International Preservation News

A Newsletter of the IFLA Core Activity on Preservation and Conservation

The Collections Security:
Access versus Protection
Old Problems, New Strategies

The picture you could admire on *IPN*'s front cover comes from the Biblioteca Malatestiana di Cesena in Italy, thanks to its Director, Dottoressa Paola Errani.

The Malatestiana is the only example of a monastic humanist library, perfectly preserved in the building, furnishings and book collection, as UNESCO acknowledged by its inclusion in the Memory of the World Register, the first in Italy.

At the behest of a single patron and produced in a short time, the collection has a strongly systematic, encyclopaedic character, since it is destined not for the personal interest of the commissioner, but to the studies of an entire community.
Still today, the volumes are held in their desk, which the dual role of an inclined lectern and deposit for books on the shelf below.

Here the codices, normally five per pluteus and subdivided by subject, are laid horizontally and bound to the desks with wrought iron chains. This habit was probably born from the necessity to provide adequate protection for such precious books.

The Cesena Noble, who perceived the Library as an undying symbol of his renown for posterity, ordered, by an entirely original and intuitive decision, that the library also be entrusted to the care and attention of the Cesena community. In fact, already in 1461 the municipal council began to perform rigorous controls every two months on books held in the pluteuses. In 1466, after the death of Malatesta Novello, the council even obtained permission **to excommunicate** anyone removing the codices.

Double control of the collection therefore developed, one by its custodians of St. Francis Monastery who guaranteed its use, and the other by the local Council, who supervised its integrity and respect. Nomination of the custodian-librarian, according to the wishes of Malatesta Novello, also fell to the municipal council.

In this way the history of the Malatesta Novello Library and its prodigious preservation, which still today represents the greatest pride of Cesena, is also the history of a symbol felt to be the property of, and loved with exceptional loyalty by, Cesena citizens.

More information at: http://www.malatestiana.it/

The Collections Security:
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Chronicles of Preservation

"As we all know, there is an inherent risk of damage and loss to collections that must be balanced with a Library's mission to make its collections accessible."
Karl W. Schornagel
Inspector General of the Library of Congress

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We chose to focus this second issue of 2008 on a very important topic for our libraries and archives: the collections security. Some years ago, we all attended on television the looting of the Museum of Bagdad; since then, INTERPOL has tried to localize, often successfully, the stolen works of art, thanks to a specialized brigade. In Italy, *tombaioli* keep on operating, and Rome recently knew spectacular restorations of items acquired in the meantime by American museums. The National Library of Denmark, the National Library of France discovered not long ago missing manuscripts or precious documents. In all these cases, items reappear some day on the market of art.

The British Library and LIBER organized on May 20th a seminar on this topic, moderated by Helen Shenton[1]. In this issue, we publish some elements of this conference as well as the results of our own investigation among other actors. The image chosen for our front cover is revealing: would it be necessary, as in the Middle Ages, to chain documents in the library to avoid thefts? And then, how to chain digital documents? Which strategies are developed today in libraries to put an end to these major losses? Which contributions can new electronic tools bring: marking, digital photography, video surveillance, databases, networks? We do not pretend to present here all the problem aspects but to emphasize the evolutions known in this domain. Thefts and missing documents in our museums and libraries are far from new, but it seems that protection and fight are becoming more intense, in a more effective way. The markets globalization and naturally Internet bring to light sales very quickly and reveal thefts which formerly remained unknown for a long time.

You will also find in this issue our usual chronicles. Personally, I was pleased (but also very sorry) to notice that, due to a lack of space, we cannot publish all the papers which were proposed to us. Naturally, it will be for another time. I consider it as an excellent sign and I encourage all of you to send us your contributions.

The next issue of December should be dedicated more specially to audiovisual collections. Meanwhile, I suggest you join our mailing-list which is gaining constantly new members:
http://infoserv.inist.fr/wwsympa.fcgi/info/pac-list

I wish you an excellent reading and let's meet in *Nouvelle-France* for those of our readers who will attend the 74th IFLA Conference in Quebec.

Christiane Baryla
IFLA-PAC Director

1. Proceedings will be published in *LIBER Quarterly*.
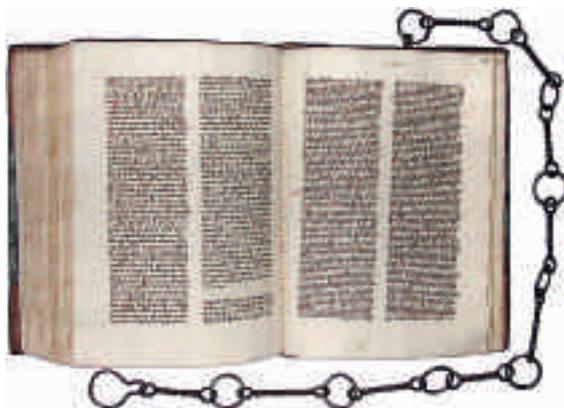
Nous avons choisi de construire ce second numéro de l'année 2008 autour d'un thème important dans nos bibliothèques et archives : celui de la sécurité des collections. Il y a quelques années, nous avons tous pu assister sur nos téléviseurs au pillage en règle du Musée de Bagdad ; depuis, INTERPOL tente de localiser, grâce à une brigade spécialisée, souvent avec succès, les œuvres volées. En Italie, les *tombaioli* continuent d'opérer, et cela a valu récemment à Rome des restitutions spectaculaires d'objets entre temps acquis par des musées américains. La Bibliothèque nationale du Danemark, la Bibliothèque nationale de France ont connu, il n'y a pas si longtemps, des disparitions de manuscrits ou d'autres documents précieux. Dans tous ces cas, les ouvrages réapparaissent un jour ou l'autre sur le marché de l'art.

Autour de ce thème, la British Library et LIBER ont organisé le 20 Mai dernier un séminaire, animé par Helen Shenton[1]. Nous en publions aujourd'hui certains éléments ainsi que les résultats de notre propre enquête auprès d'autres acteurs. L'image choisie pour notre couverture parle d'elle-même : faudrait-il, comme au Moyen Age, enchaîner les documents dans la bibliothèque afin d'éviter les vols ? Comment enchaîner alors les documents numériques ? Quelles sont aujourd'hui les stratégies développées dans les bibliothèques pour mettre fin à ces disparitions majeures ? Quels sont les apports des nouveaux outils électroniques : marquage, photographie numérique, vidéosurveillance, banques de données, réseaux d'information ? Nous n'avons certes pas la prétention de présenter ici l'ensemble des problèmes mais nous souhaitons surtout mettre l'accent sur les évolutions dans ce domaine. Il y a toujours eu des vols et des disparitions dans nos musées et bibliothèques, mais il semble que protection et lutte s'intensifient de manière plus efficace. La mondialisation des marchés et bien sûr Internet mettent très vite en lumière les ventes et révèlent des disparitions qui jadis demeuraient très longtemps ignorées.

Vous trouverez aussi dans ce numéro nos chroniques habituelles. Personnellement, j'ai été ravie (mais aussi désolée) de constater que, faute de place, nous ne pourrons pas présenter tous les articles qui nous ont été proposés. Ce n'est bien entendu que partie remise. Je considère cela comme un excellent signal et je vous encourage tous à nous adresser vos contributions.

Le prochain numéro de décembre devrait être plus spécialement dédié à l'audiovisuel. En attendant je vous propose de rejoindre notre liste de diffusion qui ne cesse de s'enrichir de nouveaux membres :
http://infoserv.inist.fr/wwsympa.fcgi/info/pac-list

Bonne lecture et rendez-vous en Nouvelle-France pour ceux de nos lecteurs qui se rendront à la 74e Conférence de l'IFLA à Québec.

Christiane Baryla
Directeur d'IFLA-PAC

1. Les actes seront publiés dans la revue *LIBER Quarterly*.

The INTERPOL General Secretariat, Lyon, France.
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The Role of INTERPOL
in Countering the Traffic in Cultural Property

by Jean-Pierre Jouanny,
Specialized Officer
at the General Secretariat of ICPO-INTERPOL

Nowadays, countering crime is high on almost all the countries agenda. The modern transport and telecommunication equipments have helped criminal activities to become more international and made the need for effective means of cooperation more urgent. That is why a structure which permits police services and all the services in charge of law enforcement to cooperate on the world level is so essential to criminal justice. INTERPOL plays this part and great efforts are made to develop the organization's services and mission.

INTERPOL has been created at the first International Criminal Police Congress held in 1914 where were discussed the possibilities of simplifying and accelerating international activities to improve arrest procedures and identification techniques, harmonize extradition proceedings and centralize international criminal records. These objectives are always hot topics and constitute INTERPOL foundations in 2008.

About INTERPOL

INTERPOL is an intergovernmental organization of 186 member countries. It is the second world organization after the United Nations Organization considering the members' number.

The main organs of ICPO-INTERPOL:
- The General Assembly and Executive Committee are the deliberative organs which meet regularly, take the decisions and supervise the activities.
- The General Secretariat is responsible, along with the National Central Bureaus and Sub-Regional Bureaus, for seeing that the day-to-day work of international police cooperation is carried out and for implementing the decisions of the General Assembly and Executive Committee.

In each INTERPOL member country, the task of cooperation is assigned to the National Central Bureau, usually located in the country's capital city, which centralises all information of international interest.

Approximately 150 police officers from about 70 countries representing all the regions of the world are working at the INTERPOL General Secretariat, which is located in Lyon, France. The composition of the staff ensures a sound knowledge and wide experience of both regional situations and the problems of international crime.

Contrary to common belief, INTERPOL is not made up of international brigades of investigators. INTERPOL police officers cannot carry out investigations in the member countries. Instead, international investigations are carried out by the national police forces of the member countries.

The purpose of our organisation is:
- to ensure and promote the widest possible mutual assistance between all criminal police authorities, within the limits of the laws existing in the different countries and in the spirit of the Universal Declaration of Human Rights.
- to establish and develop all institutions likely to contribute effectively to the prevention and suppression of ordinary law crimes.

It is strictly forbidden for the organization to undertake any intervention or activities of a political, military, religious or racial character.

Countering The Traffic In Cultural Property

Although trafficking in cultural property is of great importance because it attacks the community cultural heritage, these crimes appear secondary to most of police services compared to terrorism, drugs trafficking, crimes against individuals and more particularly against children, which constitute their priority. Since 1947, INTERPOL has particularly involved itself in the fight against the illicit traffic in cultural property.

It is extremely difficult to get a clear picture of the extent of art theft in the world, and it is not very likely that detailed statistics will ever be made available. National statistics are usually based on the circumstances surrounding the theft (simple theft, breaking-in and stealing, armed robbery, etc.) and rarely provide information on the actual nature of the stolen object itself.

Most of the thefts are carried out in museums and churches, during opening hours, in complicity with staff or in reserves. In that case, thefts are discovered when collections are inventoried. One particular modus operandi consists in replacing the original work of art by a copy.

One of the recommendations adopted at the first meeting of INTERPOL expert group on stolen cultural property held in Lyon on February 17, 2004, asks the member countries to establish statistics each year about stolen cultural property by using INTERPOL General Secretariat forms and to communicate this information in order to have a precise knowledge of this criminal phenomenon extent. Those expert group recommendations are available on INTERPOL website.

The looting of archaeological sites affects many regions of the world (Africa and America, particularly) although lack of information does not permit to make a precise report of this type of crime. Such clandestine archaeological excavations often only come to light when looted items appear on the international market.
Despite what people commonly think about us, INTERPOL is not a police master file for all the crimes committed in the world. We only record international crimes and criminals.

Which tools does the General Secretariat use to tackle traffic in cultural property?

INTERPOL efficiency relies on a large and rapid information circulation through the member countries.

1. Telecommunications Networks

INTERPOL has developed a new, secure telecommunications system at the disposal of law-enforcement services, based on the Internet technology: the I-24/7 system (INTERPOL twenty-four hours a day, seven days a week). It permits to member countries to connect and have an easy access to police information.

I-24/7 system objectives are ambitious. Thanks to the rapid exchange of information, the NCB can now face with more efficiency all types of international crime. I-24/7 system can also be connected to the national police services own networks. All the member countries are now connected and operational.

More precisely, 10 800 000 messages circulated through our network system in 2007, that is to say 30 000 messages a day, three times more than in 2003.

2. International Notices

To facilitate the international diffusion, the ICPO-INTERPOL has produced printed forms (called CRIGEN/ART FORMS) in the Organisation's four languages which can help police officers who have limited knowledge of works of art to describe the stolen objects.

From 1947 to March 2000, the General Secretariat issued international stolen cultural property notices too but the notices circulation ceased as a result of developments in computer tools making distribution of paper copies obsolete.

3. Posters

Twice a year, the General Secretariat publishes a poster of the 'most wanted works of art'. The largest the information circulation is, the more efficient it is.

4. Computerized Databases

An efficient way of countering this type of crime consists in developing computerized databases. In 1995, INTERPOL General Secretariat produced a new database for works of art combining descriptions and pictures. This database - developed by police officers for police officers - currently contains over 32,000 items: its goal is not to record all the stolen items in the world but only fully identifiable objects which may interest the international market.
It is very important to keep information as long as possible. For instance, seven years ago, we identified works of art in the USA which had been stolen in Romania in 1968. When items are recovered, INTERPOL General Secretariat ends the investigation: nearly 10 per cent of the works of art entered on the database are recovered.
Since November, 17, 2005, the Works of Art database can be directly consulted by member countries thanks to I 24/7. This technology guarantees an easy and secure access to information: it is an interactive system based on multicriteria search relying on a simple visual description of works of art, with prefilled search field to avoid typing error or using terms which do not exist. Access authorisations are given on the national level by a police officer: we strongly invite the member countries to give this possibility to all their services in charge of law enforcement. Moreover, since September, 5, 2006, in order to increase member countries' research capacities, researches can be made in French and Spanish too, which has implied a more important system use.

5. DVD

As access to our database is restricted to law-enforcement agencies, the General Secretariat has produced a CD-ROM to inform private bodies (*e.g.* museums, auction rooms, antique dealers, collectors, etc.) about stolen works of art and enable them to take appropriate action.

Since August 2006, the CD-ROM has been replaced by DVD offering increased storage capacity and improving images quality. It is updated every two months, is available on subscription and can be consulted in English, French or Spanish.

The INTERPOL Stolen Works of Art DVD contains information which member countries have reported to the General Secretariat and allow to be communicated to the general public for crime prevention purposes. However, the DVD is not intended to be used as a complete database of all the works of art stolen throughout the world.

> **These tools could be more efficient if and only if member countries communicate more information to the General Secretariat, in everybody's interest: victims, police services, customs officers, antique dealers.**

The DVD also contains the texts of the 1970 UNESCO Convention and the 1995 UNIDROIT Convention, a list with photographs of objects at risk (*e.g.*, the ICOM Red List) and Object ID, an international standard for describing a work of art, which is fully compatible with Interpol's CRIGEN/ART forms. The DVD meets the needs of art dealers who, until now, had found it very difficult to know whether a work of art offered to them for sale was stolen or not.

I want to underline how the ICOM Red List is useful: it is an essential tool for countering illicit traffic of cultural property. These red lists describe the typology of objects which are systematically looted during clandestine archaeological excavations in order to fight against illicit export at customs controls.

These tools (database and DVD) could be more efficient if and only if member countries communicate more information to the General Secretariat, in everybody's interest: victims, police services, customs officers, antique dealers. INTERPOL cannot help countries if they do not communicate.

6. Internet

In July 2000, the General Secretariat set up its public website (www.interpol.int) including:
– A list of the most recent stolen works of art with photographs;
– Cultural property stolen in Iraqi and Afghanistan;
– A list of items recovered after searches made by the police, whose legitimate owners are not identified;
– Recovered works of art;
– Frequently asked questions and other information also available on the DVD.

Typology of looted items with description and photographs can also be found on the website to inform and make police, customs officers and all the art market actors aware of the need to protect Iraqi cultural heritage.

Other Means of Countering Traffic in Cultural Property

Organization of international conferences
Every three years, the General Secretariat organizes an international conference in Lyon. Since 1995, conferences have been also organized in regions suffering from this type of crime: Mexico in 1999 and the last one in Poland in September 2007.

Training courses
In November 2002, in collaboration with Colombia BCN and Ministry for Cultural Heritage, a four-day training course was organized for police and customs officers, magistrates and staff from cultural heritage institutions. Nearly 100 persons attended this training.
The same type of training courses was organized in Chile in 2004, in Brazil in 2005, in Mexico in 2006 and the last one in Bolivia in March 2008.

Cooperation with international organizations
The General Secretariat has signed memoranda of understanding with UNESCO, WCO and ICOM. INTERPOL highly contributes to workshops and meetings organized by UNESCO and ICOM in all the parts of the world.

Cooperation with the private sector
Since 1996, representatives from private sector have been invited to participate to international conferences organized in Lyon as well as abroad. It is not possible to fight against illicit traffic in cultural property in an efficient way without a close collaboration with all the sectors concerned.

Identification of Criminals

Offences against cultural property tend to be committed by specialists. If they are identified by the investigators, INTERPOL can circulate their descriptions. Notices can be published. These include a photograph of the offender, his identity, his fingerprints, any aliases used, and all available information of use to the police.

Details of out-of-the-ordinary *modus operandi* can be circulated and may help to link several different cases of theft.

Some Advices...

