Plenary session II

Library and documentation interconnection in Europe

Chair

M. Walckiers

Future European developments in interconnecting National Union Catalogues

L. Costers

OSI-protocols

At the end of the seventies it was recognized that for the interconnection of computersystems of different manufacturers within one network, it was required to establish flexible and standard communications protocols. In 1978 the International Organisation for Standardisation (ISO) started a program for the development of Open Systems Interconnection (OSI) - standards, with the inaugural meeting of ISO Technical Committee 97/Subcommittee 16 on Open System Interconnection.

After about 18 months an initial specification of the so called OSI Reference model was adopted. The Model was designed as a multilayered service where the highest layer, layer 7, the application layer, and to some extent, layer 6, the presentation layer, are application-dependent and the lower layers 5 through 1 are implementation-dependent. The essence of the OSI-model is that applications, i.e. programs, will directly communicate with each other and that the applications will communicate with users.

In 1976 the Comité Consultatif International Télégraphique et Téléphonique (CCITT) proposed a standard called Recommendation X.25 which defined three levels of protocol for communication. By the end of the 1970s the first public packet switching networks based on the X.25 standard became operational.

Fortunately ISO adopted the CCITT X.25 standard as the standard for the protocols of the first three layers for communication over packet switched networks.

In 1984 the first finalized standard on the OSI Basic Reference model ISO 7498 was published explaining the concept of the seven OSI-layers. During the years 1984 and 1985 the specifications for layers 4 and 5 were published as draft international standards and were subsequently approved to become formal standards.
Although no formal standard has yet been approved for layer 6 this is in general not considered a problem because it is left empty in most applications.

On the highest layer, layer 7, the application layer which works closely together with a specific application, several ISO working groups, each for different applications, are working at specifications of services and protocols.

In 1986 the first meetings took place of a working group of ISO Technical Committee 46, Subcommittee 4 which is responsible for the design of OSI Layer 7 application protocols for library applications.

The working group ISO/TC46/SC4/WG4 decided to concentrate initially on a basic application protocol for the following functions:
- record search and retrieval
- record updating
- interlibrary loan.

In the summer of 1988 the working group submitted service- and

protocol-specification for both the Interlibrary Loan (ILL-) protocol and the Bibliographic Search Retrieve and Update (BSRU-) protocol to the ISO organisation for registration as Draft Proposal (DP).

In the meantime at three or four different locations in the world projects were undertaken in order to implement networks on the basis of the OSI-model.

I will mention two projects as examples.

1. In the USA in 1980 the Linked System Project (LSP) was started, aiming at the linking of the computer systems of LC, OCLC, RLG, and WLN in order to enhance sharing of bibliographic data on a national level.

As a first step it was decided to build a joint authority file, which could be accessed and updated by users of each of the participating utilities.

The computer system of the Library of Congress maintains the master file, at this phase the NACO (Name Authority Cooperative) file.

Copies of this file have been distributed to each of the participating utilities (WLN, RLG, OCLC) and updates can originate from each of them. On intervals of a few hours approved updates are distributed to the participating utilities.

In a later phase also online acces to the bibliographic databases is foreseen.

In the Netherlands, Pica developed the Pica Link project, in which Pica's central computersystem and, at this moment, some nine local library systems communicate on the basis of a pre-implementation of the ISO BSRU- OSI-standard. Apart from Pica developed systems also GEAC- and ALS-systems and in the future also CLSI-systems will be connected.

Although it may seem that the problems of interconnection of computersystems for library applications have now been solved, this is unfortunately not the case.

As the level 7 standards have not been approved and current OSI implementations as far as they are operational, are not compatible.

In order to minimize development costs only a subset of the functions of all 7 layers normally have been implemented.

Selections and choices have been made and, as even draft standards were not always available, in some projects own protocols have been developed based on the OSI-philosophy.

Also it is clear that the level 7-protocols as have been developed now, have their limitations and do not yet have sufficient flexibility for advanced networking.

A lot of work has already been done, but much more work is waiting ahead.

European applications

One of the areas where we will be able to apply the OSI-standards is in the interconnection of National Union Catalogues.

In several European countries, in the UK, in France, in Germany, in the Netherlands and in some other countries automated Union Catalogue systems, which are used as a basis for Interlibrary Loan have

been established and have now been operational for several years.

At this moment the organisations which are responsible for some of these systems are working on the development of a detailed project plan for the interconnection of three of these systems; one in the UK, one in France and one in the Netherlands.

The idea is to implement an experimental OSI-network for the support of Interlibrary Loan applications between a selected number of libraries in each of the participating countries in order to gain practical experience with the technology and to be able to evaluate possible problem areas in a live situation.

The network will be based on the X.400 standard for message handling systems as far as the forwarding of ILL messages is concerned. The messages themselves will be encoded according to the ILL-protocol specifications. The X.400 protocol will thus be the carrier on which the ILL-aplication protocol will be superimposed.
In addition it is foreseen that the BSRU-protocol will be implemented as an interactive protocol in order to allow the realtime searching of remote Union Catalogues, so that the required publication(s) may be uniquely identified in the remote system before issuing a Loanrequest.

In principle the Union Catalogue-systems will be interconnected and will communicate with each other. In each country the Union Catalogue Systems will function as a gateway to other Union Catalogues and each Union Catalogue system may communicate with the Library computer systems in that country.

Although in this concept it is not necessarily a requirement that each country has only one Union Catalogue system, it is foreseen that the number of Union Catalogue systems should be as limited as possible.

In this way it will be possible to establish a network in a relatively simple way without the necessity of implementing directory services or other facilities which are required if a large number of systems would have to be interconnected.

2. Depending on the technical situation in a given country the librarians in a country would communicate with the National Union Catalogue system possibly through a national library network or a national research network.
If the request for a publication can not be fulfilled by libraries in the country itself or if there is an other reason to request the publication from outside the country, a request is issued from the National Union Catalogue system to one of the other Union Catalogue systems in the network.

In order to do that, the publication should first be uniquely identified and the remote Union Cataloque should be able to establish whether the publication is available in one of its associated libraries.

If this is the case, the request can be accepted and processed. If all goes well, the library which holds the publication will transfer the publication to the requesting library directly, and the requesting library will be notified through the network.

Although this may be technical feasible, it is clear that a number of organisational and also financial issues have to be considered.

The experiment is therefore not only a technical experiment, but will also have to give us answers with respect to organisational and financial questions regarding to procedures and arrangements.

Last but not least the experiment should establish iff the overall cost/benefit of such an European network can be considered to be positive from an (end-)user's point of view.

CONGRES DES BIBLIOTHEQUES MEDICALES

SEANCE PLENIERE DU 4 NOVEMBRE 1988

THEME "LIBRARY AND DOCUMENTATION INTERCONNECTION"

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INTERVENTION DE D. VARLOOT

Vision prospective des banques de données et des nouvelles technologies de l'information dans le domaine médical

Mesdames, Messieurs,

C'est avec grand plaisir que je prends à nouveau la parole devant la conférence européenne des bibliothèques médicales. Ayant quitté la direction des bibliothèques du ministère de l'Education nationale depuis un an, je n'ai pas pour autant perdu de vue votre domaine d'action. En effet, je suis depuis avril dernier président de la société TELESYSTEMES, filiale de FRANCE TELECOM et au sein de laquelle se situe le grand serveur QUESTEL bien connu de la plupart d'entre vous : il porte en particulier la banque de données MEDLINE.

D'autre part, le ministre de l'Education nationale ayant récemment réuni une commission chargée d'étudier l'avenir des bibliothèques universitaires françaises, sous la présidence de l'ancien administrateur de la Bibliothèque nationale M. André MIQUEL, j'ai eu l'honneur de faire partie de cette commission.

Dans mes nouvelles fonctions, je sens toujours proche de vos problèmes, et de votre réflexion sur le futur.

