# International Preservation News

A Newsletter of the IFLA Core Activity on Preservation and Conservation

IFLA PAC

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International Preservation News is a publication of the International Federation of Library Associations and Institutions (IFLA) Core Activity on Preservation and Conservation (PAC) that reports on the preservation activities and events that support efforts to preserve materials in the world's libraries and archives.

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## editorial

We were all deeply shocked by the terrible disaster that struck several countries in Asia on December 26th, 2004. Information from colleagues in different areas stressed the need for adequate and efficient assistance. To provide a mechanism for professional responses to the tsunami disaster and to be better positioned to prepare for and respond to future disasters, IFLA President-elect, Alex Byrne, has drawn up a proposal for an IFLA Relief and Development Partnership. It involves the establishment by member associations of national foundations and other mechanisms to gather money and co-ordinate resources with IFLA specialist offices (especially ALP, PAC and the Regional Offices) providing advice and assistance to ensure that aid will be targeted appropriately. The IFLA Relief and Development Partnership (RDP) precludes the creation of new foundations. Instead, it is proposed to create National IFLA Foundations for Relief and Development within existing National IFLA Foundations established in a number of countries to assist IFLA Congresses. These foundations will be re-purposed to provide funds to respond to disasters, aid reconstruction and assist the development of library and information services.

The annual meeting of the IFLA Section on Newspapers and the International Conference on Newspapers which took place at the National Library of Australia in Canberra last February underlined the fact that more and more newspapers and serials publications tended to be published exclusively on-line. Since 1989, "International Preservation News"(IPN) has been published and distributed on paper and since 1997 both on paper and on-line through the IFLANET. Although the cost of a paper version is high and its distribution represents quite an expense and a workload for each of the PAC Regional Centres I have been struggling to maintain the paper version because I am conscious that colleagues from developing countries might have some difficulty in accessing the Internet. I also believe that having a complete collection on paper is more comfortable than trying to read pages and pages on a screen; and is easier or safer to conserve as well, at least for the moment.

IPN reports on the multiple preservation activities and events throughout the world and reflects preservation strategies implemented worldwide to safeguard the documentary heritage conserved in our libraries. Each regional PAC centre has accepted to participate in providing articles and news, in elaborating and regularly updating a mailing list of institutions and colleagues concerned by the subject in their specific region and in distributing IPN and other PAC publications. The active participation of the PAC regional centres is a key issue and the only way IPN can survive. Let us not forget it.

**Marie-Thérèse Varlamoff**
*IFLA-PAC Director*

## éditorial

Photo : Sylvie Biscioni

Nous avons tous été terriblement choqués par la catastrophe survenue en Asie en décembre dernier. Les informations en provenance des différents endroits touchés que nous ont envoyées nos collègues témoignent du besoin d'une assistance efficace et ciblée. Afin de doter la profession de mécanismes pour réagir au tsunami et d'être mieux en mesure de se préparer à faire face à d'éventuelles catastrophes à venir le futur président de l'IFLA, Alex Byrne, a rédigé un projet de Partenariat IFLA de Secours et Développement (IFLA Relief and Development Partnership). Ce projet comprend l'établissement par les associations membres, de fondations nationales ainsi que d'autres mécanismes pour la collecte de fonds et la coordination des ressources en concertation avec les instance spécialisées de l'IFLA (en particulier ALP, PAC et les bureaux régionaux) qui fourniraient conseils et support, pour que les aides soient correctement réparties et distribuées. Ce Partenariat IFLA de Secours et Développement n'implique pas la création de nouvelles fondations. Au contraire, on propose de créer des Fondations nationales IFLA de secours et développement au sein des Fondations nationales IFLA qui ont été établies dans plusieurs pays pour l'organisation des Congrès IFLA. Ces fondations se re-concentreront sur la récolte de fonds pour faire face aux catastrophes, aider à la reconstruction et favoriser le développement des services d'information et des bibliothèques.

La réunion annuelle de la Section IFLA des journaux et la Conférence internationale sur les journaux qui se sont déroulées à la Bibliothèque nationale d'Australie à Canberra en février dernier ont souligné la tendance grandissante qui consiste à publier journaux et périodiques exclusivement en ligne. Depuis 1989, « International Preservation News » (IPN) a été publié et distribué en version papier et, depuis 1997, à la fois sur papier et en ligne grâce à IFLANET. Bien que le coût d'une publication papier soit élevé et que sa distribution représente une dépense importante et une surcharge de travail pour tous les centres régionaux PAC, je me suis efforcée de défendre et de maintenir une version papier, consciente que nombre de collègues dans les pays en développement n'ont pas facilement accès à Internet. Je pense également qu'il est plus confortable de consulter une collection complète sur papier que d'essayer de lire des pages et des pages sur un écran. Quant à la conservation de toute une collection papier, elle est, a mon sens, plus aisée et plus sûre à gérer, au moins pour l'instant.

IPN traite des nombreuses activités et événements liés à la conservation dans le monde ; la revue reflète les stratégies utilisées dans les différents pays pour sauvegarder le patrimoine documentaire de nos bibliothèques. Chaque centre régional PAC a accepté d'apporter sa contribution et de fournir articles et nouvelles, de dresser et mettre à jour régulièrement la liste des institutions et des collègues de sa région intéressés par la conservation et de distribuer IPN ainsi que les autres publications du PAC. La participation active des centres régionaux PAC est le fer de lance de notre politique de publication et la seule manière de continuer la parution d'IPN. Ne l'oublions pas.

**Marie-Thérèse Varlamoff**
*Directeur d'IFLA-PAC*

# Deacidifying Books with 'CSC Book Saver' A Preservation Project of the Royal Belgian Institute of Natural Sciences (RBINS)



**by Laurent Meese**
Librarian, RBINS

## Introduction

A large part of our written inheritance is in danger. Acidification is without any doubt the most important cause of paper deterioration. Up to 80% of books and documents risk acid decay. In Belgium, mass deacidification has never been used before as a preservation treatment. Lack of time, and most of all, lack of financial governmental support are certainly key factors for this insufficient stock preservation. Library budgets are under heavy pressure by ever raising subscription rates and catalogue automation and collection digitisation are prior goals of most libraries. The necessity of mass deacidification is not generally acknowledged. But our present choices in conservation and preservation will have a significant impact on our future. Do we emphasize access via digitisation (which is not a preservation medium) or do we preserve the document in its original state and in usable condition for several decades? Successful projects in our neighbouring countries (the Netherlands and Germany) prove that mass deacidification has its limitations but offers many possibilities to save our documents from irrevocable decline.

In the period 2003-2004 the scientific library of the Royal Belgian Institute of Natural Sciences (RBINS-library) was the first Belgian library to lead a deacidification project treating more than 1 200 books. For this project we used the 'Book Saver' technology, developed by the Spanish Company CSC. This article provides a brief and practically oriented description of the RBINS-library project: damage assessment, selection, logistics and registration. Costs, results and quality control are included as well. The final conclusions are encouraging.

## 'CSC Book Saver'

The technology of 'CSC Book Saver' was developed by a team of researchers under leadership of Dr. R. Areal, professor of the Department of Chemical Engineering, and manager of the Technological Center for Restoration and Conservation of Books and Documents at the Polytechnic University of Catalonia. CSC or in full 'Conservacíon de Sustratos Celulosicos S. L.' was set up in May 1999 to commercialise the process. The Belgian chemical and pharmaceutical Group 'Solvay' is the major shareholder since March 2000 in CSC, and produces HFC 227, the gas that is used as carrier during the process. Note also that Preservation Academy Leipzig (PAL) has obtained exclusive licence rights for the 'CSC Book Saver' process for Germany, Austria and Eastern Europe. The books of the RBINS-library were divided in three contingents: two being treated in Barcelona, the third in Leipzig, with supervision from PAL.

*Description of the 'Book Saver' Method*

The 'CSC Book Saver' process is based on the use of a machine equipped with a treatment chamber, where the material to be treated is brought in contact with a reagent that penetrates the paper and neutralizes the acidity. It is a liquid phase deacidification process. The deacidification solution is comprised of:

- carbonated magnesium di-n-propylate, the effective neutralizing agent (NA),
- 1,1,1,2,3,3,3 – heptafluoropropane (HFC 227), the carrier[1],
- n-propanol (< 3%).

Before the treatment the cellulosic material is slightly dried by gently heating it to about 40°C, which makes it lose about 1,5% of its moisture weight.

Carbonated magnesium propylate is dissolved in heptafluoropropane (HFC 227) and used in a non-watery impregnation process. Selection and control of each original are an integral part of the deacidification treatment, thanks to small treatment batches (40 kg each) and short treatment times.

1 The HFC 227 is an odourless and colourless gas with a vapour pressure of 3,9 bar at 20°C and it is used as liquid under pressure in the treatment chamber. It is non-flammable and non-toxic, since 1996 it is extensively used for pharmaceutical inhalers. HFC 227 has no ozone depletion potential and has been marketed since 1991 as substitute for CFCs in refrigeration applications.

The deacidification treatment consists of the following phases:
• loading without unbinding of the books in the unit;
• drying or dehydration in the treatment chamber;
• impregnation of the cellulosic material;
• extraction;
• carrier recovery.

The complete process lasts 3 to 4 hours with a maximum volume of HFC 227 and with the maximum quantity of books. Drying the material takes 2 to 4 hours. The deacidification process is fully automated. The machine has pre-programmed cycles for treating different types of documents.
The equipment has been designed for library and archive use, in order to avoid risks and cut transport and treatment costs. However, in the case of the RBINS-library project, books were transported to CSC's facilities or its licensee PAL to be treated there. *In situ* treatments are recommended for larger amounts of books.

## Deacidification Project of the RBINS-Library

The RBINS-library has a very rich collection of books and about 7 500 journals and periodical titles, with 2 000 titles still running, totalling 10 miles of bookshelves. The Filing Cabinet owns about 35 000 geographical maps. There is also the famous 'Dautzenberg collection' with over 7 000 volumes concerning conchology. The composition of the library collection is determined by the scientific research activities of the Institute. Traditional interests include biology and palaeontology, but also anthropology, prehistory, mineralogy and sedimentology. Regarding biology, the main research domains are taxonomy and nature conservation, with a focus on biodiversity. The oldest books of the collection date from the XVI$^{th}$ and XVII$^{th}$ centuries. About 25 000 publications date from the period 1840-1950 and are thus threatened with acidification. In 2003 the RBINS-library started its deacidification project, its ambition was to select over 1 200 books for treatment. Partners were 'CSC Book Saver' / Preservation Academy Leipzig and sponsor Solvay N. V.

### 1. Evaluation and Selection

A descriptive file card for each work from the period 1840-1950 was filled in by the staff of the RBINS-library. The following elements were described: format and collation, paper, illustrations / plates / drawings, binding construction, stability of the bookbinding, damage-indication (with indication of priority). Because of lack of time, the tests were limited to determination of the pH of the paper (with a pH indicator-pen). The presence of lignin and alum was not tested. Books of which the paper already appeared to be in inferior state (brittle, yellow paper) were tested with a surface pH-meter. Works with a pH less than 3 are too degenerated to support a 'Book Saver' treatment. If the item to preserve is in an advanced state of deterioration and the essential intrinsic properties of the paper have been lost, additional stabilization processes must be applied.
Selection criteria for deacidification have been established as follows:
• the threatened period (1840-1950);
• physical state of the document: pH between 3 and 6.

Concerning contents the following criteria were determinating:
• the scientific value of the work;
• the utility and use frequency;
• the uniqueness of the work.

In total 1 205 books (1 703 kg) were given the highest priority for treatment. 65 volumes with colour-illustrations (100 kg) were selected for a manual treatment with the 'CSC Book Saver' spray. Because of time pressure – the project had to start for budgetary reasons in 2003 – no back-up copies (on micro file card) could be made of the selected material.

### 2. Logistics and Registration

After the selection, books were packed in synthetic crates delivered by CSC. The necessary precautions were taken to prevent the books being damaged. The transport to Barcelona and Leipzig was organised by CSC. The books were divided in three different cargos, for which an insurance had been taken. Each sealed and numbered box contained an inventory list. Each book or bundle was individually identified and inven-

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Dautzenberg library

toried, thus ensuring the traceability of the entire preservation process.

## 3. Costs

Total transport and insurance expenses were: 10 257, 80 e (excl. VAT).
Treatment of the books: 37 925, 84 e (excl. VAT).
Total project budget: 48 183, 64 e (excl. VAT) for treatment of 1 205 volumes.[2]

## 4. Results and Quality Control

The effectiveness of the treatment is measured by the following objectives:

- 98% of the books must be deacidified (pH raised to 7-10);
- 95% of the books must have an alkaline reserve of 1.5% eq. CaCO3.

Quality controls are carried out in-house at CSC and PAL. The deacidification results are checked immediately after the treatment using previously inserted reference papers. This general test with indicators is followed by a standard surface pH measurement. The MgCO3 reserves of the paper were measured on behalf of PAL in an independent external analysis laboratory (Wolfener Analytik GmbH). The RBINS-library staff also measured the pH at three spots of randomly chosen pages with a PEL flat surface probe pH meter.
The results of CSC concerning the first two contingent treated books and of PAL concerning the third cargo books lead to these conclusions: the pH of manually treated books (65 volumes) had raised to an average of 9.1, mechanically treated books show the same tendency (1 140 volumes): pH risen to an average of 8.78 (see fig.).
As regards the alkaline reserve, the distribution of magnesium was measured with a scanning electron microscope (SEM). The average alkaline reserve in the different sections was between 1,16 and 2,28% .
Contractual fixed objectives were therefore reached: more than 98% of the books were deacidified and more than 95% of the books obtained an alkaline reserve of 1.5%.

## 5. Side Effects

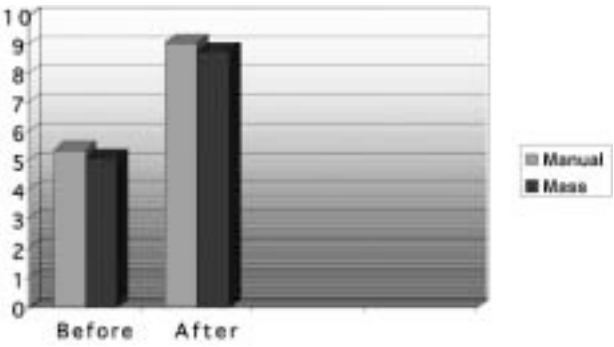
*Aesthetic Impact*
Further research and control need to be carried out to enable a more detailed reporting. Here is a first summary of the aesthetic impact on treated books:
– stains (14 volumes);
– ink bleeding (2 volumes);
– ink movement (13 volumes);
– faded pictures (8 volumes);
– sticked sheets (1 volume).

Damage is observed in 38 volumes or 3.1% of all the treated books: especially ink movement, ink bleeding and solkane stains. Additionally, a white powder was noticeable on some leather bindings. The treated books had a very pronounced chemical fragrance, which decreased after some weeks. Some works were not treated preventively because of possible detrimental side effects: it concerns 31 volumes (2.2%), mainly from serials where treated books had shown above mentioned side effects.

*Torn Pages or Damaged Covers*
No striking cracks were determined in the 46 test books. Four volumes showed a damage of the leather binding: it was broken or coming loose. With the rise in pH, leather is becoming somewhat degreased. Afterwards, a wax treatment is necessary.

*Inhomogeneous Neutralization of Acid*
The close books were placed upright in trays in the 'Book Saver' unit and remained static during the whole cycle. Due to the construction of a book, the impregnation of the neutralizing agent is not always equally diffused homogeneous through the cellulose material. The RBINS-library results and checks performed by PAL confirm the difference of pH at different places on the pages. However, the differences are too inconsistent to draw conclusions. Moreover, the pH has risen sufficiently on every spot of the tested pages.

**pH results**




2 The RBINS-library was only able to finance this preservation project via the sponsoring of Solvay (55 % of the project budget).

