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EuropeanaLocal

Metadata survey report

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Contents

1   Introduction

1.1   The purpose of work package 2

Work package 2 of the EuropeanaLocal project (WP2) is tasked with:

Task 1. [A] Partner survey of metadata and vocabulary usage;
Task 2. Assessing the [EuropeanaLocal] repositories and aggregations network;
Task 3. Identifying Thematic Content.

This deliverable, D2.1 *Metadata survey report*, is the first of two deliverables associated with Task 1. The second, D2.2 *Pan-European multilingual directory of vocabularies in use with local/regional content*, uses the same survey as this deliverable. Work on thematic analysis has been put on hold by Europeana and we are expecting further guidance after EDLF revisit the topic in 2010.

1.2   Overview of the deliverable

This deliverable is based on a survey of the content that partners have agreed to provide to Europeana through the EuropeanaLocal project. These collections are described, in outline, in the *Description of Work* for the project (pp10-33).

The main part of the deliverable looks at the results of the *EuropeanaLocal Standards Survey*. The analysis will answer a set of questions about the standards use in Europe as exemplified by the collections in the survey.

We then draw some *Conclusions* about the use of standards with its implications for the EuropeanaLocal project and for Europeana in general

As background material five appendices contain:

- *EuropeanaLocal survey questions*;
- *EuropeanaLocal content surveyed*;
- *Overview of metadata*;
- *Metadata standards landscape*;
- *Technical standards landscape*.

2 The EuropeanaLocal standards survey

2.1 How the survey was carried out

The survey questions were based on existing survey that Europeana had used when it surveyed potential content before its November 2008 launch. EuropeanaLocal partners completed the survey between October 2008 and January 2009. Additional sections were added to obtain information about:

- Terminology use;
- Use of commercial collections management systems;
- Aggregators other than Europeana.

The survey was divided into 9 sections:

1. Provider Information (Questions 1-12)
2. Collection Description (Questions 13-18)
3. Digital Object Metadata (Questions 19-33)
4. Information Scheme(s) (Metadata) (Questions 34-43)
5. Geographic Name Terminology and Co-ordinate Standards (Questions 38-47)
6. Date Format and Time Period Terminology (Questions 48-58)
7. Subject Terminology (Questions 59-67)
8. Person and Organisation Terminology (Questions 68-75)
9. Contributing to Europeana (Questions 76-87)

The survey was created in two versions:

- **RTF document** – which allowed the use by project partners and/or distribution of the questions to content providers before using the:
- **On-line system** – where project partners entered the data they had collected and allow the easier collection of data and analysis.

This deliverable (D2.1) will deal with sections 2, 3, and 4, and part of section 9 of the survey.

Sections 5 to 7 will be dealt with in deliverable D2.2 – *Pan-European multilingual directory of vocabularies in use with local/regional content*.

The part of section 9 asking about aggregation other than Europeana will be dealt with in deliverable D2.3 – *Clickable map of existing regional/local repositories (including gap analysis) on website*.

2.2 Providers

Here are the figures for the types of organisations that are represented in the survey:

Organisation type	Number of organisations	(%)
Library	77	(49.0)
Archive	19	(12.1)
Museum	33	(21.0)
Sound archive	0	(0)
Aggregator	15	(9.6)
Other	13	(8.3)

EuropeanaLocal is very much dealing with local libraries, nearly half of the organisations. However there are a significant number of organisations from the other domains of archives and museums. 'Other' organisations include government departments and agencies, and independent cultural foundations.

When the amount of content is looked at the following figures result:

Collection type	Amount of content	(%)
Library	730,850	(14.3)
Archive	2,098,406	(41.1)
Museum	708186	(13.9)
Sound archive	0	(0)
Aggregation	1,138,498	(22.3)
Other	431,568	(8.4)

Now EuropeanaLocal looks like it is dealing with archival collections and aggregations – together nearly two thirds of the content.

2.3   Collection content

2.3.1   *Themes*

This table shows which content themes are found in the collections in the EuropeanaLocal survey. Many collections have more than one theme. It is difficult to give accurate content numbers to the themes because of the mixed nature of many collections.

Theme	Number of collections
Local history	161
Fine art	30
Education	21
Local government	20
Religion	19
Archaeology	17
Literature	14
Maps	13
People	13
Science	13
Music	10
Agriculture	9
Architecture	9
Industry	9
Law	9
Family history	8
Trade	8
Drama	5
Politics	5

The table excludes themes that appear in less than 5 collections. Also it was not possible to extract themes from collections that were very diverse.

The top two themes are probably 'typical' for most on-line cultural collections. The high number for education is the result of having many collections from universities in the sample, especially from Poland. Local government is prominent because of local archival material, especially from France.

2.3.2   *Time periods*
The table below shows the number of collections with material from a range of time periods

Centuries	All	Libraries	Archives	Museums	Other	Aggregators
20th and 21st	229	97	65	35	16	16
19th	198	88	55	27	11	17
18th	152	66	44	18	9	15
17th	118	46	34	17	7	14
16th	100	39	24	16	7	14
15th	78	30	15	14	6	13
14th	67	22	14	13	5	13
13th	59	16	13	12	5	13
12th	54	11	12	12	5	14
11th	58	10	8	22	5	13
[Earlier]	37	3	7	9	5	13

If we look at the percentage of collections with material from the different periods:

Centuries	All	Libraries	Archives	Museums	Other	Aggregators
20th and 21st	83.2	85.1	70.0	94.6	94.1	94.1
19th	72.3	77.2	61.8	73.0	64.7	100.0
18th	55.5	57.9	49.4	48.6	52.9	88.2
17th	43.1	40.4	38.2	45.9	41.2	82.4
16th	36.5	34.2	27.0	43.2	41.2	82.4
15th	28.5	26.3	16.9	37.8	35.3	76.5
14th	24.5	19.3	15.7	35.1	29.4	76.5
13th	21.5	14.0	14.6	32.4	29.4	76.5
12th	19.7	9.6	13.5	32.4	29.4	82.4
11th	21.2	8.8	9.0	59.5	29.4	76.5
[Earlier]	13.5	2.6	7.9	24.3	29.4	76.5

Again these results could have been expected, reflecting the availability and survivability of material from the 18th century onwards. Technology also played a part with the invention of printing and photography.

However it should be noted that there is a significant amount of content earlier than the 11th centuries, especially in museum and the 'other' categories. Aggregators have to take into account all periods.

2.3.3   *Language*
Looking at the situation in each country where percentages for content languages are given for a collection:

Country	Major languages: Max-Min %	Other languages: Max-Min %
Austria	German: 100-35 English: 60-5 Italian: 40-38 Spanish: 60	French: 5 Japanese: 20 Latin: 10 Portuguese: 2
Belgium	Dutch: 100	
Bulgaria	Bulgarian: 90	Other: 10
Czech Republic	Czech: 100-8 Latin: 75	English: 1 French: 2 German: 10 Hebrew: 1 Italian: 1 Spanish: 1 Swedish: 1
Denmark	Danish: 100	
Estonia	Estonian: 100	
Finland	Finnish: 57 Swedish 19	English: 24
France	French: 100-80 Latin: 100-10	Catalan: 10 English: 10-4 Spanish: 10 Turkish: 11
Germany	German: 100-98	French: 2-1 English: 2-1 Latin: 2-1
Greece	Greek: 100-73	English: 15-10 French: 10-1 German: 10-1 Latin: 10
Hungary	Hungarian: 100-98	Latin: 1 Slovak: 1
Ireland	English: 95 Irish (Gaelic): 5	
Italy	Italian: 100	
Latvia	Latvian: 90	English: 5 German: 5
Lithuania	Lithuanian: 95 Polish: 30 Russian: 70	English: 3 German: 2
Malta	English: 100	
Netherlands	Dutch: 100-90	French: 10 English: 10 German: 10

Norway	Norwegian: 100-80	English 25-5 'Other': 20-10
Poland	Polish: 100-<1 Czech: 100-<1 English: 50-<1 French 33-<1 German: 100-<1 Kashubian: 90-38 Latin: 44-<1 Ukrainian: 60-<1 Yiddish 68-2	Arabic: <1 Aramaic: <1 Belarussian: <1 Church Slavic: <1 Dutch: <1 Greek: <1 Hebrew: 2-<1 Hungarian: <1 Italian: 3-<1 Lithuanian: <1 Russian: 14-<1 Serbian: <1 Slavic: <1 Slovak: <1 Slovenian: <1 Spanish: 3-<1 Swedish: <1 Syrian: 2 Turkish: <1 Welsh: <1
Portugal	Portuguese 100-40 Latin: 100-1	English: 15-0.2 French: 5-0.7 Spanish 19-2 'Other': 1
Romania	Romanian: 100-70 Latin 100-10	Cyrillic 20-10 English: 5 French: 5 German: 10 German: 5 Greek: 10 Hungarian: 10 Italian 10-5
Slovak Republic	Slovak: 80	German: 10 Hungarian: 10
Slovenia	Slovenian: 100-40 German: 40-5 Italian: 60 Latin: 80	English: 10 Other: 5
Spain	Spanish: 100-45 Basque: 30-10 Italian: 40- 0.01 Latin: 43-1 Valencian: 30	Arabic: 0.02 Asturian: 1 Catalan: 10-3 Dutch: 0.04 English: 5-1 French: 10-0.02 Galician: 0.01 German 0.28 Portuguese: 0.04-0.01 'Other': 20-1
Sweden	Swedish: 100-80 Latin: 50	Finnish: 10 'Other': 20
United Kingdom	English: 100-98	Welsh: 2

In general the major languages reflect the historical environment under which content was created and not a 'mission' to supply content in multiple languages to current users. So, for example, large percentages of Latin in some collection are because of the use of the language in medieval times (and sometimes later) as a *lingua franca* for the pan-European communication of ideas and in administration. German, French and English have played a similar role in later periods.

The other languages present in very small percentages are also probably the result of the nature of the content itself.

2.4 Digital object metadata

Questions 19-33 in the survey dealt with the different types of media types in a collection.

2.4.1 *Text objects*

Text type	Number of collections : %
[All types]	127 : 43.8%

PDF	96 : 76.8%
HTML	43 : 34.4%
XML	30 : 24.0%
Word	23 : 18.4%
DjVu	20 : 16.0%
Plain text	16 : 12.8%
RTF	4: 3.2%

2.4.2 *Image objects*

Image type	Number of collections: %
[All types]	213: 73.4%

JPEG	182: 85.0%
TIFF	107 : 50.0%
GIF	12 : 5.6%
BMP	8 : 3.7%
PNG	8 : 3.7%
DjVu	27 : 12.6%

2.4.3   *Audio objects*

Audio type	Number of collections: %
[All types]	26 : 9.0%

MP3	9 : 10.7%
WAV	6 : 7.1%
WMA	2 : 2.4%
AIFF	1 : 1.2%
MPG	1 : 1.2%
AudioCD	1 : 1.2%

2.4.4   *Video objects*

Video type	Number of collections: %
[All types]	12 : 14.3%

MPG	7 : 8.3%
AVI	6 : 7.1%
FLV (Flash Video Format)	6 : 7.1%
MOV (Quicktime)	4 : 4.8%
MP4	3: 3.6%
WMV (Windows Media Video)	3: 3.6%

2.4.5   *Other digital types*
Only two other media types appear in the survey (in one collection each):

- *"Web animations (linear and interactive) - virtual objects in QuicktimeVR format"*
- *"42 exceptional objects from the archaeology department have been photographed in the round and can be turned as a 360 degree object generated by Modelweaver v2.00. (pending permission)."*

2.4.6   *Analysis of results*
The digital content surveyed is dominated by still images and texts. There are some video and audio but they appear in much fewer numbers of collections and probably as even fewer numbers of digital objects. There are a very small number of other media types. Why is this? Perhaps it is because:

- Text (books, manuscripts and other forms) and still images (photographs, paintings, and prints) have been existence in their analogue forms for a considerably longer time than audio and video. Therefore there are much more of them existing to be digitised;
- Audio and video are more expensive to create and deliver over the Internet;
- IPR management issues are more difficult to deal with for audio and video.

2.5 Information schemes (metadata)

2.5.1 *Metadata types*

The data for this section was obtained from questions 34-43 in the Survey. The table below shows how many provider organisations use which information schemes (metadata). The schemes have be arranged by 'domain audience'. Note that where a scheme does not appear in answers to the survey it is not included in the table. Note where there are multiple collections from the same organisation, using the same schemes, they only contribute once to the table.

Standard [*domain audience*]	All	Libraries	Archives	Museums	Aggregators	Other
Library						
MARC	33	25	2	2	2	1
METS	43	36	2	1	2	2
MODS	4	3	1	0	0	0
Archive						
EAD	4	2	2	0	0	0
ISAD(G)	9	0	9	0	0	0
Museum						
CDWA	2	0	0	1	0	1
museumdat	1	0	0	1	0	0
Object ID	6	1	0	5	0	0
SPECTRUM	16	1	0	13	2	0
General heritage						
CIDOC-CRM	2	0	0	1	1	0
VRA	1	0	0	1	0	0
Resource Discovery						
Dublin Core	99	58	7	17	8	9
In-house	14	2	4	4	2	2
No standard	26	5	7	5	5	5

2.5.2   Standard adaption

Here are the figures for metadata scheme adaption:

Standard [*domain audience*]	Organisations using scheme	Organisations adapting scheme

Library

MARC	33	2
METS	43	3
MODS	4	0

Archive

EAD	4	0
ISAD(G)	9	2

Museum

CDWA	2	0
museumdat	1	0
Object ID	6	3
SPECTRUM	16	0

General heritage

CIDOC-CRM	2	0
VRA	1	1

Resource Discovery

Dublin Core	99	34

TOTAL	220	45

2.5.3   *Analysis of results*

Arranging the table by standard domain audience has revealed some interesting things about the cross-domain use of standards:

- ***The three domains (libraries, archives and museums) tend to use their own standards.***
  This suggests that a single schema for all cultural data may be difficult to achieve. The range of elements needed to describe a book is smaller than that needed to describe an archive. This difference is even more marked when comparing a book with a museum object where the cultural significance is often not with object itself but with its associations.

- ***Dublin Core is a popular metadata scheme***.
  This schema has been fashionable over the last few years for public access to cultural material. The particular challenge for a Dublin Core-based system is whether it can support the rich nature of museum data as exemplified by the museum domain standards. At a first glance it does not seem to do this task.

- ***A significant number of organisations use an in-house developed metadata scheme or do not use any standard at all.***
  This is a major difficulty for automated ingestion of cultural data by Europeana. With in-house systems it should be possible to map to a standard when exporting data. With no standard in use organisations should be asked to examine why they are not using a standard and encouraged to move to using a standard, at least for export.

- ***Standards are adapted by a significant number of organisations.***
  The figures for standard adaption show that just over 20% of information systems have changed the standard metadata scheme they are using. Furthermore most of the changed systems come from those using Dublin Core, c34% of which varies in some way from the standard. The Europeana Semantic Elements are another example of this trend.

  These figures might be seen as low when compared to a similar survey carried out by the ATHENA project where the figure was c50% for standards adaption in general and c63% for Dublin Core.

  Again this is a major difficulty for automated ingestion of cultural data by Europeana.

2.6   Contributing to Europeana

2.6.1   *URLs and other identifiers*

To the question: *Does every digital item in the collection have its own unique URL?*

- 176 gave the answer **'Yes' = 60.5%** of those who answered.

To the question: *How long will you guarantee the long-term persistence of that URL?*

Search protocol	Number of collections
Unknown	14
Less than 5 years	25
5-10 years	70
10 years	5
Long term	62

To the question: *If not, do you use other types of identifiers that can be used, through an existing resolution service, to provide persistent access to the object over time?*

- 98 gave the answer **'Yes' = 33.7%** of those who answered;
- 96 gave the type as 'Local identifier' or a variant of this. The other two gave 'URN'

2.6.2   **Downloadability of data**

To the question: *Could the digital items in this collection be downloaded via FTP?*

- 51 gave the answer **'Yes' = 18.2%** of those who answered.

To the question: *Are the metadata records harvestable via OAI-PMH?*

- 131 gave the answer **'Yes' = 45.0%** of those who answered;
- However only 92 gave a base URL. The rest indicated OAI harvesting was planned.

To the question: *What protocol is currently used to search the collection?* The following protocols were given as answers from the 208 collections who answered (some collections can be searched by more than one protocol):

Search protocol	Number of collections
SQL	125
Z39.50	53
OpenSearch	23
ITQL (Kowari Metastore)	6
SRU	4
Lucene	3
Bibliofil	3
C-ISAM	2
CQL	1
[Other proprietary]	1

2.6.3 *Commercial computer systems*
To the question: *Is a commercial computer system used to manage this collection?*

- 115 gave the answer **'Yes' = 39.5%** of those who answered.

Because there are multiple collections coming from the same organisation it here is a list of the commercial systems given with the number of organisations using a system:

- Adlib Museum Plus [10 systems];
- AiP Safe (http://www.aipsafe.cz/en) [1];
- ALEPH [1];
- Alephino (ExLibris) [1];
- AROP [1];
- Bibliofil (http://www.bibliofil.no) [2];
- Bibliotheca2000 B.O.N.D. [1];
- CADIC intégrale [1];
- COBISS (Co-operative Online Bibliographic System & Services) [4];
- DEMUS [2];
- Digibib [12];
- dLibra (http://dlibra.psnc.pl) [19];
- DSpace (open source software) [1];
- EPUB [2];
- Galis [1];
- hgiFramework [1];
- Innovative's Millennium Library System [2];
- iO (Willoughby Associates) [1];
- JaDoX eLibrary and Monguz Information Broker [5];
- 'Java Plus commercial application' [1];

- Ke eMu [1];
- Microsoft Digital Management System (custom developed) [1];
- Minok [1];
- MODES for Windows [1];
- OPUS [1];
- Oracle [2];
- PORBASE 5 [2];
- Roxen CMS [1]
- Siderean Seamark [1];
- SQL-Server [1];
- TMS (Gallery Systems) [1];
- X-Arq (Oracle) [1].

This is a very diverse picture with on systems being generally used. Even where there is more than one user of a particular system this reflects a situation in a particular country. For example Adlib Museum is popular in the Netherlands where there are a limited number of systems with a Dutch interface.

3 Conclusions

3.1 Technical standards

The survey shows that cultural organisations, in the great majority of cases, are using the common technical standards, including many open standards. To ensure that this remains so a set of guidelines should be available for cultural organisations to use.

One such example is:

Technical Guidelines for Digital Cultural Content Creation Programmes:
<http://www.minervaeurope.org/interoperability/technicalguidelines.htm>
(this page has links to various versions)

The technical standards it recommends are those being used by the organisations who took part in the EuropeanaLocal survey. The Minerva Guidelines also have advantage of being:

- *Multilingual* – Having a guide in the working language of the organisation is a significant advantage for their understanding and adoption. Further translation should be encouraged and funded;
- *Written for a general cultural sector audience* – purely technical guidelines are a barrier to the general audience, which most people in the cultural sector are in the area of IT;
- *Updated* – Is it very important that technical guidelines are kept up-to-date, especially in the rapidly changing IT area.

3.2 Cultural metadata standards

Within the limitations of the survey the use of the limited number of key standards in the three major cultural domains is largely taking place throughout Europe. They are also given as best practise in various guidelines, including those from Minerva mentioned above.

However from the evidence of the survey, there is still a long way to go to achieve total standardisation, even if this is possible or desirable. The use of national standards, in some countries, and in-house 'standards' needs to be addressed. In both these cases at least export to a domain standard needs to be encouraged and possibly demanded in the Europeana context.