M. COSTERS vous a donné des informations techniques, M. PARAJON va vous parler de la politique européenne, de mon côté, je souhaite simplement vous fairt part de quelques idées, qui me viennent à l'esprit en observant la situation actuelle, plus particulièrement française.

D'une façon générale, l'évolution des techniques s'accélère, les sceptiques sont de plus en plus rares, et le véritable feu d'artifice de communications présentées à cette conférence sur les nouvelles possibilités offertes en témoigne. En contrepartie, nous avons tous de plus en plus de mal à suivre, il devient très difficile de faire les bons choix, les bons investissements, d'autant que les oppositions commodes, les distinctions péremptoires -- que les Français, bons cartésiens, ont toujours appréciées -- s'estompent de plus en plus.

J'en donnerai trois exemples :

- la distinction entre systèmes d'information et systèmes de gestion,
- l'opposition entre systèmes d'information destinés aux professionnels et systèmes d'information destinés au grand public,
- l'opposition entre information en ligne et information sur CD-ROM,

et sur ces trois exemples, j'espère vous convaincre qu'il n'y a plus distinction, ou opposition, mais bien plutôt complémentarité avec recouvrement, dans ce que j'appellerai un continuum.

Premier exemple donc, systèmes d'information et systèmes de gestion

Au printemps dernier, une société française qui faisait l'objet d'une offre publique d'achat, "la Télémécanique électrique", a souhaité prendre à témoin l'opinion publique pour tenter d'échapper à cette prise de pouvoir. Elle a donc organisé une journée "portes ouvertes" et de nombreux visiteurs ont pu constater l'absence de tout papier dans les bureaux de ses employés -- au passage, je fais un clin d'oeil amusé à ceux d'entre vous qui m'ont entendu prophétiser, il y a cinq ans à l'IFLA à Munich, l'avénement de la société sans papier --. A la Télémécanique électrique, dès à présent, tout le personnel utilise le même réseau local d'entreprise, les mêmes écrans, pour communiquer grâce à une messagerie électronique, pour accéder à des "infocentres" permettant d'utiliser les données des fichiers de gestion pour préparer les décisions, mais également pour obtenir toute l'information dont il a besoin pour travailler.

Bien entendu, cela se passe en interne au sein d'une entreprise. Mais il n'est pas difficile d'imaginer qu'une évolution analogue se poursuive en ce qui concerne les échanges de données inter-entreprises, pour lesquels des sociétés comme TELESYSTEMES developpent des systèmes baptisés EDI (Electronic Data Interchange) appuyés sur la nouvelle normalisation internationale de présentation des documents EDIFACT et regroupant des

modules applicatifs et des modules de communication (souvenez-vous, couche 7 ISO). Ces systèmes permettent d'optimiser la gestion de la circulation des documents entre les divers organismes concernés, par exemple un hôpital, des pharmacies, des laboratoires, la direction des affaires sociales et des cabinets médicaux, d'éviter les recopies encore très lourdes aujourd'hui, donc de faire des économies substantielles ... Où sera donc la frontière entre information et gestion d'ici quelques années ? Selon moi, c'est un premier continuum qui commence à s'établir, grâce à l'utilisation de réseaux de plus en plus banalisés, de plus en plus universels !

Deuxième exemple : banques de données dites professionnelles (ou scientifiques) et systèmes télématiques destinés au grand public

Par une heureuse coïncidence, l'objectif que s'est fixé l'Organisation Mondiale de la Santé, et que votre nouvelle Association a placé en exergue de cette conférence, rencontre parfaitement les possibilités nouvelles offertes par les terminaux vidéotex bon marché, dont vous savez que les PTT français font cadeau à tous les abonnés au téléphone ... je veux parler des minitels au nombre de 4 millions à ce jour : y a-t-il, je vous le demande, un moyen plus commode pour permettre l'"information biomédicale pour tous" ?

Certes, la plupart des grandes banques de données disposent d'un accès traditionnel sur abonnement, et l'usager est alors bien identifié. Les secteurs médical et pharmaceutique sont d'importants utilisateurs de ces services, qu'il s'agisse de chercheurs, de praticiens, d'enseignants, d'hommes de marketing, d'industriels ... Les progrès se poursuivent pour permettre une plus grande synergie entre ces bases, grâce à la notion de "ligne de produit" permettant de regrouper, par exemple sur un même accès QUESTEL PLUS, toutes les informations recherchées à partir d'un mot clé sur une maladie ou sur un médicament dans les diverses banques existantes (chimie, brevets, médical ...). A l'amélioration des logiciels documentaires s'ajoute le développement permanent de services annexes très importants, tels que la commande de documents originaux, les boîtes aux lettres, le stockage d'éditions en différé et tous les problèmes d'assistance.

Mais dans le même temps un public beaucoup plus large, au sein des hôpitaux, des cliniques, de la médecine libérale, des professions paramédicales jusqu'alors sous informées, peut désormais accéder, grâce au minitel et au système baptisé "kiosque multipalier" (avec un éventail de tarifs mais sans abonnement), aux mêmes banques de données ainsi qu'à d'autres informations professionnelles.

Ceci grâce à :

- la simplification des procédures d'interrogation par une plus grande convivialité des logiciels (cf. exposés de MM. DOSTATNI et HALPERN cet après-midi),

- la même intégration de services, très attractive, allant de la boite aux lettres aux éditions, aux commandes de photocopies, et même jusqu'à l'utilisation de cartes bancaires pour le paiement,

- le regroupement sous un même code d'accès de plusieurs banques de données intéressant le même public (par ex. Medline, Bioethics, Pascal Medical, Medactua), dès que les possibilités de "reroutage" d'un serveur à l'autre -- même avec changement de tarif -- auront été mises en place par FRANCE TELECOM,

- l'accès à des services pratiques simples, d'utiisation fréquente et courte, comme les annonces pour les congrès médicaux, pour les stages en médecine, une revue de presse médicale, et toutes sortes d'informations socio-professionnelles intéressant les professionnels.

Au-delà, c'est la population tout entière qui doit avoir accès à l'information médicale, librement, comme l'a recommandé la conférence d'Alma Ata il y a 10 ans. Ceux qui ont entendu Mme NGUYEN hier après-midi ont pu constater que la Cité des Sciences et de l'Industrie de Paris (LA VILLETTE) y consacrait une partie importante de sa médiathèque. Mais les bibliothèques universitaires ont également un rôle clé à jouer dans ce domaine.

La médecine du XXIe siècle sera une "médecine de l'information", décloisonnant les spécialités, et surtout prédictive, c'est à dire qu'elle devra permettre une prise de conscience par chaque être humain, dès l'enfance, de l'existence d'un "capital santé" industriel et de la nécessité de gérer soi-même ce capital santé. Comme il n'y a pas de possibilité d'information SERIEUSE sans le support de la recherche, l'information médicale ne peut être qu'universitaire. C'est une des missions premières de l'université que de la structurer, la préparer, la diffuser.

Voici donc un deuxième continuum mis en lumière, estompant notamment la frontière entre bibliothèques universitaires et lecture publique !

Troisième et dernier exemple : information en ligne et information sur disque optique compact CR-ROM

Le CD-ROM va sans aucune doute devenir une composante importante du marché de l'information électronique, bien que les précisions concernant sa croissance soient encore peu concordantes.

Selon les prévisions de Link Resources Corporation, le CD-ROM, après avoir représenté avec 9 millions de dollars 0,2 % du marché américain de l'information électronique en 1986, représenterait avec 850 millions de dollars à peu près 7,5 % de ce marché en 1991.

En Europe, la situation est nettement plus contrastée d'un pays à l'autre. On peut escompter cependant qu'à l'horizon 1991 de l'ordre de 200 000 lecteurs de CR-ROM seront installés en Europe (cinq fois moins qu'aux Etats-Unis), l'Italie arrivant en tête du parc avec environ 40 000 lecteurs, devant l'Allemagne Fédérale, le Royaume Uni et la France.

