

Portugal

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eGovernment – National strategic policies and some practical examples and projects

During 2006 the Knowledge Society Agency (UMIC), which operates within the Ministry of Science, Technology and Higher Education, promoted a lot of projects and measures within the Information Society area, especially in what concerns the eGov. Most of those projects were built to promote the social and educational inclusion, fostering a much better and easier accessibility to all citizens in what concerns the public contents and resources.

Since the end of January 2006, all public schools have access to broadband DSL connection to the Internet through the Science Technology and Society Network.

More than 600 Internet Spaces provide free access to multimedia computers and the Internet to citizens all over the country. Almost all those Spaces have people that assure a special support to the users and they have equipment that allows special accessibility to handicapped users; mostly of the terminals were installed in the Municipalities, in the Ciência Viva Centres and in the ACIME (Choices Programmes for Ethnical minorities).

The ICT competencies recognition system is being expanded to include intermediate and higher levels of competences and e-learning, and so more than 415.000 people obtained the diploma in Basic ICT Skills. The Forum for the Information Society – an initiative developed within the Portuguese Technological Plan/Connecting Portugal Programme, connected with the Lisbon Strategy - was launched in March 2006, and the first session had more than 300 people to debate several topics related to Information Society and Information and Communication Technologies (ICT), such as public administration, modernization, education and training, electronic commerce, regional development and employment creation, information technologies for social inclusion

and new entrepreneurial opportunities.

The Portuguese Government decided that electronic invoices should be fully adopted by the public administration; the guide was published in March 2006 by UMIC, opening a period of public consultation for receiving suggestions and contributions of improvements; during 2006 several pilot projects began in cooperation between the public sector and private companies.

The Knowledge Library On line has more than 40,000 teachers and researchers and 340,000 students from 66 research and higher education institutions currently with unlimited access to the b-on contents and search engine; the downloads of full text scientific papers done through b-on account more than 5.5 million
<<http://www.b-on.pt>>.

Launched in April 2006, the Portuguese National GRID Initiative aims at promoting the development of GRID Computing and the sharing of distributed computing resources for the resolution of complex problems that require intensive data processing. The Initiative of the responsibility of the Portuguese Science and Technology Foundation (FCT) it's overseen by the Knowledge Society Agency (UMIC). Between February and April 2006 the Operational Programme for the Knowledge Information Society <<http://www.posc.mctes.pt/>>, which manages the FEDER European Funds for this area, launched a contest regarding the development of Content projects by using the broad band. Several projects were then supported making accessible digital libraries contents, archives, museums and other public collections, not only provided by the central public administration but also by the local authorities. Among them we can stress the Digital National Library <<http://bnd.bn.pt/>> a project coordinated by the Portuguese National Library, that has digitised more than 20.300 documents, with 7.825 accessible on line; the National Archives Institute

<<http://www.iantt.pt/>> project that has more than 52.500 documents available on line; The Portuguese Institute of Museums, through the Matriznet project <<http://www.matriznet.ipmuseus.pt/>> made available on line almost 30.000 images from all the Museums coordinated by this Institute. In June 2006 the Enterprise's Portal <<http://www.portaldaempresa.pt>> was launched. It is an integrated access point to public services provided to enterprises, facilitating the access to public services provided to enterprises through the Internet and extending more than 400 services for enterprises that were being provided through the Citizen's Portal. Among others, the additional services now provided include the complete creation of an enterprise through the Internet, a consultation electronic desk for matters related to enterprise activities assured by the Institute of Support to Small and Medium Enterprises and Investment (IAPMEI). The "On the Spot Firm" allowed the creation of more than 8,000 enterprises with an average creation time of only 58 minutes. The Enterprise's Portal also makes available services for the third sector: non-profit associations, cooperatives and nongovernmental organizations. The Citizen's card Project was launched in 2006 <<http://www.cartaodecidadao.pt/>> and the first experience of issuing the card began in the Azores Islands. The citizen's card will be the new identity card for Portuguese citizens. It will be multifunctional, practical and secure and make possible to: visually identify its holder in person; virtually identify the holder and authenticate his/her intervention in electronic acts. Its multifunctionality will enable the holder to interact with different public and private services, no matter the place where he/she is in and the means of communication he/she uses. It will also be a practical document that combines and replaces the existing taxpayer card, National Health Service user's card, Social Security card and voter's card.