Dublin Core (DC) has been used extensively as a 'minimum' metadata standard for resource discovery, most notably with Europeana itself and the Europeana Semantic Elements. However, there are concerns about the suitability of DC, particularly for museum data. Although there are plans for a more complex and sophisticated object data model to be developed for Europeana, it may well prove advantageous to define the relationships between DC and the domain-specific metadata standards more rigorously and also to enable interchange in some way. XML and in particular the XML-related XSLT (Extensible Stylesheet Language Transformations) may offer a solution to this.

XSLT is used for the transformation of one kind of XML document into a kind of XML document (or indeed to a human readable form). So it should be possible to transform data in a domain-specific metadata standard to Dublin Core. However it is unlikely that it will possible to transform data from DC to a domain-specific metadata form, except for a limited number of elements. This will probably have implications for the enrichment of data from Europeana to the content provider as currently forseen.

For EuropeanaLocal the implications of the above are threefold. It seems that it would be beneficial for us to further investigate:

- *Metadata mapping* – indentifying mappings (crosswalks) of major cultural metadata standards to and possibly from ESE. Seeking out and making available existing mappings. Note: these are more likely to be *to* DC rather than *from* ESE.
- *XML* – using XML as a methodology for data export, conversion and exchange. XML schemas for the important metadata standards should be indentified or if not available created.
- *XSLT* – testing the use of XSLT in the role of automatic data conversion.

We understand that the ATHENA project, another Europeana group project, is also considering these issues. The Collections Trust, being a partner in both projects and also the originator of one of the important museum standards, SPECTRUM, seems uniquely well placed to take an active role here and also to ensure that opportunities for concertation between the projects are maximised.

4   Appendix I – The EuropeanaLocal Survey questions

Provider Information

Please give the following information about the organisation providing the content:

1. Country

2. Provider name

3. Address (include postcode)

4. Is the provider a (tick ☑ all that apply):

- ☐ Museum?
- ☐ Library?
- ☐ Archive?
- ☐ Sound archive?
- ☐ Aggregator?
- ☐ Other?

Primary contact

5. Name

6. Job title

7. Telephone number

8. E-mail address

Alternative contact (if possible)

9. Name

10. Job title

11. Telephone number

12. E-mail address

Collection Description

Please give the following information about this collection.

(**Note** that the information you enter should only be for this collection and not for the organisation in general.)

13. Collection name.

For example: "Museum collection database"; "Video archives"; "WWII archive"; "Dinosaur fossils collection".

14. Collection theme(s) or subject(s).

For example: "Early commercial TV programmes in UK"; "Cartographic archives of Southern Spain"

15. The time periods which the content of the collection covers.

For example: "1914-1939"; "Medieval (1066-15th century)"; "Prehistory-Present (50,000BC-2008)"; "6 billion years ago-present"

16. Language of the digital objects (Roughly provide the % of each language and show if any dual language).

For example: "Spanish 80%; English 20%"; "French 100%"; "Catalan 80%; Spanish 15%; Latin 5%"

17. How many digital objects can you contribute to EuropeanaLocal from this collection? Please give the detail of your digital objects level.

For example: "About 90,000 (Copyright protected objects and free to use)"; "Books objects are at the volume level. Journal objects are at the year level"

18. How many thumbnails or samples can you contribute to EuropeanaLocal from this collection? Please give the detail of your digital objects level.

For example: "About 80,000 Low resolution images, low quality movies)"; "Thumbnails of books showing the cover/title page"

Digital Object Metadata

Please give to following information about the metadata of the digital objects in this collection.

(**Note** that the information you enter should only be for this collection and not for the organisation in general.)

19. Do you have Text digital objects?
☐ Yes
☐ No

20. If 'Yes' please tick all the Text formats you have.
☐ DjVu
☐ HTML
☐ PDF
☐ Plain text
☐ RTF
☐ SGML
☐ Word
☐ XML

21. If you have any other Text formats please list them here.

22. Do you have Image digital objects?
☐ Yes
☐ No

23. If 'Yes' please tick all the Image formats you have.
☐ BMP
☐ DjVu
☐ GIF
☐ JPEG
☐ PNG
☐ TIFF

24. If you have any other Image formats please list them here.

25. Do you have Audio digital objects?
☐ Yes
☐ No

26. If 'Yes' please tick all the Audio formats you have.
☐ AIFF
☐ MP3
☐ MPG
☐ WAV
☐ WMA

27. If you have any other Audio formats please list them here

28. Do you have Video digital objects?
☐ Yes
☐ No

29. If 'Yes' please tick all the Video formats you have.
☐ AVI
☐ FLV (Flash Video Format)
☐ MOV (Quicktime)
☐ MP4
☐ MPG
☐ RM (Real Media)
☐ SWF (Flash Movie)
☐ WMV (Windows Media Video)

30. If you have any other Video formats please list them here.

31. Do you have any other types of digital objects not covered above?
☐ Yes
☐ No

32. If 'Yes' please describe them.

33. IPR (for example copyright). Please give details to access rights to use the content in the collection.

For example: "Public domain"; "Licenced"

Information Scheme(s) (Metadata)

34. Please check the all boxes for the information schemes (metadata) that are used to describe the digital objects in this collection.

☐ CDWA
☐ CIDOC-CRM
☐ Dublin Core
☐ EAD
☐ FRBR
☐ ISAD(G)
☐ MAB
☐ MARC
☐ METS
☐ MIDAS
☐ MODS
☐ museumdat
☐ Object ID
☐ SPECTRUM
☐ TEI
☐ VRA

35. Did you adapt the standard?
☐ Yes
☐ No

36. If 'Yes' then please say how you adapted the standard.

37. If the information scheme (metadata) is not one of the ones listed above please say what is used to describe this collection here.

Geographic Name Terminology and Co-ordinate Standards

Please tell us which geographic name terminologies and co-ordinate standards are used to describe the digital objects in this collection.

Note that we are defining a 'standard' to be a published terminology. It might be a formal standard, a national authority file, or another published terminology source (for example Getty's *Thesaurus of Geographic Names* (TGN)).

(**Note** that the information you enter should only be for this collection and not for the organisation in general.)

Geographic Name Terminology

38. Do you use a standard set of terms for geographic names?
☐ Yes
☐ No

39. If 'Yes' is the source for the terms:
☐ Developed by the provider?
☐ A published standard?

For provider-developed terminology
40. Please give details

For published terminology, please give a reference for each source used. If the source is available on-line please give its URL (web address).

For example: TGN
41. Source reference

42. Source reference

43. Source reference

44. Source reference

45. Source reference

Co-ordinate Standards

46. Are geographic co-ordinates used to describe this collection? (for example 61.0124N, 5.8125E).

☐ Yes
☐ No

47. If 'Yes' which reference system do you use?
For example: latitude/longitude; WGS 84 UTM 32N; RT9; OSGB 1936; DHDN Zone 1

Date Format and Time Period Terminology

Date Format

48. Is a standard date format (or formats) used to describe the digital objects in this collection?

☐ Yes

☐ No

49. Which date format do you use?

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Time Period Terminology

Note that we are defining a 'standard' to be a published terminology. It might be a formal standard, a national authority file, or another published terminology source (for example Getty's *Art and Architecture Thesaurus* (AAT)).

50. Do you use a standard set of terms for time periods?

☐ Yes

☐ No

51. If 'Yes' is the source for the terms:

☐ Developed by the provider?

☐ A published standard?

For provider-developed terminology

52. Please give details

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For published terminology, please give a reference for each source used. If the source is available on-line please give its URL (web address).

53. Source reference

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54. Source reference

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56. Source reference

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57. Source reference

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58. If you have any additional comments please make them here

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Subject Terminology

Note that we are defining a 'standard' to be a published terminology. It might be a formal standard, a national authority file, or another published terminology source (for example Getty's *Art and Architecture Thesaurus* (AAT)).

59. Do you use a standard set of terms for subjects associated with the content (for example: object name, subject, iconography)?
☐ Yes
☐ No

60. If 'Yes' is the source for the terms:
☐ Developed by the provider?
☐ A published standard?

For provider-developed terminology
61. Please give details

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For published terminology, please give a reference for each source used. If the source is available on-line please give its URL (web address).

For example: AAT, Iconclass, SWD/RSWK, RAMEAU, LCSH, DDC, UDC
62. Source reference

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63. Source reference

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64. Source reference

65. Source reference

66. Source reference

67. If you have any additional comments please make them here

Person and Organisation Terminology

Note that we are defining a 'standard' to be a published terminology. It might be a formal standard, a national authority file, or another published terminology source (for example Getty's *Union List of Artist's Names* (ULAN)).

68. Do you use standard authorities for persons and organisations?
☐ Yes
☐ No

69. If 'Yes' is the source for the terms:
☐ Developed by the provider?
☐ A published standard?

For provider-developed terminology
70. Please give details

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For published terminology, please give a reference for each source used. If the source is available on-line please give its URL (web address).

For example: LCNA, ULAN
71. Source reference

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72. Source reference

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73. Source reference

74. Source reference

75. Source reference

Contributing to Europeana

Please give us information about how you will provide your content to Europeana

76. Does every digital item in the collection have its own unique URL?
☐ Yes
☐ No

77. If 'Yes' how long will you guarantee the long-term persistence of that URL?

For example: "For 5 years, but unique ID for longer term"

78. If not, do you use other types of identifiers (catalogue or inventory numbers, NBN, DOI, PURL, ARK, Open URL) that can be used, through an existing resolution service, to provide persistent access to the object over time?

For example: "Yes. Local identifier (but still discussing)"

79. Could the digital objects in this collection be downloaded via FTP?
☐ Yes
☐ No

80. Are the metadata records harvestable via OAI-PMH?
☐ Yes
☐ No

81. If you use OAI-PMH, please give us the base URL of OAI-PMH server, and set name(s) if applicable

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82. What protocol (Z39.50, SRU, or SQL, etc) is currently used to search the collection?

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83. Could the metadata for this collection be downloaded via FTP?
☐ Yes
☐ No

84. Is a commercial computer system used to manage this collection?
☐ Yes
☐ No

85. If 'Yes' please tell us which system.

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86. Is the metadata for this collection aggregated by anyone else?
☐ Yes
☐ No

87. If 'Yes' please tell us by who.

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5 Appendix II – Collection content surveyed

This appendix gives brief descriptions of the collection content surveyed for this deliverable. The information was obtained from the answers to questions 1-2, 4 and 13-17 in the EuropeanaLocal survey.

It is organised by country and by provider type within a country. Where a provider has indicated that they are more than one type they may appear more than once in a country entry, depending on the nature of the collection.

5.1 Austria

5.1.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Fachhochschul-Studiengänge Burgenland Ges.m.b.H.	Library collection database	Management, library and information science	1900-Present	German 80%; English 15%; Others 5%	c1000
Institute for Advanced Studies	Library collection	Monographs, e-collections (e-books, e-papers), series, periodicals, grey literature, articles from magazines and anthologies, statistic material and World Bank publications. The collection reflects the research fields and training programmes of IHS: Economics (operations research), finance, mathematical methods and computer science, political science, sociology, and transition economics.	1900-Present	English 60%; German 35%; French 5%	c5000 (Volltext, TOC)
Library of the University College of Teacher Education in Styria	Library collection	Text.	1900-2008	German 95%; English 5%	c5000
	Ludothek (plays)	Any kind of plays.	1990-2008	German 95%; English 5%	c1000
	Mediathek	Non-book-material (CDs, videos, etc.).	1980-2008	German 95%; English 5%	[?]
Library of the University of Music and Dramatic Arts, Graz	Compositional inheritance of Anselm Hüttenbrenner (1794-1864)	Music autographs.	1810-1864	German 60%; Latin 10%	c800

5.1.2   Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
City Museum Graz	Collection of paintings	Paintings, landscapes, portraits, art.	1600-Present	German 100%	c800

5.1.3   Other - Academic collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
University Vienna [organisational aggregation]	Phaidra (Permanent Hosting, Archiving and Indexing of Digital Resources and Assets)	Collection of the digital objects of the University of Vienna ('Institutional Repository'). Research, higher administration, library and archive objects of the university.	1470-Present	Older records: Latin 50%; German 10%; Italian [?]; French [?]; English [?]. Recent records: German and English 70%; German only 30%	c30,000 objects (numbers increasing)
Center for Information Modelling in the Humanities	QM	Visualisations and animations on quantum mechanics are presented as accessible learning materials for use in secondary schools. The project aims at facilitating a firmer understanding of this complex field of knowledge and its relevance in our everyday life. The multilingual content of the page was produced by the Department of Mathematics and Scientific Computing at the University of Graz in cooperation with the University of Hiroshima.	2007	German 80%; Japanese 20%	[?]

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Center for Information Modelling in the Humanities [Continued]	PUG	A collection of podcasts on research and teaching topics at the University of Graz, aiming to advance the dissemination of scientific content using new media methods and technology. The podcasts can be accessed by means of browser-based media players or subscription to an RSS feed.	2007	German 100%	[?]
	Spanish moral weekly papers	Interactive text format are analysed by Department of Romance Studies. The insertion of narrative layers and forms of description affords new perspectives on the original source text.	18th century	Spanish 60%; Italian 40%	[?]
	USB	Digital edition of articles by Ulrich Schulz-Buschhaus in scientific professional journals and collected editions, developed in cooperation with the Department of Romance Studies. Serves as a prime example of Single-Source publishing techniques.	1968-2003	German 50%; Italian 38%; French 10%; Portuguese 2%	[?]
	ROLLETT	Digital edition of Alexander Rollett's correspondence with his brother Emil and the scientific community. Rollett held the very first professorship for Physiology and Histology at the Medical Faculty of the Karl-Franzens-University Graz, established in 1863.	1852-1903	German 100%	[?]
	REHI	Extensive collection of legal iconography images by the Department of Austrian and European Legal History was first published in 2007 for use of students and scholars alike. High-resolution graphics in combination with descriptive texts, dating, categorisations and keyword indexing serve as a resource for teaching and research.	900-1999	German 100%	[?]

5.2 Belgium

5.2.1 Aggregations (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Provincie Limburg - ErfgoedLimburg.be project	ErfgoedLimburg.be [Will be changed shortly to ErfgoedPlus, due to the extension of the database to another province in Belgium (Vlaams-Brabant)].	The database is an aggregation from approximately 175 collection inventories, museums and other smaller collections. The themes are very diverse. The intention is to cover all kinds of cultural heritage. Currently a large portion concerns religious heritage. Other collections include archaeological and ethnographical objects, and objects related to local history. Currently, the collections consist mainly of artefacts, but during 2009 the plan is to extend with documents and architectural heritage.	Prehistory-Present	[not applicable]	c75,000 objects (currently)
Provincie Oost-Vlaanderen - MovE project	Museum collections of Oost-Vlaanderen database (aggregated database of c30 collections)	Includes: • Fine art (and design); • Modern art: history (both local and regional); • Archaeology (including industrial archaeology); • Folklore and everyday life history; • Natural history.	Prehistory-Present	Dutch 100%	c100,000

5.3 Bulgaria

5.3.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Public Library - Varna	Periodicals printed in Varna at the beginning of 20th Century	Periodicals (newspapers and magazines) printed in Varna from the end of 19th to the beginning of 20th century.	1881-1940	Bulgarian 90%; Other languages 10%	c1000 pages
	Varna in the Revival Period	Old photographs, engravings and lithographs.	1700-1999	[not applicable]	250
	Yaroslav Gochev Collection	Photographs made by one of the most popular citizens from this period, a member of the city council.	1900-1999	[not applicable]	400
	Society, Social Life and Manners	Old photographs of buildings, people and events from the end of 19th to beginning of the 20th century.	1880-1930	[not applicable]	150
	The City and the Neighbourhoods	Postcards from towns and places related to Bulgarian history.	1900-1999	[not applicable]	450
	The City in Our Memory	Postcards from the city of Varna.	1900-1999	[not applicable]	1500

5.4 Cyprus

5.4.1 Other – religious foundation collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Church of Cyprus: Archbishop Makarios III Foundation	Icon Collection	Icons	[not given]	Greek; German; English; French	15 icons

5.4.2   Other – government department collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Department of Antiquities	Ancient Jewellery Collection	Ancient jewellery	[?]	English	15
	Statues and Artefacts Collection	Statues and artefacts as point clouds	[?]	[not applicable]	20 point clouds
	Magazine Collection	Magazines	[?]	Greek; English	15,000 pages
	Book Collection	Books	[?]	Greek; English	30,000 pages
Ministry of Education and Culture	Magazine Collection	Magazines	[?]	Greek; German; English; French	5000 pages
	Newspaper Collection	Newspapers	[?]	Greek; German; English; French	20,000 pages
	Manuscript Collection	Manuscripts	[?]	Greek; German; English; French	10,000 pages
	Book Collection	Books	[?]	Greek; German; English; French	30,000 pages

5.5   Czech Republic

5.5.1   Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Moravian Library	Kramerius MZK	Digitized serials (and monographs)	1800-1999	Czech 100%; German (in future)	9 journals (335 year's volumes -> 110,950 copies -> 1,450,535 images)

5.5.2   Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Muzeum Brněnska	Museum collection database	Manuscripts, old printed book and cartographic documents.	1000-1950	Latin 75 %; Czech 8%; German 10%; Spanish 1%; French 2%; Italian 1%; Hebrew 1%; Swedish 1%; English 1%	75,000 books; c1000 maps
Technical Museum in Brno	Museum collection database	Historical stereo slides.	1817-Present	Czech 100%	c4600
	Museum collection database	History of science and technology in Czech Republic, especially Moravia	100-Present	Czech 100%	c3700
Moravian Museum	Museum collection database	Representative cross-section throughout the museum collections.	Prehistory-Present	Czech 100%	c200,000 (textual entries in collection database include some photographic documentation)
Moravian Gallery in Brno	Moravian Gallery collection database	Fine art, applied art, photography, graphic design, and old books.	Medieval-Present	Czech 100%	c50,000

5.6   Denmark

5.6.1   Archive (and library) collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Roskilde Local History Archive	Archive collection sample	Local history documents, movies and pictures from Roskilde.	1800-1999	Danish 100%	100 texts; 25 movies; 1000 pictures

5.7   Estonia

5.7.1   Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Estonian National Museum	Photographic collection	Photographic collection of the Estonian National Museum	1850-Present	[not applicable]	170,000

5.8   Finland

5.8.1   Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Helsinki City Library	Digitised music	Digitised classical old music	1245-1886	[Multilingual]	51 LPs
	RikArt (artists´ book collection)	Artists' books collection	1960-2008	Finnish 57%; Swedish 19%; English 24%	c300

5.9 France

5.9.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Ville de Bourg-en-Bresse, Direction des services culturels, Réseau de lecture publique	Poèmes bressans	Bressan poetry	1898	French 100%	230 (representing 1 record)
	Physiologie du goût de Brillat-Savarin	French gastronomy, food science an sense of taste history	1850-1899	French 100%	86 (representing 1 record)
	Incunable Histoire Universelle ou Chronique de Nuremberg	Catholic church history. European capital cities map	1493	Latin 100%	566 (representing 1 record)
	Personnages célèbres de l'Ain	Ancient portraits of local or international personalities	1600-1930	French 96%; English 4%	83 (representing 83 records)
	Paysages de l'Ain	Landscape. Rural societies - Bourg-en-Bresse ancient streets	1700-1899	French 100%	49 (representing 49 records)
	Costumes du 16e au 18e siècle	Oriental costumes, Ottoman Empire people and French aristocratic costume	1500-1799	French 100%	512 (representing 1 record)
	Louis Dupasquier	Architectural plans, neo-gothic church architecture	1827-1870	French 100%	192 (representing 112 records)
[archive]	Joseph Gabriel Monnier	Travel books, traditional Turkish costumes and genealogy	1784-1806	French 100% ; Turkish 11%	1237 (representing 177 records)