Mais ces prévisions peuvent être contredites par l'effet de politiques volontaristes. C'est ainsi qu'en France la situation, jusqu'alors morose, est en train de changer rapidement. Le parc de lecteurs n'est encore que de 1 700 unités mais

le chiffre de 5 000 pourrait être atteint dès fin 89 grâce à une opération d'équipement lancée par l'Education nationale (800 lecteurs d'ici la fin de cette année), grâce à l'offre prochaine de nombreux titres de CR-ROM, grâce à la volonté affichée par la société APPLE de promouvoir le développement du CR-ROM : le constructeur du Mac-Intosh vient de lancer son lecteur CD/SC en France, et le logiciel Hypermedia d'APPLE HYPERCARD sera la clé de voute de ce développement. Parmi les titres annoncés, une encyclopédie européenne du 20e siècle en 9 langues, faisant appel au texte, à l'image numérisée et au son ; un CD-ROM portant une banque de données du Centre National d'Information Chimique, baptisée VIEWTOX et répertoriant 800 substances toxiques ; une banque de données trilingue sur la normalisation en France, en Allemagne et en Grande Bretagne ; la version CD-ROM de PASCAL, banque bibliographique du CNRS, deux CD-ROM édités par le journal Le Monde (sur le bilan économique et social et sur l'URSS) ; etc.

Pour sa part le ministère de la recherche et de la technologie a lancé un appel aux propositions. Mieux encore, le ministère de l'Industrie et celui de la Culture ont créé un fonds commun pour promouvoir le CD-ROM comme outil de diffusion de l'information scientifique, et visent à permettre l'édition d'une centaine de titres de CD-ROM et de vidéodisques.

Mais alors, me direz-vous, est-ce la fin de l'information en ligne, est-ce la fin de QUESTEL en particulier ? Non, bien entendu ! Souvenons-nous des trois qualités essentielles que doit présenter l'information pour convenir à l'usager : elle doit être fraîche, d'accès facile et pertinente. La fraîcheur de l'information en ligne est imbattable : un CD-ROM ne donnera jamais la météo ! Et le prix des informations sur CD-ROM sera d'autant plus élevé qu'ils seront renouvelés plus souvent. Où est l'optimum ? En ce qui concerne l'ergonomie, beaucoup de progrès restent à faire, et le CD-ROM n'autorise pas jusqu'ici l'intégration de la recherche documentaire sur plusieurs banques de données, encore moins la commande directe du document primaire. Enfin, la pertinence soulève le problème difficile du tri de l'information, non sans importance quant au coût de cette dernière. Les bibliothécaires connaissent bien ce problème, et ont admis de ranger dans des centres de dépôt ou "silos à livres" les ouvrages qui ne sont presque jamais consultés. A quoi cela servirait-il de faire tourner à toute vitesse des disques magnétiques portant des milliards et des milliards d'octets, si seulement une petite partie d'entre eux était interrogée ? Est-il souhaitable d'avoir à changer plusieurs fois de CD-ROM pour explorer la totalité d'une banque de données ? ...

Je ne sais pas si je vous ai tous convaincus mais pour ma part je ne doute pas qu'il faille éviter la croissance systématique et de plus en plus rapide de la taille des banques de données, au détriment du coût de revient de leur interrogation. Ce tri, cette sélection de l'information pertinente, relève d'une profession traditionnelle : c'est le métier d'un "comité de rédaction", de "referees", donc d'un éditeur.

Je viens de parler du coût de l'information en ligne et de l'information sur CD-ROM. N'oublions pas le coût de l'accès à l'information primaire.

En France, la direction des bibliothèques du ministère de l'Education nationale a décidé d'expérimenter, avec l'aide de FRANCE TELECOM et de TELESYSTEMES, un réseau de prêt entre bibliothèques baptisé FOUDRE et utilisant le RNIS (réseau numérique à intégration de services) qui vient d'être ouvert et qui permet d'abaisser très sensiblement le coût de transmission des documents. Les grandes bibliothèques prêteuses disposeront d'une station documentaire de type serveur, raccordée au RNIS et comportant un scanner, un micro-ordinateur, une mémoire optique et une imprimante laser. Les bibliothèques seulement emprunteuses disposeront d'une station de type récepteur, également raccordée au RNIS et comportant un micro-ordinateur et une imprimante laser mais pas d'équipement de numérisation. Le SUNIST (serveur universitaire national pour l'information scientifique et technique) sera chargé de gérer l'ensemble du réseau qui intéressera dès le départ les bibliothèques médicales, des accords seront passés avec le CFC (centre français du copyright).

Ce projet montre bien tout l'intérêt d'une intégration progressive des fonctions :

- intégration de banques de données,
- localisation des documents grâce aux catalogues collectifs, (à l'instar du CCN (catalogue collectif national) qui tient un stand tout près d'ici,
- prêt interbibliothèques (interconnexion des réseaux européens décrite par M. COSTERS,
- accès aux documents primaires

et illustre une évolution que j'avais il y a cinq ans assimilée à l'adduction d'eau : "du puits au robinet !"

Voici donc le troisième continuum que je souhaitais vous présenter en soulignant la complémentarité du CR-ROM et des services en ligne.

Prolongeant ce qui précède en ce qui concerne l'emploi du RNIS qui réduira d'ici l'an 2000 le coût de transmission des images à celui de transmission de la voix aujourd'hui, je souhaite souligner tout l'intérêt du développement des banques d'images, notamment en imagerie médicale. MM. CLELAND, de WECQ et GYGAX ont eu raison d'insister sur ce point avant-hier. A Télésystèmes, nous nous y sommes préparés : premier exemple, certes modeste, la FNAIM.

Pour conclure, je voudrais attirer votre attention sur trois points :

1) Je vous encourage vivement à écouter cet après-midi Mme CRAWFORD, qui fera le point sur la situation en Amérique du Nord. Elle constate que la fonction des bibliothèques est désormais "distribuée" entre tous les partenaires concernés,

rejoignant ainsi mon idée de continuum, et souligne l'aspect capital que doit prendre rapidement la volonté d'unifier la terminologie médicale. Sans cela, la coopération restera de l'ordre du discours.

2) Le métier de bibliothécaire évolue très rapidement, et sa formation doit anticiper sur cette évolution : il doit être le pionnier de la coopération, et pour cela acquérir des connaissances non seulement sur les services d'information mais encore sur les réseaux qui les portent, voila encore un continuum, de la télématique à la linguistique. C'est ce que vise la réforme de l'ENSB (école nationale supérieure des bibliothèques) en France. C'est ainsi que les nouveaux bibliothécaires pourront relever le défi du foisonnement des techniques et exercer des choix avec une sagacité accrue.

3) Certains producteurs d'informations peuvent être tentés d'adopter dans les temps à venir une attitude inamicale, abusant d'une situation de quasi monopole pour contingenter l'information ou pour fixer unilatéralement les règles du jeu en ce qui concerne sa diffusion. Je pense aujourd'hui à des producteurs américains. Ce genre d'attitude doit être combattu et la coopération européenne peut beaucoup y aider. L'information scientifique et technique est un patrimoine commun à toute l'humanité. Une politique de laisser-faire, voire l'absence de toute politique en la matière peut conduire à une ségrégation entre des NANTIS d'une part, détenteurs de culture, d'information scientifique et technique, consommateurs avertis du marché de l'information, et des EXCLUS d'autre part, privés de la maîtrise d'un savoir élémentaire, futurs "illettrés" de la société technicienne de demain.

Excusez-moi, je vous prie, de conclure sur cette note grave. Mais je me suis souvenu de vous avoir dit il y a deux ans à Bruxelles : "bibliothécaires, prenez le pouvoir", il m'a semblé que vous étiez sans doute les mieux placés pour entendre, et, je l'espère, pour prendre à votre compte cette mise en garde.