## Conclusion

Mass deacidification as a tool to preserve library and archival materials, is comparatively seldom used in Belgium. The RBINS-library fulfilled a role as pioneer and launched a deacidification project (2003-2004). Over 1 200 books were treated using the technology of 'CSC Book Saver'. The value of the pH measured after manual and mechanical treatment increased significantly. The anticipated and contractually determined objectives were obtained: more than 98% of the books were deacidified and more than 95% of them obtained an alkaline reserve of 1.5%. The secondary effects, as far as they are perceptible at this point in time, are negligible: in only 3.1% of the cases, aesthetic and mechanical damages were shown. The studies done abroad confirm meanwhile that mass deacidification is one of the core technologies to preserve a document in its current state. Being part of a global conservation program - with microfilming, digitisation, optimisation of the storage conditions, and restoration - mass deacidification offers a fitting remedy to save a considerable amount of our written cultural heritage from being lost forever.



Deacidification unit

## Desacidificación en masiva en el Instituto real de Bélgica para las ciencias naturales

La Biblioteca científica del Instituto real de Bélgica para las ciencias naturales posee valiosas colecciones, entre las que se encuentran 25 000 documentos publicados entre 1840 y 1950, cuyo papel puede acidificarse. Por ello, de 2003 a 2004 se llevó a cabo una operación de desacidificación, para la cual se aplicaron varios criterios para la selección de las 1 200 obras tratadas:

- fecha de publicación (1840-1950);
- estado físico del documento (el pH debía estar comprendido entre 3 y 6);
- valor científico;
- frecuencia de uso;
- carácter único de la obra.

Para la realización del proyecto se escogió el procedimiento 'Book Saver', comercializado por la empresa española CSC (Conservación de Sustratos Celulósicos).
Este procedimiento consiste en que la obra a tratar se pone en contacto con un reactivo que penetra en el papel y neutraliza la acidez que contiene. En condiciones de máximo rendimiento, la operación toma de tres a cuatro horas.
Se han obtenido resultados muy satisfactorios, ya que más del 98% de las obras han sido desacidificadas y más del 95% han enriquecido su reserva alcalina en un 1,5%.
A pesar de algunos daños menores que puede ocasionar el tratamiento, la desacidificación en masa representa un medio eficaz para salvaguardar el patrimonio cultural.

# Désacidifier les livres avec « CSC Book Saver » Un projet de conservation à l'Institut royal de Belgique pour les sciences naturelles (RBINS)

par Laurent Meese
Bibliothécaire, RBINS

## Introduction

Une part importante de notre patrimoine écrit est menacée. Le papier devient acide ce qui constitue sans aucun doute la principale cause de sa détérioration. Jusqu'à 80% des documents menacent de s'acidifier. En Belgique, la désacidification de masse n'a jamais été utilisée auparavant comme mesure de conservation. Le manque de temps, et plus que tout, l'insuffisance des aides de l'Etat, sont certainement les raisons majeures de ce déficit en matière de conservation courante. On diminue fortement les budgets consacrés aux bibliothèques en leur faisant augmenter toujours davantage leurs droits d'inscription et l'automatisation des catalogues ou la numérisation des collections deviennent des priorités pour beaucoup d'entre elles. On ne reconnaît généralement pas la nécessité de la désacidification de masse. Mais les choix que nous faisons aujourd'hui en matière de préservation et de conservation auront des résonnances significatives sur notre avenir. Devons-nous favoriser l'accès aux documents grâce à la numérisation (qui n'est pas une mesure de conservation) ou devons-nous conserver le document sous sa forme originale et en bon état pour plusieurs décennies ? Des projets ont été menés avec succès dans les pays voisins (Pays-Bas et Allemagne) ; ils montrent que si la désacidification de masse a ses limites, elle offre aussi de nombreuses possibilités pour sauver nos documents de détériorations irrévocables.
De 2003 à 2004, la Bibliothèque scientifique de l'Institut royal de Belgique pour les sciences naturelles (RBINS) a été la première à mener en Belgique un projet de désacidification sur 1200 ouvrages. Pour réaliser ce projet, nous avons choisi le procédé « Book Saver » développé par l'entreprise espagnole CSC (Conservation de matériaux cellulosiques). Cet article propose une brève description du projet, orientée sur ses aspects pratiques : évaluation des détériorations, sélection, aspects logistiques et inventaire des documents ; il fait également un point sur les aspects budgétaires, les résultats et le contrôle de qualité. Les conclusions sont encourageantes.

## Le procédé « CSC Book Saver »

Le procédé « CSC Book Saver » a été développé par une équipe de chercheurs sous la direction du Dr. Areal, Professeur au Département d'ingénierie chimique et Directeur du Centre technologique pour la restauration et la conservation des documents à l'Université polytechnique de Catalogne.
CSC (Conservation de matériaux cellulosiques) a été créé en Mai 1999 pour commercialiser ce procédé. Le groupe belge Solvay spécialisé dans les produits chimiques et pharmaceutiques est le principal actionnaire de l'entreprise depuis mars 2000 et fabrique le gaz HFC 227 qui est utilisé comme conducteur pendant l'opération. Il faut remarquer également que l'Institut de conservation de Leipzig (PAL) a obtenu l'exclusivité pour l'exploitation du procédé « CSC Book Saver » en Allemagne, en Autriche et en Europe de l'Est. Les livres de la bibliothèque ont été divisés en trois ensembles : deux, traités à Barcelone, le troisième, à Leipzig avec supervision du PAL.

*Description de la méthode « Book Saver »*
Le procédé « CSC Book Saver » repose sur l'utilisation d'une machine dotée d'une unité de traitement où les documents sont mis en contact avec un réactif qui pénètre le papier et en neutralise l'acidité. C'est un procédé de désacidification à action liquide. La solution est constituée de :

- di-n-propylate de magnesium gazeux, l'agent réellement neutralisant (NA),
- 1,1,1,2,3,3,3 - heptafluoropropane (HFC 227), le conducteur[1],
- n-propanol (< 3%).

Avant le traitement, le matériau cellulosique est légèrement asséché à une température d'environ 40°C, ce qui lui fait perdre environ 1,5% de sa teneur en hygrométrie.

Le propylate de magnesium gazeux est dissous dans l'heptafluoropropane (HFC 227) et utilisé selon un processus d'imprégnation non aqueux. La sélection et le

1 Le HFC 227 est un gaz inodore et incolore à la pression de 3,9 bar à 20°C. Il est utilisé comme liquide sous pression dans l'unité de traitement. Il est inflammable et non toxique. En effet, il est utilisé depuis 1996 de façon intensive dans l'industrie pharmaceutique pour la fabrication des inhalateurs. Le HFC 227 ne favorise pas la diminution de la couche d'ozone et a été identifié depuis 1991 comme pouvant remplacer le CFC dans la réfrigération.

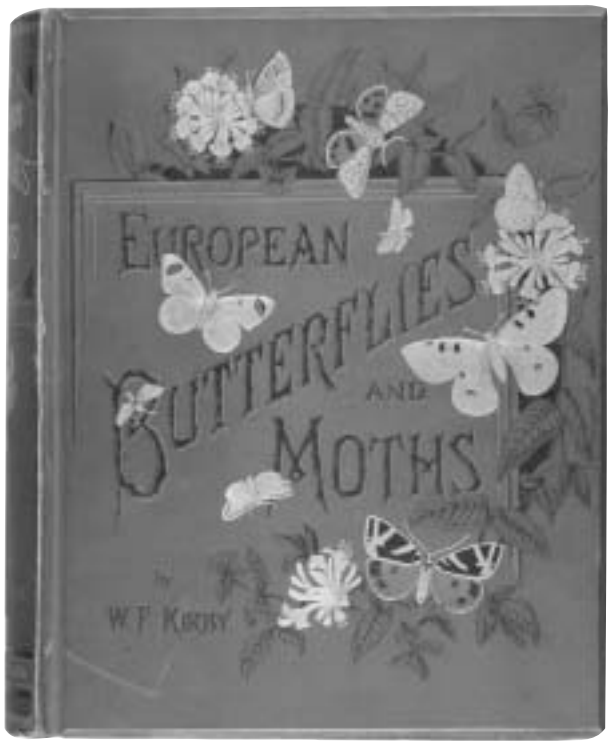
contrôle de chaque document original font partie intégrante de l'opération de désacidification puisqu'il s'agit de petits lots (40 kgs chacun) et de temps de traitement très courts.

Le traitement comprend les étapes suivantes :
- chargement des ouvrages avec leur reliure dans l'unité de traitement ;
- séchage et déshydratation dans l'unité de traitement ;
- imprégnation du matériau cellulosique ;
- retrait des documents ;
- récupération des documents.

La totalité de l'opération dure de trois à quatre heures à plein rendement (maximum de HFC 227 et quantité maximum d'ouvrages). On compte deux à quatre heures pour sécher les documents. Le processus est entièrement automatisé. L'appareil comporte différents cycles de traitement pré-programmés selon le type de documents. Il a été conçu à l'usage des bibliothèques et des archives afin de minimiser les risques, les coûts de transport et de traitement. Cependant, dans le cas de la bibliothèque de l'Institut royal de Belgique pour les sciences naturelles, les livres ont été transportés dans les locaux de CSC ou du PAL pour y être traités. Pour les grandes quantités d'ouvrages, les traitements *in situ* sont recommandés.

## Le projet de désacidification de la bibliothèque de l'Institut royal de Belgique pour les sciences naturelles

La bibliothèque abrite une très riche collection de livres et environ 7500 titres de journaux et de périodiques dont 2000 titres courants sur seize kilomètres de rayonnages. Le meuble classeur comprend environ 35 000 cartes géographiques. Rappelons également la célèbre collection « Dautzenberg » qui compte plus de 7000 ouvrages spécialisés en conchyliologie.
La composition du fonds est fonction des activités de recherche scientifique de l'Institut. Les domaines de recherche sont traditionnellement la biologie et la paléontologie mais aussi l'anthropologie, la préhistoire, l'étude des minerais et des sédiments. En ce qui concerne la biologie, les principaux domaines de recherche sont la taxonomie et la protection de l'environnement, avec un intérêt plus particulier pour la bio diversité. Les ouvrages les plus anciens remontent aux XVI$^{e}$ et XVII$^{e}$ siècles. Environ 25 000 publications sont parues entre 1840 et 1950 et menacent donc de devenir acides. En 2003, la bibliothèque a commencé son projet de désacidification avec l'ambition de sélectionner plus de 1200 ouvrages à traiter. Elle a choisi comme collaborateurs CSC, PAL et le sponsor Solvay N. V.



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Ouvrage désacidifié par traitement à l'aérosol

### 1. Evaluation et sélection

Une fiche descriptive papier correspondant à chaque ouvrage de la période 1840-1950 a été remplie par le personnel de la bibliothèque. Elle comprenait les éléments suivants : formation et collation, papier, illustrations / planches / dessins, type de reliure, solidité de la reliure, mention des détériorations (avec mention des priorités). Par manque de temps, les tests se sont limités à déterminer le pH du papier (avec un stylo indicateur de pH). On n'a pas identifié la présence de lignine et d'alun. Les livres dont le papier semblait déjà en mauvais état (cassant, jauni) étaient testés avec un pH mètre en surface. Les ouvrages dont le pH est inférieur à 3 sont trop détériorés pour supporter un traitement « Book Saver ». Si le document à conserver est dans un état avancé de détérioration et que le papier a perdu ses qualités intrinsèques essentielles, on doit appliquer des mesures de stabilisation supplémentaires. Les critères de sélection pour les documents à désacidifier ont été établis comme suit :
- période menacée (1840-1950) ;
- état physique du document : pH compris entre 3 et 6.

Quant au contenu, les critères suivants étaient déterminants :
- valeur scientifique de l'ouvrage ;
- utilité et fréquence d'utilisation ;
- caractère unique de l'ouvrage.

Au total, on a donné priorité absolue au traitement de 1205 livres (1703 kgs). 65 volumes comprenant des illustrations en couleur (100 kgs) ont été sélectionnés pour un traitement manuel à l'aérosol « CSC Book



Ouvrage du XIXe siècle traité avec succès

Saver ». Compte tenu de l'urgence, il a fallu commencer le projet pour des raisons financières en 2003 ; il n'a pas été possible de faire des copies de sauvegarde (ni de microfiches) des documents sélectionnés.

## 2. Aspects logistiques et inventaire des documents

Après avoir été choisis, les livres ont été empaquetés dans des emballages synthétiques fournis par CSC. Les précautions nécessaires ont été prises pour que les livres ne soient pas endommagés. Le transport à Barcelone et Leipzig a été organisé par CSC. Les livres ont été répartis dans trois chargements différents pour lesquels une assurance avait été souscrite. Chacune des boîtes fermée et numérotée comportait un inventaire. Chaque livre ou lot de livres a été identifié individuellement et inventorié, la traçabilité de l'opération étant ainsi assurée du début à la fin.

## 3. Coûts

Totalité du transport et assurances : 10 257,80 e HT
Traitement des livres : 37 928,84 e HT
Coût total du projet : 48 183,64 e HT pour le traitement de 1205 ouvrages.[2]

## 4. Résultats et contrôle de qualité

L'efficacité du traitement se mesure en fonction des objectifs suivants :

- 98 % des livres doivent être désacidifiés (pH élevé à 7-10) ;
- 95 % des livres doivent avoir une réserve alcaline de 1,5 % équivalent en carbonate de calcium (CaCO3).

Les contrôles de qualité sont effectués dans les locaux de CSC et du PAL. On vérifie le résultat immédiatement après le traitement grâce à des feuilles tests qui ont été insérées au préalable dans les documents. Ce test d'ensemble avec indicateurs est suivi d'un test standard du pH en surface. Les réserves du papier en MgCO3 ont été mesurées pour PAL par un laboratoire d'analyses extérieur indépendant (Wolfener Analytik GmbH). Le personnel de la bibliothèque a également mesuré le pH en trois endroits sur des pages choisies au hasard avec un pH mètre avec une électrode combinée à tête plate.
Les résultats de CSC concernant les deux premiers lots de livres traités et ceux de PAL concernant le troisième ont permis les conclusions suivantes : le pH des livres traités manuellement (65 volumes) avait augmenté jusqu'à une moyenne de 9,1. Les livres traités mécaniquement montraient la même tendance (1140 volumes). Le pH avait augmenté jusqu'à une moyenne de 8,78 (voir tableau p.6).
En ce qui concerne la réserve alcaline, la distribution de magnesium était mesurée avec un microscope électronique à balayage. En moyenne, la réserve alcaline dans les différents ensembles était comprise entre 1,16 et 2,28 %.
Les objectifs du contrat étaient donc atteints : plus de 98% des livres étaient désacidifiés et plus de 95 % d'entre eux avaient atteint une réserve alcaline de 1,5 %.

## 5. Effets secondaires

*Aspect esthétique*
Il faudrait aller plus avant dans les vérifications et le contrôle pour fournir un rapport plus détaillé. Voici un premier résumé des effets du traitement sur les livres en termes d'esthétique :
– tâches (14 volumes) ;
– solubilisation des encres (2 volumes) ;
– migrations des encres (13 volumes) ;
– illustrations décolorées (8 volumes) ;
– pages collées (1 volume).

On remarque des détériorations sur 38 volumes ou 3,1% de la totalité des livres traités : ce sont essentiellement des migrations des encres ou des fuites d'encre et des tâches de solkane. En outre, on a remarqué un dépôt blanchâtre sur certaines reliures en cuir. Des livres traités, il émanait une odeur chimique très prononcée qui a disparu au bout de quelques semaines. Certains ouvrages n'ont pas été traités de façon préventive en raison de possibles effets secondaires néfastes : cela concerne 31 volumes (2,2%) appartenant principalement aux collections dont les livres traités avaient révélé les effets secondaires mentionnés ci-dessus.

*Pages déchirées ou couvertures endommagées*
On n'a remarqué aucun dommage particulièrement frappant sur les 46 livres tests. La reliure en cuir de quatre volumes était endommagée : elle était rompue ou devenait lâche. Lorsque le pH s'élève, le cuir a ten-

2 La bibliothèque a été en mesure de financer ce projet de conservation grâce au soutien de Solvay (55% du budget du projet).

dance à perdre de sa teneur en graisse. C'est pourquoi, un traitement à la cire est ensuite nécessaire.