Here are some advices to counter this type of crime:
– To make information about fully identifiable stolen works of art circulate by INTERPOL as largely and rapidly as possible. As soon as a theft is committed, the police have to be immediately informed so that a list of the stolen items can be established, with a description and photographs. Police services can then inform their BCN which can communicate the information to the General Secretariat.
– To bring in laws to protect cultural heritage and regulate the art market.
– To become party to international conventions.
– To create in each member country a technical committee composed of all the institutions concerned by this fight, as Andean countries made it following Quito meeting recommendations on September 2001.
– To set up specialized police units in each country to tackle this type of crime (as mentioned in 1970 UNESCO Convention).
– To develop and use a computerized database to record all the information about stolen cultural items, along the lines of those currently in use as INTERPOL database, to avoid the systems multiplication.
– To raise cultural property owners' awareness of the necessity of making collections inventories (with precise description and photographs in colour). It can be also useful to make objects easily identifiable (*i.e.* marking by the owner or by specialist private companies).
– To raise public awareness of cultural heritage protection (in school, for instance, or thanks to media).
– To cooperate with art market, insurance companies and other private companies.
– To organize at the national and regional level workshops and training courses for police and customs officers with the support of UNESCO, staff from museums and ministries for cultural heritage, so that they can share information, experiences, identify problems and give their expertise.
– Antique dealers and collectors are advised to take extreme care when purchasing cultural items and to use all available means provided by both public and private sectors to be sure of their origin.

POEMA EM (EN) 2 LINGUAS (LENGUAS) GEMEAS-GEMELAS PARA JOAN MIRO, stolen in Portugal, Mário Cesariny, SPA, 2008.

Conclusions

Prevention is so essential to cultural heritage protection. There are many ways of organizing public awareness campaigns: I can quote the example of Italy, distributing postal cards of stolen works of art, or Colombia where information films were broadcast on television and cinema. It is also important to raise cultural property owners' awareness of the necessity of making inventories and photographs of their collection to protect it and help the police to recover it in case of thefts.

In conclusion, I would like to strongly reaffirm our organization's intention to closely cooperate in fight against illicit traffic in cultural property and remind the text of the resolutions nr 5 and 6 of ICPO-INTERPOL General Assembly at its 64th session in Beijing which recommend to member countries:

• To make information about fully identifiable stolen works of art circulate by INTERPOL as largely and rapidly as possible.
• To reinforce cooperation on the national and international level of police services with all the sectors involved (customs, museums, antique dealers, insurance companies, etc.) for the research of stolen items and the identification of recovered objects.

Translation made with the courtesy of INTERPOL.
Poster p. 10 published with the courtesy of INTERPOL.

LES ŒUVRES D'ART LES PLUS RECHERCHÉES
THE MOST WANTED WORKS OF ART

INTERPOL
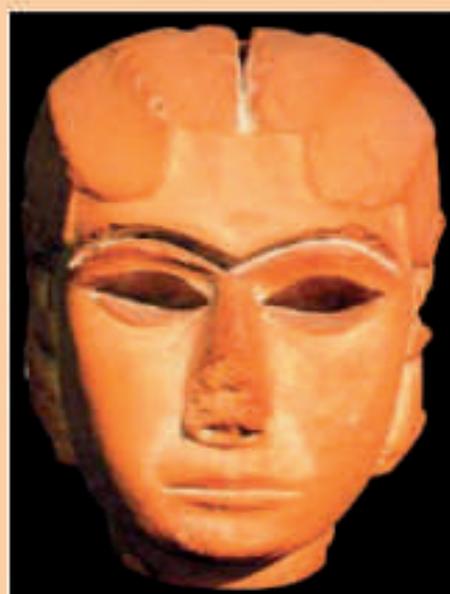
OBJET : Tête de femme sumérienne, en marbre,
RECOVERED
ITEM : c. 3000 B.C., Warka

DIMENSIONS : Grandeur nature / Life-size

OBJET : Statue en diorite représentant Entemena,
environ 2400 av. J.-C., origine Ur
ITEM : Diorite statue of Entemena, c. 2400 B.C. Ur
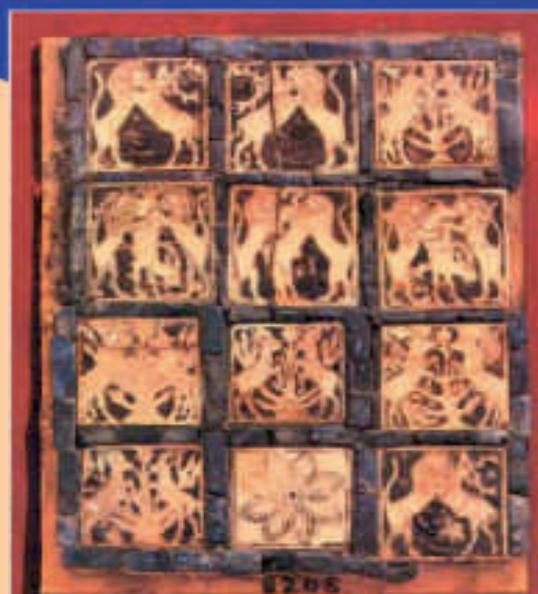
OBJET : Table de jeux incrustée de coquille, origine Ur
ITEM : Gaming board inlaid with shell, Ur

OBJETS PILLÉS DU MUSÉE D'IRAK, BAGDAD - AVRIL 2003
ITEMS LOOTED FROM THE IRAQ MUSEUM, BAGHDAD - APRIL 2003

OBJET : Personnage assis, en cuivre, environ 2250 av. J.-C., origine Bassetki
ITEM : **RECOVERED**
DIMENSIONS : Grandeur nature / Life-size

OBJET : Homme avec lionne et bouquetin,
RECOVERED
ITEM : Man with lioness and ibex, ivory,
8th century B.C., Nimrud
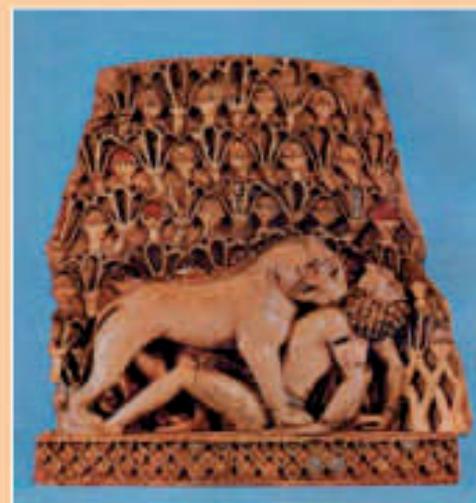
OBJET : Lionne attaquant un Nubien, ivoire et or,
720 av. J.-C., origine Nimrud
Lioness attacking a Nubian, ivory and gold,
720 B.C., Nimrud

N° de dossier / File No.: 2003/22019

TOUS CES OBJETS SONT REPRESENTES DANS LE CD-ROM - INTERPOL-ŒUVRES D'ART VOLEES
ALL THESE OBJECTS ARE FEATURED IN THE CD-ROM - INTERPOL-STOLEN WORKS OF ART

N°33 (a)

JUIN-JUNE 2003

- En cas de découverte ou de renseignements concernant ces affaires, prière d'aviser les services de police qui informeront leur B.C.N. INTERPOL.
- Should any of these items be discovered or any information concerning these cases become available, please inform the police who will contact their INTERPOL NCB.

Le rôle d'INTERPOL dans la lutte contre le trafic illicite des biens culturels

La lutte contre la criminalité est au menu des politiques de presque toutes les nations du monde. Les équipements de transport et de communication, considérablement modernisés, ont favorisé la dimension internationale des activités criminelles et un besoin de moyens de coopération efficaces se fait ressentir. Ainsi, une structure permettant aux services de police et aux autres organes de maintien de l'ordre de coopérer sur le plan mondial est essentielle au système de justice pénale. INTERPOL remplit ce rôle et de nombreux efforts sont faits pour développer les services de l'organisation ainsi que sa mission.

INTERPOL est une organisation intergouvernementale de 186 pays membres. Ses principaux organes sont : l'assemblée générale et le comité exécutif, qui sont des organes délibérants, et le secrétariat général, basé à Lyon. En étroite collaboration avec les bureaux centraux nationaux (BCN), situés dans chaque pays membre, et les bureaux sous-régionaux, il assure le fonctionnement continu de la coopération internationale policière et met en œuvre les décisions et recommandations des deux organes délibérants.

Contrairement aux idées reçues, INTERPOL ne dispose pas de brigades internationales de recherche. La recherche internationale repose sur les forces nationales des pays membres.

Le but de notre organisation est :

1. D'assurer et de développer l'assistance réciproque la plus large de toutes les autorités de police criminelle dans le cadre des lois existantes dans les différents pays et dans l'esprit de la Déclaration universelle des droits de l'homme.

2. D'établir et de développer toutes les institutions capables de contribuer efficacement à la prévention et à la répression des infractions de droit commun.

Quels sont les moyens dont dispose INTERPOL pour lutter efficacement contre le trafic illicite des biens culturels ?

INTERPOL s'est, depuis 1947, particulièrement investi dans la lutte contre le trafic illicite des biens culturels. Son efficacité repose sur une large et rapide circulation de l'information au sein des pays membres.

– *I 24/7* (INTERPOL, 24 heures sur 24, sept jours par semaine) : cet outil de dernière technologie, sécurisé et exclusif, à disposition des forces chargées de l'application de la loi, permet aux pays membres de se connecter entre eux et d'avoir un accès facile à l'information policière.
– *Les notices internationales* : les formulaires CRIGEN/ART, disponibles dans les 4 langues officielles de l'Organisation (français, anglais, espagnol, arabe), permettent de décrire les objets volés et de faciliter la diffusion internationale.
– *Le poster des œuvres d'art les plus recherchées*, publié deux fois par an.
– *La base de données* Œuvre d'Art : basée sur la description visuelle et simple des œuvres, elle contient actuellement plus de 32 000 objets. Elle peut être directement consultée par les pays membres grâce à I 24/7. Les recherches peuvent être effectuées en français et espagnol.
– *Le DVD* INTERPOL - Œuvres d'art volées, mis à jour tous les deux mois, est à la disposition des organismes privés (musées, antiquaires, collectionneurs, etc.). Il est accessible par voie d'abonnement et peut être consulté en espagnol, anglais ou français.
– *Internet* : www.interpol.int

Autres moyens de lutter contre ce type de délinquance

– *Organisation de conférences internationales* : tous les trois ans, le secrétariat général organise une conférence internationale à Lyon. Depuis 1995, des conférences se sont également tenues dans les régions qui souffrent de ce type de criminalité : Mexico en 1999 et la dernière en Pologne au mois de septembre 2007.
– *Cours de formation :* nous avons organisé des formations à destination des policiers, douaniers, magistrats et personnel des institutions culturelles en Colombie en 2002, au Chili en 2004, au Brésil en 2005, au Mexique en 2006 et le dernier en Bolivie au mois de mars 2008.
– *Coopération avec les organisations internationales* : le secrétariat général participe activement aux ateliers et réunions organisés par l'UNESCO et l'ICOM dans toutes les régions du monde.
– *Coopération avec le secteur privé* : depuis 1996, les représentants du secteur privé sont invités à participer aux conférences internationales que nous organisons tant à Lyon qu'à l'étranger. Il est impensable de lutter efficacement contre le trafic illicite des biens culturels sans une coopération entre tous les secteurs concernés.

Quelques conseils…

– Diffuser de la manière la plus vaste et la plus rapide possible, par le canal INTERPOL, les informations relatives aux objets d'art volés parfaitement identifiables.
– Adopter des lois pour protéger le patrimoine culturel et réguler le commerce des antiquités.
– Etre partie aux conventions internationales.
– Créer dans chaque pays un comité technique national composé de toutes les institutions concernées par cette lutte.
– Créer dans chaque pays des unités de police spécialisées dans la lutte contre le trafic illicite des biens culturels (comme mentionné dans la convention de l'UNESCO de 1970).
– Adopter et utiliser une base de données informatisée pour enregistrer les informations sur les œuvres d'art volées (en étudiant celle utilisée par INTERPOL et les autres pays pour éviter une multiplication des systèmes).
– Sensibiliser les possesseurs de biens culturels à l'établissement d'inventaires de leurs collections (description précise et photographie de préférence en couleurs).
– Sensibiliser le public à la protection du patrimoine culturel.
– Etablir une coopération avec le marché de l'art, compagnies d'assurances et autres entreprises privées.
– Organiser des ateliers nationaux et internationaux pour les policiers et douaniers, avec l'aide de l'UNESCO, du personnel des musées et des ministères de la culture.
– Aux antiquaires et collectionneurs nous ne pouvons que leur recommander d'être prudents quand ils achètent des biens culturels et d'utiliser tous les moyens mis à leur disposition tant par le secteur public que le secteur privé pour déterminer leur origine.

El papel de INTERPOL en la lucha contra el tráfico de bienes culturales

En la actualidad, luchar contra el crimen constituye una prioridad para casi todos los países. Los equipos modernos de transporte y tele-comunicaciones han facilitado las actividades delictivas internacionales y han hecho más urgente la necesidad de disponer de medios de cooperación efectivos. Es por ello que resulta fundamental para la justicia penal una estructura que les permita a los servicios policiales y todos los servicios encargados de la aplicación de la ley lograr la cooperación a escala mundial. En este sentido, INTERPOL desempeña este papel y se realizan grandes esfuerzos para desarrollar los servicios y la misión de la Organización.

INTERPOL es una organización intergubernamental formada por 186 países miembros. Los principales órganos de OICP-INTERPOL son la Asamblea General y el Comité Ejecutivo, que son los órganos deliberativos, y la Secretaría General que es responsable de poner en práctica las decisiones junto con las Oficinas Centrales Nacionales, ubicadas en cada país miembro.

A diferencia de lo que se piensa, INTERPOL no cuenta con escuadrones internacionales para combatir el delito. Los oficiales de policía de la Secretaría General no tienen jurisdicción para efectuar investigaciones en los países miembros. La policía local en los países miembros constituye la fuerza policial contra las actividades delictivas internacionales.

Los principales objetivos de la Organización son:

1. Asegurar y desarrollar la más amplia cooperación de las policías dentro de los límites de las leyes vigentes en los distintos países y en el espíritu de la Declaración de los Derechos Humanos.
2. Sostener y asistir a todas las organizaciones, autoridades y servicios cuya misión sea la prevención y la lucha contra el crimen internacional.

¿Qué herramientas ha desarrollado la Secretaría General para luchar contra el tráfico de bienes culturales?

Desde 1947, INTERPOL se ha dedicado particularmente a luchar contra el tráfico ilícito de bienes culturales. Su eficiencia se basa en una amplia y rápida difusión de la información a través de los países miembros, gracias a:

– *I-24/7*, sistema de telecomunicaciones nuevo y seguro a la disposición de los servicios que aplican las leyes. Les permite a los países miembros conectarse y tener fácil acceso a la información policial.
– *Difusiones internacionales* en las cuatro lenguas oficiales (francés, inglés, español y árabe), denominadas formas CRIGEN/ART, que se usan para describir las piezas robadas y facilitar el flujo internacional de información.
– *Cartel de las obras de arte más buscadas*, publicado dos veces al año.
– *Base de datos de obras de arte*, que combina descripciones y fotografías, que los países miembros pueden consultar directamente gracias al I 24/7. Las investigaciones se pueden hacer también en francés y español.
– *DVD* para informar a los entes privados (por ejemplo, museos, casas de subastas, vendedores de antigüedades, coleccionistas, etc.) sobre las obras de arte robadas. Se actualiza cada dos meses, está a la disposición por suscripción y puede consultarse en inglés, francés y español.
– *Internet*: sitio Web público (www.interpol.int).

Otros medios para combatir el tráfico de bienes culturales

– *Organización de conferencias internacionales*: cada tres años, la Secretaría General organiza una conferencia internacional en Lyon. Desde 1995, también se organizan conferencias en regiones que sufren este tipo de delito: México en 1999 y la más reciente en Polonia en septiembre de 2007.
– *Cursos de formación*: en noviembre de 2002, conjuntamente con la OCN (Oficina Central Nacional) de Colombia y el Ministerio de Cultura, se dictó un curso de cuatro días para la policía y los inspectores de aduana, magistrados y personal de las instituciones de patrimonio cultural. El mismo tipo de curso se organizó en Chile en 2004, en Brasil en 2005, en México en 2006 y el último en Bolivia en marzo de 2008.
– *Cooperación con organizaciones internacionales*: INTERPOL contribuye ampliamente con talleres y reuniones organizadas por UNESCO e ICOM en el mundo entero.
– *Cooperación con el sector privado*: desde 1996, se ha venido invitando a los representantes del sector privado para participar en las conferencias internacionales organizadas en Lyon, así como en otros países.

Algunas consejos…

– Comunicar a INTERPOL lo más amplia y rápidamente posible la información acerca de las obras de arte robadas completamente identificables.
– Proponer leyes que protejan el patrimonio cultural y regulen el mercado del arte.
– Participar en las convenciones internacionales.
– Crear en cada país miembro un comité técnico compuesto por todas las instituciones dedicadas a esta lucha, como hicieron los países andinos siguiendo las recomendaciones de la reunión de Quito en septiembre de 2001.
– Crear unidades de policía especializadas en cada país para combatir este tipo de delito (como se menciona en el Convención de UNESCO de 1970).
– Desarrollar el uso de una base de datos computarizada para registrar toda la información acerca de las piezas culturales robadas.
– Sensibilizar a los propietarios de bienes culturales sobre la necesidad de hacer inventarios de las colecciones (con descripciones precisas y fotografías a color).
– Sensibilizar a la opinión pública sobre la necesidad de proteger el patrimonio cultural.
– Cooperar con el mercado del arte, las aseguradoras y demás empresas privadas.
– Organizar cursos a escala nacional y regional para la policía y los inspectores de aduana.
– Se recomienda a los anticuarios y coleccionistas tener el mayor cuidado al comprar bienes culturales y hacer uso de todos los medios disponibles, tanto para el sector público como para el privado, para asegurarse del origen de los objetos.

