

# Identity and Residence Verification Data System

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## Abstract

*The Ministry of Public Administration of Spain (MAP), in order to stimulate the eAdministration, is promoting horizontal services to simplify administrative procedures. The Identity and Residence Data Verification Systems for Spanish citizens (IRDVS) is an example of this type of initiative. The aim of these systems is to remove the paper photocopies of the national identity and residence documents usually requested to the citizens in the majority of the administrative procedures. This procedure is being replaced by a paperless electronic request to the IRDVS, with the same legal value as the traditional identity documents.*

## Keywords

Interoperability as the key enabler for interregional cooperation

Egovernment, EAdministration, Interoperability, administrative simplification

## REFERENCE BACKGROUND

Since 1992, the Spanish Law 30/92, LRJPAC, in its article 35.f, considers the right of citizens to not present in administrative procedures documents which are already in power of the Administration.

However such basic documents as a photocopy of the national identity document or the certificate of residence are still being requested for the majority of administrative procedures. It is considered that the number of photocopies of identity accrediting documents Spanish citizens present annually for administrative purposes adds to more than four million.

Likewise, at least three million citizens change their legal residence address every year. In terms of Administration procedures, this means the issue of 10 million certificates of residence requested by citizens to justify their new residence.

Taking into account these facts, in May 2006 two Royal Decrees (RD 522/2006 and RD 523/2006) were published. Their goal is to eliminate the request of paper photocopies of identity documents and the obligation to ask for the certificate of residence as a proof of the citizen's home and residence. The decree's scope only implies the national Administration, not to the local or regional ones.

Since that moment, the Identity and Residence Verification Data System (IRDVS) began to be designed, and the orders PRE/3949/2006 and PRE/4008/2006 were written. These orders lay down the technical configuration, characteristics,

requirements and access procedures of the IRDVS. The publication date of these orders coincides with date the system became operational.

IRDVS is operative since the 1st of January, 2007. Since that moment the Spanish Administration has to check the data of the identity and/or residence of a citizen through IRDVS. These consultations are made with maximum guarantees of safety and by preserving the privacy of the data.

## PROJECT DESCRIPTION

IRDVS allows public organisations to check automatically, the data of identity and/or residence of the citizen involved in administrative procedures. To confirm the veracity of the data of identity, the system is communicated with the Directorate-General of the Police (DGP) and for that of the data of residence, with the National Statistical Institute (INE). These are the national organizations that have the competencies in those issues.

## Goal

The fundamental aim of IRVDS is to remove the citizen's obligation to present photocopies that accredit their identity and official residence in all the administrative procedures.

Other sub-goals of this system are:

- Improving of services provided by the Civil Services to the citizens, saving them time and administrative procedures because the number of documents that they have to provide is reduced.
- Increasing of the quality of the data avoiding falsifications, bad readings or errors, since the data are checked directly by the competent organisation against the real sources of data.
- Reduction of the volume of the administrative files with the lessening the documentary load that shapes the file.
- Improvement of the internal effectiveness of the public Organisations, improving the procedure of its files.
- Increasing the organizational interoperability among the different departments and organisations of the Civil services.
- Simplification of the administrative procedures.

## Technology

Two fundamental concepts have ruled the design and implementation of IRDVS: the interoperability and the re-use of systems.

IRDVS has been built taking into account several basic services that were available at the time of its design. In that way, IRDVS mainly uses services provided by the multi-PKI validation platform (@firma); services of the Time Stamp Authority platform (TSA), and the specification of messages defined by the SCSP project - message for data transmissions among Administrations.

On the other hand, to check the identity of a citizen or to obtain a home address, the IRDVS makes requests to the DGP (Spanish Police Department) or the INE (National Statistics Institute), the competent organisations able to provide that kind of information.

So, whenever an organisation wishes to check some citizen's data, at least five systems come into play: IRDVS, @FIRMA, TSA, DGP and INE. Logically, each service has its own technological infrastructure, and one of the challenges of IRDVS is to guarantee the interoperability and technological independence of all of them.