*Neutralisation non homogène de l'acide*
Les livres fermés étaient placés debout sur les plateaux dans l'unité de traitement « Book Saver » et n'ont pas bougé pendant toute la durée du cycle. Un livre est fabriqué de telle sorte que lorsqu'on l'imprègne d'un agent neutralisant, le produit n'est pas toujours réparti de façon homogène à travers le matériau cellulosique. Les résultats et vérifications de la bibliothèque effectués par PAL confirment la différence de pH à différents endroits sur les pages. Cependant, les différences sont trop légères pour qu'on en tire des conclusions. De plus, le pH a augmenté suffisamment en chaque point des pages testées.

## Conclusion

La désacidification de masse comme moyen de conserver documents de bibliothèques et d'archives est comparativement rarement utilisée en Belgique. La bibliothèque a joué un rôle de pionnière et a lancé un projet de désacidification de 2003 à 2004. Plus de 1200 livres ont été traités grâce au procédé « CSC Book Saver ». La valeur du pH mesuré après traitement manuel et mécanique a augmenté de façon significative. Les objectifs établis contractuellement ont été atteints : plus de 98% des livres ont été désacidifiés et plus de 95% ont obtenu une réserve alcaline de 1,5 %. Les effets secondaires, pour ce qu'on peut en juger à cette étape du travail, sont négligeables : on remarque des détériorations d'ordre esthétique et mécanique dans seulement 3,1% des cas. Les études menées à l'étranger confirment en tout cas que la désacidification de masse est l'une des technologies de pointe qui permettent de préserver un document dans son état actuel. Dans le cadre d'un programme global de conservation comprenant microfilmage, numérisation, optimisation des conditions de stockage et restauration, la désacidification de masse représente une solution adaptée pour sauver de la disparition un nombre considérable de documents appartenant à notre patrimoine culturel.

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# "To clean the face, wash behind the ears and brush the teeth" The Project to Conserve the Norwegian Written Heritage, 2001-2004 and its Results



**by Elisabeth Eide**
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## Introduction

In connection with the rehabilitation of the old building housing the National Library, Oslo division, and the construction on site of new underground stacks with mobile shelves, two major projects - a conservation project and a card conversion project - were planned and carried out. This article presents the projects, with the main emphasis on the conservation project which was my responsibility.

## Projects and Scope

In 1998, the Oslo division began an inquiry on the physical conditions of the national and special collections in order to be prepared for all events concerned with the rehabilitation of the old library building. The conclusions drawn from the inquiry led to two momentous decisions, costly in manpower and resources, but very important for a possible success of this newly established symbol of the nation: the National Library. The heading for this project was: New National Library, Oslo. The project comprised two main tasks:

- the construction of underground stacks and the rehabilitation of the old library building and
- the conservation and conversion of our national written heritage.

Under the umbrella of "the conservation and conversion of our national written heritage", two projects, one for the conservation of material and one for the conversion of the card catalogues, were designed.

The first project was based on the decision that all collections of national importance should be thoroughly cleaned and rewrapped. In sum this amounted to approximately 3.5 million single items. At the basis of the project lay an exhaustive investigation of:

- checking out how much time one operation would take;
- what quantities of acid-free wrapping paper, cases and boxes were needed;
- how many conservators and how many extra staff with what kind of qualifications should be employed in order to complete the tasks.

Special tests were undertaken for each special collection and for each operation.

The scope of the second project was to convert 600 000 catalogue cards to digital form through the re-cataloguing of the actual items. In sum this implied that the library over a period of four years would need 60 extra man-years. Here we investigated:

- should the conversion take place from the card catalogues or from the shelves?
- To what extent did the card catalogue cover the actual holdings?
- Should trained librarians be used for all operations?
- What figures should a man-year of conversion produce?

It was decided to catalogue the Norwegian books from scratch because a time study demonstrated that this was less time-consuming, and because the catalogues did not reflect our actual holdings.

Finally, in the year 2000 we presented to the Government, through the Ministry of Church and Culture, a plan in two stages, asking for extra finances for hiring extra personnel and for conservation material. Stage one aimed at having all the legal deposit material cleaned, re-boxed and re-catalogued by the summer of 2004 when the new stacks were completed. Stage two aimed at having all the special material rewrapped and re-boxed and all the special catalogues converted by the time we could move back to the rehabilitated building at the centre of town in 2005.

## Arguments for the Projects

There were several good arguments for these two projects. The national collection of books was so dirty that some of our staff had got asthma and eczema from working in the stacks. The dust accumulated during the years in a heavily trafficked street was so thick that it would clog the aircondition and air-temperature control machinery that was to come as part of the new stacks. All wrapping had been done with acid paper; papers were kept together with rubber bands that had rotted away decades ago, old boxes were falling apart etc.

By establishing a National Library with two branches situated as far apart as Oslo and Mo i Rana, politicians wished to demonstrate that a modern institution, based on the most innovative digital concepts could do away with barriers such as distance. To achieve this goal, the card catalogues must be converted.

The projects had as overall ambition for the collections of national importance:

- to improve the physical conditions of collections;
- to improve the library's knowledge of its holdings;
- to improve the retrieval system for the collections;
- to further the Nation's knowledge of its written heritage.

In other words, the projects would improve the condition of the collections, make them more accessible and more known to the nation in order to comply with the Norwegian vision as expressed in Parliament, that every citizen should have access to all information, no matter if he lived centrally or in the periphery.

When the annual budgetary announcement from the Ministry came in January 2001, it was evident that the application to the Ministry for this extra funding had been turned down. The plan as such was accepted by the Ministry, but without any extra financing.

## Scope once more

Obviously, the projects had to be reduced in scope and the library had to seek other solutions for its problems.

In desperation, staff from the department of national and special collections for a trial period began working on the plans drawn up, each employee spending from 1 to 10 hours a week on the project. Within a short time we understood that "to muck out our Augean stables would be a Sisyphean task" beyond our means.

The library concluded that the only possible solution was to close the library for two years, from 2001 to 2003, employing all the staff in conservation and conversion.

A reduced plan was outlined. The scope was reduced to 67 man-years for both projects. Within the conservation project certain tasks were given priority before others and within the conversion project, the emphasis was placed on eliminating the main card catalogue of Norwegian printed matter.

The Ministry, after internal discussion and external publicity, including newspaper debates, did not grant us the permission to close the library. Instead, during the autumn of 2001 they came up with added financial support, plus the permission to reduce our opening hours. During the next year this financial augmentation was incorporated into the annual budget of the National library.

It seems appropriate at this point to say that whereas an institution hardly ever gets as much money as is applied for, the ministerial grants, when they came, were substantial. Most of our figures for material such as rewrapping, boxes etc. were accepted with the provision that they had to be left to an EU tender. We had, after all, in the first application asked for what would amount to approximately 16 million NKr (app. 2.5 million US $) just for wrapping material and equipment for the conservation project. The sums finally agreed upon were approximately 9 millions, and the sum actually spent appears to be even less than 9 million NKr (app. 1.5 million US $). As for extra personnel, the Ministry felt that the library could reallocate more of our staff than we had originally envisaged, but granted us money for 17 extra man-years for both projects.

The library changed its list of priorities, giving low priority to certain tasks in order to reallocate staff.



Vacuum-cleaning of total surface of each item



Illustration of some of the rewrapping methods used: boxes specially fitted with plastazote and polythene bags with stiff carboard

The special collections closed its doors to the public one day a week and the library only opened in the mornings at 11 o'clock. An internal process was initiated, where the library did its best to make all who participated feel that they were taking part in a process that would transmogrify the library from 'the old run-down lady of the University library' into 'the informative, good looking and mature woman of the National library'. We all set to work.

## The Projects such as They Became

After the reductions, the conservation project implied:

*A. The periodical task*

1. Arranging the non-bound periodicals, previously kept together with strings or in dilapidated boxes, into new acid-free stable boxes that could withstand the movement back and forth in the planned new mobile compact stacks;
2. reshuffling the periodicals, i.e. a plan to re-shelf and renumber the national periodical holdings that for years had been placed wherever space was available. Quite a few of the more frequently used periodicals had even been integrated into the legal deposit book section. In addition the periodical section decided to start on a completely new shelf system for the approximately 12 000 national periodicals from January 1st, 2003.

*B. The special collections task*

Rewrapping in acid free paper, material such as manuscripts, letters, photos, maps, posters, musical manuscripts etc. in our special collections. For important material every item should be rewrapped, for our photo collection placing each item in an acid-free envelope, a polythene bag or a polyester pocket, and for extremely large formats and extremely fragile items, a programme for digitising items was drawn up. All deposits and all non-opened material were also to be gone through.

*C. The legal deposit task*

1. Vacuum cleaning all the legal deposit book material from before 1960 in order to remove as much soot and old dust as possible;
2. exchanging old acid wrappings in the legal deposit collection with new wrappings made of sustainable, acid free paper or new boxes.

Since part C in this decision implied the handling of every single item in the collections of legal deposit books, we also decided:

- to compare the actual items on the shelves with the shelf lists;
- to make a list of missing items;
- to note down every book that needed repair with a grading system of three levels;
  - level a, repair = half an hour
  - level b, repair = more time consuming
  - level c, repair = so costly that attempt to re-buy from antiquarian booksellers should be made;
- to box/re-box all unbound copies (in Norway the responsibility for the legal deposit copy did not depend on the publisher but on the printers, hence quite a lot of the books are in sheets).

The conversion project aimed to do away with both the main card catalogue and the catalogues for the special collections. A card-catalogue-less library was our vision. Up to 2004 the focus would be on the digitisation of all the catalogue information on the legal deposit material. In addition some foreign material had to be re-catalogued because the old card catalogue was discarded.

## Information

Two separate web-pages were created, one for internal use and one for external information. The external web-page encompassed the total project, i.e. the building plans and the conservation and the conversion projects. Information on 'interesting nuggets from our collections' was also placed there. Whenever we came across interesting material that we felt deserved to become better known, it was digitised for the external web-page. Details of what conservation measures had been taken, with a picture of 'before' and 'after', were included. Since the library had reduced its opening hours, such information was one way of

justifying this decision and at the same time keep the audience informed about activities in the library. This was rather effective. Various radio channels came several times to interview us about the activities and the newspapers also followed up on information they found of interest.
The internal web-page contained information on the project plans, progress made, reports, information about the participants etc. One internal by-product of the projects was that we found items within our collections that we had previously not been aware of.

## Finances and Employment

To sum up the downscaling of the plans that took place, the goal had been to convert 600 000 cards to digital information, to clean approximately 16 000 shelf meters of material, rewrap approximately 550 000 items in the special collections, and make use of approximately 37 000 new boxes.
The reduced estimates that we sent the Ministry in the summer of 2001 were based on 67 man-years of work and wrapping material for approximately 12 million NKr (app. 1.9 million US $). After further reductions and tenders the first phase of the projects was dimensioned to 56 man-years of work and about 9 million NKr (app. 1.5 million US $). in expenditure for wrapping material. This involved employing 17 new people and reallocating what amounted to ten permanent positions for the time of the projects. With the reallocation of our own staff and the added temporary personnel of 17, including two positions as leader of projects, the work began in the autumn of 2001.

## Staff Participation in one Department

The staff at the Department of National and Special Collections have at all time been heavily involved in the project. We began by having a brainstorming meeting where all suggestions for the project were noted down and discussed. I followed this up with an interview with all the staff to find out where the individual employee felt he/she could contribute best in the project. Some of the staff preferred working within the conversion project, whereas quite a few accepted doing menial chores, such as vacuum cleaning once a week. We downgraded some routine work and tried to cut down on administrative chores, but I am afraid the downgrading of tasks at best could be described as makeshift. Within the department of national and special collections, every physically able member agreed to use 20% of their time to the project. Most of those who for reasons of health could not participate in the conservation project, were reallocated to the conversion project or given other tasks.

Problems connected with the periodical section were so complex that the section decided it was better off coping alone. One half man-year plus some temporary aid was reallocated to the project. Attempts to reduce their daily work proved difficult since they work with legal deposit matter.
For the staff in charge of special collections, the project was a golden-sent opportunity to thoroughly examine our collections, revise them, clean them and clear out certain deposits that had remained in the library for more than 100 years etc. Here there was no lack of enthusiasm. Neither was there any lack of enthusiasm for this project within the hired temporary personnel. We had deliberately employed some highly qualified people to work part time within fields that they had already specialised in during their thesis work.

The national legal deposit collection was perhaps the field where it was most difficult to drum up enthusiasm. The sheer dirt of the material made the work very unattractive. Also the legal deposit is nobody's and everybody's responsibility. One further reason may be that one should be thoroughly familiar with both Norwegian culture and with all the vagaries of the collections to see the worth in what we did.
All had to use special protective clothing, most people wore masks whilst vacuum-cleaning, and some even showed tendencies to develop asthma or eczema during the work. To face one shelf meter with perhaps 100 items that needed dusting, removal of dirty old wrapping, rewrapping, checking shelf list and noting down lacunae, often represented an intolerable mental challenge. It did not improve matters that we had to work in cramped and stuffy stacks.



Stabilizing and preserving pamphlets and other smaller items through boxing

Nevertheless, even though the dirt was a de-motivating element and one had to be fond of the collections to undertake such work, I would argue that this part of the project was most needed and most useful. We did at certain times get some help from other departments, such as one person preparing all the boxes that were to be used, but most of the job was done by our permanent staff plus the temporary personnel.

During the 2 - 3 years that the project was my responsibility, I interviewed all the staff at my department (approximately 40) twice, once at the initiation of the project and once just before we started our first move to a temporary site. It is extremely satisfying to be able to report that most of the staff at all times were supportive of the ideas behind the project and actively participated in the projects.

## Encouragement, Endurance, and Incitement Initiatives

As one of the first activities undertaken, our conservators gave a course, both for all newcomers to the project and for the permanent staff involved in the project, in how to handle paper material, what aspects of conservation were important, where to be extra careful, special health concerns, what rewrapping material had been ordered and how it was supposed to be used. A seminar in conservation and paper history with invited guest speakers was also arranged for all interested. Later on two topics were selected for special lecture courses, one a course in Gothic script, the other an introduction to book history. Both courses proved very popular, and were attended also by staff not assigned to the projects.

## Special Problems

It soon became evident that the project, even in its scaled-down form, was over ambitious, and had to be readjusted. For the periodicals, readjustment was impossible because stable boxes are *a sine qua non* in mobile stacks. Mobile stacks were a fact, therefore the re-boxing had to be completed before we could move to the new stacks. However, lack of space at our temporary sites made it impossible to complete the final re-shelving and renumbering of the periodicals before the move to permanent stacks. Even though the logistics will be formidable, it was decided to fit one part of the project into the tender for the final move in 2005, i.e. to set aside time for our staff to rearrange approximately 7 000 shelf meters of periodicals during the actual moving process.

In the special collections we had to reduce the level of rewrapping and focus on the most fragile and more frequently used material. Decisions on this had to be made *ad hoc*, relying on individual assessments. It is now clear that our goals here will not be reached before the final move.



New shelves in new underground stacks

As for the most comprehensive part of the project, to bring our legal deposit collection into as perfect a condition as possible, to detect all lacunae in the numerus currens shelf-list and try to identify all missing numbers, proved too time-consuming. We had to fall back on noting down identified, missing objects, and compile lists for further work after the project is terminated. Further, we decided that the most thorough cleaning and checking would be applied to books before 1960. In other words, vacuum-cleaning will also form part of the moving tender.

## Status, Spring 2004

As mentioned, for the periodical task of the project, problems with space in our temporary building have made it impossible to have a proper sequence of the periodicals made before we move to our new premises. However, most periodicals are now in solid boxes, and a new sequence, starting from 2003, has been initiated.

