stored in the document.

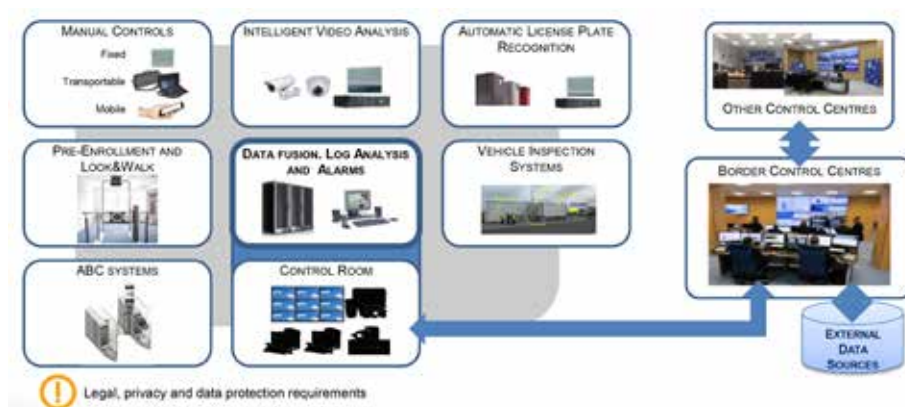
Then, the system's Business logic

decides if the traveller can cross the border, depending on the result of the previous verifications.

The following checks are also carried out in police databases. Verification of traveller's personal data against police databases in search of hits and verification of the document number in the stolen and lost documents databases.

With the Spanish electronic ID, the process is analogous. The main difference is that for finger verification a Match-on-Card algorithm is used. The ABC in Spain began in 2010 with a pilot project in the airports of Madrid and Barcelona, with a total of 24 Identification Modules installed. In 2014 the Malaga airport is incorporated. And in June of 2015, the airports of Madrid and Barcelona are extended and the ones of Girona, Alicante, Palma de Mallorca, Tenerife, the port of Algeciras and the police control of La Linea de la Concepción were added, with a total of 127 Identification Modules at a national level.

Regarding the manual controls, the Spanish smarter borders project



includes two different configurations. Stand-alone police control posts, in which there are different devices available for biometric control such as fingerprint reader, document verifier and smartcard reader. And Police Control Posts associated to ABC Systems, that have the same elements, together with the ABC management and control equipment.

In this sense, and as part of the global Smart Border project, we have developed and implemented a set of Border Control Centres that "Provide the National Border Police with a technological infrastructure to display, monitor and manage the border control activity at the airports,

seaports and land borders".

In summary, there is a set of means and systems, both manual and automatic, whose information can be merged and analysed (always in a respectful way with the individual rights and the data privacy and protection), to allow intelligent border management from police control centres.

In addition, the European border Countries would need to think about the possibility of establishing a similar solution on the other side of the European external border, with third Countries, following the European Neighbourhood Policy.

Yuma Sector's Border Safety Initiative Event Continues Educating U.S., Mexico Media

Yuma and El Centro Border Patrol sectors held their annual Border Safety Initiative (BSI) event on June 1 to educate reporters on the dangers immigrants face when attempting to enter the United States illegally.

Since 1998, when the BSI initiative was created, the Border Patrol invites media to see how the Border Patrol trains and uses multiple resources to rescue illegal immigrants who fall victim to Yuma's harsh desert. This year's event was also attended by individuals from Mexico's Centro de Comunicaciones, Computo, Control Y Comando (C4). In translation...Center for Communications, Calculations, Control and Command.

The event kicked off with a call for help through

Yuma Sector's dispatch concerning an individual in distress. BORSTAR then deployed with a canine team, ATVs and UTVs.

Even C4 members and reporters pitched in to help BORSTAR track down the caller. It was 'only' 90 degrees when the event kicked off but everyone was reminded that temperatures can climb as high as 125, and averages 110 during the summer.

