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IFLA survey on inclusion of electronic resources in national bibliographies

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To assist the IFLA Bibliography Section in gathering more comprehensive information on selection criteria used by national bibliographic agencies in preparing their countries' national bibliography, the Section crafted a survey that the Section chair and the Oslo Programme chair sent electronically and in print form. With the exponential availability of Web and other digital resources, the Section felt a critical need to address how national bibliographic agencies were incorporating these resources into the national bibliography.

In preparation for the Section's Programme during the 71st IFLA World Library and Information Congress, the survey was sent to forty-four national libraries and bibliographic agencies in Europe. We restricted dissemination of the survey to European countries, in line with the Section's strategy to plan its programmes in ways that focused on what was happening in the area of the world where the IFLA Congress was being convened. This paper gives an analysis of the data submitted in the responses.

In several countries there were two institutions that shared responsibility for creating and contributing to the country's national bibliography. We were elated that thirty-two institutions responded, giving us confidence in the validity of the data. In addition to sharing the results as part of the Section's Programme, the analyses will further provide data that will enable the Section to meet its goal of 1) developing selection criteria for an electronic national bibliography; 2) drafting guidelines for producing an electronic national bibliography; and 3) providing guidelines for producing a basic national bibliography.

The responding countries and the agencies within the countries are listed below. For those countries that had two agencies that responded (Denmark, Poland, and Russian), they are listed in separate parentheses.

Austria (Austrian National Library)
Bulgaria (St. Cyril and Methodius National Library)
Cyprus (Cyprus Library)
Czech Republic (National Library of the Czech Republic)
Denmark
 (Danish Bibliographic Centre)
 (Det Kongelige Bibliotek)
Estonia (National Library of Estonia)
Finland (Helsinki University Library, the National Library of Finland)
France (Bibliothèque nationale de France)
Germany (Die Deutsche Bibliothek)
Hungary (Országos Szechenyi Könyvtár, National Szechenyi Library)
Iceland (The National and University Library of Iceland)
Italy (Biblioteca Nazionale Centrale – Firenze)
Latvia (National Library of Latvia)
Lithuania
 (Centre of Bibliography and Book Science within the Martynas Mazvydas National
 Library of Lithuania)
Macedonia (National and University Library “St. Kliment Ohridski”)
Malta (National Library of Malta)
The Netherlands (Koninklijke Bibliotheek, National Library of the Netherlands)
Norway (National Library of Norway)
Poland
 (Biblioteka Narodowa)
 (National Library)
Romania (Biblioteca Nationala a Romaniei)
Russia
 (National Library of Russia)
 (Russian State Library)
Serbia (National Library of Serbia)
Slovakia (Slovak National Library)
Slovenia (Narodna in Univerzitetna Knjižnica)
Spain (Biblioteca Nacional)
Sweden (Royal Library – National Library of Sweden)

Switzerland (Swiss National Library)
 Ukraine (Vernadsky National Library of Ukraine)
 United Kingdom (British Library)

The survey was structured to elicit feedback in four areas that we considered to be important to helping the Section to attain the three goals cited above: 1) Legal deposit framework; 2) Current archiving and legal deposit practice; 3) Bibliographic description; and 4) Access to Web archive.

Legal deposit framework

There is little disputing the importance of legal deposit in building a national library’s collections and populating its national bibliography. Indeed, legal deposit has been the foundation on which most national libraries have been built.

Legal deposit activity is robust among the respondents. *Thirty* countries have legislation requiring legal deposit of some or all types of publications; for *eleven* of those, remote electronic resources are included; for *twenty-six*, fixed electronic resources are included.

Of the countries that do not have legal deposit, it was noteworthy that only *two* reported that they did not provide bibliographic control (in full or in part) of electronic resources.

Reflective of the changing digital landscape, *twenty-one* countries have plans to change the legal deposit framework during the coming five years. The changes most cited are encompassed by the following comments:

- “... [to] register all of electronic resources”—Slovakia
- “... [to] include all electronic materials including remote electronic materials”—Germany
- “... [to] include specifications regarding legal deposit of electronic resources ...”—Norway.

Only *one* mentioned broadcasts:

- “... [to include] electronic publications, as well as radio and TV material ...”—Finland

The table below gives the span of some of the dates that legal deposit was enacted or changed:

Which year was the legal deposit act passed?	Earliest: France (1537); next, Sweden (1661); Bulgaria (1897) Latest: Iceland (2002)
Which year was the latest revision?	Latest: Latvia (2005, and ongoing)

Current archiving and legal deposit practice

Within the framework of legal deposit, we were keen to gather information on the archiving practices for electronic resources. What methods are being used to collect the resources? Can these methods be emulated by other national libraries? While it is important to provide

contemporary access to such materials, what plans were in place for making these resources a part of the national library’s collections for future users?