The special collections task is still in progress. Some of the resources allocated to vacuum-cleaning have been reallocated to the special collections. As mentioned, the special collections will only move back to the old, renovated building and the new stacks once we all move back in 2005.

In this part of the project we have found treasures that we did not know we had, and that had, at one time or another, been placed in a box and forgotten. Daguerreotypes and old prints that had been hidden under posters, more than 2000 theatre – and circus posters – so fragile that we hardly could touch them

but containing large amounts of local information about what entertainment was offered in rural areas more than 100 years ago – letters from well-known authors, hidden within boxes with unregistered correspondence, just to mention a few.

## The Legal Deposit Task Completed before Time and with the Following Results

At the end of February 2004 the conservation project was completed as for legal deposit books. This is impressive because we were hampered by the library's temporary move when we had to work alongside the removers of the books and with constantly dysfunctional lifts. For Norwegian books we now have a solid foundation on which to assess our legal deposit, we know what material is lost and we can outline a policy for filling in lacunae. We know how large a percentage of the books need repair and conservation. If the library or the Ministry wants, we can make concrete plans based on solid figures. We are pleased to think that we now can offer our public fairly clean (as clean as vacuum cleaning can make a book) and well-preserved material for study. And we are in the privileged situation of having a national legal deposit collection whose condition has been thoroughly surveyed and registered.

When the conversion part is completed we will also be able to discover if we have two copies of a book, and we may, if we so wish, discharge the damaged one in order to establish as perfect a legal deposit collection as possible, or send the second copy to the branch in Mo i Rana (if two copies exist, the Rana branch is to serve as the lending library for legal deposit books). The conservators have a list of damaged books to work from. Our hope is to link that list to a system that automatically activates a conservation need if a book is in demand. From this list and from figures on demand we may decide whether a book should be conserved, whether it should be digitised or whether we should attempt to buy a 'new' copy from an antiquarian bookseller.

A further benefit from this exhaustive examination of the legal deposit is that we have 'purified' our legal deposit collection. Since this historical collection (books from 1643) has never been controlled or revised since the 1880s, it should not surprise anybody that within it are layers of history. At one time albums with photographs were placed within the collection, so were small ephemera, quite a lot of them bundled together and wrapped in brown paper under one heading, with little or no reference in the catalogue. We found items such as beautiful posters for boxes of sardines from 1890s, theatre programmes nobody knew we had, photo albums from historical periods, just to mention a few. All this non-book material (estimated to 2 - 3000 items) went from the legal deposit collection to the various special collections, or it remained within the legal deposit collection, but re-boxed and with a note in the computerized catalogue for ephemera. We also found large scrap-book collections with paper clippings from different people or different periods. These were given a meaning-bearing title and a signature in the database. Such material should be of great interest to the specialist scholar since it now is possible to retrieve the information.

One might express surprise that such items could be unknown to us, but anybody working in a library with a history will readily come to understand how that could happen.

## Conclusion

In short, the conservation project has in my opinion more than proved its value. The Parliament did, after all, establish a National Library in order to place focus on our written heritage. I am happy that we managed to convince the Ministry of the need for the project; I am grateful that we have been given sufficient means to buy the necessary equipment to do a proper job. I am impressed with the efforts made by all our collaborators, both the permanent staff (it is not all that much fun to vacuum clean two hours a week for two years, or rewrap extremely dirty papers) and the personnel hired to do such work. I see the potential for making the collections more known to the country through digitising and through the added value that a thorough insight in the collections has given us and I feel we can face the future with a clean, beautified façade under which huge quantities of exciting material is to be found.

As for the conversion project I believe the conclusion will be just as positive. It should be emphasized that both projects supplement each other. Without fully converted catalogues the thorough examination of the legal deposit collection will be of less value. Without a re-cataloguing of all our periodicals, we will still have to inform the audience that "in theory we have everything, it just has not been put into a catalogue" and without a further conversion of the special catalogues,

the information contained within the special collections will still have to be sought out *in situ*.

We celebrated the completion of this part of the project, and with equanimity, moved the National library's deposit collections into the new stacks in 2004.

We will move the staff and all the special collections to the rehabilitated library in June 2005. The library will be officially opened by the King on August 15th, 2005.

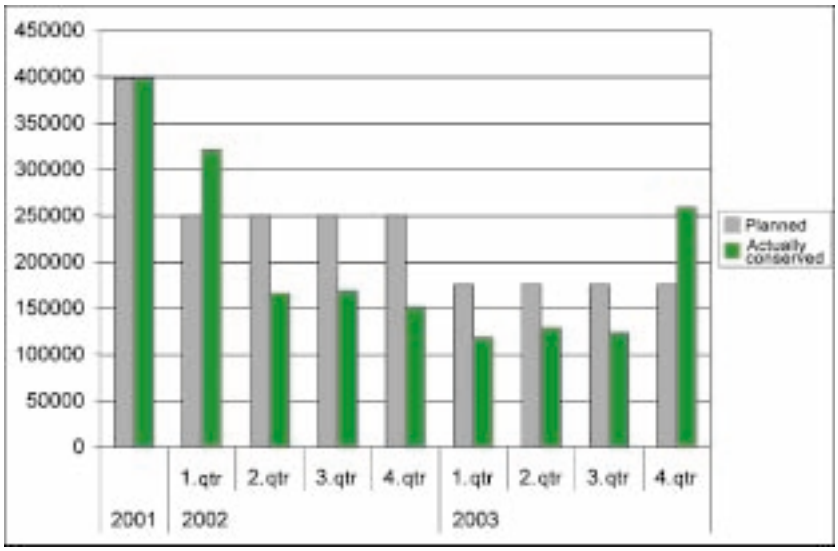
## Statistics

The projects involved detailed statistics of all our collections, with special figures for book, periodicals, ephemera, posters etc. The surveys gave us a solid foundation upon which to draw our plans, both for conservation, for temporary moves and for the planning involved in organizing the new stacks.
We also now have figures for lacunaes (so far approximately 2000 items identified), for conservation needs (estimated from 2 - 20 years of work, depending on level of repair). However, I believe the figures of most interest to an external audience is the progress made during the project. Here are some figures.

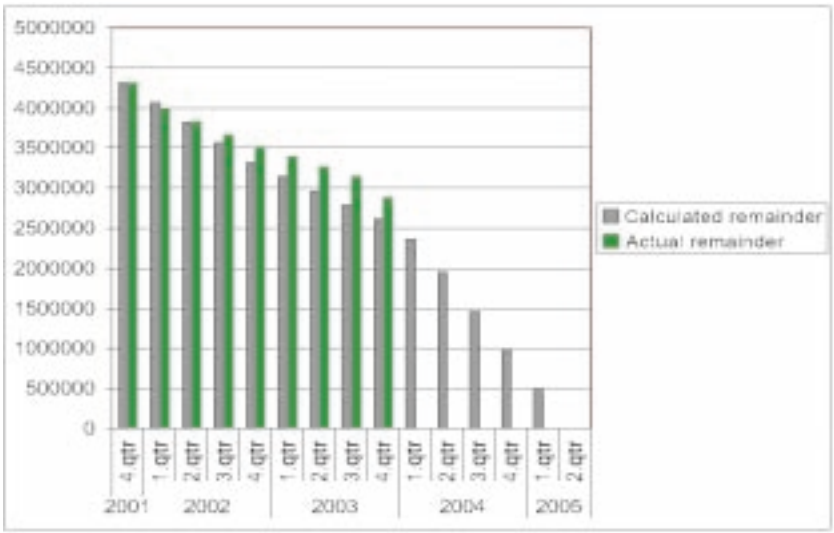
## Status for the conserving project, as of 31.12. 2003

As shown in the diagram, the status by 2004 is that the project is somewhat delayed.

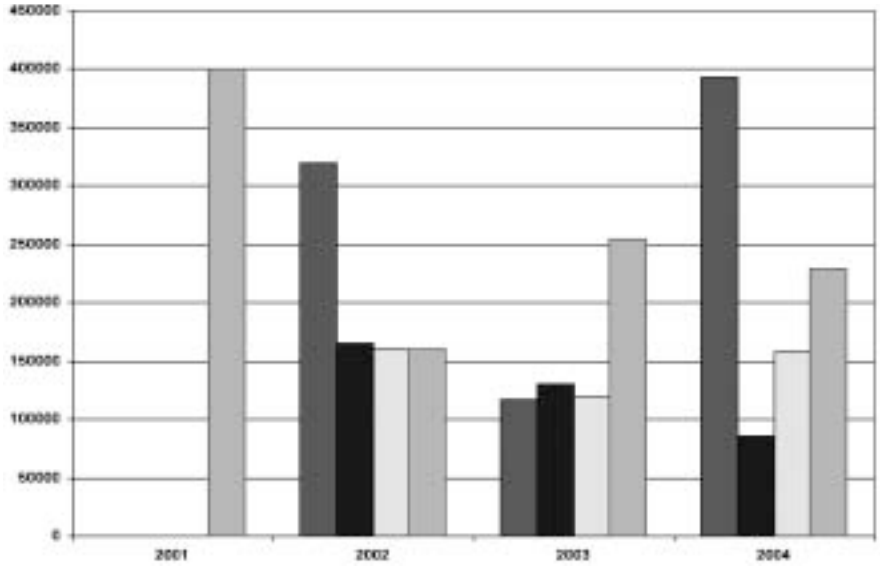
What remains is partly to work through the back-log incurred during the move to the temporary site and to complete the rest before June 2004. The back-log is estimated to approximately five man-years and the rest of the planned production is estimated to 23 man-years.




**Number of items conserved per quarter**




**Changes in the holdings of non-conserved documents**




## La Bibliothèque nationale de Norvège met en œuvre la sauvegarde de son patrimoine écrit

De 2001 à 2004, ce sont deux projets qui ont accompagné la réhabilitation de la Bibliothèque nationale de Norvège. Le premier consistait à nettoyer et doter de conditionnements appropriés environ 3,5 millions de documents, pour une meilleure conservation du patrimoine écrit ; le second projet prévoyait la conversion numérique du catalogue sur fiches (600 000 fiches).

Les budgets alloués ne permettant pas de réaliser l'intégralité du projet, les ambitions ont dû être revues à la baisse. Des 12 millions de couronnes norvégiennes et 67 années-hommes de travail envisagés au départ, ce sont finalement 9 millions et 56 années-hommes qui ont permis à l'opération de se réaliser.

Parmi les collections examinées, étaient compris des périodiques, des documents spécialisés et des ouvrages du Dépôt légal. Il a ainsi été possible d'identifier les ouvrages manquants ou les documents endommagés, et d'en déterminer le degré de détérioration. Cet état des collections a également permis de découvrir des documents dont on n'aurait pas, jusqu'alors, soupçonné l'existence.

Au début de l'année 2004, le travail était achevé pour les ouvrages du Dépôt légal, qui ont rejoint leur nouvel espace de stockage. En juin 2005, les collections spécialisées seront à leur tour transportées dans la bibliothèque remise à neuf, dont l'ouverture est prévue pour le 15 août 2005.

## La Biblioteca nacional de Noruega pone en práctica la salvaguarda de su patrimonio escrito

Entre 2001 y 2004, dos proyectos acompañaron la recuperación de la Biblioteca nacional de Noruega. El primero consistió en limpiar y dotar del acondicionamiento necesario a cerca de 3,5 millones de documentos, para una mejor conservación del patrimonio escrito; el segundo proyecto contempló la digitalización del catálogo de fichas (600 000 fichas).

Los presupuestos asignados no permitieron realizar el proyecto en su totalidad, así que hubo que revisar todos los objetivos desde la base. Los 12 millones de coronas noruegas y 67 años-hombre de trabajo proyectados del inicio, se convirtieron finalmente en 9 millones y 56 años-hombre que permitieron la realización de la operación.

Entre las colecciones revisadas se incluyen las publicaciones periódicas, documentos especializados y obras del Depósito legal. De este modo fue posible identificar las obras faltantes o los documentos deteriorados, además de determinar el grado de deterioro. Este estado de las colecciones permitió igualmente descubrir documentos de cuya existencia, hasta entonces, no habríamos sospechado.

A comienzos del año 2004, se concluyó el trabajo con las obras del Depósito legal, que fueron colocadas en su nuevo espacio en el depósito. En junio de 2005, las colecciones especializadas serán trasladadas a la biblioteca renovada, cuya inauguración está prevista para el 15 de agosto de 2005.

# National Library of Finland: First Stage of the National Collection Condition Survey Completed. Brittle Paper: a Major Problem



**by Heidi Törrönen**
Conservator, Helsinki University Library

## Introduction

Helsinki University Library, the National Library of Finland, carried out a condition survey of its National Collection between 2001 and 2004. This random sample survey formed the first stage of a larger survey planned to reach completion in a few years' time. In this article, we present an overview of the findings of the first stage of the survey. When the project is completed, we will be able to perform more in-depth analyses that will also allow a meaningful international comparison of the results.

## The National Library's Statutory Duty to Preserve

Helsinki University Library is legally responsible for the long-term preservation of the printed materials produced in Finland and for making them accessible regardless of their physical condition or whether they were meant for permanent existence at the time of publication. The Library can enhance the long-term preservation of its materials through conservation and reformatting solutions, such as microfilming and digitisation.

Our resources, however, are limited, and different types of printed materials require different preservation and conservation methods. While a leaf-casting machine is effective in repairing rag paper damaged by mould, it does not suit equally well for repairing old paper made from wood. Black-and-white microfilming is suitable for monochrome printing but not for dealing with a multi-coloured art book. Digitisation helps us make materials accessible so that we do not have to give the originals to users. From these we must choose the preservation method best suited for each type of material.

Over the centuries, printed products have been made using a wide variety of materials and methods. Today, for this reason, we often have to take special measures to ensure that they can be preserved in the long term. The durability of paper produced at different periods of time varies to a great degree. Also the preservation conditions and the handling of collections deemed proper at one time or another may have damaged the materials over the years. Because the volume of materials requiring preservation treatment is growing fast and the resources available to us remain scarce, we need a thorough understanding about the condition of our collections to be able to give priority to those materials requiring special treatment.

## Collections

The holdings of Helsinki University Library contain about three million books and periodicals and an equal number of other items such as maps, printed music, printed ephemera, manuscripts, microforms, sound recordings and other non-print media. Printed literature dates back to the XV$^{th}$ century; some items in the manuscripts collection are even older than that. For the most part the materials have been obtained after 1827, excluding a few hundred items that survived the fire of Turku in the early 1800s (the Aboica Collection).

All printed products and sound recordings published in Finland are deposited in the national legal deposit collection for permanent storage for the benefit of research and other use. The materials are obtained in accordance with the Legal Deposit Act. Besides books the National Collection contains newspapers, periodicals, printed music, maps and ephemera as well as sound recordings and other non-print media. Also materials produced by people of Finnish origin living outside Finland as well as foreign publications dealing

with Finland form part of the national collection (http://www.lib.helsinki.fi/english/services/collections/collectionlist.htm).

## Condition Survey Based on Random Sampling

Because we cannot examine every single volume individually, a condition survey must be based on random sampling. This is the only reliable way to gain an overall picture of the condition of the collections. The method based on random sampling, originally developed at Stanford University, aims to provide information on the condition of the collections and the extent of the damage as well as offer new insights into why and how objects deteriorate. In the Helsinki survey we apply a 'stratified sampling' technique.

First a heterogeneous group of materials is divided into subgroups based on the material type. Then a set of unified criteria is selected to assess the condition of the materials so that the outcomes allow a meaningful comparison among different collections. The survey also provides us with information about the type and degree of damage to each subgroup. At the same time we can record the impact of environmental conditions and use on the condition of the collections, provided such statistics exist.

The purpose of a condition survey is not to pick individual items for conservation treatment, microfilming or digitisation; rather, its aim is to assess the type and degree of damage exhibited in the surveyed materials and, by doing so, help a library improve its long-term planning and make informed decisions on the best use of the available resources, for example, the development of which preservation methods it should invest in now and in the future. We can only make long-term plans on how best to preserve our collections and serve the researchers if we have a clear picture about the condition of the collections at present.