A. Users and content

During 2006 the main institutions within the Ministry of Culture keep the previous digitisation projects on going.

Museums

In what concerns the Museums, the Portuguese Institute of Museums (IPM/PIM) coordinates 29 museums covering art, archaeology and ethnography, where visitors can find outstanding examples of Portuguese heritage. The Portuguese Institute of Museums fosters a digitisation policy that furthers beyond the museums under its direct coordination and is defined by the following general principles: rehabilitation of museological spaces and of enhancement of presentation of museum collections; study, cataloguing, management and diffusion of collections; production and diffusion of standards and guidelines in various areas, envisioning the promotion of good practices in Museums; enhancement of museums and structuring of the Portuguese Network of Museums; internationalisation of Portuguese museums.

Digitisation of museum collections and photographic inventory

The digitisation of all information concerning IPM/PIM museum collections is an ongoing project. It began in 1993, with the design of MATRIZ, a software for the inventory of PMI's museum collections. Matriz was updated in 1999, and a new update will be completed in 2007, altogether with its correspondent online search engine (MatrizNet).

PIM is also responsible for the production and management of photographic records related to those same collections. The national photographic inventory database is an important resource either for museum professionals, art historians and both national and world-wide publishers, and the production and management of its images by PMI's photographic agency is of utmost importance in order to assure the quality of the printed diffusion of the museum's collections, as well as the management of the copyrights of the images. The national photographic inventory also supports the production of museum object images that are loaded into each Matriz register and published through MatrizNet.

MatrizNet: Museum Collections Online

The digitisation of its museum's collections began in 1995, and in 2002 the inventory databases of those

museums were made accessible to all the public through MatrizNet <<http://www.matriznet-ipmuseus.pt>>, a web search engine which enables users to freely research items within those collections. This online free-access search engine constitutes the major digital library relating to Portuguese movable heritage. Since it was made accessible, it was integrated in the eEurope Action Plan in what relates to the production of European digital content for the world networks and is also integrated on the Internet Initiative in what concerns the digitisation and accession of public content, namely from museums. In 2007 the online information will be substantially enhanced in the sequence of both Matriz and MatrizNet technological update.

PIM's Portal and Museum Websites

Portuguese Institute of Museums Portal

Online publishing of the digital library on PIM's museum collections is evidently integrated in the strategy of the Portuguese Institute of Museums to assure its presence, as well of all the museums it coordinates, in the web. PIM's own Portal <<http://www.ipmuseus.pt>> is therefore of utmost importance, for it works not only as an information resource provider for the general public, but also to all kinds of professionals dealing with museums and movable heritage, namely in what respects standards and guidelines for cataloguing, digitisation, management and mobility of collections.

Museums Websites

Besides PIM's Portal, since 2002 twelve of museums coordinated by the Portuguese Institute of Museums have their own website in the internet, thus promoting their collections and their activities to different kinds of publics. In 2006 PIM has promoted the development of new museum websites, which will be accessible in 2007 onwards, summing up 21 specific websites. These museum websites were conceived taking in account a common architectural basis, without betraying the specific identity of each museum, from which one may immediately perceive its mission, type of collection, programs and activities.

Portuguese Museum Network Website

Finally, PIM has a specific website for the Portuguese Museum Network <<http://www.rpmuseus-pt.org>>,

which was first presented on-line on 2001, and focus on actions promoted by the Network, as well as on activities of the 120 accredited Museums that belong to the PM Network, such as exhibitions, education programmes and workshops. All regulations and official documents regarding PMN supporting programmes, the Accreditation system, the annual training courses programmes the quarterly Newsletter of the Network are available in the website. The PMN also gives access to the digital Catalogue of its Documentation Centre as well as on-line bibliographic services on the following themes: Selected Monographic Publications (presented on a quarterly base); Thematic Bibliography; Thematic Articles Compilations; Publications supported by the IPM/ RPM financial programme; Theses and Dissertations; and Serial Publications.

