

Progress on assembling statistics about the digitisation of Europe's cultural heritage.

Round and about – Presenting the NUMERIC study to national cultural networks

National co-ordinators driving the collection of data

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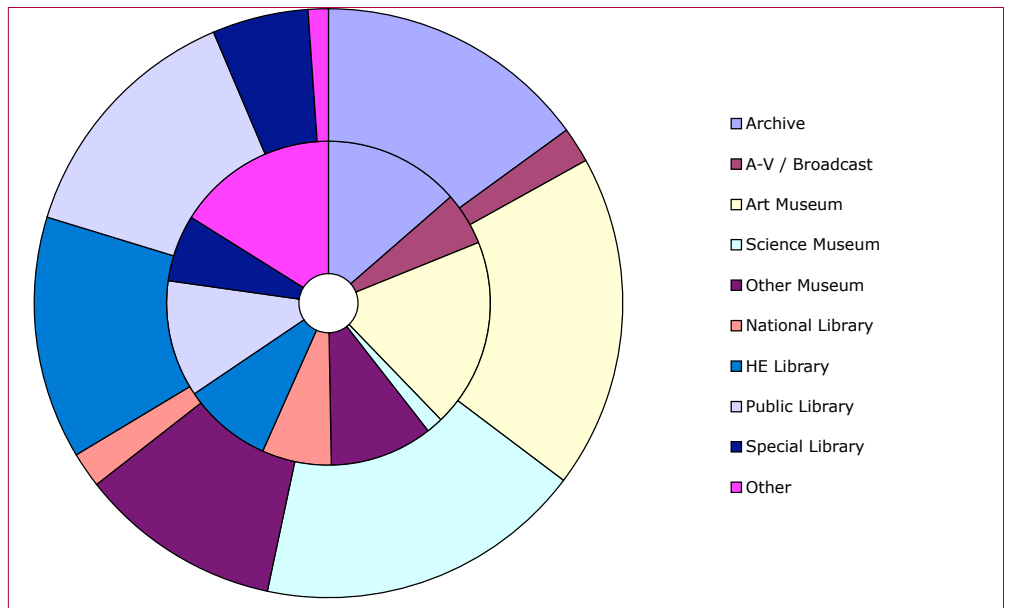
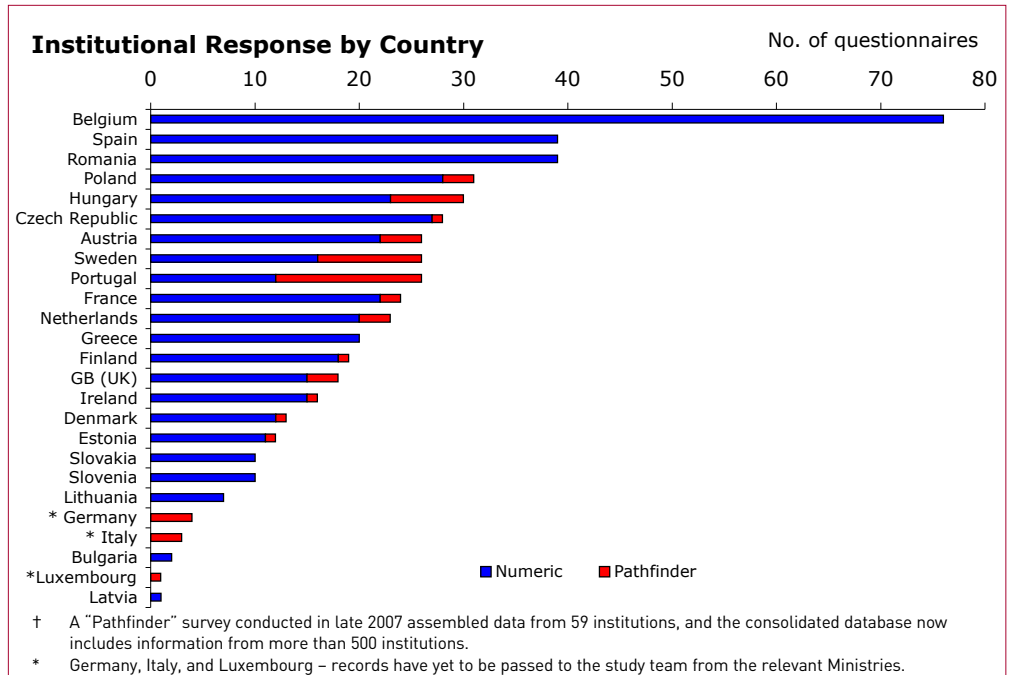
Survey is beginning to harvest valuable data