## A Tool for the Preservation Sector

Large-scale condition surveys have been conducted, for example, in Sweden, Germany, the Netherlands, Great Britain and the United States (Yale, Stanford). In the condition survey carried out at the Koninklijke Bibliotheek, the National Library of the Netherlands, the surveyed materials were divided into four groups: monographs, periodicals, newspapers and legal deposit materials. At Yale, the division was based on different library sites and collections. The purpose was to reap real benefit from the surveys, and care was taken to ensure that even the smallest material groups were represented.

The aim of the first stage of the Helsinki survey was to chart the National Collection from 1810 to 1944. It was during this period that paper made from rags was giving way to more acidic paper made from wood pulp. Acidic groundwood paper 'destroys itself' considerably faster than rag paper. Many other countries have also shown interest in doing condition surveys on paper made from wood.

A condition survey is an effective planning and decision-making tool for the preservation sector. The preservation activities of Helsinki University Library have expanded, and we now have the capacity to respond not only to the preservation needs of our own library but also to those of the country's library sector as a whole, for example, through microfilming and digitisation. To do this we need to know on which areas of our preservation activities we should focus to guarantee best possible results.



Cover damage includes detached or missing covers and spines



Newspapers deteriorate as a result of paper quality, acidity, age and previously also frequency of use. Thanks to the microfilming of newspapers that began in the 1950s, researchers are still able to access the materials, the oldest part of which have been digitised.

## The Surveyed Paper: Acidic and Brittle

The condition survey carried out at Helsinki University Library was an adaptation of the random sample surveys developed at the universities of Stanford and Yale. Our survey consisted of the National Collection's non-fiction from 1810 to 1944 and fiction from 1810 to 1972, in all 140 000 volumes.

Because of various manufacturing methods and ageing, paper is often acidic and therefore subject to becoming brittle. Paper degradation may also be caused by ink corrosion. We measured the pH of the pages and performed a folding endurance test by hand, thus gaining a clear picture about the degree of brittleness of paper and its durability when in use. The pH scale is logarithmic which means that every one-unit change in pH represents a ten-fold change in acidity or alkalinity. For example, a pH of 5 is ten times more acidic than a pH of 6, while a pH of 4 is a hundred times more acidic than a pH of 6.

The acidity of paper increases as it gets older, and so the process of deterioration gets underway. The survey found that in almost 100% of the whole sample, the paper was very acidic – that is, the pH value was less than 5.5. The pH value of neutral paper is 7.0. Of the volumes examined 50% – every second volume – had a pH of less than 4.15.

The folding endurance test revealed that about 10% of the volumes would not withstand future use at all (see table 3 p.23).

If a damaged book is used, it will damage further. It is difficult if not impossible to, for example, rebind embrittled books and costly to repair them.

**Table 1**
**The condition survey materials: holdings of Helsinki University Library, the National Library of Finland**

| Distribution of the surveyed material | 1810-1841 | 1842-1944 | 1945-1972 | Total number of volumes | Sample size |
|---|---|---|---|---|---|
| Non-fiction<br>• 19 subject areas | 1.6% | 90.9% | (7.6%, not included in the survey) | 91 000 | 3 141 |
| Fiction | 0.2% | 44.1% | 55.7% | 49 000 | 543 |
| Total | | | | 140 000 | 3 684 |

## Damage Caused by Use

Damage to the covers, binding and paper of a book can be roughly divided into three categories: damage caused by use, damage caused by the preservation conditions and damage caused by the chemical-physical properties of paper.

Damage caused by use includes torn pages, missing pieces, stains, dirt and creases. Cover damage includes detached or missing covers and spines. When a book has no covers and spine, the text block has no protection against damage. Binding damage includes broken linings and threads that will result in detached, damaged or missing pages. These types of damage call for urgent repairs so that the loss of information can be prevented. Also large-scale and continuous self-service photocopying is a threat to the condition of embrittled books.

According to the survey, 15.3% of the pages had damage caused by use, the most common being torn pages and missing pieces. Damage to binding was found in 11.2% of the volumes, while 6% of the volumes had damaged text blocks.

The survey confirmed that damage to the covers and bindings increase paper damage caused by use. The surveyed material contained a lot of volumes that have been rebound into hard covers in the library. The survey indicated that rebinding books into hard covers improves preservation and protects the text block from mechanical damage. Soft-cover books, on the other hand, are more likely to suffer from damage.

**Table 2**
**Damage found in the condition survey**

| Damage to paper | All volumes | Non-fiction | Fiction |
|---|---|---|---|
| Caused by use | 15.3% | 19.1% | 8.3% |
| Chemical | 2.7% | 4.1% | 0.2% |
| Caused by fire or water | 3.1% | 3.7% | 2.0% |
| To binding | 6.0% | 7.2% | 3.8% |
| To cover | 11.2% | 14.3% | 5.5% |

## Non-fiction with Multiple Damage

The survey results were divided into groups by subject areas. In non-fiction the volumes in the worst condition were from the most heavily used group, 'Religion and Church'. Here the extent of the damage was well above average. Overall, the number of volumes requiring urgent action amounts to some 44 000 volumes, of which 20 to 30% have already suffered from use. Often the volumes showed signs of damage from all damage categories. Additional condition surveys are likely to increase the number of volumes requiring immediate action.

The National Library's collection of fiction is not as heavily used as the collection of non-fiction. Therefore it is in a better condition as a whole. The use of fiction has been consciously restricted: the reader must obtain a special permit before being allowed to consult a book belonging to this category.

**Table 3**
**Subject areas requiring urgent action**

| Subject areas requiring urgent action | Number of volumes | Metres of shelving | Damage caused by use | Damage in binding | Damage in cover | Fire/ water damage | Chemical damage |
|---|---|---|---|---|---|---|---|
| Religion and church | 12 600 | 257 | 30.9% | 10.8% | 20.4% | 6.2% | 9.8% |
| Press | 3 000 | 71 | 27.8% | 11.5% | 11.5% | 1.3% | 3.8% |
| Defence | 4 800 | 151 | 26.9% | 6.7% | 17.3% | 5.1% | 1.3% |
| Carelian Autonomous Soviet Socialist Republic | 2 400 | 77.5 | 26.9% | 3.9% | 19.2% | 5.1% | 0.0% |
| Schools and higher education institutions | 2 400 | 52 | 26.3% | 8.0% | 11.1% | 2.0% | 2.0% |
| History | 2 400 | 39 | 22.0% | 8.8% | 13.7% | 1.5% | 4.9% |
| Linguistics, Book learning, Finnish folk poetry, Literary history and art, Philosophy | 10 000 | 208 | 21.3% | 7.5% | 15.9% | 3.9% | 4.5% |
| Collected works and series | 6 200 | 157 | 20.1% | 9.9% | 21.7% | 1.9% | 1.9% |

## Book Handling Guidelines for Collections

Urgent action is called for by those book groups, or parts of them, that show damage to the paper, covers or binding and where the degree of damage is above average. This is because brittle paper and low pH will cause further damage to already damaged materials.
Although most of the damage is minor, even that poses a serious risk to books, and the damage will become more serious if the books are in use. A large number of volumes have already reached the stage that their use should be severely restricted.

We can restrict the use of books in poor or unstable condition by promoting their use in electronic format. This can be achieved by digitising them. This enables us to withdraw the original volume from circulation and so prevent further wear and tear. Some books benefit from conservation treatment, others must be microfilmed to ensure their long-term preservation, and for some putting them in archival boxes is enough.

The principles of prioritisation of our Digitisation and Preservation Programme are demand and condition, and they go hand in hand with each other. The materials in the greatest demand will become part of the digitisation programme.
We will lay down guidelines on the use of the National Collection based on the condition of the materials. Photocopying and reprographics services as well as the handling and use of books will be developed so that priority is given to the books.
Microfilming still remains the best alternative for the long-term preservation of the information content of the material under the greatest threat. A good example of this is the paper used for making newspapers which disintegrates within a couple of generations. New methods of colour microfilming enable us to preserve also coloured materials for the next 200 years at least.

For the most part conservation is done by hand. To deacidify, paper mass deacidification systems have been developed. However, mass deacidification only removes acidity from paper; it does not make it more durable, nor does it repair any already existing mechanical damage. Because conservation treatment is slow and labour-intensive, it can only save a very small part of the material under the threat of deterioration.

## Digitisation and Preservation Programme

Because preservation measures concern a vast number of volumes, we need more resources – both people and equipment – to realise them. The evaluation on how to implement the Digitisation and Preservation Programme will be made in 2004 jointly by the Library's management and the heads of the Collection, User and Preservation Services. As the condition survey progresses, we will evaluate the results and expand the Digitisation and Preservation Programme to include new groups of materials. Additional surveys will be carried out until we have surveyed all materials that need to be preserved in the long term. At the time of writing this article, spring 2004, we are conducting a survey of the Slavonic collection and are planning to draw a random sample from the collection from the period of the Swedish rule 1488-1810.

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## Investigación de la Biblioteca Nacional de Finlandia sobre el estado de sus colecciones: balance de la primera etapa

Una de las principales misiones de la Biblioteca Nacional de Finlandia consiste en conservar por largo tiempo los documentos impresos que ella alberga, aproximadamente tres millones de libros y publicaciones periódicas. Para ello es indispensable un conocimiento profundo del estado de las colecciones, a fin de darle prioridad de tratamiento a ciertos documentos. Así, entre 2001 y 2004, se llevó a cabo una investigación sobre el estado de las colecciones. Esta investigación, realizada a partir de ejemplares seleccionados al azar, constituye la primera etapa de un estudio que debería culminarse dentro de algunos años. La investigación revela que casi la totalidad de las 140 000 obras examinadas contienen papel muy ácido, con un pH inferior a 5.5. Además, la prueba de resistencia al plegado muestra que el 10% de las obras no soportarían ser sometidas a nuevas consultas. Asimismo, se han detectado numerosos daños producidos por malas prácticas de consulta.

En el presente, la microfilmación sigue siendo el mejor medio para conservar el contenido de un documento que se encuentre gravemente amenazado. Por otra parte, se está estudiando un programa 'Digitalización y Conservación', el cual permitiría limitar la consulta de obras en mal estado.

# Bibliothèque nationale de Finlande : la première étape de l'enquête sur la condition de la Collection nationale est achevée Bilan : le papier cassant est un problème majeur

**par Heidi Törrönen**
Conservateur, Bibliothèque universitaire d'Helsinki

## Introduction

La Bibliothèque universitaire d'Helsinki, qui est également la Bibliothèque nationale de Finlande, a mené une enquête sur la condition de sa Collection nationale, de 2001 à 2004. Cette enquête, réalisée à partir d'échantillons pris au hasard, constitue la première étape d'une étude plus approfondie qui devrait aboutir dans quelques années. Cet article propose une synthèse des résultats de cette première étape. Une fois le projet achevé, nous serons en mesure de fournir des analyses plus approfondies qui permettront également une comparaison significative des résultats à l'échelle internationale.

## Conserver : une des missions de la Bibliothèque nationale

La Bibliothèque universitaire d'Helsinki est légalement responsable de la conservation à long terme des documents imprimés en Finlande ; elle doit également les rendre accessibles quelle que soit leur condition physique, qu'ils aient été publiés dans un esprit de pérennité ou pas. Pour améliorer la conservation à long terme de ses documents, la Bibliothèque a comme solution le transfert de support, microfilmage ou numérisation.

Cependant, nos moyens sont limités et des documents imprimés de nature différente nécessitent des méthodes de conservation et de restauration adaptées. Alors qu'une machine à combler répare efficacement le papier chiffon endommagé par les moisissures, elle est totalement inadaptée au papier ancien fabriqué à partir de bois. Le microfilmage noir et blanc convient à l'impression monochrome mais pas aux livres d'art qui comprennent plusieurs couleurs. La numérisation nous permet de rendre les documents accessibles sans avoir à communiquer l'original aux utilisateurs. Pour ceux-ci, il nous faut choisir la méthode de conservation la mieux adaptée au type de document.

Au fil des siècles, on a fabriqué les documents imprimés en utilisant une grande variété de matériaux et de méthodes. C'est pourquoi, nous devons souvent aujourd'hui prendre des mesures spécifiques pour que ces documents soient conservés sur le long terme. La durée de vie du papier varie considérablement d'une période à l'autre. Les conditions de conservation et la façon de manipuler les collections jugées judicieuses à une époque ou une autre, peuvent aussi avoir endommagé les documents au fil du temps. Parce que la quantité de documents qui nécessitent un traitement augmente rapidement et que les moyens dont nous disposons restent limités, nous avons besoin de connaître l'état de nos collections de façon approfondie, ceci afin de donner la priorité à des documents requérant un traitement particulier.



Le meilleur moyen que nous ayons de conserver nos documents à long-terme et de répondre à la demande des chercheurs, c'est d'avoir une idée précise de l'état de nos collections.

## Collections

Les collections de la Bibliothèque universitaire d'Helsinki comprennent environ trois millions de livres et de périodiques et une quantité égale d'autres documents : cartes, musique imprimée, documents imprimés témoins d'une époque spécifique, manuscrits, microformes, enregistrements sonores et documents autres qu'imprimés. La littérature imprimée remonte au XVe siècle ; certains manuscrits sont même plus anciens. La majeure partie des documents a été obtenue après 1827, à l'exception de quelques centaines qui avaient survécu à l'incendie de Turku, au début du XIXe siècle (Collection Aboica).

Tous les documents imprimés et les enregistrements sonores parus en Finlande sont déposés au titre du dépôt légal et constituent une collection nationale conservée pour l'éternité, qui répond aux besoins de la recherche ou autres. Les documents sont collectés en accord avec la loi sur le dépôt légal. Outre les livres, la Collection nationale comprend des journaux, des périodiques, de la musique imprimée, des cartes, des documents éphémères mais aussi des enregistrements sonores et des documents autres qu'imprimés. Appartiennent également à la Collection nationale les documents produits par des personnes d'origine finlandaise vivant à l'étranger et les publications étrangères relatives à la Finlande (http://www.lib.helsinki.fi/english/services/collections/collectionlist.htm).

## Une enquête réalisée à partir d'échantillons prélevés au hasard

Parce qu'il est impossible d'examiner chaque volume individuellement, une enquête sur la condition des documents doit être réalisée à partir d'échantillons pris au hasard. C'est le seul moyen suffisamment fiable pour obtenir une vue d'ensemble de l'état des collections. Cette méthode, qui a vu le jour à l'Université de Stanford, permet d'obtenir des informations sur la condition des collections et l'étendue des dégâts ; mais elle apporte aussi des éclaircissements sur les raisons pour lesquelles les documents s'abîment et sur le processus de détérioration. A Helsinki, nous avons appliqué une méthode d'échantillonnage par strates.

On divise d'abord un groupe hétérogène de documents en sous-groupes par type de document. Ensuite, on décide d'un ensemble de critères destinés à évaluer la condition des documents et à obtenir des résultats qui permettront une comparaison significative des différentes collections. L'enquête nous apporte également des informations sur le type de dégâts et le degré de détérioration observés dans chaque sous-groupe. En même temps, nous pouvons enregistrer l'effet des conditions environnementales et de l'utilisation des documents sur l'état des collections, ceci dans la mesure où de telles statistiques existent.

Le propos d'une telle enquête n'est pas de choisir certaines pièces pour leur appliquer un traitement de conservation, microfilmage ou numérisation, mais plutôt d'évaluer sur les documents observés le type et le degré de détérioration. Il sera alors possible d'aider une bibliothèque à améliorer sa politique de conservation à long terme, à faire des choix judicieux en fonction des ressources dont elle dispose par exemple, à déterminer les méthodes de conservation dans lesquelles elle doit investir pour l'heure et dans l'avenir. Nous ne pouvons faire des projets à long terme sur la meilleure façon de conserver nos collections et donner satisfaction aux chercheurs que si nous avons une idée précise de l'état actuel des collections.