Movable and immovable heritage

Database for protected movable heritage

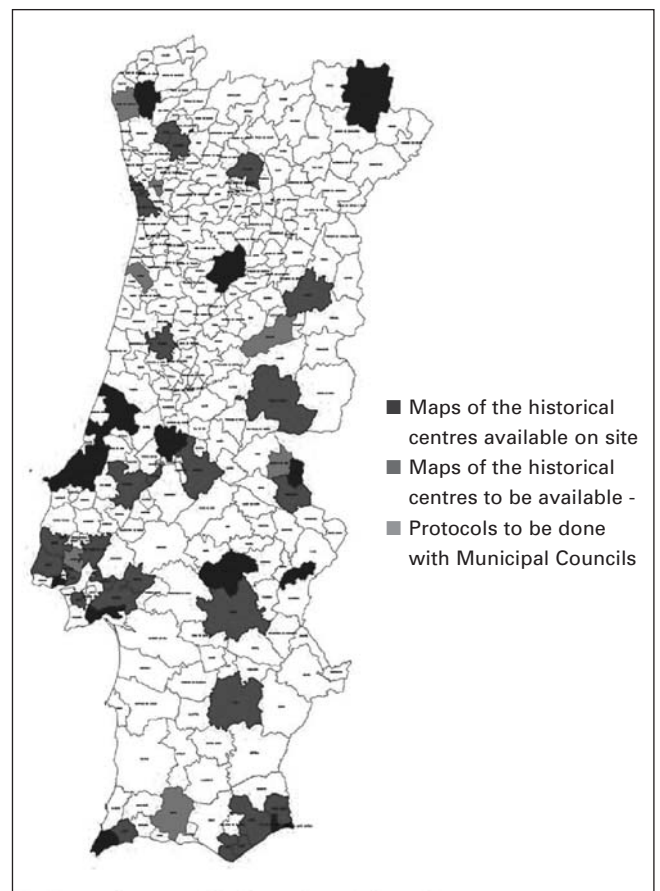
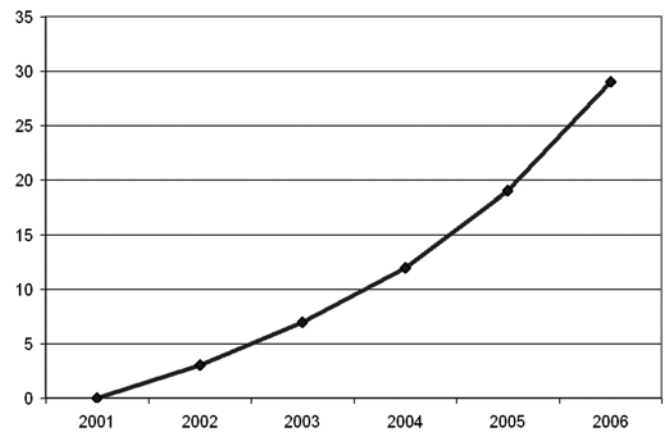
All information related to the movable heritage items protected under Portuguese Law since 1930 are managed in a specific database/information system developed by PIM. These objects belong mainly to individual collectors, foundations, museums, and also to the Catholic Church. This database was structured in order to suit the parameters of the new law on cultural heritage, issued by the Portuguese parliament on 2001 (Law nr. 107/2001), which identifies different levels of protection for movable heritage (National Treasures; Public Interest; Municipal Interest). Since its development, the various contents of this database have been updated, in order to promote the global re-appreciation of the protected items and under the scope and criteria of the current law on cultural heritage.

