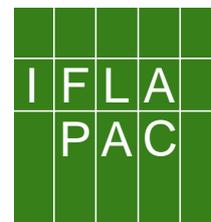


International Preservation News

A Newsletter of the IFLA Core Activity
on Preservation and Conservation



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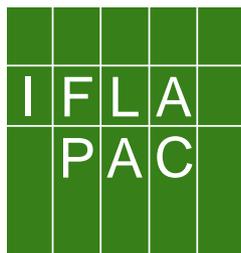
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The dreadful events of September 11th have proved that what had seemed unthinkable or unexpected could always happen. Beyond the horror which struck the whole world and beyond the sadness which is overwhelming us all, we must react and think about the range of threats menacing not only our lives but our memory and our future too, in other words our documentary and cultural heritage.

No words will ever be able to reflect and convey expressions of sympathy in order to soothe the grief of those who have been hurt whether personally or through the loss or injury of people they cherished and cared for. But there is one thing I am convinced of: we must work harder and harder to prevent similar attacks or mitigate major disasters, whatever their origin, be they man-made or natural.

As we have been advising for years now, the best solution for us as librarians, archivists, curators or conservationists is to join efforts in advocating the creation of national Blue Shield Committees whose initial tasks are to: document disasters, inform people of possible risks, take preventive measures, implement and update disaster plans, get ready to react in case of emergency and finally build strategies to recover.

Risk-consciousness will not avoid disasters but it is by far the best defence that we have to oppose ill will, evil or fatality. Let us get to work on convincing our respective governments of the necessity of signing and applying *The Hague Convention (1954) for the Protection of Cultural Property in the Event of Armed Conflict*. Let us gather heritage managers and professionals around joint preservation initiatives.

Marie-Thérèse Varlamoff
IFLA-PAC Director

Les tragiques événements du 11 septembre dernier sont la preuve que ce qui semblait jusqu'alors inimaginable ou improbable pouvait néanmoins arriver. Au-delà de l'horreur qui a secoué le monde entier et malgré la tristesse qui désormais nous habite, il nous faut réagir et prendre la mesure des dangers multiples qui planent au-dessus de nos têtes et qui menacent également notre mémoire et notre futur, en d'autres termes, il nous faut connaître les risques encourus par notre patrimoine documentaire et culturel.

Aucun mot ne pourra jamais dire ce que nous ressentons ni dire notre compassion et soulager le chagrin de ceux qui ont été blessés personnellement ou à travers leurs proches. Il y a cependant une chose dont je suis sûre : il nous faut travailler et lutter pour que des attentats de ce type ne se perpétuent plus et pour que les catastrophes majeures, qu'elles soient naturelles ou perpétrées par l'Homme, aient des conséquences moins tragiques.

Comme nous le recommandons depuis déjà plusieurs années, la meilleure solution pour nous bibliothécaires, archivistes, conservateurs de musée ou responsables de la conservation consiste à unir nos efforts en vue de la création de comités nationaux du Bouclier Bleu dont les tâches essentielles consistent à : documenter les catastrophes, informer sur les risques éventuels, prendre des mesures préventives, établir et mettre à jour des plans d'urgence, se tenir prêts à intervenir en cas d'urgence et enfin établir une stratégie pour la remise en état.

Etre conscient des risques n'évitera certes pas les catastrophes mais c'est encore de loin le meilleur système de défense que nous puissions opposer à la malveillance, au mal ou à la fatalité. Mettons-nous donc tous ensemble au travail pour convaincre nos gouvernements respectifs de la nécessité de signer et de faire appliquer la *Convention de La Haye (1954) pour la protection des biens culturels en cas de conflit armé* et rassemblons responsables et professionnels de notre patrimoine autour d'initiatives communes.

Marie-Thérèse Varlamoff
Directeur d'IFLA-PAC



Photo : Sylvie Biscioni

This issue of IPN

deals with both digitisation and microfilming.

*We do not think that the former should necessarily compete with the latter, we know now that hybrid solutions are the safest way for some institutions, such as Helsinki University Library, that is digitising some newspaper collections on microfilms, **page 18.***

Each institution must act according to its own parameters.

*Some of them, like the Royal Library of Sweden, **page 10,** or the National Library of Australia, **page 13,** can afford to digitise their respective national Internets.*

These experiences were presented at a workshop organised by the IFLA Section on Preservation and Conservation in Jerusalem, in 2000.

Because these are courageous initiatives we thought that they deserved a wider audience.

*Other libraries, like the National Library of Portugal, **page 21,** have invested a lot of money and energy in microfilming and do not deem it wise to repudiate it for the sake of looking modern.*

We hope that on closing this issue, readers will feel more comfortable about the persistent argument opposing microfilming to digitisation.

The Editor

The New Preservation Tasks of the Library Community



Johan Mannerheim, Head of the Information Technology Division at the Royal Library of Sweden, has explored the different ways of preserving on line publications. The Internet holds no secrets for him and he has chosen to share them with us.

According to a study conducted by Steve Lawrence and Lee Giles in 1999 the number of public Web pages could be estimated to 800 million. Among these Web publications, there is material of value, both to today's readers and to coming generations, who might have a historic interest in what we are doing. It is certainly an important task of the library community to collect part or all of it and to preserve it in order to guarantee access for the next hundred years.

What is the Web ?

To be able to preserve Web publications it is necessary to know the construction of the World Wide Web and some definitions used to describe it.

The World Wide Web is a way of viewing pieces of information located in all different places on the Internet as if they were one large indexed document by using hypertext and multimedia techniques. This means that in a way it is impossible to preserve single publications completely because they have links pointing to other documents, which in their turn link to others.

A recent study by Andrei Broder, Ravi Kumar et al., gives a more elaborate picture in the form of a "bow tie", separating the "strongly connected components" from looser ones (see figure one, p. 6). In this group of strongly connected Web pages it should be possible to get from any page to any other in a small number of clicks. After investigating more than 200 million pages it appeared that 28 percent of these belonged to this group, the core of the Web. They also defined three other groups, which happened to be of about the same size, 21-22 percent. From the In-group any core page can be reached in a small number of clicks, but the links are not going back to them. Probably this group mainly consists of relatively new pages. The Out-group pages can easily be reached from any of the core pages, but they are not linking back to the core. The third group, called the tendrils, is not connected to the core but to

some of the other pages. Completely unconnected in this study were only 8 percent of the pages.

Hypertext mark-up language, HTML, is the language of Web pages that makes this possible. An HTML file contains text, layout information, links to images and multimedia and external links (or pointers) to other pages or sites. A Web browser is the software you use to download and view Web pages. It interprets the HTML and image files and brings them together on your screen.

A Web site is a collection of Web pages run by an information provider on a server connected to the Internet. It is identified by an address called URL (Uniform Resource Locator) up to the first "/". Here is an example: www.kb.se/. All page addresses on that site begin with these characters (or to be precise with <http://www.kb.se/>).

A Web page or, as some prefer to call it, a Web document is what you download and view on the computer screen after asking for an address (URL): www.kb.se/oppet.htm or www.kb.se/ENG/kbstart.htm

In its simplest form it consists of an HTML file only, but usually the page is illustrated or has some logotype on it. These images are also files with their own addresses. They are automatically fetched by the HTML code. If the page has frames each frame is a separate file.

The home page of a site is the page you get if you address the site without specifying a certain page. Usually it mainly consists of links leading into the Web page structure of the site. The larger sites are often constructed with a hierarchy of different catalogues and subcatalogues containing the actual Web pages: www.kb.se/Bus/DC/metadata.htm

The domain concept is needed when you discuss the overall structure of the URL system and Web addresses. Highest in rank are the top-level domains. Some are national like "se" (Sweden), "uk" (United Kingdom), "il" (Israel) and "nu" (the small island Niue). Others are international like "com" (business), "org" (organisations).

The top-level domains are each handled by an organisation. You must apply for a domain name for your institution or company and pay to get it registered. It might look like kb.se/ or telia.com/ or telia.se/.

The domain name owner might create subdomains for organisational or other reasons like libris.kb.se/ or sbi.kb.se/.

Eventually the servers, the machines containing the Web sites are named, so the complete site address might look like www.kb.se/ or unow.kb.se/ or www.telia.com/ or www.libris.kb.se/.

The scope of Web preservation

In this issue you will find two main approaches to the scope of Web preservation.

The comprehensive approach is represented by the Swedish Kulturarw3 Project (more on page 10), by Brewster Kahle's Internet Archive and, more recently, by the Finnish EVA Project. The scope is to collect everything published on the Internet. These projects are collecting millions of documents. The selective approach is represented by the PANDORA Project of the National Library of Australia (see page 13) and EPPP (Electronic Publications Pilot Project) of the National Library of Canada. The scope is to collect important publications that can be made accessible at once. They are "only" collecting thousands of documents. There is also the Danish way. Denmark changed the legal deposit law, so that from 1998 onwards Web publications matching certain narrow criteria should be given notice of to their national library. So far the result has not exceeded one thousand publications.

An argument for being selective is that you should not spend your limited resources on preserving lots of trash. However, doing an intelligent selection is difficult and researchers in the future may criticise our choices. Even if we try our very best, important digital information will be lost.

Computer storage is getting cheaper and cheaper, while the cost of personnel is not. It might seem a paradox, but it is a fact that the selective projects use more staff than the comprehensive ones.

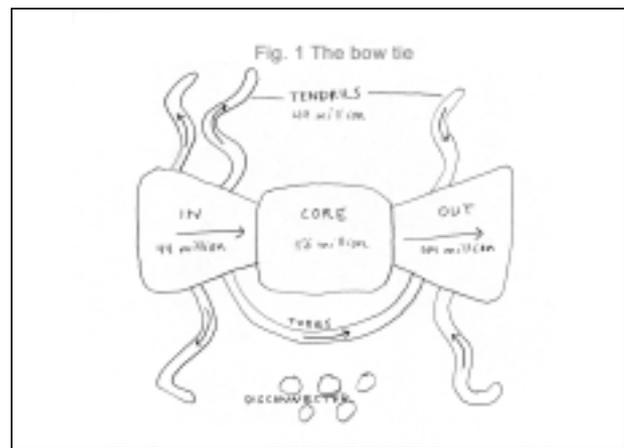
If selection is made in the indexing process, and not in the collecting process, we have at least saved the publications and the inevitable mistakes we will do, when we select publications for cataloguing and indexing, can be corrected in the future.

The responsibility of Web preservation

Who should preserve digital publications? There are at least three approaches to this problem. One is to put the immediate responsibility on publishers and other institutions as was advocated in the USA by the Task Force on Archiving of Digital Information in 1996. The second is the national approach exemplified by Denmark and by the Australian, Canadian, Finnish and Swedish projects. The third is the international approach represented by the Internet Archive.

Long-term preservation should be undertaken by long-term institutions with stable financing that lasts for hundreds of years. To give the task to the national library in each country, widening its responsibility for printed publications to include digital publications, based on rewriting the deposit law, seems to be a good solution for many countries. Collection and preservation is best done at one institution with good resources, while indexing and selection might be done in co-operation with other institutions.

The institutional approach is not so stable. It also combines badly with automatic, comprehensive collecting of Web publications, as each publisher and institution will



find their own solution for preservation of their own publications. Links pointing to resources on other sites will not function.

The interactive character of the Web pages with links to other pages, regardless of national boundaries, speaks for the international approach. But there seems to be a long road to go before it would be possible to create an international institution for Web archiving with long-term stable financing. It seems more realistic to start co-operation between national Web archives not only to exchange experience and provide each other with support, but to create a forum for raising questions of standards, exchange formats, communication between the archives.

Waiting for a permanent solution, which seems close in Sweden and Finland, but so far fairly distant in most other countries, institutions, companies and individuals have to rely on themselves if they want to preserve their old Web pages. In countries with the selective approach they have to consider if they are content with the selection.

Some challenges of Web preservation

One interesting feature of Web publishing is that it is so cheap and easy to accomplish. You are not bound to the traditional publishing industry and its routines, obstacles and time-consuming methods. Therefore many people who only were consumers of printed publications now are becoming involved in the production of publications on the Internet. Many become creators of text and images. A new profession of graphical designers of Web pages has emerged. The Web publishers are so numerous that there are no statistics over them yet. The number of Web sites could however be used as a rough estimate. The figure could be so high because many Web publishers have several sites. But it could also be too low as Web providers may have many publishers on the same site. In 2000 in Sweden there were more than 80,000 Web sites, about twenty-five times as many as traditional publishers. So it is evident that if you want to preserve their publications, you need automatic means of collecting.

If you search for a tree on the Internet today, you will get the whole forest as an answer. In the long list presented, you are lucky if you find a relevant hit on page

seven. This problem will not be less and the list will not be shorter in a historic Web archive. Cataloguing, even if it is done at a minimum level, can hardly be accomplished for more than some per mil of the total number of Web pages. Therefore, it is important to promote the use of metadata, in order to help and encourage the producers to make their own cataloguing and put that onto the page.

After years of discussion, it seems that the Internet community rallies around the metadata format Dublin Core. The Royal Library promotes metadata by meetings and by information on the Web, by having a template for Dublin Core creation, and by encouraging other actors also to provide Dublin Core templates.

Automatic indexing and cataloguing might also be used more for digitised material in the future. There are some rather promising projects going on.

Another feature of Web publications is their short life. The average life length has long been estimated to be three or four months. A small internal study made at the Royal Library shows that after a year only one fifth of the Swedish Web pages were left completely unchanged, that is, they still had the same check sum. About half of the pages had vanished. Their addresses (URLs) did not exist any more. The remaining pages had been changed, maybe just corrected in some detail, maybe filled with completely new contents. The check sum method does not make a difference. A manual study of a small sample suggests that most changes might be fairly marginal and would not affect indexing or cataloguing at all. There is a need for further investigation and analysis into this matter. Anyway it is clear that if you are not quick enough in collecting, many Web pages will be lost forever.

Another problem is the lack of a legal framework for Web preservation and access in most countries. There is not only the need of revising the deposit law, but copyright and privacy legislation might also be in conflict with Web preservation and reasonable studies in the Web archive.

Preservation of digital information

I will now discuss long-term preservation and access of digital information in general, of which Web publications constitute one subset. The amount of digital information created is increasing drastically. The time when word processors and economy systems were tools to create written or printed documents is gone. Now more and more information is primarily digital. It might be in a text format like MS Word, HTML or XML, in an image format like TIFF or JPEG, in some kind of data base or in a more specialised system. Today not only printouts but also printed reports should often be regarded as secondary forms, which are used to spread the information or a selection of it on paper. Different digital formats like HTML, PDF and reports in Excel could as well be secondary forms to spread the information on intranets or the Internet. But for long-term preservation, most institutions and companies still stick to paper and in some case microfilm, when they are not closing their eyes to the problem.

Long-term preservation of the Web an impossible goal to reach. A Web page could not be preserved on paper or microfilm because the hypertext and multimedia techniques embedded will get lost and can never be retrieved again. The links will point into the air. Only a shadow of the Web pages will be preserved, if their functionality vanishes.

Web preservation is such a clear case. There are so many Web publications. They are part of our cultural heritage. Their life length is short. They will be lost, if we do not do something. We have to build infrastructures to preserve them in digital form to preserve contents as well as appearance and functionality. We have to build human and technical infrastructures for long-term preservation of digital information. And this is not so complicated.

It is the digital file that should be preserved, not the media carrying it. In this respect it is easier than paper conservation. If you make a copy of a digital file, you get the original once again if it is properly done.

The problem is linked to the software that interpret the saved digits, once the programmes that created them have become outdated and the systems have shifted. In order to keep the digital information alive and accessible in the future you have to take care of document files by converting them to readable formats or by applying emulation software on original files, a software which functions in the current technological environment. Since the collections of Web publications will grow large the methods applied must be as automatic as possible.

Just as you need professionals to take care of manuscripts and printed books by preservation and conservation, you will need experts specialised in taking care of digital documents and publications. Today tape robot archives supplemented by large hard disk arrays seem to be the cheapest solution, tomorrow other media will emerge. All file formats must be treated individually and decisions must be made about how and when documents should be converted or emulation programmes implemented. By conversion, the original file must be kept to make emulation from the authentic possible future file.

How to cope with other Web products such as discussion lists?

Long-term preservation of Web publications is in principle not different from long-term preservation of any other digital information. Maybe the situation is a little easier because over 95 percent of the files, HTML and image files, are in standardised formats. So the prospect of having software reading them in the future is better than in other areas using proprietary software.

When you are building an infrastructure for long-term preservation of Web publications you can as well use it for any other digital information. Most libraries have a few floppy disks and some more CD-ROMs in their collection as parts of combined publications or as independent publications and many of them are not readable any more. Some libraries and especially national libraries should investigate these resources and decide if it is worth the effort to convert some or all of them and put

Fig. 2

Web retrievability
The large squares represent the Web or the Swedish Web or some other part of the Web.



them online thanks to the long-term preservation infrastructure. There are also other objects on the Internet than Web pages like discussion lists and FTP collections that might be considered as publications. The Norwegian National Library and The Internet Archive have both collected Usenet documents.

Another example from the perspective of a research library: what happens to the manuscripts of today? For centuries, The Royal Library has collected personal archives of authors and other persons related to the publication and production of books. These are frequently used sources for studies in literature, art, history and other academic disciplines. Today, the corresponding material is in the author's PC till she or he buys a new computer, when most of it gets lost. Therefore, on the initiative of the author and professor Sven Lindqvist, a member of the library board, the Information Technology Division and Manuscripts have just started a joint project to find ways of preserving digital personal archives. Such an archive might include different versions of texts reflecting the creative process, as well as e-mail correspondence and research material collected by the author.

I will give a last example, the results of different digitisation projects constitute another kind of digital collections worthy of long-term preservation if the quality is good enough. Some of them might have images in dying formats that should be converted. Others might use outdated database software for stand-alone machines and need a data base conversion to become available online. Especially digital images made to reduce the use of fragile originals are worth professional handling. In many libraries the results of digitisation will constitute a large share of their digital collections.

The current situation of Web archiving in the world

The first Web archiving projects were the Electronic Publication Pilot Project (EPPP) of The National Library of Canada which started in June 1994 and the Australian Pandora Project that began in June 1996. Both national libraries now collect Web publications on permanent bases. They have chosen a selective approach and are cataloguing their electronic collections.

In October 1996 Internet Archive started collecting Web pages from all over the world in large scale. The archive is a non-profit organisation located in San Francisco and founded by Brewster Kahle. Till now they have collected about 1000 million Web pages.

In September 1996 the Swedish National Library started the Kulturarw3 project aiming at complete collection of Swedish Web pages. The regular collecting started in April 1997. Seven "snapshots" have been taken so far, comprising about 35 million Web pages. A fairly informal Working Group Nordic Web Archive started in 1997.

In June 1997 Finland started the EVA project with complete Web preservation as one of its goals. They joined the European project NEDLIB, Networked European Deposit Library, which among many other things has the development of Web archiving software on their programme. It started in January 1998.

Denmark started by revising the legal deposit law and initiated in 1998 a very selective collection accordingly.