Digitisation is allowing, so called, "memory institutions" to diversify and enrich the information economy by providing on-line access to Europe's cultural heritage. The Numeric study is establishing a framework to measure the pace and cost of translating often frail collections into this rich resource.

The study is being conducted over two years (May 2007 to May 2009), and this newsletter is the fourth, charting progress to-date. The survey, described in this edition is aimed solely at institutions in the cultural domain

The Numeric survey questionnaire has now been implemented in each of the EU27 nations, except for Malta. However, the response to the survey is proving to be different in each country. The most significant contribution has been made by institutions in Belgium, where the survey is coordinated by the Belgian National Institute of Statistics. Part of their relative success derives from promoting the survey within the national Minerva network, through which more than 200 institutions were asked to participate. The aim is to provide sufficient data to compare the progress of digitisation between regional administrations of the country.

Although the survey framework was published and agreed by all member states in April / May 2008, the necessary preparations to translate the questionnaires and select relevant sample institutions took rather longer than anticipated. Most countries did not aim to seriously pursue the responses until after the end of the summer holidays, when they judged that institutions would be in a better position to research the new statistical information required. In Germany, the survey was not launched until October, although it is hoped that the response will be sufficiently rapid to feed into the study database in time for the analysis prior to Christmas.



Even so, the emerging database provides a good cross-section of the identified relevant institutions in Europe. In the following diagram, the outer ring represents the actual distribution of all relevant institutions identified by national coordinators. The inner ring indicates the pattern of response.

There are fewer Science Museums responding than there were reported as "relevant", but it is evident that many of these museums are holding collections

of scientific value rather than materials deemed of cultural significance. Also, it will be seen that there are more "Other" types of institution responding to the survey. However, before we analyse the data, records are being scrutinised to determine whether or not each of these "Other" institutions would be more appropriately classified under one of the main headings which suits the main purpose of the organisation.

All national coordinators are being

requested to encourage more institutions to participate in the survey. Even institutions that are not undertaking any (or insignificant) digitisation activity are asked to respond as this information helps to ensure that the survey results do not over-inflate the statistical estimates. As the following diagram shows, the actual pattern of response does spike according to the month-end deadlines set in each circulated reminder.

A significant effort to boost the response rate during November, and early December is urged.