Inventorying and digitising the historical-cultural heritage

Within the area of Architectonic Heritage, the Portuguese Institute of Architectonic Heritage (IPPAR) finished, in December 2006, the Project «Inventorying and Digitising the Historical-Cultural Heritage Project» which started in 2001 and was supported by POC (Operational Program for Culture) with European Funds. The main purpose was to involve the IPPAR Information System with 130 fields of thematic panels concerning the Heritage Module,

aggregate with several informative parts. The project includes two essential slopes for the knowledge and divulgation of the heritage legally protected in Portugal: on one hand the existence of an internal information system that has all the information about that heritage universe; on the other hand, the correspondent availability of the contents over the site <<http://www.ippar.pt>>. The system guarantees the immovable goods knowledge and their bibliography, legal protection, documentation and related processes, as well as all the actions made concerning goods conservation and recover. The system has a graphical digital database (that contains the classified heritage and the heritage to be classified), focused on the urban centres. This database was build up over the digitisation with geographical indication and availability on site: protected buildings limits, their protected zones and special protected zones, made on 1:1.000 scales. The Municipal Councils, thanks to 34 protocols commended with IPPAR, participated with all the digital cartography. In 2006, IPPAR developed new technologies for the Territory Representation, concerning the identification, location and geographical information, related with the immovable goods legally protected and its protected areas. To turn these information available, it was necessary to digitise 2.158 immovable goods, Protected Zones (PZs) and Protected Special Zones (PSZs), 1.875 of them have geographic information. All the information concerned the 29 Historical Centres in Portugal. The Photographic Module was implemented in the Information System related with the immovable heritage: 13.105 images were digitised and 8.514 are available on site. The IPPAR's web site <<http://www.ippar.pt>> was reformulated, specially the home page, making salient the options: Agenda, News and Projects. Beside, there're digital photos (236 images from 59.537 photos digitised with Matriz Program) from the main pieces belong to the main collections of the National Palaces: Ajuda, Queluz, Mafra, Pena and Sintra. The final balance of the project was published in the Magazine «Estudos» (n. 10) under the title *O conhecimento do Património – a sustentabilidade de um projecto de serviço público* (The knowledge of the Heritage – the sustainability of a public service project).

DIGITISATION EVOLUTION
EVOLUÇÃO DA GEORREFERENCIAÇÃO



Public attending through Internet- guichet on line

This project, funded by the Operational Knowledge Society Programme (Programa Operacional da Sociedade do Conhecimento – POSC), allows that the reports made by IPPAR - involving urbanistic operations on legal protection buildings, Protection Zones and Special Protection Zones - could be asked through Internet by the citizens. The aim of this project was the development of specific technological tools and the change of the internal procedures within IPPAR in some specific areas: reception, analyse and final decision. At the same time an electronic shop was also available on line.

Within this project the public can access, through Internet, to:

- All forms used on IPPAR to communicate with the public
- Make a personal login (with a code and a key-word to access and consult)
- Access to his personal process, using his personal login.

In order to simplify the communication with the public, there are 5 forms available on the Web site:

- Classification Instruction Procedures
- Preference Rights on Onerous Transitions/Taxes Benefits
- Previous Information/Architectonic Projects Analysis
- Heritage Protection
- Several Requirements.

Until the end of 2006 the Information System had the following registered: 543.284 documents, 66.523 legal proceedings/requirements, 25.478 safeguard processes (47 made through the electronic shop) and 13, 677 petitioners.

This *guichet* online is in the IPPAR's website <<http://www.ippar.pt>>.

Portuguese photographic heritage

The Portuguese Centre for Photography (Centro Português de Fotografia – CPF) is responsible for an important part of the Portuguese Photographic Heritage and is located in the Photographic Archives of Oporto and Lisbon.

Beside the photographic species, CPF has also a collection of historical cameras and assorted photographic material.

The CPF digitised cultural contents has been distributed through reproductions of authorised material sent out on CD as well as accessed on computer (in the form of databases which are only available in the terminals of the Information Units in Oporto and Lisbon).

The dissemination of all digitised contents to the general public will happen in December 2007 through a website. The digitisation project on CPF is funded by public budget and also by European Funds through the POC (Operational Program for Culture).

