Portugal

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Policy scenario

1. General description

As explained on the last National Report, since 2003,
the UMIC – Knowledge and Information Society Mission
Unit, `www.umic.pcm.gov.pt/UMIC/`, started a
network with all the Ministries and public departments,
coordinating all the initiatives in what concerns the
information and knowledge society programmes and
projects.
As coordinator of all issues concerning the Information
Society, that Unit developed some strategic measures
that each Ministry had to follow in order to fill and
achieve all the main goals contained in the *eEurope
2005Action Plan* guidelines.
Based on a legal framework approved in the
Summer of 2003- as we already specified on the last
Report - each Ministry began to work within their field
of action, planning actions and building projects that
came out to *day light* during 2004.
A special effort was made to accomplish the Portuguese
Citizens needs in what concerns the quality of life,
as well as better social services and economic growth.
The following issues were reinforced: policy
coordination, implementation and funding; broadband
availability nationwide and broadband diffusion in
households, in the public sector and in the education
and healthcare systems; interoperability frameworks;
quality public services provision, mainly through
a multi-platform and multi-channel portal; adoption
of public electronic procurement and the promotion
of the digital economy.
The citizens with special needs and the accessibility
for all, were areas specially touched by the legal
rules approved on 2003 and implemented on 2004

by all public departments The National Programme
for the Participation of Citizens with Special Needs
in the Information Society
`www.acesso.umic.pcm.gov.pt` was designed
to provide full access to the Information, improve
life standards and make scientific and technological
knowledge available to all as we can see in a short text
provided by `www.infosociety.gov.pt/`.
During 2004 the *e-Government* has been the leader
of structural changes felt by the Portuguese citizens
within the Information Society domain. A large number
of information and services provided by Public
Administration became available on-line in 2004, but
the main goal was achieved with the CITIZENS PORTAL
`www.portaldocidadao.pt`.
«Launched in March of 2004, with 118 service providers,
the portal currently offers more than 700 services: 50%
informative, 30% interactive and 20% transactional.
In the three months following the launch of the Portal,
it received more than 265 000 individual visitors, with
an average visit of between 15 and 30 minutes.
The change of address file has been downloaded more
than 17 000 times» (`www.infosociety.gov.pt`).
Acting as an essential key to give the necessary tools
for the Portuguese citizens in general and the academic
community in special the innovation area is a critical
element for the development of a knowledge-based
society. Within this area some specific projects were
also launched during 2004:

B-on - Online Knowledge Library
This Internet portal has a search engine that allows
Portuguese researchers to search in more than 10.000
science magazines and read full-text articles from the
main international science publishers like Elsevier, IEEE,
Kluwer, SAGE, Springer and Wiley. In addition, it is also

Alfredo Keil, music;
Henrique Lopes de Mendonça, verses
Serrana: ópera em três actos.
189. Act 1, Scene 1
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possible to view abstracts from multiple search criteria as keyword, author, title, year, and publisher. Until December 2004 this portal registered more than two million downloads of scientific articles. The next step of B-on will include the Portuguese National Library (BN) cooperation: the BN is developing an on-line platform with the entire thesis produced by the Portuguese academic community, previously digitised by BN. That platform will also allow the access and search in PORBASE-data base of all the Portuguese Public libraries.
www.b-on.pt

e-UVirtual Campus - Portuguese Electronic University Project
This project was also launched by UMIC - Knowledge and Information Society Mission Unit and it is one of the most innovative projects within Information Society in partnership with the University, even in Europe, and is considered a case study for companies as Intel, Cisco or Microsoft. It is based on a network of virtual campus, integrating university services online, the production and sharing of academic contents and the setting up of university communities. With e-U Portuguese students will have access to classes, R&D articles, student papers, grades, bookshops and academic administrative services online, as well as access to the Internet through a broadband wireless LAN.
www.e-u.pt

Knowledge and Information Society Observatory (OSIC)
The OSIC is a structure based on UMIC that gathers, analyse, and produce studies and statistics based in all the data and relevant information within the knowledge and information society. The main areas are: Digital Economy; Population; Education; E-Gov; Public Administration; Electronic Democracy; Communications.
www.osic.umic.gov.pt/index.aspx

Broad Band and Internet Free Access Points and Hotspots
Some Portuguese museums, monuments and theatres offer free broad band accesses to the internet, through kiosks that are installed at the main entrances and also free wireless access zone in public areas such as gardens and cafeterias.