The Library of Congress,
Collections Security & the Role of its Inspector General

by Karl W. Schornagel,
Inspector General of the Library of Congress

The Inspector General of the Library of Congress discusses the Library's collections security program and how his office's audits and investigations support it.

The Library of Congress (Library), located in Washington, D.C., is the United States' National Library; operating three large buildings in Washington, collections storage facilities in nearby Maryland, and a new audio/visual complex in the foothills of Virginia. The recently constructed climate controlled storage facilities efficiently store books by size to conserve space. Interestingly, the 45 acre Virginia facility was used previously as a back-up operations center for the Federal Reserve in the event of a Cold War emergency; including vaults for storing backup money reserves. The Library also operates offices in Egypt, India, Indonesia, Brazil, Kenya, and Pakistan that collect and process acquisitions in some of the approximately 450 foreign languages included in its collections.

Opened in 1897, the Library's first independent structure was the Thomas Jefferson Building. It is the Library's showplace, a major tourist attraction, and considered by many to be the most beautiful building in the United States.

Thomas Jefferson Building

In addition to being the National Library, the Library of Congress also operates the U.S. Copyright Office, Congressional Research Service, the National Law Library, and National Library Service for the Blind and Physically Handicapped. The Library's collections include about 138 million items made up of approximately 32 million books and serials, among which is a large collection of books printed before the year 1500 CE; 14 million microforms, 13 million prints & photographs, 1 million moving images, 3 million sound recordings, 5 million maps, and 61 million manuscripts. Deposits of intellectual property with the Copyright Office continually enrich the Library's collections.

The Library maintains an award-winning Web site at http://www.loc.gov/index.html that draws about 100 million visitors annually. The Web site makes available more than 11 million digital items from the Library and other partner institutions.

The Broad Role of the Inspector General
at the Library of Congress

The Library of Congress may be the only library on earth with an inspector general. The purpose of the Office of the Inspector General (OIG) is to (1) provide an independent means to conduct investigations and audits relating to the Library, (2) provide leadership and recommend policies to promote economy, efficiency, and effectiveness, and (3) keep the Librarian and the Congress informed about issues relating to the administration and operation of the Library. The OIG accomplishes its mission by detecting and preventing waste, fraud, and abuse.

The Inspector General reports to the Librarian of Congress primarily through written audit reports and periodic meetings, and to the U.S. Congress through written semiannual reports. The OIG conducts investigations that deal with administrative, civil, and criminal conduct issues including matters involving theft and mutilation of Library property. Audits include in-depth analyses of program performance including contracting and grant activities, and financial operations, among others.

OIG investigators execute search warrants and make arrests in criminal cases, including collections theft. A valuable tool for conducting investigations relating to collections thefts is subpoenas. Subpoenas are used most frequently to obtain evidence from Internet providers and auction houses relating to the ownership trail of suspected stolen property.

A Brief History of Collections Security
at the Library of Congress

As we all know, there is an inherent risk of damage and loss to collections that must be balanced with a Library's mission to make its collections accessible. Since its establishment in 1800, the Library has developed increasingly sophisticated security controls to combat theft and mutilation of its collections, from locks and keys initially to state-of-the-art electronic security systems and a host of other controls.

Early threats were from fire which destroyed its 3,000 volume collection in 1814. Another fire in 1851 destroyed about 35,000 of the 55,000 volumes in the collection. Obviously, subsequent facilities for the Library were built with fireproof materials; which led in 1953 to the creation of a beautiful large iron room in the U.S. Capitol before its first independent building.

Fire was not the only problem. It was discovered in 1861 that 1,300 items of the Library's 70,000 item collection were missing. This prompted additional controls such as compartmentalization and controlled access, particularly for manuscripts and rare books. Some of the Library's top treasures were targets for thieves as far back as 1896, which saw the theft of George Washington's diary. Although the diary was recovered, the Library recognized the need for additional controls.

Much larger than the threat from individuals is the threat of war. The threat was real enough at the beginning of World War II

that arrangements were made to move 26 freight cars of material far away from Washington, D.C. for safekeeping. This included moving the U.S. *Constitution*, *Declaration of Independence*, and Great Britain's Lincoln Cathedral copy of the *Magna Carta*. Britain had sent us its Magna Carta when it entered the war. Several other European countries already at war had also sent us some of their most priceless collections for safekeeping.

Formerly a guard force, the Library's security staff was given police powers in 1950. Gradual physical security improvements were made in the ensuing decades, including stack access identification cards, closed-circuit television monitors in principal exhibit areas and high-risk collections areas, additional automation of fire and theft detection systems, and electronic security devices at entrance and exit doors.
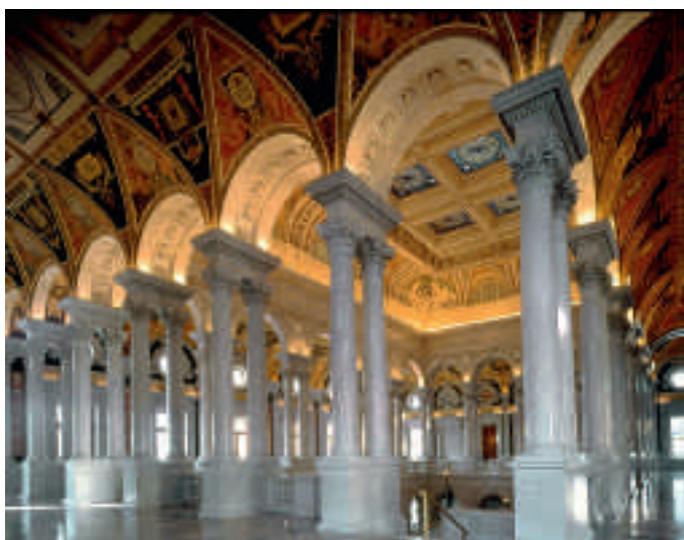
The Great Hall of the Thomas Jefferson Building.

In 1987, a much publicized manuscript theft by a prominent scholar intensified security efforts. The theft resulted in a more in-depth analysis of security, including reviews by the OIG and further enhancements of security technology. The newly appointed Librarian of Congress pledged further scrutiny of the collections security program.

In addition to exit inspections, the Library started performing entrance inspections in 1991. Furthermore, staff members were required to wear identification badges. In the early 1990s the Library discovered additional losses, including volumes gutted of their rare plates, volumes missing from the general collections, and thefts of rare maps and manuscripts. In response, the Librarian closed the stacks to the public and greatly reduced staff access. During this time, the Collections Security Oversight Committee (CSOC), composed of security professionals, librarians, and others was established.

In 1992, the Library began inserting theft detection devices in books, along with electronic theft detection gates. In 1996, the Library introduced a reader registration program. In 1997, an external team was brought in to make further security recommendations. These resulted in the establishment of a permanent Director of Security position, development of a comprehensive security plan which more thoroughly defined the threats to the collections and established priorities to protect them, and an expansion of the security awareness program. The public is now limited to viewing books and other collections while on Library premises.

Facilities security improvements were accelerated in 1995 after the bombing of a federal building in Oklahoma City. Security tightened further in 1998 following shootings at the U.S. Capitol and other events. Shortly thereafter, the Library expanded visitor screening and also began screening staff members with metal detectors, and putting their personal articles through x-ray machines. Other enhancements included the installation of bollards and barriers around the perimeter of buildings, vehicle searches, installation of pop-up barriers at garage and parking lot entrances, and using contract guards in some reading rooms.

Current Collections Security Program

Important facets of security include protecting valuable collections from environmental damage and providing proper bibliographic, inventory, and preservation controls.

The 1997 security plan has evolved into the current *Strategic Collections Security Plan*. It categorizes the collections into a hierarchy of risk levels, with the strongest protection accorded the Library's "Treasures" and other rare items. The plan identifies the five cycles that collections go through at the Library: in-process, in-use, in-storage, in-transit, and on exhibit. The Plan also establishes a priority order of baseline protection standards for each item category in each of the cycles.

An important component of the comprehensive security program was the development of an inventory management plan which includes an ongoing baseline inventory project which began in 2002; several million items have already been inventoried. A security awareness program was put in place and in 2007 a year-long collections security awareness campaign was launched. An additional safeguard is the personnel security office that conducts background investigations to determine the suitability of employees, contractors, and volunteers.

Another significant aspect of the security program is the Integrated Library System (ILS) which improves tracking and inventory management at the item level. Accountability for newer collections is improved, the baseline inventory project is also improving accountability in existing collections and supplements other bibliographical, inventory, preservation, and physical security controls.

Exhibit of Thomas Jefferson's Library at the Library of Congress.

Recent improvements also include additional preservation controls to complement the security plan that address detailed emergency management, recovery, and continuity of operations plans. These controls align with the United Nations' Educational, Scientific and Cultural Organization (UNESCO) model and addresses environment, emergency preparedness and response, storage, handling, needs assessments, physical treatment, and reformatting; and also include scenarios for sheltering in place, relocation, and personnel security operations.

The culmination of all of these efforts has resulted in an integrated *Strategic Plan for Safeguarding the Collections* that is updated as needed.

The Specific Role of the OIG in Collections Security

The OIG initiated a series of recurring audits to assess risk and randomly sample the collections. The audits establish baselines in particular functional areas such as Manuscripts, Prints & Photographs, Geography & Maps, etc. A sampling technique called paneling is used to record a baseline of observations about the existence and condition of the population, drawing about 150 items for sampling. About half of these samples are then included in a subsequent audit along with an equal number of new samples.

These audits are repeated periodically to determine whether changes have occurred since the last audit, and to establish an extended baseline for future comparison. The reviews assess risk within individual custodial and processing divisions and check on the success of previously implemented security improvements. The audit process includes digital photography for assessing the condition of the collections over time. To date, the results of these reviews are very encouraging.

In 2002, the OIG also conducted an audit of several aspects of inventory, bibliographic, and physical collections security controls. The audit touched on an array of topics including tracking collections in the ILS, access methodologies in reading rooms, physical security of restricted collections, bar coding collections, the reader registration process, and even janitorial access to collections vaults, among other topics. Auditors and investigators are also mindful of security ramifications as part of our other audits and investigations, including systems reviews.

Future reviews will focus on the Library's "Treasures" and exit inspections. Another

Exhibit Brochure Cover.

important consideration is security over digital-born collections. Our challenges are evolving and expanding as we move to digital content, certainly one of the biggest and most rapid changes in our history.

From 2005 to 2007, the OIG took part as an advisor to an external research group to establish policy to audit and certify digital archives. The project culminated in a February 2007 report *"Trustworthy Repositories Audit & Certification: Criteria and Checklist"* that built on prior efforts.

Many of our investigative leads come from book, manuscript, and map dealers. For example, a prominent book dealer alerted us to the attempted sale of several of the Library's rare books. That incident resulted in the recovery of more than 30 valuable rare books. An arrest and guilty plea were obtained after OIG investigators spent months working closely with Library staff to establish provenance for each stolen book.

The OIG has had other such success stories that have resulted from close collaboration with dealers and Library staff resulting in convictions, restitutions, and most importantly, recoveries of valuable collections. We believe that being part of the institution puts us in a valuable position to react quickly and effectively in the event of incidents based on our knowledge of the collections and the collections security program, and our collaboration with Library staff. This scenario may not always be available with external law enforcement organizations, which could impede recovery efforts.

The OIG works cooperatively with other law enforcement organizations locally, nationally, and internationally because of today's broad market. We also keep in touch with our counterparts in collections security at other libraries as evidenced by our participation in the recent *Ligue Des Bibliothèques Européennes De Recherche* [Association of European Research Libraries] (LIBER) conference on collections security at the British Library. The collective knowledge of threats and potential vulnerabilities in the library community will make for better protection for all of us.

Conclusion

Today, the Library of Congress has a comprehensive collections security program that maximizes protection while still making its collections accessible. The program includes some of the most sophisticated security systems available and the commitment to execute its broad scope. Protection ranges from internal collections management controls like reader registration, personal belongings restrictions, controlled service, marking and tagging, transit accountability, and reading room configuration. External physical controls include entrance and exit electronic screening, intrusion detection systems, closed-circuit television, electronic access controls, theft-detections devices, vaults and cages, and key controls. Collectively, these components are effective.

The Library's Office of Security and Emergency Preparedness, Library staff, and the OIG work together to secure the collections. After the long development of an increasingly comprehensive and well executed collections security program, we believe that George Washington's diary and all of the other treasures under Library of Congress stewardship are well protected to ensure that our national and international heritage is preserved for future generations.
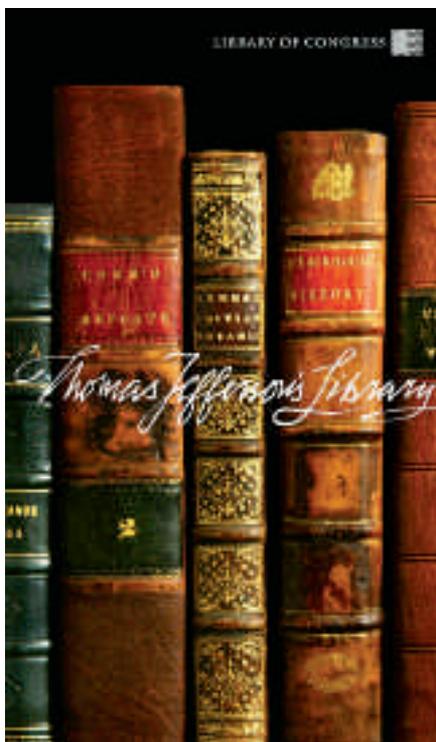
Stolen Manuscript: Lessons Learnt

by Jacqueline Sanson,
Director of the National Library of France

Between February 1998 and 2003: several discoveries of missing Hebraic manuscripts and printed documents at Western and Oriental Manuscripts, Rare books Reserve and Philosophy departments. General stocktacking of the holdings concerned.

The Story

The *Hebrew 52* manuscript, opened at the end of Pentateuch and at the beginning of the Song of Songs. Photo David Paul Carr/BnF.

In 2000, the 13th century Hebrew Bible, known as *Hebrew 52*, was discovered missing at the National Library of France. In 2003 an anonymous letter revealed that the manuscript had been sold by Christie's in 2000 and denounced the chief curator of the French library's Hebrew collection: the internationally esteemed specialist, Michel Garel. Garel sold *Hebrew 52* in 1998 to an English collector who showed the manuscript to a specialist in Jerusalem. The scholar, in spite of the changes made to the manuscript (stamps were removed, pages were taken out and borders were cut), recognized it and warned the French National Library. Garel was arrested in 2004 and convicted in March 2006 of stealing and damaging the manuscript. The book has been recovered by the BnF in January 2007 after negotiations with Christie's and the antiques dealer who had bought the book from the auction house in 2000.

Lessons Learnt

The BnF has learnt from the theft of this very valuable manuscript. Under the leadership of an internal steering committee a security plan was launched, concerning four action fields:
• Spaces and access controls
• Preservation and control of collections
• Measures applied to library staff and readers
• National and international cooperation

Spaces and Access Controls

A general access control system has been implemented at the BNF (François Mitterrand site) as well as a video surveillance system. Security devices were installed in storage areas too and an organization charter for organizing keys (*vigikeys*) has been created. Security measures also include the collections transfers – between all the BNF sites and outside. A new administrative procedure is now required for staff recruitment.

Preservation and Control of the Collections

- Stamping and systematic marking have been implemented for current flow and older collections (for example, 54104 documents from the audiovisual department have been marked in 2007).
- Electronic tracking of the documents flow has been expanded (access to legal deposit storage).
- Intensifying of substitution activities: the supply of a copy, in microform or digitized form, in order to protect the original from use and to create an accurate picture of the object (facsimile).
- Reflection on the increase and preservation of rare and precious collections.
- Regulation and control of the deposits outside BNF, etc.
- Stocktaking: a new charter and achievement of a three-year plan (2003-2005), 2007-2009 plan in progress.

Stocktaking
Definition: three stages
1) Checking and inspection of book stacks: counting volumes, pieces, sheets…
2) Investigations for missing documents
3) Analysis
The three-year program priorities:
– Rare and precious collections
– Documents issued after 1994
– Problems detected in storage, catalogue or delivering documents
Method:
– Rigorous planning
– Work in pairs
– Large use of electronic procedures
Results:
– 2003-2006 first plan: 500 000 documents a year on average annual rate of missing documents: 0.6%
– 2007-2009 (in progress): 489 667 documents
  Missing documents: 0.4%

Measures Applied to the Library Staff and Readers

Concerning library staff and service providers in contact with collections:
– Updating of library rules
– Stacks and workshops regulations (accreditations)
– Security training for newcomers
– Staff lending: regulations and centralised database (July. 2006)
– Police record certificate required in case of new responsibility on patrimonial collections

Concerning readers:
– New requirement for registration: identity papers, attested address
– Electronic storage of readers ID photos (oct. 2006)
– Consultation data are stored in electronic file and declared to the CNIL (BNF François-Mitterrand site). Filing of transmission forms (for the other sites)
– Regulations of public areas
– Fittings of reading rooms

National and International Cooperation

The French National Library systematically lodges a complaint in case of missing documents and several actions have been launched to recover stolen documents. The BnF works in cooperation with national and international police services (OCBC, BRB, INTERPOL…) and associations (LIBER, International Council of Museums).

Assessing New Developments in Collection Security

by Barry Knight,
Head of Conservation Research, The British Library

Abstract

Recent developments offer the possibility of using a security marker that contains a unique code that cannot be forged, and which can be detected at very low concentrations even if attempts have been made to remove it. The way in which these systems work is explained, and some of their advantages and disadvantages for libraries are examined.