For that reason, the current platform of IRDVS is defined as a Service Oriented Architecture (SOA) based on the following elements:

- Web Services specifications based on WSDL.
- Use of XML documents to exchanged data among different services involved in the system.
- Web Services electronically signature through XMLDsig.
- Establishment of secure communication channels between the participants through SSL protocol.
- Use of electronic certificates.
- Use of Time Stamping Services (TSA)

## Functional Description

The execution of IRDVS, implies the realisation of the following operations:

1. The citizen fills in a form where he gives its consent to the administration to consult its personal data of identity or residence. This consent substitutes the corresponding paper document that credits that citizen's personal information about her identity and residence place.
2. In the course of the administrative procedure, the public organisation connects with IRDVS to consult the data of identity or residence place of the citizen. For that:
  - a. The public organisation fills up the data necessary to make the consultation and signs the request that it is

going to make to the system. In this way the system shows evidence of the author of the consultation.

- b. IRDVS checks the validity of the signing of the received request through the multi-PKI platform @firma.
- c. IRDVS checks if the author of the request has the rights to access this data (Access Control to the system).
- d. To show evidence of the moment when the public organisation makes the request, IRDVS uses the TSA system for stamping the time when the request was received.
- e. The system leaves a signed register of the received request, the origin of the latter, and the moment of the consultation (stamp of time).
- f. IRDVS makes the request of identity data or residence place to the DGP or INE according to the case. This request is signed by the system.
- g. IRDVS receives the answer generated by the DGP or INE and checks its signature and the validity of this certificate.
- h. IRDVS leaves register of the request and the answer made to the DGP or INE.
- i. The answer for the public organisation is generated by IRDVS and it is also signed.
- j. IRDVS registers, signs and stamps the time the answer is returned to the public organisation.
- k. The public organisation receives the answer and continues with its procedure.

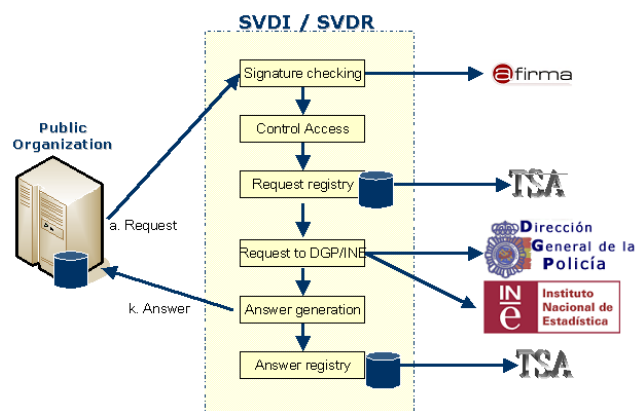


Figure 1. Functional Description of IRDVS.

## Functional Characteristics

### Access to IRDVS

The public organisations can make the consultations to IRDVS, through the administration intranet (SARA), in two ways:

- **automatic consultations:** the system sets out Web services which will be used by the applications of administrative procedures to confirm the data of identity of a citizen or their place of residence. This type of consultation facilitates the automatization of these verifications in the administrative procedures and increases the interoperability among administrations.
- **on-line consultations:** for the case of organisations that cannot make use of the automatic consultations, an application web is provided furthermore. After filling in a form with the data of the citizen, the system will go on to consult its data of identity and/or residence. This type of consultations only can be made by public employees duly authorised. This users will also sign each of the consultations made.

#### *Request security*

All the request will be made with full guarantees of safety, confidentiality and data protection:

- All the requests will be signed (XMLDSig) with electronic certificate (X509 v3).

In case the consultation is made automatically by an implementation that forms part of an administrative procedure, the request will be signed with the electronic certificate of software component.

In case the consultation is made through the application web provided by this system, the public employee will have to authenticate himself for accessing the system by means of a personal certificate. Furthermore the employee will sign with his certificate, any request made to the system.