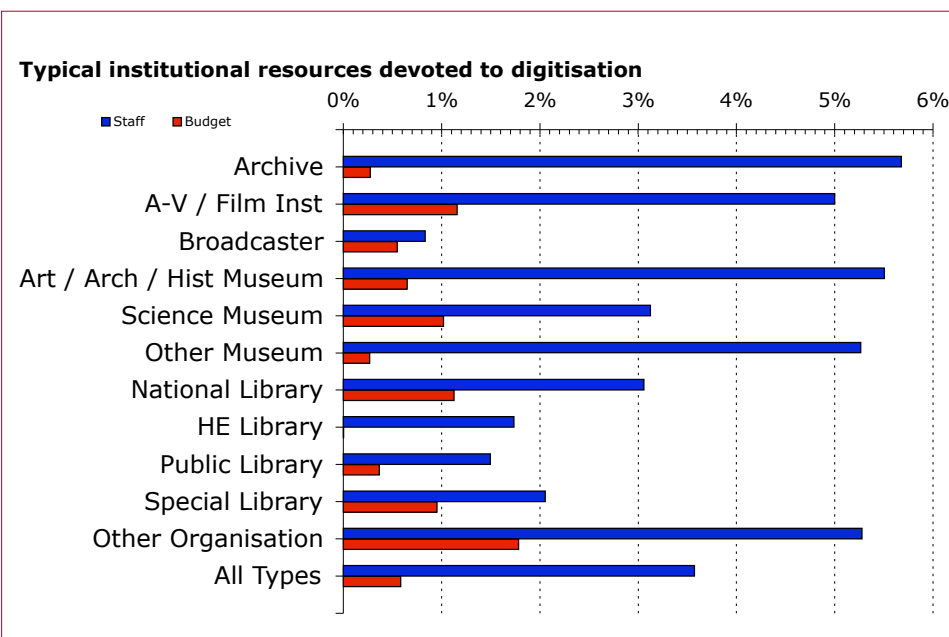
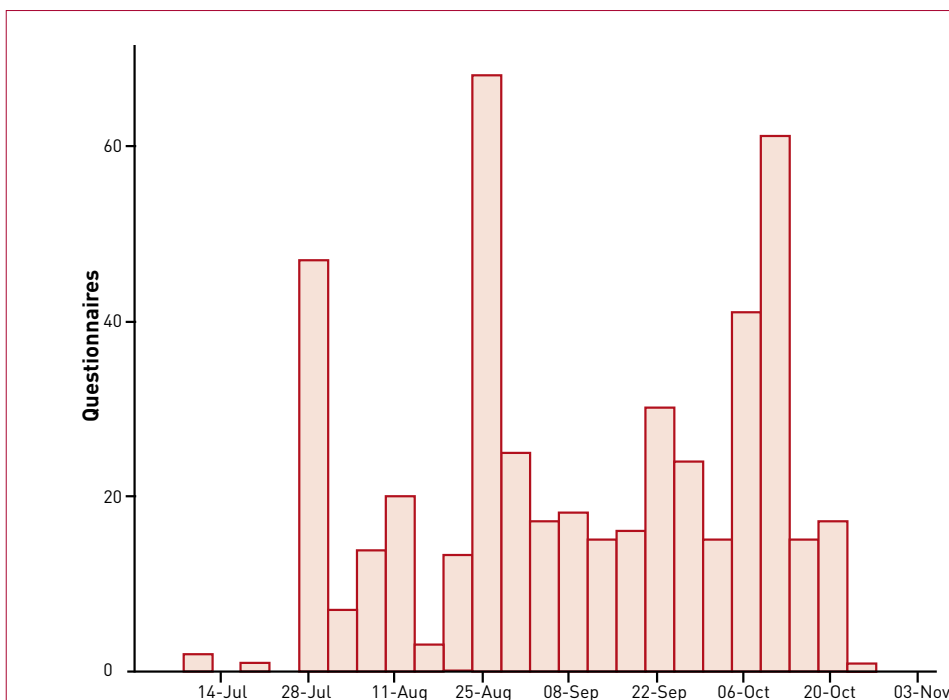
Early insights

Considerable effort is now being made to validate the responses from each institution. In a survey like this, seeking new types of management information, it was anticipated that many institutions would have difficulty in answering all the questions. So, until the dataset has been scrutinised, the early analysis is highly provisional. Never-the-less, from an analysis of the first 470 records on the database several patterns are emerging.

The total sum the annual budgets formally set aside for digitisation work by these initial survey respondents was a little over €60 millions. This compares with their total institutional budgets which exceeded €5 billions. These institutions employed more than 60,000 staff (full-time equivalent), of whom about 1,600 were engaged on digitisation work.