5.9.2   Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Archives départementales de la Gironde	Cultes	Religious administration.	1791-1940	French 100%	937 descriptive records (in one finding aid)
[aggregation]	Réseau estuaire	Estuary of the Gironde.	2000 BC-2010	French 100%	3000 descriptive records; 500 items; 10,000 images
	Affaires militaires	Military administration.	1791-1940	French 100%	4103 descriptive records (in one finding aid)
	Administration et comptabilité départementales	Local administration.	1732-1943	French 100%	2247 descriptive records (in one finding aid)
	Fonds de la préfecture	State and local administration.	1798-1940	French 100%	6998 descriptive records (in one finding aid); 50,000 images (representing 110 descriptive records (4M + 8M)
	Fonds des bénédictins	Church history.	1001-1300	French 100%	1335 descriptive records (in one finding aid)
	L'Archevêché de Bordeaux et de l'église métropolitaine et primatiale Saint-André	Church history.	1139-1774	French 80%; Latin 20%	3155 descriptive records (in one finding aid)
	Université, collèges et Académies des sciences et Belles lettres de Bordeaux	Education.	1581-1791	French 100%	59 descriptive records (in one finding aid)
	Intendance et bureau des finances de la généralité de Bordeaux	Local government.	1693-1791	French 100%	4680 descriptive records (in one finding aid)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
[library]	Collections de la bibliothèque des Archives départementales	History, local and regional history, archives, administration and the press.	1500-Present	French 90%; English 10%; Latin 10%; Catalan 10%; Spanish 10%	73 volumes (BIBIN2); 30 monographs; 38,000 descriptive records
	Collection châtillon	Exploration.	1501-2002	French 100%	77 descriptive records (in one finding aid)
	Registres de catholicité (dépôt de l'archevêché)	Church history.	1803-1900	French 100%	887 descriptive records (in one finding aid)
Archives départementales de la Gironde	Cour des jurats de bordeaux	Justice.	1600-1800	French 100%	615 descriptive records (in one finding aid)
	Maréchaussée de Guyenne et contrôle des officiers de la maréchaussée de Guyenne	Local government.	1697-1791	French 100%	24 descriptive records (in one finding aid)
	Collection Michel Duvergier	Private collection.	997-2000	French 100%	366 descriptive records (in one finding aid)
	Fonds d'Arlot de Saint-Saud	Family ties.	1800-1900	French 100%	851 descriptive records (in one finding aid)
	Magistrats, Officiers publics et ministériels; Répertoire des notaires et commissaires priseurs	Justice.	1800-1958	French 100%	482 descriptive records (in one finding aid)
	Collection de documents sur le Libournais rassemblés par Ulysse Bigot	Private collection.	1194-2000	French 100%	1167 descriptive records (in one finding aid)
	Fonds des Eaux et Forêts	Landscape.	1697-1791	French 100%	828 descriptive records (in one finding aid)
	Fonds Martin: Érudit local	Local history.	1301-1920	French 100%	128 descriptive records (in one finding aid)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Archives départementales de la Gironde [Continued]	Fonds Mouline, Collection Pierre Lamarre	Mapmaking.	1900-1950	French 100%	199 descriptive records (in one finding aid)
	Fonds des Négociants	Trade.	1593-1791	French 100%	3154 descriptive records (in one finding aid)
	Fonds Billaudel: Ingénieur en chef des Ponts et Chaussées	Architecture.	1797-1850	French 100%	111 descriptive records (in one finding aid)
	Affiches des Archives départementales de la Gironde	Covers.	1600-1900	French 100%	765 descriptive records (in one finding aid)
Archives départementales de la Gironde [Continued]	Amirauté de Guyenne	Trade routes and commerce.	1640-1792	French 100%	2112 descriptive records (in one finding aid); 70,485 images (representing 242 records)
	Fonds Durand: Architecte et ingénieur de la ville de Bordeaux	Architecture.	1828-1889	French 100%	117 descriptive records (in one finding aid)
	Sénéchaussée et siège présidial de libourne	Justice.	1640-1790	French 100%	246 descriptive records (in one finding aid)
	Commission des monuments historiques	Cities - archaeology and architecture.	1800-1900	French 100%	34,661 images (representing 1749 records)
	Dons et legs	Local government.	1800-1940	French 100%	367 descriptive records (in one finding aid)
	État civil de la Gironde	Social life - family ties.	1538-1900	French 100%	600,000 images (representing 1125 records)
	Sénéchaussée et siège présidial de bazas	Justice.	1719-1790	French 100%	234 descriptive records (in one finding aid)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Archives départementales de la Gironde [Continued]	Archives départementales de la Gironde	History of the institute of conservation.	1800-1940	French 100%	292 descriptive records (in one finding aid)
	Fonds de l'enregistrement	Local government.	1791-1940	French 100%	24,119 descriptive records (in one finding aid)
	Cadastre	Local government.	1800-1940	French 100%	7795 descriptive records (in one finding aid)
	Notaires de la Gironde	Local government.	1301-1920	French 100%	63,390 descriptive records (in one finding aid)
	Bureaux de bienfaisance et bureaux d'assistance	Free medical help.	1800-1940	French 100%	647 descriptive records (in one finding aid)
	Contributions Directes	Local government.	1800-1940	French 100%	1678 descriptive records (in one finding aid)
	Cartes et plans des Archives départementales de la Gironde	Mapmaking.	1600-1900	French 100%	2249 descriptive records (in one finding aid)
	Fonds du contrôle des actes.	Local government.	1693-1791	French 100%	4090 descriptive records (in one finding aid); 6650 images (representing 25 records)
	Comptabilité Communale	Local government.	1800-1940	French 100%	1121 descriptive records (in one finding aid)
	Registres d'enregistrement du parlement 1451-1790	Local government.	1451-1790	French 100%	58 descriptive records (in one finding aid)

5.10 Germany

5.10.1 Library collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Zeitzeugen TV Film- und Fernsehproduktion GmbH	Eyewitness Reports of Berlin History	Film clips about the history of Berlin, eyewitness reports and aerial movies.	1985-2008	German 100%	c500 film clips

5.10.2 Library and archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Landesarchiv Berlin and Zentral- und Landesbibliothek Berlin (ZLB)	Collection of the 1848 Revolution in Berlin	Pamphlets, posters and other publications of the revolution 1848 in Berlin.	1848	German 100%	c4000

5.10.3 Archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Zentral- und Landesbibliothek Berlin	Berlin Collections	Digital imprints on Berlin history, language, architecture, and administration. History journals of Berlin, publications in the Berlin dialect, architecture journals, government and municipality publications, and historical address books.	1700-1990; 1810-1990 (government and municipality publications); 1848 (Leaflets, pamphlets and posters of the Revolution)	98% German; French 1-2%; English 1-2%; Latin 1-2%	c20,000 PDF files (c1.4m pages. Book objects at the volume level. Journal objects at the year or issue level, partially also at article level.)

5.11 Greece

5.11.1 Aggregation

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Openarchives.gr - Greek Digital Libraries Search Engine	Collection of Greek Academic Digital libraries content	PhD and MSc theses, academic publications, scientific journals, preprints, course material, and digitized historical documents.	1800-Present	Greek 85%; English 15%	c230,000

5.11.2 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Technical Chamber of Greece – Regional Department of Corfu	Technical Reports – Conference Material	Conference. Seminars. Theses. Technical Reports. Studies	2002-2008	Greek 95%; English 4%; French 1%	100
Veria Central Public Library	Book Collection, Postcard Collection, and Map Collection	Multidiscipline Book Collection. Veria postcards. Greek Maps	1300-2000	Greek 73%; French 6%; Latin 10%; English 10%; German 1%	1315; 972 books; 220 newspapers and magazines; 123 maps and postcards
Music Library - Lilian Voudouri	Digital Greek Music Archive	1. Archives of Greek composers. 2. Collection of Greek songs.	1 .1900-2000 2. 1890-1930	Greek 100%	c180,000
National Technical University of Athens Central Library	Historical Library	Rare books and unique journals collection.	1830-1947	Greek 90%; English 10%; German 10%; French 10%	c2100

5.11.3   Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
American Farm School	Girls School Collection	Girls School Craft Center at the American Farm School. Girls School activities and training at the American Farm School	1947-1969	[not applicable]	c153 images
	Miscellaneous American Farm School Photograph Collection	Photographs of the founder of the AFS and his successors; buildings of the AFS, students' photos; exhibitions; AFS everyday life.	1920-1979	[not applicable]	c619
	Card Postales Collection	**Small trades of Salonica; miscellaneous places from Greece; Greek everyday life; Greek traditional costumes; Greek work and trade; boats and ships; stereoscope cards**	**1920-1959**	**[not applicable]**	**c223**

5.11.4   Other – Research centre collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
National Documentation Centre / National Hellenic Research Foundation	PANDEKTIS - A Digital Thesaurus of Primary Sources for Greek History and Culture	Digitized portraits of Greek men and women. Travel literature material. Heraldic monuments from all over Greece. Maps and cartographic material, Collections of biographical details of Greek painters and an index of their works. Biographical details, list of the works and portraits of Greek teachers in the 19th century, Documentary material of the industrial heritage and workshops in the Aegean. Archival material from the Athonite Archives and from the monastery of Saint John the Theologian in Patmos. Ancient Greek and Latin inscriptions from Upper Macedonia, Aegean Thrace and Achaia.	600 BC-Present	Greek (Byzantine manuscripts, 20% of the collection)	c20,000

5.12 Hungary

5.12.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Németh László Town Library	Local history collection	Local collection, regional history.	1869-2008	Hungarian 100%	c70,000 pages (c300 books with 60,000 pages, c10,000 journal pages, c2000 images)
Békés County Knowledge Centre and Library	Local history collection	Local history archives of Békés County.	1869-2008	Hungarian 98%; Slovak 1%; Latin 1%	c35,600 pages (c350 books with c28,200 pages, c6800 journal pages, c600 images)

5.12.2 Archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Békés County Archives	Békés archive collection database	Békés county local collection, regional history.	1900-2008	Hungarian 100%	c17,800 (books with about 6150 pages; 8500 cartographies; c3150 images)

5.12.3 Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Munkácsy Mihály Museum	Museum collection database	Local collection, regional history, ethnography, and arts.	1920-2008	Hungarian 100%	c17,000 (c80 books with 12,350 pages and c4650 images)

5.12.4 Other – Cultural foundation collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Tree of Life Cultural Foundation	Ethnographic collection database	Hungarian ethnography.	1900-2000	Hungarian 100%	c11,400 (about 7,200 books objects and 4,200 images)

5.13 Ireland

5.13.1 Museums Aggregation (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
The Library Council	Ask About Ireland Local Studies Content	Local studies and history in Ireland.	Prehistory-Present	English 95% ; Irish (Gaelic) 5%	c1000

5.14 Italy

5.14.1 Aggregation (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Marche Region	Database of audio-visual and photographic cultural heritage	Archive of catalogue of audio-visual and photographic cultural heritage of Marche Region.	1922-2000 (audio-visual); 1980-2008 (photographic)	Italian 100%	c28,000 cards; c24,000 descriptive card files
	Database of movable cultural heritage	Archive of catalogue of historical, archaeological, and traditional cultural heritage of the Marche Region.	400,000 BP-Present (archaeology); 1400-1999 (history); 1800-1999 (traditional culture)	Italian 100%	c53,000 file cards
	Database of immovable cultural heritage	Archive of catalogue of architectural and monumental heritage and of archaeological sites of the Marche Region.	400,000 BP-Present (archaeological sites); 500 BC-1999 (architectural and monumental heritage)	Italian 100%	c24,000 descriptive file cards

5.15 Latvia

5.15.1 Aggregation (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
National Library of Latvia	Culture and History of Latvia	Collection of photographs, video and sound files.	1880-Present	Latvian 90%; English 5%; German 5%	c19,000

5.16 Lithuania

5.16.1 Library collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Kaunas County Public Library	Famous Kaunas People: immortalization of remembrance	List of biographies of famous Kaunas people. List of dates and historical facts of Kaunas. Bibliographies of Kaunas artists.	1361-Present	Lithuanian 95%; English 3%; German 2%	[?]

5.16.2 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Biržai Sėla Museum	Photographic negative collection	Documentary about Soviet occupation in Lithuanian. Archaeological expeditions Regional studies expeditions.	1900-1950	[not applicable]	c2000
	Photography collection	Documentary about Biržai region and Lithuanians abroad (in exile).	1850-1999	[not applicable]	c10,000
Lithuanian Theatre, Music and Cinema Museum	19th century posters from Vilnius collection	Posters of cultural events: theatre plays, circus shows, concerts.	1800-1900	Russian 70%; Polish 30%	c2000

5.17 Malta

5.17.1 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Heritage Malta	Ganado Map Collection	Old maps of Malta.	[unknown]	English	c1500
Palazzo Falson Historic House Museum	Palazzo Falson photographs of the artefact collection	Various.	Various	English 100%	47

5.17.2 Other collection (historical foundation)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Fondazzjoni Patrimonju Malti	List of publications published by Fondazzjoni Patrimonju Malti	Publications about Maltese history and art history, including a magazine that is published three times a year.	Prehistory-Present	English 100%	38 (books); 44 (magazines)

5.18 Netherlands

5.18.1 Aggregation (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Erfgoed Brabant	Inventory of museums in Noord-Brabant	Database with general information about the museums in the province of Noord-Brabant; with a list of the collections they hold. These collection names are linked to the collection level description database of MUSIP.	[not applicable]	Dutch 100%	94 objects (in index online and in original database)
	Inventory of museum collections in Noord-Brabant	Database with collection level descriptions of collections in museums in the province of Noord-Brabant.	Prehistory-Present	Dutch 100%	1109 objects (in index online and in original database)
	Brabantse Leeuw	Illustrated magazine with metadata.	Prehistory-Present	Dutch 100%	1799 (within ThuisinBrabant – 50 complete years of this magazine); 1799 (in the database)
	Brabants Heem	Illustrated magazine with metadata.	Prehistory-Present	Dutch 100%	2226 (within ThuisinBrabant – 50 complete years of this magazine); 2226 (in the database)
	Biographies and Theme-articles	Articles: biographies and theme-articles.	Prehistory-Present	Dutch 100%	293 (metadated records/articles within ThuisinBrabant); 293 (metadated records/articles in the original database)

5.18.2 Archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
BHIC (Brabants Historisch Informatie Centrum)	Photocollection BHIC	Historical pictures of the province of Noord-Brabant.	1865-Present	Dutch 100%	71,517 (within ThuisinBrabant); c73.000 photographs (in the original database)

5.18.3 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Geniemuseum	Museum collection database	Objects concerning the history of the Royal Engineers in the Netherlands.	[?]	Dutch 100%	64 (within ThuisinBrabant)
Museum De Acht Zaligheden	Museum collection database	Crucifixes and sculptured nativity scenes.	[?]	Dutch 100%	14 records (within ThuisinBrabant)
Museum Jan Heestershuis	Museum collection database	Paintings, drawings and prints of artist Jan Heesters.	1893-1982	Dutch 100%	1487 records (within ThuisinBrabant)
Museum Tongerlohuys	Museum collection database	Objects concerning the history of the town of Roosendaal.	[?]	Dutch 100%	99 records (within ThuisinBrabant)
Museum voor Religieuze Kunst	Museum collection database	Religious art from the 20th century.	1900-1999	Dutch 100%	168 records (within ThuisinBrabant)
Nationaal Veeteelt Museum	Museum collection database	Objects concerning the history of cattle-breeding in the Netherlands.	[?]	Dutch 100%	23 (within ThuisinBrabant)
Noordbrabants Museum	Museum collection database	Paintings, sculptures, print and drawings.	Late Medieval-Present	Dutch 100%	14,640 (within ThuisinBrabant)
Textielmuseum Tilburg	Museum collection database	Textiles, textile history, and textile technology.	1800-Present	Dutch 100%	1028 (within ThuisinBrabant)
Ton Smits Huis	Museum collection database	Paintings, drawings and prints of cartoonist Ton Smits.	1921-1981	Dutch 100%	34 (records within ThuisinBrabant)

5.18.4 Other - University collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Tilburg University	Film- en Fotobank Noord-Brabant	Historical films and photographs (including picture postcards) of the Dutch Province of Noord-Brabant.	1870-Present	Dutch 100%	103,372 photographs and films (within ThuisinBrabant (lowres)); 113,600 photographs (in the original database); c350 films (in the original database)
	Databank Topografisch-Historische Atlas	Topography, maps, historical prints, civil life, portraits all dealing with the Dutch Province of Noord-Brabant.	1500-Present	Dutch 100%	18,198 records (within ThuisinBrabant); c20,000 (14,500 prints and 5500 photographs in the original database)
	Brabant Databank (Brabant Collection, Tilburg University)	Descriptions of books, journal articles and chapters from books dealing with the history of the Dutch Province of Noord-Brabant (North-Brabant). Also descriptions of books by authors from Noord-Brabant can be retrieved from the Brabant-Databank.	10,000 BC-Present	Dutch 90%; Other languages 10% (French, English, German)	71,466 records (within ThuisinBrabant); 100,000 (free to use in the original database)

5.19 Norway

5.19.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Sogn og Fjordane County Library	Biblioteka i indre Sunnfjord database	Books and other media on a wide variety of subjects. (Content from The County Library in Sogn og Fjordane and the public libraries in Førde, Gaular, Jølster and Naustdal municipalities).	1700-Present	Norwegian 85% (Other languages represented are English, Danish, Swedish, German, Spanish, French, etc. The exact percentages of these other languages are not known.)	0 (72,000 objects (books, videos etc) are registered in the library database. However there are no digital objects in the database, just catalogue information/metadata. Digital images of the cover page of books exist and are shown in the library database. However, these images are stored in a separate database, and we don't have the right to use them in any other context (like Europeana)).
	"Fjognedok" article database	Articles concerning local/regional history, culture and events published in local and regional magazines in Sogn og Fjordane.	1800-Present	Norwegian 100%.	0 (The database contains more than 13,000 articles, but none have been digitized yet. The County Library wants to digitize the articles, but is dependent on external funding to do so.)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Sogndal Bibliotek	Sogndalsbasen	Books and other media on a wide variety of subjects. Content from all libraries in Sogndal municipality and the libraries at The Heiberg Collections (museum) and The County Archives in Sogn og Fjordane).	1589-Present	Norwegian 80-90%; Other languages 10-20%	48,000 catalogue posts (=titles) (The books and journals catalogued only exist as 'physical' rather than digital objects. We have thumbnails showing the cover page of about half the titles.)

5.19.2 Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
County Archives in Sogn og Fjordane	Place names database	Place names collected 1985-2000. All geo-referenced. Local pronunciations recorded on tape (25% of the tapes are digitized).	1900-2000	Norwegian 100%	c180,000 digital objects (place names).
	Farm names database	Name of farms in Sogn og Fjordane. This database is linked to several other databases: photographs, place names, census, museum objects, and mountain farms.	1800-2008	Norwegian 100 %	2400 digital objects (farm names)
	Minutes records database	Minutes from local council meetings in Sogn og Fjordane.	1837-1964	Norwegian 100%	c60,000 digital objects (scanned pages)
	Mountain farm database	Information about mountain farms (name, location, etc). The database contains names of mountain farms in Sogn og Fjordane, and is linked to the photo database and the "1930s mountain farm registry".	1930-2008	Norwegian 100 %	2200 digital objects (names of mountain farms)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
County Archives in Sogn og Fjordane [Continued]	Municipal, county and private archives – catalogues	Municipal and county archives of Sogn og Fjordane, Norway. Private Archives Sogn og Fjordane, Norway.	1750-1998	Norwegian 100%	[?] (database/collection only contains catalogue data, and no digital objects. However image digital objects will gradually be added to the collection in the course of 2009 and the following years)
	Organisations and societies database	General information on organisations and societies in Sogn og Fjordane and their archival documents.	1870-1980	Norwegian 100%	c6000 (Only catalogue in Oracle database. No digital objects)
	America Letters	Letters and postcards. Most were sent to Norway from America. About 200 were sent from America to Norway. A few were sent between states in USA. There are also some letters from and to other countries.	1860-1960	Norwegian 95%; English 5%	c3000 (in Oracle database with detailed information on each item. No digital objects)
	Photographic database	Historical photographs depicting persons, rural life, rural landscapes, industry, social life, life cycle rituals, farming, buildings, emigration, tourism, transport and communications.	1860-2008	Norwegian 100%	c70,000 digital objects (digitized photographs)
	Kulturhistorisk leksikon (article database)	Articles about cultural heritage (buildings, roads and communications, historical events, clothing, authors, artists, and mountain farms, etc).	Prehistory-Present.	Norwegian 100%; English 25%	c1800 articles
	Minutes Registry of Sogn og Fjordane.	Index of minutes from local municipalities in Sogn og Fjordane county.	1837-1930	[not given]	0 (The index contains no digital objects. Links to 'minutes records database' containing digitized minutes.)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Fylkesarkivet i Sogn og Fjordane	Multimedia database	Archive of sound and moving pictures.	1928-Present	Norwegian 100%	c1700
	Traditional music in Sogn and Fjordane	Traditional music.	1921-Present	Norwegian 100%	0 [?]