Although it is not Web archiving in a strict sense, it is worth mentioning that the Koninklijke Bibliotheek in the Netherlands has made agreements with a few very large publishers on deposit of their scientific journals in electronic form, beginning with Elsevier in August 1996.

In France the government has initiated studies preparing its preservation of Web publications and several institutions in other countries have also shown their interest in different ways.

To sum it up, only a few countries have been trying to preserve their Web up to now. Most Web publications are lost forever and can never be retrieved again. We are wasting our digital heritage.

I hope that this paper will inspire libraries all over the world to raise the question of preserving the Web in their countries. There is certainly a need for much more co-operation on this issue. My vision is a net of national libraries all archiving their countries' Web publications, so you can follow a link on a page in one archive to a page in another just as in the living World Wide Web.

Johan Mannerheim,
Head of the Division of Information Technology,
The Royal Library of Sweden

Internet Resources

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- Andrei Broder, Ravi Kumar, Farzin Maghoul and others. *Graph structure in the Web*, Proceedings 9th WWW, 2000 (<http://www.almaden.ibm.com/cs/k53/www9.final/>) Internet Archive. (<http://www.archive.org/>)
- Kulturarw³. (<http://kulturarw3.kb.se/html/kulturarw3.eng.html>)
- Steve Lawrence and Lee Giles. *Accessibility of information on the Web*, Nature 400 (1999):107-9.
- National Library of Canada Electronic Collection. (<http://collection.nlc-bnc.ca/e-coll-e/index-e.htm>)
- Networked European Deposit Library (Nedlib) (<http://www.kb.nl/coop/nedlib/>)
- Project EVA. (<http://linnea.helsinki.fi/eva/english.html>)
- PANDORA Project (<http://pandora.nla.gov.au/>)
- Preserving *Digital Information*. Report of the Task Force on Archiving of Digital Information commissioned by The Commission on Preservation and Access and The Research Libraries Group, Inc. May 1, 1996. (<http://www.rlg.org/ArchTF/>)

Les nouveaux défis de la conservation

A qui revient la responsabilité de conserver le Web ? Les éditeurs et institutions n'offrant pas toutes les garanties d'une collecte et d'une conservation constantes, la communauté internationale étant une solution trop aléatoire, restent les bibliothèques nationales, dont les budgets permettent d'assurer une continuité dans les actions.

Une certitude, seules les métadonnées permettent aux BN de créer leur propre modèle, souvent inspiré du système Dublin Core. Il faut construire des infrastructures humaines et techniques pour conserver les fichiers numériques, eux-mêmes faciles à conserver mais dépendant de logiciels rapidement obsolètes.

Les logiciels doivent être convertis en format lisible grâce à l'émulation des dossiers originaux, l'objectif étant d'automatiser le plus possible toutes ces opérations.

L'auteur souligne la nécessité de conserver les données privées (textes, méls, documents de recherche), sujet sur lequel travaille actuellement un chercheur danois, le professeur Sven Lindqvist.

Los nuevos retos de la conservación

¿En quién recae la responsabilidad de conservar la Web? Los editores u otras instituciones no ofrecen todas la garantías de una recolección y una conservación uniformes, la comunidad internacional parece una solución demasiado aleatoria, quedan entonces las bibliotecas nacionales, cuyos presupuestos pueden asegurar una continuidad de las acciones.

Hay una certeza, la metadata permite a las bibliotecas nacionales crear su propio modelo, con frecuencia inspirado en el sistema Dublin Core. Es necesario construir infraestructuras humanas y técnicas para conservar los archivos electrónicos, que son fáciles de conservar pero que dependen de programas que se vuelven obsoletos rápidamente.

Los programas deben convertirse a formato legible gracias a la emulación de los documentos originales, siendo el objetivo automatizar lo más posible todas esas operaciones.

El autor destaca la necesidad de conservar los datos privados (textos, mensajes electrónicos, documentos de investigación), tema sobre el que trabaja actualmente un investigador danés, el profesor Sven Lindqvist.

The Royal Swedish Web Archive: A “Complete” Collection of Web Pages



In 1661 the Royal Library of Sweden (KB) was assigned the task of collecting, preserving and giving access to all publications printed in Sweden. In 1996, the Library inaugurated the Kulturarw³ project to extend its role to electronic publications. The aim of the project is to test methods of collecting, preserving and providing access to Swedish electronic documents, accessible on line in such a way that they can be regarded as published.

In 2000, the collection comprised about 65 million items. About half of them were text documents, mostly html and plain text. Through this project the Royal Library has laid the foundations of a collection of Swedish electronic publications for today and for future generations.

How to collect the Web?

There are basically two approaches to collect electronic documents. On the one hand, there is the comprehensive approach where everything on the Internet is collected automatically using software. On the other hand, there is the selective approach where documents deemed worthy of preservation are selected by staff.

The Kulturarw³ project has chosen the comprehensive approach for several reasons. First of all, we do not know what information will be considered important by future generations. Then, selection process requires manpower, which is expensive. Thirdly, based on the operating premise that because no selection is done for legal deposit documents, there should not be any selection either for electronic ones. Lastly, computer storage is getting cheaper and cheaper.

What to collect?

The first issue to address is how to define in Internet terms, just exactly what constitutes Sweden *per se*; there is no clear cut definition for that. So we have decided that Sweden encompasses everything that has a server

address ending on with “se”; all generic top-level domains “com, org and net” registered with a Swedish address or telephone number and all Swedish domains under “nu” (*Niue, nu* means *now* in Swedish). There is no selection on document type; therefore pictures, sounds and other file types are all collected.

It should be noted that it is very difficult, if not impossible, to be complete. There will always be Web servers which are left unfound; for example Swedish material residing on servers registered under the wrong country code for instance.

Strategy

The strategy we adopted is to take snapshots several times a year. The collecting robot starts with an empty collection and harvests every page once and then stops. In this way a complete copy of the Swedish Web is stored each time. To be a real “snapshot” the collection time should be as short as possible. In practice the process takes a few months because of heavy Web sites that requires more time to be harvested completely. However, this option is inadequate for electronic newspapers. For such material our objective is to get every issue in the future: daily newspapers will be harvested every day, weekly newspapers every week, and so on. There is also the possibility to have the search robot check automatically how often certain material changes and to adjust its harvesting schedule accordingly.

Major issues to be addressed

Web pages are another issue to be addressed because they demand some kind of interaction from the visitor. Such material is generally lost, since a software programme cannot fill key words into a data field. What would we do with sites that require to download a plug-in in order to surf the site?

When visiting Web sites we obey instructions about what to acquire and depend on an index supplied by the servers, (i.e. robots.txt files and robots metadata). However, such data are usually made up with an indexing robot in mind. Pictures and short-lived material are blocked for access on the grounds that (a) you cannot index pictures and that (b) it does not make sense to index very short-lived pages, as before it is indexed and loaded into the database they have disappeared from the server. In our project, however, it is important to collect such material. There are many cases where we would like to ignore those instructions. We have chosen to obey them since at present the legal framework for our activity is unclear. Also, we believe that in the long run it will pay off to be nice to people and obey “netiquette”.

Authenticity is also an issue to be met since a page usually is made up of several objects that are harvested at different times. Let’s imagine the process of collecting a page. That a page holds an online picture. For

some reason, time passes before the picture is acquired. Meanwhile (between getting the main page and getting the picture) an update is made of the page in which both the text of the page and the picture are modified, the picture having been replaced with a new one. This means that the wrong picture will be associated with the text; in other words, a page that has never existed will have actually been reconstructed. Acquiring all online material as soon as possible reduces this problem.

Sweden on the Web

Since the inception of the project seven downloads of the Swedish Web have been done, the first one took place in summer of 1997, the most recent one happened in spring 2000. In the latest complete download, in spring 1999, 15 million files were collected corresponding to about 7.5 million pages. The data amounts to about 300 gigabits/sweep. More than 100 different MIME-types have been found. However, the four most common, text/html, text/plain, image/jpeg and image/gif, comprises about 97% of all documents. Since the first download, the number of Web servers identified as "se" servers has risen from 16,700 to 37,100. Please note that in the first download only Web servers identified as "se" were accessed. In the latest sweep 25,600 non "se" Web servers were processed, about 40% of the total. The increase seems to be somehow smaller than the 18-months doubling time often quoted for various other Internet related parameters.

Accessing Material

For accessing the archive we have put priorities on the usual ways to access the Web: surfing and free-text search. For several reasons, less priority has been put on traditional library methods such as cataloguing. We believe users of the archive will be familiar with normal Web-related tools and methods. These tools are already available now, whereas many standard library methods, such as cataloguing are not yet ready for Web material. The only ways to catalogue the Web will be by automatic means, and such software is not yet ready for full scale use.

We have also decided that no special tools would be required for accessing the archive. A normal Web browser



THE ROYAL LIBRARY

National Library of Sweden

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ser with no plug-in should be sufficient.

The archive must be organised in such a way as to make surfing easy. The time aspect adds a further dimension to the Web, which might be compared to an ordinary map in two dimensions. Collecting different instances of the Web can be compared to making further map-sheets. Time forms the third dimension making it possible to travel (taking the time-elevator) between different time levels of the Web. Surfing the historical Web must be given the added feature of changing time frames. With this possibility it is easy to scan the historical development of a Web site. A first version of such an application has been implemented in the Swedish Kulturarw³ Project.

Free-text search is the next access method to be added. As a lot of commercial and non-commercial software exist it was very difficult for us to index our archive as the time aspect has to be taken into account. This means that it will be possible to search something with the additional condition of time span, for instance for everything written about the Royal Library in 1998-1999.

Future development

There are many possible future applications. One of the most obvious enhancements is the possibility to search on metadata. When and if

methods for automatic generation of metadata and automatic cataloguing are available they can be added as a new way to access the archive.

The archive offer the possibility to do unique research about the Web. Different kinds of Web statistics may be an interesting fringe benefit. The archive will of course also provide the opportunity to forecast future development of the Internet.

Preservation of digital information

When organising the material one has to take into account the way it is supposed to be accessed. Also the number and sizes of the files play an important role. At present we have collected about 70 milj files, totaling about 1500 gigabits. Soon the number of files will reach several hundred millions amounting to tens of thousand of gigabits. In the latest sweep more than 60,000 Web servers were accessed. These are important parameters when building the archive.

There are also other requirements to be met by the archive. Amongst the most important are: original documents must never be changed; several pieces of metadata must be stored about each object (for instance URL and time stamp); files must be organised in such a way to make access easy.

We have chosen to store all information about an object in one single file. This file is defined as a multi-part MIME file¹. The file is divided into three separate parts. The first part contains the metadata associated with the collection process: when it was collected, with which software version, etc. The second part contains the metadata delivered by the Web server, document type etc. The third part contains the actual content of the document. The name of the file is first a 33-character-long string to which is added a time stamp. The URL is not a good name for the file for two reasons. First, a URL can contain special characters that have meaning for a certain computer system and second, they have varying lengths.

In this way, everything that belongs to a certain document is contained in one single file. Nothing outside this file is needed to build the archive. Should we lose all the databases associated with the archive, we would be able to rebuild everything from the original files.

We can also add other parts to the file when needed. Suppose we decide that a picture needs to migrate from one image format to another. One possibility would be to add one more part to the file containing the migrated version and a part containing history information about the picture; in particular information about the migration process.

We plan to store files that belong together near each other. In practice this means that all files belonging to a certain Web server will be grouped together. This has the advantage that if a document demanded by the user is on magnetic tape, the whole site will be retrieved. Also, considering the number of files that has to be handled it makes good sense to try to group them together.

For the physical storage we have chosen a tape archive controlled by a special software, Hierarchic Storage Management (HSM). The HSM software make files that reside on tape look as if they were on the disk. Only when you try to access a file that is on tape the difference is noticed because it takes longer to access it, since it first has to be read from the tape and stored on the disk.

An important consequence is that when designing access tools, it must be taken into account that most of the material will not be on fast disks.

Legal aspect

There is currently no public access to the archive because a legal framework is missing. The Ministry of Education has published a report about the legal deposit of electronically published material where it is suggested that the Royal Library, together with the Sound and Moving Pictures Archive, would be assigned the task of collecting all material published on the Internet according to methods now developed by the kulturarw3 project. It is also suggested that a selection of databases on the Web were collected.

The report proposes that access to the archive should be given to "researchers affiliated with recognised institutions". The Royal Library, however, thinks that the rules governing the access to the Web archive should be same as for other legal deposit material, namely also accessible to the public. Which is the intention of the legal deposit law; to secure every citizen's right to the free access of information.

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Web sites

The Kulturarw3 Project

Web page:

(<http://kulturarw3.kb.se/>)

The Royal Library Web page

(<http://www.kb.se/>),

(<http://www.kb.se/ENG/kbstart.htm>)

Conserver le Web suédois

En 1996, la Bibliothèque Royale de Suède inaugure le projet Kulturarw³ qui vise à collecter, conserver et rendre accessible les documents en ligne sur le Web suédois. Il existe deux possibilités de collecte de l'information : l'approche sélective, opérée par du personnel et par conséquent onéreuse ou l'approche globale, plus économique car gérée par un logiciel automatique. La stratégie consiste à prendre plusieurs clichés par an. Un robot de fichiers et de métadonnées balaye et capture chaque page.

La recherche documentaire se fait en surfant ou en texte libre. On peut naviguer à l'intérieur d'un document, le facteur temps permettant de visionner les différents états. Toutes les informations se rapportant à un sujet sont stockées sur un seul fichier divisé en trois parties, l'une pour les métadonnées de collecte (date, type de logiciel, etc.), l'autre contient des métadonnées sur le type de document et la troisième comporte le document lui-même.

Les dossiers se rapportant au même document sont stockés ensemble. Le support de conservation est une bande d'archivage contrôlée par un logiciel spécial. Il n'existe pas encore de législation sur l'accès public à ces informations.

Conservar la Web sueca

En 1996, la Biblioteca Real de Suecia inauguró el proyecto Kulturarw³ que tiene por objetivo recolectar, conservar y dar acceso a los documentos en línea que se encuentran en la Web sueca. Existen dos posibilidades para recolectar la información: el enfoque selectivo, manejado por el personal y en consecuencia oneroso, o el enfoque global, más económico ya que es manejado por un programa automático. La estrategia consiste en tomar varias capturas de pantalla por año. Un robot de archivos y de metadata escanea y captura cada página.

La búsqueda documental se hace navegando o en texto libre. Se puede navegar en el interior de un documento, mientras que el factor tiempo permite desplazarse entre distintos períodos. Todas las informaciones que se relacionan con un tema son almacenadas en un solo archivo dividido en tres partes, una para la metadata de la recolección (fecha, tipo de programa, etc.), otra contiene la metadata sobre el tipo de documento y la tercera contiene el documento propiamente dicho. Los documentos que provienen del mismo documento se almacenan juntos. El soporte de conservación es una cinta de archivo controlada por un programa especial. Todavía no existe una legislación sobre el acceso público a estas informaciones.

(1) For a description of the MIME standard see (<http://www.rfc-editor.org/rfc/rfc1521.txt>).

PANDORA

The Australian Electronic Heritage in a Box



The National Library of Australia aims as part of its statutory obligations to preserve online publications of lasting cultural value for access by the Australian community now and in the future. The PANDORA Project commenced in 1996 to build an archive of selected online publications.

What to collect ?

At the outset of the PANDORA Project, we felt it was important to develop selection guidelines and a set of business principles (1) to help us define what we were trying to achieve. In addition we wanted to put boundaries around the task so that we wouldn't be swamped by the enormity of what laid before us. In order to develop and test the selection guidelines and business principles we decided to allocate a discrete resources to the project. We established a unit of five staff, called the Electronic Unit. The staff were drawn mainly from the Legal Deposit Serials Section. We felt that we needed people who had experience in collection development and acquisition work, in managing complex publications and problem solving, and who had experience liaising with publishers through the ISSN office.

Establishing the Electronic Unit at an early stage in the project allowed us to work at two levels, the conceptual and the practical. Each informed the other which meant that we were able to test concepts through practical application and to modify or expand our ideas accordingly. It also taught us that our business principles needed to be flexible. We realised that these principles would undergo evolutionary change just as digital publishing would also evolve as technology developed and provided more sophisticated mechanisms for publishers to use. The Electronic Unit staff are responsible for managing all aspects of online publications. These responsibilities include: selection; liaison with publishers/creators; determining a capture schedule (frequency of capture); quality control and problem solving, including fairly high level technical issues; creation of a title entry page; cataloguing onto our National Bibliographic Database. The current business principles are outlined below.

(1) A business process model for PANDORA. National Library of Australia. (1999). Available: <http://pandora.nla.gov.au/pandora/bpm.html>

1. Select titles, which are available in online format only

This principle is based on the need to limit the number of publications eligible for inclusion in the archive. As printed Australian publications are already collected comprehensively between the national and state libraries, it seemed sensible to concentrate resources on collecting and managing those publications, which exist only in digital format. The rejection of titles, which are published in both formats, has to date eliminated about seventy percent of titles that could otherwise fall within the PANDORA selection guidelines.

2. Selectivity rather than comprehensiveness

Within the parameters of the 'born digital' principle a rigorous selection process is applied to titles under consideration for inclusion in the archive. The main reason for this is that it is complex, time consuming and expensive to collect and archive digital publications; therefore the Library has chosen at this stage to concentrate resources on those publications considered to have current and future research value. Our selective approach enable us to:

- inject quality control over the capture process; by being selective we can ensure that the titles we archive are captured successfully, with all files, software plugins and other features in working order;
- seek permission from the creator/publisher to enable us to make the archived titles available to all Australians;
- most importantly if we select a title for PANDORA we are making a commitment to *preserve* that title for future use. And that is a commitment of current and future resources. This commitment to preservation means that it is not enough to merely capture a title and place it in a stable environment in an archive. The Library has also made a commitment to the following:
 - Developing a persistent naming convention for digital resources so that they remain visible and able to be found.
 - Establishing mechanisms for recording the metadata we will need so we can manage future preservation. This preservation metadata may be used to store technical information that supports preservation decisions and actions such as file types, document preservation action taken such as migration or emulation, to record the effects of preservation strategies, to ensure the authenticity of the item over time, and to note information about collection management and the management of rights; as well as identifying formats that we should be able to migrate easily and formats that will cause problems.

- Setting up registers of existing emulation software that we may need to use; and
- Identifying when we need to take action so that we don't lose access to our online titles.

We believe that these actions will assist us in building pathways from current archiving to future preservation. However the selective approach currently used for PANDORA does not rule out the importance of capturing a picture of the whole Australian domain, and in future we might do this periodically. However, the present lack of legal deposit provisions for online publications means that this approach presents a copyright difficulties which prevents the Library from providing access to such comprehensive captures.



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3. Create records for the National Bibliography

The decision to catalogue online publications onto the (Australian) National Bibliographic Database (2) is an acknowledgment that as a National Library we have a responsibility to record digital publications as part of the national imprint. Creating catalogue records also facilitates integrated access to Australian publications, regardless of format, and we believe this is important for transparent user access.