Over half of the respondents indicated that electronic resources are being archived—**eighteen** are archiving remote resources; **twenty-six** are archiving fixed resources. The archiving responsibility is a shared one in **eleven** countries. The types of organizations that share in the responsibility included: academies; archives (national and special—e.g., film); government agencies; libraries (governmental, research); museums; and other national libraries.

Sixteen libraries collect remote resources by harvesting; **fourteen** by publishers’ depositing; and **seven** through other means. The other means included downloading after being notified; voluntary deposit; purchase; and donation.

The following table captures the responses related to the types of remote electronic resources that agencies are currently archiving.

The entire national domain name space (e.g., “.fi,” “.uk”)	11
Selected resources within national domain name space	12
Resources published outside your national domain name space (e.g., “.com,” “.org,” “.net”)	9
Only digital born resources	7
Only resources that may be accessed without cost	7
Resources that have a fee to be accessed	2
Resources for restricted user groups	2

The survey queried agencies as to the frequency with which remote electronic resources are deposited or collected. To elicit information on the wide range of remote resources, twenty-six categories were listed. For the most part, the frequency most cited for the various categories was once or twice per year, including the most comprehensive category—the entire national domain space. Interestingly, **eighteen** of the categories were cited as being harvested daily! To facilitate the harvesting process, **fifteen** agencies have developed selection criteria for the deposit/archiving of remote resources; **sixteen** have developed selection criteria for fixed resources. Of these, **twelve** have published their criteria. We will list this information on how to access the published criteria on our Section’s Website.

The evolving nature of Web resources and the rapidly changing landscape on which they are created, make it fairly common practice to experiment to figure out how best to handle such resources. **Thirteen** agencies reported that they are conducting experiments to test the archiving or selecting of remote resources:

- Czech Republic
- Denmark
- Finland
- France
- Germany
- Hungary

Iceland
Latvia
The Netherlands
Norway
Serbia
Slovenia
Ukraine
United Kingdom

The comments related to the testing indicated a variety of pilots:

- “Several tests have been carried out before the new law was promulgated ...”—Denmark
- “ ... experimenting with continuous harvesting of selected resources.”—Iceland
- “ ... test harvesting includes “universal” harvesting of the Finnish Web (1-2 times a year) *plus* some special targets ...”—Finland
- “There was no “on-shelf solution”, which resolve all needs for harvesting Latvian Web content.”—Latvia
- “The selection is being tested in order to tune the harvesting.—France
- “Several WEB harvesting technologies are currently investigated ...”—Germany

Several harvesting tools were mentioned as being tested: Heritrix (Czech Republic and Slovenia); Nedlib harvester (Latvia); and Wget and Htrack (Germany). A sizeable volume of testing is being done under the auspices of the International Internet Preservation Consortium (IIPC). This collaborative initiative was cited by several of the respondents. The IIPC is an group of twelve charter member institutions whose mission is to acquire, preserve, and make accessible Internet materials. It hopes to engage national libraries in this quest. ***Eight*** of the agencies responding to the survey are members of the IIPC.

Denmark
Finland
France
Iceland
Italy
Norway
Sweden
United Kingdom

A chief goal of the IIPC is to encourage the development and sharing of tools, methods and standards that support the building of international archives. More information can be found at <http://netpreserve.org>

It seems appropriate to close this section of the survey with the comments submitted by our host country:

“In 2005 the NL of Norway plans these activities regarding legal deposit of remote electronic resources

- Harvesting the entire national domain name space four times a year. This harvesting will include websites and all other types of documents that are available on the Internet
- Harvesting newspapers on a daily basis
- Harvesting serials and e-journals on frequencies based on the update frequency of each individual periodical.
- Harvesting relevant websites on other domains than .no (.com, .org, .net etc.)

Databases and deep web will not be collected in 2005.”

Bibliographic description

It is reassuring to report that a high percentage of electronic resources are given bibliographic description: *twenty* agencies supply such description to some or all remote resources; *twenty-seven* do so for fixed resources. *Nine* agencies share this responsibility with another entity. To achieve this description, a variety of schemas and cataloguing tools were cited as being used. The metadata schema most often cited as being applied is Dublin Core (*eleven*) and MARC21 (*six*); UNIMARC and METS (Metadata Encoding and Transmission Standard) were each used by *two* agencies.