Collection security is presently receiving greater attention than ever in libraries, museums and galleries, partly because of the greater prevalence of thefts, and partly because of the increased value of library materials, antiquities and works of art on the market. Recent high-profile cases, such as the theft of maps by Forbes Smiley, or the theft of Munch's *The Scream* have increased awareness of the vulnerability of our collections to determined thieves.

This paper reviews briefly recent developments in security marking that utilise substances that can be detected in very small concentrations, and which can be combined in very many ways to give a unique identity code. These substances are combined with a fluorescent marker compound and a permanent adhesive, so that when applied to a rough or porous surface it is extremely difficult for a thief to remove all traces, and the traces can be easily located with an ultra-violet lamp.

The idea of using invisible security marks that fluoresce brightly under ultra-violet is not new, but the concept of using a marking system with many possible combinations is novel. This means that not only can every user have a unique identifier (combination of substances), so that their property can be identified unambiguously, it also means that it is impossible for a thief to imitate the mark. This provides protection against substitution, for example, of a copy of a map for an original.

The marker substances that have been proposed or used are:

- Fluorescent organic compounds. These are detectable using ultra-violet light and have characteristic colours or emission spectra[1].
- Complexes of metals that can be dissolved in organic solvents. Every metal has a characteristic X-ray emission spectrum, and can be detected using a hand-held X-ray fluorescence spectrometer[1].
- Short, specific, synthetic DNA strands. These can be identified by genetic engineering techniques even in very low concentrations.

Fluorescent Compounds

A wide range of fluorescent organic compounds exists, which can be distinguished by their emission spectra using a portable spectrometer. Figure 1 shows the emission spectra of three typical compounds that glow red, green and blue under ultra-violet light. Many possible compounds could be chosen, all with different emission spectra. Provided that the spectra do not overlap too much, making it difficult to distinguish between them,

many different combinations are possible. For example, if we have just three compounds that are either present or absent, there are 7 possible combinations. If we have three compounds that are either present in high concentration, present in low concentration or absent, there are 25 possible combinations.
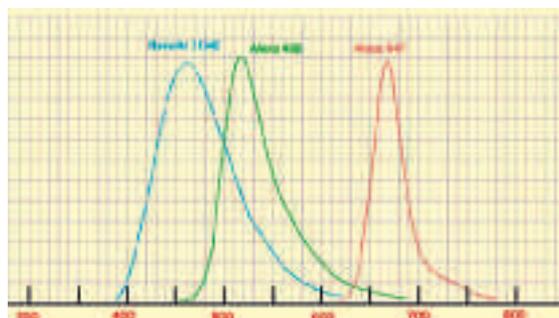

Fig. 1: Fluorescence emission spectrum for three dyes – red, blue and green. (Dr Carl Boswell, Dept of Molecular and Cellular Biology, University of Arizona) http://www.mcb.arizona.edu/IPC/spectra_page.htm
© Copyright Arizona Board of Regeants.

In a more complex example, if we choose one of three red fluorescent compounds plus one of three green fluorescent compounds and one of three blue fluorescent compounds, we can generate up to 198 distinct codes.

This method is limited only by the choice of suitable compounds: for example, they must be stable, colourless under normal lighting and compatible with the adhesive, and their emission spectra must be distinguishable. Identification is quick, non-contact and does not require a sample to be taken.

Metals

Metal compounds may also be used as markers. Every element emits X-rays with a distinctive energy when stimulated by an X-ray source, and can be identified using an X-ray fluorescence spectrometer. For example, we could choose from the metals in the first transition series in the periodic table (fig. 2), from titanium (element 22) to zinc (element 30): their emission spectra are shown in Figure 3.
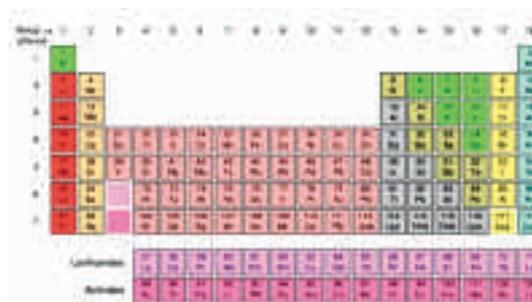
Fig. 2. The Periodic Table. Note the first transition series (Ti to Zn) and the lanthanides (Ce to Lu). Wikimedia Commons.
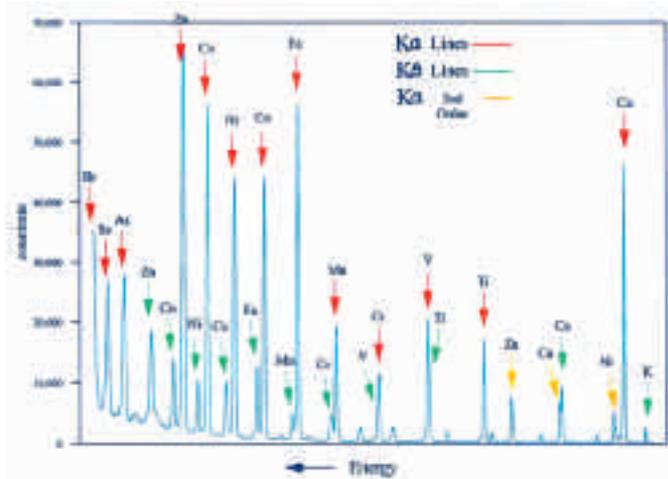
Fig. 3. X-ray fluorescence spectrum for the first transition series. Each element has a distinctive emission line.
http://en.wikipedia.org/wiki/X-ray_fluorescence

Alternatively, we could choose from the 13 stable lanthanides or rare earths, from cerium (element 58) to lutetium (element 71) (omitting promethium (element 61), which is radioactive). These are particularly suitable as markers because they are not normally present in library or museum objects. Using 13 metals, we can make a very large number of combinations. For example, if we just allow them to be present or absent, there are 8191 combinations, but if we allow them to be present in high concentration, present in low concentration or absent, the number of possible combinations rises to 1,594,322. This is clearly sufficient to allow every library or museum to have its own unique combination.

The metals are incorporated into the adhesive carrier in the form of an organic complex, such as an acetylacetonate, which is soluble in organic solvents. In practice, the marker also contains a fluorescent compound to enable the marked area to be identified with an ultra-violet lamp: this area can then be examined with a hand-held X-ray fluorescence spectrometer and the metals identified.

DNA

The use of synthetic DNA offers the possibility of generating a very large number of unique sequences which can be used as codes. As is well known, DNA consists of a double helix containing a sequence of the four bases (A, C, G, T) which can be arranged in any order – this means that there are 4100 ways (about 1.6 x 1060) in which a DNA strand consisting of 100 bases can be made. Modern genetic engineering techniques using automated equipment mean that it is possible to synthesise a DNA strand 100 bases long in a few hours.

There are two vital elements to the use of DNA as a security marking system: the strand which contains the code, which is flanked by specific key sequences at each end, and the primers, which are short double strands of DNA, about 20 bases long, that recognise and pair with the key sequences. Each user of the system will have a unique DNA code which is specific to them. The primers will be the same for all users of the marking system served by the same supplier, but will be different from those used by other suppliers. The sequences of the codes belonging to each user, and of the primers, must be kept secret, in a secure database.

In use, a solution of the DNA marker is mixed with an adhesive and a colourless fluorescent dye and is painted onto the item

to be protected. To identify the coded DNA, an ultra-violet lamp is used to find the patch of adhesive by its fluorescence and a tiny sample is removed. In principle, as long as it contains one marker DNA molecule, that is sufficient. The sample is dissolved and mixed with a solution containing the primers. The primers will recognise and bind to the key sequences on the coded DNA strand, but not to any other DNA sequence. This means that one strand of coded DNA can be recognised even in the presence of very many other unrelated strands.

The Polymerase Chain Reaction (PCR) is then used to amplify (increase the number) of coded strands. The polymerase enzyme will only recognise and duplicate strands to which the primers have bound, so the reaction is very specific. The duplication process can be repeated until a very large number of copies of the coded strand have been produced. Using automatic equipment, this takes only a few hours. Even one strand of DNA can yield a billion identical daughter molecules.

The ability of the primers to recognise the key sequences in the presence of unrelated DNA strands gives an additional degree of security. Even a thief with the necessary biotechnology skills who did not know the key sequences would be unable to pick out the specific marker DNA and would therefore not be able to synthesise it. This provides security against substitution, and guarantees that an object bearing an institution's specific marker does indeed belong to that institution.

Once a large number of identical copies of the marker DNA has been synthesised, they can be sequenced. Again, using automated equipment, this takes less than one day. The sequence can then be read and compared with the sequences in the database in order to identify the owner. The success of this method relies on the extraordinary selectivity of the primer in binding to the key sequences, and the ability of the PCR technique to generate very large numbers of copies of the marker DNA[2].

Additional Security Features

Some companies that use these marker techniques also use microdots that are mixed with the adhesive. These microdots are less than 1mm diameter and contain a unique numerical code that identifies the owner plus a contact telephone number for the security company (Figure 4). The advantage is that the microdots can be identified under an ultra-violet lamp and the coded information can be read with a low-power microscope, so that the owner can be found simply by contacting the security company and quoting the code number.
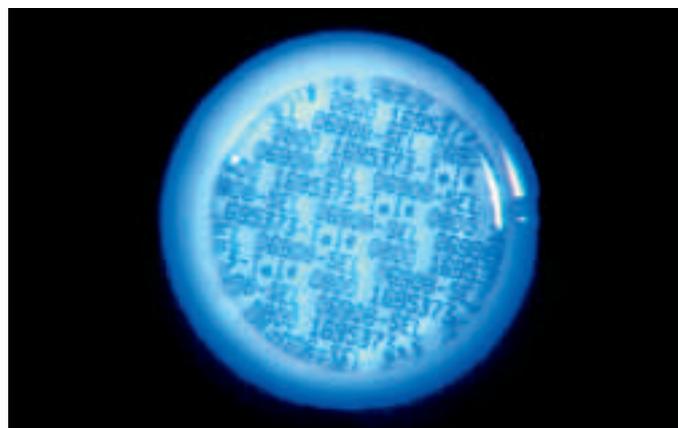
Fig. 4. A Selectadot. Less than 1mm diameter, it holds a unique reference number and a contact telephone number.
http://www.selectamark.co.uk/product_SelectaDNA.html
© Copyright SelectaMark Security Systems PLC

Microdot marker systems are being used for example on expensive motorcycles – the bike is sprayed with microdots so that each part is labelled invisibly. Even if the bike is stolen and broken down into parts, a microdot is likely to remain on each part which can therefore be identified as stolen property[3].

Questions for libraries

Before unhesitatingly recommending these systems to libraries and museums, we do need to consider the practical implications. We can divide these into materials questions, organisational questions, and criminological questions.

Considering the materials first of all, conservators are concerned about applying an adhesive that is supposed to be permanent and irremovable to valuable objects. How permanent is the adhesive? How well will it age? Will it affect the aesthetics of the object it is applied to? Will it yellow and peel? We also need to consider the stability of the marker compounds. How long will they last? Fortunately we can be more definite about the stability of DNA: identifiable DNA has been found on archaeological remains many thousands of years old, so we can be reasonably confident that DNA on an object kept under museum conditions will also be stable for a very long time.

Under the heading of organisational questions we must consider the resource implications and feasibility of applying markers to all vulnerable items in a collection. Ideally we need to mark not only the cover of every book, but also every map and plate. The aesthetic argument becomes even more acute here, because in order to defeat the determined thief the mark must be on the recto, within the image area so that it cannot be trimmed off. We come back then to the traditional library practice of conspicuous stamping.

The other organisational questions apply to the security companies. How will they guarantee the security of their databases and the integrity of their employees in the long term? The companies also have different business models. Some charge a fixed fee up-front, while others charge an annual fee to remain on their database. What are the implications of this? What would happen if the company went out of business or was taken over by another company?

Finally, under the heading of criminological questions, we need to ask how successful these systems are in deterring thefts or assisting the recovery of stolen property? These systems are heavily advertised to owners of historic houses etc., and are endorsed by police Crime Prevention Officers. The manufacturers claim that their systems have been effective in reducing the number of thefts of expensive cars and motorbikes, but it is less clear what their effect has been on art theft. Anecdotal evidence from one historic house museum that uses one of these systems is that in spite of warning notices that all the objects on display are security marked, the number of opportunistic thefts has not decreased noticeably, and it has not led to greater success in recovering stolen property.

We also have to consider that while a professional thief may be prepared to spend money on removing ownership marks in order to be able to sell stolen items through the rare book trade for the best possible price, an opportunistic thief will want to sell his loot as quickly as possible through informal channels for whatever price he can get, to a non-specialist buyer who is probably not concerned about the presence of ownership marks, and may even consider that they increase desirability.

In conclusion, these newer systems offer the prospect of unambiguous covert marking that appears very attractive to museums and galleries, but which raises a number of preservation concerns when applied to library collections. There are also concerns about how the companies offering these products will ensure the long-term survival and security of their databases. Finally, and this is true of all security systems, there is little published evidence that they are actually effective in reducing thefts or enhancing the recovery of stolen property.

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Security of Digital Collections:
The BnF Distributed Archiving & Preservation System (SPAR)
Operating Safety and Reliability

by Adoté Chilloh,
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Due to technological evolutions, book publishing becomes more democratic and chooses more and more only electronic forms of publication, whether it includes still or moving images. Besides, traditional medias and equipments of reproduction, distribution and restitution tend to disappear. Therefore, the BnF began four years ago to imagine and design a new system which will be able to record digital objects of different formats, including images, graphs, texts, sounds and videos. This future archiving system has also to plan the conversion of formats to limit their number.

The vocation of the future archiving system will be to preserve information while allowing a specific community of users to have access to it and to use it (as defined by the ISO-norm 14721:2003). It has to guarantee that data and all the information necessary for the data to be understood and used will be preserved in the long term.

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This archiving system conceived by the BnF is neither a backup system, nor a definitive data storage, but an on line virtual store. It is a new "digital" information system:
- including a storage system for archiving data;
- including access systems to digital objects and to the database so that the library staff manage the technical data and metadata of these archived digital objects and lead research, management and conservation activities;
- creating an interface to the library applications to implement an harvesting system for the library staff in charge of digital collections and to develop a public access to these collections via Internet or reading workstations.

The project will be coordinated by the "preservation process" which has to:
- Make a technological watch on media, formats, access tools and processing software;
- Validate the processes proposed by the system;
- Take decisions of migrations, transformations, etc.;
- Implement tests prior to these transformations;
- Approve before applying them and validating the results.

The project aims at meeting the needs of preservation in the long term by progressively implementing a distributed archiving & preservation system (SPAR). This system once installed will allow all the existing and future applications whose data have to be preserved and archived in the long term to be integrated into SPAR. "SI-NUMERIQUE" is the BnF new digital information system, including SPAR and applications of production and dissemination of the library digital cultural heritage.

Because of technological evolutions and above all Internet, nowadays an information system cannot be conceived without raising the issue of safety and reliability, which requires to make a risk analysis.

One of the first study concerns which led to the new system design was to define the safety policy to be implemented to provide minimum safety, minimize the risks and increase the reliability of this brand-new system of an unprecedented scale since the first information system has been put in service in 1998.

Operating Safety and Reliability Applied to SPAR

According to the ISO standards 17999, 27001 and then 27002:
- Information security aims at protecting information against a large variety of threats so as to guarantee the transactions continuity, reduce as many risks as possible and optimize return on investment as well as opportunities in terms of activity for the institution.
- Information security is provided by implementing adapted measures, including rules, processes, procedures, organizational structures and material and software functions. These measures must be specified, implemented, followed, revised and improved as often as necessary, so as to reach the specific objectives in terms of institution's safety and activity. That is why the other processes of management have to be consulted.
- Information security aims at protecting data confidentiality, integrity and availability. It also concerns other proprieties such as authenticity, accountability, non repudiation.

As far as the SPAR project is concerned, it is not possible to study the safety and reliability devices necessary to keep the system in working order without identifying first the potential threats on the system, in particular:
- Data theft, piracy, or illicit use of the system for other purposes
- Loss, full or partial destruction of the system
- Drop in service quality
- Denial of service
- Data destruction or corruption
- Access to confidential data (personal, financial, contractual data)
- Premeditated or occasional unauthorized circulation or illicit reproduction of confidential data
- Premeditated or occasional user's identity theft and fraudulent use of related rights (change in the author's name, rights data, etc.).

The previous threats identification leads to the conclusions below:
- The SPAR system must become the BnF digital data safe. The fraudulent access to these data, even their thefts will be a great damage to the BnF.

- The SPAR system is imagined to become the cornerstone of the BnF's entry into the digital era. A drop in the service quality can lead to the mistrust in the new system; so the service quality has to be guaranteed and kept.
- The SPAR system has to receive continuously digital data; the inaccessibility of one or some of these services cannot be accepted.
- The access to confidential data (personal, financial, contractual data) by unauthorized third parties can damage the contractual relations between the BnF and the literary or industrial sectors, and so the institution's image. Besides, even inside the BnF, it is necessary to take the necessary guarantees against the possibility of falsifying data or the free access to protected documents.
- The physical environment which will host the material infrastructure must be secured, with its own physical safety devices.

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Once the risks identified and evaluated, the risk analysis will permit to choose and plan the most adapted actions to reduce their possibility and effect on:
- Availability: ensure that entitled users have access to information and related data when needed;
- Integrity: ensure that information and data processing methods are exact;
- Confidentiality: ensure that only entitled persons can have access to specific information.

These measures are part of the risk-reducing plan.