Archives

Since nearly end of 2005 that IAN/T - National Institute of Archives/Torre do Tombo - has a project named "Torre do Tombo online" that aims the digitisation of graphics and iconographic records.

Those digital contents are distributed to the general public through the Institute Portal as well as through optical supports. The project is funded by the National public budget and no creative industry for heritage contents are used.

B. Technologies for digitisation

In what concerns the Museums the software developed for the inventory of PMI's museum collections was the MATRIZ. It was updated in 1999, and a new update will be completed in 2007, altogether with its correspondent online search engine called MATRIZNET. The MATRIZ software is currently used also for other institutions within the Ministry of Culture such as the Portuguese Institute of Architectonic Heritage (IPPAR). The National photographic inventory produced within Museums also supports the production of museum object images that are loaded into each MATRIZ register and published through MatrizNet. The digitisation of the national photographic inventory began in 2001 and in 2005 was extended to infrared reflectography and X-ray images.

The Secretaria-Geral (SG/MC-General Secretariat of the Ministry of Culture) developed in 2006 a database with a technological system based in free software: AJAX and LAMP (Linux, Apache MySQL and PHP), to digitise articles included in the Portuguese newspapers and magazines, which referred to Cultural matters. This is a daily work made

by internal resources - both technical and human - and it's accessible through the Internet by the Members of the Ministerial Cabinets and also by the board directors of all the bodies within the Ministry; each person as a username and a password to enter this data base, anytime and anywhere in the world in a browser and it's possible to print. Simultaneously we did the retrospective recovering of all the old news archived in paper, by using the Operative System called CentOS.

The Portuguese Centre for Photography currently scanned the photos at 48 bits, mode RGB, 30 dpi for a standard format 30x40cm. CPF has been using flat scanners (A3 format) and Nikon scanners for 35mm negatives; Silverfast and Photoshop software and Macintosh computers. So far, for the database, Filemaker has been used, but a new specific application (Digitarq) is now being implemented. Concerning interoperability, until this moment only intranet ensures that. As soon as Digitarq software will be fully installed, the interoperability will be complete.

All the work produced on IPPAR, as mentioned above, was possible thanks to specialized workers in different areas as Art; History, Archaeology and digital drawings with graphical bases related with goods geographically indicated. The work related with immovable goods geographically indicated, was produced by an external company, named Chiron, that developed the technology in what concerns the Information System, storages, maintenance and site operations.

The standards in use for digitisation in the National Archives are:

ANSI/NISO Z39.86 – 2002
ANSI/NISO Z39.87 – 2002
ISO 12234-2: ISO 12639:2004
ISO 12639:2004
ISO 12651:1999
ISO 18927:2002
ISO/IEC 14495-1:1999
ISO 8601:2004
ISO/IEC 11179-1:2004
ISO/IEC 11179-2:2005
ISO/IEC 11179-3:2003
ISO/IEC 11179-4:2004
ISO/IEC 11179-5:2005
ISO/IEC 11179-6:2005

Also in the National Archives the tools to capture are planetary scanners (A4-A0 formats) and rotary scanners (A5-A2 formats). The software in use are ACDEee, Potoshop, Power Filme version 5.1.0, Proview version 5.57, Film Scan version 2.09, MagicScan version v4.5 for windows. The interoperability is ensured by the application of standards.

C. Sustainability of content and digital preservation

Most of the Digitisation projects developed by the Public Cultural Institutions within the Ministry of Culture are supported in two kinds of financial funding: the National and the European – this one through the Structural funds approved for Portugal until 2007 - namely the POC – Programa Operacional da Cultura (Operational Programme for Culture) and the POSC – Programa Operacional Sociedade do Conhecimento (Operational Programme for the Knowledge Society). Sometimes there are partnerships between the public and the private sector, mostly after a legal procedure of public contest, that allow the public administration to choose in the end the enterprise that won the contest. Normally these enterprises developed the technological issues because there are not enough human resources specialized in this area.

Not only the initial development of the projects but also the economical sustainability and the maintenance of the contents – in a medium and long term – are kept through National and European funds and also with partnerships between public institutions and private partners. The private partners act normally as technological experts, sometimes for free joining the public bodies as patrons (Mecenases) other times as bidders.