OPEN Source – Software livre
The Portuguese Parliament approved a Resolution last September (Resolução da Assembleia da República n.º 66/2004) recommending the Government some practical measures in order to ensure the development of the open source in Portugal, specially within the Pubic Administration.
That initiative was launched by the Parliament with specific goals and with a clear range of objectives as conceived in the eEurope Action Plan 2005 – An information Society for All; and is developed by experimental bodies in the Ministries of Culture; Education; Science and High Education, all in cooperation with UMIC. The General Secretariat of the Ministry of Culture is within our Ministry the body uncharged of this task.
www.sg.min-cultura.pt
www.softwarelivre.citiap.gov.pt/

Identified problems: although the efforts made by all Ministries and UMIC there were some problems detected and unsolved within Public Administration that affects all the public bodies, including naturally the Ministry of Culture. In fact the problems are the same over all the departments; for instance: some relevant information and services are still missing on-line; lots of websites have fragmented information; deficient ways for interoperability (not only in the technical sense but also in what refers to the walls

between the contents = culture of separated "silos"); lack of a National framework for the digitisation and preservation of Cultural heritage resources and contents.

2. National Portal for Culture

The Portal of Culture it is a plurianual project, 2004-2006, within the Ministry of Culture, approved on the first semester of 2004 and supported by National Funds (National budget of the Secretary General Office) and European Funds (trough the POSI – Information Society Operational Programme). It's). The Portal will be based on the principles defined by MINERVA and MINERVA Plus working group. The Portal should be: transparent - effective - maintained - accessible – user-centred - responsive - multi-lingual - interoperable - managed - preserved, The first step during 2004 was the launch of a general analysis concerning all the data bases and websites within the Ministry. Simultaneously a study about the viability of the Portal was ordered to an external independent consultant team in order to achieve the *best model for* the Portal of Culture in Portugal. The study reported not only the financial subjects but also, and mainly, the technological issues and the barriers founded.
The final Report was delivered on November 2004 and some of the conclusions are based on the Handbook *for Quality in Cultural Web Sites, produced by the Minerva Quality Working Group WP5 - Identification of user needs, content and quality framework for common access points.*
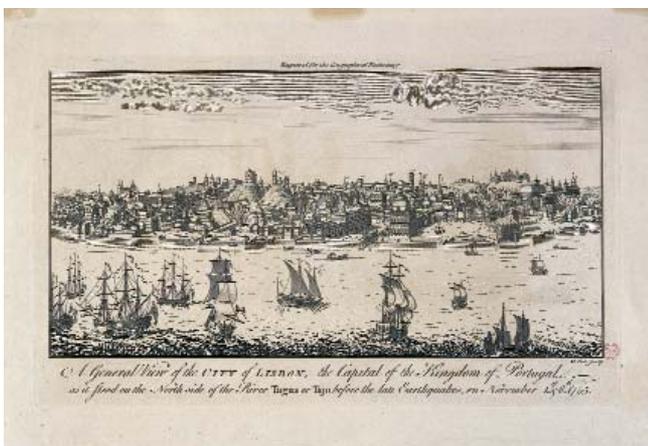
3. Relevant programmes and projects within the Ministry of Culture