The resources actually devoted to digitisation projects are a very low proportion of earmarked budgets – about 0.6% represented the median survey response. However, it is usual for a higher proportion of total staff time to be devoted to digitisation projects, highlighting a factor identified in the pathfinder survey that most institutions were making the most of scarce resources to progress digitisation work as best they can.

This possibly conditions the approach to formulating digitisation strategies in most institutions, because nearly two-thirds of institutions (66%) either do not have a formal plan or do not know of its existence. However, in some countries the majority of institutions reported that they had formulated written plans (Denmark,



Estonia, Lithuania, Slovenia and the Netherlands). Of those that responded, more than four fifths (82%) of the written digitisation plans cover the long-term preservation of digital items.

Whilst 58% of responding institutions serve national catchments, it is surprising that only two-thirds of all responding institutions possessed on-line catalogues. A number reported that for them, obtaining one was a higher priority than the digitisation of the material to which it would refer. Even so, only 42% of those institutions

with on-line catalogues could distinguish digitised materials on the catalogue.

For the digitisation of image and text, “*.TIFF” was the principal standard master file format, and the versatility of “*.PDF” appears to be supplementing “*.JPEG”.

The following table shows what proportion of respondents had adopted the respective file formats

Master File Formats for:	TIFF	JPEG	PDF	Sum of these formats
Images (alone)	61%	31%	1%	93%
Text & Images	52%	25%	10%	87%
Text (alone)	49%	20%	15%	84%

The Master file formats reported for audio-visual materials reflected a much more diverse set of carriers and technologies:

Audio		Other:
WAVE	47%	BWF 24-bit / 96kH
Other	28%	digitale betacam
MP3	14%	FLAC
Broadcast WAVE	9%	MP2
AIFF	1%	MXF, MPEG-4, WMA/WMW

Video		Other
Other	53%	digibeta, wordt 2K en JPEG2000
AVI	24%	DPX, MPEG4, MPEG2, MPEG1
MPEG-4	18%	DVC PRO 50
MXF	4%	DVD video HD/SD + DPX
SMIL	1%	Filmklip MPEG-2 / 3

Film		Other
Other	58%	digibeta
AVI	19%	DVC PRO RAW
MPEG-4	19%	DVC PRO 50
MXF	4%	MPEG2 and MPEG1
		VideoDVD

Only 4 institutions (3% of those digitising a-v materials) reported the use of simultaneous high speed digitisation equipment; and two of these were broadcasting institutions.

The access policies applying to the usage of digitised materials tended to be less than simple – fewer than half of all institutions allowed free access to all digitised materials.

Access Policy applied:	%
Free to full service	49.2
Restricted (e.g. in-house)	22.3
Something else	19.7
Paid to full or part	7.4
Don't know	1.3
Total	100.0

There was a very wide range in the reported costs of digitising materials, with the highest tending to be reported by the broadcasting institutions, working to high technical standards.

Digitisation cost per:	Lower Quartile	Median	Upper Quartile
Pictorial image	€0.74	€2.16	€8.20
OCR Text & Image	€0.25	€0.65	€1.28
OCR Text	€0.15	€0.50	€1.04
Audio hour	€3.55	€23.46	€75.00
Video hour	€7.25	€75.00	€625.00
Film hour	€16.71	€75.00	€105.39

Median digitisation costs reported by:	Pictorial image	OCR Text & Image	OCR Text	Audio hour	Video hour	Film hour
Archives	€3.00	€2.36	€1.61	€13.48	€75.00	€100.00
A-V / Broadcast	€5.36	€1.10	€0.33	€41.17	€302.35	€105.39
Museums	€4.90	€1.00	€0.40	€20.09	€29.19	€16.71
Libraries	€1.00	€0.60	€0.50	€71.84	€16.76	€80.00
Other Types	€1.81	€0.78	€0.55	€30.00	€6.60	€75.00
All Types	€2.16	€0.65	€0.50	€23.46	€75.00	€75.00