4. Retain the 'look and feel'

It was agreed at a very early stage that it is important to strive to capture not just the content but the look and feel of digital publications. Many digital publications contain software plug-ins or other features that are an integral part of the publications. This is one of the most challenging aspects of our work. A good example of the sort of challenge that we face is online publications structured as dynamic databases which are entirely reliant on software to enable the publication to be used on the fly.

Selection guidelines

At this stage I should say something about our definition of a publication on the Internet. After a lot of debate, we decided that any information available on the Internet was a publication. At first we had tried to look at categories of information - formats like e-jour-

(2) The NBD is a national union catalogue of the holdings of Australian libraries and provides the framework for inter-library loan among those libraries

(3) *Guidelines for the selection of online Australian publications intended for preservation by the National Library of Australia*. National Library of Australia. (1999). Available: <http://www.nla.gov.au/scoop/guidelines.html>

nals that mimic print publishing, academic papers and so on. But then we found that we wanted to collect more broadly than traditional formats. In particular Web sites and some listserv discussions. Are those really publications? Our position is if we think it is important, we will collect it. There are of course grey areas, particularly relating to government records where we do not want to duplicate the work of the Australian National Archives and government departments.

The *PANDORA Selection Guidelines* (3) is a living document that is subject to regular review. The key elements of the guidelines are:

- to be selected for the Archive, a digital publication should be about Australia or Australians or written by an Australian and be on a subject of significance and relevance to Australia. Australian authorship does not however guarantee automatic selection as it does with print publications.
- Within these parameters five categories of publications are sought in particular:
 - 1) publications emanating from the academic sector and in particular e-journals or works that have been subject to a peer review process;
 - 2) publications or sites which reflect views on topical issues such as euthanasia, the gun debate, mandatory sentencing or sites which relate to a theme, such as the 2000 Olympic Games or the Centenary of Federation;
 - 3) publications or sites, which reflect the way in which Australians are using the Internet or which, reflect aspects of Australian culture;
 - 4) publications or sites maintained by community groups and associations and
 - 5) commonwealth and state government publications.

In addition to these categories the Library has decided to archive e-journals which are being indexed by indexing and abstracting services, regardless of whether the digital publication also appears in print. The Library became aware through its own APIAS (Australian Public Affairs Information Service) indexing service that there is a need to provide a persistent identifier (permanent location address) for articles cited by indexers. By undertaking to archive indexed publications in PANDORA the Library can assign a persistent identifier (at this stage an URL) which can be cited by the indexing service and which will provide a guarantee that a user will not encounter a broken link.

Providing access - Legal deposit and copyright issues

Legal deposit as described in the current (Commonwealth) *Copyright Act 1968* does not extend to digital publications. In the absence of this, we contact publishers individually for permission to copy their publications and to store them in the PANDORA Archive. Where titles are available free of charge, publishers have in most cases been happy to allow us to provide immediate access to the versions in the PANDORA Archive. We include options to link to publishers' sites both from the catalogue record for each item and again from the Archive.

The *Copyright Act* is under revision and the Copyright Law Review Council (CLRC) has proposed that legal deposit be extended to cover publications in all formats, including digital. In anticipation of this change, the Library is participating in a series of discussions with the Australian Publishers Association (APA) in regard to the provision of access to commercial digital publications received on legal deposit.

Although the APA is chiefly concerned with protecting the interests of its commercial members by limiting access to legal deposit publications as far as possible, the Library is chiefly concerned with providing the Australian public with as much access as possible to these publications. There is, however broad agreement between the two organisations that a set of guidelines governing use of this material and which satisfy the needs of both groups, can be developed.

Based on its experience to date with the cost and complexity of collecting, archiving and preserving digital publications, the Library believes that commercial publications that are selected for the Archive should be available gratis for national access at an agreed point in time when the commercial viability of the publication has diminished. Prior to the provision of national access, publications received on legal deposit will be restricted to on-site access only. However this model is still largely untested because to date, there has been very little commercial publishing of titles which appear in digital format only. Australian commercial publi-

shers have not yet moved beyond the dual print/electronic model of publication.

Given the complexities and resource intensive nature of archiving and preserving digital publications, the Library would be more selective in acquiring commercial publications in this format than it has been with printed publications. Selection would be against established guidelines but would also occur in the context of national co-operative arrangements with other collecting organisations.

National Collection of Online Australian Publications

From the inception of the PANDORA project in 1996, the Library has envisaged that the collection, provision of access to and preservation of Australian digital publications would be a co-operative activity. It would involve the National Library and the other deposit institutions, such as the State Libraries and ScreenSound Australia (the national body responsible for collecting film and sound materials) (4). The National Library is the Commonwealth depository library, and each of the six Australian States has a State deposit library.

Essentially the National Library of Australia is requesting the State Libraries to take responsibility for archiving significant online publications relating to their own State; for example State government publications, and other categories to be developed in agreement with the National Library of Australia. Four of the six State Libraries are now archiving online publications, to varying degrees. Two have developed their own internal processes and two are using the processes and procedures set up by the National Library's Electronic Unit.

From the National Library's point of view it does not matter whether the deposit institutions develop their own archiving infrastructure or whether they join the PANDORA Archive as a contributing partner. What matters is that the depository institutions work within a collaborative framework to ensure that Australia's significant digital publications are collected and preserved for future access. With this goal in mind, the Library has developed a statement outlining the elements that the Library sees as the key to the successful development of a National Collection of Online Australian Publications. These elements are:

- A set of formal collecting agreements: through a formal agreement each depository institution articulate as clearly as possible the areas in which it will take responsibility for collecting, archiving and preserving digital publications for current and future access.
- Endorsement of the principle that digital publications are part of the national bibliography: the Library is seeking agreement from the deposit institutions that they will catalogue titles selected for archiving and future preservation onto the National Bibliographic Database (NBD). It is envisaged that the NBD will be a key point of access to the virtual National Collection and that depository institutions will be able to flag their preservation

(4) The National Library already works in close co-operation with the State Libraries and ScreenSound Australia across a range of collection management issues, and the development of a (virtual) National Collection of Online Australian Publications in partnership with these organisations is a natural extension of the current relationships.

intentions to each other via the NBD. The approach does not exclude other forms of access to digital publications, for example via a metadata repository. However, it endorses the importance of recognising digital publications as part of the national imprint.

- A commitment to future access through the development of long-term preservation strategies: although the strategies for future preservation remain largely untested at this stage, it is crucial that deposit institutions contributing to the National Collection of Online Australian Publications commit to undertaking the key steps necessary to preserve these publications for future access. This includes being prepared to record the preservation metadata that will provide the information on which to base future migration or emulation strategies.
- A commitment to negotiate arrangements with publishers which will ensure that publications which form part of the National Collection will, after an agreed period, be available gratis on a national level: the Library believes that the development in cooperation with the peak Australian publisher's organisation, the Australian Publisher's Association, of a common set of guidelines will assist in the achievement of this goal.

PANDORA's dimensions

At the last count, there were 1535 titles in the PANDORA Archive. Most of these titles have individual title entry pages. The remaining titles are part of collective entries we have created for topics such as the Sydney Olympics, and broad subjects such as euthanasia. Approximately two-thirds of the titles have been archived on a one-off basis. This is either because the title is static, for example a completed report or project, or because the site has been archived as a «snapshot» example of how the Internet is being used by Australians.

The remaining one-third of items in PANDORA are being archived on a regular basis, ranging from weekly to annually. These items may be electronic journals, or sites of ongoing research interest that are being updated regularly.

On average, around 35 new titles are selected and archived each month. In addition, an average of around 30 titles which are being archived on a regular basis are "regathered" each month.

The data is stored in a Unix file system. Currently, the production area of the PANDORA archive is around 15 gigabits, and the working file area (new gatherings being assessed and fixed prior to moving them into production) is around 7 gigabits.

Gathering titles

For particularly complex or large publications, the publisher transfers the files over the Internet or sends them on CD-ROM. However, for the majority of titles we use a robot to gather the desired files directly from

the Internet. We are in the process of changing the software used for these gatherings to two main tools: HTTrack and Teleport Executive.

We are currently developing a new in-house gathering system. We are moving away from a rather clumsy system of an Access database containing management information combined with a customized communications interface for submission of requests and problem logging. Our new collection management system will be an integrated Web-based interface. It will provide for the entry and maintenance of management information describing the title and interactions with the publisher, as well as the assigning of persistent identifiers, initiation and monitoring of gathering requests, tracking of and repairing problems, and automatic generation or amendment of title entry pages.



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Related activities

I should also mention that the National Library is committed to a number of other activities related to the preservation of online publications. Examples of this work include:

- Investigations into data migration strategies. As part of this planning process the Library has created a list of tags and attributes which are dead in HTML 4.0 and are used in HTML files in the PANDORA Archive. It has also started work on an analysis of the file types within PANDORA to assess which formats may present critical migration difficulties for the future. For example, compressed delivery or access formats such as RealAudio are subject to constant change as improvements are made to them. They often require special browser plug-ins to use them. These formats are likely to be the most subject to change, and the most complex to migrate.
- Development of a preservation metadata scheme. An exposure draft *Preservation Metadata for Digital Collections* (5) has been developed for comment. The Library is working in co-operation with others such as the United Kingdom CURL Exemplars in Digital Archives (CEDARS) project (6) to develop an international standard in this area.

(5) *Preservation metadata for digital collections: exposure draft*. National Library of Australia (1999). Available: <http://www.nla.gov.au/preserve/pmeta.html>

- Developing a persistent identifier scheme for use with National Library digital resources and promoting the use of persistent identifiers for Australian Web publications. The Library expects to implement a persistent identifier scheme for its own digital resources during the next 12 months. This is likely to be a URL based scheme that maintains persistence through use of an in-house resolver service. Use of the Library's resolver service may also be extended to other interested agencies within Australia.
- Producing a set of "best practices" guidelines for creating and archiving online publications. These guidelines will be trialed with academic, government, and commercial sectors. The Library believes that the widespread use of a set of «best practices» guidelines will encourage the creators of online publications to take an active role in ensuring that their information remains accessible for the future. This is a vital step if the National Collection of Online Australian Publications is to be realised.
- International co-operation with other organisations interested in the issues of digital archiving and preservation. As part of this information sharing process, the National Library has developed and maintains the PADI (Preserving Access to Digital Information) (7) Web site - a subject gateway to digital preservation resources from around the world.

The Australian approach is an attempt to respond to the need for National Libraries to actively collect and preserve new digital publications created in the Internet environment. Our approach is not perfect and is based on learning by doing. We do not see our approach in conflict with the Swedish approach. In fact both libraries are in close contact and share information on development on a regular basis.

The real issue for us all, especially libraries with legal deposit responsibilities, is to start to see the Internet as a «space» where valuable cultural and documentary heritage «information objects» are being created. We all need to start implementing the values and strategies for preservation we have developed for the print-based world, using the opportunities provided by new technologies. It is our responsibility.

Acknowledgements

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(6) CEDARS Project. [On-line]. Available: <http://www.leeds.ac.uk/cedars/>
(7) PADI. [On-line]. Available: <http://www.nla.gov.au/padi/>

PANDORA, la boîte australienne

Dans le cadre du projet PANDORA, la Bibliothèque nationale d'Australie archive depuis 1996 l'information en ligne présentant un intérêt culturel national. Pour résoudre les problèmes liés à la sélection, une équipe de cinq personnes venues du dépôt légal des publications en série a établi des directives concernant : les relations avec les éditeurs ou/et les créateurs (il n'existe pas de dépôt légal pour les publications électroniques, chaque éditeur devant être contacté pour autoriser la copie et l'archivage de ses publications), le respect d'un délai de capture de l'information, le contrôle qualité, la création d'une page de notices de titres qui sont cataloguées dans la base de données.

La loi sur le droit de reproduction est en cours de révision pour être appliquée aux supports numériques. La responsabilité d'archivage est partagée entre la Bibliothèque nationale et les six autres bibliothèques d'Etat. 1535 titres figurent actuellement dans la base PANDORA.

PANDORA, la caja australiana

Desde 1996, en el marco del proyecto PANDORA, la Biblioteca Nacional de Australia almacena en línea la información que presenta un interés cultural nacional. Para resolver los problemas relacionados con la selección, un equipo de cinco personas provenientes del depósito legal de las publicaciones seriadas ha establecido las directrices en lo que respecta a las relaciones con los editores o los creadores (no existe depósito legal para las publicaciones electrónicas, por lo que se debe contactar a cada editor para que autorice la copia y el archivo de sus publicaciones), el cumplimiento de un tiempo de captura de la información, el control de calidad, la creación de una página de notificación de los títulos que se encuentran catalogados en la base de datos.

La ley sobre el derecho de reproducción se encuentra en proceso de revisión a fin de abarcar los soportes digitales. La responsabilidad del archivo es compartida por la Biblioteca Nacional y otras seis bibliotecas estatales. Actualmente, la base PANDORA contiene 1535 títulos.

A Nordic Digital Newspaper Library



In the framework of its reformatting programme, Helsinki University Library is currently digitising its newspapers collections on microfilm, as newspapers remain the most frequently requested documents. Due to copyright restrictions, digitisation has focussed on pre-1880 material.

Digitisation began with two main projects funded partly from external sources. The first one, the Nordic TIDEN was co-financed by the Nordic Council for Scientific Information (NORDINFO). It started in 1998 and broke new ground for the entire work. In 1999 the Library started an additional project named AURORA co-financed by the Finnish Ministry of Education.

The TIDEN project

The project aims at both digitising all newspapers dating from 1640 to 1860 on microfilm and at creating a Nordic digital newspaper library. Other libraries involved in TIDEN are the Royal Library of Stockholm, the National Library of Norway and the State and University Library of Århus. In 2000, financing was granted by NORDINFO that also supported the VÄSTNORD project which included Iceland, Greenland and Faroe Islands.

Some Norwegian newspaper publishers showed interest in the project, so the *Nordland Avis* newspaper was also digitised and made available on the Internet.

Digitisation at Helsinki University Library

Work for both the TIDEN and AURORA projects takes place at the Library's Centre for Microfilming and Conservation in Mikkeli, about 250 kilometres from Helsinki, in the

south-eastern part of the country. Whereas digitisation and microfilming - supported by the Centre's conservation and preservation expertise - constitute the Library's reformatting activities, the handling of the legal deposit of electronic publications will be concentrated in Helsinki, once the Legal Deposit Act is revised. Both units work hand-in-hand and they will use the same technical infrastructure for archiving electronic resources.

While the TIDEN project has limited its scope to pre-1860 newspapers the AURORA project will treat the titles dating from 1870 to 1890. All in all, more than one million pages have to be digitised.

In connection with these two projects and on the basis of the expertise developed, the Library signed an agreement with the country's biggest newspaper publisher *Sanoma Oy*. *Sanoma Oy* is the first important newspaper publisher in the world who has started creating electronic archive of all previous printed newspaper volumes, the famous *Helsingin Sanomat* and others. The co-operation between the publishing house and the Library focused on the use of microfilm as an intermediary and the selection and development of search and retrieval software. The contract allows the publishing house to use the Library's microfilms for scanning purposes and to provide the Library with an electronic index to newspa-

pers, serving as a powerful search tool for those using the corresponding newspaper volumes on microfilm. Due to copyright restrictions, the publisher is not able to hand over the whole full text database. The Library can also make use of the publisher's microfilm scanner located on the Library's premises.

Much effort has been put into developing a proper functional architecture for the newspaper library. The architecture will include both the production of digital versions, the database structure combined with permanent archiving and retrieval. Solutions have to be portable to make sure that they can be used also for other types of material such as maps, periodicals and books.

Advanced retrieval solutions

The interest of digitisation lies in increased access thanks to new powerful search tools. All the words in the text files are searchable, which means that images have to be converted into text files with the help of an Optical Character Recognition (OCR) process. Researchers need primarily access the images of the original pages made available as digital facsimiles. Text files will be used for searching but only the narrow context of the hits is shown on the screen as a way of controlling the relevance of the hits.

Tidningar från Utrikes Orter.

Stockholm den 14 Maj.

Major Mechanicus Blom har, enligt en af honom upfunnen method, begynt bygga flyttbara hus. Dessa hus bestå af en dubbel brädvägg, däri yttre sidans bräder stå vertikalt, men den inre ligga horisontelt. De sålunda sammanslagna wäggarne skrufwäs från hwarandra och hela huset, söndertaget, transporteras ganska lätt, och uppsättes på en dag af några tämligen wanda arbetare. GOLF, tak, kaklugnar, fönster o. s. w. allt är så inrättadt, att det med lätthet kan tagas löst och åter insättas. Husen äro dragfria och warma, då de rätt sammansättas, och hafwa redan blifwit utan minsta olägenhet begagnade till vinterboningar. Priset är också ganska billigt. Ett, som af H. K. H. Kronprinsen är beställt, för att nyttjas wid lustlägret på Ladugårdsgårde nästkommande månad, och består af en sal 10 alnar i qvadrat, ett förmak, en sängkammare och ett cabinet, kommer att kosta omkring 1100 R: d b ^ co. Redan hafwa från Hamburg- och andra ställen beställningar af ännu större, ända till två vå-

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Gothic letters converted by the OCR software

When dealing with pre-1880 newspapers we have to accept that the quality of original printed copies can be rather poor and uneven from one page to another. In addition to that, several fonts - including gothic letters - and sizes have been used and even several languages have been mixed. To address that particular issue the Library worked jointly with the Royal Library of Stockholm and the publishing house *Sanoma Oy*.

After having investigated various available OCR products, the Fine Reader 4.0 (5.0) software was chosen. It can handle the columns of newspapers and it is not too sensitive to the unevenness of the original quality of the pages. It can also handle text in batches provided that it has been formatted beforehand to do so.

From the very beginning it was obvious that OCR conversion would not reach 100 % quality. It was equally obvious that it could not proof read great amount of converted texts manually. Therefore two decision were made : the ASCII code was chosen as a mere search tool, together with Excalibur, an advanced retrieval software. The main advantage of Excalibur is its capacity to identify misspelled words. Finnish and

Swedish languages were included into the software.

After testing eight different newspapers we realised that there were several factors influencing the quality of the conversion, the most important of them being fonts, language and reduction rate. Roman style fonts, Swedish language and a low reduction rate gave the best results. The converted text was up to 98-99 % correct. The Finnish text printed in gothic letters gave a slightly lower percentage of 95 to 97. A comparison was also carried out between materials digitised from originals and from microfilms. No significant differences were found which strengthened our opinion that scanning from high quality microfilm is a very rewarding option.

The quality of microfilms is the key to success. Quality is crucial for preservation as a rule, since newspapers will only survive on microfilm. Whereas preservation needs stress the importance of technical and chemical quality, digitisation and improved access require better legibility, sharpness and homogeneous density. This entails strict compliance with microfilming processes, including systematic quality control. In our case,

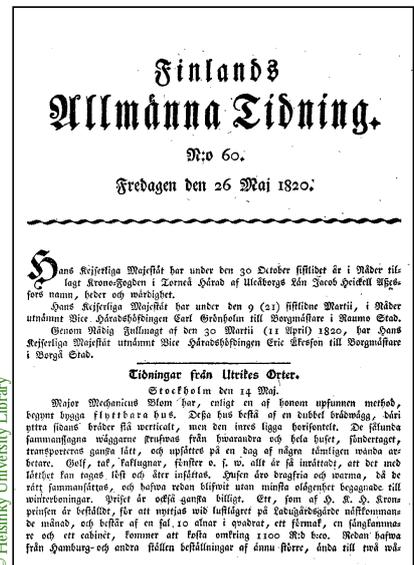
for instance, microfilms produced in the 1950's are not fit for scanning as far as the OCR is concerned.

