



eID Interoperability for PEGS

NATIONAL PROFILE CROATIA

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## **Executive summary**

The project eID Interoperability for PEGS aims to propose a solution to the legal, technical and organisational issues related to the creation of an interoperable Pan-European identity management infrastructure. The EU Member States, Candidate Countries and EEA Countries are introducing more sophisticated ways to manage identities in the eGovernment area. Different member states are implementing different structures as their identity management solution. The main challenge for the eID Interoperability for PEGS project is to propose a general architecture that, while taking into account the existence of different models, is able to cope with them by obtaining the final goal of interoperability.

The project should conclude with several different proposals how to build interoperability without affecting member states' own existing infrastructures.

This document describes the current situation regarding the use of electronic authentication means in Croatian eGovernment applications.

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## 1 Documents

### 1.1 Applicable Documents

[AD1]	Framework Contract ENTR/05/58-SECURITY
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### 1.2 Reference Documents

[RD1]	eGovernment in the Member States of the European Union – 5th Edition – May 2006 <a href="http://ec.europa.eu/idabc/servlets/Doc?id=24769">http://ec.europa.eu/idabc/servlets/Doc?id=24769</a>
[RD2]	European Electronic Signatures Study <a href="http://www.law.kuleuven.ac.be/icri/itl/es_archive.php?where=itl">http://www.law.kuleuven.ac.be/icri/itl/es_archive.php?where=itl</a>
[RD3]	DIRECTIVE 1999/93/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 December 1999 on a Community framework for electronic signatures <a href="http://europa.eu.int/information_society/eeurope/i2010/docs/esignatures/esignatures_en.pdf">http://europa.eu.int/information_society/eeurope/i2010/docs/esignatures/esignatures_en.pdf</a>
[RD4]	Decision 2003/511/EC of 14 July 2003 on the publication of reference numbers of generally recognised standards for electronic signature products in accordance with Directive 1999/93/EC of the European Parliament and of the Council, OJ L 175, 15.7.2003, p.45 <a href="http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_175/l_17520030715en00450046.pdf">http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_175/l_17520030715en00450046.pdf</a>
[RD5]	DIRECTIVE 2004/18/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts <a href="http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_134/l_13420040430en01140240.pdf">http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_134/l_13420040430en01140240.pdf</a>
[RD6]	IDABC Work Programme Third Revision <a href="http://ec.europa.eu/idabc/servlets/Doc?id=25302">http://ec.europa.eu/idabc/servlets/Doc?id=25302</a>
[RD7]	DIRECTIVE 2004/17/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors <a href="http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_134/l_13420040430en00010113.pdf">http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_134/l_13420040430en00010113.pdf</a>

## 2 Glossary

### 2.1 Definitions

In the course of this report, a number of key notions are frequently referred to. To avoid any ambiguity, the following definitions apply to these notions and should also be used by the correspondents.

- *Entity*: anyone or anything that is characterised through the measurement of its attributes in an eIDM system. This includes natural persons, legal persons and associations without legal personality; it includes both nationals and non-nationals of any given country.
- *eIDM system*: the organisational and technical infrastructure used for the definition, designation and administration of identity attributes of entities. This Profile will only elaborate on eIDM systems that are considered a key part of the national eIDM strategy. Decentralised solutions (state/region/province/commune...) can be included in the scope of this Profile if they are considered a key part of the national eIDM strategy.
- *eIDM token (or 'token')*: any hardware or software or combination thereof that contains credentials, i.e. information attesting to the integrity of identity attributes. Examples include smart cards/USB sticks/cell phones containing PKI certificates, ...
- *Authentication*<sup>1</sup>: the corroboration of the claimed identity of an entity and a set of its observed attributes. (i.e. the notion is used as a synonym of "entity authentication").
- *Authorisation*: the process of determining, by evaluation of applicable permissions, whether an authenticated entity is allowed to have access to a particular resource.
- *Unique identifiers*: an attribute or a set of attributes of an entity which uniquely identifies the entity within a certain context. Examples may include national numbers, certificate numbers, etc.
- *Official registers*: data collections held and maintained by public authorities, in which the identity attributes of a clearly defined subset of entities is managed, and to which a particular legal of factual trust is attached (i.e. which are generally assumed to be correct). This includes National Registers, tax registers, company registers, etc.

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<sup>1</sup> For the purposes of this Profile, the notion of authentication is considered to be synonymous with 'entity authentication', as opposed to 'data authentication'. The notion of 'identification should be avoided to avoid confusion.

- *eGovernment application*: any interactive public service using electronic means which is offered entirely or partially by or on the authority of a public administration, for the mutual benefit of the end user (which may include citizens, legal persons and/or other administrations) and the public administration. Any form of electronic service (including stand-alone software, web applications, and proprietary interfaces offered locally (e.g. at a local office counter using an electronic device)) can be considered an eGovernment application, provided that a certain degree of interactivity is included. Interactivity requires that a transaction between the parties must be involved; one-way communication by a public administration (such as the publication of standardised forms on a website) does not suffice.
  
- *eSignature*: data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication with regard to this data. Note that this also includes non-PKI solutions.
  
- *Advanced electronic signature*: an electronic signature which meets the following requirements:
  - (a) it is uniquely linked to the signatory;
  - (b) it is capable of identifying the signatory;
  - (c) it is created using means that the signatory can maintain under his sole control; and
  - (d) it is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable;Again, this definition may cover non-PKI solutions.
  