The cataloguing tools used most often are shown in the table below:

Cataloguing tool	Remote electronic resources	Fixed electronic resources
<i>AACR (Anglo-American Cataloguing Rules)</i>	8	10
<i>ISBDs (International Standard Bibliographic Description)</i>	13	21
<i>Library of Congress Rule Interpretations</i>	2	2

The identifiers that agencies used revealed that ISBN (by *twenty-one*) and ISSN (by *twenty-two*) are regularly applied, followed by URL (by *thirteen*) and URN (by *ten*).

In tabulating the responses related to the level of bibliographic description applied to remote resources, it is notable that the largest number of responses showed that agencies were using full standard catalogue records. Less reassuringly, only a small percent was applying authority control—no more than *six* reported authority control for any of the twenty-six categories listed. For fixed resources, the number of agencies reporting using full level bibliographic description was substantial—*twenty-two*.

As we turn our attention more intently on electronic resources, our Section is keenly interested in whether electronic resources are being captured in national bibliographies. The following table shows the responses for both remote and fixed resources.

Remote electronic resources	
Types of resources	Included in the National Bibliography
The entire national domain name space (e.g., “.fi,” “.uk”)	2
Topical web sites	2
Web sites of government institutions	2
Web sites of non-government institutions	4
Web sites of business enterprises	
Weblogs (Blogs)	1
Chat groups	
News groups	
Monographs (except those mentioned below)	11
Research reports, dissertations & other academic works	10
Textbooks	7
E-books	12
Serials (except those mentioned below)	12
E-journals	13
Article archives	4
Newspapers	9
Newspaper archives	2
Maps (including databases)	4
Music scores	5
Sound recordings	3
Motion pictures	2
Games	2
General learning objects and multimedia	2
Databases (e.g., bibliographic, full text, numeric, image, audio, mixed)	3
Ephemera	
Other (please specify)	
Fixed electronic resources	18

Agencies have developed corresponding selection criteria for the inclusion of electronic resources in the national bibliography. **Ten** reported having developed such criteria for remote resources; **seventeen** have done so for fixed resources. For those that have published such criteria, the URLs will be posted to the Section’s Website.

Seven agencies noted that they were engaged in experiments or pilots related to bibliographic description of electronic resources. Most of these indicate that the experiments are devised to find alternative ways of providing bibliographic description. For instance,

- use of a metadata generator.;
- use of Dublin Core;
- use of descriptions in an article database to access the full texts of the articles held by a privately owned company; and

- use of the newly created Library of Congress access level record for creating catalogue records.

Access to Web archive

Access to content is the desired end result of bibliographic data that are included in national bibliographies. This component of the survey focused on this important aspect. **Fourteen** countries have legislation concerning the rights of users to access and use electronic resources; **ten** agencies give users access to their Web archive. A solid number of agencies (**sixteen**) has a digital repository for the archiving of electronic resources. **Eight** agencies listed URLs where information on the technical framework is available. These URLs will be posted to the Section's Website. As a closing remark for this segment of the survey, these two comments from respondents are broadly applicable:

- “The archiving of the web is still in an experimental phase.”
- “... it is clear that there will be stipulations around access to websites archived under [legal deposit].”

In conclusion

The Section is gratified for the data collected as a result of our survey. The results will continue to yield useful information--both for practical needs and for policy considerations. We will continue to build on the data as the Section plans for the next two IFLA World Congresses, in Seoul and Durban. We will mount on the Section's Website the analyses offered in this presentation, along with fuller information. The URLs for further information from the various national bibliographic agencies will be included. Also available will be fuller comments submitted by the responding agencies.

Looking to the future, based on our survey results, it seems safe to conclude that

- national bibliographic agencies are seeking ways to provide bibliographic description based on using and capturing existing metadata
- bibliographic description will be accomplished using alternatives to the full level catalog records that are used for analog and print resources
- revising legal deposit legislation will be crucial to the inclusion of Internet resources in the collections of national libraries
- most European countries are planning such revision of legal deposit legislation
- national bibliographies are moving towards more extensive inclusion of electronic resources—both remote and fixed, in national bibliographies
- experimentation is under way to improve the capture, preservation, and provision of access to Web resources by national bibliographic agencies
- best practices and emerging standards will result from the various experimentation
- the IIPC will play an influential role in Web harvesting done by European national bibliographic agencies