In order to ensure operating safety and reliability,
- The premises which will host the hardware will be provided with their own safety devices besides the existing ones.
- The BnF infrastructure hosting SPAR will be provided with:
  – Firewalls in order to filter and control some communications applications to protect BnF from both outside and inside intruders.
  – Hypervision system allowing systems administrators to:
    - ensure the information system availability;
    - keep the information system in operating conditions;
    - manage and optimize the information system working;
    - analyse and determine the damages causes;
    - measure data load and performance to improve service quality for users;
    - manage the evolutions.
- Security supervision systems whose objectives are:
  - Provide centralized configuration information on the supervised infrastructure;
  - Analyze and follow in real time the supervised infrastructure performances;
  - Analyze and follow in real time faults;
  - Classify security events for proceeding to their ex post facto processing (correlation, etc.).

SPAR integrates from its design mechanisms such as:
- Security check in terms of access;
- Traceability to facilitate audit.

Access control security will be ensured by a system of identity and access control which will be the only one entitled to manage the life of the different SPAR users and will feed SPAR accounts directory. Thanks to reconciliation process, every difference will be identified and the alert will be given.

To guarantee its availability, the SPAR system is imagined to work on the basis of multi site architecture, with a load balancing between two sites, or between one main site/one backup site, to take into account the defined working constraints:
- The main site infrastructure must have an availability such as described above. The means used to reach this objective will be chosen by the equipment market tenderer (software or material redundancy, mirror disks, safety reviews…).
- The backup site infrastructure has to restart within 4 hours whatever the stop cause.

Risks Management Applied to SPAR

The project instigators have been made sensitive from the beginning to the fact that it was not possible to manage such a project without taking into account some constraints, such as:
- The BnF authorities support;
- The respect for the project key dates;
- Taking into account the BnF general environment (human, technical, physical);
- The interfaces compliance with such or such system.

The principle of risk management chosen for the BnF distributed archiving & preservation system is classical:
- Risk assessment ("Identify and Trace");
- Impact evaluation ("Measure");
- Definition and implementation of plans ("Treat").

This archiving and preservation system is conceived to meet the BnF present and future needs in the field of digital preservation. During the realization and implementation of such a system, we look for the events that may damage the normal functioning or worse stop completely and durably the expected services. These events constitute the portfolio of risk factors.

The preliminary studies allowed:
- to list factors of risk (clear expression of needs, delay constraints, technical or contractual requirements, factors of complexity, means, variability, technical and volumetric evolution, resources management, documentary state, …) and categorize them;
- to define the resulting risks knowing that several risks can result from each risk factor.

This approach will be followed by the implementation of actions that must allow to:
- follow identified risks and their treatments ("corrective actions");
- take into account new risks which will be identified during the project and system life ("preventive actions").

The main categories of risks identified for SPAR are:
- Organizational risks
- Risks inherent to the system construction
- Environmental risks
- Technological risks
- Safety-related risks

Risks	Consequences	Treatments
Organizational Risks		
Financial risk • False initial budget estimation	Chaotic realization and exploitation	• Budget updating • Support and awareness of decision makers
Human resources risk • Lack of organization to host the new system • Non support from staff • Lack of training	Chaotic realization and exploitation	• New organizational structure for the future realization and exploitation of the system • Awareness of decision makers • Staff training
Risks related to bad accompanying measures for change	Non-usable system	Plan accompanying measures
Risks related to the project • Management • Bad management or reception of deliverables	Unreached general objective	• Close contractual follow-up • Help of a consultant in organisation

Risks inherent to the system construction		
Risks related to bad initial hypothesis • Non implementation or stop of invests • Giving up of the system complete implementation • Data disparity in terms of format	• Loss of initial investments • Non-manageable system (dead-born)	• Continuous awareness of decision makers • Visibility on the system's realization
Risks related to the material, software and application infrastructure conception • Disproportionate ambitions • Choice of a non-performing infrastructure • Use of proprietary technology • Deterioration of storage media • Lack of vigilance in formats definition • Obsolescence of a format used and stored • Insufficient management of metadata • Incompatibility caused by migration within the framework of preservation	• Loss of initial investments • Non-manageable system (dead-born)	• Selection of an architecture validated by the majority • Control of supports and capture software with fault management • Selection of formats validated by the majority • Training process and permanent adaptation of migration processes • Technological watch
Risks related to the bad choice or lack of management tools • Non detection of minor or serious faults	• Accidental erase • Full or partial loss of system and data • Insufficient data management	• Study of an adapted supervision device • Selection of an adequate support • Technological watch

Environmental Risks		
Natural unforeseeable risks • War, terrorism • Natural disaster • Epidemics	• Non accessible system • System destruction	• Implementation of a disaster plan • Multi site architecture
Risks inherent to BnF host sites • Failing in physical security • Fire • Power loss • Flood	• Full or partial loss of system and data	• Power supply redundancy • Secure access management • Firewalls • Firemen • Protection against flood • Implementation of a disaster plan • Multi site architecture

Technological risks		
Risks related to the mismanagement of material infrastructure evolutions	• Loss of data access • System obsolescence	• Device of material infrastructure preservation • Training process and permanent adaptation of material evolutions trajectory • Technological watch • Writing off policy
Risks related to the mismanagement of software infrastructure evolutions	• Regression in the data processing system • Full or partial loss of data	• Non regression policy • Technological watch

Safety-related risks		
Outside risks • Computer system intrusion • Data leakage	• Denial of service • Full or partial loss of data	• Global policy of logical and physical security • External security devices • System of identity and access control
Inside risks • System misuse • Unauthorized access to the system • Data leakage	• Denial of service • Full or partial loss of data • Images loss	• Global policy of logical and physical security • External security devices • System of identity and access control
Risks causing the system outage or disturbances	• Denial of service • Data loss	• Supervision device • Audit and reporting device
Risks related to information asset loss	• Images loss • Non-manageable system (dead-born)	• Supervision device • Audit and reporting device
Risks related to the data mismanagement	• Information asset loss • Images loss	• Audit and reporting device
Risks related to the access mismanagement	• Piracy • Information asset loss • Images loss	• Supervision device • System of identity control

In order to take these risks into account it is necessary to measure their level of gravity[1] by combining the risk likelihood and its magnitude of impact:

• Impact: measure the consequences on the services. Four levels are defined: major, high, medium and low.
• Probability: evaluate if risk is liable to happen during a period. Three levels are defined:
  – 3: high to certain (70 to 100%)
  – 2: low to high (30 to 70%)
  – 1: very low to low (0 à 30%)

Gravity represents the global risk approach. Four levels are defined:
• Gravity > 9 : Critical risk
• 8 = Gravity = 9 : High risk
• 4 = Gravity = 7 : Acceptable risk
• 1 = Gravity = 3 : Insignificant risk

The identified risks (or the risks treated by a plan and thus requiring a revaluation) for the SPAR system will be, after their impact and likelihood have been evaluated, ranked according to their level of gravity such as calculated in the table below.

				Impact
Gravity (Impact * Likelihood)	Major (4)	High (3)	Medium (2)	Low (1)
High (3)	12	9	6	3
Medium (2)	8	6	4	2
Low (1)	4	3	2	1
Probability				

1. Extracted from the plan of risks management studied at the BnF within the framework of the market of level 1 facilities management of its information system.

Le Système de Préservation et d'Archivage Réparti de la BnF (SPAR)
Sécurité et Sûreté de fonctionnement

La BNF a entrepris, il y a quatre ans, d'imaginer et de concevoir un nouveau Système de Préservation et d'Archivage Réparti (SPAR) qui aura pour fonction de préserver l'information tout en permettant à des communautés définies d'utilisateurs d'y accéder et de l'utiliser. Il doit à ce titre assurer la pérennité et la préservation des données et de toutes les informations nécessaires à leur compréhension et utilisation. Ce système d'archivage n'est ni une sauvegarde, ni un système de secours, ni un rangement définitif des données, mais un magasin virtuel vivant.

Photo David Paul Carr / BnF

Du fait de l'évolution de l'informatique en général, et surtout de l'Internet en particulier, il n'est plus possible aujourd'hui de concevoir un système d'information sans poser au préalable les questions de sécurité et de sûreté de fonctionnement. Ainsi les menaces potentielles doivent-elles être identifiées, notamment :
• le vol des données, le piratage ou l'usage illicite du système à d'autres fins ;
• la perte ou la destruction, totale ou partielle du système ;
• la baisse de la qualité de service ;
• le déni de service ;
• la destruction ou la corruption de données ;
• l'accès à des informations confidentielles ;
• la diffusion indue ou la duplication illégitime d'informations confidentielles ou payantes, préméditée ou occasionnelle ;
• l'usurpation d'identité d'un utilisateur et l'usage frauduleux des droits associés, prémédités ou occasionnels.

L'étude de risques permettra, une fois les risques identifiés (risques organisationnels, environnementaux, technologiques, liés à la sécurité ou intrinsèques à la construction du système) et évalués, de planifier les actions les mieux adaptées pour réduire leur probabilité d'apparition et leur impact sur:
• la disponibilité (garantir que les utilisateurs habilités ont accès au moment voulu à l'information et aux ressources associées) ;
• l'intégrité (garantir l'exactitude de l'information et des méthodes de traitement des données) ;
• la confidentialité (garantir que seules les personnes habilitées puissent accéder à une information donnée).

Pour garantir la sécurité et la sûreté de fonctionnement, les espaces qui accueillent les infrastructures matérielles disposent d'une sécurité physique propre. L'infrastructure de la BnF est également dotée :
• d'un système de sécurité via les pare-feux ;
• d'un système d'hypervision qui permettra aux administrateurs de garantir entre autres la disponibilité du système d'information ;
• d'un système de supervision de la sécurité dont l'objectif est de fournir de manière centralisée les informations de configuration relatives à l'infrastructure supervisée et d'analyser et de suivre en temps réel ses performances et anomalies.

Le système SPAR a ainsi pour vocation de devenir le coffre-fort des données numériques gérées par la BnF. Pour garantir sa disponibilité, il est imaginé pour fonctionner sur la base d'une architecture multisite. La sécurité des accès sera également prise en compte par la mise en place d'un système de gestion des identités et des accès.

Preserving Digital Information at the BnF: The SPAR Project

by Thomas Ledoux,
Software Engineer at the IT Department, SPAR Project Manager
National Library of France

Context

The digital information is acquiring an always more important place inside the National Library of France (BnF). Indeed the digitization programs, for paper collections or audiovisual material, are gaining momentum and the number of such generated files increasing in proportion. Moreover, the harvesting of the French Web or the extension of the legal deposit to the digital form bring into the patrimonial collections of the BnF digitally-born material that needs to be preserved as well as the other forms.

But the preservation of a digital document raises new challenges. It's not enough to keep the record and its media: we need to be able to read it (own the proper reading device and know how to use it), to interpret the bits (know its format and own the software able to comprehend it) as well as to know how to find it.

At the opposite, the digital document can be copied endlessly without loss of information.
Building a preservation system is therefore the obligation to provide the means to develop around the digital document that we want to preserve a set of information (metadata) that will enable us to locate this document, to give it meaning and to continue to provide access long after its creation and dissemination.


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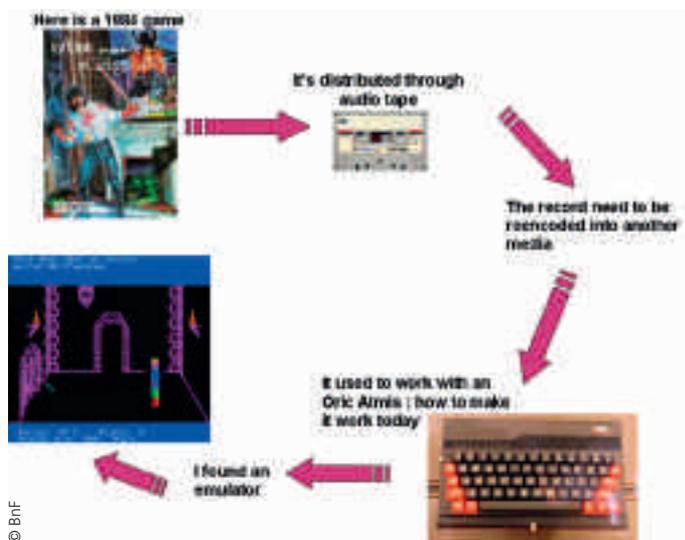
To reach this goal, the BnF has relied on the standard of the reference model for an Open Archival Information System[1] (OAIS), elaborated by the spatial community, which defines the main functions and responsibilities of a long-term archiving system in respect with a community of users.

1. The OAIS is registered as an ISO standard under the 14721:2003 number.

The SPAR Project

The BnF has launched the SPAR project ("Système de Préservation et d'Archive Réparti" / Distributed Archiving and Preservation System) inside the large scope of the digital information system of the library. This system provides the mean to preserve in the long-term all the digital material while providing the means of ingest and dissemination of this data.


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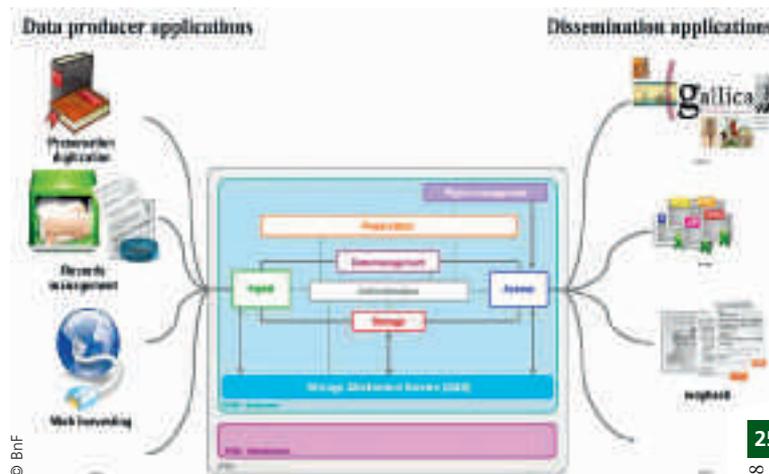
This project breaks down the system in 8 generic modules:
- the Ingest Module (receipt of digital documents and validation of their conformance),
- the Storage Module (choice of storage locations and periodic check of the documents),
- the Data Management Module (search in the metadata),
- the Rights Management Module (calculation of usage licenses in accordance with the laws),
- the Access Module (provision of digital data ready for dissemination),
- the Administration Module (coherence and internal monitoring of the system),
- the Preservation Module (technological watch and implementation of migration plan to ensure the continuity of data),
- a Technical Module (the "Storage Abstraction Service") to guarantee the independence of the system in respect with the storage hardware.

that rely on an infrastructure aimed to host in a secure way large amounts of data.

The SPAR Infrastructure

In order to implement the system, the BnF has acquired an infrastructure distributed on two geographically distinct sites in order to prevent from disasters. Each site is viewed as a system *per se*, each component of one of the sites being able to replace temporarily or over a longer period its counterpart.

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The infrastructure is made of 3 main parts:

1. the SSS (Side Storage System) in charge of the reception of the files made by the production applications and hosting them before the ingestion in the Archive,
2. the SSP (Main Storage System) in charge of storing for long time the digital objects once they have been audited and shaped for their preservation,
3. the SSC (Access Storage System) in charge of providing a cache storage to feed in an efficient manner the dissemination applications with data properly transformed for such a dissemination.

Each of these parts has been selected in order to optimize their execution while keeping their openness (compatibility with various operating systems) as well as their scalability (from an initial hundred of terabytes to multiple petabytes).

For the SSS and the SSC, disk arrays directly linked to the network in NAS ("Network Attached Storage") mode give access to efficient file systems between 50 to 300 Tb for Windows or Unix platforms.

For the SSP, a tape library hosts in an economical way (even from the energy viewpoint) multiple petabytes of data while allowing for the use of various technologies (LTO, T10000…).

Obviously, this infrastructure can't be thought without a high level of security which applies not only to users but also to the administrators of the system. To guarantee this security, the system hosts its own directory for access control and security clearance management.

From the reliability viewpoint, each write is made in double and in near-real time. Hence in case of malfunction of the main site, the system is designed to commute automatically or manually to the backup site.

But the high level of the technology of the infrastructure is not enough in the long term: the overall system must be able to assume as cheaply as possible the inevitable technological changes. To do so, a storage abstraction service, based on the iRods software from the San Diego Super Computer Center, exhibits the components of the infrastructure as common storage units able to render a given level of service (for example, fast read or write in at least 2 copies). The commonality of the storage permits the implementation of a system that doesn't care about the available technology but only about the required outcome.

The Elements of Preservation in SPAR

The SPAR system implements various elements in order to guarantee the perpetuity of the data it receives.

At ingest time, the data are audited in order to retrieve as closest to the producer as possible all the contextual metadata which will give meaning to the archived data. Not only the description of the object (is it a book or a game?) but also the structure (how the files are organized), the technical metadata (file formats) as well as the audit trail of all the operations (digitization, audit, update…) need to be captured. All these metadata are packaged in a manifest file formatted with the standard METS.

The archival package (the raw data along with the manifest and an electronic digest) is then sent to the storage to be recorded in various copies on long term media. But these data do not remain at rest: periodically, under supervision of the Administration, all the media are audited to verify their good condition and the data are read and checked. In case of a failure, the media are refreshed or the faulted records are rewritten based on the good copies. Similarly, if there is a need or a will to change the storage technology, after installing the new infrastructure, a refreshment of the media is started by the administrators.

Finally, when a user wants to access a specific archived document, depending on the access media (Web browser, pda, mobile phone), the system will provide the adequate version using the present tool able to transform the archived format into a format comprehensible by the current system.