However, microfilm is not only a very stable medium very easy to use, it can also offer very high resolution. For instance with the reduction rate of 24 the resolution can reach 3000 dpi or 120 lppm very easily. Therefore, microfilms can be used for reformatting onto new carriers very easily. The optimal reduction rate would obviously be 8 to 16.

Costs

The total budget for both the TIDEN and the AURORA projects amounted to one million euro, which included the participation of libraries and the creation of routines and processes. 400.000 pages have been created over the past four years. The national libraries in Sweden and Finland have invested substantial money in testing the OCR methods with the aim of creating mechanisms for full text search. In Finland the old newspaper index from the period of 1771-1890 was digitised and converted into a searchable text file. Price per page is around 2,5 and 3,5 euro. Once the project period is over costs will be substantially lower.

Old newspapers have often been seen as difficult items to digitise because of the bulk of searchable text. We thought that it did not make sense to scan them and make them available on the Internet as mere images. Microfilms produced by the Library are distributed widely and digitisation would not add very much value compared to its costs.





The team involved
in the TIDEN project.

Therefore our approach was to try to work after the example of the JSTOR (a journal storage programme initiated in 1994 by the Andrew W. Mellon Foundation).

Results are encouraging. We still have to improve both the technological and the economical points to make sure that the procedure is to be completed successfully. It means that quality requirements have to be kept on a reasonable level as Don Walters put it with KISS (Keep It Simple Stupid) and that the work flow can be streamlined.

Of course, our initial goals have had to be revised. With TIDEN we tried to provide users with a possibility to search in their respective mother tongue and let the software translate the search terms into other Nordic languages. So far this ambition has had to be abandoned.

The Nordic Digital Newspaper Library has been available at <<http://tiden.kb.se>> since October 2001 and on the Websites of participating libraries. It has been an important cornerstone in the virtual library of the future. Based on the experience and the infrastructure developed with the help of these projects, the National Library of Finland will create a national digitisation service, which will be strong enough to assume the responsibility for large national projects. The projects themselves will be financed from external sources and additional government grants.

Majlis Bremer-Laamanen,
Head of the Centre for Microfilming
and Conservation
Helsinki University Library, Finland

Une bibliothèque numérique pour les journaux anciens des pays nordiques

En 1998, la Bibliothèque universitaire d'Helsinki s'est lancée dans deux programmes de numérisation des journaux : le projet TIDEN concerne les journaux publiés entre 1640 et 1860, le projet AURORA ceux publiés entre 1870 et 1890. L'éditeur finlandais de journaux *Sanoma Oy* s'est associé à cette initiative en utilisant les microfilms et les installations de reproduction de la Bibliothèque au centre de microfilmage de Mikkeli - situé à 250 km au sud-est de la Suède - en échange de la fourniture de l'index électronique des journaux numérisés.

Il a fallu trouver des logiciels puissants de reconnaissance optique des caractères pour pallier le type de police utilisé autrefois et la qualité inégale des journaux ainsi que des logiciels de recherche avancée.

Les études menées sur la qualité des images numérisées ont démontré que la numérisation d'après microfilm est tout aussi satisfaisante que d'après original.

Les coûts des deux projets s'élèvent à un million d'euros. 400.000 images doivent être numérisées d'ici 2004. Depuis octobre dernier, la bibliothèque numérique nordique est en ligne sur le site TIDEN <<http://tiden.kb.se>>

Biblioteca digital para la prensa antigua de los países nórdicos

En 1998, la Biblioteca Universitaria de Helsinki dio inicio a dos programas de digitalización de periódicos: el proyecto TIDEN se ocupa de los periódicos publicados entre 1640 y 1860, mientras que el proyecto AURORA tiene que ver con los periódicos publicados entre 1870 y 1890. El editor finés de prensa *Sanoma Oy* se asoció a esta iniciativa utilizando los microfilmes y las instalaciones de reproducción del centro de microfilmación de la Biblioteca en Mikkeli, que se encuentra situado a 250 km al sudeste de Suecia, como intercambio por el suministro del índice electrónico de los periódicos digitalizados.

Ha sido necesario encontrar programas poderosos para el reconocimiento óptico para compensar la tipografía utilizada en esa época y la calidad desigual de los periódicos, así como programas para la investigación avanzada. Los estudios realizados sobre la calidad de las imágenes digitalizadas han demostrado que la digitalización a partir del microfilme es tan satisfactoria como a partir del original. El costo de los dos proyectos asciende a un millón de euros. Cuatrocientas mil imágenes deben digitalizarse desde ahora hasta el año 2004. A partir de octubre del año pasado, la biblioteca digital nórdica cuenta con el sitio en la Web TIDEN <<http://tiden.kb.se>>

Microfilmación, todavía hoy

Introducción al problema

Desde el punto de vista estratégico es una decisión ineludible la opción tomada por la Biblioteca Nacional de escoger el microfilm como soporte alternativo para la preservación de los documentos gráficos.

Tiene en la práctica su propia ley orgánica implantada desde 1997. Para tener una armonía total, aún no se ha tomado una opción clara en la atención de los pedidos del público, a los que se les entrega imágenes digitalizadas o microfilmadas, independientemente de las condiciones físicas del documento y de los cuidados que exige la conservación preventiva.

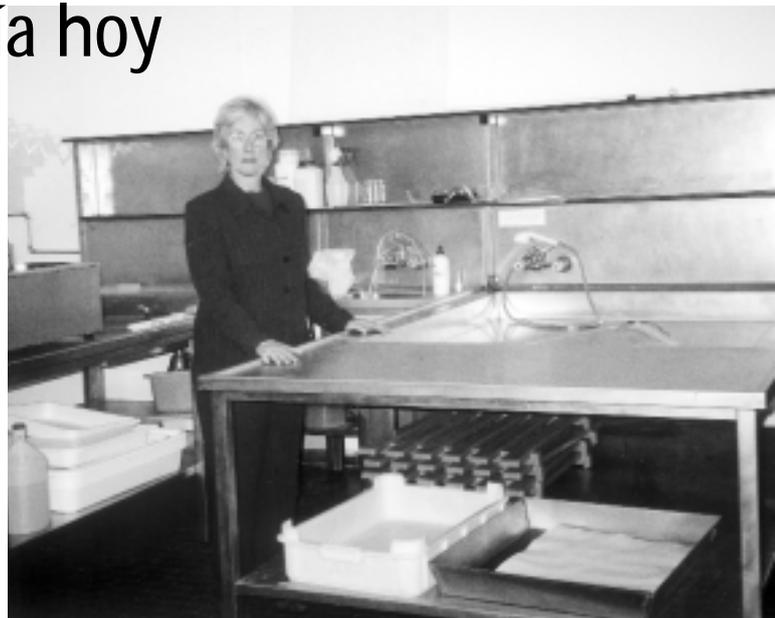
Aunque los pedidos de digitalización sean pocos, debemos tomar algunas medidas de precaución, dada la fragilidad de los documentos gráficos, que pueden ser únicos en una biblioteca patrimonial. Tal vez el público no comprenda la verdadera responsabilidad de la biblioteca patrimonial portuguesa por excelencia.

Parece extraño hacer esta introducción en el 2001. Quizás sea irónico e incluso un poco popular. Pero existen bibliotecas que se encaminan decididamente por la digitalización, dejando la microfilmación en un segundo plano, renegando incluso de esta práctica. Por eso creo oportuno reivindicar la actualidad de la microfilmación como una solución para la preservación.

Si bien es cierto que hay razones que aconsejan la cautela a la hora de escoger un soporte alternativo para los documentos gráficos en una biblioteca decididamente implicada en la conservación preventiva, hay factores a valorar, tales como el estado de conservación físico de la obra, la evaluación del interés actual y futuro del documento; o su valor como artefacto o como rareza; incluso el hecho de existir ya en otro soporte alternativo.

En definitiva, en la elección de un soporte alternativo está implícita primordialmente una decisión desde el ámbito de la preservación. Y en cualquier circunstancia, tenemos una consideración especial para los objetivos de cada *medium*. Lo que se está tratando es demasiado importante para que se haga por oportunismo o por moda.

Claro, que esta llamada de atención por parte de una pequeña biblioteca nacional puede sonar pretenciosa. Pero me gustaría que esta intervención constituyese una contribución para evitar repetir errores y gastos que pueden ser inducidos por técnicos poco atentos o vendedores muy dinámicos. La fascinación por la tecnología puede llevarnos a tomar decisiones poco adecuadas (más caras a la larga); la angustia por conseguir financiaciones puede llevarnos a tomar decisiones precipitadas, menos ponderadas aunque atractivas. A pesar de poder ser acusada de "conservadora" la responsabilidad inherente a mi función, me obliga a replantearme constantemente el estudio de la situación, ahora en la entrada del siglo XXI.



© MTV

María Luisa Cabral, Jefe de la Conservación, Biblioteca Nacional, Lisboa.

¿Una opción o una salida?

Que yo sepa la práctica de la microfilmación en la Biblioteca Nacional se lleva haciendo desde el cambio a este nuevo edificio. En la década de los 80, los responsables, en aquella época, fueron sensibles a la rápida e incontrolable degradación del papel y comenzaron a plantearse el problema. No obstante, aunque existiese la preocupación, los filmes se realizaban de forma casuística, sin estar sujetos a un plan concreto, los filmes no constituían "microfilmes de preservación", las llamadas matrices no siempre lo eran, no existía una caja fuerte para guardar los negativos en las mejores condiciones posibles y, lo peor de todo, los filmes se hacían en función del dinero que hubiese: cuando había fondos, se hacían matrices y copias positivas - muchas veces en diazo - pero cuando no había mucho dinero, la microfilmación se quedaba en el negativo.

Presencé esta fase sin adivinar da responsabilidad que me sería atribuida y los millares de filmes cuya inspección tuve que organizar. Por lo tanto la elección del microfilme no fue tomada en la Biblioteca Nacional como una salida. La elección fue tomada en función de las dificultades que iban apareciendo. Diez años más tarde, esta elección sigue siendo intencionada y hoy en día es indiscutible dentro de la Biblioteca Nacional. En la comunidad de bibliotecas portuguesas, de igual manera que la Biblioteca Nacional se tienen un programa de Microfilmación en el que se hace un gasto considerable. Desde 1998, cerca de 100 mil contos (US\$ 500,000) para un volumen de 2 millones de imágenes. Es importante, por lo tanto, reseñar que la Biblioteca Nacional hizo una elección fundamentada y coherente a pesar de todas las dificultades antes citadas. Entre las necesidades y la urgencia de garantizar el contenido de la información, y el tipo de soporte que debía asegurar la permanencia de la información, la elección de la Biblioteca Nacional fue clara y el camino ya está trazado.

Las razones de una preocupación global

La innegable y evidente degradación del papel, es la que lleva a bibliotecarios y archiveros, dirigentes institucionales y políticos a decidir la transferencia de soporte de la información. De todos los media, la situación de los periódicos es particularmente delicada: el papel utilizado en la producción de los periódicos es siempre de una calidad inferior; el carácter único de muchas colecciones aumentan la ansiedad de los profesionales; el valor testimonial de los periódicos del siglos XIX y XX, les coloca en la cima de las prioridades.

La transferencia de soporte no constituye, con todo, una solución ideal puesto que ningún soporte alternativo se puede considerar una solución definitiva. Como técnicos se intenta hacer lo mejor que se puede con la tecnología disponible.

Es en este contexto cuando se plantea el problema de la elección de la alternativa más adecuada y es precisamente aquí cuando divergen las posiciones. Sería conveniente no olvidar que el problema central depende de la durabilidad de la opción tomada y que este concepto "durabilidad" varía según el contexto, es tradicional, mecánico y analógico o, por el contrario, electrónico y digital.

En un contexto tradicional "durabilidad" encierra la idea de "eternidad" mientras en un contexto más abierto este término adquiere ventajas de la experiencia, una vez pasado lo transitorio.

Sin estar pensando en la transferencia de información del contenido de 100 libros o de 100 periódicos, incluso sin pensar en la transferencia de contenidos por causa de un evento - una exposición por ejemplo - entendemos fácilmente que está en causa algo con carácter permanente, un patrón, una referencia.

Tenemos, así, ambos lados de la problemática de la "transferencia de soportes" que situamos en una perspectiva de salvaguarda de la herencia colectiva designada al "patrimonio nacional": a estas dos posibilidades, a veces, se le suma una tercera vía, relativamente reciente, llamada "solución híbrida" y que vale la pena explorar. Volveremos a ella.

Las alternativas técnicas

La microfilmación es una técnica de miniaturización sobre un film, que tiene una base de poliéster, preferentemente de 35 mm, y normalmente en blanco y negro, de cualquier documento gráfico con el objetivo de preservar su contenido intelectual para el futuro. Se trata de una técnica con muchos años de práctica y de investigación, que tiene en cuenta su propia mejoría, perfectamente regulada, basada en un conjunto de normas internacionales que le concede una tremenda garantía de calidad y fiabilidad. Si se produce y se mantiene en condiciones óptimas, el microfilm tiene garantizada una vida larga de varios siglos. Los testes en los laboratorios garantizan cinco siglos.

A esta definición general de microfilme es absolutamente indispensable, para bibliotecas y archivos, sumarle el nuevo concepto de "microfilme de preservación". Un

"microfilme de preservación" resulta del conjunto de actividades de selección, preparación, producción, control de calidad, control bibliográfico, manipulación y almacenamiento llevadas a cabo para preservar el contenido intelectual de las obras deterioradas, inestables o dañificadas, suministrando una copia de seguridad o una copia de uso, y de esta manera minimizar el acceso a las obras originales.

La producción de "microfilme de preservación" cuenta con la utilización de materias-primas con características de conservación, o recurre a métodos que tienen una máxima longevidad, prevé la producción de una matriz, filme negativo o en sales de plata, que será almacenada posteriormente en un depósito con rigurosas condiciones ambientales, esta matriz apenas es utilizada para producir una copia para su reproducción.

Las ventajas del microfilm se pueden sintetizar de la siguiente forma: bajos costos de producción (US\$ 0,41/fotograma/3 filmes acondicionados); bajo costo del equipamiento para la lectura; valor legal y de archivo atribuido; enorme compactación en relación a la documentación original (cerca de 98%); facilidad en la manutención de la seguridad dado su pequeño volumen; normalización fija; adaptabilidad y fácil transporte.

En contraposición conviene no olvidar sus desventajas: filme en blanco y negro; lentitud en la búsqueda; búsqueda secuencial; consulta incómoda y cansada para el lector; utilización en uno solo puesto de lectura; pérdida de calidad del traspaso de una copia a otra.

Efectivamente, la microfilmación va haciendo su propio camino definiéndose más como aquello que no es que como lo que es. El microfilme se define por la vía negativa: no es accesible pero es preservación, no es sofisticado pero es fiable, no es atrayente pero es seguro, no es caro pero satisface, atrae pocas inversiones pero sobrevive. Como un amigo de la infancia, fiel y preparado siempre para intervenir en cualquier momento que se le necesite.

La otra alternativa técnica para la transferencia es la digitalización. Se trata de un proceso de captura de imagen, una "fotografía electrónica" hecha directamente a partir del documento. Esta imagen digital proporciona con fidelidad la información, el aspecto físico del documento, incluyendo los caracteres tipográficos, las anotaciones, los defectos (rayas o manchas) y las ilustraciones. Formada por píxeles una imagen digital tiene mayor definición cuanto mayor fuese el número de píxeles. Cada píxel tiene un valor tonal (negro, blanco, grises o de colores) y se representa digitalmente por un código binario (bits) almacenados por orden secuencial. La calidad de la imagen final depende de la resolución utilizada en la captura inicial. Las imágenes así obtenidas para ser utilizadas tienen que acoplarse a una base de datos.

En este dominio de la informática, cuya existencia nos es familiar a todos pero que al mismo tiempo se nos escapa, la sofisticación es enorme y trae consigo ventajas a destacar: fidelidad total al original; mantenimiento de la calidad inicial cualquiera que sea el número de copias que se realicen; distribución en red con uso múltiple y



simultáneo; utilización de la imagen “por medida” y con posibilidad de zoom.

Para quien trabaja en un sector fuertemente normalizado como es el de la información, inmediatamente se comprende que la inexistencia, entre las ventajas, de una normalización establecida solo puede esconder o conllevar algunos aspectos negativos, que son: rápida evolución tecnológica; incompatibilidad entre sistemas que repercute en la posterior migración de la información; restricciones legales, incluyendo cuestiones relacionadas con la autenticidad de los documentos; falta de apoyo y de estabilidad de las firmas; ausencia de infraestructuras institucionales; dificultades de almacenamiento.

Se entiende, de repente, que estamos entrando en un mundo que no depende de la voluntad de las instituciones. El centro de decisión se escapa, entonces, a los profesionales de la información. Las reglas del mercado que imperan, y los intereses comerciales, son los que dictan el destino de las investigaciones y de las inversiones en curso. Las bibliotecas y archivos se limitan a utilizar lo que disponen y, por tanto, lo que se les concede aunque todavía no garantice la salvaguarda del patrimonio documental. Esta conclusión repetida por los autores norteamericanos, refleja muchas de las investigaciones en curso que no podemos omitir. En Europa la investigación es considerablemente menor y en Portugal ni tan siquiera existe.

Una estrategia de compromiso

La tercera vía, antes citada, existe, se aconseja pero no parece, hasta hoy, muy explorada. Me refiero concretamente a la antes citada “solución híbrida”, en la cual la microfilmación sirva de plataforma para la digitalización. Es decir, dónde prevalece la preservación y donde no se

olvida el fácil acceso del público. Se pueden realizar microfilmes para preservar y a partir de estos, efectuar la digitalización para el acceso y la distribución en red. De un lado tendríamos el microfilme con su registro exacto y secuencial, con valor de archivo y una garantía de durabilidad por siglos y de otro lado, estaría el soporte electrónico más adaptado a las exigencias y al ritmo actual, mas a la medida del lector y libre de obstáculos dentro del campo documental. Consonante a las audiencias así es la digitalización. Hecho a la medida por encargo. La información preparada de esta manera representará una manera valiosa e insustituible para el gran público, reuniendo armónicamente preservación y accesibilidad.

Las razones para microfilmear

El microfilme y la microfilmación no dan señales de envejecimiento. Revelan una gran perfección, un completo control de los procesos de captación, reproducción y lectura de imágenes y denotan también una preocupación en comprender y acompañar las exigencias del mundo moderno. El filme en blanco y negro continúa siendo el filme de preservación por excelencia, pero los laboratorios están alerta en relación sobre la durabilidad del filme a color. La propia expansión y prolongación del campo de aplicación del microfilme - cuyas responsabilidades respecto al patrimonio documental excedieron a lo que se podía prever en un principio a la propia aplicación del microfilme - así lo exige. No juzgo necesario esconder aquella que es la única crítica razonable relativa al microfilme: su falta de capacidad por razones financieras y de longevidad, en registrar imágenes en color. Existe la certeza, todavía, de que estas contrariedades serán superadas. Hasta aquí, y porque los desastres naturales y el vandalismo causado por el hombre existen, será sensato proseguir con los programas de microfilmación a pesar de sus puntos débiles.