5.19.3 Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Musea i Sogn og Fjordane	Museum object database	Cultural history of Sogn og Fjordane.	1536-Present	Norwegian 100%	c8000 images (c52,000 museum objects in the database. Both numbers of museum objects and images are growing).

5.20 Poland

5.20.1 Aggregation (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Poznań Supercomputing and Networking Center	PIONIER Network Digital Libraries Federation	Aggregates metadata of digital objects from over thirty various Polish digital libraries. The range of subjects is wide and includes: various kinds of Polish cultural heritage, regional materials from majority of regions, scientific and educational materials, and music notes.	1100-Present	Polish 80%; German 12% (minor number of objects in many other languages)	200,000 (c60% of these objects are old magazines and newspapers available at the issue level)

5.20.2 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Main Library and Scientific Information Centre of the Wrocław University of Technology	Wrocław University of Technology	Resources associated with Wrocław University of Technology.	1736-2008	English 14%; French 5%; German 39%; Latin 0% (3 objects); Polish 42%; Ukrainian 0%(1 object)	828
	Ossolinski National Institute	Resources associated with The Ossolinski National Institute.	1493-1917	French 18%; German 0% (1 object); Latin 4%, Polish 77%	141
	University School of Physical Education in Wroclaw	Resources associated with University School of Physical Education in Wroclaw.	1884-2007	Polish 100%	65
	Wroclaw University of Economics	Resources associated with Wrocław University of Economics.	1644-2007	English 13%; Latin 6%; Polish 81%	16
	Wrocław University of Environmental and Life Sciences	Resources associated with Wrocław University of Environmental and Life Sciences.	1675-1859	Polish 100%	24

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Main Library and Scientific Information Centre of the Wrocław University of Technology [Continued]	Karol Lipinski University of Music	Resources associated with The Karol Lipinski University of Music.	1840-1923	French 33%; Polish 67%	3
	Karkonoski College	Resources associated with Karkonoski College.	2001-2007	Polish 100%	23
	Pontifical Faculty of Theology	Resources associated with Pontifical Faculty of Theology.	1697-2008	Aramaic 0% (1 object); German 50%; Greek 0% (1 object); Latin 10%; Polish 36%; Slovak 0% (1 object); Syrian 2%	142
	Tadeusz Kosciuszko Land Forces Military Academy	Resources associated with The Tadeusz Kosciuszko Land Forces Military Academy.	1916-1929	English 14%; French 14%; Polish 71%	5
	Wroclaw Medical University	Resources associated with Wroclaw Medical University.	2001-2004	English 47%; German 1%; Polish 52%	101
	Academy of Fine Arts in Wrocław	Resources associated with Academy of Fine Arts in Wrocław.	1875-2006	English 7%; French 13%; German 47%; Polish 33%	12
	Academy for the Dramatic Arts	Resources associated with Academy for the Dramatic Arts.	1918-2007	German 33%; Polish 67%	3
	Dolnośląska Public Library	Resources associated with Dolnośląska Public library.	1947-2002	Polish 3%	3
	Opole University of Technology	Resources associated with Opole University of Technology.	2004-2007	Polish 100%	7
	Academic Society	Resources associated with Academic Society.	2007	English 31%; Polish 69%	21

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Jelenia Góra Center for Regional Information and Education - Karkonoska Library	Archives	The oldest manuscripts relating to the region of Lower Silesia.	1309-1384	German 50%; Latin 44%; Polish 6%	16
	Journals	Journals associated with the region of Lower Silesia.	1881-2006	German 56%; Polish 44%	322
	Non-Book Materials	Non-book materials associated with the region of Lower Silesia.	1946-2008	Czech 17%; Polish 83%	7
	Film	Movies associated with the region of Lower Silesia.	2008	Czech 100%	1
	Iconography	Iconography associated with the region of Lower Silesia.	1993-2008	[No language specified]	5
	Books	Books associated with the region of Lower Silesia.	1827-2007	Czech 4%; German 50%; Polish 46%	23
	Postcards	Postcards associated with the region of Lower Silesia.	1897-1969	[No language specified]	298
	Biographical Dictionary of Jelenia Góra Land	Biographical Dictionary of Jelenia Góra Land.	2006-2008	Polish 100%	67
	Various	Various.	2008	Polish 100%	9

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Poznan Foundation of Scientific Libraries	Cultural heritage	Includes the most valuable literature and historical documents stored in libraries and archive of Wielkopolska region, such as: manuscripts, old printed books, handwritten books, incunabula, rare books, newspapers, magazines, ephemeras, cartographic materials, photographs, prints and other 19th and 20th century material.	1100-1950	Polish 68%; Latin 14%; German 14%; Other 15% (Czech, Belarussian, Arabic, English, French, Italian, Greek, Hungarian, Lithuanian, Russian, Slavic, Swedish, Turkish, Ukrainian, Welsh)	15,070
	Educational Materials	Course lectures, textbooks and other materials to be used during educational processes.	1600-Present	Polish 96%; English 10%; Other 1% (German, Latin, Serbian, Welsh))	545
	Music Notes	Includes materials stored in the library of the Academy of Music in Poznań, especially music scores and other materials which are useful for students of this type of academy.	1800-1950	Polish 72%; German 33%	18
	Regional materials	All types of archival and historical documents related to the territory of Poznań and Wielkopolska and materials which were printed or published in historical region of Wielkopolska.	1200-1999	Polish 95%; German 3%; Other 2% (English, French, Greek, Italian, Latin, Russian, Ukrainian)	61,927

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Voivodeship and City Public Library in Rzeszów	Cultural heritage	The most valuable library collections: old prints, manuscripts, collections of iconographic and cartographic data.	1749-2006	Polish 90%; German 9%; Latin 4%; Russian 3%; French 1%; Czech <1% (2 objects); Hebrew <1% (1 object); Church Slavic <1% (1 object)	1469
	Educational materials	Selected academic textbooks, monographs, and scientific issues arising in University of Rzeszów and other centres of scientific and educational district.	1918- 2007	Polish 100%	19
	Regional materials	Books and magazines, iconographic collections, maps, manuscripts and documents of social life related to the Podkarpacie province and Galicia.	1749-2008	Polish 89%; German 9%; Russian 4%; Latin 5%; French 1%; Church Slavic <1% (1 object); English <1% (1 object)	1084
	Doctoral dissertations	Doctoral dissertations at the University of Rzeszów, which the authors agreed on their provision.	1994-2008	Polish 85%; English 8%; German 8%	12
Nowohucka Public Library in Kraków	Special collections	Relating to the Nowa Huta and sites geographically and historically related to this region.	1900-1999	Polish 100%	551
	Regional materials	[as above]	[as above]	[as above]	561

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Silesian Library	Cultural heritage	The most important publications of high historical value. Regional publications. Scientific and didactic works (habilitations, doctorates, articles, and lectures)	1300-Present	Polish 79%; German 20%; French 2%; Other 1% (Czech, Dutch, English, Italian, Hebrew, Yiddish, Latin, Russian, Spanish)	9976
	Educational materials	[as above]	1800-Present	Polish 79%; German 20%; French 2%; Other 1% (Czech, Dutch, English, Italian, Hebrew, Yiddish, Latin, Russian, Spanish)	634
	Miscellanea	[as above]	1400-1950	Polish 96%; German 10%; Other 2% (French, Greek, Hebrew, Latin, Russian Yiddish	1468
	Participants publications	[as above]	1600-Present	Polish 60%; German 34%; French 6%; English 5%; Latin 2%; Other 1% (Czech, Greek, Hebrew, Italian, Russian, Slovenian, Spanish)	2012
	Lower Silesia	[as above]	1800-1950	German 94%; Polish 4%; Latin 1%	49
	Upper Silesia	[as above]	1800-Present	Polish 76%; German 36%; Other 1% (English, French, Italian, Latin)	991
	The Opole Land	[as above]	1800-1950	German 70%; Polish 30%	271
	The Bielsko-Biała Region	[as above]	[no information]	[none]	0

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Silesian Library [Continued]	The Częstochowa Region	[as above]	1800-Present	Polish 98%; Other 2% (French, Russian)	56
	Cieszyn Silesia	[as above]	1800-1950	German 80%, Polish 20%	29
	Czech Silesia	[as above]	1900-1950	German 100%	22
	The Dąbrowa Basin	[as above]	1800-Present	Polish 97%; Other 3% (German, Russian)	31
	Bibliophile collection	[as above]	1900-Present	Polish 86%; Czech 14%; German 14%	7
University Library in Białystok	Cultural heritage	The most valuable, oldest and most used writing relics of Białystok libraries: old printed books. Cartography collections, Supraska printings, handwritten books, 19th century books, iconography collections, first half of 20th century publications. Also Vilniana i Lituanica documents concerning Poland Eastern lands.	1600-Present	Polish 89%; Russian 14%; Latin 7%; Polish / Latin 5%; Russian / Polish 5%; German 4%; Other 8% (English, Italian, French, Swedish)	1078
	Regional materials	Documents on Podlasie, Suwalszczyzna, Pojezierze Augustowskie and Mazowsze. There are many Białystok newspapers from end of 18th to the 20th century and digital copies of leaflets, posters, placards, invitations, exhibitions and fair catalogues and other printings of Podlasie. There are also many historical publications by Białystok University and National Archive of Białystok employees. Also cartography documents many of which being from interwar era.	1600-Present	Polish 99%; German 2%; Other 5% (Belarusian, English, Russian, Latin, French)	3559
	Scientific and Educational Materials	Scripts, handbooks, monographs and scientific articles written by employees of universities of Białystok, and MA theses by Białystok University students. There are also magazines and other publications published in Białystok University and Białystok Technical University.	1900-Present	Polish 97%; Polish / English 11%; Other 7% (Czech, German, French, Russian)	214

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
University Library in Białystok [Continued]	Music notes	Unique notes and song-books published in 19th and first half of 20th century that are no longer protected by copyright law.	1600-1950	Polish 41%; English 8%; German 7%; Italian 3%; Russian 3%; Other 10% (French, Dutch, Latin)	90
District and City Public Library in Wjeherowo	Articles from national magazines	Regional materials associated with Kashubia and Pomerania.	1900-1999	Polish 100%	346
	Articles from regional magazines	[as above]	[as above]	Polish 100%	2472
	DIGITAL Kashubia	[as above]	[as above]	Kashubian 38%; Polish 61%; Other 2% (German, Latin)	142
	Magazines	[as above]	[as above]	Polish 100%	10
	Documents of social life	[as above]	[as above]	Polish 97%; Other 3% (English, French, German)	279
	Library Chronicles	[as above]	[as above]	Polish 100%	5
	Books	[as above]	[as above]	Kashubian 90%; Polish 10%	10
	Publications and theses	[as above]	[as above]	Polish 100%	2
	Texts of speeches	[as above]	[as above]	Polish 100%	1
	Special collections	[as above]	[as above]	Polish 100%	1
Technical University of Lodz Library	Journals	Selected titles of periodicals (mainly chemical) published from 19th to the beginning of the 20th century. These journals are very valuable for the history of science and are our common European heritage of technological development. There are some other scientific journals which are currently being published.	1832-1939; 1984-2008	English 10%; French 0.6%; German 23.4%; Polish 66%	c1100 (Each periodical volume has its own digital object, except Fundamenta Mathematicae title which is divided into articles,)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Voivodeship Public Library in Kraków	Journals and newspapers	Nationwide, regional and sublocal journals and newspapers concerning Małopolska region.	1800-Present	Polish 99%; Other 1% (English, German, French, Italian)	12,221
	Cultural heritage	Past journals, incunabulas, books (1801-1939), past maps, music notes (to 1945), manuscripts, cymelium and old prints concerning Polish cultural heritage.	1200-1950	Polish 96%; Other 4% (Czech, English, French, German, Italian, Latin, Slavic, Spanish)	2171
	Science and Education	Scientific publications about: architecture, librarianship, economy, philosophy and sociology, geography and geology, history, culture and habits, literature and language, mathematics and physics, media, medicine and health, music, theatre and film, science, education, environmental protection, politics, political science, law, administration, religion, theology, agriculture, art, technique, tourism, sports, Varia, and community.	1200-Present	Polish 81%; English 3%; German 3%; Latin 3%; Other 3% (Czech, Spanish, French, Hungarian, Italian, Russian)	1507
	Regional materials	Regional materials concerning Kraków and Małopolska region.	1200-Present	Polish 98%; Other 2% (English, Spanish, French, German, Hungarian, Italian, Latin, Russian)	5502
	Archival resources	Collections of National Archive in Kraków and Regional Museum in Miechowo.	1200-1899	Latin 78%; Polish 31%; German 28%; French 3%; Spanish 3%	32
	Special collection	Broadsides, iconography, cartography, and administrative agencies.	1600-Present	Polish 68%; German 16%; English 7%; French 5%; Russian 2%; Other 2% (Czech, Spanish, Hungarian, Italian, Latin)	202

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Voivodeship Public Library in Kielce	Cultural Heritage	The most precious and interesting cultural heritage documents preserved by the library. It includes old printed books, books and periodicals.	1752-2004	Polish 98%; German 2%; Latin 2%	c2235
	Modern collections (since 1946)	Materials and documents concerning the Świętokrzyski region. Includes: periodicals, regional bibliographies and publications of Voivodeship Public Library in Kielce.	1996-2008	Polish 100%	c40
Silesian University of Technology, Main Library	Journals	Mostly journals published at Silesian University of Technology (SUT).	1954-1997	Polish 100%	75
	History of science and technology	Historical texts about science and technology.	1902-1957	Polish 100%	[See above]
	Education	Materials used by students during the educational courses at SUT.	2008	Polish 100%	[See above]
	Handbooks and monographs	Monographs, textbooks, and academic scripts published by SUT's publishing house.	1898-1980	Polish 100%	[See above]
	Silesian University of Technology	Materials (historical and current) associated with SUT and its students.	1949-2008	Polish 100%	[See above]
	Dissertations	Doctoral dissertations prepared at SUT	1928-1928	Polish 100%	[See above]
	Varia	Historical materials about Lwow University of Technology and some old books	1919-1939	Polish 100%	[See above]
Library of the University of Łódź	Periodicals	Periodicals from the 19th and 20th centuries.	1963-1939	Polish 100%	c300
Library of Cracow University of Technology	PhD theses from Cracow University of Technology	Theses written at various divisions of Cracow University of Technology.	1854-2009	Italian 0% (1 object); English 27%; German 1%; Polish 86%; French 0% (4 objects); Russian 2%; Latin 0% (2 objects)	1072
	Didactic materials	Materials used during courses at Cracow University of Technology.	[as above]	[as above]	[See above]
	Monographs	Articles and dissertations published by Cracow University of Technology in journal "Monografia" ("Monographs" in English).	[as above]	[as above]	[See above]

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Library of Cracow University of Technology [Continued]	Technical Journals	Series of "Technical Journal" published by Cracow University of Technology.	[as above]	[as above]	[See above]
	Special collection	Unique and precious objects from the Library of Cracow University of Technology.	1854-2009	[as above]	[See above]
Nicolaus Copernicus University, University Library in Toruń	Regional Materials	Regional materials on Pomerania, Kuyavia and Vilnius land.	1500-Present	Polish 82%; German 14%; Other 2% (Belorussian, English, French, Italian, Latin, Lithuanian, Russian, Slavic, Yiddish)	21,653
	Cultural heritage	The most old and valued items, such as: incunabula, old prints, manuscripts, and iconography collections from the universities and public libraries in region.	1580-1999	Polish 79%; French 10%; German 9%; Latin 3%; Other 1% (Czech, English, Italian, Lithuanian, Russian)	3705
City Library in Elbląg	Lower secondary school in Elbląg	Materials about the school.	1651-1936	Polish 100%; German [?]	1018
	Elbląg Graphics	Images, paintings and other similar objects associated with Elbląg.	1635-1755	[as above]	[See above]
	River channel in Elbląg	Historical materials associated with river channel between Elbląg and Ostróda.	1863-1925	[as above]	[See above]
	Theatre	Poster, invitations and other materials about Elbląg's Theatre.	1821-2008	[as above]	[See above]
Wrocław University. University Library	Catalogues of WUL	Card catalogues, printed catalogues etc. of Wrocław University Library.	1800-Present	German 74%; Multiple languages 25%; Latin 6%; Polish <1%	c456
	Cultural Heritage	Particularly valuable historical documents stored in Wrocław University Library holdings, such as: manuscripts, old printed books, books, serials, ephemeras, pamphlets, music materials, cartographic materials, drawings, photographs, and prints.	1200-Present	German 61%; Polish 35%; Latin 3%; Others c1%	c17,009

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Wrocław University. University Library [Continued]	e-Books	Course lectures, textbooks and other materials to be used during educational processes at the University. They are divided into the following general fields: science, social science, art and humanities.	2002-2008	Polish 98%; German 2%	c131
	Educational Materials	Course lectures, textbooks and other materials to be used during educational processes at the University. They are divided into the following general fields: science, social science, art and humanities.	1997-2008	Polish 97%; German 3%	c23
	Regional Materials	All types of documents listed in the Cultural Heritage Collection relating to all territory of Silesia and Lausitz and particularly to Low Silesia and Wrocław.	1600-Present	German 79%; Polish 20%; Other less than 1% (Czech, English, Latin)	c12,206
	Specialist Collections	Materials stored in branch libraries and other organizational units of Wroclaw University.	1810-2009	Polish 90%; English 9%; French 1%	c303
Pedagogical University in Cracow	Annales academiae pedagogicae cracoviensis	Annales academiae pedagogicae cracoviensis (journals published by Pedagogical University in Cracow).	1819 -2008	English 10%; Polish 90%; French 13%	c170
	Conference materials	Conference materials (from pedagogical conferences which were organized at Pedagogical University in Cracow).	1996-2007	Czech 20%; German 20%; Polish 100%; Ukrainian 60%	[See above]
	Cultural heritage	Cultural heritage (books published between 1801 and 1945 and journals published before 1945)	1819-1954	Polish 100%	[See above]
	Didactics materials	Didactics materials (educational materials used during the courses organized at Pedagogical University in Cracow).	1949-2008	Polish 100%	[See above]
	Dissertations	Dissertations (this collection will contain doctoral dissertations prepared at pedagogical divisions of Pedagogical University in Cracow).	[this collection is empty]	[this collection is empty]	[See above]
	Miscellanea	Miscellanea.	1890	German 14%; Polish 14% (rest of objects does not have value for language attribute)	[See above]