The focus of the survey is directed towards measuring the progress made towards digitising the cultural heritage, and the overall investment this is attracting / requires. The measure of progress has to be considered against the size of collections held by the institutions and the proportion of these collections that they think need to be digitised (either to preserve the materials or widen access). There are considerable differences between individual institutions in these proportions, even between institutions of the same type. Basing the measures on the median values (mid-point in the distribution of answers), the progress reported was as follows:

Proportions of the collection in:	No Need to digitise	Digitisation completed	Still awaiting digitisation
Archives	36%	1%	63%
A-V / Broadcasters	28%	6%	66%
Museum	3%	25%	72%
Library	69%	1%	30%
Other	0%	15%	85%
Total	31%	11%	58%

It should be remembered that these statistics relate to institutions that have responded to the survey to-date. The overall estimates will need to be adjusted to reflect the actual distribution of institutions in each country that national coordinators have reported. These aspects will be drawn out in future analyses of the database. In the meantime the emphasis is being placed on gaining further survey returns.

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NUMERIC reaches out to the Baltic audiovisual community

The NUMERIC project made a presentation at the international conference “Transformation as Stability: Audiovisual Archives in the Era of New Media” in Tartu, Estonia, on 24-27 September 2008.

Zinaida Manžuch, a researcher for the NUMERIC study, provided an overview of the project, raising awareness of the importance of contributing data to inform the new statistical framework. In the presentation “Monitoring digitisation of cultural materials in the European memory institutions”, she described the broad political context underlying the need for assessing digitisation progress. The project seeks to establish

a common framework for collecting statistical information on digitisation that all stakeholders can employ to better influence future progress and policy priorities.

The conference was organised by the Baltic Audiovisual Archival Council (<http://www.baacouncil.org/>), an international association of the Baltic and Scandinavian private and public institutions that hold audiovisual collections. The association includes members from the Baltic diaspora worldwide. The conference was the fifth international forum of audiovisual institutions that brought to Tartu about 60 participants from museums, broadcasters, libraries and other audiovisual institutions. The major topics

discussed during the event included issues of rapid obsolescence of media, digitisation and digital preservation.



The Numeric Study reports to the 2nd Belgian workshop of MinervaEC

On 19 September, 2008, Phillip Ramsdale, a member of the NUMERIC study team, reported to the 2nd Belgian workshop of MinervaEC. More than 100 delegates convened at the Royal Library in Bruxelles to address the digitisation agenda in Belgium. Phillip described the cross-domain approach to set standard measures, which had been agreed by national coordinators to the study in early April 2008. These were:

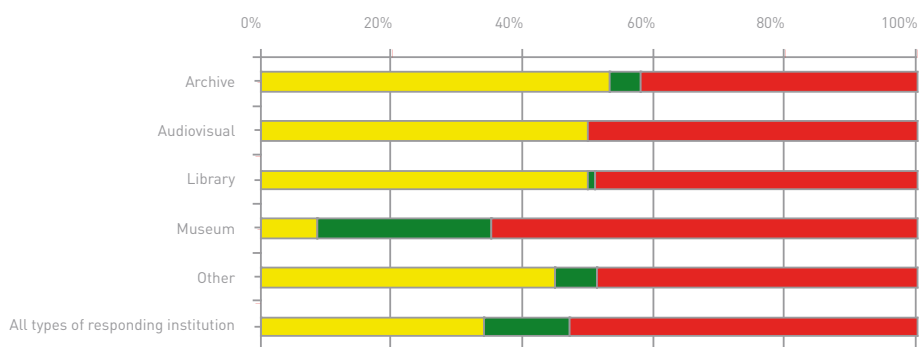
Units of measurement:

- Archive records – shelf length and **pages**
- Audio-visual / film – **hours**
- Museums – **objects** / collections
- Libraries – volumes and **pages**

The NUMERIC survey in Belgium is being managed by the National Institute for Statistics, whilst the Scientific coordinating different professional / regional interests. For this reason, the sample has been drawn from a wide number of institutions (229), providing a sufficient base to allow for regional analyses of the results.