- *Qualified electronic signature*: advanced electronic signatures which are based on a qualified certificate and which are created by a secure-signature-creation device, as defined in the eSignatures Directive<sup>2</sup>.
  
- *Validation*: the corroboration of whether an eSignature was valid at the time of signing.

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<sup>2</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0093:EN:HTML>

## **2.2 Acronyms**

<b>A2A</b> .....	Administration to Administration
<b>A2B</b> .....	Administration to Businesses
<b>A2C</b> .....	Administration to Citizens
<b>CA</b> .....	Certification Authority
<b>CRL</b> .....	Certificate Revocation Lists
<b>CSP</b> .....	Certificate Service Provider
<b>eID</b> .....	Electronic Identity
<b>eIDM</b> .....	Electronic Identity Management
<b>IAM</b> .....	Identity and Authentication Management
<b>IDM</b> .....	Identity Management
<b>OCSP</b> .....	Online Certificate Status Protocol
<b>OTP</b> .....	One-Time Password
<b>PKCS</b> .....	Public-Key Cryptography Standards
<b>PKI</b> .....	Public Key Infrastructure
<b>SA</b> .....	Supervision Authority
<b>SOAP</b> .....	Simple Object Access Protocol
<b>SCVP</b> .....	Server-based Certificate Validation Protocol
<b>SSCD</b> .....	Secure Signature Creation Device
<b>USB</b> .....	Universal Serial Bus
<b>TTP</b> .....	Trusted Third Party
<b>XAdES</b> .....	XML Advanced Electronic Signature
<b>XML</b> .....	eXtensible Markup Language
<b>XML-DSIG</b> .....	XML Digital Signature



## 3 Introduction

### 3.1 General status and most significant eIDM systems

In Croatia, there is no general eIDM system. If the administrative body wants to use identity management in electronic form, it has to establish a new eIDM system. An eIDM system based on eID cards such as a mandatory electronic identity card intended to facilitate access to eGovernment services is not planned at the moment, because access is already established through certificates and the e-fina smart card.

There is a need to enable communication between information systems of public administration using a number that will be unique, and to create a unique personal identifier different from the birth number. According to the data protection law the current birth number is not usable for the information systems of public administration because it is possible to derive from it the personal data of the person, such as date of birth, sex, place of birth, etc. The birth number is currently used in all public sector systems and unfortunately, many Croatian laws are explicitly bound up with the birth number. Because of this, the replacement of the old birth number with a new unique identification number will be a necessary and it will take a long period of time in which probably both numbers will be used for a few years simultaneously.

Due to the harmonization with EU legislations that refer to standards of protection and biometric data in travel identifications, for now the possibility of introducing biometric passports is being considered. They would have security and safety implemented with no-contact chip in which all the biometric data of the owner of the passport would be stored. Electronic identity cards are planned in the future, but there is no program developed yet.

### 3.2 Background and traditional identity resources

#### 3.2.1 eGovernment structure

The Croatian eGovernment strategy is set in the **eCroatia 2007**<sup>3</sup> Programme, which was adopted in December 2003. Based on the principles and priorities outlined in the eEurope 2005 Action Plan, the eCroatia strategy sets the objective of providing online access to key services in public administration, health, education and the justice system by 2007. In addition, in order to improve the quality and responsiveness of public services to citizens and businesses, this strategy is also aimed at reducing red tape and corruption while delivering significant cost savings on government operations. To drive the implementation of this eStrategy, a **Central Government Office for eCroatia** was established in December 2003, headed by a cabinet-level State Secretary directly responsible to the Prime Minister. The primary task of this new body is to reinforce strategic planning and develop

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<sup>3</sup> [www.e-hrvatska.hr](http://www.e-hrvatska.hr)

stronger coordination between government departments for the use and deployment of computer systems.

The implementation of the eCroatia 2007 programme, including the mechanisms of implementation and monitoring of the activities and projects planned in the year 2006, is incorporated in **Operational Plan for the Implementation of the eCroatia 2007 Programme for the year 2006**. This document was issued as a framework for the enforcement and monitoring of the programme in order to establish and provide a successful and effective implementation of the programme at the level of activities, projects and implementation measures. The document defines the objectives, tasks and services through which the implementation of the eCroatia 2007 programme for the year 2006 was to be carried out, including the mechanisms of its implementation, as well as the system of monitoring of the actions and projects. Through the eCroatia 2007 programme, various tasks, completely harmonized with the European agenda in the area of information society, have started being carried out. The eCroatia 2007 programme follows the guidelines of The Action Plan eEurope 2005, supplemented with The recommendations for the Action plan after 2005 (eGovernment beyond 2005) and finally, The i2010 Initiative which recognizes information and communication technology as a powerful moving force in both development and employment. By adopting these guidelines and by implementing the eCroatia 2007 programme, the Republic of Croatia will fulfil the precondition for increasing the general competitiveness of the country, as well as active participation on equal footing in the development of a knowledge-based society.