Plenary session III

Action plan for libraries in Europe

Chair

V. Comba

PLENARY SESSION III

Plenary Session Three was devoted to a presentation by Senor V. Parajon-Collada of the European Communities Directorate General XIII of the Commission's draft Action Plan for Libraries.

The Plan arises from the resolution of the Council of Ministers with responsibility for Cultural Affairs of 27 Sept 1985 and it aims to promote:

-the availability and accessibility of modern library services throughout the Community taking into account existing geographic discrepancies in library provision
-a more rapid but orderly penetration of new information technologies in libraries in a cost effective way
-standardization, because of its practical consequences and economic impact
-harmonization and convergence of national policies for libraries.

The Commission believes that the Plan of Action must facilitate progress in four key areas which embrace a wide range of inter-related problems:
-availability of catalogue/bibliographic records in machine readable form as a basic resource for international information exchange
-ability to interconnect automated library systems
-better access to documents held in European libraries through enhanced inter-library loan mechanisms
-modernizing the skills of library workers

Activities under the Action Plan will range from the development and testing of communication standards (particularily for library applications of OSI), pilot and demonstration projects, field trials and the development of prototypes to the evaluating the feasibility of special purpose files, the development of guidelines, methodologies and library standards, and the support of relevant on-going international initiatives.

A modular approach providing such a framework is envisaged, defined through five "Action Lines" and based on a shared funding formula. Depending on the action line and the type of project, the level of funding might range from 25% to 100%.

A balance is sought through the five action lines between the needs and priorities of those countries which have less well developed library services (particularily in the field of automation) and those which are more advanced.

The Action Lines are:

I Library resource data projects - primarily in the fields of machine readable national bibliographic and union catalogues but including the retrospective conversion of the catalogues of internationally important collections. Emphasis will be placed in the initial stages on the development of national coverage. National development should be completed before Community wide implementation of the plan could take place.

II Projects to further the international linking of systems.

The Commission would seek to stimulate networking and trans-border data flow by encouraging the formulation of data exchange standards. There would be support for the initiation of major pilot projects with the involvement of commercial software houses with the provision of up to 50% EC funding.

III Stimulation of the development of new services coupled with the creation of demand for innovative services.

The Community would assist the initiation of small pilot projects which would have a multiplier effect but the definition of "innovative" would depend on the local situation. Up to 80% funding would be available from the Commission.

IV The encouragement of the commercial development of products and services specific to libraries such as management information systems and multilingual software. Commission funding of up to 25% would be available.

V Dissemination of know-how and the stimulation of information exchange with studies to support initiatives, programmes of workshops, study trips and professional exchanges for which EC funding of up to 100% would be available.

The plan will be guided by an Advisory Board and it is forseen that implementation will take place over a five year period with equal priority being given to all the action lines.

Valentina Comba, Chairman in opening the discussion, said that responses to the draft action plan were now being prepared and she emphasised the potential usefulness of the European Association of Health Information and Libraries in representing the views of a wide range of European librarians working in the field.

Dr Peter Leggate (U.K.) said that the small size of most health care libraries should be borne in mind. A recent survey of health libraries in the United Kingdom showed that only 50 of 800 were "medium sized" or formed part of a larger library. The remaining 750 were staffed by a single person or less. The success of the plan required large and efficient national resources; action lines one and two had least relevance to biomedical libraries though he saw the development of a union list of periodicals as important. Action line 3 was most relevant but it was important that health care libraries should be able to afford the costs of computerisation and be enabled to avoid expensive mistakes. They needed large gains for small expense. Low cost solutions to information exchange problems were already being implemented through the introduction of facsimile document transmission, electronic mail, CD-ROM and improved user training.
As far as commercial product developments are concerned he emphasised the need for really integrated software for housekeeping and management, information retrieval and communications. Immediate improvements needed now included the development of a "flat bed" facsimile machine for direct copying and CD-ROM hardware and software which would facilitate multiple disc use. In all areas simplicity and reliability were essential.
He also felt it was important that the Action Plan linked closely with the AIM (Advanced Informatics in Medicine) project.

M. Walckiers (Belgium) wished the Action Plan every success so that ultimately all the libraries of Europe could exchange information electronically but he also emphasised the relatively limited purchasing power of libraries. Extensive networking could cause problems for the larger libraries if they did not have the resources to meet increasing demands on their stock. Every document has to be bought and all interlibrary document deliveries have to be paid for. He also pointed out that the salary levels of librarians presented problems in most European countries and that there were often difficulties in recruiting or retaining staff of the right calibre to operate more sophisticated information technology.

Anne Parrical (France) stressed the importance of representation on the Action Plan Advisory Board of professionals experienced in the new technologies. There was also a need to identify what already exists before planning improvements. She regarded training for librarians as still inadequate and hoped that Community action would include the possibility of seconding staff for training in other countries.

V. Alberini (Italy) said that although the national situation in Italy was similar to that in many other European countries only state libraries were funded by central government; university and public libraries have other funding arrangements. She thought it important that the Advisory Board should include representation from special libraries.
Existing Italian national library networks emphasised the exchange of bibliographical data and information retrieval was seen as secondary though it was of prime importance to biomedical libraries. Sophisticated software was needed to support biomedical information needs; it was important that searches should not be confined to broad subject or author approaches.

Monique Cleland (Switzerland) felt that Swiss libraries, like those in Scandinavia, though not within the European Community, had a positive role to play on the international scene. Switzerland already had a national union list of serials, the first in Europe. She felt it important particularily in the provision of biomedical information that provision should be made for some participation by libraries in non-EC countries.

Senor Parajon-Collada explained that Community policy had to confine itself to certain areas. Some project proposals already received from small libraries were very good and it was recognised that the plan had to consider the needs of all libraries. If a network already exists in a country it will be used; the plan does not aim to change existing successful information infrastructures. Some countries, however, have no widespread network outside the major cities and increased inter-library document delivery activity must be accompanied by the growth of networks.

The training of librarians presented problems as the EC could not seek to modify national training programmes. Continuing education must depend on local initiatives.

He said that the Commission anticipated that national government spending on library services would follow the pattern laid down by the Action Plan and that libraries would be enabled to budget funds to meet CEC directives which the Commission was not directly funding.

Membership of the Action Plan Advisory Board would be determined by national ministries with responsibility for libraries and that members of the board should be prepared to act politically. Experts would be appointed to the special working groups which would be set up by the board.

By early 1989 the Commission of the European Communities will make a decision on the draft Action Plan, adopt the programme and refer it to the European Parliament for approval. He emphasised that he was still referring to a draft project and that it was still subject to change.

Community funding could only be made available to member states and institutions and although interconnection with non-EC institutions was possible the costs would have to be met by the country involved.