In the long term, to ensure the intelligibility of the documents, a group of preservation expert is in charge of technology watch on file formats and on the dissemination tools. They can therefore initialize migration operations to guarantee the perpetuity of access. Hence, if a file has been recorded in, say, Word 97 format, they can decide to convert it to PDF format to allow its reading in the future. Each destructive operation made on archived data creates a new version allowing, if necessary, to rollback to the previous state.

Each archival package is thus kept in 3 versions: the original one, the last version and the penultimate one.

Each decision of preservation is based on risk analysis which takes into account not only the technical aspects (obsolescence, maturity…) but also the environmental (natural disasters, material deterioration…), organizational (responsibilities, skills, training,…) and financial (amount of budgets against cost of solutions) ones.

Conclusion

SPAR is a long-term preservation system for digital material which design is both **modular** and **flexible**.

The BnF aims to take the responsibility of archiving digital material in the very long term by reaching a critical mass sufficient to reduce costs (hardware, software and human means) and by pooling of the archives between different cultural institutions.

Biblioteka Academie Nauk Fire: Twenty Years On

by Randy Silverman,
Preservation Librarian, University of Utah, USA

Twenty years to the day after the worst library fire of the twentieth century, on 14-15 February 2008, the Library of the Russian Academy of Sciences, (Biblioteka Academie Nauk, BAN) convened a symposium to commemorate the 1988 event and summarize the lessons learned. The clarity of hindsight offered some observations about disaster response that may prove of interest to the conservation profession.

BAN, founded by Peter the Great in 1714 in Saint Petersburg, is the first library in Russia to open its doors to the public. With collections totaling over 20 million books and manuscripts, BAN is one of the world's largest research libraries. It predates the establishment the National (Royal) Library in Paris (1735), the British Museum in London (1753), and the Library of Congress in Washington D.C. (1800)[1]. Descriptions of the 1988 disaster are well documented in the conservation literature, yet the implications for professional practice are seldom discussed. This may be due to the length of time over which these reports were published, the scatter of journals in which the articles appeared, translation issues, or the changing perspectives of the participants. Suffice to say, the BAN disaster is not commonly understood outside of Saint Petersburg.

1. The Library of the Russian Academy of Sciences (Biblioteka Academie Nauk, BAN), Saint Petersburg, Russia, 14 February 2008.
(Photo credit: Randy Silverman)

The general facts of the fire are as follows. The fire began on the library's third floor in the newspaper depository. Fire fighters were called at 8:14 p.m. the evening of 14 February 1988 after most employees had left the building for the night. By 12:30 a.m. the morning of 15 February (4.15 hours later) the fire was extinguished, but around dawn (at 5:20 a.m.), additional flash points were discovered on the fourth and fifth floors. This second fire was far more damaging than the first

and could not be extinguished until 3:15 p.m. (10 hours later), causing major collection damage from floors three through six. The most significant damage occurred to 152,245 seventeenth-through-twentieth century volumes belonging to the famous Baer Collection, a non-Russian literature collection named for German Academician Karl M. Baer whose classification system is still used to organize this material[2]. The fire had been doused by 25 fire brigade hoses that ran for 19 hours and pumped hundreds of tons of polluted water directly from the Neva River into 22 sections of BAN's repository[3]. After several enigmas of investigation it was determined that 298,961 books, periodicals and newspapers were destroyed in the conflagration[4]. An estimated 3.6 million volumes were severely smoke and water damaged[5].

The official report from the Ministry of Internal Affairs singled out no identifiable source of ignition for the blaze, although an employee's cigarette was called into question. However, M. F. Shaitanov, Head of the Fire Prevention Administration for the Leningrad Region, published a scathing condemnation of the Ministry's conclusion in 1990. Mr. Shaitanov suggested while criminal negligence might have explained the first fire, "the fire on the third and fourth floors did not result from the inadequate fire extinguishing on the second floor." His explanation was an arsonist had set both fires[6]. BAN's Director, Dr. Valerii Leonov supports this theory, emphasizing there were actually three fires. The last one, occurring inside the drying chamber long after the initial blaze, presented an enigma that was not addressed by the initial investigation. Dr. Leonov's hypothesis is that incendiary devices were placed inside of several hollowed-out books in various places in the stacks, an explanation supported by one recovered book charred in the middle but with its covers unscathed. He reasons that the fire in the drying chamber occurred when one such device, delayed when its fuel became saturated with water, dried out as the book dried and once again became capable of spontaneously igniting[7].

1. Valerii Leonov, *The Library Syndrome* (München: K. G. Saur, 1999): 166.

2. Leonov, *The Library Syndrome*, 1999: 52, 70; Valerii P. Leonov, Irena M. Belayaeva, and Julia P. Nyuksha, "Fire recovery and preservation of collections at the Russian Academy of Sciences Library," *Advances in librarianship* 27 (2004): 200.
3. Julia P. Nyuksha and Valerii P. Leonov, "Preservation of collections at the Russian Academy of Sciences Library: a retrospective overview, problems, and solutions," *Restaurator* 18/4
(1999): 203, 213; Carolyn Hoover Sung, Valerii Pavlovich Leonov, and Peter Waters, "Fire recovery at the library of the Academy of Sciences of the USSR," *American Archivist* 53 (Spring 1990): 299.
4. Leonov, Belayaeva, and Nyuksha, "Fire recovery," 200.
5. Jane Slate Siena, "Preserving the collective memory: a conversation with Valery Leonov," *Getty Conservation Newsletter* 7/1 (Winter, 1992): 3.
6. M. F. Shaitanov, "Where one fire was extinguished, there were actually two fires in BAN: new details," *Leningradsky literator* (N7, 12, 1990), in Leonov, *The Library Syndrome*, 1999: 132-35.
7. Interview with Valerii Leonov, St. Petersburg, Russia, 15 February 2008.

Not enough can be said in praise of the staff's heroic and well orchestrated efforts during those first, frigid winter days. Don Etherington, one of the three foreign experts to be invited to consult on the disaster, told me recently that by the time he, Sally Buchanan, and Peter Waters arrived on 28 March (six weeks following the fire), all of the salvageable charred and actively-wet material had already been removed from the building and stabilized[8]. Limited freezer space accommodated only 210,000 volumes, leaving 90% of the damaged collections at risk from biological attack due to the extremely wet conditions existing inside the soggy building. A massive mold outbreak was averted in the immediate aftermath of the blaze by the timely application of in situ fumigation applied to 8.1 million volumes from 19 April until 27 May. The mass disinfection system, devised by Dr. Oleg Gromov and Dr. Vladislav Donchenko of the USSR Ecological Safety Research Center, relied on thermoelectric fans to create ideal environmental conditions for mold growth prior to killing the active spores. Using pressurized carbon dioxide as the carrier formaldehyde was propelled into hermetically sealed sections of the stacks. The gas was applied by the use of ultrasonic nozzles from a "clean room" established outside the sterilization area[9]. Only 10,000 volumes (0.002%) suffered mold damage at BAN – a testament to the efficiency of the recovery.

Frozen books were dried using a system also designed by Drs. Gromov and Donchenko that Mr. Waters called "a technological breakthrough"[10] but is still essentially unknown to the West. Books were grouped in 10-15-volume batches and segregated by size so that volumes of similar height and width would physically support each other and dry flat. Each batch of books was tightly bundled inside a pouch sewn from absorbent cotton toweling (measuring approximately 8 x 10 x 12 inches / 20 x 25 x 30 cm). Each pouch contained six outer pockets – one on each side of the bundle – filled with clean sawdust procured from local mills. Each bundle was placed on a wire rack within an environmentally controlled drying room (86°F / 30°C; 30% RH) where air could be vigorously circulated by fans. Acting as both a barrier and a poultice, the sawdust slowed the drying and caused active water to be evenly distributed within the books. Simultaneously, the sawdust evenly extracted moisture from the bundles and dispersed it into the air through evaporation. Moist air within the room was continually exhausted by positive pressure produced by the fans. A complete drying cycle took approximately one week per batch of 3,000-4,500 books[11] "without the slightest damage to, or deformation of, paper and bindings."[12]

Another novel approach used during the recovery was to entrust wet books to the concerned citizens of Leningrad who dried them in their homes. Shortly after the blaze 18,000 wet volumes were checked out to 13,000 of people who were instructed in methods of air drying and ironing the distorted pages[13]. No books were lost through this unprecedented utilization of volunteer labor and, as noted above, the drying occurred timely so that mold growth was very minimal.

2. Fire-damaged books waiting for phased boxes, BAN, 15 February 2008. (Photo credit: Randy Silverman)

As a result of formal cooperation agreements signed between the Library of Congress (LC) and BAN, Mr. Waters returned to BAN at least ten more times during the next seven years to help with the recovery. When he first arrived, traditional single-item treatment was the only recognized course of action. This approach, Mr. Waters estimated, would require "5,000 person years" or the equivalent of 250 conservators each working twenty years[14]. With the support of BAN's Director, Mr. Waters introduced the concept of phased preservation and an automated phased boxing machine to address an otherwise overwhelming problem. First developed by Mr. Waters' son Michael, the automated boxing machine proved its utility in 1991. In the United States, Custom Manufacturing, Inc. producing 11,000 boxes from alkaline E-fluted corrugated paperboard and shipped them to St. Petersburg for assembly. At first in library history, each box fit its intended book. Compression applied to the book during measuring helped compensate for expansion normally caused by water damage so the boxed books took up almost no additional shelf space[15]. With the help of an explanatory film he produced, Mr. Waters convinced the Getty Conservation Institute (GCI, Los Angeles) in 1994 to provide

8. Interview with Donald Etherington, 23 May 2008, Salt Lake City, UT.
9. Sung, Leonov, and Waters, "Fire recovery", 308-9; Leonov, Belayaeva, and Nyuksha, "Fire recovery," 203-4.
10. Sung, Leonov, and Waters, "Fire recovery", 311.
11. Larissa B. Shapkina, Adolph A. Leonovich, Michael K. Nikitin, Maya V. Apreleva, Oleg A. Gromov, Vladislav K. Donchenko, Alexander I. Kalinin, and Vladimir P. Sokolov, "New technologies from the USSR: restoring book paper and drying water wetted books", The Book and Paper Group annual [of the American Institute for Conservation] 10 (1991): 221-23; and, Sung, Leonov, and Waters, "Fire recovery," 309-10.
12. Leonov, Belayaeva, and Nyuksha, "Fire recovery," 203.

13. Leonov, The Library Syndrome, 1999: 169; and, Larissa B. Shapkina, et al., "New technologies from the USSR", 217.
14. Peter Waters, "A unique library 'preventive' preservation technique", International Preservation News 10 (July 1995), 8-9; Sung, Leonov, and Waters, "Fire recovery", 312; Irena Belyaeva, "Phased conservation at the Library of the USSR Academy of Sciences", Conservation administration news 46 (July 1991): 1-3.
15. Peter Waters, "Report on his visit to the USSR Library of the Academy of Sciences, Saint Petersburg, November 29 to December 10, 1991", submitted to the Paul Getty Conservation Institute January 12, 1992. Unpublished typescript, Peter Waters Archive, University of Utah, Salt Lake City, Utah: 5-6. A very small number of boxes gaped open due to book distortion, a problem overcome using polyester straps closed with Velcro buttons.

funding to purchase and ship a more sophisticated, second-generation boxing machine to BAN. Together with Dr. Robert McComb (a chemist at LC) Mr. Waters also established paperboard specifications so the requisite material could be manufactured domestically by Russian paper mills[16]. With such tools in hand BAN technicians produced a total of 47,620 boxes to house fire-damaged books from the Baer Collection[17] and continue today to provide phased boxes for other collections within BAN as well as for other Russian libraries.

3. More phased boxes in the Baer Collection, BAN, 15 February 2008. (Photo credit: Randy Silverman)

Charity and good will played a large part in the recovery's success. Shortly after news of the fire became public, Armand Hammer, U.S. industrialist, philanthropist, and Executive Committee Member of the International Foundation for the Survival and Development of Humanity (IFSDH), called Raisa Gorbachev, wife of President Mikhail Gorbachev, to suggest IFSDH send experts to Leningrad to help advice on the recovery. With Mrs. Gorbachev's support, Mr. Hammer contacted Los Angeles Mayor Tom Bradley to locate the consultants who had advised on the Los Angeles Public Library arson fire in 1986[18]. Nine days later, Ms. Buchanan, Mr. Etherington, and Mr. Waters were airborne traveling from the United States to the Union of Soviet Socialist Republics during the Cold War without visa! Additional support came from Reader's Digest Association, Inc., Ms. Esther Coopersmith, International Council of Archives, International Federation of Library Associations, and UNESCO. In total, 222,336 replacement volumes were donated from 764 institutions including 20,000 copies from libraries outside of Russia[19].

The obstacles encountered following the BAN fire were monumental and bear examination although the most stressful were not conservation-related. For example, on 26 February, twelve days following the fire, then-Director V. A. Filov became severely ill and required hospitalization. While he did recover, Dr. Filov was never able to return to his post. Four months later, Dr. Leonov was appointed to serve as Acting Director by the Academic Presidium in Moscow, but was not formally confirmed as BAN's thirteenth director until November 1989. Those twenty-one months placed Dr. Leonov in the unenviable position of having to shoulder gargantuan responsibilities fortified with only limited authority[20]. As Dr. Filov himself noted in the English edition of Dr. Leonov's The Library Syndrome, "Apparently, it was necessary to accuse the Director."[21] The string of personal accusations that accrued was biting, public, and unrelenting.

In the days and weeks following the fire, a few notable academicians and several disgruntled library employees surreptitiously collaborated to unleash a firestorm of bad press fraught with slanderous recrimination. Dr. Leonov was falsely accused of trying to cover up the disaster, mismanaging the recovery, throwing away salvageable collections, and endangering staff through the sterilization process. As each fallacious judgment was addressed and disproved, further denunciations emerged which demoralized not only the Director but the entire staff that continued to soldier on through this very dark period.

Finally, in August 1995, criminal charges were leveled against the Director by the Office of the City Prosecutor. This formal accusation included two points; charges of misappropriating funds ($30,000) and illicitly selling Russian national heritage to foreign book dealers.

Fortunately, six months of legal investigation exposed the nature of these accusations as lies. The verdict handed down in February, 1996 resolved the matter and exonerated Dr. Leonov of any wrongdoing. Nearly eight years after the date the fire was originally set the Director was finally vindicated but his accusers were never penalized.

Twenty years after the Leningrad fire this commemorative symposium provided an important opportunity to look back and assess the lessons learned. This huge and complex recovery ran the gamut of human experience, from tremendous generosity, prodigious creativity, and tenacious fortitude to gross human indecency. The collaboration between Dr. Leonov, Miguel Angel Corzo, former Director of GCI, and Mr. Waters remains an outstanding model that should be emulated where possible. Their exchange of expertise produced results that could not otherwise have been achieved. Their work transcended institutional boundaries and international borders to forge unexpected and sometimes brilliant solutions. While we continue to mourn the fire's destruction, the opportunities it generated continue to inspire.

16. At the time, E-fluted corrugated paperboard was a patented material solely produced by Conservation Resources International. The lignin free, calcium carbonate buffered paperboard contained a polyester film inner core and came in 40 point or and 60 point thicknesses. Unpublished memo, 19 October 1989, Peter Waters to Ms. Pat Gerner, Chief, Procurement and Supply Division, Library of Congress. Peter Waters Archive, University of Utah, Salt Lake City, Utah.
17. Interview with Valerii Leonov, St. Petersburg, Russia, 15 February 2008.
18. Leonov, The Library Syndrome, 1999: 67.
19. Leonov, Belayaeva, and Nyuksha, "Fire recovery", 205.

20. Leonov, The Library Syndrome, 1999: 46-47.
21. Leonov, The Library Syndrome, 1999: 80.

Travelling Treasures: A Touring Rare Book Roadshow

by Samantha Tidy,
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The State Library of Victoria in Melbourne is the largest exhibiting library in Australia, and the oldest public institution in the state of Victoria.

Australia has six states and two territories. The nation has a national library in Canberra and in addition, there are seven state/territory libraries which are non-lending libraries, and patrimonial in their collection, of each state's heritage.

The State Library of Victoria is the documentary heritage keeper for the state's patrimony. Whilst the National Library represents the national collection, the SLV has a formidable collection of precious and patrimonial manuscripts, maps, books, and objects.

As part of the learning programs offered by the State Library of Victoria, it acknowledges that parts of the Victorian population live in remote areas, without easy access to the city centre. With the financial assistance of two philanthropists, the Learning Division is able to extend their programming outside of the Library site, by way of a touring rare book road show, called *Travelling Treasures.*

Travelling Treasures takes key and precious items from the collection and displays them for a short supervised time of 90 minutes, in public libraries and schools in regional areas of Victoria. The program directly impacts on the cultural experience and awareness of up to 10,000 people per year in rural, regional and outer-metropolitan Victoria. The tour lasts for one week in one area of the state, and in a week can cover up to 1000 kilometres, with only three towns visited.

The treasures typically include manuscripts, rare books, maps and objects from the State Library of Victoria's collection. The total value of the treasures in any tour usually ranges from $500,000 AUD to $1,000,000 AUD, and include up to 6 items maximum, at any given time.

The treasures are presented to the public in a series of talks given by collection experts, to both school students and the adult population. A series of poster size photographs are used to help the audience see the items close up, during the presentation.

Specific schools are invited to provide a host venue in each location in which to deliver three, daily one-hour presentations to primary and secondary students from several schools, aged between 8 and 18 years. All programs are free, in keeping with the ambition of 'bringing the library to the people', those who would not normally have the opportunity to view such items in a regional setting.