The eCroatia 2007 programme comprises several areas:

- Broadband
- Interoperability
- Information security
- HITRONet Network
- eGovernment
- eJustice
- eEducation
- eHealth
- eBusiness

One important aspect within eCroatia 2007 is the:

### **One-Stop-Shop Programme (OSS)**

The starting point of the One-Stop-Shop concept is the assumption that the state governmental bodies must supply services to all enterprises and citizens, i.e. taxpayers, in a simple and prompt way, devoid of unnecessary costs, duplicate obtaining of identical information and documents, aimlessly wondering from one body or office to another; on the contrary – services should be provided in one place or from one location, by applying all modern means of connection, i.e. available and mature information technologies, particularly the Internet through meaningful applications on the web. The government has an Open Source policy, expressed in a recent policy document, which advocates its support for Open Standards and Open Source Software (OSS) and its intention to treat open and proprietary software equally. Other measures include training of civil servants in OSS and the intention to request source code for products used in public administration. Among the funds allocated, two projects stand out as the most important: the realisation of the private communication network of the bodies of state administration **HITRONet**, and the continuation of the HITRO.HR programme (see below for more details on both).

## 3.2.2 eCroatia

### 3.2.2.1 eGovernment

Following is a selection of projects that are taking place in bodies of government administration. The aim of these projects is to enable the development of common electronic services and central access to information resources of the government administration.

#### The eRegistries

The informatisation process introduced in regional offices of bodies of state administration, applies to those areas relating to records on citizens' personal status. Registry offices in the Republic of Croatia keep national records on registries of births, marriages and deaths. Data on citizens' personal status are entered into local databases and are replicated into the central registry at the **Central State Administrative Office for Public Administration** (SDUU - *Središnji državni ured za upravu*).

#### The Electoral Register

Data entered into the Electoral Register are available to citizens via the web service of the **Central State Administrative Office for Public Administration** (SDDU) or SMS. The State Election Committee of the Republic of Croatia provides access to data on the local and national elections.<sup>4</sup>

#### The Central Database Registry on Personal Data

In 2005, the **Croatian Personal Data Protection Agency** (*Agencija za zaštitu osobnih podataka*) established the **Central Database Registry on Personal Data**. This was done in accordance with the regulations of the Law on the protection of personal data and the Ordinance on the management method and form for recording private data. The registry consists of a main database, subsidiary database and records.

#### The Eurovoc Thesaurus

The EU Eurovoc Thesaurus, with a Croatian appendix Crovoc creates a strategy for bilingual (Croatian/English) standardization of the terminology for governing bodies of the Republic of Croatia, as well as segments of political, historical, geographical and other terminology characteristic for the Republic of Croatia. The Eurovoc thesaurus relates 6 500 concepts to the same number of concepts in 20 languages of the European Union at the level of legislative practice of the European Parliament. The translation of Eurovoc into the Croatian language with a search service is available on the pages of the **Croatian Information and Documentation Referral Agency (HIDRA)** and those of the European Union. The HIDRA web page provides information on other projects such as: **eCatalogue**, **DAMIR (Digital Archive of network sources)** **ROSA (Registries, Forms, Services, Archives)** and **AIDE (Automatic indexing by Eurovoc Descriptors)**.

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<sup>4</sup> [www.izbori.hr](http://www.izbori.hr)

The application of the **Multipurpose Spatial Information System** (*Višenamjenski Prostorno Informacijski Sustav – VPIS*) will link basic spatial databases, maintained by **the Croatian State Geodetic Directorate**, into a unique information system which will enable users to efficiently use data and respectively build on it.

### 3.2.2.2 eJustice

**The Ministry of Justice** is the coordinator of the majority of the projects for introducing information technology into the judicial system. Its major goal is to introduce modern methods of operation and networking of all judicial institutions. Thanks to this portal judges and other judiciaries are provided with access to legal databases and registers, and citizens have fast access to information on the activities, reforms and functioning of the judicial system.

#### **The Integrated Communication Management System (ICMS)**

With a loan from the World Bank, The Ministry of Justice initiated the development of an integrated communication system for managing court cases (ICMS) which will, once in the phase when it is completely functional in all courts of the Republic of Croatia, cover all business operations and needs of the judicial system. The aim of that project is the creation of an automatic efficient system at the national level which will aid judges and court clerks in applying the rule of law and in offering court services to citizens.

#### **The eLand-registry Certificates Project**

In order to develop a strong and efficient system for land administration, **the Real Property Registration and Cadastre project (RPRCP)** was initiated. The main aim of the project is to speed up real estate registration real estate ownership rights in Cadastre offices of the State Geodetic Administration and the land registry offices of Municipal courts. At the state level, **the Land-registry Database of the Republic of Croatia** is organizationally and technologically a united body of data which consists of land-registers recorded by electronic data analysis (EDA – landregister) and cadastre real property completed by electronic data processing (digital cadastre plan with associated cadastre data).

#### **The eCadastre Project**

The Central Office of the State Geodetic Directorate maintains cadastre data for the Republic of Croatia which unifies data from all of the 115 cadastre offices. In November 2005, a browser for cadastre data was established within **the eCadastre project**, thus providing insight via the Internet into the central cadastre database of the Republic of Croatia. The cadastre database contains more than 16 million registered land plots which are entirely accessible by using the web browser, that is, the eCadastre project. The eCadastre service enables checking of cadastre plots, authentication of data entries as well as latest data changes and documentation based on which changes were made.

#### **The eCourt registry Project**

The Court registry contains all entities that are being founded including trading companies, co-ops, institutions, etc. The Court registry contains accurate data on the name, headquarters, activities, board members, company and capital stock. The insight into the Court registry via the Internet was made possible already in 1995. A simpler registration of business subjects is one of the more important activities of the Ministry of Justice in creating a suitable business enterprise environment.