- IRDVS registers all the consultations made. It also identifies the author of the request (the public employee and/or the application) thanks to the electronic certificate used for authentication purposes. It also stores the moment when that request was made (stamped in time) and the purpose with which it has been made. The system guarantees the integrity of the exchanged message through the use of electronic signature.

The system guarantees the confidentiality of the exchanged data. All the communications that are made among different organisations go over https protocol (SSL) and furthermore the network SARA provides, in its troncal section, data additional protection measures.

#### *Delegated system administration*

To facilitate works of registry, delete or update of users and applications that can use IRDVS, a delegated administration system has been developed. In this way each organisation can, independently, manage the users and applications that have rights for consulting the data of identity and residence place of a citizen.

#### *Audit system*

The system registers all the operations made. Each consultation of data of identity or residence of a citizen has a unique identifier. This identifier allows IRDVS to trace the sequence of operations carried out by the system. The basic information that can be retrieved regarding any request contains: the organization (user and/or application) that performed the request, the moment (date and hour) in which the aforementioned consultation has been made, and if the citizen has allowed the organization to perform this request.

### **IMPACT AND RESULTS**

#### **Impact of IRDVS in the Simplification of the Administrative Procedures**

Among other goals, this initiative promotes, in relation to the administrative procedures:

- Simplification of the administrative procedures.
- Improvement of the effectiveness of the administrative procedure.
- Reduction of the volume of the files, saving role and space of storage.
- Improvement the quality of the data diminishing the falsifications and errors of transcription.
- Enable the citizen to put in practice their rights of not contributing with data and documents that Civil services already have.

To guarantee the citizen the removal of the contribution of accrediting identity and residence documents in all the administrative procedures, it is necessary to act in three fronts:

- a. All the administrative procedures must be simplified by analyzing the cases in which it is really necessary to request these accrediting documents.
- b. In those administrative procedures where the presentation of these documents is essential it has to be analyzed if the organisation has its own mechanism to obtain those data.
- c. In case having analyzed both previous points it is still necessary to contribute those documentation, and whenever the citizen of its express consent, the next step is to consult, by telematics resources, the citizen data through IRVDS.

Since IRVDS is in production, is the public organization the one in charge of checking the data of identity and/or residence place of the citizen involved in the administrative procedure. This consultation is made only in those cases in which it is strictly necessary, and only after obtaining the authorisation of the interested one. The consultation is made with maximum guarantees of safety and by preserving the privacy of the data. Only in case the interested one does not give its consent to make that consultation, he have

to contribute its corresponding accrediting identity document or certified of residence.

### Innovation

One of the most remarkable aspects of this project is the political commitment it has received since its own conception. It is one of the first eAdministration services in Spain regulated by a Royal Decree (RD 522/2006 and RD 523/2206).

Another notable aspect of this telematic service is that it has managed to overcome wide organizational interoperability issues within the civil services. This interoperability happens in two senses:

- With the organisations suppliers of data, that in this case comes from the Spanish Police Department (DGP) and the National Statistics Institute (INE).
- With the consumers of that information (all the public sector organisations). By the end of June 2007, a total of 642 public organisations had already joined the system.

However, the innovating aspect of this system is not restricted to the political commitment and the organizational interoperability of the public sector. Furthermore, it is one of the first horizontal services that the MAP puts at the disposal of all the Public Administrations in order to facilitate the provision of electronic public services, in fulfillment with Law 11/2007 of Electronic Access of the Citizens to Public Services.

In their relationships with the administration, citizens usually have to go from one office to another to obtain official documents. However, with the IRDVS and its law development, the exchange of information among administrations has been boosted, enabling means to avoid citizens to provide copies of documents of the own Public Administration.

### Evolution

The evolution of this system since its putting in production is picked up in the following graphics. Since January'07 to May'08, the total number or request received was **2.485.263**.