These talks are complemented by evening presentations held in local libraries and the combination of school and evening talks maximizes the impact of the visit for each community.
Obviously, security and preservation of the collection is the utmost importance. All staff on tour are regularly trained in conservation and handling techniques by the Library's conservation staff, and the treasures are always secured overnight in a highly secure and confidential location, such as a locked safe in a government building or art gallery, if one exists in the town. The items are insured by the Library's insurer on this

The Nuremberg Chronicle

basis. The public of course, are not allowed to touch the items at any time during the presentation, and all staff reinforce this by wearing white gloves, and guarding the items closely.

In 2004, the program's success was measured with an *Arts Portfolio Leadership Award* for leadership in the community, and since then it has continued to grow into one of the most highly respected and hugely successful programs delivered by the State Library of Victoria. It recently won the prestigious 2007 Victorian Museums Award, administered by Museums Australia (Victoria) for exemplary performance in public programs and exhibitions.

Items that have toured in the past five years include (among many others):
- *The Nuremberg Chronicle*, published 1493 by Anton Koeberger.
- An illuminated, *Book of Hours*, c1490. France.
- A second edition of Nicolaus Copernicus' *De Revolutionibus*, printed in Basel in 1566.
- Shakespeare's fourth folio (1685).
- Robert Hooke's *Micrographia*, published in 1665, containing the first illustrations resulting from the use of a microscope for scientific purposes.
- *The published journal of Sydney Parkinson*, the artist on James Cook's first voyage to the South Seas, 1768-1771, detailing observations made on the Endeavour.
- A Cuneiform Tablet, c 2500BC, Mesopotamia.
- *Atlas de Voyage Aux Terres Australes,* Francois Peron, 1811 (the published atlas and botanical illustrations of the famous French scientific exploration of 1800 – 1804 led by Nicholas Baudin).
- *The Voyage of Governor Phillip to Botany Bay* – the official published account of the voyage of the First Fleet, based on the journals of Arthur Phillip, first governor of New South Wales, featuring fascinating early maps and illustrations (1789).
- *The Lazarus Diary* – a handwritten diary of early settler Samuel Lazarus, recounting his time on the Victorian goldfields and observations of the Eureka Rebellion 1853-55 – Australia's only civil war.
- *The Lofty Cannon Collection* – a book of sketches by English artist Ronald Searle, depicting scenes from his time as a prisoner of war during World War II, and correspondence from

Searle to his soldier mate Henry 'Lofty' Cannon (1943-46).
- The colt revolver found in explorer Robert Burke's hand upon his death. Burke was the first man to lead an expedition across the continent. He died on the way back.
- The last dying note of Robert Burke, 1861 (see above).
- The only page of Margaret Ingham's diary to survive her ordeal at sea in a lifeboat after her vessel, *The City of Cairo* was torpedoed in 1942. As the only survivor, she listed each of those that died on the lifeboat, and contacted their families after her rescue.

Travelling Treasures achieves an enormous amount:
- It takes collections held by the Library back to its owners across the State;
- It engages young Victorians with a world they might not otherwise encounter, giving many who may not travel to Melbourne a chance to share in the great resources held in trust for them;
- It takes experts from the Library into the community to share their knowledge of and passion for the collection;
- It builds important and enduring relationships with local communities – in both the planning and delivery of *Travelling Treasures*, the State Library collaborates extensively with staff and administrators from local councils, libraries, galleries, schools, community groups and the media;
- It attracts numerous philanthropic supporters to the Library and this support continues to be renewed each year.

The Library foresees that the program will continue to run for several more years, given the consistent support of eager philanthropists, who share the same vision of sharing the collection with its rightful owners, the citizens of Victoria.

Photos published with the courtesy of Samantha Tidy and The State Library of Victoria.

A New Building for the National Archives and Library Agency of Ethiopia (NALE): Cooperation and Preventive Conservation

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This paper emphasizes the cooperation program between Ethiopia and France and describes more specifically the way the NALE carried out the collections transfer into the new building.

1. Ethiopian Manuscript.

Introduction

Ethiopia is among few countries of the world that have ancient written records and unique alphabet, which dated back to the 4th century AD. Until the beginning of the 20th century, it was in monasteries, churches and mosques where books and other manuscripts were preserved.

The National Library of Ethiopia was officially inaugurated in 1944 at Addis Ababa by the Emperor Haile Sellassie (Harar 1892-Addis Ababa 1975). In 1977, the National Archives have been incorporated into the National Library and then were renamed as the National Library and Archive Department. Since 1995, this department has become a governmental autonomous agency falling under the aegis of the Ministry of Culture and Tourism.

2. Manuscripts traditional enclosure.

In June 1999, a specific law, the "Ethiopian National Archives and Library Proclamation n°179/1999" reinforced this institution by giving it a legal framework and a nation-wide level of responsibility. This proclamation defines the current organization, skills, powers and duties of the institution.

The main role of the National Library of Ethiopia is to build the most comprehensive collection of the country national heritage by collecting, receiving and preserving all publications and productions printed or not and produced in the country or abroad for present and future generations.

The principal source of acquisitions is the legal deposit system. Every publisher in Ethiopia is required to deposit free of charge three copies of each publication to the National Library. To ensure that the Ethiopian collection is comprehensive, the National Library has also to acquire all print and non-print materials published and printed abroad, whose subject matter relates to Ethiopia.

Currently, the whole collection of the National Archives and Library of Ethiopia is around 60 500 items, consisting of books, periodicals, newspapers, audiovisual documents (CD, Audio and Video), records, archival documents, photographs, maps, and manuscripts (Figure 1). The agency has a large collection of printed and non-printed documents:

- Books printed since 1520
- Ancient and historical manuscripts written since the 14th century (Picture 1 and 2)
- Newspapers published since 1902
- Historical archives and records (Letters of Emperors, Private Archives and Archives of the Gibi Minister...)
- Traditional and oral history, audio video recordings
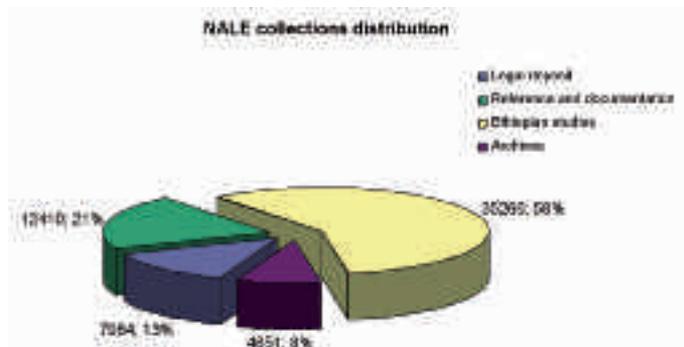
Figure 1: Distribution of collections according to the number of documents.

Cooperation between National Archives and Library Agency of Ethiopia and National Archives and Library of France

To meet the demand of the National Archives and Library of Ethiopia, the cooperation service of the French embassy invited in 2001 a French archivist from the National Archives of France and a French historian specialized in Ethiopian manuscripts, to visit NALE for two weeks and to draw up a cooperation program.

Six cooperation actions have been then designed, addressing specific objectives, which led to a tripartite agreement signed in December 2005 between the Archives of France Direction (DAF), the National Library of France (BnF) and the NALE. This agreement is a turning point in the cooperation program between France and Ethiopia. It led to a mission in June 2006 specifically based on preventive conservation because NALE was preparing the transfer of collections into a new building. This mission consisted in a theoretical and practical training session and a collections conservation assessment. This assessment enables NALE to prioritize actions that have to be undertaken in the short-term (for the moving) but also in a mid and long-term[1].

The National Archives and Library of Ethiopia have obtained advantages on the following points:

- Cooperative research and experience sharing between the three institutions have been created and expanded;
- Knowledge and capacities especially in areas of Archival and Record management (production, appraisal) are increased;
- Trainings in conservation, preservation, organization of archival and librarian materials and records management are

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1. See *International Preservation News* n°40, p. 37, December 2006, "Preventive conservation at the NALE: a mission report" by Caroline Laffont and Anne Lama.

facilitated: Records and Archives Management: Theory and Practice of Appraisal (October 2004), Ethiopian Manuscripts Cataloguing System (October 2005), Preventive Conservation (June 2006 and December 2007);

- This cooperation program allowed for 5 workers of the NALE to receive trainings and have visits in France.

Context and goals of the last mission

This one-week mission in December 2007 is the continuation of the first mission led in 2006.

The moving didn't take place at the end of 2006 as expected but was planned for the end of December 2007. That's why the main goal of this mission was to give the last advices for the moving to the NALE staff according to the actions defined by the conservation assessment made in 2006.

From the old building to the new one

Since NALE was founded, the building allocated for collections and staff was not built for the purpose of National archives and library. It was an old hospital of Fascist Italia during the Second World War, given by Emperor Haile Sellassie for the public as a reading room (Picture 3 and 4).

3. Entrance of the NALE old building.
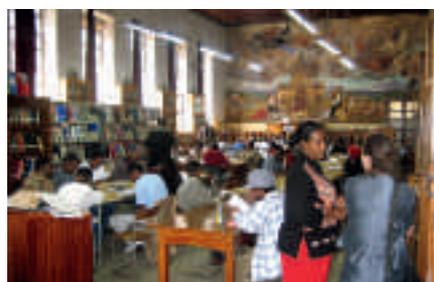
4. The historical reading room before the transfer.

Because of the increasing number of collections and of users, to build a new national archives and library building was needed (Picture 5). The main purpose of the new building is to integrate Ethiopia into international information, innovative and cultural system. This new building is built near the old one within the ministry of Culture and Tourism compound. It takes into account the international preventive conservation recommendations in terms of lighting, safety and security…It is notable for its size (1,683.35 m2), compared to that of other libraries in the country. This building shelters the Legal Deposit section, the Reference and Documentation section and the

archives section. Two reading rooms are at users' disposal, one for the Archives and one for the Library (Picture 6). Six storage rooms are shared in three levels equipped with large metallic shelves and a mechanical ventilation system. This building shelters also a new microfilming laboratory in a blinded local.

Nevertheless, the old building will be kept as storage and reading rooms for the Ethiopian studies collections (manuscripts, books and audiovisual documents). It is better-adapted for these kinds of documents in term of climatic stability and storage equipments. Ethiopian studies collections will be redeployed on the ground floor in order to solve the actual lack of space. However, the 850 manuscripts will remain stored in the current armored room with no window and low but good natural ventilation. The historical public reading room will be reused as a reading room.

5.
The new building.

6.
New building
reading room
before the moving.

Collection moving

The book and newspapers Legal Deposit and the Archives sections: the moving preparation was almost achieved: the dust removal of collections has been done and collections were packed and ready to be moved.
In collaboration with the staff of these sections, an estimation of the moving duration was made (taking into account the number of collections to move and the number of daily workers dedicated to each section).
Staff expressed their worry about the space optimization in the new building and the lack of bookends. Some temporary solutions have been suggested.

The Reference and Documentation section has not been included in the sanitary expertise of June 2006, so a general conservation conditions assessment has been done in December 2007; the global linear meter of collections to move has also been estimated. The collections are in a good conservation condition except the dust that will be removed before the transfer.

These cooperation missions were also the occasion to record the climatic conditions with electronic data loggers, equipments that NALE has not yet.
In order to compare the new building climatic performance during the dry season (December 2007) and the rainy season (June 2006), recordings obtained in June 2006 and December 2007 have been analyzed.

The climatic recordings showed a good thermic inertia but a poor hydric inertia. Moreover, it is less humid than in June 2006, this is due to concomitant reasons: normal seasonal fluctuations and materials have finished drying. The recorded climatic conditions are in accordance with international recommendations for a long-term conservation of documents. But the recordings time was too short to draw up definite conclusions. NALE staff will watch out any harmful effects of climatic fluctuations on documents.

Conclusion and future prospects

The moving occurred at the end of December 2007 without any trouble. The schedule, time and daily workers provided were sufficient to move collections. The new building has not so far been officially inaugurated. Collections are now properly rearranged on shelves and are accessible for users.

NALE can now focus on other projects as the microfilming or digitization of NALE documents and documents kept in other part of the country (manuscripts, mostly Muslim, or ancient newspapers). It is of most importance also to develop a market for enclosures adapted to long-term conservation. Actually, the current enclosures are not adapted both because of the materials used and shape and consequently cause damages to documents as tears (especially for archives documents).

As there is no permanent paper producing fabric in Ethiopia, we have been in touch with polypropylene plastic producing fabrics. If the raw material exists, one must look for a fabric which has the specific matrix to produce polypropylene in sheets in order to make specific enclosures more particularly for archives documents. A list of Ethiopian private fabrics was given to NALE which may now go deeper into the matter.

NALE drafted a project for a restoration laboratory. This project has been submitted to UNESCO and other organizations. It is a real necessity to establish such a conservation and restoration laboratory in Addis Ababa to proceed to conservation actions as dust removal, protective enclosures program, repairs.
It would be of great interest that other Ethiopian cultural institutions as the Ethiopian Studies Institute, or the National Museum join this laboratory.
If this project becomes a reality, it would be the first conservation and restoration pool in Ethiopia dedicated to the cultural heritage preservation.

These missions were the opportunity for each of us to share experiences in practical situations such as preparation and transfer of collections. We compared our daily working habits and exchanged about how to do with different situations such as low budget, mass collections…
NALE is now living a great organizational change in the field of record management since it started to receive the first official records from ministries. NALE implements a real preventive conservation policy for the preservation of its heritage to pass it on to the future generation thanks to the cooperation programs and the motivated and trained teams.

News

New PAC Directors

Noriko Nakamura has been appointed as PAC Director for Asia while Maria Antonieta Palma Varas is the new PAC Director for Chile: we are very pleased to welcome them in their new functions!

Noriko Nakamura

Maria Antonieta Palma Varas

New PAC Center in Kazakhstan

An agreement has just been signed with the National Library of the Republic of Kazakhstan, creating a new PAC Center for Central Asia, whose director is Zarema Shaimardanova.

Zarema Shaimardanova

Publications

Noticias del Fondo Editorial: *Bibliotecas después del sismo. Región Ica*, Universidad Nacional Mayor de San Marcos, Perú

El Fondo Editorial de la Universidad Nacional Mayor de San Marcos y la Oficina General de Sistema de Bibliotecas y Biblioteca Central ponen en conocimiento de la opinión pública su reciente publicación *Bibliotecas después del sismo. Región Ica*, libro pionero en el estudio de casos y evaluación de bibliotecas en zonas de desastre.

La presente publicación forma parte de los compromisos asumidos por la Universidad Nacional Mayor de San Marcos en la ayuda a los damnificados del sur. Así, un equipo de bibliotecólogos se movilizó a las zonas más afectadas por el movimiento telúrico con la finalidad de investigar el grado de siniestralidad sufrida por las bibliotecas, sus colecciones e infraestructura educativa.

La investigación fue realizada en 36 bibliotecas de la región Ica durante los meses de septiembre a diciembre de 2007 y estuvo acompañada de una serie de trabajos de campo sobre las bibliotecas de Pisco, Ica y Chincha realizados bajo la conducción de un grupo de bibliotecólogos de la UNMSM. Este grupo también produjo un video sobre los daños registrados en las bibliotecas por el sismo. El estudio cuantifica, analiza y explica los daños sufridos por las bibliotecas y las colecciones de esas localidades, y propone lineamientos para planes de gestión en caso de desastres en bibliotecas así como de reconstrucción de la infraestructura dañada.

El estudio fue preparado por los bibliotecólogos Alejandro Ponce, Alonso Estrada, Carlos Quispe, y Orlando Corzo, con la colaboración voluntaria de estudiantes de la Escuela Académico Profesional de Bibliotecología y Ciencias de la Información de la UNMSM.

Enlace:
http://biblioteca.unmsm.edu.pe/fondoeditorial/index.asp

Report on Security: *Shoplifters on shop theft: implications for retailers,* Martin Gill, Perpetuity Research and Consultancy International

Martin Gill, Director of Perpetuity Consultancy, publishes a report on *Shoplifters on shop theft: implications for retailers* focusing on offenders' perspectives to improve crime prevention. This report reviews findings from five studies undertaken in different countries (Brazil, Canada, the UK, Spain and the USA) in the period 2003-2006. All the research teams employed the same method: interviews of shop thieves to recreate their offences and highlight the way they manage to circumvent security.

The report begins to consider the decision to offend, the thieves attitudes to different security measures (tags, CCTV and uniformed security officers) and then "what works" according to the thieves' account.

Perpetuity Research and Consultancy International is a "spin out" company from the University of Leicester that undertakes research and consultancy in relation to crime, community safety, risk and security management.

Events and Training

Announcements

Reminder

22nd IIC International Congress: *Conservation and Access*, 15-19 September 2008, London, UK

The Congress will examine the role of conservation in the presentation and protection of the world's cultural heritage. It will explore the ways that conservation professionals engage in the worldwide sharing of art and heritage, whether through people going to see that heritage or the heritage itself travelling the globe.
Contact: iic@iiconservation.org
http://www.iiconservation.org/congress/index.php

15th Triennial Conference/ ICOM-CC: *Diversity in Heritage Conservation: Tradition, Innovation and Participation*, 22-26 September 2008, New Delhi, India

The objective of the Triennial Conference is to present an overview of the current state of conservation research and practice through reports by the ICOM-CC Working Groups. Special attention will be given to papers and posters dealing with problems and progress in conservation in the region hosting the conference and to papers addressing the congress theme.
Contact:
Isabelle Verger - secretariat@icom – cc.org
Website:
http://icom-cc.icom.museum/TriennialMeetings/

International Seminar and Workshop: *Conservation and Restoration of Parchments*, 3- 5 September 2008, Turin, Italy

The Seminar aims to provide an updated picture of the chemical and physical nature of parchment, its ageing and deterioration processes caused by environment. Information will be given on advanced physical-chemical methods set up for the assessment of the molecular, nanoscopic, mesoscopic and microscopic deterioration of parchment's supramolecular structure as well as on latest techniques devised for their restoration. Conservators-restorers and curators engaged in investigation of damaging of parchments and their restoration will illustrate current conservation and restoration practice.