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Pedagogical University in Cracow [Continued]	Pedagogical journals	Pedagogical journals (journals published after 1945).	1903-1904	Polish 100%	[See above]
Akademicka Biblioteka Cyfrowa Kraków, ABC Kraków (Academic Digital Library Cracow)	Students text books	Students text books (contains scripts and textbooks used by students.	1969-2009	Czech <1% (1 object); Yiddish <1% (1 object); German 2%; Polish 85%; French <1% (15 objects); Russian <1% (15 objects)	4120
	Conference materials	Conference materials.	2003-2009	[as above]	[See above]
	Monographs and scientific reports	Monographs and scientific reports.	1974-2009	[as above]	[See above]
	Doctoral dissertations	Doctoral dissertations (theses prepared by scientist from various Cracow's universities which has contributed them to ABC Kraków).	2005-2009	[as above]	[See above]
	Articles from scientific journals published by AGH USaT	Articles from scientific journals published by AGH USaT (articles published in scientific journals published by AGH USaT after 1946).	1945-2008	[as above]	[See above]
	Multimedia catalogues of exhibitions.	Multimedia catalogues of exhibitions.	1945-2008	[as above]	[See above]
	Patents.	Patents (description of patents created at AGH USaT).	1947-1949	[as above]	[See above]
	Old books and manuscripts	Old books and manuscripts (old books contributed by Cracow's libraries who created ABC Kraków.	1702-1924	[as above]	[See above]
	Journal articles (till 1945)	Journal articles (before 1945).	1900-1945	[as above]	[See above]
	19th- and 20th-century books	19th and 20th century books.	1801-1945	[as above]	[See above]
University Library, University of Zielona Góra	Culture and Fine Arts	Cultural heritage (manuscripts, old printed books, maps, documents of social life) and fine art (drawings, paintings, posters, photography, ex-libris).	1400-1999	Polish 87%; German 13%; Other, less than 1% (English, Greek, French, Latin	c4600
	MSc, PhD and Habilitation theses	PhD and habilitation theses defended at the University of Zielona Góra.	1921-2007	Polish 85%; English 15%	c68

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
University Library, University of Zielona Góra [Continued]	Regional Materials	Includes materials, documents, records and works concerning Zielona Góra and the Lubuskie Province, also in its historical boundaries. Contemporary publications, as well as archival recordings (chronicles, statutes, charters, iconography etc.), and works by local artists from the University Library holdings.	1600-1999	Polish 78%; German 22%; Other, less than 1% (Latin)	c2395
	Science and Teaching	Course books, textbooks, monographs, periodicals and other locally published materials.	1984-2007	Polish 78%; English 22%; Other <1% (Russian, German)	c175
University of Warsaw Library	Journals	Daily newspapers, social and literary weeklies and scientific magazines mostly in Polish published in 19th century and first decades of 20th century.	1600-1999	Polish 100%; Yiddish 2%	1609
	Cultural heritage	The most valuable writing relics held in libraries, University of Warsaw Archive and Museum including handwritten books, incunabulas, old prints, books, social life documents, graphic collections.	1300-1950	Polish 80%; Latin 10%; Yiddish 9%; French 7%; German 5%; Russian 3%; English 2%	294
	e-publications	University of Warsaw employees' publications, especially those of the University of Warsaw Library, and information system (books or their parts, articles, etc.)	2007-2008	Polish 100%; English 50%	4
	History of University of Warsaw and of University of Warsaw Library	Books, handwritten books, social life documents and graphical collections showing the history of University of Warsaw and University of Warsaw Library.	1800-1950	Polish 84%; German 8%; French 5%; Latin 3%; Other 2% (English, Russian)	123
	Judaica	Books, social life documents (leaflets, placards, daily documents, brochures, postcards and posters) and journals, mostly in Polish and Yiddish touching on different aspects of life of Jewish society in Poland during the interwar period.	1800-1950	Polish 100%; Yiddish 68%; Hebrew 2%	81

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
University of Warsaw Library [Continued]	Book Collection of the Warsaw Society of the Friends of Science	Part of the Warsaw Society of the Friends of Science library collection, which is kept in University of Warsaw Library. This Society existed from 1800 to 1832 and was one of the most important national institutions in the intellectual life in Poland.	1802-1831	Polish 96%; Latin 8%; German 5%; French 2%, Hebrew 2%; Russian 1%	86
	Science and Education	Source materials, heraldry books, handbooks and readings used in scientific and didactic processes in University of Warsaw	1400-1999	Polish 91%; Latin 11%; Russian 2%; Other 2% (English, French, German, Greek, Serbian)	331
	Varsaviana	Books, journals and also handwritten books, old prints, social life documents and iconographic and cartographic materials concerning Warsaw.	1780-1950	Polish 82%; German 7%; French 6%; Russian 2%; Other 2% (English, Latin)	125
	Various	Different publications including: dictionaries, lexicons, indexes and encyclopaedic publications.	1800-Present	Polish 100%; Latin 15%	27

5.20.3 Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
National Museum in Warsaw	Museum collections	Collections of: • Ancient art; • Eastern Christian art; • Byzantine icons and crafts; • Nubian, Ethiopian and Coptic art; • Medieval art; • Oriental art; • Polish modern art; • Polish paintings; • Miniatures; • Modern Non-Polish art; • Non-Polish Paintings; • Modern art; • Modern paintings; • Modern design; • Decorative art; • Silverware and metals; • Pottery; • Glass; • Furniture; • Textile; • Iconography and photography; • Non-Polish modern graphics and drawings; • Non-Polish plates; • Non-Polish drawings; • Polish graphic art; • Polish modern graphics and drawings; • Polish drawings; • Coins and medals; • Maps; • Old printed books; • Dunikowski Collection; • Ancient sculpture; • Modern sculpture. Scope is worldwide, European, national and regional. Includes own publications, and educational materials.	8000 BC -Present	[no information available]	c20,000 (aiming at 500,000)

5.21 Portugal

5.21.1 Aggregation (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Município de Vila Nova de Famalicão	Museums collection database	• Bernardino Machado (President of the Republic): Personal Documents and Bibliography of the author; • Camilo Castelo Branco (Writer): Related information of the author; • Vila Nova de Famalicão (City): About history, heritage and tourism; • Archaeology of Vila Nova de Famalicão: study and disclosure documents; • Industrial Archaeology (In the region of Ave Valley): • History of the textile industry; • Heritage: History of Vila Nova de Famalicão.	Prehistory-Present	Portuguese 99%; French 1%	c478 files (books objects are at the volume level)

5.21.2 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Altentejo Digital Library (Alentejo Terra Mãe Foundation)	Altentejo Digital Library Monographs and Literature Collection	Monographs and literature concerning the Alentejo region. Monographs and literary texts where the author is from the Alentejo region.	1500-1920	Portuguese 96%; Latin 3%; French 0.7%; English 0.2%	450 book volumes
Biblioteca Geral da Universidade de Coimbra	Old books and manuscripts collection	Coimbra's 16th-17th century printed books. Portuguese and Latin manuscripts (text and music). Portuguese newspapers and magazines (in public domain).	1100-1999	Portuguese 40%; Latin 40%; Spanish 19%; Others 1%	805
City of Aveiro, Municipal Library, Consortium BibRia [also archive]	BibRia (Digital Library)	Historical studies, literary, ethnographic, local newspapers and regional culture of Aveiro.	1848-2005	Portuguese 100%	c97,000
Hemeroteca Municipal de Lisboa (Municipal Newspaper Library)	Hemeroteca Digital	Portuguese culture, literature, politics, political caricature, and municipal publications. Comprises e-periodicals.	1841-1988 (newspapers); 1808-1988 (leaflets)	Portuguese 94%; English 2%; French 2%; Spanish 2% (about)	[?]

5.21.3 Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Arquivo Distrital do Porto	Grupo de Arquivos Paroquiais	Migration and diasporas. Family ties. Genealogy	1500-1999	Portuguese 99%; Latin 1%	c12,000 (more than 2,000,000 images by the end of 2009)
	Grupo de Arquivos Notariais	Cities of the future/cities of the past; migration and diasporas; trade and industry; archaeology and architecture; family ties; clubs, groups and movements.	1500-1999	Portuguese 99%; Latin 1%	c260 objects (c10,000 images)
	Local ambulance service support archive	City planning; cities of the future/cities of the past; architecture; policies on housing; social movements; popular and community participation; clubs, groups and movements; contemporary Portuguese architects.	1973-1987	Portuguese 100%	c100 (20,000 images)
	Oporto Civil Government Archive	Public healthcare, demography, emigration, coordination of economic activities and population, monitoring the census and military recruitment, promotion and supervision of elections.	1800-1999	Portuguese 100%	c280 (more than 42,700 images)
	Monastery Archives Collection	Monasteries administration and financial management. Records of the rents and financial obligations. Records of judgments and sentences. Documents and books of revenue and expenditure; granting of privileges through royal charters. Catalogs of the libraries of the convents and monasteries.	1100-1999	Portuguese 90%; Latin 10%	c30 (more than 12,000 images)
	Archive Collection	Religious ritual and ceremony, religious music, liturgical songs and liturgical codices .	1200-1799	Latin 100%	35 (55 images)
	Cathedral Priests Corporation Archive	Church history. Portuguese nationality foundation. Transactions of properties (agricultural land). Cities of the past. Trade with the overseas. Religious ritual and ceremony. Granting of privileges through royal charters.	800-1999	Portuguese 90%; Latin 10%	c180 objects (more than 4000 images)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Câmara Municipal de Lisboa - Direcção Municipal de Cultura - Arquivo Municipal de Lisboa	Non-book material	Posters, postcards, and invitations.	1900-Present	Portuguese 100%	c6000 documents (to be digitalised, starting in 2009)
	Private collections (mostly architectonic projects and political issues)	Letters, working projects and family photographs, drafts, newspapers articles and private documents.	1800-1999	Portuguese 98%; French 1%; Others 1%	83,500 images in microfilm support (with the possibility to convert into digital objects)
	Photographic collection	Portraits, landscapes, Lisbon city, historic moments, and monuments.	1800-Present	Portuguese 99%; Others 1%	c100,000 (less than 5000 are copyrighted)
	Historical records	Medieval (such as royal chancellery), modern (such as legislation: Lisbon senate houses decrees) and contemporary historical records (such as education, assistance health and social welfare).	1100-1999	Portuguese 99%; Latin 1%	c4000
	Cartographic and iconography documents	Maps, atlas, urbanism projects and drawings, topographical survey and drafting. Built environment, furnishings and equipment.	1700-1999	Portuguese 99% French 1%	c1000

5.21.4 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Museu da Guarda	Archaeology	Roman numismatics	100 BC-399	Portuguese 100%	319
Museu da Guarda	Painting museum collection database	Religious art paintings	1500-1799	Portuguese 100%	10
Museu Nacional do Teatro	Portuguese Actors Photographs	Actors from Portuguese theatre	1880-1930	Portuguese 100%	c600
Transport and Communications Museum [and library]	Custom House Collection	Records and bibliographic documents; objects from custom house activity.	1776-Present	Portuguese 80%; English 15%; French 5%	c20,000 (books and objects are at the volume level; periodicals are at the number (item) level)

5.21.5 Other – Local government collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Câmara Municipal de Chaves	Museum collection database	Trains and archaeology.	Prehistory-Present	Portuguese 100%	c500
Câmara Municipal de Lisboa - Direcção Municipal de Cultura - Divisão de Património Cultural	Public art collection database	Lisbon's public art.	1700-Present	Portuguese 90%; English 10%	c200

5.22 Romania

5.22.1 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Alexandru and Aristia Aman County Library	Library collection database	Aman family; Elena Farago – documentary; A Dolj personalities dictionary.	1300-1999	Romanian 100%	9 books (objects are at the volume level, c1600 text pages)
	Audio archives	Romanian writers in Aman library.	1965-1984	Romanian 100%	6 audio folders
	Images from old town Craiova	Streets and buildings in Craiova City.	1860-1977	Romanian 100%	500
Braila County Library	Books	Books about Braila.	1834-1945	Romanian 100%	c4500 journal pages
	Newspapers	Local newspaper collection in Romanian, Italian and Greek.	1834-1945	Romanian 80%; Italian 10%; Greek 10%	c700 pages
Cluj County Library	Text archive	Manuscripts collection.	1800-1999	Romanian 90%; Cyrillic 10%	c384
	Images from old town Cluj	Streets and buildings in Cluj City.	1859-1960	Romanian 100%	883
Galati County Public Library	Rembrandt – Recueil de Quatre-Vingt-Cinq Estampes	Engraving from Recueil de Quatre-Vingt-Cinq Estampes, Rembrandt.	1629-1664	[?]	10 files
	Manuscript and text	Autographic manuscripts and letters.	1800-1899	Romanian; French; Italian	348 files
	Books, text and images	Old Romanian Books (1552-1830); Old foreign books (1472-1700); Old photographs about Galati and surroundings.	1552-1830; 1472-1700	Romanian (Latin and Cyrillic script); French; English; Spanish; Latin; Old Greek	2744 files
Hunedoara County Library	Cultural Foundation I.D.Sarbu Collection	Historical and geographical monograph of Petrosani city.	Medieval-Present	Romanian 100%	1 book (150 pages)
	Obarsii Association Deva Collection	Ethnological material about traditional customs, arts and crafts from different areas of Hunedoara County.	Medieval-Present	[?]	270 photos

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Hunedoara County Library [Continued]	Obarsii Association Deva Collection video archives	Traditional trades and customs from different areas of Hunedoara County.	Present	Romanian 100%	8 movies
	Hunedoara County Library Digital Collection	Personalities of Hunedoara County, calendars, magazines and monographs.	1800-1999	Romanian 100%	57 books
	Emia Monographs of Some Local Villages and Towns of Hunedoara County	Information about some local villages and towns of Hunedoara County.	Medieval-Present	Romanian 100%	7 books
	Monographs of Brad City	Information about Brad City.	Medieval-Present	Romanian 100%	1 book
Hunedoara County Library [Continued]	Monographs of Some Local Villages and Towns of Hunedoara County	Information about local villages, communes and towns.	Medieval-Present	Romanian 100%	8 books
Iasi County Library	[not given]	1. "Iasi yesterday and today, in text and pictures"; 2. "Europe for All"; 3. "Literature for Children"; 4. "Catalogs of Manuscripts and Rare Books".	1. 1913-2000; 2.1999-2004; 3. 2002; 4. 1972-1982	Romanian 100%	13 books at the volume level
Neamt County Library	Local history books and newspapers	Books and newspapers from 19th to the beginning of 20th century in the region.	Prehistory-Present (50,000 BC-2008)	Romanian 100%	18 books object at the volume level (2051 pages)
Sibiu County Library	Ex-libris. Old Romanian books	1. Graphic. 2. Old books.	1. 1960-1970 2. 1500-1800	Romanian 70%; Cyrillic 20%; Latin 10%	6500 ex-libris; 110 books
Timis County Library	Newspapers	Newspapers from 19th to the beginning of 20th centuries, from region (Banat) in Romanian, Hungarian and German.	1880-1950	Romanian 80%; Hungarian 10%; German 10%	25 full years

5.22.2 Archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Cluj County National Archives – DJAN Cluj	Medieval Collection	Archives of medieval collection.	Medieval	Latin 100%	50 objects (c2500 pages)

5.22.3 Museum collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Deva Museum of Dacian and Roman Civilisation	"Sargetia" Collection – Magazine of the Museum	Scientific and cultural research.	Prehistory-Present	Romania 80%; English 5%; French 5%; Italian 5%; German 5%	87 volumes (c65,000 pages)

5.22.4 Other – Traditional culture centre collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Centrul Judetean pentru Conservarea si Promovarea Culturii Traditionale Cluj - CJCPCT Cluj	Folk music	Romanian traditional culture in district.	1900- Present	Romanian 100%	1000 music files
	Movies	Romanian traditional culture of district.	1900-Present	Romanian 100%	100 movies
	Traditional culture collection	Romanian traditional culture of district.	1900- Present	Romanian 100%	200 images

5.23 Slovak Republic

5.23.1 Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Pamiatkový úrad Slovenskej Republiky (Monuments Board of the Slovak Republic)	Archival collections of Monuments Board of SR	Plans and visual documentation of cultural monuments.	1919-1950	Slovak	7000

5.23.2 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Slovak National Gallery	Gallery collections from Zvolen and other local galleries in custody of Slovak National Gallery	Diverse range of visual arts, mainly paintings and sculpture.	Medieval-Present	[not applicable]	600
Slovenské národné múzeum (Slovak National Museum)	Centrálna evidencia múzejných zbierok SR (Central Evidence of the museum collections of SR)	Commercial posters.	1905-1945	Slovak 80%; German 10%; Hungarian 10%	19,100

5.24 Slovenia

5.24.1 Aggregation (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Semantika d.o.o.	Web Gallery Collection	Collection contains objects that are held in museums and galleries (collections of art works, paintings, statues, blue prints, ethnographical objects, archeological objects etc.)	Prehistory-Present	Slovenian 100%	c3000 (currently - new objects are added on a daily basis)

5.24.2 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Consortium KAMRA	Regional portal KAMRA	Cultural heritage collections from local libraries, archives and museums.	1800-1999	Slovenian 100%	c1000 (constantly growing)
Knjižnica Mirana Jarca Novo mesto (Miran Jarc Public Library)	Collection of picture postcards	Local history material: picture postcards of Dolenjska region.	1890-1940	Slovenian 100%	c20,000 (picture postcards)
Knjižnica Velenje (Velenje Public Library)	Library Velenje Local Studies Digital Collection	Works by many authors from Velenje and Šalek Valley.	1900-2009	Slovenian 100%	150
Koroška osrednja knjižnica dr. Franca Sušnika Ravne na Koroškem (Ravne na Koroškem Public Library)	Artoteka	Ted Kramolc's art works between 1942 and 1952.	1942-1952	Slovenisn 100%	433 (photographs of original art works)
	Manuscript	The Črna Manuscript (1633-1707): Liber FraternitatisB.M.V./S. Osbaldi in Suorcenpach	1633-1707	Slovenian; German; Latin	1 volume (200 pages of manuscript)
	Artoteka	Ted Kramolc's art works between 1942 and 1952	1942-1952	Slovenian 100%	433 digital objects (photographed original works and reproductions)
Osrednja knjižnica Celje (Celje Public Library)	Works by Vladimir Levstik	12 prose works.	1900-1950	Slovenian 100%	12 volumes
	Collection of research papers	Research papers from Celje schools and high schools.	Prehistory-Present	Slovenian 100%	c50 research papers in full text
	Collection of postcards	Archive of postcards of Celje and surroundings.	1894-2008	Slovenian 60%; German 40%	1150

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Osrednja knjižnica Celje (Celje Public Library) [Continued]	Collection of old maps	Old maps of Celje and surroundings.	1590-1864	Latin 80%; German 20%	37 maps
Osrednja knjižnica Srečka Vilharja Koper Biblioteca centrale Srečko Vilhar Capodistria (The Srečko Vilhar Public Library)	Local old postcards collection	Old postcards of the Slovenian coast region.	1850-1950	Slovenian 40%; Italian 60%	357
	Local old postcards collection	Old postcards of the Slovenian coast region.	1850-1950	Slovenian 40%; Italian 60%	357
	Slovenski Jadran	Local history newspaper "Slovenski Jadran".	1952-1963	Slovenian 100%	9 volumes (7488 pages)

5.24.3 Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Pokrajinski arhiv Maribor (Maribor Regional Archives)	Postcard and picture collection	Maribor and other small towns in NV Slovenia, local historical events, buildings, portraits	1880-Present	Slovenian 90%; German 5%; Other 5%	c10,000 (at the level of files)
Zgodovinski arhiv Celje (Historical Archive Celje)	Archive collection database	Photography collection of Josip Pelikan	1932-1941	Slovenian 100%	200