Además de las limitaciones del filme en blanco y negro que conviene, por lucidez, tener presente, porque con nuestra lucidez acabaremos convenciendo a los laboratorios de que es preciso investigar e invertir más, la limitación que representa el acceso único y secuencial son otros de los aspectos inconvenientes del microfilme. Sólo por ser cabezota me atrevería a defender que el acceso a la información vía microfilme tiene más encantos que el acceso por vía electrónica, pero no la tiene. Además de no disponer de esos atractivos, la posición del microfilme se vuelve cada vez más frágil frente a la abertura con que bibliotecarios y archiveros, con responsabilidades directas sobre el patrimonio, se sienten tentados a abrazar la digitalización. Los argumentos son varios - es solo una vez, tenemos cuidado en la manipulación de las obras, la máquina es tipo “planetaria”, la imagen digitalizada es de mayor calidad, se consigue obtener color y son tan verosímiles que terminan por marginar y aislar completamente al que todavía tuviese el coraje de recordar los peligros de la digitalización. Tengo la costumbre de difundir los argumentos habituales sobre la falta de respuestas a la cuestión de la durabilidad de las imágenes por causa de la indispensable y constante migración de los ficheros digitales y también el desconocimiento sobre

la repercusión de la múltiple exposición luminosa sobre estos soportes. Si este argumento es más fragil, lo primero, es por la gran cantidad de recursos financieros que precisa. Debería hacernos pensar. El glamour de la información electrónica y las presiones a las que están sujetos los técnicos, pueden impedir a medio y largo plazo una proyección objetiva de las consecuencias de las decisiones que se tomen hoy.

Las grandes bibliotecas – El Congreso con 120 millones de dólares para el campo digital, La British Library o la Royal Library de la Haia con sus programas de investigación en el sector digital – avanzan asociándose a las poderosas compañías como es el caso de IBM, que lleva años investigando distintos caminos a seguir. Como sabemos esta no es - para nuestra desdicha- nuestra situación.

En un texto de 1999, Abby Smith, expuso muy claramente sus dudas e incertidumbres en relación a la adopción de la solución digital. No voy a seguir este texto como si el tiempo se hubiese parado. El desarrollo es una realidad, y quizás, en un plazo relativamente corto las cosas se alteren y habrá más certezas que preguntas a propósito de la fiabilidad de los registros digitales. De momento me parece preocupante la precipitación con que la bibliotecas, con recursos modestos, pretenden lanzarse a lo digital olvidando las inversiones, los equipos, las infraestructuras que las grandes bibliotecas movilizan cuando es un cambio que todavía nos estamos cuestionando. Que no quede la impresión que como “Viejo de Restelo” hago campaña contra lo digital. Pero admito que me gustaría ver estas nuevas aplicaciones más domesticadas, que permitiesen una contribución mayor del lado de la preservación. La implantación de una solución híbrida iría al encuentro de los intereses institucionales, prueba inestimable de la viabilidad de esta vía es la microfilmación de los periódicos portugueses en la Biblioteca Nacional, en donde lo digital puro, podría quedar reservado en exclusivo a la divulgación del patrimonio.

Algunas dificultades

La Biblioteca Nacional hizo su elección y, partiendo de esa certeza, valdría la pena analizar algunas dificultades que surgieron (o surgen) las que, por no ser exclusivas de la Biblioteca Nacional, merecen una mayor atención. Su conocimiento nos puede ayudar a avanzar.

La primera cosa que se hizo fue la preparación del cuaderno de encargos. No fue fácil reunir y discriminar todas las especificaciones técnicas que forman el microfilme ideal como lo queremos cuando, en el pasado, no existe un documento similar para comparar o se tiene de la microfilmación una idea vaga. La literatura de esta especialidad no refleja la coyuntura portuguesa e ignora nuestras limitaciones en Know-how. Por esto fue necesario construir en abstracto las situaciones a través de un conjunto de preguntas y respuestas, por las que poco a poco nos encaminamos hacia aquello que queríamos hacer y comprar. En el inicio se generaban de tal forma los obstáculos que en el año 1997 creímos más conveniente anular el proceso del concurso publico en lugar de proseguir con un documento que estaba poco cimentado

y con unas negociaciones que evidenciaban las debilidades de la Biblioteca Nacional. Si confieso esta situación un poco anomala, lo hago con la intención de subrayar lo aislados que podemos estar cuando nuestra biblioteca tiene la osadía del pionero.

Otro aspecto que contrarió la dinámica pretendida, fue el número de técnicos. Por motivos que vienen de la falta de preparación generalizada y con la dificultad en incorporar nuevos técnicos en el Servicio Público, es prácticamente imposible conseguir nuevos operadores de microfilme. Irónicamente la Biblioteca Nacional tiene un buen parque de máquinas de microfilmación sin la correspondencia necesaria de recursos humanos. A pesar de las múltiples tentativas, el equilibrio conseguido es muy frágil y puede desmoronarse en cualquier momento. La cuestión del personal es muy delicada y podría destruir las expectativas creadas en torno a este servicio.

No será exclusivo de la BN pero debe ser apuntado porque la realización de cualquier proyecto depende mayoritariamente de una respuesta adecuada por parte de los recursos humanos.

En relación, todavía, con los recursos humanos hay que considerar la formación y la bibliografía. Todas o casi todas se encuentran en inglés o francés y limita el acceso a ella. Hasta las normas ISO. Quienes pudiese suministrar las respectivas traducciones tienen la idea de que la microfilmación es simplemente disparar el flash. Como los operadores no son interlocutores de los dirigentes o de los políticos, es absolutamente improrrogable que bibliotecarios y archiveros aprendan la mecánica de la microfilmación, para después poderla transmitir junto con dos niveles de decisión; lo que falta por hacer en materia de formación y de reclutamiento.

De una forma más directa, para bien de la microfilmación, los bibliotecarios y archiveros tendrían que pasar a la acción.

Finalmente, existe el enorme problema del mercado y de la distancia a la que Portugal se encuentra de los fabricantes. Claro que en Portugal se venden cámaras de microfilmación y todo el equipamiento indispensable para el funcionamiento de un laboratorio de Microfilmación. Hay equipamientos que no crean muchos problemas porque la tecnología hace mucho tiempo que no sufre desarrollos importantes en este sentido. Pero no sucede lo mismo con las máquinas de microfilmación que se perfeccionan constantemente y que, entre ciertos fabricantes, casi sólo se hacen cuando es por encargo. El proceso comienza en la elección y sería perfecto poder tener un contacto directo con el fabricante. Por motivos geográficos y del reducido número de clientes, la elección es hecha por catálogo, con las explicaciones ofrecidas por el intermediario, cuando nuestros colegas de Europa central tienen el privilegio de ser visitados (o visitar) por los propios fabricantes. ¡Que oportunidad para la discusión y para el aprendizaje! ¡Qué oportunidad de comparar y escoger!. Con nosotros el riesgo es la norma y como el error no tiene disculpa, a veces no compensa tomar la iniciativa. ¡Como incentivo a la paralización, este es exactamente el modelo a seguir!



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Antes y después de la microfilmación

La Biblioteca Nacional no dispone de un sector dedicado en exclusiva a la preparación de los periódicos para microfilmarse. Esta falta se controla a través de la adquisición de servicios específicos. A lo largo del año, técnicos de la BN seleccionados por el conocimiento que tienen de las colecciones, por su capacidad organizativa, por el contacto que pueden tener con la producción de microfilmes en la BN, o por sus conocimientos en conservación y restauración, se encargan de preparar los periódicos, siendo adecuadamente pagados por este trabajo. Es importante describir las fases de este trabajo porque sólo entendiendo sus recovecos se puede percibir la complejidad de lo que está en marcha y sólo así es posible exigir y realizar un microfilme de calidad.

¿En que consiste esta enorme operación?

La selección de los títulos a microfilmarse constituye una primera tarea. Deben estar presentes en este punto factores como la frecuencia con que se solicita la consulta de un título; el interés documental de la obra; su carácter único; el estado físico de las obras; el estado de la propia colección, si está o no completa desde el punto de vista bibliográfico.

Esta selección se realiza casi simultáneamente del recuento de páginas para el cálculo de la formación de las bobinas. Cada bobina lleva un cierto número de imágenes, fotogramas, y hay que tener en cuenta el formato del periódico (un fotograma puede contener dos páginas de un formato tabloide pero contendrá apenas una página de un formato A1 o A0). Si por otro lado la mancha tipográfica fue impresa en caracteres muy pequeños y apretados, también tiene que ser tomado en cuenta.

En relación todavía con la formación de las bobinas, es preciso mantener una cierta lógica y unidad bibliográfica. Hay que evitar a toda costa crear bobinas que 1. se rompan en un día o en unas semanas cortando de esta manera la secuencia de un número o de un conjunto. 2. Contrariar la organización del propio periódico. Si las bobinas pudiesen acompañar al crecimiento de las colecciones, haciendo que un volumen esté contenido en una misma bobina, los servicios de búsqueda y de lectura se facilitarían.

El otro aspecto tiene que ver con la calidad del periódico, incluyendo papel, tinta y el estado de conservación del propio periódico. Un operador entrenado sabe evaluar en un mismo disparo la tonalidad de la mancha y si es capturada con la misma tonalidad y densidad o no. Si las condiciones de las páginas no son esas tendrá que considerar hacer más disparos, esto es, más fotogramas. De esta manera el recuento de las páginas para adecuarlo al número de bobinas no es un trabajo mecánico y obvio. Pero es un trabajo fundamental en todo el proceso: una vez formadas las bobinas, los espejos se preparan con base a esa información respetando las normas ISO. Ahora, si el cálculo de las imágenes estuviera mal hecho, las empresas que van a realizar ese trabajo lo rechazarían y habría que revisar de nuevo todo el proceso.

A este recuento, le sigue la comprobación de las obras desde el punto de vista de la conservación y restauración. En el pasado se encuadraban tradicionalmente los periódicos, pero su calidad técnica no siempre era satisfactoria. La desencuadración es un proceso delicado, que se rastrea con minuciosidad. De esta forma un lomo curvo se desencuadra a mano y un lomo a escuadra se permite ser cortado con la cizalla. A veces, incluso después, hay que intervenir con el bisturí para eliminar excesos de cola o cuerdas que no fueron cortadas por la cizalla. ¡Quién diría que una tarea así, aparentemente rápida, exigiría una intervención tan minuciosa!

Disponiendo ahora de las páginas sueltas, agrupadas por bobinas, se pasa a la fase del alisado y remiendo. Los periódicos, tienen pliegues y arrugas que hay que eliminar. No se consigue una buena imagen microfilmada de un papel ondulado o deformado de cualquier manera.

La fase siguiente es el acondicionamiento. Una vez que los periódicos van a ser microfilmados fuera de la biblioteca, es indispensable acondicionarlos para su transporte, se hace recurriendo a cartones de un espesor razonable, costados ex-profeso. Los conjuntos, equivalentes a bobinas, son "ensandwichados" entre dos cartones mayores y atados con una cinta estrecha de algodón.

Simultáneamente a esta operación se preparan las guías de remesa, previstas contractualmente con las empresas contratadas, son guías que acompañan la salida y el regreso de los periódicos.

La organización, preparación y envío terminan aquí pero, no el conjunto del proceso, todavía falta la entrega de los microfilmes el control de calidad, su aceptación y la devolución de los periódicos. Los periódicos son acondicionados en cajas apropiadas de acid free debidamente identificadas en el exterior y reubicadas en la Caja Fuerte.

La microfilmación no se resume, como se acaba de demostrar en la captación de las imágenes. Si esta sigue los principios estipulados por las normas ISO, la preparación también tiene sus secretos y la calidad del producto final depende del esfuerzo de esta cadena humana que se desarrolla durante varios meses. Transferir de un soporte a un microfilm, requiere cuidados desconocidos que parece difícil entender en los retrasos, los avances y los retrocesos. Es importante tener presente la "cadena de montaje" para que se puedan justificar los costes y para que, con precisión, se proponga un proyecto de esta naturaleza.

La salvaguarda del patrimonio microfilmado

Una de las cuestiones que mas suspicacias ha causado entre los profesionales coincide con el destino que se le da a las especies microfilmadas. En Europa este problema no se encuentra en la bibliotecas nacionales. El patrimonio es el patrimonio y siempre se va descubriendo un espacio adecuado para conservarlo. En Estados Unidos, las bibliotecas tuvieron que adoptar una solución más radical, que levantaron argumentos más o menos encarnizados que rápidamente envolvió a los profesionales, a las instituciones, y al público.

No estoy segura si los argumentos que llevan a guardar el patrimonio microfilmado son de orden técnico o afectivo. Las experiencias de los laboratorios aseguran que el microfilme producido y conservado en condiciones optimas debe durar más de 500 años, pero la verdad es que sólo conocemos com 500 años de vida el papel. Desde el punto de vista afectivo, las cosas se vuelven más complicadas, si cabe, porque en el alma de un bibliotecario, vive un gusto por lo antiguo, por lo único y por el coleccionismo. Desechar no consta en nuestro vocabulario e incluso cuando se procede a la disminución de las obras, ésto es hecho sobre enorme restricciones.

En la Biblioteca Nacional nunca surgió este problema: lo que se microfilma se retira del circuito normal de lectura o de préstamo, pero permanece en los estantes debidamente acondicionados. Se hace así para todas las obras y algunas excepciones que se pueden registrar en esta regla están siendo observadas sistemáticamente. Infelizmente no siempre los lectores colaboran de la manera mas positiva recurriendo a todo tipo de argumentos para frustrar una decisión de importancia capital.

Procedimiento futuro

De todo lo antes citado, conviene quedarse con que la microfilmación para la BN constituye una elección deliberada; que la adopción de la tercera vía, o solución híbrida, traería más ventajas todavía a la BN; que 2 millones de imágenes microfilmadas se consiguieron con el apoyo de un equipo especializado con el gusto profesional de hacer siempre lo mejor; que en los procesos y las soluciones técnicas, aunque no sean exclusivos de la BN, están siendo aprendidos y perfilados en la propia institución; que la BN deberá mejorar la aplicación de las normas ISO un poco olvidadas en ciertas circunstancias. Luchando por perfeccionar la tarea como lo estamos haciendo, no creo posible un retroceso. Pero falta la joya de la corona, o sea, la cooperación a nivel nacional para que se concrete un Plan Nacional de Microfilmación asociado a una gran tarea de inventario del patrimonio bibliográfico nacional. Quizás nuestras convicciones podrian sumar a colegas de otras bibliotecas eruditas portuguesas a esta causa y, entonces si, nuestros horizontes serían otros.

Trad. Isabel Zarazúa Astigarraga, Conservadora y Restauradora, Biblioteca Nacional, Lisboa.

Maria Luísa Cabral,
Jefe de la Conservación, Biblioteca Nacional, Lisboa

Pourquoi microfilmer de nos jours ?

Maria Luisa Cabral, responsable de la conservation à la Bibliothèque nationale du Portugal justifie le choix du microfilmage comme support de conservation plutôt que la numérisation.

Elle invite les responsables des bibliothèques nationales des petits pays à réfléchir à leur politique de transfert de support sans succomber à la pression commerciale ni au désir d'imiter les grandes bibliothèques nationales dont les programmes de numérisation sont parfois sponsorisés par des sociétés privées.

Le choix de sa bibliothèque en faveur du microfilmage est raisonné. Il est le fruit d'immenses efforts entrepris depuis vingt ans, d'investissement en équipements mais aussi en personnel qui n'a cessé de se former et d'évoluer pour se conformer aux normes ISO.

Les opérations nécessaires avant et après la prise de vue du microfilm sont lourdes et minutieuses mais effectuées par un personnel rigoureux.

L'auteur estime qu'il est plus rentable pour la Bibliothèque nationale du Portugal de persévérer dans cette voie et de produire des microfilms de qualité supérieure qui, ultérieurement, pourront être numérisés.

Why keep on microfilming today?

Maria Luisa Cabral, Head of Preservation at the National Library of Portugal explains why the Library is still microfilming instead of turning to digitisation as it is now the rule.

She incites national libraries to think carefully about their reformatting policy without being influenced either by the economical pressure or by the whim to imitate major national libraries in the world, the digitisation programmes of which are sometimes sponsored by private companies.

The National Library of Portugal has been investing in microfilming materials and human resources for over 20 years. She has kept updating methods and staff's know how in order to better comply with ISO standards.

Microfilming processes before and after filming are long and heavy and they are being carried out by meticulous staff.

For all these reasons, M.L. Cabral thinks that the Library had rather keep on producing high quality microfilms that may be digitised in the future.

La Digitalización y la Conservación como centro de interés en la discusión de ABINIA

Marie-Thérèse Varlamoff,
Directora del programa IFLA-PAC

ABINIA (Asociación de Estados Iberoamericanos para el Desarrollo de las Bibliotecas Nacionales de Iberoamérica) se reunió en la Biblioteca nacional de Portugal en Lisboa del 17 al 19 de octubre 2001.

Pese a una mala coyuntura política y económica trece países asistieron: Argentina, Brazil, España, Estados Unidos de America, Francia, Mexico, Panama, Perú, Portugal, Puerto Rico, la República Dominicana, El Salvador, Venezuela.

Vastos proyectos de digitalización fueron presentados: el de la Universidad de Alicante, "Biblioteca Virtual Miguel de Cervantes" y el de la UNESCO, "Biblioteca Digital Iberoamericana y Caribeña". El primer proyecto, que funciona desde 1999, constituye la más importante biblioteca virtual del mundo consagrada a la cultura española e hispanohablante. Reune, además de los portales de las Bibliotecas Nacionales de Argentina, Chile y Cataluña, los documentos digitalizados por las universidades españolas, latinoamericanas y también norte-americanas. El segundo proyecto tiene como objetivo el desarrollo de la digitalización al interior de las instituciones latinoamericanas a través de programas de capacitación y de ayudas técnicas y materiales.

El Programa PAC presentó los resultados de la encuesta que realizó en los meses pasados con las bibliotecas nacionales de America Latina sobre las condiciones de conservación de las colecciones patrimoniales y sobre sus prioridades en materia de preservación. Las necesidades en capacitación, en traducciones de documentación profesional así como la necesidad de crear y establecer políticas y programas nacionales de conservación son las principales prioridades.

Todos los participantes manifestaron también sus deseos de aplicar sus esfuerzos en la creación de comites nacionales del Escudo Azul con la finalidad de prevenir los desastres ocasionados por los conflictos armados y las catastrofes naturales.

La reunión se acabó con el voto de algunas recomendaciones en las cuales la Declaración de Lisboa (ver la página 40) que condena los actos terroristas que tienen consecuencias evidentes en el patrimonio cultural y que constituyen un ataque contra la humanidad entera.