Concurring session 1A

Medical libraries - medical information

Chair

A. Parrical

RICERCA BIOMEDICA, BIBLIOTECHE E BANCHE DATI NEL "VILLAGGIO ELETTRONICO"

Enzo CASOLINO

Direttore della Biblioteca Centrale
del Consiglio Nazionale delle Ricerche
Roma

Prima di addentrarmi nel merito della relazione, mi corre l'obbligo di premettere che le valutazioni suggerimenti e modelli di organizzazione su cui mi soffermerò non sono rivolte alla generalità delle biblioteche mediche o biomediche.
Personalmente ritengo che ogni biblioteca è un mondo a sè in quanto deve vedersela con la sua propria storia e soprattutto con il proprio bacino culturale.
Qui mi riferirò ad una biblioteca scientifica esclusivamente biomedica o che copra anche l'area biomedica, aperta al pubblico, e quindi non una biblioteca di Istituto, a beneficio di un lettore tipo che è un ricercatore.
Detto questo, non è detto che talune indicazioni non possano essere rapportate anche ad altre realtà. Infatti, guardando l'erba del vicino, non sempre si prova solo invidia: a volte si impara anche. Ed io personalmente mi attendo molti ammaestramenti da questa Conferenza europea.
Il profilo del ricercatore biomedico sta mutando in questi ultimi anni. Il fenomeno, in verità, riguarda anche taluni altri settori disciplinari, come la fisica, la chimica, alcuni settori della geologia, l'economia e le ricerche tecnologiche: in generale i settori di discipline caratterizzate da un elevato grado di internazionalizzazione.
La stessa maniera di lavorare del ricercatore biomedico (in particolare il biomedico più che il ricercatore clinico) sta mutando in questi ultimi anni. Svariati sono gli aspetti di questa modificazione (dalla svalutazione dei finanziamenti alla composizione dei gruppi di ricerca). Qui ci soffermeremo principalmente sulle modificazione che in qualche modo hanno riflessi sull'organizzazione delle biblioteche e dei centri di documentazione.
Il nostro ricercatore - contrariamente a quanto avveniva appena qualche decennio indietro - tende a diminuire il periodo complessivo di soggiorno in centri di ricerca all'estero, ma contemporaneamente aumenta la frequenza dei suoi spostamenti e dei suoi contatti con tali centri. Noi ritroviamo - nel corso del periodo di produttività scientifica del ricercatore - un lungo soggiorno iniziale di borsa di studio in un centro di eccellenza scientifica, seguito da un consistente periodo di sedentarietà nel paese di origine, fatti salvi i tradizionali brevi spostamenti in occasione di convegni e seminari.
In qualche misura il periodo di apprendistato iniziale speso all'estero si riduce , per il fatto che tutta la carriera scientifica è costellata da quasi annuali soggiorni di aggiornamento e ricerca presso centri di ricerca esteri con cui - e qui sta il dato più caratteristico - abitualmente si collabora in programmi comuni di riceca.
La collaborazione tra centri di ricerca di differenti paesi diviene così concreta e quotidiana, in quanto i programmi di ricerca vengono concepiti in comune e in comune vengono realizzati. Parallelamente, sempre più si diffonde la possibilità e la consuetudine, per studiosi affermati, di "tenere cattedra" contemporaneamente in due diverse università europee o

anche di insegnare contemporaneamente su questa e sull'altra sponda dell'Atlantico senza migrazioni forzose o definitive.
Si può ritenere che questo nuovo corso di comportamenti determini generalmente effetti più positivi specialmente per i paesi europei, dato che il fenomeno del drenaggio dei cervelli è meno remunerativo per chi lo pratica e meno incentivante per chi li accetta.
In Italia ad esempio, in questi ultimi anni si è assistito - grazie anche ad una illuminata politica praticata dal C.N.R. - al rientro dagli Stati Uniti di svariati scienziati di chiara fama, tra cui alcuni Premi Nobel. Ma anche a questo punto occorre sottolineare che il rientro in Italia non è avvenuto, per questi studiosi, abbandonando completamente "il posto di lavoro" negli USA. In sostanza si è avuto un arricchimento per tutti grazie ad una migliore utilizzazione delle risorse.
A veder bene, poi, tra le risorse di cui parliamo e che consentono di avviare questi fenomeni di massima utilizzazione dei cervelli, si colloca principalmente il progresso enorme delle comunicazioni che la società moderna e tecnologicamente sviluppata mette al servizio anche della scienza. Rapidità di spostamenti grazie al mezzo aereo, rapidità di comunicazione intellettuale tramite le applicazioni informatiche e telematiche.
Il ricercatore biomedico sceglie oggi, quindi, di lavorare nel proprio paese solo se e in quanto egli si sente in linea con il top della ricerca biomedica, con il centro di eccellenza che più lo attrae per comunanza di interessi scientifici. Oggi l'aereo, il calcolatore, la biblioteca moderna gli consentono di avere le mani in Italia o in Germania e il cervello negli USA, o viceversa. La continua consultazione, il controllo dei risultati, la revisione e correzione delle relazioni scientifiche gli vengono assicurate dalla teleconferenza, dalla trasmissione on line di dati scientifici o tramite disco. L'aggiornamento dei dati bibliografici, la ricerca dell'interlocutore straniero, la conoscenza di standards, disposizioni, regolamenti, normativa tecnica, gli vengono assicurate dalle banche dati, dai supporti "full text", dalle biblioteche e centri di documentazione.
E' ovvio che se egli non ha a disposizione, o peggio se ha a disposizione una rete malfunzionante di servizi informazionali e di comunicazione, quel ricercatore sarà fuorviato nei suoi risultati scientifici, non potrà stabilire rapporti di copartnership con altri centri esteri di ricerca e dovrà riprendere la via dell'espatrio.
Da qui il ruolo - e la relativa responsabilità - che assume il bibliotecario, il documentarista, l'informatico ai fini dell'affermazione e sviluppo di una buona ricerca biomedica nel proprio paese. Particolarmente il problema si pone per i paesi europei più che per gli USA, proprio perchè il flusso migratorio dei giovani ricercatori in passato si è verificato verso gli USA e non verso l'Europa.
Per quanto riguarda questa tendenza al nomadismo che dal dopoguerra in poi si è sempre più accentuata nella comunità scientifica internazionale, va anche detto che esso si manifesta come un bisogno irreprimibile del ricercatore e dello studioso. L'Europa conosce oggi fortunatamente un rinnovato fenomeno di mobilità scientifica che fa rivivere le antiche tradizioni dei "clerici vagantes" (è bene ricordarlo in questa Bologna tradizionalmente ospitale per studenti e studiosi, grazie alla sua "Alma mater studiorum" che quest'anno celebra i novecento anni di attività).
I contatti tra studiosi e ricercatori si sommano al flusso migratorio stagionale che si sta ampliando anche tra studenti di scuole "undergraduate". Se andranno in porto - come certamente andranno in sede europea - i propositi di integrare le università europee in una unica rete

didattica in grado di conferire lauree e diplomi, indipendentemente dal fattore della nazionalità e della "lex loci" (vedi progetto Erasmo), non si potrà non pensare alle biblioteche e ai centri di documentazione scientifica come ad organismi operanti realmente come un unico sistema documentario e centro di supporto culturale per la ricerca e la didattica universitaria. Essi quindi devono operare nei fatti e non solo nominalmente come sedi di accesso, ricerca e distribuzione di dati e documenti.
D'altra parte - occorre dirlo - con questo, il sistema bibliotecario europeo si presenta all'appuntamento della storia culturale europea con un qualche ritardo, non certamente dovuto alla mancanza dei supporti tecnici.
Basti pensare che tale integrazione di centri, di reti, di servizi, è già avvenuta in altri settori: quindi il settore scientifico non ha il beneficio purtroppo della novità. Si pensi alla integrazione realizzata nel settore economico, finanziario, bancario. Si pensi alle trasformazioni in atto nelle agenzie di notizie e nel giornalismo; si pensi al turismo. Fra l'altro si può osservare che l'incidenza anche culturale e non solo economica di questi settori non è affatto secondaria e talune interazioni di tali settori con il sistema bibliotecario potrebbero essere fruttuose.
Quindi siamo nel pieno del villaggio elettronico. Lo sviluppo delle telecomunicazioni, l'integrazione dei sistemi socioeconomici, l'integrazione delle culture e delle etnie ci porta a vivere nella dimensione del villaggio: si sa tutto si tutti, forse anche troppo.
Per contro, ciò che era vicino è diventato lontano. Si pensi alle megalopoli, alla loro estensione, ai problemi del traffico e alle disfunzioni nei servizi pubblici che caratterizzano ormai buona parte delle più grandi capitali europee e americane. Occorre più tempo per attraversare Roma che andare in aereo a Milano.
La biblioteca deve farsi carico del fatto che la fruizione dei servizi da parte dell'utente è divenuta più onerosa. Se vogliamo che il livelo di utilizzazione di questo impareggiabile strumento culturale qual'è il sistema bibliografico e documentario non perda ulteriormente ruolo e incidenza nei processi culturali, occorre mettere in atto tutte le iniziative per recuperare i gaps delle disfunzioni nei servizi, determinati dalle inefficienze delle municipalità o dello Stato.
Certo una biblioteca non potrà mettersi a gestire - di norma - i servizi di autolinee, ma dovrà certamente farsi carico del problema dei parcheggi, dei servizi di ristoro e - all'occorrenza - anche di alloggio per un tipo di utente che oggi viene in biblioteca quanto meno per una giornata intera e intende sfruttare al massimo il suo tempo.
Occorre inoltre che l'utente - che affronta di norma un lungo e stressante percorso urbano per venire in biblioteca - trovi esattamente quello che - in documenti, informazioni e dati- aspetta di trovare, altrimenti riterrà che la biblioteca non è una struttura efficiente.
Per questo è necessario che una biblioteca, in particolare una biblitoeca scientifica che opera sostanzialmente sulla novità delle informazioni, sull'aggiornamento delle riviste, dei repertori bibliografici, delle banche dati bibliografiche, organizzi un adeguato servizio di informazioni a distanza (per telefono o on line, poco importa) rivolto ad assicurare, il lettore interrogante che quel certo numero della rivista non solo è posseduto dalla Biblioteca, ma che non è in rilegatura o in prestito e che è disponibile per la lettura e fotocopiatura.
Andando avanti con queste considerazioni ci rendiamo conto che diviene necessario realizzare delle ristrutturazioni, nuove progettazioni, intese con altre biblioteche, ecc. per moltiplicare i punti di accesso della biblioteca da parte dell'utente. La biblitoeca monosede deve