Changes in the Law on the Court registry, investments in the information system of court registries of commercial courts, automation of administrative and accounting judicial operations, criminal and minor offence records, simplify procedures when establishing companies and provide simpler access to data from the court registry.

### **The eJudicial Practice Database Project**

The eJudicial Practice database portal provides an insight into the case-law published in printed versions of the Supreme court under the heading „Selection of rulings“, but also gives access to complete texts on the rulings of the Supreme Court of the Republic of Croatia since 1993. In addition to the rulings of the Supreme Court, a selection of rulings of regional courts and the High commercial court of the Republic of Croatia are published.

### **The Judges Web**

The Judges Web is a non-governmental and non-profit organisation whose aim is to use modern technology in order to speed up and improve the quality of court operations and to make information relating to court proceedings accessible to the public. The organization has launched a project called ‘*suda•ka mreža*’<sup>5</sup>, as an online service providing access on various legal information to lawyers, judges, students at the Faculty of Law, the public, court experts, court interpreters and foreign investors. The Ministry of Justice took over the project in May 2005.

### **The eEnforcement**

It concerns the implementation of electronic services for delivering enforcement measures for debts for communal services, fees and rent via the Internet. The objectives of this service are to reduce the number of enforcement cases, shorten the period for overhead proceedings, simplify and accelerate communication between the enforcement creditor and the Court, and to expand support for public notary offices.

#### **3.2.2.3 eEducation**

Projects in the area of informatisation of education are under the jurisdiction of the Ministry of Science, Education and Sports and include several aspects among which are applicable support for business processes in education institutions, application of information and communication technologies in teaching, as well as the introduction of information science as a mandatory subject in the primary and secondary school.

### **The Croatian National Educational Standard (HNOS)**

The Ministry of Science, Education and Sports included Information science into the national educational standard for the Republic of Croatia.

### **The Information System of Elementary and Secondary Education**

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<sup>5</sup> [www.sudacka-mreza.hr](http://www.sudacka-mreza.hr)

It is expected that in the beginning of 2006 the first modules of the project Information system of primary and secondary education become active, and that the completion of the entire planned coverage of data in the 5 modules should have taken place by the end of 2006.

### **The ECDL (European Computer Driving Licence)**

The Ministry of Science, Education and Sports and the Ministry of Justice initiated the basic education in the area of Information science and new technologies, through which officials at the ministry, the judiciary and teachers in primary and secondary schools can obtain the European Computer Driving License. In order to enable young people to use the eEducation contents, the project of the ICT literacy and certification of ECDL users will continue to develop, while the infrastructure for the educational portal „**Croatian system for eLearning**“ has already been established.

### **The Information System of Higher Education Institutions (ISVU)**

In 2005, the Ministry of Science, Education and Sports completed the project for developing software for the implementation of an information system in institutions for higher education<sup>6</sup> and contracted software maintenance. A survey on equipping higher education institutions for entry into the information system of higher education was conducted. Based on the results, a decision on the inclusion of institutions for higher education into the Information system of higher education institutions was made.

### **The information system of organized meals for students**

The information system of organized meals for students (known as X-cards<sup>7</sup>) provides information support to student users and providers of services of subsidized meals. The main users of the system are students, institutions of higher education and providers of the system of subsidized meals in the Republic of Croatia

#### **3.2.2.4 eHealth**

The informatisation of health is a priority area of the eCroatia programme which expects to improve the quality of service to citizens with considerable financial savings. The main areas of application are: informatisation of primary health services, introduction of an integral information system for hospitals, informatisation of the Croatian Institute for Health Insurance with the introduction of multifunctional smart cards. One of the main tasks of this project is to establish the standards of interoperability of these information systems by introducing online

appointments for examinations by specialists.

**The Ministry of Health and Social Welfare** conducted evaluations of **the Informatisation of primary health services (PZZ)** projects, and **the Informatisation of the Hospital information system (IBIS)**. The implementation of the project on the informatisation of Primary Health Services was initiated. The development of functional and technical specification had been completed, as well as the creation of the health information system. Within the framework of the project financed by a World Bank loan, The Ministry of Health and Social Welfare is conducting **the informatisation of the**

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<sup>6</sup> [www.isvu.hr](http://www.isvu.hr)

<sup>7</sup> [www.cap.srce.hr](http://www.cap.srce.hr)

**system of social welfare** through informatisation of centres for social welfare at the regional level and their linking into the information system of the Ministry.

**The Croatian Institute for Health Insurance (HZZO)** initiated the **HZZO Portal** project harmonious to the project of Informatisation of primary health service. The HZZO Portal ensures a secure electronic exchange of data with subjects within the health system of the Republic of Croatia.

### 3.2.2.5 eBusiness

One of the main tasks of this eCroatia programme is to create favourable conditions for the development of electronic business. It is expected that through intensive development of information services in the government administration and the economy, and by conducting ICT literacy for users of these services, the implementation of eBusiness will be significant for the entire economy. The founders of these activities are the Central State Administrative Office for eCroatian, the Ministry of Finance, the Ministry of Economy, Labour and Entrepreneurship, the Croatian Chamber of Commerce and the Croatian Information Technology Society.

#### **The eREGOS (The Central Registry of Insured Persons) Project**

The eREGOS services within HITRO.HR set of services provide electronic transmission of an official form, so called R-Sm form, (the insured person's specification based on calculated and paid compulsory contributions for the pension fund insurance) with authorization for accessing the service and authentication of forms by applying smart cards with a digital certificate.<sup>8</sup> The service is available to registered users only. Information on how to register for using the service is available at [www.hitro.hr](http://www.hitro.hr).