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ABINIA (Association des Etats ibéroaméricains pour le développement des bibliothèques nationales d'Amérique latine) s'est réunie du 17 au 19 octobre 2001 à la Bibliothèque nationale de Portugal à Lisbonne.

Malgré une conjoncture politique et économique défavorable, treize pays étaient représentés : Argentine, Brésil, Espagne, Etats-Unis d'Amérique, France, Mexique, Panama, Pérou, Portugal, Puerto Rico, République Dominicaine, Salvador, Vénézuéla.

Parmi les grands projets de numérisation présentés, citons celui de l'Université d'Alicante « Biblioteca Virtual Miguel de Cervantes » et celui de l'UNESCO « Biblioteca Digital Iberoamericana y Caribeña », projets très différents puisque le premier, déjà très avancé, fédère les prestations numérisées d'universités espagnoles, latino-américaines et nord-américaines alors que le second est un projet pour développer la numérisation au sein des institutions latino-américaines par le biais de programmes de formation et d'aides techniques et matérielles.

Le Programme PAC de l'IFLA a présenté les résultats de l'enquête menée ces derniers mois auprès des bibliothèques nationales d'Amérique latine sur les conditions de conservation des collections patrimoniales et sur leurs besoins en matière de préservation. Parmi les priorités dégagées, citons les besoins en formation, en traductions de la littérature professionnelle, ainsi que la nécessité de concevoir et d'établir des politiques et des programmes nationaux de conservation.

Tous les participants ont également manifesté leur désir d'appuyer la création de comités nationaux du Bouclier Bleu afin de mieux prévenir les dégâts causés par les conflits armés et les catastrophes naturelles.

La réunion s'est terminée par le vote d'un certain nombre de recommandations parmi lesquelles la Déclaration de Lisbonne (voir en page 40) condamnant les actes terroristes dont les incidences sur le patrimoine culturel sont évidentes et constituent une attaque envers l'humanité toute entière.

Numérisation et conservation au cœur des débats d'ABINIA

Marie-Thérèse Varlamoff
Directeur du Programme IFLA-PAC

PAC IN BOSTON, AUGUST 2001

IFLA Annual Conference always gives PAC Directors the opportunity to hold their annual meeting. However, this year only two PAC directors out of six were able to attend it. Thus Marie-Thérèse Varlamoff and Mark Roosa were present, the other directors were represented. John F. Dean from Cornell University and John McIlwaine, Chair of IFLA Section on Preservation were invited.

Finances

The currently difficult situation of IFLA Core Activities was discussed. PAC regional centres presented their respective activities for the past year. It was decided to continue to publish and distribute *IPN* free of charge although it might prove difficult to produce three issues annually due to financial restrictions.

Latest release

One thousand additional copies of the CD ROM *Safeguarding our Documentary Heritage* have been produced and a Spanish version is in preparation.

The French version of *IFLA Principles for the Care and Handling of Library Material* is now available and will be sent on request to <marie-therese.varlamoff@bnf.fr>

PAC strategy

Links between PAC, the International Committee of the Blue Shield and UNESCO's Memory of the World Programme were discussed as well as joint projects with CLIR (Council on Library and Information Resources), Cornell University, JICPA, ICA, ABINIA and the Social Science Research Center (New York).

PAC strategy for the next three years was presented, in line with the strategy of IFLA Section on Preservation.

The meeting ended up with proposals for an Action Plan (see on page 29) and new perspectives that include fields of excellence to be shared by PAC Regional Centres.

- Digital preservation by the National Library of Australia and the Library of Congress
- Paper conservation by the National Diet Library
- Deacidification by the Library of Congress
- Integrated Pest Management by the National Library of Venezuela
- Newspapers preservation by the National Library of Venezuela and the National Library of France
- Risk preparedness by the National Library of France
- Training by the Library for Foreign Literature
- Audio-visual carriers by the Library of Congress
- Photography by the Library of Congress

Conservation tour

The Annual Conference is also an opportunity to visit libraries and preservation facilities. Boston and the region offered quite a lot of outstanding places. We were very much interested in the visit of NEDCC, the *Northeast Document Conservation Center* in Andover, the largest non-profit, regional facility in the United States; *Acme Bookbinding* in Charleston, Mss, that offers a wide range of services such as different kinds of bindings, photocopying and digitisation; *Harvard College Library Conservation Services*: Collections Conservation Lab at the Widener Library and Special Collections Lab at the Holyoke Center (1).

Many thanks to those who offered to help us

During the conference several institutions, organisations or individuals proved their interest in PAC activities by expressing their wish to bring some kind of support. We are very grateful to them all and we will let you know in the next *IPN* issues whether we have succeeded in restoring PAC financial health.

(1) For more information on the services provided by these centres :
 Harvard : <http://preserve.harvard.edu/about/programoverview.html>
 NEDCC : <http://www.nedcc.org>
 Acme Bookbinding : <http://www.acmebook.com>



PAC PRIORITIES FOR 2001-2003

At the Annual Conference in Jerusalem in 2000, IFLA professional and executive boards presented the professional priorities identified for boosting the policy of core programmes that were renamed core activities. In line with these, PAC has established an action plan for the next two years.

Priority 1. Preserving our intellectual heritage

Priority 2. Developing library professionals by establishing preservation curricula and promoting continuing education activities such as lectures, seminars, workshops and in-service training.

Priority 3. Promoting standards, guidelines and best practices.

Priority 4. Promoting resource sharing – and long-term preservation – by encouraging the development of virtual libraries whose holdings will be accessible regardless of geography or national boundaries.

Priority 5. Defending the principle of freedom of information especially by preserving and making available the widest variety of materials.

ABINIA: Asociación de Estados Iberoamericanos para el Desarrollo de las Bibliotecas Nacionales de Iberoamérica

ACURIL: Association of Caribbean Universities Research and Institutional Libraries

CDNL: Conference of Directors of National Libraries
CENL: Conference of European National Librarians - <http://portico.bl.uk/gabriel>

JICPA: Joint IFLA/ICA Committee for Preservation in Africa - <http://epa-prema.net/jicpa>

SSRC: Social Science Research Center

To Develop and re-organise the existing network of preservation professionals

- Establish fields of excellence among PAC Regional Centres: each centre will prepare articles for *IPN* and develop research in its field of excellence
Actors: all PAC Centres
Agenda: 2001-2003
- Reorganise PAC activities in Latin America and the Caribbean and establish priorities
Actors: PAC Paris, PAC Caracas, ABINIA, ACURIL / Agenda: 2001-2003

To raise awareness of preservation issues, train staff and technicians, produce and disseminate information and encourage people to respect the documentary heritage

- Publication of PAC newsletter *International Preservation News*, and PAC series *International Preservation Issues* with a focus on archives issues and a corresponding significant increase in print runs
Actors: PAC Paris, plus PAC Regional Centres, ICA Committee on Preservation
Agenda: three times a year
- Promote the development of disasters plans among national libraries
Action and Agenda: questionnaire and survey: 2002; implementation of projects: 2003
Actors: PAC, CDNL, CENL, ABINIA, IFLA Section on National Libraries, national committees of the Blue Shield
- Encourage United Nation State Parties to sign the *Hague Convention and Protocols for the Safeguard of Cultural Heritage in the Event of Armed Conflicts and Natural Disasters*
Actors: PAC, IFLA Section on National Libraries, CDNL, CENL, ABINIA
Agenda: 2001-2003
- Preservation Microfilming training
Actors: PAC Australia
Agenda: 2002

To assess needs in preservation through surveys and promote the development of national and international standards, guidelines and best practices in the field of preservation

- Survey on newspapers in Africa
Actors: PAC, JICPA, IFLA Round Table on Newspapers
Action and agenda: questionnaire: 2001; analysis of results: April 2002; recommendations: 2002; follow-up: 2003
- Survey on preservation needs in Latin America
Actors: PAC Paris, PAC Caracas, ABINIA
Action and agenda: questionnaire: June 2001; analysis of results: October 2001; recommendations: October-December 2001; implementation of further actions: 2002-2003
- Survey and analysis of regional digital preservation requirements
Actors: PAC Australia / Agenda: 2002-2003
- Guidelines on Digitisation
Actors: UNESCO, IFLA (PAC, IFLA Section on Preservation And Conservation), ICA
Agenda: 2001-2002
- Register of existing standards, guidelines, codes of best practice in preservation, in print or electronic form, indicating in which language
Actors: PAC, IFLA Section on Preservation And Conservation / Agenda: 2003

- French translation of *IFLA Principles on the Care and Handling of Library Material*
Actor: PAC Paris / Agenda: November 2001
- Update of the IFLA Package on The Care, Handling and Storage of Photographs
Actor: PAC Washington / Agenda: 2002

To encourage scientific research on the causes of deterioration of library documents in all formats, including digital materials and promote reformatting as a preservation option

- Promoting the Use of Permanent Paper
Actors: PAC, IFLA Section on Preservation And Conservation
- Guidelines on Digitisation
Actor UNESCO, IFLA, ICA - Agenda: 2002
- Workshops on Microfilming
Actor: PAC, Moscow
- Digitisation of 19th Century Latin American Newspapers
Actors: PAC Caracas, ABINIA, Andrew Mellon Foundation
- Web site for on-line dissemination of Latin American newspapers published between 1820 and 1830
Actors: PAC Caracas
- Preservation microfilming of Russian newspapers
Actor: PAC Moscow / Agenda: 2001

To develop a policy of coordinated activities with institutions, with national or international organisations, with NGOs as well as with information professionals interested in the preservation of the documentary heritage

- Working out a national preservation policy in Russia
Actor: PAC Russia
- Organising workshops in the framework of UNESCO's "Memory of the World" Programme
Action 1: prevention of and response to hurricanes in the Caribbean area
Actor: PAC Caracas, PAC Washington & PAC Paris with the possible co-operation of ACURIL
Agenda: May 2002
Action 2: Preservation and Digitisation in Brazil
Actor: PAC Paris & PAC Caracas / Agenda: 2003
- Participation to CLIR Advisory Board for Web-based tutorial on preservation and conservation project
Actor: PAC Paris and later PAC Caracas
Agenda: 2001-2003
- Development and update of ICBS (International Committee of the Blue Shield) Web site in cooperation with UNESCO
Actor: PAC Paris / Agenda: 2001
- Promote the setting up of national Blue Shield Committees in co-operation with ICOM, ICOMOS, ICA
Actors: all PAC Centres
- Edition of a CD ROM on the "Gran Colombia" newspapers that circulated between 1820-1830
Actor: PAC Caracas, Andrew Mellon Foundation
- Co-operative project on disaster prevention in Cuba
Actors: PAC Paris, PAC Caracas, SSRC in the USA
Agenda: 2003

PAC REGIONAL CENTRE FOR ASIA

Environmental control in libraries and archives

It is the title of the 14th Forum on preservation organised by the PAC Regional Centre for Asia last February. Ms Riga Kigawa, from National Research Institute for Cultural Properties, said that prevention was to be preferred to the extermination of insects. She induced librarians to build an environment adverse to insects and pests. Eighty-three staff members from national libraries, archives and preservation-related institutions attended the forum.

Actions in India

Mr. Akio Yasue, Director of the Serials Department of the National Diet Library, gave a lecture on the preservation of palm leaf and paper-based materials and on preservation management at the Orissa Art Conservation Centre in Bhubaneswar, India.

PAC REGIONAL CENTRE FOR ASIA AND OCEANIA

Preservation Microfilming Training Materials

The aim of this PAC project is to develop simple flexible learning materials for preservation microfilming training in the Asian and Pacific region.

The first stage of this project was the design of a survey to gather information about the preservation needs of the region. This survey, distributed by the PAC Regional Centres in Canberra and Tokyo, gathered information to enable the construction of a regional profile of preservation microfilming training activities and requirements.

The flexible learning materials have been written to conform to the preservation microfilming curriculum recently developed and accredited within the Australian national training framework. They have been prepared with the assistance of comments and review from a number of people, both in Australia and in the region.

Preservation Training Needs of Southeast Asia and the Pacific

This recently completed project was designed to investigate the training needs of the region, both in terms of content requirement and modes of delivery, as well as identifying particular areas of need. This was achieved through questions incorporated into the microfilming training survey (described above).

It is anticipated that the results of this survey will be useful in enabling the PAC Regional Centre in Canberra to deliver well targeted training assistance to the region in the future.

Register of projects in Southeast Asia and the Pacific

Designed to assist those considering undertaking preservation activities in the region, this online register will provide up-to-date information about current and recent documentary heritage preservation projects. The register will be available on the National Library of Australia's server at <<http://www.nla.gov.au/dhp>> early in 2002.

PADI safekeeping project

This project aims to establish a networked 'library' of highly significant PADI resources that will be accessible in the long term. Resource owners were asked if they were able to provide long-term access to their resources. A common understanding of what this long-term access entails includes elements such as making regular back-up copies, storage of relevant metadata, the use of persistent identifiers and the use of procedures to overcome technological obsolescence <<http://www.nla.gov.au/padi/safekeeping/safekeeping.html>>

In the future, it is envisaged that new resources added to the PADI database will be routinely assessed against selection criteria for safekeeping and long-term access understandings will be sought for selected resources.

PADIUpdate

The PADI Web site has become more useful to users around the world with the introduction of a Web-based interface called PADIUpdate. The new Web site, available to registered users, allows users from around the world to directly contribute records to the

PADI Web site. It is anticipated that users of PADI will benefit from the broader coverage that contributors located globally can bring to the identification and selection of resources.

PAC REGIONAL CENTRE FOR LATIN AMERICA AND THE CARIBBEAN

A CD-Rom on Gran Colombia

The National Library of Venezuela is carrying out the digitisation of Latin American newspapers from the 19th century in the framework of ABINIA's project "Rescue of the Latin American Newspapers from the 19th century".

The project is supported by the Andrew W. Mellon Foundation. A CD-Rom is planned once it is completed. It will show Gran Colombia newspapers that circulated between 1820 and 1830, a period that reflects the first experience of Latin American integration.

Survey on preservation in Latin American libraries

The PAC Regional Centres in Paris and Caracas are conducting a survey to assess preservation and training needs in Latin American and Caribbean institutions in order to identify priorities. The survey is a joint action between IFLA and ABINIA. Thirty responses have been received. (More in *IPN* next issue)

In-house training

The PAC team in Caracas has designed a workshop on cleaning, handling and storage for maintenance staff of the National Library of Venezuela. One workshop took place last June, another three workshops were scheduled for the end of the year.

PAC REGIONAL CENTRE FOR EASTERN EUROPE AND THE CIS

A preservation and conservation centre at the Library for Foreign Literature

The PAC Regional Centre in Moscow is conducting negotiations with the Book Preservation Centre in Leipzig for setting up a preservation centre at the Library for Foreign Literature. After two working visits to Leipzig, the project is being drafted in order to identify a suitable site and production levels.

PAC INTERNATIONAL CENTRE IN PARIS

IFLA Principles for the Care and Handling of Library Materials published in French

After the Russian, Polish, Slovene, Greek, Spanish editions, the *IFLA Principles* are now available in French. They were translated by Marie-Thérèse Varlamoff and Virginie Kremp at the PAC International Centre where they are available upon request.

Translations into Portuguese, Arabic, Turkish are pending. The Italian, Japanese and the Malaysian ones are underway.

Departure of Programme Officer

Virginie Kremp, PAC Officer at the International Centre left PAC last November for another assignment outside the Bibliothèque nationale de France. Virginie was responsible for *IPN* and other PAC publications since 1992, with a full year break in 1999 for the birth of her second daughter. She assisted the Director in coordinating PAC activities, especially the recent training sessions in Africa.

We wish Virginie good luck in her new career.

CLIR SUPPORTS IFLA-PAC

The Council on Library and Information Resources in the USA has recently been focusing its efforts on South Africa, Latin America and Southern Europe, supporting preservation projects and activities, such as surveys, translations and workshops. CLIR has decided to contribute \$20,000 to support the most urgent preservation needs in developing countries identified by IFLA-PAC. IFLA-PAC is extremely grateful to CLIR for this generous contribution which will help meet some of its priorities stated on page 29.

PRESERVATION OFFICE FOR ARGENTINA

The Preservation Office for Argentina was born early in 2001 modelled on the British/Irish National Preservation Office. It will meet the needs of libraries, archives, museums and the private sector nationwide. Seven regional offices have been designated. A monthly e-newsletter has been launched since May to inform Argentine professionals about courses, publications, news and projects. A project focusing on municipal archives and libraries is underway.

EMERGENCY RESPONSE AND SALVAGE WHEEL

The third printing of the Wheel is over. Since its release in 1997, the Wheel has become an essential resource for archives, libraries, museums and historic sites. It is a popular training tool in more than 40 countries, and it has been translated into Chinese, Dutch, French and Spanish.

Price : \$10.95, including postage and handling.
 Orders and information : colsen@heritagepreservation.org
 National Task Force on Emergency Response
 1730 K Street, NW Suite 566
 Washington, DC 20006 USA

« MEMORY OF THE WORLD » IN KOREA



The Fifth Meeting of the International Advisory Committee of the "Memory of the World" Programme was held in Cheongju City, Republic of Korea, last June.

Besides members of the Committee and UNESCO representatives, nineteen observers attended it, among those Marie-Thérèse Varlamoff, Director of IFLA Preservation and Conservation Core Activity, representing IFLA.

The objective of the meeting was to review the progress of the Programme and to make recommendations to the Director-General

of UNESCO regarding the inclusion of nominated documentary heritage in the "Memory of the World" Register.

Among the 42 nominations received from 23 countries, the International Advisory Committee decided to recommend 21 nominations to the Director General.

Register Sub-Committee

During the meeting the revised guidelines were discussed. In consequence of their adoption, the International Advisory Committee established the Register Sub-Committee. The meeting appointed Mr Wojciech Falkowski from Poland as its Chair.

Marie-Thérèse Varlamoff, IFLA, and Joan Van Albada from the International Council on Archives were selected to represent their respective organisations. This Sub-Committee held its first meeting on October 26, 2001 and discussed the selection criteria for inclusion on the "Memory of the World" Register. The final report of the meeting is available on the Web: http://www.unesco.org/webworld/mdm/2001/5th_iac_meeting/eng/final_report.html or as a UNESCO publication CI/INF/2001/3.

SWITZERLAND MASS DEACIDIFICATION UNIT

The mass deacidification unit has been operational since 2000. It originated from a joint initiative between the Swiss National Library and the Swiss Federal Archives, sixty percent of their respective holdings being acidic. It is operated with the *papersave*TM process developed by Battelle Ingenieurtechnik GmbH.

A twelve-part test series was performed between 1993 and 1994. Since then further developments have taken place. The system uses a non-aqueous solvent, magnesium titanium ethylate dissolved in hexamethyl disloxane.

The management of the facility is a combined effort: one hundred percent of the construction costs were covered by the Swiss Government, which also paid for the licensing fees; the facility, however, is operated by a private company. According to the licensing agreement, the facility may treat materials from neighbouring countries such as France, Austria and Italy, as well as treating the holdings of the National Library and the National Archives.