necessariamente "distendersi" sul territorio urbano in modo da raggiungere i punti cruciali, o meglio ritenuti cruciali dal suo tipo di utenza.
Non si tratta - come ognuno può capire - di spostare necessariamente la sede o di moltiplicare necessariamente le sedi fisiche della biblioteca. Si arriverà a questo solo se non ci sono altre soluzioni. Ma l'obiettivo può essere conseguito, di norma, realizzando i cataloghi unici, interrogabili da punti diversi della città; ma aggiungendo a beneficio dell'utente anche l'informazione. Assicurarlo preventivamente che quanto lui richiede gli può essere messo a disposizione in quel dato giorno.
Su questa strada, però ci accorgiamo che dovremo essere preparati anche ad un altro ripo di richiesta. Cioè quella di far avere al ricercatore - che sulla propria banca dati ha già completata la ricerca bibligorafica - il testo di quanto desiderato. La Biblioteca centrale del CNR, ad esempio sta sperimentando un servizio di document delivery anche a beneficio di utenti dell'area di Roma mediante telefax e posta elettronica.
Le tecnologie informatiche hanno dato un contributo determinante alla moltiplicazione delle informazioni e alla velocità di comunicazione. In ogni caso si può ritenere che anche per i settori scientifici in cui l'obsolescenza dei testi è al livello massimo, subito dopo l'informazione di carattere economico, la biblioteca rimarrà sede di conoscenza e di cultura: certamente non più sede monopolistica, ma questo è un bene per tutti. D'altra parte è anche facile prevedere che quelle biblioteche che non saranno in grado di offrire anche questi "nuovi servizi" verranno eliminate dal mercato. Il ricercatore certamente otterrà l'informazione che gli occorre. Oggi la telematica gli offre la possibilità di superare ostacoli di tempo e di spazio chiedendo per esempio, alla Stanford University, quello che non riesce ad avere dalla biblioteca sotto casa.
La biblioteca, a sua volta, che ha una più inveterata conoscenza del suo utente, è in grado - se messa sulla strada del rinnovamente tecnologico - di offrire un prodotto più completo e idoneo di quanto non possa essere oggi la stessa banca dati.
Il ricercatore vuole avere, di norma, il testo completo dell'articolo, gratuitamente o a costi accettabili, nel minore tempo possibile. Ogni altro sottoprodotto non lo interessa o addirittura può fuorviarlo. Oggi molte banche dati forniscono indubbiamente cose egregie (quale è l'informazione bibliografica) ma non sufficienti (vedi ad esempio l'abstract dell'articolo scientifico). L'abstract, a parere di svariati ricercatori, oltre ad essere necessariamente lacunoso, è talvolta fuorviante perchè non riporta spesso l'interpretazione dell'articolo da parte del suo autore, bensì quella di colui che ha compilato l'abstract. Ci sono controversie legali tra autori e gestori di banche dati USA, riguardanti il diritto all'integrità dell'opera dell'ingegno. A questo proposito, incidentalmente dobbiamo rilevare che in sede CEE non si è realizzato granchè per quanto riguarda il regime giuridico delle banche dati, le riproduzioni e trasmissioni di testi coperti da copyright, ecc.
Il ricercatore, un buon ricercatore normalmente legge un articolo sotto angoli visuali non convenzionali che neppure lo stesso autore dell'articolo ha concepito nel momento della sua ricerca. Questo tipo di ricercatore non ama gli abstracts, non ama i soggetti e soggettari; preferisce che gli sia consentita una ricerca, la più ampia possibile con parole chiavi prelevate dal titolo o dal testo (il che non solo è fattibile con gli attuali software, ma riduce i tempi di lavoro). Egli vuole infine avere a disposizione il fulll text subito e non attenderne il recapito tramite servizio postale.
Orbene questi prodotti mirati, quasi personalizzati, possono essere

realizzati molto meglio dalla struttura biblioteca che dalla struttura banca dati, (ancor molto meglio possono essere realizzati dalla struttura rete di biblioteche) tanto più che progrediscono velocemente le tecnologie dei Dischi ottici numerici (DON) sia reiscrittibili che ROM.

Comunque, per migliorare i servizi dall'utente, occorre pensare ad una stretta collaborazione tra biblioteche e banche di dati.

Come si vede, il lavoro che si può realizzare non è poco, inoltre offre stimoli, arricchisce professionalità, riavviva motivazioni e consapevolezza di essere forza viva della ricerca e della cultura europea e nazionale.

INTEGRATION OF HEALTH INFORMATION INSTITUTES AND MEDICAL LIBRARIES - PREREQUISITE OF NEW QUALITY OF BIOMEDICAL INFORMATION SERVICES

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Present information philosophy, reflected also in the WHO programmes, builds upon the idea of parity and equivalence of the approach of the appropriate users categories towards health information. Information with a content profile corresponding to a broad spectrum of health problems and formed predominantly by scientific information is in question. In fact it is a revival of the idea included in the intentions vivified in the early eighties by the International Federation of Library Associations and its sections, including the section of scientific medical and biological libraries. Union of information base with the development of health service penetrates deeper and deeper in the minds of professional public as indispensable condition, and it is this frequently declared principle which demonstrates the rapprochement of the starting points of the advanced countries in the presents divided world. The common basic platforms seem perspective for the cooperation within the European and other regions due to an intellectual agreement and efforts to achieve humane aims of health service in the present unsteady world. We cannot fail to see a number of bariers, hindering the access to relevant information, accumulated under the influence of various factors, such as differing advancement and character of available computer devices in the states of Western Europe and those of the socialist camp, differences in legislation and in the overall character of the technological base of information systems, including reprographical and micrographical