5.24.4 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Gorenjski muzej (Museum of Gorenjska)	Vintage postcards of Gorenjska sites	The postcards are limited to the Gorenjska region. Most of them depict towns and important places of Gorenjska, among which the tourist sites and small villages are particularly interesting.	1890-1939	Slovenian 90%; German 10%	c3200 units
	Digital inventory book of objects registered in Ethnological Department	Folk architecture, furniture, farming and trade tools, clothing, folk art, etc.	1500-Present	Slovenian 100%	c8000 entries in the inventory book
	Collection of drawings and watercolours by Rudolf Arh	Pictures and drawings depicting different monuments of ethnographic heritage, landscapes, mountains and other motifs as well as mountain resorts, castles, natural sights, etc.	1950-1999	Slovenian 100%	c1300
Muzej novejše zgodovine Celje (Museum of Recent History Celje)	Video archive in Museum of Recent History Celje	Documentary film about urban crafts in Celje; Audio-visual documentation: general; visual footage; regional news; events in museum.	1995-2009	Slovenian 90%; English 10%	50 (5 movies, visual footage)
	Westen-EMO Collection	The factory of enameled kitchenware in Gaberje near Celje was founded in 1894 by Adolf Westen. The main part of the collection is enameled kitchenware: pots, saucepans, frying pans, dishes, plates, strainers, measuring pots, jugs, and kettles for water and tea.	1900-2000	Slovenian 100%	1200 items
	Collection of Josip Pelikan photographs	Events in the town Celje. Every-day life of Celje and surroundings. Architecture and industrialisation. Health resorts in Celje surroundings.	1920-1977	Slovenian 99%	c500 photographs

5.25 Spain

5.25.1 Aggregations (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Ministry of Culture. Directorate General for Books, Archives and Libraries	BVPH - Biblioteca Virtual de Prensa Histórica (Virtual Library of Historical Newspapers)	Historical newspapers.	1777-2005	Spanish 89%; Catalan 10%; Others 1% (Basque, Galician, French, Russian)	1929 titles
	BVPB - Biblioteca Virtual de Patrimonio Bibliográfico (Virtual Library of Bibliographical Heritage)	Collections that make up Spanish bibliographic heritage. It includes manuscripts, incunabula, rare and old printed books. Next year we will include engraving and maps also.	900-1928	Spanish 65%; Latin 24%; French 5%; Catalan 3%; Italian 1%; English 1%; Others 1% (Arabic, Dutch, German, Hebrew, Portuguese, Valencian)	3176 titles (book objects are at the volume level)

5.25.2 Library collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Andalusian Virtual Library	Andalusian Virtual Library	Bibliographic and audiovisual Andalusian heritage. Incunabula, manuscripts, press and magazine, graphic library (engravings, draws, posters, photographs), cartographic library (maps, street plans, aerial photography, panoramas), author library (all production of an author, includes audio books), voices library (Andalusian oral tradition and culture, author interviews), video library, musical library (manuscripts, books and audio files).	1400-Present	Arabic 0.02%; French 1.97%; Latin 6.99%; Dutch 0.04%; German 0.28%; Portuguese 0.04%; English 2.24%; Italian 0.40%; Spanish 88.01%	4983 titles
Biblioteca General de Navarra	BiNaDi - Biblioteca Navarra Digital (Navarra Digital Library)	Manuscripts, incunabula and rare books from the libraries of Navarra.	Medieval-1999	Spanish 80%; Basque 10%; Latin 10%	170 titles

D2.1 - Metadata survey report

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Biblioteca Valenciana (Generalitat Valenciana)	BIVALDI - Biblioteca Valenciana Digital (Valenciana Digital Library)	Valencian bibliographic heritage. Manuscripts, incunabula and rare books, old printed books, photography and posters.	1200-2008	Spanish 60%; Latin 10%; Valencian 30%	755 books
Castilla-La Mancha Library	BIDICAM - Biblioteca Digital de Castilla-La Mancha (Castilla-La Mancha Digital Library)	Bibliographic heritage of Castilla-La Mancha. Manuscripts, old printed books, and historical newspapers.	1533-2007	Spanish 98%; French 0.5%; Latin 1.5%	743 titles
Diputación General de Aragón	Biblioteca Virtual de Aragón (Aragon Virtual Library)	Bibliographic heritage of Aragon. Manuscripts, old printed books, and historical newspapers.	1501-1958	Spanish 95%; Latin 5%	36 titles
Fundacion Sancho El Sabio [and archive]	Memoria Digital Vasca - Euskal Memoria Digitala (Basque Digital Memory)	Basque Country.	1400-1899	Spanish 45%; Basque 30%; French 10%; English 5%; Latin 5%; Other 5%	942 titles
Fundación Sierra Pambley	Biblioteca Virtual Sierra Pambley (Sierra Pambley Virtual Library) and Biblioteca Azcárate Digital(Azcarate Digital Library)	Law, history, philosophy, religion, politics, industrial arts, and farming.	1785-1892	Spanish 97%; French 3%	37
Galicia National Library	GALICIANA - Biblioteca Dixital de Galicia (Galicia Digital Library)	Galicia bibliographic heritage. Includes manuscripts, newspapers and old books.	1517-1999	Spanish 96%; French 0.02%; Galician 0.01%; Italian 0.01%; Latin 3%; Portuguese 0.01%	1782
Gobierno de Aragón, las Cortes de Aragón, el Justicia de Aragón, la Universidad de Zaragoza, Ibercaja y Caja de Ahorros de la Inmaculada	BVDA: BIVADI - Biblioteca Virtual de Derecho Aragonés (Virtual Library of Aragon Law)	Civil and public law of Aragon.	1496-Present	Spanish 99%; Others 1% (English, French, Italian, Portuguese)	9538 titles (books are at volume level)
Gobierno de La Rioja. Biblioteca de La Rioja	Biblioteca Virtual de La Rioja (La Rioja Virtual Library)	Bibliographic heritage of La Rioja.	1549-Present	Spanish 56.5%: Latin 43%; French 0.5%	203 titles
Instituto de Estudios Altoaragoneses	Biblioteca Virtual Lastanosa (Lastanosa Virtual Library)	The maecenas and collector Vincencio Juan de Lastanosa. 17th century documents related to Huesca and Aragon region. Ancient books, manuscripts and other documents collection.	1600-1699	Spanish 100%	15
Junta de Castilla y León (Autonomous Government of Castile and León)	Biblioteca Digital de Castilla y León (Digital Library of Castile and León)	Bibliographic heritage and local studies of Castile and León.	Prehistory-Present	Spanish 97%; English 1%; French 1%; Latin 1%	c10,000 (by 2010)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Library of Asturias	Biblioteca Virtual del Principado de Asturias (Virtual Library of Principado de Asturias)	Manuscripts and old printed books from Asturian authors or about Asturias.	1588-1937	Spanish 95%; Latin 4%; Asturian 1%	709 titles
Subdirección General de Bibliotecas. Consejería de Cultura y Turismo. Comunidad de Madrid (Autonomous Region of Madrid)	Biblioteca Virtual de Madrid (Madrid Virtual Library)	Manuscripts, rare books, maps and historical periodicals about Madrid.	1500-Present	Spanish 80%; Others 20% (French, English, German)	c1000 (books are at volume level; journals at issue level)

5.26 Sweden

5.26.1 Aggregation (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Midälva Genealogiska Förening	Genealogical database	Registry of families in Torp, County of Västernorrland.	1500-1900	Swedish 100%	21,000 records

5.26.2 Library collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Länsbiblioteket Västernorrland	Book Collection	Book titles with a regional perspective.	1700-1900	Latin 50%; Swedish 50%	6 books

5.26.3 Archive collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
City Archives, Sundsvall Municipality	Sundsvallsminnen (Sundsvall Memories)	History of the city of Sundsvall and surrounding area.	1800-1950	Swedish 100%	116,000 (registry of sailors, employed in Sundsvall 1903-1939); 6000 (trade union banners, 1870-1950, county of Västernorrland); 5000 (posters from Sundsvall and surroundings 1890-1970); 825 (archives registries (descriptions) from local authorities in Sundsvall 1863-1990); Archives registries (descriptions) from popular movements and civil organisations in Sundsvall with surroundings 1850-1990); 270 (archives registries (descriptions) from the forest company SCA and predecessors 1600-1928)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Landsarkivet I Härnösand	Archive database on older land registry in Sweden	Older land register.	1878-1932	Swedish 100%	c80,000
	Sámi archive database	Archive concerning the Sámi people and Sámi culture in Sweden.	1700-1900	Swedish 90%; Finnish 10%	c10,000
SVAR - Svensk Arkivinformation	Eriksbergs collections	Manuscripts on various issues and private sources.	1500-1800	Swedish 80%; Other 20%	c138,000
	Historical Land Survey Maps database	Early topographic maps and descriptions of Sweden, including economical and natural issues.	1630-1655	Swedish 100%	c1000
	Thematic collections - Trade and Shipping database	Manuscripts concerning trade and shipping.	1500-1800	Swedish 100%	c1000
	Hülphers collection database	Travel journeys and descriptions of archaeological and historical sites in north of Sweden.	1740-1760	Swedish 100%	9800
	Manuscript Collection, National Archives	Manuscripts on various issues and private sources.	1500-1800	[various (Swedish, French, German and Latin at least]	c8500

5.26.4 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Länsmuseet Västernorrland, Murberget	Museum collection database concerning the county of Västernorrland	Photographs (landscape pictures), Sámi handicrafts collections (ethnic), painted sculptures from middle ages; and peasant furniture.	Medieval-Present	Swedish 100%	c20,000

5.27 United Kingdom

5.27.1 Aggregations (national)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
MLA (Museums, Libraries and Archives Council)	MICHAEL-UK	An online catalogue that describes digital collections and associated services or multimedia productions in the UK.	All periods.	English 98%; Welsh 2%	868 collection descriptions
MLA (Museums, Libraries and Archives Council)	People's Network Discover Service	National aggregation of metadata for the UK. At the moment includes data from: Beamish Treasures; Bede's World; Collect Britain; Commanet; Devon Etched; Dorset Coast Digital Archive; Durham County Council; English Heritage Viewfinder; Exploring 20th Century London (Bishopsgate); Exploring 20th Century London (Croydon Museum and Heritage Service); Exploring 20th Century London (Hampstead); Exploring 20th Century London (Jewish Museum); Exploring 20th Century London (London Transport Museum); Exploring 20th Century London (Museum of Domestic Architecture); Exploring 20th Century London (Museum of London); Farne; Fitzwilliam Museum; Kirklees Image Archive; Lambeth Landmark; Leodis; Manchester City Galleries; Picture the Past; Sense of Place South East; Seven Stories, The Centre for Children's Books; Tyne and Wear Museums, Imagine; iSee Gateshead.	All periods	English 100%	358,295 images (586,790 records in total)

5.27.2 Aggregations (regional)

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Derby City Council; Derbyshire County Council; Nottingham City Council; Nottinghamshire County Council	Picture the Past	Historic photographs, postcards, paintings and engravings from the photographic archives of the local authorities in the North East Midlands of England.	1800-1899 (Mostly. Some images or earlier material.)	English 100%	68,781
Durham County Council	Durham Record	Photographs of County Durham.	19th Century - present	English 100%	15,750
Leeds City Council, Library and Information Service	Leodis - a photographic archive of Leeds	Online photographic archive of Leeds, old and new.	1690s-present (but mostly 19th and 20th centuries)	English 100%	51,477
Renaissance Yorkshire Hub	My Learning	Learning resources from museums, libraries and archives in Yorkshire.	Prehistory - Present	English 100%	1363 'journey pages'; 77 museum pages; 136 videos; 161 audios; 426 documents; 49 quizzes; 11 interactives.

5.27.3 Archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Lambeth Archives	Lambeth Landmark	Images of places, streets, buildings, events, and people in the London Borough of Lambeth.	1900-1999 (Mainly, with some earlier documentary material)	English 100%	5701 images

5.27.4 Museum collections

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Manchester City Galleries	Gallery general collection	Fine and decorative art and costume.	1100 BC - present	English 100%	41,947
Tyne and Wear Museums	IMAGINE	The collection is drawn from the diverse collections of Tyne and Wear Museums, and covers four subject areas: archaeology, natural sciences, art and history with connections to the north east of England.	Cambrian-Recent (fossils); Mesolithic-Anglo-Saxon (archaeology); Medieval-Present (art and history)	English 100%	4269

5.27.5 Other – Community archive collection

Provider	Collection name	Collection themes or subjects	Time periods	Languages	Content amount
Commanet (Storyville Archives)	Commanet	Photographic images (with some audio and video) with accompanying text and oral reminiscences.	1870-Present (with some earlier material)	English 100%	65,000

6 Appendix III – Overview of metadata

Metadata has become such a popular term it is worth examining its use in some detail.

6.1 Definition difficulties

In its origin it is clear that the metadata has taken as its model words like *metaphysics*, *metalanguage*, where the 'meta' element of the word indicates:

> "**2.** *(of an academic discipline) concerned with the concepts and results of the discipline*"[1]

The use of 'data' element has led to the tendency to restrict its usage to digital 'objects'. For example an often quoted definition is that its: 'Data about data'[2]. This implies that metadata is concerned solely with world of text and multimedia on the Internet or on computers.

Metadata has emerged in recent years as a new 'buzz-word' for information professionals, causing confusion and/or unease in some quarters. For example Tony Gill writes:

> "… *the term 'metadata' is now increasingly used in contexts where the term 'data' would have sufficed just a few short years ago (for example, descriptions of people, objects and events)..*"[3]

In this wider context metadata can be data usually known in the cultural heritage sector as: collections management data, catalogue records and exhibition texts. In fact any 'data' can be thought of as 'metadata'.

So why use the term 'metadata' at all? Perhaps looking at some of the key aspects of metadata is the best way to find an answer.

6.2 Aspects of metadata

A key idea in metadata is that of a *resource*. This is the entity that the metadata is about. A danger here is to restrict the idea of a resource to texts and multimedia 'objects' accessible over the Internet and in particular on the Web. *A resource is anything one wishes to describe and give access to in some way*. A resource can be:

- Texts (electronic **or** paper-based);
- Physical objects;
- Multimedia (image, sound, and video, etc.);
- Software;
- Persons;
- Organisations;
- Places;
- Events;
- Concepts;
- Collections of all the above.

Also some resources are *surrogates* for another resource. A surrogate is a representation of resource in some other form. For example: a digital image or photograph of an artwork, or a virtual reality representation of a place, or a facsimile of an object.

It is important to distinguish between a resource and its surrogate when creating metadata for the two entities. Metadata for a surrogate should not describe the original resource. For example, an original artwork might but out of copyright, but a photograph of it might not be.

Resources can also be *related* to each in ways other than of original and surrogate. Examples include: creation, making available (e.g. publication), and use.

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[1] *Collins Concise Dictionary. Third Edition*. (1995), p835.
[2] See: http://www.webopedia.com/TERM/m/metadata.html
[3] **Gill, Tony**. 'Metadata and the Web', in Baca, M. (ed.) *Introduction to Metadata: Pathways to Digital Information. 3rd rev*. Getty Information Institute. 2008. See http://www.getty.edu/research/conducting_research/standards/intrometadata/metadata.html

A number of different typologies for metadata have been proposed. For example Anne Gilliland-Swetland[4] gives:

- *Administrative* – Managing and administering resources (e.g. acquisition, rights, location);
- *Descriptive* – Describing or identifying resources (e.g. catalogue records);
- *Preservation* – Preservation management of resources (condition, and migration data);
- *Technical* – How a system functions or metadata behave (e.g. formats, encryption, passwords);
- *Use* – The level and type of use of resources (user and use tacking information).

The relationships between different resources and their associated metadata can be summarised in the diagram below:

Another type of metadata is that of *resource discovery*. This is metadata aimed at allowing potential user of a resource to find information they need in order to decide whether or not they want to have access to a resource itself. This is a similar situation to putting a term into a Web search engine, viewing the results, and deciding to 'click' on the link. The aim of resource discovery is to give a more accurate and relevant search result for the user.

The most well know resource discovery metadata is Dublin Core. This gives information on a resource, gives its identifier, and uses the identifier to give access to that resource. Access is direct if the identifier is an URL or similar, or indirect in the case of an ISBN (for example).

Finally there is a sense of there being a *metadata movement* taking place with large effort being put into the open development of metadata *schema*s. Schemas are the description of a metadata *element* set, together with a description of how the elements are structured. In turn these schemas are being tested and indeed adopted by organisations and governments. The metadata 'bandwagon' is impossible to ignore!

6.3   A better definition?

Metadata is much more than the simple definition given above. Perhaps a more comprehensive one is:

> ***Structured information about any kind of resource, which is used to identify, describe, manage or give access to that resource.***

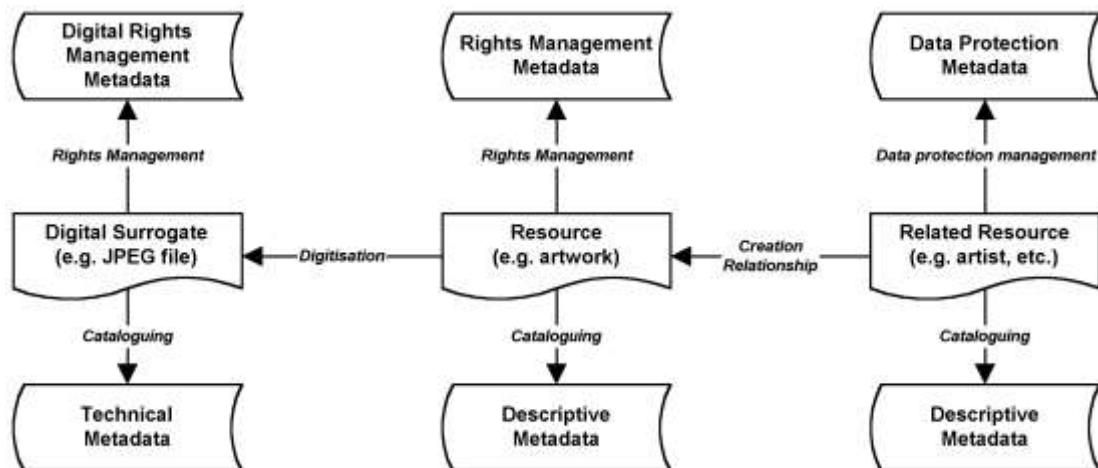[4] **Gilliland-Swetland, Anne J**. 'Setting the stage', in Baca, M. (ed.) *Introduction to Metadata: Pathways to Digital Information*. *3rd rev*. Getty Information Institute. 2008.
See: http://www.getty.edu/research/conducting_research/standards/intrometadata/setting.html

7 Appendix IV – Metadata standards landscape

7.1 Describing standards

The purpose of this section is to allow the reader to have an easy reference to the range of relevant metadata standards in one place. The descriptions are aimed at a general reader.

Taking the idea of the use of standards to heart, we describe each standard in a Dublin Core (DC) derived format. 9 out of the 15 DC elements are used in the descriptions.

These elements are:

Title	The name (or names) under which the standard is known. In most cases both the abbreviated and the full name is listed.
Creator	The name of the organisation or individual who originally created the standard.
Publisher	The name of the organisation that makes the standard publicly available.
Date	The date on which the standard was *originally* published.
Identifier	A number or other identifier under which standard is published or a URL which points to the definition of the standard.
Rights	Whether rights restrictions, e.g. patents, apply to the standard.
Description	A textual description explaining the standard and its usage.
Subject	Keywords that identify the nature of the standard.
Relation	Other standards that this standard relates to, and associated websites.

Most of the standards listed below define descriptive metadata. They focus on recording information about resources: books; archives; museum objects; people, places; and organisations.

In addition SPECTRUM is also a procedural standard. This type of standard defines the activities and the information requirements (a type of administrative metadata) needed to manage a specific area of the cultural sector practise. The standards do not necessarily give guidance about its technical implementation. They can be seen as defining 'good-practice' in a specific field.

The descriptions here have been divided into those created for recording information about material from a particular cultural domain:

- Library specific;
- Archive specific;
- Museum specific;
- Historic environment specific;
- General heritage.

or for a particular purpose:

- Resource discovery;
- Document encoding.