Susan Herion, Head of Preservation at the Swiss National Library, delivered an enlightening paper at the ECPA Conference in the Hague in 1999*, where she described the strategy to convince politicians to be interested in the project and to defend it before the Parliament. It took two years and a lot of energy from cultural authorities for the project to be studied and for politicians to be persuaded of the need to save Switzerland's memory. This is indeed a nice example of effective co-operation among libraries and archives. www.snl.ch/f/download/massdea.pdf

* *Preservation Management – Between Policy and Practice*. Ed Yola de Lusenet. Amsterdam: the European Commission on Preservation and Access, 2000. ISBN 90-6984-308-0, pp. 47-53.

The Printing Museum

At the end of the meeting, participants were invited to visit the Early Printing Museum, a perfect example of its type, describing step by step, in a very educational way, the process of early printing with mobile metallic characters.

The Museum organises visits for primary school. When we were there, dozens of children were waiting in line to get in. It was so well presented and the processes were so well explained and displayed that even small children looked very interested.

The concept of this Museum appears to be excellent to make the public conscious of the importance of its national documentary heritage.



THE FUTURE OF LIBRARIES AND ARCHIVES IN CUBA

FORTY Cuban and international archivists and librarians were invited to Cuba last June to discuss the current needs, trends and future directions of libraries and archives of Cuba.

One theme that arose repeatedly was the challenge of establishing priorities given the complexity of the problems faced. While all agreed that collaborative efforts in this area had been and will continue to be essential to the work, opinions differed as to what deserved the most emphasis among the interrelated issues of equipment, technology, training, and basic preservation.

The need to create a comprehensive, structured strategy of preservation and access based upon well-planned collaboration and longer-term initiatives rather than individual and short-term projects was emphasised.

Digitisation versus microfilming was discussed, especially the preservation of information versus the preservation of original materials or artefacts. Participants identified a number of benefits and disadvantages regarding each approach, and expressed dismay that in some cases, original documents have been destroyed in order to digitise their contents.

Numerous participants mentioned the high cost of digitising and suggested that it may not be feasible for Cuban institutions currently, though it was suggested that hybrid solutions - some digitising and some microfilming - could be considered. There were some diverging opinions as to whether it was easier to get funding for digitisation projects or for microfilming projects.

The meeting provided a important opportunity for a focused, open discussion and laid the foundation for ongoing personal and institutional networking. The Working Group left with a clearer sense of the current needs, trends and future directions of the libraries and archives of Cuba, and look forward to the further development of initiatives along these lines, pending sufficient funding.

EL FUTURO DE LAS BIBLIOTECAS Y DE LOS ARCHIVOS DE CUBA

CUARENTA archivistas y bibliotecarios de Cuba y el extranjero se reunieron en Cuba para discutir las necesidades actuales de las bibliotecas y los archivos de Cuba, y sus tendencias y orientaciones a futuro.

Uno de los temas que más se mencionó fue lo difícil que es establecer prioridades, dado la complejidad de los problemas que se enfrentan.

Han hizo hincapié en la necesidad de crear una estrategia de preservación y acceso comprensiva y estructurada, que está basada en una colaboración bien planificada e iniciativas a largo plazo, en vez de proyectos individuos que son de corto plazo.

El debate se concentró también en dos preguntas interrelacionadas: si es mejor digitalizar o microfilmear materiales, y si es más importante preservar la información o los materiales originales como artefactos. Los participantes identificaron los beneficios y las desventajas de cada aproximación, y mostraron su desacuerdo en que en algunos casos, los documentos originales han sido destruidos para digitalizar sus contenidos.

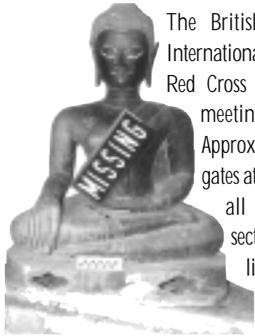
Varios participantes mencionaron lo caro que es digitalizar y comentaron que a lo mejor no era posible pensarlo en este momento en Cuba, aunque han sugerido que se podía considerar soluciones híbridas (algo de digitalización y algo de microfilmación). Hubo diferencias de opinión en cuanto a si era más fácil recibir dinero de fundaciones para los proyectos de digitalización o para los de microfilmación.

La reunión presentó una oportunidad clave para que hubiese una discusión específica y abierta. También estableció las bases para seguir creando conexiones institucionales. Esta red de contactos podría resultar tan importante como los proyectos específicos que terminan saliendo. El Grupo de Trabajo terminó la reunión con una idea más clara de las necesidades actuales de las bibliotecas y los archivos de Cuba, y sus tendencias y orientaciones a futuro. Esperan que en el futuro haya recursos suficientes para que se pueda desarrollar una iniciativa de este tipo.

Blue Shield and the Red Cross

by Graham Cornish, Past President
of the Library Association

© UNESCO



The British Branch of the International Committee of the Red Cross called a half day meeting last June. Approximately 100 delegates attended representing all the Blue Shield sectors. In addition the list included members of both Houses of Parliament, delegates from such diverse organisations as the Council for the Care of Churches, the Fire Protection Association, the Society for the Protection of Afghanistan's Cultural Heritage and Christie's.

Patrick Boylan from City University, a world specialist in this field and a key player in The Hague negotiations, explained that several important issues needed to be addressed to understand the problems facing delegates. Culture belongs to psychology and spirituality whereas race is genetic and these two factors often do not coincide. Religion is a central factor in determining cultural attitudes. Our culture defines who we are and to destroy it is to destroy part of what makes a group of people who they are. For this reason military objectives often include cultural objects such as libraries, archives or significant architectural monuments so as to make a deliberate attempt to wipe out part of a people's cultural memory.

The issues relating to cultural preservation are enshrined in International Humanitarian Law, the development of which was explained by Martin Eaton of the Foreign & Commonwealth Office and Colonel Charles Garraway of the Army Legal Service. The concept of cultural objects being prizes in war goes back several hundred years BC but the protection of such material really dates only from the 17th century.

ICBS



It is all very well to have laws and treaties in place but how can they be enforced? The military delegates stressed the importance of any such rules being practical, plausible and possible. Soldiers are often more aware of such matters than they are credited for and see the meaning of culture on the ground amongst daily life of the people with whom they become involved. Therefore training and education are vital, not just for the military but for politicians, administrators and everyday folk. If people realise the importance of cultural objects and collections they may be more ready to protect them. The down side of this approach is that their enemies are more aware of their importance too and may target them more specifically.

The UNESCO representative stressed the importance of seeing collections such as libraries as well as monuments such as the Afghan Buddhas as part of a world heritage and not just a local matter. The National Archivist of Scotland George Mackenzie emphasised the importance of Blue Shield nationally even in a country which was fairly remote from traditional armed conflict.

The conference brought together many different strands of concern in the field of cultural protection and enabled new perspectives to be seen from different sectors. The result is likely to be a greater awareness of the cross-sector of protection of nature and disaster planning which should benefit the library community as much as the built environment, artistic or archival ones.

Approval by ICBS of requirements for national committees of the Blue Shield

The following requirements are to be met by national initiatives that wish to seek recognition as national Blue Shield Committees.

1. Initiatives for establishing a national committee of the Blue Shield should fully recognise the ICBS charter as adopted by ICBS in Strasbourg, 14 April 2000.

In order to protect endangered cultural heritage, the International Committee of the Blue Shield has been created in 1996 by the four non governmental organisations which represent professionals active in the field of archives, libraries, monuments and sites, and museums.

In the framework of the Hague Convention for the protection of cultural property in the event of armed conflict (1954), ICA (International Council on Archives), ICOM (International Council of Museums), ICOMOS (International Council on Monuments and Sites), and IFLA (International Federation of Library Associations and Institutions) have taken up the emblem of the Convention as symbol of the International Committee of the Blue Shield.

The four organisations are working together to prepare for, and respond to, emergency situations in the case of armed conflict or natural disaster that could affect cultural heritage.

They respect the following principles : joint actions, independence, neutrality, professionalism, respect of cultural identity, work on not - for - profit basis.

2. Initiatives for establishing a national committee of the Blue Shield should have the support of the national representatives of all four non-governmental organisations listed above, which together form the ICBS. In case of doubt, the bureaux of the four non-governmental organisations will decide on the respective representational claims.

3. An appropriate representative of initiatives to establish a national committee of the Blue Shield should inform the ICBS of the membership, contact addresses, meeting schedules and agendas and relevant national events of the proposed national committee.

4. An appropriate person or organisation on behalf of initiatives to establish a national committee of the Blue Shield may request the ICBS to grant official recognition. The ICBS has the sole right to decide whether to accord such recognition.

Approved by the International Committee of the Blue Shield as its meeting in Paris, 8th June 2001.

UKIRB's URL

In IPN #24 issue, the Website address of UKIRB (United Kingdom and Ireland Blue Shield Organisation) skipped before printing. We apologize for this inconvenience.

UKIRB URL is : <<http://www.bl.uk/blueshied>>

ICA Committee on Disaster Prevention's

In 1993 the Committee on Disaster Prevention was established by the International Council on Archives. *Guidelines on Disaster Prevention and Control in Archives* were published in 1997. In this 48-page document main risks are identified, together with risk management (preparedness, response and recovery). Both an English and French version were published and distributed to all ICA members. A Portuguese version was produced by the Biblioteca Nacional de Portugal under the title *Directrizes para a prevenção e controlo de desastres em arquivo*. Lisboa : Biblioteca Nacional, 2000. ISBN 972-565-296-7.

Le Comité sur la prévention des sinistres du CIA

C'est en 1993 que le Conseil International des Archives a créé un comité sur la prévention des sinistres. En 97, ce comité a publié des *Principes directeurs pour la prévention et le contrôle des sinistres*. Il s'agit d'un document de 48 pages qui décrit de façon claire et générale les principaux risques ainsi que les moyens (prévention, intervention et réhabilitation) pour y faire face. Rédigé en anglais et traduit en français, ce texte a aussi été traduit en portugais par la Biblioteca Nacional sous le titre *Directrizes para a prevenção e controlo de desastres em arquivo*. Lisboa : Biblioteca Nacional, 2000. ISBN 972-565-296-7

Workshop in The Gambia



Readers of *IPN* are familiar with Jonathan Rhys-Lewis, an Archive Preservation Consultant from the UK who specialises in organising practical preservation workshops in Africa. Recently he conducted a mission in The Gambia.

IPN: What was the scope of your mission in the The Gambia ?

Jonathan Rhys-Lewis : As part of an ongoing records management improvement project, The National Records Service (NRS) of The Gambia requested the UK Department for International Development (DFID) to fund a workshop for building preservation awareness amongst its staff.

IPN: Is the Department funding other projects in Africa?

JRL: Yes, there are many DFID-funded projects in African countries, including Ghana, Tanzania and South Africa. In fact, the Department has commissioned the International Records Management Trust, based in London, to deliver a number of records and information management projects. The trust was set up in 1989 to develop new approaches to managing public sector records. A core part of its work is to support the development of reliable records and information systems to improve government accountability and services to citizens and to strengthen national archives programmes. Much of its work is carried out in the developing world.

IPN: In a preceding issue of *IPN* you wrote about your experience in Uganda. Looking back, what did you learn from this previous project?

JRL: The experience in Uganda allowed me to see the process through from the beginning to the end and that was very rewarding. The National Archives in Uganda is now equipped with a real preservation workshop which is a major boost for preservation in East Africa.

In The Gambia I was commissioned to teach staff who administer the National Archives. I did not know either their needs or their priorities.

IPN: How did you proceed?

JRL: I split the mission into two parts. I paid an initial visit in March 2001 to familiarise myself with the problems affecting the archive collections and to conduct a preliminary sample survey. The scope was to obtain a detailed compilation of information on the holdings of the archives. The results made it clear that a planned preservation-packaging programme would be the most effective response to safeguard those items at risk. Then I further investigated the possibility of holding a workshop in the building. Once this was agreed, I formulated estimates for materials and tools.

IPN: Did you involve the local staff in your preparatory phase?

JRL: The assistance from the local staff and the staff at the Trust in London was invaluable. From London, the workshop supplies consignment was air-freighted to The Gambia just in time for my second visit in June 2001.

IPN: How many participants attended the workshop?

JRL: Four. Three were from the National Records Service and one from the Attorney General's Department.

IPN: How did you organise the training?

JRL: I gave a morning of theoretical lectures, but the main emphasis was on the practical folder making sessions. We began the workshop by first unpacking the shipment of tools and materials despatched from the UK.

IPN: How long did the workshop last?

JRL: Three days plus a second week after I had returned to the UK.

IPN: Don't you think that it was too short a time to teach preservation basics and for practical training?

JRL: Not at all, a workshop of this kind can make a significant contribution to the preservation of archival materials. Although it was focused on paper materials only, I think that it is perfectly possible to instill basic craft skills, backed up with an appropriate guidance manual, such as desk instructions, to enable the protection of material at risk. In every way this was an enabling initiative, made all the more poignant by the commitment and enthusiasm of the participants. In fact, this type of practical training workshop has proved very effective in building capacity amongst records staff and has a greater success rate in ensuring sustainability.

IPN: How did you split practice and theory?

JRL: I commenced with the presentation of the preservation desk instructions, which included information on preservation management and policy, handling, simple document cleaning methods, the management of mould outbreaks, the storage of packaging materials, the monitoring of atmospheric conditions and detailed instructions on the construction of four-flap folders.

Then I showed a video to outline the range of preservation issues associated with the workshop, most especially handling. I followed this up by discussing and demonstrating the use of all the tools, stressing health and safety considerations where appropriate. We had a group discussion regarding each of the three archival packaging materials, namely manilla, cover paper and folding boxboard, in which cases they should be used and how to use the sheets economically. I put considerable emphasis on tidy and safe working and I ensured that standards were not compromised.

For the following two and a half days, participants continued the packaging programme, calling on me for advice and guidance where necessary.

On day three, I set productivity targets for each individual based on their initial abilities. It was agreed that the daily production target would be multiplied by 25 folders. Based on this rate of productivity, the estimated output for the two-week

workshop was multiplied by 90. Then I further estimated that if the workshop were to continue for a further 3 weeks, the potential total of folders completed would be approximately 300, thus achieving the original requirement of the records at risk I had identified from the original sample survey results.



© JRL

IPN: What will come next once the materials sent are exhausted?

JRL: I estimated future productivity based on the remaining materials that had been shipped from the UK, and I added this information to proposed future preservation plans. I also visited four stationers and printers within walking distance of the National Records Service in Banjul. I assessed samples of the three materials from the UK and compared them to available products. Unfortunately, no products of a similar quality and specification were available in the capital. I also visited the National Printing and Stationery Corporation who confirmed that the materials we required were very difficult to source within the region, with some potential offered from Senegal but otherwise only the UK. Another feature is that the sourcing of such specialised materials would require the ordering of substantial quantities, which would be beyond the means of the NRS.

IPN: So in the end where will supplies come from?

JRL: You know, it is often the feature of such a mission that the "shelf-life" so to speak of the teaching and the project's potential is limited to the timetable of the visit itself, and so the effect of the investment soon diminishes. Eventually, we identified some suitable card. We did not have any information on the quality, and it was not possible to carry out any form of testing. However, I believe that the opportunity to protect the material from risk will be the priority. I also calculated future packaging requirements for specific collections, and estimated the general costs, so that further applications to donor organisations will be possible.



© JRL



Report of JICPA Survey of preservation resources in Africa 1999 is available

Conducted and edited by Peter R. Coates, President of the friends of the National Library of South Africa, the Survey includes: the complete report of conservation experts and facilities in Africa, the directory of physical and human resources and an index.

It is an indispensable tool for preservation professionals who need to know who is involved in preservation and conservation throughout Africa. A full description of institutions and conservation tools and facilities is provided, together with the background of expert staff. 52 pages.

The English paper version is available from the IFLA-ALP Core Activity at Uppsala University Library <ifla.alp@ub.uu.se> or online at <<http://epa-prema.net/jicpa>>.

L'enquête de 1999 sur la conservation en Afrique vient de paraître

Réalisée et rédigée par Peter R. Coates, Président des amis de la Bibliothèque nationale d'Afrique du Sud, l'enquête comprend le rapport complet sur la conservation, le répertoire des ressources humaines et matérielles et un index. Il s'agit du seul document actuellement disponible sur la conservation et la restauration en Afrique indiquant les coordonnées précises des institutions et des individus et décrivant les activités et les moyens techniques à leur disposition. 52 pages.

La version française est disponible en format papier auprès du Programme ALP à la Bibliothèque de l'Université d'Uppsala <ifla.alp@ub.uu.se> ou en ligne <<http://epa-prema.net/jicpa>>.



Publications

En Español

El Centro Nacional para la preservación y conservación en Chile ha traducido en español y publicado documentos que han sido distribuidos gratuitamente a instituciones chilenas. De cada documento, han sido publicado mil copias. Quedan aún copias que pueden ser distribuidas a otras instituciones in America latina o en España. El unico costo coresponde al envío. Si hay otros países que esten interesados en reproducir nuevamente sus documentos, pueden obtener el permiso contactando la Señora Magdalena Krebs.

The National Centre for preservation and conservation in Chile has translated into Spanish and published a set of issues relating to preservation to be distributed for free among Chilean institutions. One thousand copies of each title have been printed. There are some issues left for other institutions in Latin America or Spain. Only mail costs will be charged. If any other country is interested in reproducing the whole project or some of the titles, permission will be granted. Please contact Magdalena Krebs for further information.

Centro Nacional de Conservación y restauración

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- IFLA
Principios para el Cuidado y manejo de material de bibliotecas



Compilado y editado por Edward P. Adcock con la asistencia de Marie-Thérèse Varlamoff y Virginie Kremp

- Cómo seleccionar colecciones de investigación para la digitalización

Dan Hazen, Jeffrey Horrell,
Jan Merril-Oldham

- La preservación en el mundo digital
Paul Conway

- Protección y puesta en valor del patrimonio de las bibliotecas
Recomendaciones técnicas

Ministero de Cultura y Comunicacion –
Direccion del Libro y la Lectura Francia

- Conservación de fotografía patrimonial
Ilonka Csillag Pimstein

- El manual de preservación de bibliotecas y archivos del Northeast Document Conservation Center

Tercera edición revisada y ampliada
Editado por Sherelyn Ogden

Esta versión se basa en la traducción de la segunda edición realizada por la Biblioteca Nacional de Venezuela, Centro Nacional de Conservación del Papel, Centro regional IFLA-PAC para América latina y el Caribe, Serie Conservaplan n°7 de 1998, e incorpora la revisión y ampliación realizadas por el NEDCC en su tercera edición.

370 páginas. ISBN 956-244-111-3

- Ateliers de micrographie et de numérisation : norme technique et financière

Françoise Houle

Cette norme établit des profils d'ateliers de micrographie et de numérisation pour les pays du Sud et de l'Europe de l'Est. Elle peut servir de guide pour la rédaction de propositions et de projets soumis à des bailleurs de fonds et de référence sérieuse pour les bailleurs de fonds appelés à évaluer et à donner suite aux demandes des institutions. En trouve en annexes, la liste du matériel – en petit équipement, mobilier et consommables - et du personnel requis pour la création d'un atelier de micrographie ou de numérisation, le choix en faveur de l'une ou de l'autre option de reproduction étant clairement explicité.