What part of your collection:

- does NOT NEED to be digitised?
- has ALREADY BEEN digitised?
- STILL NEEDS TO BE digitised?



Early indications from the survey in Belgium, show that as in many other countries, the significant progress on the amount of material already digitised was yet a small impression on the remainder of collections awaiting digitisation

National co-ordinators driving the collection of data

Austria	Ms Irene Hyna	Federal Ministry for Education, the Arts and Culture
	Mr Rainer Hubert	Mediathek
	Mr Hans Petschar	National Library
	Mr Gerhard Tarmann	Tiroler Landesmuseum Ferdinandeum
Belgium	Ms Elena Phalet	DWTI (Federal Science Policy)
	Ms Lydia Merckx	Administrative Organization of the Federal Public Service
	Mr Philippe Pepin	Observatoire des Politiques culturelles
	Mr Jeroen Walterus	Flemish Contact Point for Cultural Heritage
Bulgaria	Mr Georgi Prangov	State Agency for IT and Communications
Cyprus	Mr Marinos Ioannides	Higher Technological Institute
Czech Republic	Mr Adolf Knoll	National Library
	Mr Vladimír Opela	National Film Archive
Denmark	Ms Randi Svendsen	Library Agency
	Mr Henrik Jarl Hansen	Heritage Agency
Estonia	Mr Indrek Eensaar	Ministry of Culture
Finland	Ms Minna Karvonen	Ministry of Education
	Mr Markku Mäenpää	National Archives
	Ms Sirkka Valanto	The National Board of Antiquities
France	Ms Sonia Zillhardt	Ministère de la Culture et de la communication
	Mr Bruno Dietsch	Ministère de la Culture et de la communication
Germany	Ms Monika Hagedorn-Saupe	Institut für Museumsforschung
	Mr Hans-Jörg Lieder	Staatsbibliothek zu Berlin
Greece	Mr Alexios Georgantas	National Audiovisual Archive
	Ms Cleopatra Christopoulou	Ministry of Culture
Hungary	Mr Gábor Veres	Ministry of Culture and Education
Ireland	Ms Joan Ward	Library Council
Italy	Mr Salvatore Vitrano	Ministry of Cultural Heritage and Activities
Latvia	Ms Kristine Paberza	Culture Information Systems State Agency,
Lithuania	Mr Juozas Markauskas	Baltic Audiovisual Archival Council
	Ms Regina Varniene	National Library
Luxembourg	Mr Guy Frank	Ministry of Culture, Higher Education and Research
	Mr Patrick Peiffer	National Library
Malta	Mr Luciano Mulé Stagno	Heritage Malta
Poland	Ms Agnieszka Lissowska	National Library
Portugal	Ms Helena Patrício	National Library
	Ms Amélia Fernandes	Institute of Museums and Conservation
Romania	Mr Radu Stefan Malureanu	Centre for Studies & Research for Culture
Slovak Republic	Mr Pavel Antalík	Ministry of Culture
	Mr Peter Stefanec	National Gallery
Slovenia	Ms Brigita Lipovšek	Ministry of Culture
Spain	Ms Barbara Munoz De Solano	National Library
	Ms Maria Elena Cortes Ruiz	National Archives
	Mr Luis Rodriguez Moreno	Fundación Biblioteca Virtual Miguel de Cervantes,
	Mr Raúl Alonso Sáez	Ministerio de Cultura
Sweden	Mr Börje Justrell	National Archives
	Mr Martin Jacobson	National Archive for Sound and Moving Images,
	Mr Erik Peurell	Arts Council
The Netherlands	Ms Trilce Navarrete Hernández	Digital Heritage Netherlands
	Mr Marco De Niet	Digital Heritage Netherlands,
United Kingdom	Mr Javier Stanziola	Museums, Libraries and Archives Council

Numeric

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