#### **The ePDV (VAT) Project**

The ePDV is the first electronic service of the Tax administration within eTax which provides all taxpayers (business subjects) in the Republic of Croatia with a simple and secure distribution of data on the periodic calculation of VAT (PDV) for a specific cost accounting period. In order to use the ePDV services, it is necessary to own a certified electronic signature issued by FINA.

#### **The eCREW Project**

The eCREW system was established in April 2005 in order to enable all legal and natural persons who are in the business of renting yachts and boats to register, prior to putting out to sea, their crew and passengers via the Internet using smart cards with a digital certificate based on acquired user rights. At the same time, the system enables registering residency of foreign tourists on chartered vessels with the Ministry of the Interior. The communication between clients and the server is done through a secure channel (SSL) using a digital certificate. The aim of the project is to expedite business processes at the Ministry of the Sea, Tourism, Transport and Development with business subject (charter companies) relating to charter vessels, to secure a complete monitoring over the procedure of renting vessels by all authorized bodies of the state administration and in that way prevent illegal chartering.

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<sup>8</sup> [www.eregoss.fina.hr](http://www.eregoss.fina.hr)

## The eCustoms Project

The Customs administration offered its first Internet services to international dispatchers in 2001. In addition to dispatching, dispatchers can gain insight into the current charge of their bank guarantees, and insight into the register of customs duties. These services provided considerable savings in dispatcher business operations, faster submission of customs declarations, and a lowered risk in business operations of dispatchers.

## Identification infrastructure

There is no specific identification infrastructure, but the basis for its development is there. Registry offices in the country keep national records on registries of births, marriages and deaths. Data on citizens' personal status are entered into local databases and are replicated into the central registry at the Central State Administrative Office for Public Administration. The project is being carried out across the Republic of Croatia with a database of over 22 million entries. At the end of 2005, over 56% of data was transferred into digital form. In 2005, the Croatian Personal Data Protection Agency established the **Central Database Registry on Personal Data**. This was done in accordance with the regulations of the law on the protection of personal data and the Ordinance on the management method and form for recording private data. The registry consists of a main database, subsidiary database and records.

## Knowledge Management infrastructure

The **Croatian Information and Documentation Referral Agency (HIDRA)**<sup>9</sup> is an expert government service, which also provides a central information and documentation portal for official information and documents of the public domain. Documentation includes laws, regulations, state documents, official studies and other similar data. Storage is permanently allocated in DAMIR, the Digital Archives of Web Sources of the Republic of Croatia. HIDRA assures availability of public official data, information and documents while promoting their use. The Scientific libraries are under the Ministry of Science, Education and Sports, while city libraries are under the Ministry of Culture. Public libraries offer search of contents/catalogues and view of content services. This service enjoys the highest level of sophistication in the country so far. For instance, the **National and University Library** in Zagreb has interesting space-age functionality for online booking and a huge virtual library which ranks among the leading places of online booking in Europe. Booking services are integrated with search tools allowing simple or advanced search. The information in this section is based on the common list of 20 basic public services (12 for citizens, 8 for businesses) adopted by the Council of the EU in March 2001, and on the methodology used to assess their level of online availability and sophistication in the eEurope benchmarking exercises (see: eGovernment indicators for benchmarking eEurope).

A significant target is the completion of **HITRO.HR**<sup>10</sup>, a government service for quick communication of citizens and business subjects with the state administration. HITRO.HR encompasses all independent projects of different bodies of state administration, and therefore, represents the realisation of the One-Stop-Shop concept which is the main objective to be achieved. The project is based on a list of twenty basic areas of services where informatisation must be implemented. Twelve service areas are intended for citizens and eight for entrepreneurs and all of them are evaluated by

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<sup>9</sup> [www.hidra.hr](http://www.hidra.hr)

<sup>10</sup> [www.hitro.hr](http://www.hitro.hr)



the European Commission as the areas of public services with the most frequent interaction between citizens and business subjects on one side and public administration on the other. The service areas accessible online by citizens are the following: income tax returns, services relating to employment, social fees, obtaining and extending the date of validation of personal documents, vehicle registration, obtaining building permits, filing reports with the police, public libraries services, access to data from public registries, higher education, registration of permanent and temporary residence, and health services. The service areas accessible online by business subjects are the following: employee social insurance, profit and income tax returns, company registration, reporting data to the Central Bureau of Statistics, customs declarations, environmental protection and public tenders.

An ICT network of state governmental bodies is critical for implementing the OSS Programme, interlinking all such bodies by fast, broadband telecommunications. For this purpose, the Financial Agency (FINA) is building a network entitled HITRONet. The programme is to be implemented from 2005-2007, under funds allocated by the state budget. eGovernment is also pursued through other programmes such as the **USAID/Croatia Operational Plan** (13 June 2006), which promotes the Local Government Reform Programme. According to the plan, fifty local governments will introduce new eGovernment systems that offer increased transparency and that will also respond to the needs of businesses planning local investments. Other supporting activities include the National Programme on Information Security for the Republic of Croatia. The National Programme for Information Security in the Republic of Croatia defines goals for information security at the national level, the jurisdiction and duties of particular institutions in the area of information security, as well as the necessary mutual coordination of all factors of information security. These include the requirements necessary for a systematic development of laws, regulations, methods, procedures and technical systems. The strategic task of this National programme is to gradually expand the process of information security to the entire country by introducing appropriate, minimal safety criteria into the government and public sector, as well as the development of the awareness for security among the wider public.