National Library (Biblioteca Nacional - BN)
`www.bn.pt`
The National Library of Portugal executed in 2004 a digitisation project covering all its collections, with a direct cost of nearly 300.000,00, partially supported by the National Operational Programme for the Culture. This project resulted in half a million of new images, in sizes up to A1. All the images were produced with 24 bits of colour and in TIFF format. Nearly 100.000 images from originals texts, which was the case of some books, were produced in 300 dpi, while all the rest, made of books, periodicals, manuscripts, maps, drawings, etc., were done at 600 dpi (the largest produced images have 1,2 GByte in size, while in total all the images make more than 50 TByte os storage).
The work was subcontracted to three companies, two Portuguese, SCANSYSTEM and REDINTEG, and one Spanish, VINFRA. All the images were delivered in DVD, two copies of each.
In the end of 2004 BN started building a large online storage system to contain and provide access to all these master images and its sub-products. During 2005 all these images will be processed to create high-resolution JPEG images for internal use and low-resolution JPEG, PNG or GIF images for the Internet. All the images with text will be also submitted to OCR, in a first moment to produce text for indexing (the text of important works will receive a special care, so they can be used also for access). When possible, PDF copies will also be created (based on images and/or text).
The works will be published online in the National Digital Library during all the year.
All these processes are supported by a set of software tools developed by BN, which are available in open

Benjamin Cole,
A general view of the city of Lisbon…before the late earthquakes, on November 1.st & 8th. 1755, London, c. 1755-1769, etching
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source. Those tools are important for the management of image file names and identifiers, image processing (TIFF, JPEG, PNG, GIF, ASCII, PDF, etc.), editing of structural metadata based on METS, registering of rights management, publishing in HTML, etc.

Institute for Cinema, Audiovisuals and Multimedia (Instituto do Cinema, Audiovisual e Multimedia ICAM)
`www.icam.pt/`
ICAM is developing a set of shares in order to expand the Portuguese and European Cinematographic and Audiovisual Creations, strengthening the independence of this industry and promoting it all over the country. In this direction ICAM intends to develop an alternative net of digital cinema that answers and achieves all those objectives. This will work through the InterNet, taking the cinema to those ones who are less privileged in a cultural point of view, allowing any space in any geographic place to join this project.
The Net of Digital Cinema consists of a set of cinema rooms that will be on to a central system from which will be available the contents to show. The technology of the digital cinema seats essentially in the distribution – costs and security of the copies – being this guaranteed in a net IP, through broad band accesses.
The cinema rooms are equipped with a local server connected to a projector for cinema exhibition. Each room will have to be on-line through an ADSL access with the biggest width band possible. Each room chooses trough the central system, the contents that it intends to show and the system put it on the screen as previously "ordered ".
The central system is composed by a management system web and one mass-storage in which the contents to show are available – long and short

pictures, sets of documentaries, animation, etc. All the contents obviously are converted into encrypted files and before the public exhibition they will be opened with a special exchange of keys and the "video signal " will be decoded; all those operations are controlled in order to have only an authorized, previously-defined, number of exhibitions for that movie. Thus, the central system must be ideally installed in the Center Date of the ISP in order to fill the best conditions – technical and structural - that will import to the necessary reliability of the project. Considering the maximum security ICAM made a partnership with the Portuguese Foundation for the National Scientific Computation (FCCN) in the component of the Housing and all the associated services - backup, storage centered, assistance, etc. This project was financed by the Operational Program of the Knowledge Society, POSI/POSC, specially for the acquisition of the central system (the hardware and software) with capacity and licenses to linking 20 rooms, as well as the acquisition of the adjusted equipment, of projection and sound, for the installation of 4 rooms pilot in 4 different places; City of Tavira; City of Tondela; Catholic University in Porto and the last one inside the ICAM, in Lisbon, in order to coordinate the project.

Portuguese Institute for Book and Libraries (Instituto Português do Livro e da Biblioteca – IPLB)
`www.iplb.pt`
The aim of this public body is to define and oversee the coordination and implementation of an integrated non-school and library book policy at national level, and the dissemination of Portuguese literary works and writers at an international level.
During the year of 2004 IPLB's replaced the website.