techniques. Even more marked are the differences in the experimental verification and introduction of progressive techniques, such as electronic publication, compact disks, long-distance transfer of information using satellites etc. Progressing internationalization of science, including biological and medical sciences, gives cause both for an increasing demand to reavaluate the quality of information infrastructure and for a more rapid transfer from strictly defined national systems towards international information systems of a broad content spectrum. The newly formed European Association for Health Information and Libraries is to take a still more active part in this comprehensive process mainly in the constructive integration of individual institutions of the European region, defined in the frameworks of the fundamental documents of the Association. I am not a spokesman of the health information and library institutions of the socialist countries, however, I dare to express my conviction that these institutions have already repeatedly expressed their readiness to cooperate and fully profess through their executive - Council of the International Biomedical Information System Medinform - the information line of WHO. They take an active part in propagation and distribution of the materials published by WHO in different language versions and play the role of a significant transfer article in the formation of the preconditions of their countries to participate in WHO programmes. In this respect it should be stressed that in relation to the possibilities offered by WHO there is a number of so far not fully utilized reserves and that not all medical libraries, representing in the individual socialist countries the leading libraries of the national networks of professional health libraries, have the status of WHO deposit libraries. The step to be taken is not only of organization and administration or prestige character but it is also a question of amplification of the activity spectrum

of these libraries with iteme significantly influencing the character of cooperation of the national information infrastructures with WHO, both in the stage of conception and realization. New facts - the existence of the Association and the paraphrase of the main object of WHO - Health for all up to the year 2000 - into information level - will undoubtedly influence the further course of integration processes in Europe and find a tangible expression in improving information services. Political clima becoming more and more favourable and the broadening possibilities of the participation of constructive workers in the field of health information and library science are a catalyst in the European information integration.

The present profile of the Institute for Medical Information /IMI/ is given by an organic, functional, organization and ideological union of the library component with information superstructure. Fusion of both components implemented in the sixties proved in its further development as a principle upon which to build an institutional resort base, and in a broader concept of the branch system of scientific information in health service. If the seventies can be characterized as a period of search and finding corresponding arguments, the following decade became a touchstone substantiating the theoretical hypotheses and elaborating them into realization application ending. To find the optimal solution was not easy, if only because the healthy core of the tradition of the Czechoslovak library science was finghting its way and still increasing demands called for more original approaches. It proved that a mere passive reception of even the most progressive foreign models may lead to an impasse, and that it is necessary to give a true picture of not only Czechoslovak information but also of the economical, scientific and health specificity in all its aspects and in relation to the trends of international cooperation and the development both in the countries of the socialist system and in advanced western countries.

Broadening of the service spectrum is usually a response to the actual information needs and demands, and the feedback ensures a corresponding correction of innovation changes. However, penetration of new services in the awareness of the users has its logical latency which may disagree with respect to time profile with the objective demands of the development. In other words, disproportion between the quality of information base and the giwen state of the demands of the development may have in both directions a negative impact on the overall level of the health practice and of biomedical research. Despite respect, for the significance of information policy in health service, manifest, among others, in its inclusion in the files of measures accepted by both Ministries of Health further to the previous congresses of the Communist Party of Czechoslovakia and meetings of the Central Committee of the Communist Party of Czechoslovakia, material technological, financial and personnel preconditions for an appropriate development of medical information in Czechoslovakia have not yet been and cannot even be created in their full extent.

Taken by itself the difficult effort to improwe the information base has been for more than the last two years further influenced by factors resulting from the reconstruction tendency of the whole Czechoslovak society. The goals of reconstruction in health service are formulated gradually in agreement with the priorities in the ladder of the emphasized social health facts and phenomena. These are in no case any breakthroughs - the existing facts are rather reevaluated or included in a new realization chronology. Health state of the Czechoslovak population in some respects is continually deteriorating and its result values witness a regressive tendency in comparison with other advanced countries. The situation puts us on the alert and requires a still greater

attention of all the health articles, including information infrastructure, linked up with other cooperating fields or branches of the national economy whose activities directly or indirectly create the factors contradicting the effort to improve the state of health of the population.

On one hand, we can speak about lack of relevant information, that is to say, about a kind of information insufficiency, on the other hand it is necessary to see also the persisting information "inertia", that is a certain unwillingness of the users sphere to absorb available information for ther own activities. This "unwillingness" has undoubtedly its source in an unhealthy overburden of the health personnel, primarily the doctors, caused often by the overgrown red-tape dictation, but also in an inadequate motivation and prevailing negative, rather than positive, attitudes towards publication or pedagogical and lecture activities. Therefore, those leading health worker who, using their authority, appeal against insufficient utilization of information rather than their apparent defficiency, have a true look at reality. Concerning this, an interesting study would be that with a view to comparing utilization of information at present and future availability in Czechoslovak conditions. In my opinion, however, the users need a further stimulation and an offer formally more attractive and more profound in contents - the horizon of information coverage should exceed the limits of the present state of development and information should play a still more avantgarde role.

Recently, the tendency for a more profound integration of the economies of the countries with different economic and political arrangement has become stronger. Gorbačov ˇs idea of the "European house" has found a practical application in the mutual steps of EEC and CMEA /COMECON/ states and this raprochement will undoubtedly be followd by measures in the sphere of scientific policy and exchange of new scientific

knowledge. In the sphere of librarianship and information, operating for the needs of health service and biomedical science the European integration endeavour culminated by calling the ist European Conference of Medical Libraries in 1986 - its continuity is documentd by a number of further activities,including a significant librarianship - information forum which is in progress. Health library and information institutions of European, and partially non-European, regions are heading at a closer cooperation and appeal analogical institutions of the European socialist community for participation. Already the first European forum gave rise to a common platform - comparability both of the key problems and development tendencies. Information front of the Czechoslovak health service supports this effort, and only future will prove its potential contribution to the European integration. Simultaneously, bonds are activated to WHO in its inomissible role in the world communication of scientific knowledge. For cooperation to be not only possible but also bilaterally purposeful, it is necessary to reach the level of concrete working contacts, and, as the case may be, the common solution of some problems in information sphere. To a certain degree these tendencies can be observed with the view to the efforts to enhance the field of scientific information and library science to one of the scientific disciplines within the framework of the system of scientific branches recognized in Czechoslovakia. In the field of medical information the first step in this direction was taken by the Czechoslovak activity within the system Medinform. The system Medinform has been recently received also as a clear-cut institutional community with a potentional partnership with other groups or producers of the world biomedical information. It is this partnership which enables further uncoiling of new possibilities also Czechoslovakia, progressive innovations included.

The Institute for Medical Information togerther with the

Institute for Scientific Health Information in Bratislava are on the threshold of a new epoch in their development. Both institutions are bound and often bound down by the existing rules of economic and other mechanisms, predominantly of a limiting character. However, they quarantee implementation of the reconstruction of information infrastructure of both resorts of health service and social affairs /i.e. both Czech and Slovak resorts/, and that is why they have to anticipate the expected measures and thus take part in acceleration of the development under more demanding conditions. At the same time, they have to conform their activities to the recent extension of the province of the ministries of health to the sphere of social affairs, and to continue its activities in the agreement with the state information policy in Czechoslovakia. If the top, leading role of the above institutions is to be broadened, they have to pay more attention to research and verification of its results in practice, and gradually decrease the degree of centralization of some the services by transmitting responsibility for partial processes on branch system departments, correspondingly equipped, that is on appropriate information organizations and professional libraries.

At present, system Excerpta Medica, operating on licence contract with the producer since 1978, has gained a standing position in the offer of services of the Institute for Medical Information. The last decade of practical application has proved the quality of the system and its unquestionable impact on information supply of the users sphere. The Institute for Medical Information also mediates access to other relevant world biomedical data bases, including the bases of a related profile, and, at the same time, forms its own basis - Bibliographia Medica Čechoslovaca. At present, attention is paid to preparation of automatization of selected library processes

and to extension of the access to other foreign data bases, including the Soviet ones.

An organic linkage of information component with a librarian one gives to appropriate conditions for satisfying the needs of the users sphere, even in spite of some persisting interior barriers, such as the given extent of the acquisition of professional publications, determined by the amount of alloted western currency. A significant place in the structure of the library funds is occupied by WHO publications as a source of topical information on the world health programmes and investigations.