## Un outil pour la conservation

Des enquêtes de grande envergure sur l'état des collections ont été menées en Suède, en Allemagne, aux Pays-Bas, en Grande-Bretagne et aux Etats-Unis (Yale, Stanford) par exemple. Dans l'étude menée à la Koninklijke Bibliotheek, la Bibliothèque royale des Pays-Bas, les documents examinés étaient divisés en quatre groupes : monographies, périodiques, journaux et documents du dépôt légal. A Yale, les documents étaient choisis sur plusieurs sites de la bibliothèque et dans des collections différentes. Le but était de tirer un véritable bénéfice de ces enquêtes et on a pris soin que les plus petits ensembles de documents soient représentés.

Le but de cette première étape de l'enquête d'Helsinki était d'obtenir une vue schématique de la Collection nationale, de 1810 à 1944. C'est pendant cette période que le papier fait à partir de chiffons a cédé la place à un papier plus acide, fabriqué à partir de pâte de bois. Le papier acide fait à partir de copeaux de bois s'autodétruit considérablement plus vite que le papier chiffon. De nombreux autres pays ont manifesté leur intérêt pour des études sur le papier fabriqué à partir de bois.

Une étude sur l'état des documents représente un outil efficace pour planifier et prendre des décisions en matière de conservation. Dans ce domaine,

les activités de la Bibliothèque universitaire d'Helsinki se sont développées et nous avons maintenant la possibilité de répondre non seulement à nos besoins, mais aussi à ceux des autres bibliothèques de notre pays, grâce au microfilmage et à la numérisation par exemple. Pour ce faire, il nous faut connaître les domaines sur lesquels nous devons insister en matière de conservation, pour garantir les meilleurs résultats possibles.

presque 100% des cas, le papier était très acide, c'est-à-dire que le pH était inférieur à 5.5. Le pH du papier neutre est de 7.0. Parmi les ouvrages examinés, 50 % – un ouvrage sur deux – avait un pH inférieur à 4.15.

Le test de résistance au pliage a montré que 10 % environ des ouvrages ne résisterait pas à une utilisation future (voir tableau 3 p.28). Si un ouvrage endommagé est utilisé, il s'abîmera davantage. Il est difficile, pour ne

**Tableau 1 – Enquête sur l'état des documents : collections de la Bibliothèque universitaire d'Helsinki, Bibliothèque nationale de Finlande**

| Répartition des documents examinés | 1810-1841 | 1842-1944 | 1945-1972 | Nombre total d'ouvrages | Nombre d'échantillons |
|---|---|---|---|---|---|
| Documents autres que les œuvres de fiction • 19 domaines répartis par sujet | 1,6 % | 90,9 % | (7,6%, non comprises dans l'étude) | 91 000 | 3 141 |
| Œuvres de fiction | 0,2 % | 44,1 % | 55,7 % | 49 000 | 543 |
| Total | | | | 140 000 | 3 684 |

## Résultats de l'enquête : un papier acide et cassant

L'enquête menée à la Bibliothèque universitaire d'Helsinki s'est inspirée des études réalisées à l'Université de Stanford et de Yale, à partir d'échantillons pris au hasard. Cette enquête avait pour objet les documents de la Collection nationale qui ne sont pas des œuvres de fiction, publiés entre 1810 et 1944 et les œuvres de fiction parues de 1810 à 1972, 140 000 volumes en tout.

Compte tenu des multiples procédés de fabrication et de l'usure, le papier est souvent acide et donc susceptible de devenir cassant. La détérioration du papier peut aussi être provoquée par la corrosion de l'encre. Nous avons mesuré le pH des pages et procédé manuellement à un test de résistance au pliage, ce qui nous a permis d'avoir une idée précise du degré de fragilité du papier et de sa pérennité à l'usage. le calcul du pH est exponentiel, ce qui signifie qu'un changement d'unité du pH représente une différence d'une dizaine, en terme d'acidité et d'alcalinité. Par exemple, un pH de 5 est dix fois plus acide qu'un pH de 6, un pH de 4, cent fois plus qu'un pH de 6. L'acidité du papier augmente avec le temps et ainsi commence le processus de détérioration. L'étude a révélé que dans pas dire impossible, de restaurer la reliure de livres dont le papier est devenu cassant, et coûteux de les réparer.

## La consultation à l'origine des dégâts

Les dommages observés sur la couverture, la reliure et le papier d'un livre peuvent être grossièrement divisés en trois catégories : dégâts provoqués par l'utilisation, par les conditions de conservation et par les propriétés physico-chimiques du papier.

Parmi les dégâts provoqués par l'utilisation, on comprend les pages déchirées, les lacunes, les tâches, les traces de saleté et les pliures. On parle de dégâts sur la couverture lorsque la couverture et le dos sont détachés ou font défaut. Lorsqu'un livre est privé de couverture et de dos, le corps de l'ouvrage n'est absolument pas protégé contre les détériorations. Lorsqu'on parle de reliure détériorée, cela signifie que les attaches et les fils ont été cassés, ce qui donnera lieu à des pages détachées, endommagées ou manquantes. Ce genre de dégâts nécessite d'être réparé rapidement de façon à éviter la perte des informations. De la même façon, la réalisation de photocopies en nombre, de façon continue, représente un danger pour les livres fragilisés.

L'enquête a révélé que 15,3% des pages avaient été abîmées par les utilisateurs, les dégâts les plus courants étant les pages déchirées et les lacunes. Sur 11,2% des ouvrages, la reliure était endommagée et dans 6% des cas, c'est le corps d'ouvrage qui était détérioré. L'enquête a confirmé que lorsque la couverture et la reliure étaient endommagées, cela augmentait le risque de dégâts sur le papier lors de la consultation.

Les documents examinés comportaient beaucoup d'ouvrages qui ont été reliés en interne avec des couvertures rigides. L'enquête a montré que le fait de relier les livres avec des couvertures rigides améliorait la conservation et protégeait le corps d'ouvrage des dommages mécaniques. A l'inverse, les livres équipés d'une couverture souple sont plus susceptibles d'être endommagés.

**Tableau 2 – Dégâts observés**

| Dégâts sur le papier | Totalité des ouvrages | Documents autres que les œuvres de fiction | Œuvres de fiction |
|---|---|---|---|
| Causés par l'utilisation | 15,3 % | 19,1 % | 8,3 % |
| Dégâts chimiques | 2,7 % | 4,1 % | 0,2 % |
| Causés par le feu ou l'eau | 3,1 % | 3,7 % | 2,0 % |
| Dégâts sur la reliure | 6,0 % | 7,2 % | 3,8 % |
| Dégâts sur la couverture | 11,2 % | 14,3 % | 5,5 % |

## Documents autres que les œuvres de fiction : des dégâts multiples

Les résultats de l'étude ont été répartis en plusieurs groupes correspondant à un domaine particulier. Parmi les documents autres que les œuvres de fiction, les volumes les plus endommagés appartiennent à l'ensemble le plus utilisé, « Religion et Eglise ». Ici, l'étendue des dommages était bien supérieure à la moyenne. Au total, le nombre de volumes qui nécessitent une intervention rapide s'élève à quelques 44 000 volumes, parmi lesquels 20 à 30% ont déjà souffert de l'utilisation qui en a été faite. Souvent, les ouvrages ont révélé des signes de détérioration de toutes sortes. Les études complémentaires révéleront certainement que d'autres ouvrages requièrent une intervention immédiate.

**Tableau 3 – Domaines qui nécessitent une intervention urgente**

| Domaines qui nécessitent une intervention urgente | Nombre d'ouvrages | Mètres de rayonnages | Dégâts causés par l'utilisation | Dégâts sur la reliure | Dégâts sur la couverture | Dégâts causés par l'eau ou le feu | Dégâts chimiques |
|---|---|---|---|---|---|---|---|
| Religion et Église | 12 600 | 257 | 30,9 % | 10,8 % | 20,4 % | 6,2 % | 9,8 % |
| Presse | 3 000 | 71 | 27,8 % | 11,5 % | 11,5 % | 1,3 % | 3,8 % |
| Défense | 4 800 | 151 | 26,9 % | 6,7 % | 17,3 % | 5,1 % | 1,3 % |
| République soviétique socialiste de Carélie | 2 400 | 77,5 | 26,9 % | 3,9 % | 19,2 % | 5,1 % | 0,0 % |
| Écoles et établissements universitaires | 2 400 | 52 | 26,3 % | 8,0 % | 11,1 % | 2,0 % | 2,0 % |
| Histoire | 2 400 | 39 | 22,0 % | 8,8 % | 13,7 % | 1,5 % | 4,9 % |
| Linguistique bibliothéconomie, poésie populaire finlandaise, histoire littéraire et arts, philosophie | 10 000 | 208 | 21,3 % | 7,5 % | 15,9 % | 3,9 % | 4,5 % |
| Œuvres et collections rassemblées | 6 200 | 157 | 20,1 % | 9,9 % | 21,7 % | 1,9 % | 1,9 % |

La collection de romans de la Bibliothèque nationale n'est pas autant consultée que les autres. Elle est donc, dans l'ensemble, en meilleur état. La consultation des œuvres de fiction a été volontairement restreinte : le lecteur doit obtenir une autorisation spéciale pour consulter un ouvrage de cette catégorie.

## Quelques conseils pour manipuler les ouvrages

Il faut intervenir rapidement sur ces groupes de livres qui, pour tout ou partie, révèlent des dégâts sur le papier, la couverture ou la reliure, et qui sont endommagés au-delà de la moyenne. Ceci parce qu'un papier cassant et un pH bas provoqueront des dégâts supplémentaires sur des documents déjà endommagés.
Bien que la majeure partie des dégâts soient mineurs, cela représente un sérieux danger pour les livres, et cela empirera si on les utilise. Un grand nombre d'ouvrages a déjà atteint le stade où leur utilisation doit être sérieusement restreinte.

Nous pouvons limiter la consultation des livres en très mauvais ou mauvais état en encourageant l'utilisation de versions électroniques. On peut y parvenir en les numérisant. Cela nous permet de retirer l'original de la consultation et d'empêcher qu'il ne s'abîme davantage. Certains ouvrages bénéficient d'un traitement ; d'autres doivent être microfilmés si l'on souhaite en assurer la conservation à long terme, et pour certains, il suffit de les placer dans des boîtes d'archives.

Notre programme « Numérisation et Conservation » considère en priorité deux aspects : la demande des lecteurs et l'état du document ; et cela va de pair. Les documents qui sont le plus demandés seront inscrits au programme de numérisation. Nous établirons des directives sur l'utilisation de la Collection nationale lorsque nous connaîtrons l'état des documents. On utilisera les services de photocopie et de reprographie de façon à ce que l'intégrité du document soit considérée en priorité ; de même pour la manipulation et l'utilisation des ouvrages.
Le microfilmage reste encore la meilleure alternative si l'on souhaite conserver à long terme le contenu d'un document gravement menacé. Prenons l'exemple du papier utilisé pour fabriquer les journaux qui se détériore en quelques générations. De nouvelles méthodes de microfilmage couleur nous permettent aussi de préserver les documents couleur pour les deux prochains siècles au moins.

Dans la plupart des cas, les travaux de restauration sont effectués à la main. Les systèmes de désacidification de masse se sont développés. Néanmoins, ce procédé permet seulement de retirer l'acidité du papier. Il ne le rend pas plus pérenne et ne répare aucun des dommages mécaniques existants. Le traitement de restauration nécessite du temps et beaucoup de travail ; c'est pourquoi il ne permet de sauver qu'une très petite partie des documents susceptibles de se détériorer.

## Programme « Numérisation et Conservation »

Parce que les mesures de conservation concernent un grand nombre d'ouvrages, nous avons besoin de plus de ressources - humaines et matérielles - pour les mettre en œuvre. En 2004, la Direction, en collaboration avec la Direction des Collections, le Service des lecteurs et le Département de la Conservation, évaluera les moyens de mettre en place un projet « Numérisation et Conservation ». Au fur et à mesure de l'enquête, nous évaluerons les résultats et nous élargirons le Programme « Numérisation et Conservation » pour y inclure de nouveaux groupes de documents. Des études complémentaires seront menées jusqu'à ce que tous les documents qui nécessitent d'être conservés à long terme aient été examinés. A l'heure où j'écris cet article - printemps 2004 - une étude est réalisée sur le fonds slave ; une autre est prévue à partir d'échantillons pris au hasard sur la collection qui remonte à la période de la domination suédoise, 1488-1810.

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# National Digital Newspaper Project



**by Deborah Thomas**
Digital projects coordinator,
Library of Congress

In July 2004, the U.S. **National Endowment for the Humanities (NEH) and Library of Congress (LC)** joined together in announcing the **National Digital Newspaper Program (NDNP)**, a ground-breaking initiative to develop a freely-available national digital resource to enhance access to all American historical newspapers, published between 1836 and 1922. This searchable Internet database, "American Chronicle", will be permanently maintained by the LC and include both records for all American newspapers cataloged under the **United States Newspaper Program (USNP)**, as well as digital images and text of historically significant titles from all states and U.S. territories.

Historic newspapers are the primary record of events that shape our communities. They provide a venue for sharing the facts and opinions of moments in time, significant people, and local perspectives – a unique resource for recording and understanding the effects of both singular and united voices on ideas, events, and democratic identity, as well as defining the historical record. As Dr. Bruce Cole, chairman of the NEH, declared to the National Press Club in November, "a democracy like [America's] is only as good as the knowledge of the people who are part of it. The more we remember of our past, the better off we are…" Dr. Cole went on to describe the primary goals of the program - over approximately 20 years, providing enhanced access to 30 million digitized pages from historically newspapers and a catalog directory of over 145,000 US titles and associated institutional holdings, created under USNP, in a freely-accessible and searchable repository.

In the initial phase of the program, 2004-2006, the **National Endowment for the Humanities (NEH)** and the Library of Congress will collaborate to produce a developmental digital repository with more than one million pages of historic newspapers converted, primarily, from microfilm. These pages will be contributed both by LC and NEH grant awardees selected for their experience with historic newspapers, digitizing collections, and their existing digital library infrastructures. The program also builds on the legacy of the strategically-successful United States Newspaper Program, sponsored by the NEH and supported by the LC over the past twenty years – an excellent example of successful collaboration at both the national level and within states to inventory, catalog, and preserve the national corpus of at-risk newspaper materials.

In recent decades, under **United States Newspaper Program (USNP)**, the preservation of newspapers on microfilm and the establishment of imaging and bibliographic standards has been an important component of archival programs, however, even this aspect of newspaper librarianship does little to address the use and access needs of text-intensive newsprint. Utilizing this valuable resource, imaged on film or in original paper is a challenge for libraries and users alike, with its cumbersome format, discolored and brittle paper, and difficult organization. Even with the best imaging standards and process, the intellectual content of the newspaper is contained in a complicated layout, with varying visual cues and small type faces, wearying to the eye and the mind. However, with the development of new technologies in digitization, text recognition, search engines, etc. the NDNP will provide enhanced access and searchability to this material, as well as the national leadership necessary to establish technical standards for the digitization and architecture of newspaper materials.

In July 2004, the **National Endowment for the Humanities (NEH) announced the National Digital Newspaper Program (NDNP)** grant competition for 2005 awards of up to $500,000 each, to convert 100,000 pages of microfilm to the NDNP digital specifications, based on appropriate best practices and digital format standards. These awards will take the form of cooperative agreements between awardees and the NEH, with technical support provided by the LC. The NEH will consult with recipients on title selection, work plans (including microfilm analysis, conversion practices and deliverables) and timelines. The Library of Congress will review all deliverables for compliance with the technical specifications before adding them to the repository. Fifteen institutional cooperatives applied for grants by the October 2004 deadline and the NEH will announce the successful awardees in April 2005. Meanwhile the LC has worked together with the NEH to design a sustainable and interoperable digital library architecture for the NDNP that will provide open access to the digitized content through the "American Chronicle" website. In September 2006, the NDNP will make its first release of "American Chronicle", which will include newspaper title cataloging and holdings records created under United States Newspaper Program- 145,000 titles and 900,000 holdings – and over one million pages of newspapers, published between 1900 and 1910.