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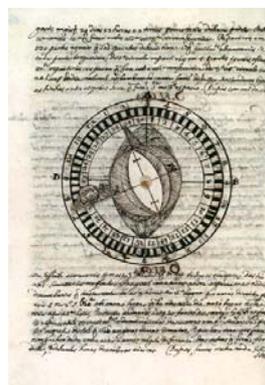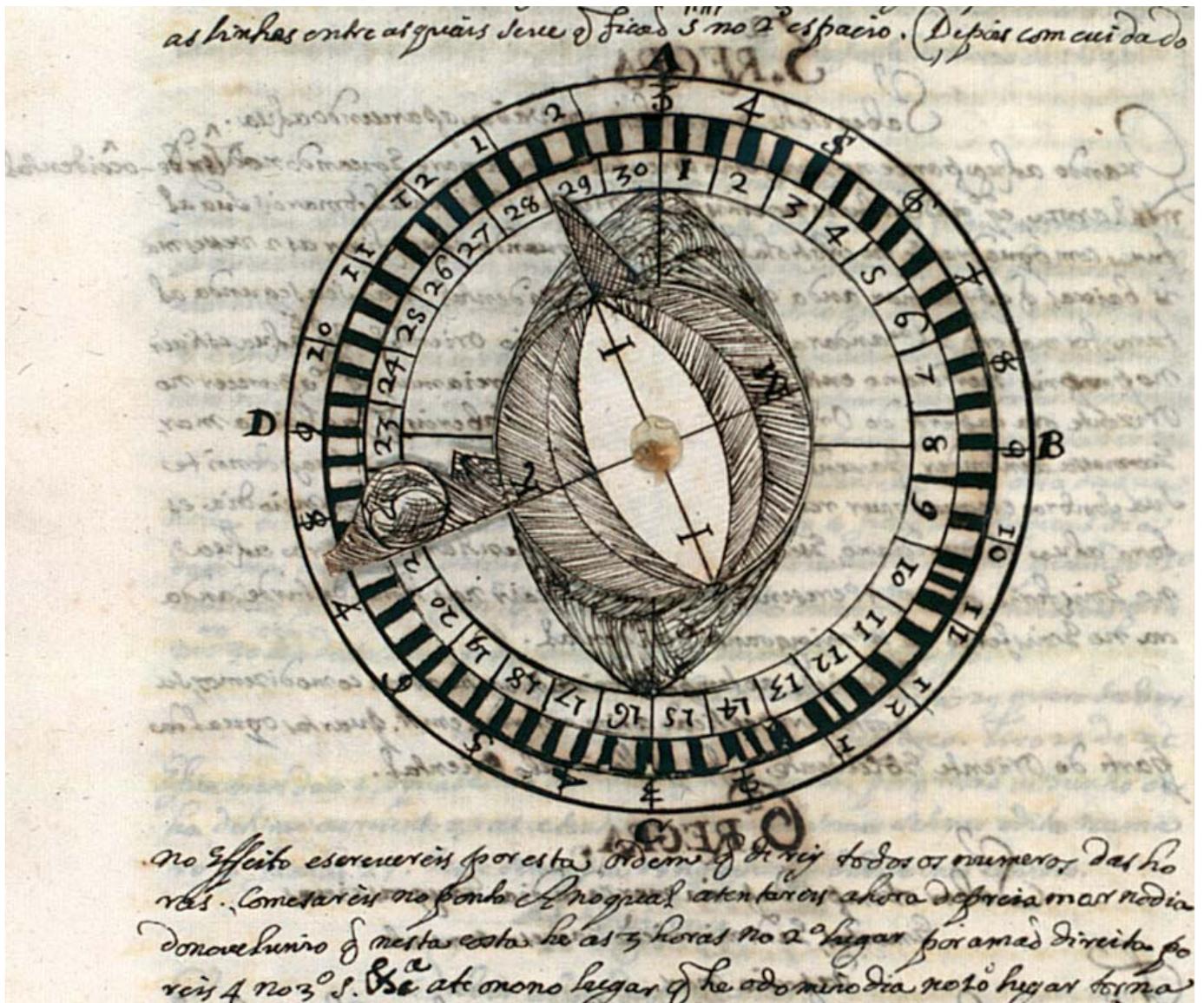
Representation of the rotation movement
of the Moon around the Earth
Ink drawing
In: Cristóvão Galo - *Tratado sobre a
e[s]phera material, celeste e natural*. [1651-1700]. p. [50 v.]
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Contents had been reorganized and even more supported in the information system to improve usability. Digitisation and image treatment were intensified to get better contents and contents translation to English grew significantly. Presently IPLB is working on raising the accessibility of contents for disabled people.
IPLB offers technical and financial support for the creation of public libraries in all municipalities throughout the country. The National Public Library Network began in 1987 with the aim of building and developing municipal libraries in line with the principles contained in the UNESCO Manifesto. In short-term, the challenge that takes place is the creation of the Digital Library Net. The project aspires to give access to the citizen to a set of services and contents of exceptional quality.