EAD and TEI are also *tagging* standards for the encoding of documents. They were originally based on the text encoding standard SGML, but more recently have been 'updated' to use XML (both of these are described later).

7.2 Library specific

FRBR

Title	FRBR
	Functional Requirements for Bibliographic Records
Creator	IFLA Study Group on the Functional Requirements for Bibliographic Records International
Publisher	International Federation of Library Associations and Institutions (IFLA)
Date	1998
Identifier	ISBN 3-598-11382-X
Rights	Copyright International Federation of Library Associations and Institutions
Description	A conceptual entity-relationship model that relates user tasks of retrieval and access in online library catalogues and bibliographic databases from a user's perspective.
Subject	bibliographic description
Relation	**http://www.ifla.org/VII/s13/frbr/frbr.pdf** (Final report)

MAB2

Title	MAB2
	Maschinelles Austauschformat für Bibliotheken (Automated Library Exchange Format)
Creator	Deutsche Nationalbibliothek
Publisher	Deutsche Nationalbibliothek
Date	2001
Identifier	**http://www.d-nb.de/standardisierung/txt/titelmab.txt** [bibliographic data (MAB-TITEL)]
Rights	Deutsche Nationalbibliothek
Description	The machine exchange all data generated within a library environment (bibliographic, authority and local data).
Subject	bibliographic description
Relation	**http://www.d-nb.de/eng/standardisierung/formate/mab.htm** (German National Library MAB web page)

MARC

Title	MARC
	MAchine-Readable Cataloguing
	MARC 21 Concise Format for Bibliographic Data
Creator	Network Development and MARC Standards Office of the Library of Congress
Publisher	Library of Congress
Date	2002 (updated)
Identifier	**http://www.loc.gov/marc/bibliographic/ecbdhome.html**
Rights	[Open Standard]
Description	Standard for the representation and communication of bibliographic information in machine-readable form.
Subject	bibliographic description
Relation	**http://www.loc.gov/marc/authority/ecadhome.html** (authority information)
	http://www.loc.gov/marc/holdings/echdhome.html (holdings data)
	http://www.loc.gov/marc/classification/eccdhome.html (classification data)
	http://www.loc.gov/marc/community/eccihome.html (community data)
	ISO 2709

Information and documentation -- Format for Information Exchange

Title	Information and documentation -- Format for Information Exchange
Creator	International Organization for Standardization (ISO)
Publisher	International Organization for Standardization (ISO)
Date	1996
Identifier	ISO 2709:1996
Rights	[Open Standard]
Description	Specifies the requirements for a generalized exchange format suitable for bibliographic descriptions. Describes a framework for communications between data processing systems. Replaces the second edition.
Subject	bibliographic description
Relation	MARC

METS

Title	METS
	Metadata Encoding and Transmission Standard
Creator	McDonough, Jerome (et al)
Publisher	Digital Library Federation
Date	2007 (Version 1.7)
Identifier	**http://www.loc.gov/standards/mets/mets.xsd**
Rights	Copyright Digital Library Federation
Description	XML schema is a standard for encoding descriptive, administrative, and structural metadata regarding objects within a digital library.
Subject	digital library
Relation	**http://www.loc.gov/standards/mets/mets-schemadocs.html** (METS website)

MODS

Title	MODS
	Metadata Object Description Schema
Creator	Library of Congress' Network Development
	MARC Standards Office
Publisher	Library of Congress
Date	2008 (version 3.3)
Identifier	**http://www.loc.gov/standards/mods/v3/mods-3-3.xsd**
Rights	[?]
Description	XML schema for a bibliographic element set that may be used for a variety of purposes, and particularly for library applications
Subject	bibliographic description
Relation	**http://www.loc.gov/standards/mods/** (website)

7.3 Archive specific

EAD

Title	EAD
	Encoded Archival Description
Creator	Encoded Archival Description Working Group of the Society of American Archivists
	Network Development and MARC Standards Office of the Library of Congress
Publisher	Society of American Archivists
Date	2002
Identifier	**ftp://ftp.loc.gov/pub/ead/ead.dtd** (DTD)
	http://www.loc.gov/ead/ead.xsd (W3C schema)
Rights	Copyright Society of American Archivists.
	[Open Standard]
Description	DTD and schema for the encoding archival finding aids. Also used to describe collections (collection description).
Subject	archive description
	collection description
	document encoding
Relation	**http://www.loc.gov/ead** (EAD website)

ISAD(G)

Title	ISAD(G)
	ISAD(G): General International Standard Archival Description, Second Edition
Creator	Committee on Descriptive Standards (ICA/CDS) (adopter)
Publisher	International Congress on Archives (ICA)
Date	2000
Identifier	0-9696035-5-X (ISBN)
	http://www.ica.org/sites/default/files/isad_g_2e.pdf
Rights	Copyright International Congress on Archives
Description	General rules for archival description that may be applied irrespective of the form or medium of the archival material. The rules accomplish these purposes by identifying and defining twenty-six (26) elements that may be combined to constitute the description of an archival entity.
Subject	archive description
Relation	**http://www.ica.org** (ica website)

ISAAR (CPF)

Title	ISAAR (CPF)
	ISAAR (CPF): International standard archival authority record for corporate bodies, persons and families, Second Edition
Creator	ICA Committee on Descriptive Standard (preparer)
Publisher	International Congress on Archives (ICA)
Date	2004
Identifier	2-9521932-2-3 (ISBN)
	http://www.ica.org/sites/default/files/ISAAR2EN.pdf
Rights	Copyright International Congress on Archives
Description	General rules for the establishment of archival authority records that describe the corporate bodies, persons, and families that may be named as creators in descriptions of archival documents.
Subject	archive description
Relation	**http://www.ica.org** (ica website)

7.4   Museum specific

CDWA

Title	CDWA
	Categories for the Description of works of Art
Creator	Art Information Task Force
Publisher	Getty Research Institute
Date	1990
Identifier	**http://www.getty.edu/research/institute/standards/cdwa/index.html**
Rights	Getty Research Institute.
Description	Describes the content of art databases by articulating a conceptual framework for describing and accessing information about objects and images. They identify vocabulary resources and descriptive practices that will make information residing in diverse systems both more compatible and more accessible. They also provide a framework to which existing art information systems can be mapped and upon which new systems can be developed.
Subject	documentation (museum)
Relation	**http://www.getty.edu/research/conducting_research/standards/cdwa/cdwalite.html** (CDWA Lite)

museumdat

Title	museumdat
Creator	Fachgruppe Dokumentation im Deutschen Museumsbund
	Institut für Museumsforschung SMB-PK
	Zuse-Institut Berlin
Publisher	Fachgruppe Dokumentation im Deutschen Museumsbund / Institut für Museumsforschung SMB-PK / Zuse-Institut Berlin
Date	2006-2007
Identifier	**http://museum.zib.de/museumdat/museumdat-v1.0.xsd**
Rights	Copyright FG Dokumentation im Deutschen Museumsbund / Institut für Museumsforschung SMB-PK /Zuse-Institut Berlin
Description	A harvesting format (XML schema) optimized for retrieval and publication, meant to deliver automatically core data to museum portals.
Subject	description (cultural object)
Relation	**http://museum.zib.de/museumdat/museumdat-v1.0-en.pdf** (documentation)
	http://www.museumdat.org/index.php?ln=de&t=home (German website)
	http://www.museumdat.org/index.php?ln=en (English website)

Object ID

Title	Object ID
Creator	Thornes, Robin (et al)
Publisher	J. Paul Getty Trust
Date	1999
Identifier	**http://www.object-id.com/guide/guide_index.html**
Rights	Copyright The J. Paul Getty Trust. All rights reserved
Description	Standard for describing cultural objects. Developed through the collaboration of the museum community, police and customs agencies, the art trade, insurance industry, and valuers of art and antiques.
Subject	description (cultural object)
Relation	**http://www.object-id.com/checklist/check_eng.html** (checklist)

SPECTRUM

Title	SPECTRUM
	SPECTRUM: The UK Museum Documentation Standard, 3rd Edition (Version 3.1)
Creator	McKenna, Gordon (ed)
	Patsatzi, Efthymia (ed)
Publisher	Collections Trust [MDA]
Date	2007
Identifier	1 900642 14 X (ISBN)
Rights	Copyright Collections Trust. All rights reserved.
	[Open Standard]
Description	Standard for the collections management documentation. Built around 21 procedures that commonly occur in museums. Supported by definitions of 'units of information' – the data needed to support the procedures. There are Dutch language versions for Flanders and the Netherlands. An XML schema is available.
Subject	documentation (museum)
Relation	**http://www.collectionstrust.org.uk/spectrum** (UK version)
	http://www.collectionstrust.org.uk/spectrum-nl (Netherlands version)
	http://www.collectionstrust.org.uk/spectrum-nl-be (Flanders version)
	http://www.collectionstrust.org.uk/schema (XML schema)

7.5 Historic environment specific

'Historic environment' is a relatively new term used in the UK for what is sometimes called 'built heritage' or 'sites and monuments'.

MIDAS

Title	MIDAS
	MIDAS Heritage
Creator	English Heritage
	Forum on Information Standards in Heritage (FISH)
Publisher	English Heritage
Date	2008
Identifier	**http://www.english-heritage.org.uk/upload/pdf/MIDAS_Heritage_Part_One.pdf**
	http://www.english-heritage.org.uk/upload/pdf/MIDAS_Heritage_Part_Two.pdf
	http://www.english-heritage.org.uk/upload/pdf/MIDAS_Heritage_Part_Three.pdf
Rights	Copyright Forum on Information Standards in Heritage (FISH)
Description	The UK data standard for information about the historic environment. It states what information should be recorded to support effective sharing of the knowledge of the historic environment, and the long-term preservation of those records. It covers: the individual assets that form the historic environment (buildings, archaeological sites, shipwrecks, areas of interest and artefacts); the work that is undertaken to understand, protect and manage change to those assets.
Subject	documentation (historic environment)
Relation	**http://www.fish-forum.info** (FISH website)
Relation	**http://www.heritage-standards.org.uk** (FISH Interoperability Toolkit)

7.6 General heritage

These standards are not associated with a specific cultural domain but which can be used in any.

CIDOC-CRM

Title	CIDOC-CRM
	CIDOC Conceptual Reference Model
Creator	CIDOC Documentation Standards Working Group
Publisher	International Organization for Standardization (ISO)
Date	2006
Identifier	ISO 21127:2006.
Rights	[Open Standard]
Description	A conceptual object-oriented model that provides the extensible ontology for concepts and information in cultural heritage and museum documentation.
Subject	documentation (museum)
Relation	**http://www.iso.org** (ISO website)
	http://cidoc.ics.forth.gr (CRM website)

VRA

Title	VRA
	VRA Core (Version 4.0)
Creator	Visual Resources Association's Data Standards Committee
Publisher	Visual Resources Association
Date	2007
Identifier	**http://www.vraweb.org/projects/vracore4/VRA_Core4_Element_Description.pdf**
Rights	Copyright Visual Resources Association [?]
Description	A metadata element set (units of information such as title, location, date, etc.), as well as an initial blueprint for how those elements can be hierarchically structured. The element set provides a categorical organization for the description of works of visual culture as well as the images that document them.
Subject	visual culture
Relation	**http://www.vraweb.org/projects/vracore4/index.html** (website)
	http://www.vraweb.org/projects/vracore4/vra-4.0.xsd (XML schema)

7.7 Resource discovery

Dublin Core

Title	Dublin Core
	The Dublin Core Element Set Version 1.1
Creator	Dublin Core Metadata Initiative
Publisher	Dublin Core Metadata Initiative
Date	1999
Identifier	**http://dublincore.org/documents/1999/07/02/dces/**
Rights	[Open Standard]
Description	The Dublin Core is a simple metadata element set intended to facilitate discovery of electronic resources. Elements can be grouped into those having data on: Content – Coverage, Description, Type, Relation, Source, Subject, Title; Intellectual Property – Contributor, Creator, Publisher, Rights; Instantiation – Date, Format, Identifier, Language. Its use has been mandated by several governments in Europe (e.g. UK) and throughout the world (e.g. Australia).
Subject	resource discovery

7.8   Document encoding

TEI

Title	TEI
	TEI P5: Guidelines for Electronic Text Encoding and Interchange
Creator	Burnard, Lou (ed)
	Bauman, Syd (ed)
Publisher	Text Encoding Initiative Consortium
Date	2007
Identifier	**http://www.tei-c.org/P5X/**
Rights	Copyright TEI Consortium 2007 Licensed under the GPL. Copying and redistribution is permitted and encouraged.
	[Open Standard]
Description	Defines a set of tags (markers) for inserting into the electronic form of a document (a text) in order to identify the structure and other features of that document. The aim of these tags is to allow the processing of the text by computer. They are aimed at use with texts in any 'natural' language, of any date and of any genre. This version is XML-compatible.
Subject	document encoding
Relation	XML
	SGML
	http://www.tei-c.org (Text Encoding Initiative Consortium website)

8 Appendix V – Technical standards landscape

8.1 Multimedia formats

8.1.1 *Text*

Text encoding standards deal with how texts are stored in computer systems. They vary from industry standards (*de facto*) standards, such as Microsoft Word, to World Wide Web Consortium (W3C) endorsed standards, such as XML.

DjVu

Title	DjVu
Creator	AT&T Labs
Publisher	LizardTech Incorporated
Date	1996 onwards
Identifier	**http://djvu.org/docs/DjVu3Spec.djvu** [version 3]
Rights	[Open Standard]
Description	Designed mainly to store scanned images, especially those containing text and line drawings.
Subject	document rendering; document structure
Relation	**http://djvu.org** [DjVu website]

HTML

Title	HTML
	HyperText Markup Language
Creator	Berners-Lee, T
Publisher	World Wide Web Consortium (W3C)
Date	1989 onwards
Identifier	**http://www.w3.org/TR/html4/** [version 4.01]
Rights	[Open Standard]
Description	The Hypertext Markup Language was designed by Tim Berners Lee to create a semantic network of documents. The markup language was based on SGML (an SGML application). The emphasis of HTML is on rendering (display) of documents rather than on representing document structure. The HTML standard is maintained by the World Wide Web consortium. The Cascading Style Sheet standard is an addition to HTML to facilitate the lay-out and design of web pages. Version 4 of HTML uses Unicode as its standard character set.
Subject	document rendering
Relation	SGML; XML; XHTML; Unicode

PDF

Title	PDF
	Portable Document Format
Creator	Adobe Systems Incorporated
Publisher	Adobe Systems Incorporated
Date	1999
Identifier	[not available]
Rights	Copyright Adobe Systems Incorporated. All rights reserved.
Description	A *de facto* standard for documents. The portable document format was designed by Adobe as a device independent way to represent document structure and lay-out. It is based on the Postscript page rendering standard. The pdf format is widely used to publish documents on the World Wide Web and CD-ROM.
Subject	document rendering; document structure
Relation	Postscript; RTF

RTF

Title	RTF
	Rich Text Format
Creator	Microsoft Corporation
Publisher	Microsoft Corporation
Date	1999
Identifier	**http://msdn.microsoft.com/en-us/library/aa140277.aspx** [Version 6.1]
Rights	Copyright Microsoft Corporation.
Description	The RTF Specification provides a format for text and graphics interchange that can be used with different output devices, operating environments, and operating systems. RTF uses the American National Standards Institute (ANSI), PC-8, Macintosh, or IBM PC character set to control the representation and formatting of a document, both on the screen and in print. With the RTF Specification, documents created under different operating systems and with different software applications can be transferred between those operating systems and applications.
Subject	document rendering; document structure
Relation	PDF

SGML

Title	SGML
	Standard Generalized Markup Language
Creator	Goldfarb, Charles F
Publisher	International Organization for Standardization (ISO)
Date	1986
Identifier	ISO 8879:1986
Rights	[Open Standard]
Description	SGML is the International Standard (ISO 8879) language for structured data and document representation, the basis of HTML and XML. In the cultural sector SGML itself is not widely in use. An early project was the CIMI CHIO demonstrator project. Later projects often use XML, which originally started as a simplified SGML.
Subject	document structure; document encoding
Relation	XML; HTML
	http://www.iso.org (ISO website)

Word

Title	Microsoft Word Document Format
Creator	Microsoft Corporation
Publisher	Microsoft Corporation
Date	1983 onwards
Identifier	[none available]
Rights	Proprietary format of Microsoft.
Description	A *de facto* standard for documents. The .doc format was designed by Microsoft for their Word program and has gone through several version changes. The format is widely in use for exchange of documents. The specification of the format has not been made public.
Subject	document rendering; document structure

XML

Title	XML
	eXtensible Markup Language
Creator	World Wide Web Consortium (W3C)
Publisher	World Wide Web Consortium (W3C)
Date	1996 onwards
Identifier	**http://www.w3.org/TR/xhtml1/** [revised 1 August 2002]
Rights	[Open Standard]
Description	XML started as 'SGML light', to overcome some of its complexities and terseness. Soon if overhauled its ancestor in popularity and is now the most widely used structuring language for electronic documents. XML structures a document by 'tagging' texts.
	The tags can be freely defined, but can be controlled by a Document Type Definition (DTD) or an XML-schema. XML uses the Unicode character set, so that it is very usable in multi-lingual and international applications.
	Several XML derivates have been standardized, such as XSLT (eXtensible Style Language and Transformation) and the xPath query syntax.
Subject	document structure; document encoding
Relation	SGML; HTML; Unicode

8.1.2 *Image*

Still image encoding deals with how images are represented in digital form. In this section we are dealing with 'raster images' rather than 'vector images'. Raster images are usually 'photographic' images, where the image is represented by a number of horizontal and a number of vertical picture elements (pixels). Each element has its own colour representation. Raster graphics are produced by scanners and digital cameras. Eventually the individual pixels become visible if raster images are enlarged.

BMP

Title	BMP
	BitMap
Creator	Microsoft Corporation
Publisher	Microsoft Corporation
Date	1987
Identifier	[not available]
Rights	Copyright Microsoft Corporation
Description	The bmp image format is the Microsoft Windows standard format. It holds black and white-, 16-colour, 256-colour and Truecolor (24 bits) images. The paletized 16-colour and 256-colour images may be compressed via run length encoding.
Subject	image format; raster graphics

DjVu

Title	DjVu
Creator	AT&T Labs
Publisher	Lizardtech
Date	1996 onwards
Identifier	**http://djvu.org/docs/DjVu3Spec.djvu** [a DjVu plug-in is needed]
Rights	[Open Standard]
Description	Designed mainly to store scanned images, especially those containing text and line drawings. It offers advanced compression technology.
Subject	document rendering; document structure
Relation	PDF
	http://djvu.org [DjVu website]

GIF

Title	GIF
	Graphical Interchange Format
Creator	CompuServe Interactive Services Incorporated
Publisher	CompuServe Interactive Services Incorporated
Date	1987
Identifier	[not available]
Rights	Patent on LZW compression by Unisys.
Description	GIF was created by Compuserve for their online service, but the specifications were made publicly available. GIFs can hold multiple bitmaps of up to 256 colours, each using LZW compressed raster data to minimize file sizes. The format uses Lempel Ziv Welch (LZW) compression that has been patented by Unisys.
Subject	image format; raster graphics

JPG

Title	JPG
	JPEG
Creator	Joint Photographic Expert Group
	Independent JPEG Group
Publisher	International Organization for Standardization (ISO)
Date	1990
Identifier	ISO/IEC 10918-1:1994
Rights	[Open Standard]
Description	JPEG is a still image compression algorithm based on the fact that the human eye cannot detect subtle differences in colour or contrast. JPEG is a lossy algorithm: the higher the compression factor the more information gets lost. An image that has been compressed using the JPEG algorithm cannot be completely reconstructed. The file format for JPEG compressed images is called JFIF. This file format is what people generally mean when they refer to "JPEG".
Subject	image format
	raster graphics
Relation	**http://www.iso.org** (ISO website)

PNG

Title	PNG
	Portable Network Graphics
Creator	World Wide Web Consortium (W3C)
Publisher	International Organization for Standardization (ISO)
Date	2003
Identifier	ISO/IEC 15948:2003 (E)
Rights	[Open Standard]
Description	PNG is an extensible format for the lossless, portable, well-compressed storage of raster images. PNG provides a patent-free replacement for GIF and can also replace many common uses of TIFF. Indexed-colour, grayscale, and Truecolor images are supported, plus an optional alpha channel for transparency. Sample depths range from 1 to 32 bits.
Subject	image format; raster graphics
Relation	**http://www.w3.org/TR/PNG/**
	http://www.iso.org (ISO website)

TIFF

Title	TIFF
	Tagged Image File Format
Creator	Aldus Corp
Publisher	Adobe Systems Inc.
Date	1992
Identifier	**http://partners.adobe.com/public/developer/en/tiff/TIFF6.pdf** [Version 6.0]
Rights	[Open Standard]
Description	TIFF provides a general purpose data format and is compatible with a wide range of scanners and image-processing applications. It is device independent and is used in most operating environments. This non-proprietary industry standard for data communication has been implemented by most scanner manufacturers and desktop publishing applications.
Subject	image format; raster graphics

8.1.3 *Audio*

Digitisation of sound is achieved through a sound sampling process. During sampling the analogue signal strength is digitally measured at given time intervals. The obtained signal values are then stored in compressed or uncompressed form. The open standard for the use of compressed sound in this area is MP3. The proprietary standards tend to offer better performance, in terms of file size (speed of transmission) and quality of sound.