For more information on the program or technical guidelines, please visit the NDNP Request for Proposal for Phase One at

http://www.neh.gov/grants/guidelines/ndnp.html.

## Les Etats-Unis numérisent leurs journaux

En juillet 2004, la U.S. National Endowment for the Humanities et la Bibliothèque du Congrès ont annoncé la création d'un Programme national de numérisation de la presse. Echelonné sur une vingtaine d'années, celui-ci devrait permettre la consultation sur Internet de tous les journaux américains publiés entre 1836 et 1922, ceci grâce à 30 millions de pages numérisées et un catalogue contenant plus de 145 000 titres.

Dans un premier temps (2004-2006), c'est un million de pages, ayant comme support d'origine le microfilm, qui sera rendu accessible. Pour mener à bien ce projet, un appel à candidatures a été lancé parmi les professionnels spécialisés dans la presse historique et la numérisation des collections. Les lauréats se verront attribuer une bourse pour effectuer la numérisation de 100 000 pages de microfilms.

En septembre 2006, c'est plus d'un million de pages des journaux américains publiés entre 1900 et 1910 qui devrait avoir été produit.

## Los Estados Unidos digitalizan sus periódicos

En julio de 2004, la U.S. National Endowment for the Humanities y la Biblioteca del Congreso anunciaron la creación de un Programa nacional de digitalización de la prensa. Programado en veinte años, este programa debería permitir la consulta en la Internet de todos los periódicos estadounidenses publicados entre 1836 y 1922, gracias a la digitalización de 30 millones de páginas y un catálogo con más de 145 000 títulos.

En una primera etapa (2004-2006), se dará acceso a un millón de páginas, que tienen como soporte original el microfilme. Para realizar este proyecto, se hizo un llamado a concurso entre los profesionales especializados en prensa histórica y digitalización de colecciones. Los ganadores recibirán una beca para efectuar la digitalización de 100 000 páginas de microfilme.

En septiembre de 2006, se deberá haber producido casi un millón de páginas de periódicos estadounidenses publicados entre 1900 y 1910.

# News

**International Newspaper Conference: Asia and the Pacific**
22-24th February, 2005
Canberra, Australia
Report by Else Delaunay, IFLA Newspapers Section

About a hundred people especially involved in newspaper activities attended this three day conference held at the National Library of Australia in Canberra. The programme was very dense and ranged from current newspaper activities (in Germany and France) and newspaper preservation (the IFLA-PAC experience in South America and Africa) to various newspaper digitisation projects in Australia and New Zealand (« Papers Past », a selection of XIXth century New Zealand newspapers and periodicals, 750 000 pages from 34 publications) but also in the United States, the United Kingdom, Finland and the Nordic countries, South America (rescuing of the Great Columbia newspapers 1820-1830 by ABINIA and the National Library of Venezuela).

## Some highlights

– The **British Newspapers 1800-1900 Project** launched in April 2004, to be finished in 2006. It aims the digitizing of two million pages of UK newspapers, national, regional and local.
Edmund King, responsible for the projet, insisted on certain important points:
- selection of the newspaper titles;
- use of microfilm for scanning;
- creating OCR so as to enable searching of OCR text;
- mounting digital files on a web server and, not to forget;
- keeping in mind lessons learnt so far.

Some 400 000 pages have been examined and prepared to be microfilmed and scanned, then OCR processed. Texts will be searcheable. The British Library makes a grant of three million pounds sterling.

– Developments of the **Nordic Newspaper Library Project TIDEN** since 2001 were introduced by Majlis Bremer-Laamanen, head of the Finnish National Library's Preservation and Reproduction Centre in Mikkeli. If the other nordic countries continue to digitize without OCR, Finland has preferred to use OCR processing. The Centre in Mikkeli has accomplished a great number of studies to develop the best software. All Finnish historical newspapers have been microfilmed. *At the end of 2005, one million pages will be digitized and OCR processed, that means all Finnish newspapers until 1890 online*. Software is developing very quickly and becomes more and more automated and therefore faster. *All digitizing is made from microfilms to get the best and cheapest result*.

– The **Argus Index Online**: historical newspaper indexing in a digital age presented by Judith Pearce and Geraldine Suter, National Library of Australia, is probably the most ambitious newspaper project in Australia. It will provide a complete online index to the « Argus » newspaper published in Melbourne from 1846 to 1957. It will build on completed and published indexes for the years 1846-1869 and 1909-1949 as well as indexing the intervening run. The entrances are ranged chronologically.
The process is:
- reading (35 readers using especially microfilms);
- indexing;
- editing;
- review.

– Georgia Highley, head of the Newspaper Section, Library of Congress, introduced the **National Digital Newspaper Program** (NDNP), a follow up of the United States Newspaper Program (USNP). The aim of this project is to enhance web access to all American newspapers in using current technologies to improve the products of the USNP (cataloguing and microfilming of all American newspapers). There will be a *depository of duplicate digitized microfilms at the Library of Congress*.

– Colin Webb, head of the Preservation Services at the National Library of Australia, introduced the **NPLAN**, the **National Plan for Australian Newspapers**, which was launched in 1992. It is a multi-partner plan (all Australian State Libraries) that aims to preserve all Australian newspapers and ensure the public has adequate access to them. Funding: 7.9 million Australian $ already spent (excluding administrative costs). Some 21 million $ are still needed for achievement of the project. The plan is a third of the way on! Filming process: 10 % completed.
NPLAN achievements and issues:
– standards of copying;
– image quality and completeness;
– use of acetate film (a lot of work has been done on acetate material, storage, copying);
– storage and control of masters.
The NLA has the infrastructure to keep digitized material and accept digitization as a preservation mean.
See also:
www.nla.gov.au/nplan/index

Digitisation was indeed the overall subject during the conference. In most countries, digitisation projects are under way or already achieved to some extent. The general recommendation throughout the papers was: microfilm first, digitize afterwards using the microfilm. The Finnish colleagues were among the first to elaborate an important newspaper digitisation programme studying all available software, OCR process, so much more as they had newspapers in different languages, scripts and prints. They still examin new developments of technologies.

## Conférence internationale sur les journaux : l'Asie et le Pacifique

22-24 février 2005
Canberra, Australie
Compte rendu de Else Delaunay, Section IFLA des journaux

Quelque cent professionnels des journaux participaient à cette conférence qui s'est déroulée à Canberra, à la Bibliothèque nationale d'Australie, pendant trois jours. Le programme, très dense, portait aussi bien sur les activités courantes concernant les journaux (en Allemagne et en France) et la conservation de la presse (les expériences d'IFLA-PAC en Amérique du Sud et en Afrique) que sur les divers projets de numérisation des journaux rétrospectifs en Australie et en Nouvelle-Zélande (« Papers Past », une sélection de 34 journaux ou périodiques néo-zélandais du XIX[e] siècle, au total 750 000 pages numérisées), mais aussi aux Etats-Unis, en Grande-Bretagne, dans les pays nordiques et en Finlande, en Amérique du Sud (pour sauver les journaux de la Grande Colombie, 1820-1830, par ABINIA et la Bibliothèque nationale du Venezuela).

### Quelques moments forts

– Le projet **British Newspapers 1800-1900**, lancé en avril 2004, se terminera en 2006. Il a pour but de numériser deux millions de pages de journaux britanniques, nationaux, régionaux et locaux.
Edmund King, responsable du projet, a insisté sur quelques points :
- le choix des titres ;
- la numérisation à partir de microfilms ;
- la création d'OCR pour permettre l'interrogation du texte par mots clés ;
- la mise à disposition de collections numérisées sur le serveur web et, à ne pas oublier ;
- l'enseignement de l'expérience acquise.

Quelque 400 000 pages ont été vérifiées et préparées pour être microfilmées et numérisées, puis traitées par OCR. Les textes seront interrogeables. La British Library subventionne le projet à hauteur de trois millions Livres sterling.

– L'évolution depuis 2001 du **TIDEN**, le **Projet nordique de numérisation des journaux**, a été présentée par Majlis Bremer-Laamanen qui dirige le Centre de conservation et de reproduction de la Bibliothèque nationale de Finlande à Mikkeli. Si les autres pays nordiques continuent de numériser en mode image (sans OCR), la Finlande, elle, a préféré appliquer le traitement OCR. Le Centre de Mikkeli a réalisé un grand nombre d'études pour développer le meilleur logiciel. Tous les journaux rétrospectifs finlandais ont été microfilmés. *Fin 2005, un million de pages auront été numérisées et traitées par OCR, ce qui signifie que tous les journaux finlandais jusqu'à 1890 seront en ligne*. Les logiciels évoluent très vite et s'automatisent de plus en plus, ce qui les rend de plus en plus rapides. *Toute la numérisation se fait à partir de microfilms afin d'obtenir le meilleur résultat au tarif le plus compétitif*.

– **L'index de « L'Argus » en ligne** : indexation d'un journal rétrospectif à l'âge de la numérisation, projet présenté par Judith Pearce et Geraldine Suter de la Bibliothèque nationale d'Australie. Il s'agit sans doute du projet de numérisation de la presse le plus ambitieux en Australie qui fournira un index complet en ligne du journal « L'Argus » publié à Melbourne de 1846 à 1957. Il est basé sur des index complétés, déjà publiés, de 1846 à 1869 et de 1909 à 1949, et des index en cours pour les périodes manquantes. Les notices sont classées chronologiquement.
On procède comme suit :
- lecture (35 lecteurs utilisant surtout des microfilms) ;
- indexation ;
- édition ;
- contrôle.

– Georgia Highley qui dirige la Section des Journaux à la Bibliothèque du Congrès a présenté le **Programme national de numérisation des journaux** (NDNP), la suite du programme USNP (United States Newspaper Program). Le projet vise à donner accès à tous les journaux américains sur le web en utilisant les technologies courantes pour améliorer les produits de l'USNP (catalogage et microfilmage de tous les journaux américains). *Le stockage des copies de microfilms numérisés sera assuré par la Bibliothèque du Congrès*.

– Colin Webb qui dirige les Services de la Conservation à la Bibliothèque nationale d'Australie a présenté le **NPLAN, le Plan national pour les journaux australiens**, qui a été lancé en 1992. Ce projet rassemble plusieurs partenaires (notamment l'ensemble des bibliothèques d'Etat en Australie) et vise à conserver tous les journaux australiens en veillant à ce que le public y ait accès correctement. Financement : 7,9 millions de dollars australiens déjà dépensés (sans tenir compte des frais administratifs). Quelque 21 millions de dollars seront encore nécessaires pour terminer le projet. Un tiers du chemin est actuellement parcouru ! Microfilmage : environ 10% du projet achevé.
Réalisations :
- normes de duplication ;
- qualité d'image et complétude ;
- utilisation de films d'acétate (beaucoup de travail a été effectué sur ces films, stockage, duplication) ;
- stockage et vérification des films matrices.

La Bibliothèque nationale d'Australie possède l'infrastructure nécessaire pour conserver le matériel numérisé et accepter la numérisation comme un moyen de conservation. Voir aussi : www.nla.au/nplan/index

La numérisation a en effet été le sujet prédominant durant toute la conférence. Dans la plupart des pays, des projets de numérisation de journaux sont en cours ou, dans une certaine mesure, déjà achevés. Dans l'ensemble, les intervenants recommandent de microfilmer d'abord, et de numériser ensuite à partir du microfilm. Les collègues finlandais ont été parmi les premiers à élaborer un important programme de numérisation de journaux avec des études approfondies sur les logiciels disponibles, le traitement OCR, d'autant plus que les journaux finlandais comportent plusieurs sortes de langues, d'écritures et de caractères. On étudie régulièrement de près les nouveaux développements technologiques.

## Comité français du Bouclier Bleu

Deuxième journée d'étude
8 avril 2005, Toulouse

La deuxième journée d'étude du Comité français du Bouclier Bleu s'est déroulée à la Médiathèque José Cabanis de Toulouse, le 8 avril dernier. Dédiée à la prévention des catastrophes et aux plans d'urgence, cette journée faisait suite à celle organisée le 28 novembre 2003 à Caen, à l'initiative de Christine d'Anterroches, directrice de Normandie-Patrimoine.
Plus de 130 personnes d'horizons culturels divers, conservateurs et restaurateurs des musées, archives et bibliothèques, mais aussi de la société civile, ont participé à cette rencontre organisée par Jocelyne Deschaux et articulée en deux demi-journées. Après une présentation du Bouclier Bleu, plusieurs expériences d'inondation ont tout d'abord été présentées ainsi que leurs conséquences sur le patrimoine culturel et le fonctionnement des institutions sinistrées. L'après-midi, les interventions traitèrent plus particulièrement des mesures de prévention, de la mise en place des secours et de l'élaboration des plans d'urgence.
Le nombre et la variété des questions ont montré l'intérêt des participants pour ce type de rencontre qui, au-delà des thèmes abordés, permet de fédérer les enthousiasmes autour du Bouclier Bleu. Ainsi, l'adjoint au maire chargé de la culture a encouragé l'assistance à créer un Comité régional du Bouclier Bleu en Midi-Pyrénées, une initiative qu'il serait intéressant de reprendre dans d'autres régions si l'on veut opérer un maillage efficace du territoire. L'organisation d'une troisième journée est à l'étude pour 2006 en région PACA.
Les Actes de la journée d'étude de Caen « Prévention des risques et patrimoine culturel » viennent d'être publiés par Normandie-Patrimoine avec le concours du Conseil général de Basse-Normandie.

Informations auprès du secrétariat
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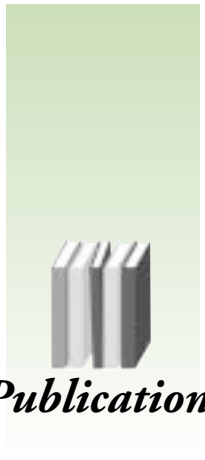
## Cuba
## Workshop on disasters
## Creation of a Cuban Committee of the Blue Shield

February 9-10th, 2005, Havana

Following the workshops organised by IFLA-PAC in the framework of the Blue Shield at the Universidad Nacional Autónoma de Mexico (UNAM) in Mexico City, October 16-17th, 2003 and at the National Library of Trinidad & Tobago, on May 21-22nd, 2004, a third workshop "Taller de Protección de Bienes Culturales" was organised at the Biblioteca nacional José Martí in Havana, Cuba, on February 9-10th, 2005. More than 40 participants attended the workshop where archives, libraries and museums from each of the Cuban provinces were represented. A number of institutions presented their specific disaster plan and the measures taken to cope with disasters, especially hurricanes. A seismologist from Venezuela presented a very interesting paper on the mechanisms of earthquakes and tsunamis, on the ways to get well prepared in the event of such disasters and on the preservation of data about past and current disasters.
A representative from the Meteorological Office explained the degrees of vulnerability of the population and of the buildings according to the strength of the winds and drew up the scale of risks from tropical depression (winds inferior to 63 kms per hour) to force five hurricanes (with winds superior to 250 kms per hour).
Representatives from the civil defence detailed the measures taken at national level to mitigate the consequences of hurricanes. Being used to be regularly hit by tropical tempests and hurricanes, Cuba has learned to take adequate measures and is well prepared to face emergency situations.

Creation and signature of the Cuban Committee of the Blue Shield.

At the end of the workshop and at the initiative of Eliades Acosta, Director of the National Library, an official ceremony took place, in the presence of representatives of IFLA, ICA (International Council on Archives), ICOM (International Council of Museums) and ICOMOS (International Council of Monuments and Sites) to celebrate the creation and the signature of the Cuban Committee of the Blue Shield.



# *Publications*

- « IFLA Principles for the Care and Handling of Library Material » have been translated in Japanese.

The document can be consulted on the IFLA website at:
http://www.ifla.org/VI/4/ipi.html
For more information, please contact the PAC Center in Tokyo at:
pacasia@ndl.go.jp

- « IFLA Principles for the Care and Handling of Library Material » have been translated in Polish.