Portuguese Institute of Museums
(Instituto Português de Museus – IPM)
`www.ipmuseus.pt/`
As already stated in previous reports 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
• cataloguing, study and management of collections
• diffusion of collections
• production and disclosure of standards and procedures in the various areas of the museological practice, envisioning the promotion of good practices.
• safeguard and diffusion of the cultural movable heritage
• enhancement of museums and structuring of the Portuguese Network of Museums
• internationalisation of museums.

In order to achieve those goals the Portuguese Institute of Museums has set in place different ongoing long and medium term projects, some we have already made extensive notice through previous reports, such are the Matriz and MatrizNet programs, that will during 2005 encompass significant technological updates that will permit a much more agile availability of information through the Internet.
Since 2004 IPM is beginning to implement a VPN-Virtual Private Network; during 2005 it will integrate the collections management program Matriz, with the MatrizNet, application site that makes the latter's information available through the internet, being transformed into a real-time publishing system. Another strand of work was the construction of a website for the central services, IPM, and also individual websites for the various museums, this way responding to the necessities of the general public and of museum professionals. The IPM website, transformed itself into a portal that works not only as an information resource provider for the general public, but also to museum professionals. A new museum site is available for the Museu Monográfico de Conimbriga, `www.conimbriga.pt/index.html`, located at the city with the same name.

MATRIZ System – digitisation of Museum Collections
The digitisation of all information concerning IPM museum collections is an ongoing project that aims at the complete computerization of all information concerning museum inventories and collections management activities. For this, a software (MATRIZ) was developed in 1993, updated in 1999 in what refers to content and technology and will be renewed again in 2005. The digitisation of all information concerning IPM museums collections and its daily routines aims at the

complete computerization of all documentation concerning museum inventories and collections management activities.

This project belongs to the long term scope, is a priority within the institute's annual plans, and beside internal support, has been receiving external financial support from national programs for the information society, such as the, Operational Program for the Information Society POSI/POSC, for added human resources in order to work with the digitisation of collections within each museum.

Key Standards and Guidelines
IPM has been producing guidelines for the correct documentation of museum objects of different categories from Fine Arts and Decorative Arts to Archaeology to Ethnology. Standards are published and made available on line through the IPM website. Standards for digitisation of images were also defined and implemented.

Image Digitisation Program and National Photographic Inventory
IPM is responsible for the production and protection of photographic records of the objects belonging to its collections.

As previously referred, the digitisation of Inventories is being carried out through an information system called Matriz. In 2001 a database (Information System of the National Photographic Inventory, SI-IFN) that aims the complete digitisation of all images that exist in the National Photographic Inventory was implemented. This system also works as an image provider to the Matriz and MatrizNet projects and in the near future is intended to be available through the Internet.
The SI-IFN controls the images, making them available

through an internal network to IPM and its museums. In a few time onwards these images will also be available through the IPM website portal, this way giving summarized documentation information on the images and, consequently on the identification of museum objects, to any one anywhere, that wishes to retrieve this kind of information

The invisible spectrum
During 2004/2005 the digitisation of the national photographic inventory was extended to the invisible spectrum, that is to say to all radiography and infrared reflectography produced for the analysis of works of art, that are now entirely digital from the very beginning of their production, as new equipment was acquired for this purpose.
The leitmotiv of the decision to invest in the production of digital images for the invisible spectrum, was the project "Study of the Flemish Panels of Evora Museum", that acquired an international dimension and aims to study, conserve and restore this important retable, that is part of the collection of the Evora Museum and fore which were already produced 18600 digital images.