AIFF

Title	AIFF
	Audio Interchange File Format
Creator	Apple Computer Incorporated
	Electronic Arts
Publisher	Apple Computer Incorporated
Date	1988-1989
Identifier	**http://www-mmsp.ece.mcgill.ca/Documents/AudioFormats/AIFF/Docs/AIFF-1.3.pdf** [Version 1.3]
Rights	Apple Computer Incorporated [?]
Description	A non-compressed audio format most widely found on Apple Macintosh computers. Lossless, it is commonly used with professional-level audio and video software and systems.
Subject	sound format

MP3

Title	MP3
	MPEG Layer 3
	Coding of Moving Pictures and Associated Audio for Digital Storage Media
Creator	ITU-T (International Telecommunication Union Telecommunication Standardization Sector)
	Moving Pictures Expert Group (ISO/IEC JTC1/SC29 WG11)
Publisher	International Organization for Standardization (ISO)
Date	1993 onwards
Identifier	ISO/IEC 11172:1993, Part 3: Audio
	ISO/IEC 13818, Part 3: Audio
	ISO/IEC 14496, Part 3: Audio (Amendment 1: Audio extensions)
Rights	[Open Standard]
Description	An audio compression format common on the Internet. Part of the MPEG standards, it can take larger audio recordings and shrink them down to a fraction of their size while losing little if any fidelity of the sound.
Subject	sound format
Relation	MPEG-1; MPEG-2; MPEG-3
	http://www.iso.org (ISO website)

WAV

Title	WAV
	RIFF
	Resource Interchange Format
Creator	IBM
	Microsoft Corporation
Publisher	Microsoft Corporation
Date	1991
Identifier	**http://partners.adobe.com/asn/developer/pdfs/tn/TIFF6.pdf**
Rights	[?]
Description	Contain sampled audio. The sound information itself it stored in a container using the Resource Interchange File Format. The RIFF file stores data in chunks, including metadata. A WAV file can contain sound clips with different sample rates, number of channels etc.
Subject	sound format
Relation	AVI

WMA

Title	WMA
	Windows Media Audio
Creator	Microsoft Corporation
Publisher	Microsoft Corporation
Date	[?]
Identifier	[not available]
Rights	Copyright Microsoft Corporation
Description	Microsoft's proprietary competition to MP3. Optimised to deliver audio over the Web, particularly streaming, and using Microsoft products. Has integrated rights management, the advantages of a smaller file size and therefore transfer rates over other formats, including MP3. In addition the sound quality is said to be better.
Subject	sound format
Relation	WMV

RealAudio

Title	RealAudio
Creator	RealNetworks Incorporated
Publisher	RealNetworks Incorporated
Date	[?]
Identifier	[not available]
Rights	Copyright Real Networks
Description	Format optimised for delivery of audio over the Web.
Subject	sound format
Relation	RealVideo; RealMedia

AU

Title	AU
Creator	Sun Microsystems Incorporated
Publisher	Sun Microsystems Incorporated
Date	[?]
Identifier	[not available]
Rights	Copyright Sun Microsystems Incorporated
Description	A sound format for Unix systems. It is the 'standard' audio file format for Java.
Subject	sound format

8.1.4 *Video*

Digitisation of video adds the time dimension to the digitisation of still images. In principle the process is similar to producing raster images, but then produced in a very fast succession of images. The number of images per second is called the frame rate.

The quality if digitised video is defined by three factors: resolution, colour depth and frame rate. Digitised video can produce large quantities of data. Because of this compression is very important.

Compression relies on the fact that only small portions of the images tend to change between successive frames. With regards to encoding standards, the situation is similar to that with audio encoding, with the MPEG family of standards being open, and a set of proprietary standards, particularly on offer as well.

AVI

Title	AVI
	Audio Video Interleave
Creator	Microsoft Corporation (for Intel)
Publisher	Microsoft Corporation
Date	[?]
Identifier	[not available]
Rights	Copyright Microsoft Corporation
Description	The earliest video format for PCs. The size of image that can be displayed is dependent on the hardware being used. As compression and decompression functionality is part of Microsoft's *Video for Windows* package, there is support for this format in a range of hardware and software configurations. File sizes are high and therefore this format ill-suited for delivery over the Internet.
Subject	video format

FLV (Flash Video Format)

Title	FLV
	Flash Video Format
Creator	Macromedia (now Adobe)
Publisher	Adobe Systems Incorporated
Date	2002 onwards
Identifier	**http://www.adobe.com/devnet/flv/pdf/video_file_format_spec_v10.pdf** [Version 10]
Rights	Copyright Adobe Systems Incorporated
Description	Used for the delivery of video over the Internet. It is viewed either using separate 'player' software or using a web browser 'plug-in'. It is becoming the *de facto* standard of video embedded on web pages.
Subject	video format

MOV (Quicktime)

Title	QuickTime
Creator	Apple Computer Incorporated
Publisher	Apple Computer Incorporated
Date	1991 onwards
Identifier	[not available]
Rights	Copyright Apple Computer Incorporated
Description	Apple's proprietary video (and virtual reality) format and system. Built into the Mac's operating system, can be viewed on a PC by using a free to download player. Some of its technology was used in the development of MPEG-4
Subject	video format
Relation	Quicktime VR; MPEG-4
	http://www.apple.com (Apple website)

MP4

Title	MPEG-4
	Very-low bitrate audio-visual coding
Creator	Moving Pictures Expert Group (ISO/IEC JTC1/SC29 WG11)
Publisher	International Organization for Standardization (ISO)
Date	1999 (version 1)
	2001 (version 2)
Identifier	ISO/IEC 14496 (Parts 1 to 10)
Rights	[Open Standard]
Description	A high compression version of MPEG-2. Version 2 has data protection and IPR.
Subject	video format
Relation	MPEG-2; MP3; QuickTime [used in development]
	http://www.iso.org (ISO website)

MPG

Title	MPEG-1
	Coding of Moving Pictures and Associated Audio for Digital Storage Media
Creator	Moving Pictures Expert Group (ISO/IEC JTC1/SC29 WG11)
Publisher	International Organization for Standardization (ISO)
Date	1993
Identifier	ISO/IEC 11172:1993 (Parts 1 to 5)
Rights	[Open Standard]
Description	Designed to be the equivalent of a video recorder format in the digital world, and to make use of the early model CD-ROMs as a delivery method. Standard television quality images, with a compression ratio of 50 to 1.
Subject	video format
Relation	MP3
	http://www.iso.org (ISO website)

Title	MPEG-2
	Coding of Moving Pictures and Associated Audio for Digital Storage Media
Creator	ITU-T (International Telecommunication Union Telecommunication Standardization Sector)
	Moving Pictures Expert Group (ISO/IEC JTC1/SC29 WG11)
Publisher	International Organization for Standardization (ISO)
Date	2000
Identifier	ISO/IEC 13818:2000 (Parts 1 to 11)
Rights	[Open Standard]
Description	An improvement to MPEG-1, with encoding techniques to allow for higher quality video and audio, and delivery from DVDs. High definition television quality images, with a compression ratio of 150 to 1.
Subject	video format
Relation	MPEG-1; MP3
	http://www.iso.org (ISO website)

RM (Real Media)

Title	RM
	Real Media
Creator	RealNetworks Incorporated
Publisher	RealNetworks Incorporated
Date	[?]
Identifier	[not available]
Rights	Copyright Real Networks
Description	Format optimised for delivery of audio over the Web.
Subject	multimedia
Relation	RealAudio; RealVideo

SWF (Flash Movie)

Title	SWF
	Small Web Format
	Flash Movie
Creator	Macromedia (now Adobe)
Publisher	Adobe Systems Incorporated
Date	1996 onwards
Identifier	**http://www.adobe.com/devnet/swf/pdf/swf_file_format_spec_v10.pdf** [version 10]
Rights	Copyright Adobe Systems Incorporated
Description	Originally just for the delivery of animated vector graphics it is now used for interactive audio and video. It can be viewed using a standalone player or via a web browser plug in.
Subject	animated vector graphics; interactivity

WMV (Windows Media Video)

Title	WMV
	Windows Media Video
Creator	Microsoft Corporation
Publisher	Microsoft Corporation
Date	[?]
Identifier	[not available]
Rights	Copyright Microsoft Corporation
Description	Microsoft's proprietary competition to MPEG-4. Optimised to deliver video over the Web, particularly streaming, and using Microsoft products.
Subject	video format
Relation	WMA

ASF

Title	ASF
	Advanced Streaming Format
Creator	Microsoft Corporation
	RealNetworks Incorporated
Publisher	Microsoft Corporation
Date	2004
Identifier	**http://www.microsoft.com/windows/windowsmedia/forpros/format/asfspec.aspx** [Revision 01.20.03]
Rights	Copyright Microsoft Corporation. All rights reserved.
Description	A proprietary format, designed to deliver, compressed, streaming video / audio content over the Internet.
Subject	video format

8.1.5 *Virtual reality*

VRML97

Title	VRML97
	Virtual Reality Modelling Language
Creator	VRML Consortium Incorporated
	Joint Technical Committee ISO/IEC JTC 1, Information technology, Subcommittee 24, Computer graphics and image processing
Publisher	International Organization for Standardization (ISO)
Date	1997
Identifier	ISO/IEC 14772-1:1997
Rights	[Open Standard]
Description	A format for describing 3D objects and worlds. These are designed to be interactive and accessible over the Internet as well as in other scenarios (e.g. standalone computers). Is capable of representing static or dynamic 3D and allowing links to other multimedia 'object' such as text, still images, audio and video.
Subject	virtual reality
Relation	X3D
	http://www.web3d.org (Web3D Consortium website)
	http://www.iso.org (ISO website)

X3D / Extensible 3D

Title	X3D
	Extensible 3D
Creator	Web3D Consortium
Publisher	International Organization for Standardization (ISO) [in process]
Date	2007
Identifier	ISO/IEC FDIS 19775-1.2:2008
Rights	[Open Standard]
Description	An XML-based format expressing the functionality of VRM97. Currently being developed as an ISO standard.
Subject	virtual reality
Relation	VRML97; XML
	http://www.web3d.org (Web3D Consortium website)
	http://www.iso.org (ISO website)

QuickTime VR

Title	QuickTime VR
Creator	Apple Computer Incorporated
Publisher	Apple Computer Incorporated
Date	1995 onwards
Identifier	[not available]
Rights	Copyright Apple Computer Incorporated
Description	Apple's proprietary virtual reality format and system for creation of content. Built into the Mac's operating system, can be viewed on a PC by using a free to download player. Part of the QuickTime system, it 'stitches' individual photographs together to create panoramas, 3-D views of objects, and allows the linking of them into 'scenes'.
Subject	virtual reality; panoramas
Relation	QuickTime
	http://www.apple.com (Apple website)

8.1.6   *Vector graphics*

EPS

Title	EPS
	Encapsulated Postscript
Creator	Adobe Systems Inc.
Publisher	Adobe Systems Inc.
Date	1992
Identifier	**http://partners.adobe.com/public/developer/en/ps/5002.EPSF_Spec.pdf** [Version 3.0]
Rights	[Open Standard]
Description	Although strictly speaking EPS is not an image format is often used to represent line drawings. EPS is based on the PostScript language, a page layout language often used in printers. The EPS version allows PostScript encoded layouts to be "encapsulated" in other documents.
Subject	page layout language; vector graphics

SVG

Title	SVG
	Scalable Vector Graphics
Creator	World Wide Web Consortium (W3C)
Publisher	World Wide Web Consortium (W3C)
Date	2003
Identifier	**http://www.w3.org/TR/SVG/index.html** [Version 1.1]
Rights	[Open Standard]
Description	SVG is a language for describing two-dimensional graphics in XML.SVG allows for three types of graphic objects: vector graphic shapes (e.g., paths consisting of straight lines and curves), images and text. Graphical objects can be grouped, styled, transformed and composited into previously rendered objects. Although primarily intended for vector applications SVG documents can also contain bitmap images.
Subject	vector graphics
Relation	XML

8.2   Other technical standards

These deal with various areas:

- ***Search and retrieval*** – the intricacies of formulating a query for a database system and obtaining (and handling) the search results;
- ***Transmission*** – to achieve the end-to-end delivery of digital data. They can be low-level (such as TCP/IP) or be more application specific, such as http. Today TCP/IP is the predominant low level protocol. Application specific protocols are constructed 'on-top-of' TCP/IP;
- ***Character encoding*** – defining how separate characters in text are stored in a computer system.

8.2.1   *Search and retrieval*

OAI-PMH

Title	OAI-PMH
	Open Archives Initiative Protocol for Metadata Harvesting (Version 2.0)
Creator	Sompel, Herbert van de
	Lagoze, Carl
Publisher	Open Archives Initiative
Date	2002
Identifier	**http://www.openarchives.org/OAI/openarchivesprotocol.html**
Rights	[Open Standard]
Description	The Open Archives Initiative metadata harvesting protocol provides access for harvesting programs to data stored in databases or repositories that cannot be harvested using 'standard' http/html parsing. The protocol is based on http requests and responds in the form of XML. Different record syntaxes can be used, but Dublin Core support is mandatory.
Subject	harvesting protocol
Relation	XML; Dublin Core

SQL

Title	SQL
	Structured Query Language
Creator	International Organization for Standardization (ISO)
Publisher	International Organization for Standardization (ISO)
Date	1987
Identifier	ISO 9075
Rights	[Open Standard]
Description	SQL defines a query language for relational databases. It was developed by IBM during the 1970's. SQL went through a standardisation process during the 1980's. The 2nd version of SQL (SQL2 was standardised in1992). The syntax is based on operations on two-dimensional tables which form the basis for relational database systems.
Subject	query language; relational databases
Relation	ODBC
	http://www.iso.org (ISO website)

Z39.50

Title	Z39.50
	Information and documentation -- Information retrieval (Z39.50) -- Application service definition and protocol specification
Creator	ANSI/NISO
Publisher	International Organization for Standardization (ISO)
Date	1988
Identifier	ISO 23950:1998
Rights	[Open Standard]
Description	The Z39.50 protocol is protocol to implement search and retrieval client-server applications. Queries are expressed in Reversed Polish Notation (RPN) form and records can be returned in different formats, including MARC (Machine Readable Catalogue) format. The search component deals with the construction and execution of a query, the retrieval component of the standard deals with handling the search results.
Subject	search and retrieval protocol
Relation	MARC
	http://www.iso.org (ISO website)

8.2.2 Transmission

TCP/IP

Title	TCP/IP
	Transmission Control Protocol/Internet Protocol
Creator	Internet Engineering Task Force
Publisher	World Wide Web Consortium (W3C)
Date	1981
Identifier	RFC793
	RFC1122
Rights	[Open Standard]
Description	The Transport Control Protocol (TCP) and Internet Protocol (IP) go hand in hand and form the basis of all data transport over the Internet. The IP protocol provides a basic 'datagram' service. No guarantees are built in regarding the correct delivery of the data. IP is a so-called connectionless service. TCP runs on top of IP to provide error free, guaranteed-delivery connections. TCP is (unlike IP) on connection oriented protocol.
Subject	Internet; data transmission
Relation	HTTP; FTP

HTTP

Title	HTTP
	HyperText Transfer Protocol
Creator	Berners-Lee, Tim
Publisher	World Wide Web Consortium (W3C)
Date	1991
Identifier	**http://www.w3.org/Protocols/**
Rights	[Open Standard]
Description	The hypertext transfer protocol runs 'on-top-of' TCP/IP and is intended for the implementation of requesting (hypertext) documents over an Internet connection. A set of parameters can be passed within an http request, making it useable for other high level protocols, such as the OAI protocol.
Subject	hypertext transfer
Relation	TCP/IP; OAI

FTP

Title	FTP
	File Transfer Protocol
Creator	Neigus, Nancy J.
Publisher	Internet Engineering Task Force
Date	1973
Identifier	**http://www.ietf.org/rfc/rfc542.txt**
Rights	[Open Standard]
Description	The FTP protocol is a machine / operating system independent protocol for the transfer of files. Its origins are from the beginning of the Internet and the FTP protocol can be considered one of the foundations of the net.
Subject	file transfer
Relation	TCP/IP

8.2.3   *Character encoding*

ASCII / American Standard Code for Information Interchange

Title	ASCII
	American Standard Code for Information Interchange
Creator	ANSI
	American National Standards Institute
Publisher	ANSI
Date	1967
Identifier	[?]
Rights	[Open Standard]
Description	A 7-bit code to represent characters, such as letters and digits in computer systems. The original ASCII standard was created in 1963, but was replaced by its final version in 1967. The ASCII character set contains 128 different characters of which 95 are 'printable' and 33 are 'control characters'
Subject	character encoding
Relation	ISO 8859-1; Unicode

ISO 8859-1 / ISO Latin 1

Title	ISO 8859-1
	ISO Latin 1
Creator	International Organisation for Standardization (ISO)
Publisher	International Organization for Standardization (ISO)
Date	1998
Identifier	ISO-8859-1
	ECMA-94
Rights	[Open Standard]
Description	For the representation of European languages the 95 printable characters from the ASCII character set were not sufficient. To solve this problem 8 bit versions were created notably by the European Computer Manufacturers Association (ECMA-8) and IBM. IBM introduced different *code pages* for the different languages. The 8-bit ECMA standard was later adopted by the International Organization for Standardization (ISO) under the registration ISO-8859-1.
Subject	character encoding
Relation	ASCII
	Unicode
	http://www.iso.org (ISO website)

Unicode

Title	Unicode
Creator	Unicode Incorporated
Publisher	International Organization for Standardization (ISO)
Date	1992
Identifier	ISO/IEC 10646
	ECMA-94
Rights	[Open Standard]
Description	A 16-bit code to represents characters, such as letters and digits in computer systems. The Unicode standard was created to overcome the limitations of 8 bit character sets and to form one universally usable encoding scheme for characters from the Western languages, but also including non-Western scripts, such as Chinese, Arabic, Cyrillic and Hebrew. Version 3.0 of Unicode defines 49,194 characters. Different encoding schemes exist for Unicode including the widely used variable length UTF-8 encoding. Unicode is the default XML character set.
Subject	character encoding; non-Western scripts
Relation	ASCII; XML
	http://www.iso.org (ISO website)