**HITRO.HR** is a service of the Government of Republic of Croatia intended for quick communication of citizens and business subjects with the state administration. It enables the citizens and entrepreneurs to have quicker, simpler access to information and services in one location. The first of the services being offered through HITRO.HR is the establishment of Limited Liability Companies. From now on, it will be possible to establish a Limited Liability Company through the HITRO.HR counters within *Financijska agencija* (FINA) in an easier, quicker manner. It will be possible to acquire all information and perform most of the required procedures for establishing the Limited Liability Company in one location.

**FINA**<sup>11</sup>, the **Croatian Financial Agency**, is the leading service-providing institution in the financial sector. The Croatian Government has entrusted the HITRO.HR service to the agency. Furthermore, the Croatian Information and Documentation Referral Agency (HIDRA) directly participates in the development of the information infrastructure of the Government and state administration bodies.

Regional agencies have been formed, under contracts between local and central administration as well. The contract between the Republic of Croatia and the City of Zagreb on establishing the **Information Systems and Information Technology Support Agency**, APIS-IT, signed in October 2005 is an example of such arrangements. APIS-IT came about as a redirection of the City Bureau for Automatic Data Processing, to enable a higher quality implementation of the HITRO.HR project.

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<sup>11</sup> [www.fina.hr](http://www.fina.hr)

HITRO.HR services will be available to all interested parties in all FINA's branch offices. For the moment, HITRO.HR windows provide the opportunity for founding Limited Liability Companies, and in the future, the majority of your dealings with government administration will be done by FINA, thus saving your time and enabling you to obtain all the necessary permits, extracts and registrations, quickly and in one place.

**e-kutak / e-corner**<sup>12</sup> provides education services and information regarding the possibilities and advantages of the FINA e-card and supported services. e-kutak is accessible through 19 HITRO.HR offices in FINA branch offices. e-kutak is intended for entrepreneurs and craftsmen. The service will be available to other citizens soon.

**e-services** that e-kutak offers are the following:

- e-REGOS
- e-PDV
- e-Pension
- Registry of Annual Reports through web
- WEB-BON
- Concession Registry
- e-Payment

It is important to note that the e-Corner service is in accordance with recently introduced recommendations by the National Council for the Competitiveness proposing the augmentation of ICT competitiveness. This process will certainly allow to exceed the standards of European Union in the usage of information technologies in businesses and industries. In September of 2007, the Croatian public will be presented with an action plan of the recommendations for increasing the Croatian ICT competitiveness. This plan will be the final result of a collective intercession of the business sector, government, unions and experts.

### **eSpis**

e-Spis, a unique IT system for the management of judicial documentation, was introduced to the public, in June 2007. The goal of this project was a creation of conditions for faster and more efficient protection, in other words, bringing the judicial system closer to the people by making it more tangible and transparent. Through e-Spis public will be able to follow the court system processes more easily, and pursue a desired case from the initiation to its closing. Information available through this system will provide a factual base for the future decision-making processes in accordance to needed changes in the judicial system (legislative, financial, organizational, personnel etc.).

The introduction of this method into the entire judicial system and its development, will lead to number of benefits for both the Croatian public and its institutional users. Some of these benefits may be: efficient case resolution, transparency, anti-corruption, improvement in service, monetary savings, and assistance in decision making of the authorities.

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<sup>12</sup> [www.hitro.hr/eng/e-kutak/index.html](http://www.hitro.hr/eng/e-kutak/index.html)

### **3.3 eIDM framework**

#### **3.3.1 Main eGovernment policies with regard to eIDM**

**The FINA E-CARD** is a multi-functional smart card which enables companies to conduct their business from their offices by using the Internet, without having to leave the workplace. The FINA e-card is a card with two business certificates. It is intended for corporate and other legal entities and craftsmen. It offers unlimited access to FINA's services (24 hours a day), lower transaction costs, access to accounts at various banks, a cheaper and faster way of obtaining financial information (WEB-BON and the Register of Annual Financial Reports – financial and statistical reports), as well as an opportunity to look into the Register of Land/Cadastral Certificates and the Register of Concessions. This card also ensures a safe signing of documents using digital signatures.

Besides providing access to FINA's Internet services, this multi-functional card can also be used to access e-government services such as e-Regos (possibility of submitting the RS-m forms via the Internet), e-PDV (on-line submission of VAT reports and payments), e-HZMO (on-line employee pension insurance registration and payments), etc.

Especially interesting is the FINA card's potential for further development. It is expected that by the end of 2007 it will be possible to use this card to access a range of other e-services enabling the electronic submission of profit and VAT tax reports, online company registration, submission of statistical indicators to the State Department of Statistics, payment of custom duties, obtaining approvals and permits concerning environmental protection, and conducting public procurement operations.

The FINA e-card thus represents a universal platform for electronic business in Croatia, ensuring the identity of each electronic business participant, and becomes the key IT infrastructure guaranteeing the highest level of security for all forms of Internet business.

The smart card certificates are not limited to a single web service and e-mail – they can be used in other e-business services and applications in Croatia and abroad without subsequent modifications. A card held by a user thus becomes truly universal and multifunctional.

All services offered and developed by the Financial Agency in the e-business domain are conformed to the e-Croatia and e-Europe programs, the Pan-European Interoperability Program, and the laws on electronic signature, electronic commerce, electronic document, Personal Data Protection Act, and global and European business practices.