Matriznet Project Portuguese Museums Online
MatrizNet, the public interface of Matriz, materializes a major goal defined by the Portuguese Institute of Museums in what concerns its policy towards research and disclosure of the collections safeguarded by its museums. This action is integrated on 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 availability of public content, namely from museums. MatrizNet makes available on the internet, information about

Adrien Balbi, *Atlas da geographia universal*, Paris, J. P. Aillaud, 1839
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the collections of the museums coordinated by the Portuguese Institute of Museums and was updated this year with more 18000 multimedia records. The same long term scope and search for external financial support also applies to this project.

Museum Educational Projects making use of Information Technology
The Portuguese Institute of Museums is now making an effort in order to use information technology as a tool to engage different audiences with museums and its collections. Virtual 3D recreations that bring to life historical contexts are important as they bring added value in the fostering of public interest towards museum collections.
In this scope one should mention the project, the Avatar of King João I that from an object within the collection of the Museu Alberto Sampaio brings to life, within the museum context, an important historical figure of the nation. The Electronic Maquette of Ancient Conímbriga, a CD-Rom, will able the user, to walk through Roman Conímbriga perceiving its urban net in what is an accurate reconstruction of the existent private and public buildings, roads with their respective construction techniques and materials. The MUSEAVE project will produce educational tools that relate to the integration of the Aveiro Museum with the historical socio economic context of the city where it is located and establishing a relationship with other museums existent in the same geographical area. Finally one must mention the "Virtual Show Case" installed at the Museu D. Diogo de Sousa in Braga that developed hardware and software visualisation system that presents a virtual reconstitution of a funeral ceremony from the roman period. The users can look from outside to inside at computer generated images projected onto representational models of the real archaeological artefacts.

Informatisation and Availability of IPM Museum Libraries
Some IPM museums integrate specialised libraries on the thematic of their specific collections. Many of theses libraries are open to the public, and an effort is being made towards its complete computerization and availability on the internet, this way creating new free services towards the community it serves. Following this intent, the website of the National Museum of Archaeology, now integrates a free access to its library catalogue that can be accessed through the following address
`www.mnarqqueologia-ipmuseus.pt.`

Charles Legrand, *Camões*. Lisboa, [1841], litography
© Biblioteca Nacional

Data Base for Classified Objects
This database aims to manage all the information related to the cultural objects (movable heritage) that have been classified by the Portuguese authorities since 1930. These objects are mainly in the hands of private owners such as foundations, museums, individual collectors and the Catholic Church. This database was reformulated in order to adapt it to the parameters of the new law on cultural heritage, issued by the Portuguese Parliament on 2001. (Lei de Bases do Património Cultural nº 107/2001 de 8 de Setembro). At the moment this database is only accessible through the IPM's internal network, but plans exist to make it available to the public through the internet.

Portuguese Institute of Architectonic Heritage (Instituto Português do Património Arquitectónico – IPPAR)
`www.ippar.pt`
The main tasks of the Portuguese Institute of Architectonic Heritage are the study, protection, recovery and improvement of the built heritage. Taking in consideration the perspective of the innovation of procedures in the internal management, and a better communication with other institutions and with the general public, it has been conceived, since 1995, with CHIRON information systems, an Integrated Information System for the Heritage Management, based on Council of Europe Recommendations.
Considering the Information System as an amount of data structured and guarded, to which have been added capacities that allow to convert data in information, using the graphic and static work and producing summaries, the aim is on one hand to develop an information system capable to keep all data and information. On the other hand, to use access and