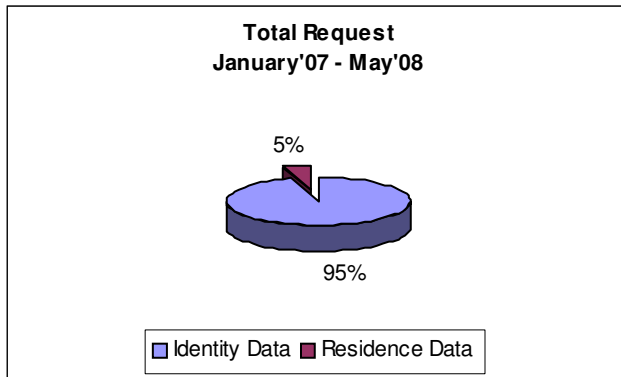


Figure 2. Total of request to IRDVS.

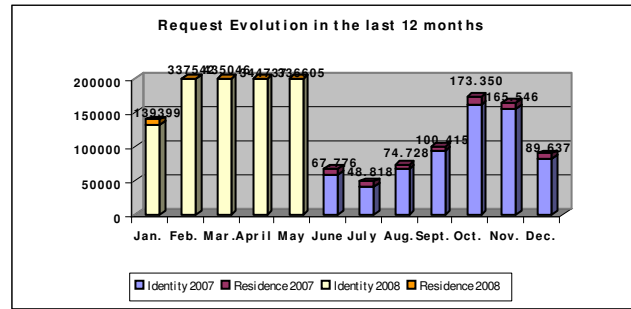


Figure 3. Evolution of request to IRDVS in the last 12 months.

Table 1. Number of request in the last 12 months

| Month     | Identity | Residence | Total   |
|-----------|----------|-----------|---------|
| January   | 131.666  | 7.733     | 139.399 |
| February  | 327.127  | 10.415    | 337.542 |
| March     | 424.559  | 10.487    | 435.046 |
| April     | 331.795  | 12.942    | 344.737 |
| May       | 320.114  | 16.491    | 336.605 |
| June      | 60.261   | 7.515     | 67.776  |
| July      | 42.493   | 6.325     | 48.818  |
| August    | 68.541   | 6.187     | 74.728  |
| September | 93.651   | 6.764     | 100.415 |
| October   | 162.386  | 10.964    | 173.350 |
| November  | 156.569  | 8.977     | 165.546 |
| December  | 82.871   | 6.766     | 89.637  |

### Results

This system presents the following advantages:

- Communications among organisations are rationalised. Where before relations had to be maintained bilateral, the relation is now maintained with a single speaker (this system) that is who will channel all the requests to the different organisations suppliers of data.
- It is constituted a single information point for the resolution of incidences so much techniques as of business.
- Access to the data is homogenised, by unifying the interface of access to them.
- The safety and confidentiality of the personal data exchanged by this system are guaranteed.
- A single point for the exchange of secured data is facilitated with organisations of the EU in case of arriving at agreements of collaboration of exchange of data among the different Member States.

- A unified control of access to the data of the citizens, provided that its consent is had and complying with the rules of protection of data.

For all these reasons, and in view of the good experience of use and answer of the current model of intermediation of data of identity and/or residence, it exists a large demand by any kind of public organisations (local, regional and national) to extend this model of intermediation of data.

### **LESSONS LEARNT**

Lesson 1. The IRDVS is an example of a system able to deal with interoperability in its three levels: organizational, semantic and technological.

Lesson 2. It is worth to mention that the organizational interoperability was guaranteed thanks to the political support (through the new law regulation) the system had from its beginning.

Lesson 3. Furthermore, that organizational interoperability helps to simplify all the administrative procedures.

### **FUTURE DEVELOPMENTS**

Taking into account:

- the actual demand of extending this system functionality,
- the international recommendations and initiatives about data exchanges and interoperability
- and the principal aim of this system, that is facilitating the citizen rights of not contributing any personal data that the Civil Service already has,

the future of this project is to constitute an international and national platform for the citizen data intermediation for all the Public Administrations (National, regional and international).