Avril 2001, 23 pages, ISBN 2-921420-57-0

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Hull, Canada K1A 0M5

Fax : + (819) 953-8439,

acctbief@fox.nstn.ca

- Guidelines for Information about Preservation products

This standard (ANSI/NISO Z39.77-2001) specifies the information that should be included in advertisements, catalogues, and promotional material for products used for the storage, binding or repair of library materials, including books, pamphlets, sound recordings, videotapes, films, compact discs, manuscripts, maps and photographs.

30 pages – ISBN 1880124491

Hardcopy: \$49

NISO Press

4733 Bethesda Avenue, Suite 300

Bethesda, MD 20814, USA

Also available at www.niso.org

- Préserver les objets de son patrimoine



Précis de conservation préventive
Collectif SFIIC – collection Beaux-Arts

Cet ouvrage a été conçu de manière à rendre sa consultation pratique et efficace. La première partie est consacrée à l'environnement et aux facteurs externes de dégradation. Dans la seconde partie sont classés les différents types de biens culturels : métaux, pierre, céramique, verre, vitrail, émaux, mosaïques, objets de fouilles, matériaux organiques, bois, textile, objets et collections, tapisseries, documents graphiques, photographies, documents sonores et audiovisuels, peinture et art contemporain.

Les propriétés de chaque matériau sont présentées ainsi que ses altérations et les mesures de conservation préventives nécessaires. Dans chaque rubrique on trouvera de petits encadrés rappelant des notions simples sur des informations de bases. Rédigé par des spécialistes qui brossent un portrait historique et scientifique selon les matériaux, ce livre, agréable à consulter et à regarder, inaugure une démocratisation du savoir sur la conservation du patrimoine culturel dans son ensemble.

264 pages – ISBN 2-87009-766-237

Pierre Mardaga Editeur

Hayen, 11 - 41470 Sprimont – Belgique

Tél. + 32 4 368 42 42

Fax. + 32 4 368 42 40

• Presse et sauvegarde du patrimoine

The Press and the Safeguard of Heritage



Sous la direction/
Edited by Ghislaine Pardo

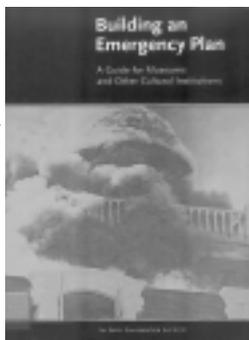
En 1991, l'ICCROM lance le prix Media Save Art avec le concours de la Présidence du Conseil des ministres italiens et de l'UNESCO pour récompenser les journalistes alertant le public sur les multiples dangers menaçant le patrimoine culturel. L'objectif est de rallier le public autour des professionnels pour les aider à sauvegarder le patrimoine et créer des campagnes de sensibilisation sur une information qui circule uniquement en circuit fermé parmi les spécialistes de la conservation. En 2000, l'ICCROM décide de publier quelque 36 articles parus dans la presse internationale, majoritairement en France et en Italie mais parfois aussi au Pérou, en Chine ou au Liban. Les textes, dont les extraits sont traduits en anglais et français, sont regroupés en trois chapitres autour de la détérioration, de l'intervention et de la prévention. Le patrimoine archéologique et artistique est majoritairement présent. Cet effort visant à attirer un plus vaste public pour une prise de conscience individuelle à défaut d'être politique n'en reste pas moins louable.

187 pages – ISBN 92-9077-168-2
ICCROM – Service des ventes/Publications Sales Dept.
Via di San Michele, 13
00153 Roma, Italie
Tel : +39 06 5855 3367
Fax : + 39 06 5855 3349
Publications@iccrom.org

In 1991, ICCROM launched the Media Save Art price with the support from the Presidency of the Italian Council of Ministers and UNESCO to encourage journalists to inform the public of the dangers that threaten cultural property. The aim is to rally public opinion around professionals in order to help them safeguard our heritage, to set up raising awareness campaigns and to widen the audience beyond the restricted community of preservation professionals. In 2000 ICCROM decided to publish some 36 papers printed all over the world by the daily press.

They were translated into French and English, and gathered in 3 chapters: deterioration, response and prevention. It is worth encouraging initiative of the kind, to where individual consciousness is appealed so as not to fall on the deaf ears of politicians.

• Building an Emergency Plan
A Guide for Museums and Other Cultural Institutions



Compiled by Valerie Dorge
and Sharon L. Jones

If you need one book to be more acquainted on disaster planning, this is the book to acquire. Part I is devoted to the director of the institution, part II is for the emergency preparedness manager, part III informs the departmental team leaders who are the safety and security team, the collections team, the buildings and maintenance team and the administration and records team. The book takes each reader by the hand and leads her/him from one duty to another, with exercises suggested and questions to consider. You cannot be lost, all you have to do is follow your guide and do what is written step by step.

1999 – 272 pages – ISBN 0-89236-529-3 (alkaline paper)
The Getty Conservation Institute
1200 Getty Center Drive, suite 700
Los Angeles, California 90049-1684
USA

• An Experiment in Using Emulation to Preserve Digital Information

By Jeff Rothenberg
Koninklijke Bibliotheek, Den Haag,
2000, 70 pages. NEDLIB Report Series 1.
ISBN 9062 59 1442

This study was undertaken in 1999 to test whether emulating obsolete computer hardware on future computers can be used to confer longevity on digital publications by allowing obsolete software to be run on future platforms. A prototype experimental environment for trying out emulation-based preservation was developed. The experimental conditions and environment are described. Results include proposed data,

metadata, procedural models to support emulation-based preservation, as well as recommendations for future experiments and experimental procedures. The analysis is presented in the context of the increasingly accepted Open Archival Information System (OAIS) as well as the NEDLIB adaptation of the OAIS, the Deposit System for Electronic Publications (DSEP), both of which are discussed.

• Metadata for the Long Term Preservation of Electronic Publications

By Catherine Lupovici
and Julien Masanès
NEDLIB Report Series 2.
ISBN 906259146-9

This 22-page report intends to define the core minimum metadata that are mandatory for preservation management purposes, in order to handle large amounts of data items in a changing technological environment.

• Standards for Electronic Publishing An Overview

By Mark Bide & Associates
NEDLIB Reports Series 3. 34 pages.
ISBN 906259147-7

The aim of this report is to provide an overview of the extent to which publishers are using common standards in their electronic publications

• Standards for the Implementation of a Deposit System for Electronic Publications

By Bendert Feenstra
NEDLIB Report Series 4. 39 pages.
ISBN 906259148-5

All NEDLIB reports are available from the Koninklijke Bibliotheek or at <http://www.kb.nl/nedlib/results/NEDLIBterms.pdf>

events

En France et en français

- 4-6 février 2002 - Paris
Les mesures préventives pour la conservation des documents patrimoniaux
Analyser les risques et les causes de dégradations des collections et connaître les mesures préventives pour mettre en œuvre une politique de conservation.
Stage de 3 jours à l'attention des personnels de bibliothèques français, organisé par l'Enssib et la Bibliothèque nationale de France
Contacter Guylène Gérard (enssib) au 04 72 11 44 44

- 27-30 mai 2002- Paris
La conservation à l'ère du numérique
Quatrième journées internationales d'études de l'ARSAG
Deux grands sujets sont au programme : Politique, mise en œuvre et économie de la numérisation des collections d'une part et Conservation, restauration (recherche scientifique, nouvelles techniques) et numérisation des collections d'autre part.
Communications en anglais et en français avec traduction simultanée. Les actes seront distribués lors de la séance d'ouverture.
Françoise Fliedner ou Sibylle Monod
ARSAG: 36, rue Geoffroy-Saint-Hilaire
75005 Paris - France
Tél: + 33 (0) 1 44 08 69 69
Fax: + 33 (0) 1 47 07 62 95
monod@mnhn.fr

- 13-15 juin 2002 - Paris
Visibilité de la restauration, lisibilité de l'oeuvre
5è Colloque international de l'Association des restaurateurs d'art et d'archéologie de formation universitaire
Ce colloque se veut le cadre d'un débat international entre les différents acteurs du patrimoine, qui permettra au-delà d'une comparaison des approches de chacun d'enrichir les aspects théoriques et déontologiques pouvant guider les praticiens et créer de nouvelles directions de recherches.
Langue : anglais et français.
Information et inscription auprès de : Colloque ARAAFU,
c/o N. Richard,
7 rue Port de Fer - 75005 Paris
infocolloque2001@freesurf.fr

- Programme des formations au CCL en Arles pour 2002
Centre de Conservation du Livre
18, rue de la Calade 13200 Arles
Tél: + (0) 4 90 49 99 89
Fax: +(0) 4 90 49 66 11
info@ccl-fr.org www.ccl-fr.org

Restauration

- 13-15 mai
Entretien et petites réparations des documents d'archives et de bibliothèques, 427 €
- 20-22 mai
La restauration d'affiches, 427 €
- 27-31 mai
La réalisation d'une reliure en toile, 535 €
- 10-14 juin
La réalisation d'une reliure en parchemin souple, 535 €
- 24-28 juin
La réalisation d'une reliure en cuir, 535 €

Nouvelles technologies

- Stages gratuits pour les bibliothèques et archives de la région Provence - Alpes - Côte d'Azur*
- 25-26 mars
Préparation d'un cahier des charges pour la numérisation, 275 €
- 27-28 mars
Traitement documentaire des données liées à la numérisation : formats d'images (TIF, JPEG, etc.), normes documentaires, formats texte (TXT, HTML, XML, SGML), 275 €
- 17-18 juin
Numérisation des documents, 275 €
- 19-20 juin
Gestion documentaire informatisée : photothèque, GEID, etc. 275 €

- 17-19 April - Melbourne
AICCM Symposium
The Australian Institute for the Conservation of Cultural Materials will hold its 2002 symposium on the conservation of paper, books and photographic materials at the State Library of Victoria.
More from Ruth Shervington
P.O. Box 5269
Melbourne VIC 3001 Australia
Tel. + 61 3 9208 0327
Fax: + 61 3 9208 0249
ruth.shervington@ngv.vic.gov.au

- 9-10 May - London (UK)
Part and Parcel of the Job: Planning, Packing and Transporting Loans for Exhibitions
A two-day conference to show how institutions carry out complex processes for planning, preparing, packing and transporting items selected for loan to exhibitions.
Curators, technicians, registrars, agents, packing specialists and conservators have been invited to talk.
Institute of Paper Conservation (IPC) - Leigh Lodge, Leigh, Worcester WR6 5LB
Fax : + 44 188 683 36 88
information@ipc.org.uk

- 22- 24 May - London (UK)
Multimedia Archive Preservation
A Practical Workshop
Eighty percent of audio and video archive content is at risk, according to the results of the EC project PRESTO. Unless preservation procedures are funded and implemented quickly, unique heritage and commercially valuable material will be lost. The workshop will provide in ten concentrated days, the combined experience of the major European broadcast archives, and the new technology developed by PRESTO.
Themes covered: funding; selection, preservation factory; sustainability; online and Internet; the small archive; commercial resources, new technology.
Organised by IASA, FIAT, PRESTO and ECPA.
Cost: 250 euros for ten days, accommodation excluded. Free for PRESTO, IASA and FIAT members.
How to register: send an email to richard.wright@bbc.co.uk or adrian.williams.01@bbc.co.uk
More from the ECPA.
Tel. + 31 20 551 08 39
Fax + 31 20 620 49 41
www.knaw.nl/ecpa

- 27-30 May - Paris
Preservation in the Digital Age
The Fourth ARSAG International Symposium
Two major topics will be discussed: First, Policy implementation and economics of the digitisation of collections; second, the preservation, conservation (scientific research, new techniques) and digitisation of collections.
Papers will be delivered in English and in French. Proceedings will be available to all participants at the beginning of the Symposium.
Françoise Fliedner ou Sibylle Monod
ARSAG: 36, rue Geoffroy-Saint-Hilaire - 75005 Paris - France
Tel: + 33 (0) 1 44 08 69 69
Fax: + 33 (0) 1 47 07 62 95
monod@mnhn.fr

- 9 June - 9 July - Honduras
15 July - 15 August
South Africa

Spend the summer of 2002 helping communities gain access to the information they need to build a better future. As an Inform the World (ITW) Volunteer Librarian, you can use your professional skills to help rural Librarians in South Africa or Honduras.

The World Library Partnership (WLP) is a non-profit organisation dedicated to building global understanding by promoting literacy, learning and access to information. We believe that libraries empower individuals and enrich communities and we advocate for sustainable, community-based libraries in developing areas of the world. By supporting libraries and librarians, WLP mobilises the power of information to make the world a better place for all.

The Inform the World Program will train and place professional librarians from around the world. The volunteers will conduct practical service projects determined by the needs of their South African and Honduran host libraries. After returning home, the volunteers also work with WLP to design projects that will continue to help the libraries they visited.

WLP invites professional librarians and library school students from all disciplines to apply. We will also have placements for several Information Technology professionals. Flexibility, a sense of adventure and the ability to adapt to very basic living conditions are a must. Basic conversational Spanish is required for the Honduras programme. Fluency in English is required for the South Africa programme.

The cost of the trip is US \$2,200. Airfare is not included.

The Application Deadline is January 18th, 2002.

Early applications are welcome. We will interview qualified applicants by phone and announce the final selections by the end of February.

Contact Maggie Hite
hitem@ils.unc.edu
or Mary Alice McCarthy
mamccart@email.unc.edu

The World Library Partnership, Inc.
1028 Bahama Road, Bahama, NC 27503 USA
Tel. + 9 19 479 0163
<http://rtpnet.org/wlp/itw2002/ITW02.htm>

PAC CORE PROGRAMME

USA and CANADA

LIBRARY OF CONGRESS
Preservation Directorate
Washington, D.C. 20540 USA

Director: Mark ROOSA
☎ (1) 202.707.7423
Fax: (1) 202.707.3434
E-mail: mroo@loc.gov

WESTERN EUROPE, AFRICA, MIDDLE EAST

INTERNATIONAL FOCAL POINT
BIBLIOTHEQUE NATIONALE DE
FRANCE Quai François Mauriac
75706 Paris Cedex 13 FRANCE

Director: Marie-Thérèse VARLAMOFF
☎ (33) (0)1 53.79.59.70
Fax: (33) (0)1 53.79.59.80
E-mail:
marie-therese.varlamoff@bnf.fr

EASTERN EUROPE and THE CIS

LIBRARY FOR FOREIGN LITERATURE

Nikolo-Jamskaya Street 1
109 189 Moscow RUSSIA

Director: Galina KISLOVSKAYA
☎ (7) 095.915.3621
Fax: (7) 095.915.3637
E-mail: gkislov@libfl.msk.su



LATIN AMERICA and THE CARIBBEAN

BIBLIOTECA NACIONAL DE VENEZUELA
Centro Nacional
de Conservación Documental
Edificio Rogi, Piso 1, Calle Soledad
Zona Industrial la Trinidad
Caracas, VENEZUELA

Director: Aurelio ALVAREZ
☎ (58) 2.941.4070
Fax: (58) 2.941.4070
E-mail: dservtec@bnv.bib.ve

ASIA

NATIONAL DIET LIBRARY
Preservation Planning Office
10-1 Nagatacho 1-chome
Chiyoda ku, Tokyo
JAPAN

Director: Masashi MURAKAMI
☎ (81) 3.3581.2331
Fax: (81) 3.3592.0783
E-mail: pacasia@ndl.go.jp

OCEANIA and SOUTH EAST ASIA

NATIONAL LIBRARY
OF AUSTRALIA
Section of the Preservation
Services Branch
Canberra Act 2600
AUSTRALIA

Director: Colin WEBB
☎ (61) 26.262.1662
Fax: (61) 26.273.4535
E-mail: cwebb@nla.gov.au

Declaración de Lisboa

Los directores de las Bibliotecas Nacionales de Iberoamérica presentes en la XII Asamblea General de ABINIA (Asociación de Estados Iberoamericanos para el desarrollo de las Bibliotecas Nacionales de Iberoamérica) celebrada en Lisboa, Portugal, del 17 al 19 de octubre del presente año, deciden:

Considerando los altos ideales humanistas y culturales de su misión, los objetivos generales de la propia asociación y de organismos internacionales como la UNESCO.

Considerando el deterioro de la situación internacional, los peligros crecientes que amenazan la paz mundial, la comprensión y colaboración entre todos los hombres y mujeres del planeta, conscientes de lo que esto representa para la educación, el patrimonio y la herencia cultural, emitimos y suscribimos la presente:

Declaración de Lisboa

Expresamos nuestra absoluta condena al terrorismo, sea cual fuese la forma, credo o ideología que éste diga sustentar, por considerarlo lesivo a la Humanidad y a los bienes culturales y patrimoniales, como testimonian las más de 80 bibliotecas desaparecidas entre los escombros del World Trade Center de New York, tras los ataques del pasado 11 de septiembre.

Rechazamos el uso de la violencia como recurso para solucionar los problemas internacionales y afirmamos que sólo el diálogo ha de restaurar el equilibrio y la paz entre las naciones, creando condiciones para la colaboración entre los hombres y el avance de la cultura.

Consideramos como inadmisibles, y rechazamos como un grave atentado contra las esencias profundas del ser humano y de la sociedad, cualquier daño que se cause sea cual sea la razón o pretexto que se esgrima, a la herencia cultural de la Humanidad, y muy especialmente a las bibliotecas, archivos, museos, monumentos y cualquier colección patrimonial, y apelamos con vehemencia a la comunidad internacional y, muy especialmente, a los profesionales de la información y la cultura, y a sus organizaciones, para la concertación de esfuerzos que puedan evitar la repetición de tan lamentables sucesos.

Nos comprometemos a intensificar nuestra labor por el aumento de la cultura y el nivel educacional de nuestros pueblos, y de todos los pueblos del mundo, posibilitando la difusión de una cultura de paz entre los hombres y mujeres de la Tierra, en el espíritu proclamado por la UNESCO.

En medio de los graves acontecimientos recientes, nos alientan y reafirman nuestras convicciones expresadas en la presente "Declaración", la reapertura de la "Biblioteca de Alejandría" en Egipto, símbolo de la perdurabilidad de la cultura y la sabiduría, y de la victoria del saber y la paz sobre la guerra y los desastres, recordatorio de lo expresado por un pensador de nuestra región: "Ser culto es el único modo de ser libres, y ser buenos es el único modo de ser dichosos" (José Martí)

Dada en la ciudad de Lisboa, Portugal, a los 19 días del mes de octubre del 2001.

Yamilette Solano N.
Manlio Argueta
Biblioteca Nacional de Costa Rica
Biblioteca Nacional de El Salvador

Nitzia Barrantes
Carlos Reis
Biblioteca Nacional de Panamá
Biblioteca Nacional de Portugal

Ramón A. Budet
Celia Zaher
Sistema de Bibliotecas
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Gonzalo Catalán
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Andrés Mateos
Eliades Acosta
Biblioteca Nacional Rep. Dominicana
Biblioteca Nacional de Cuba

Sinesio López
Vicente Quirarte
Biblioteca Nacional del Perú
Biblioteca Nacional de México