To order copies, please contact:
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Tel: + 0 12 422 40 94
E-mail:
sekretariat@archiwum.krakow.pl

- « IFLA Principles for the Care and Handling of Library Material »;
- « IFLA/UNESCO Survey on Digitisation and Preservation » and
- « A Blue Shield for the Protection of our Endangered Cultural Heritage » have been translated in Chinese.

The translations have been collected in one document which is available from:
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Beijing 100081 - China
Tel: + 86 10 68 41 92 71
E-mail: interco@nlc.gov.cn

## Newspapers in Central and Eastern Europe / Zeitungen in Mittel – und Osteuropa

Edited by Hartmut Walravens

This book contains the proceedings of a special IFLA conference held in Munich in August 2003. The situation of newspapers collection was reviewed in the part of the world that had undergone a complete change of the political and economical situation during the 1990's. The papers focus on a wide array of issues related to newspaper librarianship. They are grouped into the following categories:

- acquisition policies,
- copyright issues for newspaper collection management,
- digitisation and electronic newspapers,
- new technologies of paper conservation,
- storage and text management.

There are approximately 35 short articles in total; these are a mix of English and German texts.
All German papers are provided with an English abstract.

München: Saur, 2005, 251 p.
IFLA Publications 110
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Order:
K.G. Saur Verlag
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81316 Munich, Germany
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## Crisis Management and Recovery CASLIN 2003

Edited by Františka Vrbenská

In June 2003, the Czech and Slovak Library Information Network (CASLIN) organized in Prague a five-day seminar focusing on « Crisis Management and Recovery ». This event gathered international specialists in the protection of cultural heritage and administrators of the collections that suffered the most from the floods that affected Central Europe in August 2002.
The proceedings have been divided in three parts, the first one dealing with theory and practice of crisis management. The second one is devoted to papers by library, archives and museums professionals who were confronted with the 2002 floods. The last part focuses more particularly on recovery activities.

The proceedings of the CASLIN 2003 seminar are available online at:
http://www.stk.cz/CASLIN03/caslin03_en

## Preparing for the Worst, Planning for the Best: Protecting our Cultural Heritage from Disaster

Edited by Nancy Gwinn and Johanna Wellheiser

Throughout history, libraries, museums and archives have been struck by disasters, both natural and man-made. Earthquakes and floods, storms and fires have caused huge losses of precious collections. Human conflicts and wars

have also played their own roles in violating the heritage of human civilization.
This book contains the proceedings of a special IFLA conference held in Berlin in July 2003 which was devoted to the preparedness of library collections for situations of 'man-made' disasters (conflict, war) and/or natural disasters (earthquakes, floods, hurricanes). A panel of international experts discussed these issues and exchan-ged their views. Papers concentrated on different aspects of the issues. One part focuses on national policy planning with contributions by speakers from countries that have established national planning efforts and strategies for handling disasters, specifically as they relate to cultural organizations, such as libraries, archives and museums. Another part concentrates on the institutional level, with an emphasis on what has shown to work based on practical experiences in libraries and other sectors: human resource and response issues, training requirements, pitfalls and success factors. In addition a worldwide scala of case studies is presented.
The book pays tribute to the efforts that have been made to protect or recover our cultural heritage from disaster, and provides valuable advise on planning for emergencies and on the preventive measures needed to safeguard collections.

München: Saur, 2005, 192p.
IFLA Publications 111
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# *Book Review*

**Exhibiting Archival and Library Material and Works of Art on Paper**
International symposium
Proceedings edited by
Jedert Vodopivec
Book review by
Helen Forde, consultant

*N.B.: this review has been published in "The Journal of the Society of Archivists" (volume 26/1-April 2005)*

The papers from this international symposium, held in Ljubljana in the summer of 2003, have been put together to provide both a textbook for students and offer ideas on exhibition presentation, and standards to which the promoters of exhibitions should adhere. The texts are in Slovenian and English having been translated to benefit both those who supported the symposium and others who were not able to attend. The volume is handsomely produced, following the format of earlier publications on preservation and conservation issues, containing diagrams and photographs to illustrate the contributions.

Several authors are concerned about display requirements. Ted Steemers (Netherlands) acknowledges that standards already exist in many countries, but takes issue with the practicalities advanced by some and the difficulties which guidelines in general present. Marie-Thérèse Varlamoff (France) also questions the value of standards but argues that these are necessarily set high since they promote improvements in exhibition design, display and storage and act as a protective screen for fragile documents. She ends on the salutary note that "if standards are useful, common sense is essential". How true. Mojca Jenko (Slovenia) stresses the need to allow adequate time for preparation and the importance of cooperation in what is essentially a shared responsibility. Misunderstandings, especially in foreign languages and over a considerable period of time, often mar otherwise well intended arrangements for exhibitions, and both those borrowing and those lending materials need to avoid unnecessary and stressful confrontation.

Environmental conditions and the problems associated with implementing adequate safeguards concern many of the authors especially, all recognising the central importance of the issues. Dario Camuffo (Italy) combines theory and practice, outlining the Italian experiments in infra-red heating for people in churches, which avoids the damaging fluctuations of temperature and relative humidity resulting from traditional means of heating, followed by a critique of the Italian standard. Christopher Clarkson (UK) and two Hungarian conservators, Gabriella Albrecht-Kunszeri and Márta Járó, discuss particular problems with the display of parchment, emphasising the importance of checking the conditions in which displayed material is normally kept; not all owners are reliably informed about conditions in their own repositories. The preservation requirements for large works of art on paper, in particular the difficulty of providing appropriate environmental conditions, are outlined by Karmen Corak-Rinesi (Italy).

Fading, due to light exposure, is a serious issue for many exhibitions, especially those where it is acknowledged that material will be on display for longer than the recommended norm. Several authors, and especially Michal Durovic (Czech Republic) refer to the Blue Wool Standard (ISO 105) and varying degrees of vulnerability to

light as the determining factor for length of exposure. A recent project in Prague has resulted in a useful categorization of materials and their light stability, which is outlined here. Jana Kolar, Jasna Malešic and Matija Strlic (Slovenia) address the particular problems of iron-gall ink and indicate how their research shows how irradiation of inks, by exposure to light, can result in a serious loss of contrast, while Clara van Waldthausen (Netherlands) focuses on the particular difficulties associated with the display of photographic materials, summarizing current knowledge on this difficult area.

The respective roles of the curator and the conservator have evolved in the development of exhibition techniques over the past twenty or so years. This is discussed by Caroline Checkley-Scott and Tony Bish (UK), recognising that the exhibition process is one which needs active input from all parts of the organisation and understanding about the advisory role of the conservator as well as his or her role in preparing exhibition material for either interior display or external loan. Pamela Porter (UK) addresses the issues facing curators and couriers when considering loan exhibitions, and outlines the pitfalls all too often encountered in moving valuable material across the world for exhibition.

Several of the contributors turned their attention to the problems related to the presentation of the displayed items and the materials used. Rosie Fremantle (UK) considers the glazing options for works of art on paper, emphasising that the performance and safety of any glazing product is only as good as the way in which the item is prepared and handled. The editor herself, Jedert Vodopivec (Slovenia) discusses the importance of understanding mounting techniques and supports, particularly for long-term display, arguing that inappropriate materials often lead to artefact damage.

Many of the issues related to the display of archival materials cross international boundaries and local guidelines. Fortunately, the archival and conservation communities are sufficiently small, and well-knit, to make communication about such matters relatively easy. Josef Hanus (Slovak Republic), Elena Popova (Russia) and Marie-Thérèse Varlamoff all consider the problems and some of the solutions - such as the strategic plans for the development of the Blue Shield Initiative. Legislative issues are discussed in the context of the need for archives to promote access to their holdings and to display them as comprehensively as possible.

The volume as a whole is well edited and translated, with the customary care that is now the hallmark of the series. Much of the emphasis is on practical considerations and several of the articles will be used as valuable reference points in the years to come. Those considering exhibiting archives or works of art on paper would do well to consult it. If it is written primarily from the point of view of the conservation problems associated with the display of such vulnerable materials, that makes it no less important reading for archivists. Understanding the concerns of both archivists (and organisations), eager to display precious items and the conservator charged with the safety and well-being of such material will improve the quality of exhibitions and ensure that materials on display are subjected to minimum danger.

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Archives of the Republic of Slovenia
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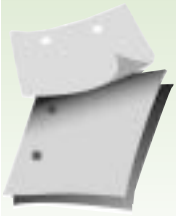
1127 Ljubljana
Slovenia



# Events and Training

## Programme « Profession Culture » Bibliothèque nationale de France Rapport de stage

Du 20 avril au 31 août 2004, Monsieur Issam Abed, Docteur en Sociologie, membre de l'Association des journalistes irakiens, a effectué un stage à la Bibliothèque nationale de France, dans le cadre du programme « Profession culture ».
Ce programme a pour objectif de favoriser le développement de projets de coopération et la constitution de réseaux durables d'échanges entre les établissements publics relevant du Ministère de la Culture et de la Communication et leurs homologues étrangers. Il est accessible à des personnes qui poursuivent un projet professionnel, scientifique ou personnel, et nécessitent de travailler sur les collections et services de la bibliothèque d'accueil, sur ses programmes culturels, ses modes de gestion et ses projets de développement.
C'est dans le cadre du projet d'aide à la reconstruction des bibliothèques irakiennes mené par la Bibliothèque nationale de France que s'est inscrit le stage de Monsieur Abed.
Au sein du Service des littératures orientales de la Bibliothèque nationale de France, le stagiaire devait identifier dans le fonds imprimé de la BnF et, le cas échéant, dans les fonds arabes d'autres bibliothèques parisiennes, des imprimés irakiens, ou d'auteurs irakiens, ou relatifs à l'Irak, susceptibles d'être reproduits.

Dans son rapport de stage, Issam Abed indique que le nombre des imprimés sélectionnés, à la fois dans les fichiers papier et les catalogues imprimés, s'élève à 1750 titres de monographies. Ce sont des œuvres en langue arabe, relatives aux sciences, au patrimoine littéraire et culturel, et à l'histoire, qui représentent « des œuvres de référence d'une haute importance pour les bibliothèques irakiennes en général et pour la Bibliothèque nationale d'Irak en particulier ». Monsieur Abed précise encore que cet ensemble apportera probablement « une réponse au moins partielle aux lacunes des collections irakiennes, après les dommages qu'elles ont subis au fil du temps et après les destructions du printemps 2003, plus particulièrement. »



### Arctic Circle Conservation Colloquium: Preservation Storage Solutions for all Library Materials

August 10-11th, 2005
Mo i Rana, Norway

The colloquium has been jointly organised by the IFLA Newspapers Section and the IFLA Preservation and Conservation Section. It is to be held on the 10-11th August, i.e just before the 71st IFLA General Conference. It will focus on the interdependency of preservation and storage for making solutions to the longevity of varied library materials.
The colloquium venue will be at the Mo i Rana facility. The National Library of Norway has developed the facility at Mo i Rana which is situated just south of the Arctic Circle. It provides a new approach to the long term retention of all types of library materials. The colloquium will give attendants the opportunity to learn at first hand about the aims of the National Library of Norway's preservation programme, and how these aims have been achieved in practice.
This storage facility is almost unique. It has facilities for the retention of materials that serve as an example to others. The National Library in Rana has also an automated storage and retrieval system which contains the lending material of the Repository Library. This storage solution is the first of its kind in the Nordic library sector. This is a chance for the attendants to travel to the far North and be guided by the professional staff of the National Library of Norway. They will also be able to experience the Arctic Summer.

It is intended to place further details about the colloquium programme, about speakers, accommodation, travel arrangements and any registration needed all on a website.
In the meantime, please contact the organising committee:

- Edmund King, British Library, at ed.king@bl.uk
- Majlis Bremer-Laamanen, Helsinki University Library, at majlisbremer-laamanen@helsinki.fi
- Gunhild Myrbakk, National Library of Norway, at gunhild.myrbakk@nb.no
- Kari Mathisen, National Library of Norway, at kari.mathisen@nb.no

### Digital Futures: from Digitisation to Delivery

September 26-30th, 2005
London, United Kingdom

King's College London and OCLC-PICA announce the second 'Digital Futures' training event on creation, delivery and preservation of digital resources from cultural and memory institutions. Lasting five days, 'Digital Futures' is aimed at managers and other practicioners from the library, museum, heritage and cultural sectors looking to understand the strategic and management issues of developing digital resources from digitisation to delivery.
'Digital Futures' will include visits with the National Gallery and another major cultural organisation (to be confirmed) to view their respective digital activities.
'Digital Futures' will cover the following core areas:

- planning and management;
- fund raising and sustainability;
- copyright;
- key technical concepts;
- creating and delivering textual resources;
- visual and image based resource creation and delivery;
- metadata – introduction and implementation;
- implementing digital resources;
- digital preservation.

The training course aims for no more than 30 delegates and every delegate will have the opportunity to also spend one-on-time with a 'Digital Futures' leader to discuss issues specific to them. 'Digital Futures' will issue a certificate of achievement to each delegate.
The 'Digital Futures' leaders have over 40 years of experience in the digital field between them. Other experts are invited to speak in their areas of expertise.

To register interest, find more information and to receive a registration form, please contact Gillian McLeod at OCLC-PICA
E-mail: g.mcleod@oclcpica.org
See www.kcl.ac.uk/kdcs/digifutures.htm for more information.

## Digital Preservation Management: Implementing Short-term Strategies for Long-term Problems

October 31 – November 4, 2005
Ithaca, USA

Cornell University Library announces continuation of its digital preservation training program with funding from the National Endowment for the Humanities. The program consists of an online tutorial and a series of one-week workshops held in Ithaca, NY. The primary goal of this program is to enable effective decision making for administrators who will be responsible for the longevity of digital objects in an age of technological uncertainty.
The « Digital Preservation Management » workshop series is intended for those who are contemplating or implementing digital preservation programs in libraries, archives, and other cultural institutions. The goals of this initiative are to foster critical thinking in a technological realm and to provide the means for exercising practical and responsible stewardship of digital assets.

The online tutorial is a prerequisite to the workshop, but is also publicly accessible as a stand-alone tool (see at http://www.library.cornell.edu/iris/tutorial/dpm/index.html).
Workshop attendees participate in an interactive process to develop digital preservation plans that incorporate technical, financial, organizational, and policy aspects encompassing the full cycle of digital objects. The resulting organization-specific digital preservation plans stresses short-term risk reduction strategies while research and development goes forward in creating longer-term solutions that can be incorporated into the program framework. The workshop includes presentations, group discussions, labs, individual assignments, and a keynote presentation by an international expert in digital preservation.

Issues to be covered include:
- program planning, managment, and evaluation,
- risk assessment,
- cost benefit analysis,
- legal issues,
- the role of file formats, standards and metadata,
- storage and maintenance,
- disaster planning,
- the relationship between preservation and access,
- preservation strategies, approaches, and methodologies,
- technology forecasting.

Digital preservation workshop
Day 1: Organizational Context and Policy Framework
Day 2: Digital Formats and Archival Requirements
Day 3: Technology Context and Infrastructure
Day 4: Digital Preservation Strategies and Resources
Day 5: Action Planning

For more information, please see at: http://www.library.cornell.edu/iris/dpworkshop/

## MSc in Digital Libraries

Full-time course
Glasgow, Scotland

MSc in Digital Libraries is a brand new course, starting in October 2005, which focuses on state-of-the-art research in the design and deployment of digital libraries. This course is intended for students who have pertinent experience of library or information work, including membership of a relevant professional body and a good Undergraduate degree and/or a Masters degree in librarianship or a cognate discipline.
Digital libraries are a major area of research expertise in the Department of Computer and Information Sciences (CIS) at Strathclyde University (Glasgow, Scotland) encompassing several research groups and the work of the CDLR (Centre for Digital Library Research).
Students will be taught in formal classes but will also participate in research seminars and in actual digital library research work on placement at the CDLR or an equivalent provider. In the first semester, they will be given a solid theoretical grounding in digital libraries. In the second semester, they will learn both the practical and research aspects of digital libraries through a placement and seminars covering research foci.

For further information, please contact:
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