FINA aims to raise the awareness of the application of e-business by developing the existing and new services based on the PKI technology through cooperation with the IT community.

FINA offers the service of certifying and issuing digital certificates to both retail and corporate clients. FINA's certificates are widely accepted standard X.509 certificates and are not specially designed for any individual application, geographical or business area.

In addition, the FINA online service enables banks/savings banks to inspect: overview of orders by giro account, overview of DI orders, acceptance of DI statement files (with NKS), overview of checks, acceptance of checks, daily balance – basic data, overview of balance by VAT number, depositing institution's status, daily giro account turnover and daily turnover for depositing institution's clients.

Beside the abovementioned, FINA may enable a user to view data contained in the JRR (Integrated Business Entities' Accounts Registry), as well as to accept data from the JRR.

FINA is in charge of the following registries:

- Unique account register of business subjects (Croatian „JRR“) - record of all accounts expressed in HRK (Croatian KN) of all business subjects opened in banks and in Croatian National bank.
- Register of annual financial reports (Croatian „RGFI“) - central source of information about efficient business activities and financial situation of both natural and legal entities who are bound to pay taxes.
- Register of digital certificates (Croatian „RDC“) - leading Croatian provider of the service of certification to citizens and business entities. It operates in accordance with the Law on Electronic Signature and is the only authorized certifying institution registered with the Ministry of Economy as the umbrella certifying authority for the Republic of Croatia. Products and services: issuance and management of the life cycle of business and personal digital certificates, issuance of digital certificates on a smart card, provision of certification services to state administrative bodies, offering technical and operational support to the ministry of economy, labor and enterprise in managing the central certification authority for the republic of Croatia.
- Concession register (Croatian „RK“) - unique electronic register of business contracts and also central source of information about all concessions contracted in Croatia.

FINA's certificates allow safe electronic access to information and services through the application of the public key infrastructure (PKI) and the technology of electronic signatures. Special attention is given to the procedure of registering users of the Digital Certificates Registry, including detailed identification prior to issuance of certificates. Registration, issuance and collection of certificates are organized at FINA's business units. The current total of 9,600 certificates issued for FINA's e-services, as well as for the „business to government“ services, stored on more than 400 smart cards, makes a ten times greater number than the number recorded in 2004. This reveals a greater interest and need for products and services offered by the Digital Certificates Registry Center.

### **Electronic Certification Regional & Local eGovernment**

The Land Register Department of the Municipality Court, Ministry of Justice produces electronic land certificates through the **e-izvadak** service, available since May 2005. Regional authorities (Counties and Municipalities) oversee local implementation of the main government projects and set up local one-stop shops to serve citizens. This process is ongoing, in an effort to minimise differences between the central and local services.

### **Audit/Assurance**

There is no separate body assigned, therefore the role is played by the agencies mentioned above. Data Protection The Croatian **Personal Data Protection Agency** (<http://www.azop.hr>) has been given this responsibility. [In the basic telecommunications infrastructure, in mobile penetration and in the supply of ISDN and DSL services, Croatia is at a level comparable to other countries where the market has been open since 2001. An ICT **network of state administration bodies** called **HITRONet**, which connects them via broadband links, is being financed and built by the Financial Agency (FINA). The Information–Communication Network for State Administration (HITRONet) is a basic system of computer-based communication network for state administration interlinked into a unique communication infrastructure. In addition to that, it forms subsystems for the following: common Internet access, access by remote users, assistance to users, system security, overseeing and managing the system, as well as the subsystem of common network and application services. The network is an integral part of the HITRO.HR programme and represents a basic infrastructure for further development of electronic services and enables better communication among the bodies of public administrations. With the completion of the first phase of development, ministries and other government institutions in the city of Zagreb were linked by a common 10Gbps network infrastructure providing Internet access and data transfer. The 2nd phase, which started in December 2005, will provide links to selected regions.

### **3.3.2 Legal framework**

There is no specific eGovernment legislation but the framework of set of laws and regulations for exercising eGovernance is comprehensive.

#### **ELECTRONIC SIGNATURE**

- Electronic Signature Act (OG 10/2002.)
- Ordinance on the register of qualified certificaion authorities for electronic signatures (OG 54/2002.)
- Ordinance on the records of certification authorities for electronic signatures (OG 54/2002.)
- Ordinance on the measures and procedures for the use and protection of electronic signature and advanced electronic signature, electronic signature and advanced electronic signatures development tools and certification system and obligatory insurance for certification authorities issuing qualified certificates (OG 54/2002.)
- Ordinance on the technical rules and conditions for linking certifying systems for electronic signatures (OG 89/2002.)
- Regulation on the scope of operations, content and responsible authority for operations of electronic signature certification for state administration bodies (OG 146/2002.)

## **ELECTRONIC COMMERCE**

- Electronic Commerce Act (OG 172/2003.)

Croatia will have to ensure adequate means of supervision in this area and appoint a contact point to co-operate with authorities in other EU Member States. It should also take steps to prohibit the production, manufacturing, sale and distribution of pirate smart cards and other devices circumventing the encryption of conditional access services, as well as to ensure adequate sanctions.

## **ELECTRONIC DOCUMENT**

- Electronic Document Act (OG 150/2005.)

## **ELECTRONIC COMMUNICATIONS**

- Telecommunications Act (OG 122/2003; 158/2003; 60/2004; 70/2005.)