Results obtained in the project funded by the Italian Ministry for Cultural Property and Heritage and coordinated by the National University Library of Turin, in collaboration with the Central Institute for the Pathology of the Book (ICPL) of Rome, on the restoration of its parchment collections damaged by fire in 1904 will be illustrated.

Seminar themes
- Recent progress in parchment research (assessment, diagnosis, damage prediction, monitoring)
- Current practice in conservation and restoration of parchments
- Knowledge and technology transfer from research to end-users
- Standardisation and sustainability strategies in parchment heritage conservation
- Education and training

Workshop
The workshop will train conservators-resto-

rers, curators, archivists and librarians in managing and monitoring parchment collections, as well as the assessment of their damage in environmental ageing conditions. Participants will be taught the macroscopic examination (visual assessment) techniques used to assess the 'state of health' of parchment. They will also be shown how to use the databases created by the IDAP, PDAP (Parchment Damage Assessment Programme), EWS (Early Warning System) and DUPDA (Digitised User-Friendly Parchment Damage Atlas).

For more information:
Dr Elena Badea
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Telephone: ++39 011 6707571
Email: parchment2008dchifm@unito.it
Website: http://www.seminar-parchment2008.org/

iPres 2008: the Fifth International Conference on Digital Preservation, 29-30 September 2008, London, UK

The British Library will host this year's International Conference on Preservation of Digital Objects (iPRES 2008) at its Conference Centre in St Pancras, London, on 29-30 September 2008.

iPRES 2008 is the fifth in the series of annual international conferences which bring together researchers and practitioners from around the world to explore the latest trends, innovations, thinking, and practice in digital preservation.

Preserving our scientific, cultural and social digital heritage draws together activity across diverse disciplines. It transcends international boundaries and incorporates the needs of disparate communities.
Realizing digital preservation activity will increasingly require integration of thinking and activity across these boundaries to address the unique challenges associated with digital content.

The theme of iPRES 2008 is 'Joined Up and Working: tools and methods for digital preservation'.

Sessions will address three core topics:
• Practical preservation work
• Policy and costs
• Theory and conceptual frameworks

Dame Lynne Brindley, CEO of the British Library, will open the conference.

Conference Chairs
General Chair: Adam Farquhar
Local Chair: Jane Humphreys

Registration deadline
September 22, 2008

For more details about iPRES 2008, please visit: www.bl.uk/ipres2008 or e-mail ipres2008-papers@bl.uk.

The 8th European Conference on Research for Protection, Conservation and Enhancement of Cultural Heritage: *Cultural Heritage Research Meets Practice*, 10-12 November 2008, Ljubljana, Slovenia

The 8th European Conference on Research for Protection, Conservation and Enhancement of Cultural Heritage will be held in Ljubljana, Slovenia, from 10th to 12th November 2008, supported by the European Union through its 7th Research Framework Programme.

The main objective of the conference is to foster the exploitation and spin off of EU research results. New technologies, tools and devices will be presented through talks, posters, exhibitions and practical workshops. Interdisciplinary discussions among scientists, policy makers and end-users – e.g. conservators and restorers, managers and owners of the cultural patrimony- will aim at identification of future needs and development of funding strategies. Special attention will be devoted to pooling of expertise of key players in the field, such as ICOM-CC, ICOMOS, ICCROM, ECTP-FACH, EUROPA NOSTRA, UNESCO and others.

The aim of the final Conference is to present the state-of-the-art in the field of the four defined thematic groups:
• Recent progress in cultural heritage research
• Knowledge and technology transfer, from research to industry and SMEs
• Education and training, communication
• Policies, legislation, standardisation, and sustainability strategies in cultural heritage.

Contact: Jana Kolar - chresp@nuk.uni-lj.si
For more information, please visit the website: http://www.chresp.eu/

Stage de formation à la conservation du patrimoine écrit, Décembre 2008, Porto Novo, Bénin

Stage destiné à des bibliothécaires et archivistes d'Afrique francophone. La langue de travail sera le français.

Ce stage est organisé par le programme fondamental PAC de l'IFLA en collaboration

avec le Centre régional PAC du Bénin (Bibliothèque nationale de Porto Novo) et l'Ecole du Patrimoine Africain. Ce stage reçoit le soutien financier du programme ALP de l'IFLA.
Le programme détaillé ainsi que les conditions d'inscription seront communiqués à partir de Septembre 2008, après la Conférence de l'IFLA à Québec.

Reports

The Third International Conference of the UNESCO Memory of the World Programme, 19-22 February 2008, Canberra, Australia
By Jan Bos, IFLA / National Library of the Netherlands

The Third International Conference of the UNESCO Memory of the World Programme took place from 19 to 22 February 2008 in the National Library of Australia in Canberra. 170 participants from 35 countries attended this conference. They came from Australia itself (55%) but also from the US, New Zealand, Latvia, Vietnam, Samoa, France, Namibia, Austria, India, Vanuatu and many more, indeed from all over the globe, personifying the theme of the conference: *Communities and memories: a global perspective.*

The Memory of the World programme itself was the focus point of the conference. Jan Lyall, chair of the organizing committee, wrote in her introduction: "The Memory of the World Programme has been in operation for more than 15 years and the time has come for us to reflect on, and celebrate its many successes, to identify its shortcomings and to propose improvements."

The conference was perfectly organized and the programme was very challenging and inspiring. There were 41 speakers, some of them very renowned such as Ms Jackie Huggins, Co-chair of Reconciliation Australia and Director of the Australian Centre for Indigenous History, and Alex Byrne, former president of IFLA. Even more important were the many working group sessions with lively debates on various sub themes.

The proclamation and recommendations of the conference can be found at the end of this report, and at the conference website, http://www.amw.org.au/mow2008/mow/

mow2008.htm, together with all papers and information on the speakers. Here I would like to highlight some important elements in the discussions.

The vision and mission of the MoW Programme proved to be unquestioned. They were called "noble and extremely important". Although the aims and intentions are much broader, the Memory of the World Programme until now coincides almost completely with the Memory of the World Register. For many people the Programme and the Register are the same. The Register lists documentary heritage of world significance and outstanding universal value and so far it has been very successful. More than 150 items have been inscribed. They come from all continents and are very divers: archival materials, personal documents, photographs, feature films, highlights of book culture, the oldest or only remnants of civilizations, etc.

The success of the Programme leads inevitably to more complexity. Some subjectivity in the assessment of nominations can't be excluded, but the involvement of various commissions and experts guarantees as much objectivity as possible. Rethinking the procedures is an ongoing process. The criteria for the assessment of nominations (*time, place, people, subject/theme, form/style*) have recently been extended with a new one: *Social/spiritual/community significance.* This was generally applauded. Nevertheless the question arose whether selection criteria can be universally applied.

Fundamental questions
In her paper Alissandra Cummins, president of the Memory of the World International Advisory Committee, raised some other fundamental questions regarding the underlying expectations, processes and challenges of the Programme. In her view, the Register should not so much be an archive of 'important' documents, but rather an accessible assemblage of ideas and values. To establish a true memory of the world, the relative rarity or authenticity of the carrier of the heritage would become less important than the ideas or images it contains.

It was noted that in general Europe is better represented in the Register than the rest of the world. It is a fact of history that some world regions possess more documentary heritage than others, and Europe is one of them. On the other hand it was stated that the structure and the procedures of the Programme are Western-oriented and difficult to understand for potential nominators from other cultures. Ellen Ndeshi Namhila from Namibia added that there are only twelve African inscriptions from eight countries. And almost all of them have to do with colonial history, the struggle for independence, etc. So there is hardly any

purely indigenous African documentary heritage included in the Register. The same applies for Latin America.

Another subject of discussion was the lack of controversial items in the Register. The global impact of *e.g.* Hitler's *Mein Kampf* has been enormous and would justify inscription. But some people could regard the admission as support for Nazism, which should be avoided. In this case the decision might depend on the country that submits the nomination: *e.g.* Germany or Israel.

The very limited representation of literary authors (and of novelists in particular) was also pointed out. It was remarked, however, that the Programme should not duplicate the Nobel Prize in literature.

Some participants came up with the idea that instead of focusing on the documents, the starting point should be to define events in history that are of world significance (*e.g.* the first human landing on the moon). The second step would then be to find the best materials to document that event.

It was remarked that not only the national highlights, but also the national memory itself is very important for nations in transition. Whose memory will be preserved and privileged? Native tongues are often prohibited. Therefore the problem of endangered languages should be an issue for the MoW programme. Also the issue of lost and missing items and collections should be addressed.

Several attendees spoke about the issue of preservation and conservation. Not only paper documents but also many audiovisual documents will be lost within decades. Digitization has proven to be a good preservation strategy for the content of these materials. It also offers the opportunity for much wider access. However, the decision process on what should be digitized differs from country to country, ranging from very centralized decisions to locally made. And cultural value is not always the first criterion. Moreover, many countries or institutions lack a reliable long-term storage strategy for digital information.

Visibility
A repeatedly returning theme in many papers and sessions was the visibility, or better: lack of visibility of the Memory of the World Programme. This was seen as the main drawback. In many countries the Memory of the World is completely unknown, even to archivists, librarians and university teachers. It became clear that in countries with a national Memory of the World Committee the awareness of the programme is better than in countries without a national committee. But even if people have heard about it, the Programme has no clearly defined "brand", which leads

to public confusion about its role and purpose. The Programme needs advocacy in the media to reach the general public, advocacy in government circles to reach the decision makers, and even advocacy within UNESCO itself to get more internal funding and staff support.

The necessity of a marketing strategy was expressed several times, but there were also many practical suggestions and offers, like the involvement of literary artists as MoW ambassadors, a series of small books about the items on the Register, T-shirts and television programmes. Examples of successful nomination forms on the MoW website would be helpful to new nominators, as would be the admittance of proposals in all six official UNESCO languages. A closer co-operation with other UNESCO-initiatives like the World Heritage Convention and the Intangeble Heritage Convention was argued as well.

Probably the most important recommendation was to strongly encourage the establishment of national Memory of the World committees. They can provide information about the Programme on a national level, stimulate archivists and librarians to come up with new proposals, enhance and support nominations before they are being sent to UNESCO, and establish National Registers.

Representatives from India and Denmark came up with inspiring examples of national initiatives which had led to more public awareness and understanding of documentary heritage. In 2003 the Indian Ministry of Culture launched its 'National Mission for Manuscripts'. Large numbers of vulnerable manuscripts on paper, parchment, silk, palm leaves, etc., are found all over the subcontinent in libraries, temples, monasteries and private collections. This project seeks to locate, catalogue and preserve India's manuscripts, but also to enhance access, spread awareness and encourage their use for educational purposes. The Mission brings manuscripts and the knowledge they house to the public through lectures, seminars, publications and specially designed programmes for schoolchildren and university students.

In Denmark the compilation of a cultural canon received a lot of public attention and discussion. Twelve works of outstanding Danish works of art were chosen in each of the categories: architecture, visual arts, design and crafts, film, literature, music and dramatic arts. The cultural canon was published as a book with DVD and presented to all Danish pupils and students.

These examples were very stimulating and so was the atmosphere of the entire conference. It was very inspiring to meet so many people from so many different countries, all very strongly devoted and committed to the world memory and to the safeguarding of the world's documentary heritage. The Third International Memory of the World Conference was an extremely successful gathering.

IFLA International Newspaper Conference: *Old Issues, New Issues - Impact of Digital Technology upon Contemporary and Historic Newspapers*, 1-3 April 2008, National Library of Singapore

(Article extracted from *Discover NLB* – a newsletter by the National Library Board, Singapore)

An up-to-date, daily capsule of information, pictures, graphics, facts and opinions: these are the hallmarks of a quality newspaper that captures the pulse of the times. And yet, most newspapers are tossed away without a second glance as they make way for newer editions that soon face a similar fate. As cultural snapshots of local and global scenes, libraries all over the world face the challenge of preserving both printed and online newspapers as resources of value.

The International Federation of Library Associations and Institutions (IFLA) is the leading international body that represents the interests of library and information services and their users. The IFLA International Newspaper Conference 2008 is an annual conference organised by the IFLA Newspaper Section to enable the sharing and exchange of ideas and practices. This year's conference which ran from 1–3 April at the National Library Singapore, saw 140 delegates from more than 20 countries.

Titled *Old Issues, New Issues: Impact of Digital Technology upon Contemporary and Historic Newspapers*, the conference programme explored key issues and challenges that pertain to the acquisition, collection development, storage, preservation and access of newspapers.

Co-organised by the National Library Singapore, IFLA Newspapers Section, IFLA Preservation and Conservation Section and IFLA Core Activity on Preservation and Conservation (PAC), the conference was also a platform for libraries, librarians and industry players to network and explore suitable partnerships to help improve the provision of newspaper services at libraries.

Promoting Knowledge

In his opening address, Mr Ed King, Chairperson, IFLA Newspapers Standing Committee, commented, "Technological developments are now made so quickly that it can be difficult to keep up with the flow of information, let alone figure out how to integrate improvements in computer software and hardware into library procedures and processes. One of the useful benefits of such a conference is the exchange of experience and ideas that flows from the presentation of papers, and the free flow of opinions and ideas between conference delegates."

1. The conference proved to be a success and was well attended by delegates from around the world.

2. (From left to right) Mr Ed King, Chairperson, IFLA Newspapers Standing Committee, Dr Varaprasad, CE, NLB and Mr Hartmut Walravens, Chairperson, IFLA Newspaper Section having a light-hearted discussion during the conference.

Dr N Varaprasad, Chief Executive (CE), National Library Board (NLB), warmly welcomed all the delegates in his speech and also highlighted the context of changing technology on libraries. "A common goal for us is to share and learn from each other on how digital technology has and will influence the way libraries are managing the preservation and access of both historic and contemporary newspapers," expressed Dr Varaprasad. He then shared that one of the many efforts by NLB in building up Singapore's print and digital knowledge resources is the collaboration with Singapore Press Holdings Ltd, which publishes *The Straits Times* and other language newspapers, to digitise archived copies from as far back as 1845.

The keynote address was given by Mr Hartmut Walravens, Chairperson, IFLA Newspaper Section, who provided an overview of the last 20 years of newspaper librarianship. He emphasised, "Newspapers will remain a world phenomenon for some time to come and libraries are confronted with the need to make them available in printed or online format."

Indeed, consistent planning and innovation on the part of libraries are needed to improve newspaper resources. The IFLA International Newspaper Conference 2008 certainly provided an efficient, catalytic platform for the sharing of ideas, evaluation of new technologies and practices, relationship building and the formation of partnerships to the benefit of end-users.

LIBER Library Collection Security Conference, 20 May 2008, The British Library Conference Centre, London, UK
Hosted by the British Library and sponsored by LIBER (Ligue des Bibliothèques Européennes de Recherche)

The aim of the conference was to share information on market intelligence, technology watch, trend analysis and research into collection security. It provided a forum to share experience in managing risks to library collections, investigating incidents and preventing loss. In this issue of *IPN*, you will find inside our special report some of the papers given on the occasion of the conference.

As usual, this event organized mainly by Helen Shenton was very rich and interesting. Among the different topics that you will be able to read on line in LIBER Quarterly, I have been very interested by the introduction from Karl Schornagel, Inspector General of the Library of Congress, a special position with a mandate to recommend policies to promote economy, efficiency and effectiveness in its administration. Karl shared with us his experience in investigating collection security at the Library of Congress. Mainly he gave us some figures about missing documents and the presumed authors of the thefts. A great percentage of the thefts were made with the complicity of library staff.

Jacqueline Sanson, Director of the BnF, told the story of a major theft: the Hebrew manuscript H52. More, she presented how lessons were learnt and the new decisions and devices installed after the restitution of the missing treasure.

Mark Winkworth, Head of Integrated Risk Management at the British Library is also a member of the Home Office Security Partners Forum. He talked about prevention in the British Library.

In the afternoon, Martin Gill, among other positions Professor of Crimonology, produced a very interesting typology and analysis of who are the robbers and shared with us his doubts about the efficiency of the devices like videosurveillance.

Barry Knight, Head of Conservation Research at the British Library, gave a very complete paper about invisible security marks.

Obviously the issues of databases and images networks were important. Lars Björk (National Library of Sweden) proposed an example of how photographic techniques could be used as prevention measures; Erland Kolding Nielsen (Director of the National Library of Denmark) is at the origin of the LIBER security network; Theo Vermeulen (National Library of the Netherlands, Program Co-ordinator for Security & Collections) presented the Expertise Centre on the Protection of Dutch Cultural Heritage.

All the presentations were very dense and of a very high level.
From this fruitful day I shall remember the importance of networking: not only between us, libraries and archives, but also with the external actors like INTERPOL, for example. The second point is the importance of images for documents retrieving. I remembered from my visit to Interpol that the only way to identify a document recovered very far from its place of origin is a very good description and several images.

Helen Shenton, Jacqueline Sanson and Karl Schornagel.

PAC CORE ACTIVITY

USA and CANADA

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http://marvel.loc.gov
http://www.loc.gov/index.html

PAC INTERNATIONAL FOCAL POINT AND REGIONAL CENTRE FOR WESTERN EUROPE, NORTH AFRICA AND MIDDLE EAST

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