maintenance tools, and sharing a unique database.
Under the project "Inventorying and Digitising the Historical-Cultural Heritage", approved by the "2000-2006 Culture Operational Plan" is undergoing, since July 2001, a more accurate GIS (Geographical Information System) data search of the Immovable Goods of several cities, aiming at cooperating with other associations in order to promote a more efficient management, relegating the IPPAR to a coordination role, defining rules and procedures, validation, support and training.
Regarding this project, there are available in `www.ippar.pt` the GIS data search maps of 592 Listed and In Course of Being Listed Real Estates for the Municipality of Lisbon and for 16 other Historic Centres, on a 1:1000 scale: Beja, Castelo Branco, Castro Marim, Coimbra, Évora, Faro, Golegã, Guimarães, Lagos, Mafra; Montijo, Portalegre, Santarém, Tavira, Vila Nova de Gaia, Vila Real.
This work includes the digitisation of the listed immovable goods, protection zones and special protection zones in CAD and the association of the alphanumeric information from the Information System to the digitised geographical information from the software Arc View. Until now, the IPPAR digitised nearly 26.000 records, referring to different types of information regarding historical and artistic descriptions, associated images, and bibliography, 15.000 of which are available at the website of the Institute.
Additionally, IPPAR has about 200.000 digital images related to heritage, which will be catalogued and archived in a Digital Image Repository, Part of the Central Information System, starting in 2005. Concerning the Movable Goods, since 1997, it is installed in 9 Palaces under IPPAR administration the

same software used in the Portuguese Institute of Museums, conceived for the computerisation of the collections of Museums. This program, "Matriz", was conceived according to international standards for the documentation of museum objects (for instance, Getty Categories for the Description of Objects of Art and CIDOC Categories)

At the moment, there are about 55.000 records, including descriptions and images of the museum pieces.

Portugal is associated to the HEREIN Project – European Heritage Network Policies – through the Portuguese Institute of Architectonic Heritage. www.european-heritage.net

4. NRG and MINERVA results, interpretation and impact

The Progress Report of the NRG coordination mechanisms for digitisation policies and programmes 2003 was delivered to several Ministerial Cabinets within the Portuguese Government, to all the institutions and bodies related to these matters in the Ministry of Culture and also in other Ministries, such as the Education; Science and Higher Education. Almost all the receivers congratulated the initiative of spreading this Report (just as happened on last year), pointing the excellent quality of the reports and also the unique possibility that a Report with this content permits to understand and know about the digitisation policies and programmes developed all around the European Union.

Directly more than 100 people read the Report that was delivered with a letter explaining the aim of it and the role of the NRG in the cultural field. Indirectly is not possible to calculate the number of people that

read it with a simple click in the Minerva website, were all the National reports are available.

The *Charter of Parma* and the *Good Practices Handbook* were also distributed within relevant institutions of the Portuguese Government. The Cultural bodies in the Ministry of Culture were the most interested ones and some of them asked for more copies in order to distribute to other small cultural institutions all over the country. On 11th May 2004, an "International Conference on Digitisation: Experience and Technology" took place in Lisbon, organized by the National Library (BN) in cooperation with the Secretary-General of the Ministry of Culture (SG/MC) and the Operational Programme for Culture (POC). Mr. Claude Poliart, who spoke about the digitisation of cultural artifacts, represented the European Commission/DG Information Society. Several international and national experts presented their experiences, programmes and projects related to the main subject of the Conference. The Minerva Project was presented by Mrs. Rossella Caffo, from the Italian Ministero per i Beni e le Attivitá Culturali and also by Mr. Pier Giacomo Sola, from Consortium Amitié, Italy. The NRG network – in strong cooperation with MINERVA and MINERVA Plus working groups – has been a very useful way to share experiences, spread important information, to learn and improve concepts, to reinforce the importance of these subjects within our Government. Portugal should continue to participate strongly on NRG and MinervaPlus network, reinforcing the previous commitment towards a new stage, "reinventing" the Lund Principles and adapting the principles and guidelines approved for the next years – 2007/2013 - in what concerns the Information Society in general and the digitisation process in special, always in straight connection with the European Commission.

J. Wells, A S.W. *view of the grand Aqueduct over the Valley of Alcantara near Lisbon*, London, 1792. upon a drawing of Antoine A.P. Noël
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