## **CYBERCRIME**

- Convention on Cybercrime (OG 172/2003.)<sup>13</sup>

## **AUDIOVISUAL POLICY**

- Media Act (OG 59/2004.)
- Electronic Media Act (OG 122/2003.)
- Croatian Radio – Television Act (OG 25/2003.)

## **Freedom of Information legislation**

The freedom of information law was adopted in October 2003, as the **Zakon o pravu na pristup informacijama** (Act on the Right of Access to Information).

## **Data Protection/Privacy legislation**

The law on **Personal Data Protection** was adopted in June 2003, implementing the relevant EU Directive.

As mentioned above, there is no general eIDM system in Croatia. If the administrative body wants to use identity management in electronic form, it has to establish a new eIDM system. eIDM system based on eID cards as a mandatory electronic identity card intended to facilitate access to eGovernment services is not planned because there is already a system established for accessing the eGovernment services. There are a few strategies and programs for planning the introduction of eID cards, but there is actual no legal framework in force related to the electronic identification of a person.

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<sup>13</sup> Convention on Cybercrime is implemented in Criminal Code.

### **3.3.3 Technical aspects**

Because there is no real and standardized eIDM system in Croatia the technical aspects of the questionnaire cannot be answered.

Under one of the fundamental goals of e-Croatia 2007 the Government of the Republic of Croatia decided to stimulate development of infrastructure for broadband in areas of the country where the interest of telecommunication operators continues to remain low. They will allocate around 36,3 mil kunas (5 mil euros) toward development of territories of the special national welfare as well as highland areas and islands (e-Islands).

A second part of the budget, 16,1 mil kunas (2,3 mil euros) will be used given to the telecommunication operators for the connection of the isolated areas into broadband. Financial initiatives and precedence will be provided to the operators interested in connecting new users among private households as well as educational, cultural and public health institutions. Public bidding for these projects and its criteria will be available soon.

### **3.3.4 Organisational aspects**

As we already mentioned, Croatia has no centralised eIDM system usable for all eGovernment application.

## **3.4 Interoperability**

All eGovernment applications/systems are accessible to qualified certificates holders, who are identified to public administration bodies.

Croatia has no agreements with different governments ensuring users access using their authentication method. There are also no strategies and plans for now to provide eGovernment services to non-nationals.

## **3.5 eIDM Applications**

See above for an overview of eGovernment applications in Croatia. As noted, there is no common authentication solution at this point.

FINA (the Croatian CA) is publishing qualified certificates in accordance with the Electronic Signature Act; FINA is currently the only Certificate Authority in Croatia.

FINA presently provides three types of digital certificates - signature certificates, authentication certificates and encryption certificates.

### 3.6 Future trends/expectations

Due to the harmonization with EU regulations that refer to standards of protection and biometric data in travel identifications, for now the possibility of introducing biometric passports is being considered. They would have security and safety implemented with contactless chips in which all the biometric data of the owner of the passport would be stored. Electronic identity cards are planned in the future, but there is no program developed yet.

A lot of eServices for citizens and businesses have been deployed so far and the **national infrastructure** for supporting the delivery of such services is not yet fully in place. In particular, an eServices portal has yet to be set up and electronic ID cards are yet to be introduced. On the other hand, an intra-governmental infrastructure was set up in 2001 to automate **cabinet work**. Background documents for government sessions are now available only electronically: ministers use computers equipped with software interfacing with government departments' back-end systems through a virtual private network (VPN) that allows them to retrieve and exchange documents. A government-wide multiservice network that will include computer and voice communication and allow videoconferencing is also being projected.

With its **eCroatia 2007** programme, the Croatian Government is determined to accelerate the pace of its eGovernment progress transforming the Croatian society into an information society. Fulfilling its ultimate objective, and in accordance with the EU recommendations, the eCroatia 2007 programme will provide the Croatian citizens and the economy with the highest level of information services and the most widespread use and exchange of information, thus creating opportunity for their active participation in global developments. This project primarily aims to provide an opportunity for citizens to receive information in a timely manner, and therefore, actively participate in society through a networked information system; to strengthen and connect business entities of the Croatian economy; to provide a comprehensive exchange of information and experience in the business and entrepreneurial world; and finally, to enable the state to become a transparent, quick and efficient service provider to its citizens.

By the end of this year there will also be an interesting and user-friendly Central Governmental Portal which will list all the procedures and needed documentation for public services. Additionally, e-Islands



is also a remarkable project using broadband technologies to connect the island schools with those located in the continental region.

### **3.7 Assessment**

#### **3.7.1 Advantages:**

- Freedom in implementation of any authentication solution
- Highest level of information services and the most widespread use and exchange of information

#### **3.7.2 Disadvantages:**

- Lack of eID cards
- Insufficient coordination
- eCommunications and interoperability remain constrained by the heterogeneity of systems and software in use across the government
- Low level of Internet access (though rising fast) and the relatively late definition of a legal framework for the Information Society. Laws on Electronic Signatures and Personal Data Protection, compliant with corresponding EU directives, were adopted in January 2002 and June 2003 respectively
- A Freedom of Information (FOI) Law was also passed in October 2003, and an eCommerce Law (harmonised with Directive 2000/31/EC) as approved by the government in September 2003. However, a law regulating electronic payments and electronic money is still pending enactment, and the Telecommunication Law adopted in July 2003 has yet to be fully harmonised with the new eCommunications framework