The system developed in the Secretaria-Geral (SG/MC) to digitise articles included in the Portuguese newspapers and magazines, as above explained, represented an enormous cost reduction in what concerns the current expenses in copies, toners, mail, copy machinery, and express deliveries.

Now all the interested people can view the news concerning the Ministry and the Cultural field on line and all the direct and indirect costs with the same service before were totally abolished: we had 50 collections of articles everyday distributed along

the country by express mail (each collection had dozens of copies - one for article – so this was an automatic cost reduction that represented in one year thousands of Euros).

The Portuguese Institute of Museums has set in place different ongoing long term projects, such as MATRIZ and MATRIZNET, that will during 2007 encompass significant technological updates that will allow a much more agile availability of information through the internet and also an economic sustainability of both projects.

The MATRIZNET project will be developed on a business model which results of cooperation between the PIM and the private sector, and one of its main aims is the cost-reduction of both projects economic sustainability. Concerning digital preservation, as in Portugal there's not a National Policy approved for the sector, the preservation of the digital contents are made by each sector and department based on International standards or in internal solutions. For instance in the National Archives the digital preservation is made by RODA Project and by external backups, in DTDs.

E. Monitoring progress

During 2006, CPF digitised 64.058 archives and 64.058 images, corresponding to 3% of the total collection and distributed 75 CDs contained 2.5545 photographs.

The National Archives digitised 300.000 items from the archives collections, 100.000 items from collections recorded in the national inventory, 280.000 text documents and 20.000 images.

The work was made by 4 full-time workers. In what concern the use of the web site during the last year, there were 250.000 user sessions, 100.000 images were seen and there were 400 CDs/DVDs purchased or distributed. At the present a total of 250.000 PMI museum objects have been digitised, 30.000 of which are published online through MatrizNet. During 2006, the IPPAR's website registered between 32.000 and 45.000 visitors per month, excluding their own workers.

Digitisation Statistic (2006) Portuguese Institute of Architectonic Heritage

Registered Immovable Goods in the Information System: 6,731

Digitised documents about immovable heritage: 33,577

Digitised images of the immovable goods

Immovable goods (digitised): 2,158

Immovable goods (geographic indication): 1,875

Digitised pieces in Matriz software for collections management

Digitised Heritage: 133,620 immovable goods, pieces, aggregate heritage, associate documents, bibliographies, images and drawings

With legal protection: 4,220

Without legal protection: 2,511

13,269 descriptions (4,085 on site)

13,684 bibliographies (on site)

1,214 aggregate heritage

5,410 associate documents

13,105 (8,514 on the web site)

Drawings of the immovable goods, Protected Zones (ZP) and Special Protected Zones (SPZ)

Immovable goods, Protected Zones (ZP) and Special Protected Zones (SPZ)

Pieces: 23,368

Images: 59,537

Immovable goods heritage (digitised): 50,715

immovable goods, bibliography, associate heritage, images and immovable goods drawings

Movable heritage (digitised): 82,905 pieces as images

Assess any user-need surveys made on digital heritage content services

The Information and Knowledge Society Observatory (OSI) is the part of UMIC – Knowledge Society Agency, in charge of the statistical indicators and studies on the Information Society and the use of Information and Communication Technologies (ICT) in Portugal. It assures regular surveys and studies on the use of ICT by families, enterprises, hotels, hospitals, schools, public administration, and other sectors, as well as on the employment in the ICT sector, the quality of public administration websites and other matters of interest to monitor the development of the Information Society in Portugal and compare it with the development observed in other countries. This group of UMIC assures the representation of Portugal in international organizations that deal with indicators and statistics of Information Society or TIC, such as EUROSTAT, OECD and the DG Information Society of the European Commission - source: *in* UMIC website and OSI web site, <<http://www.osic.unic.pt/>>.

Notes and acknowledgements

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The source of the information concerning eGov and other transversal projects, was the UMIC website:

<<http://www.unic.pt/>>.