To conclude, I would like to express my sincere gratitude to the organizers of the conference for enabling my personal participation, and, also, I would like to stress that Italy and Czechoslovakia are two countries that have for centuries been united by friendship and cultural traditions. It is a great honour for me to pay a visit to the town which can pride itself upon the revolutionary traditions and which with its 9 - centuries - old university has gone down in the cultural history of mankind. I am convinced that the conference will significantly contribute to further progress in our field and will resume and enrich further constructive contacts.

Concurring session 1B

Regional cooperation

Chair

L. Frenkiel

INFORMATION SERVICE AND BIBLIOGRAPHICAL RESEARCH IN THE LIBRARIES OF UNITÀ SANITARIE LOCALI IN EMILIA-ROMAGNA: A STATISTICAL SURVEY

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It is rather difficult for who is entering the field of biomedical libraries, to get an overall view of the Italian situation; there are some works attempting a countrywide synthesis, some conference proceedings, some local analysis (1), but for instance there is neither a national directory of biomedical libraries , or a comprehensive study accounting for aims, characteristics, resources and basic problems of these libraries.

The situation in Emilia-Romagna is hardly any different: with the exception of some partial directories (2) and the rearrangement of Unita' Sanitarie Locali (USL) libraries and archives, the basis for a complete series of specific works in the field was laid only after the bylaw 42/1983 (3) made by Regione Emilia-Romagna. Consequently, Soprintendenza per i beni librari e documentari launched the first reckoning of book and documentary material of the region. The intended aim is to locate and study the qualitative characteristics of the hospital libraries. The works are still in progress and I have pleasure in anticipating here some of the first results.

METHODOLOGY OF THE RESEARCH

The results of the first part of the inventory showed that all or nearly all medical institutions buy books but only a small part can grant the control and use of the material acquired while providing users with information services.

In order to continue the research therefore, it was necessary to establish some standards to ascertain the existence of an actual library service in health and/or medical institution.

A questionnaire was devised in order to cater for all situations, both above and under the agreed standard. The requisites of an effective service were studied considering the local situation and were defined by existing seat, staff and services available to users.

The following bodies were asked to fill in the questionnaire: 1) Unita' Sanitarie Locali, 2) Health care and scientific structures of hospitalization, 3) Local authorities operating in medical and hospital fields. A total of 42 out of 44 institutions answered.

FIRST RESULTS

Eighteen libraries were identified as such according to the stated requisites; fifteen belong to USL, one to the health care and hospitalization institute and the remaining two to local authorities.

These libraries are concentrated in the cities only and particularly in a few towns with big hospitals and an old consolidated hospital tradition. The highest concentration is in Bologna and in Reggio Emilia. In Bologna, medical information resources are particularly rich in quantity and quality, but are fractioned into an excessive number of small institutions, all to be found in a restricted area.

a) - Characteristics of the libraries

The available financial resources and the staff employed were chosen as a yardstick for the study of the basic structure of the libraries. In 1987, four libraries administered budgets exceeding 100 million. The overall turn-over administered by these libraries was of 1,108,300,000 Liras. The amount of the financial resources spent is decidedly considerable one (see table 1). The largest part of the funds is spent for the purchase of and subscription to periodicals (755,946,000 Italian Liras approximately).

Table 1: 1987 Budget

Budget (Italian Liras)	Libraries
More than 100 million	4
Between 50 and 100 million	4
Between 25 and 50 million	7
Less than 25 million	2
No answer	1
Total	18

As far as staff is concerned, only a small number of libraries has an adequate number of people. Nine libraries are run by one person only (in one case, part-time employed) and only four libraries in the region rely on four people or more (see table 2). Moreover, library staff comes from the most various professional situations (4), since USL do not give any official recognition to the librarian as such: 69.3% was originally appointed for administrative positions (3 directors; 17 assistants; 6 clerks), while the remaining proportion belongs either to the medical staff (7.6%) or to the technical one (5.13%). There are only two librarians properly appointed, but significantly outside USL (see table

3). Therefore, we can say that staff is quantitatively inadequate, has no professional training when appointed and has to acquire skills on the spots (5).

Table 2: Staff

People employed		Libraries
Full time	Part time	
-	1	1
1	-	8
1	> 1	2
2	-	3
4	-	2
5	-	1
6	-	1
Total		18

Table 3: Position of the staff

Positions	Number of people
Administration	
* directors	4
* assistants	17
* clerks	6
Medical staff	3
Technicians	2
Librarians (@)	2
No answer	5
Total	39

(@) Posts outside USL

b) - Quantity, control and treatment of the documentation

Book-collections seem to be relatively small, whereas scientific magazines are actually numerous. Only four libraries house collections ranging from 5,000 to 10,000 volumes. Collections of periodicals listing between 400 and 1,000 titles are to be found in six libraries, whereas only two libraries house collections of less than 100 titles. In addition to this, ten libraries out of eighteen have funds of rare books, in some cases absolutely rare and precious: manuscripts, incunabula, 16th- 17th- 18th- and 19th- century editions. The necessary catalogues (by author/title, subject, classified and of periodicals) are to be found simultaneously in four libraries only, while they are being com-

pleted in a fifth library (see table 4). In these libraries, RICA (the Italian cataloguing rules) are used in the writing of the author/title catalogue (6) and, in at least two cases, ISBD is followed.

Table 4: Catalogues

Kind of catalogue	Libraries
Author/title	12
Classified	9
Subject	7
Periodicals	16

Table 5: Author/title catalogues

Kind of catalogue	Libraries
RICA	5
ISBD(M)	2
Other	7

The descriptors from the Medical Subject Headings and established classification systems are used in the semantic catalogues (National Library of Medicine Classification, Library of Congress Classification and Universal Decimal Classification). The catalogues of periodicals follow UNI rules (7). On the other side of these libraries where cataloguing follows the established rules, there are libraries where particular cataloguing solutions, either unrelated or partially related to rules, are adopted (see tables 5-8).

Table 6: Classified catalogues

Kind of catalogue	Libraries
NLM/LC	3
UDC	1
DDC	1
Other	3
No answer	1

Table 7: Subject catalogues

Kind of catalogue	Libraries
MeSH	5
Other	1
No answer	1

Table 8: Periodicals catalogues

Kind of catalogue	Libraries
UNI 6392-76	6
Other	7
No answer	3

c) - Services offered to users

Ten libraries carry out bibliographical research and five can rely upon on line research of international biomedical data banks (see table 9). Information is given by circulation of periodicals (indexes of the issue received) in six libraries; a newsletter outlining new acquisitions and/or an annual catalogue of the periodicals are used in eight libraries. Three libraries organize courses and/or provide guidebooks to inform users about documentary resources and their appropriate use. Four libraries provide members of the medical institution with a service of bibliographical quotation check for their scientifical works and four also provide a translation service. All libraries have xeroxing facilities for the book material they house.

For the retrieval of the documentation not in their possession, fourteen libraries apply to other libraries to obtain the necessary copies. Six libraries out of fourteen are at the same time applicants and recipients. Applications are generally made to biomedical libraries belonging either to universities, or hospitals, or research institutes, or local authorities or drug company of northern Italy (seven libraries are in Emilia-Romagna) and Rome. Applications are made abroad to the British Library and to the World Health Organization Library.

Therefore we can say that there is a kind of informal supply service, frequently basing itself on a series of personal contacts. On the one hand there is a tendency among more active libraries to establish important contacts with biomedicals libraries outside our region and abroad; on the other hand, there is a network of contacts establish between smaller libraries within the region or the very same province. Shared collective catalogues are rare: only seven libraries patronize and share collective catalogues of periodicals either already existing or in progress.

d) - Bibliographical research on online bases

The bibliographical research on international biomedical data bases is undoubtedly oriented towards the MEDLARS sy-

stem, particularly MEDLINE base seems to be the more frequented. Four out of five libraries offering online service, run more than 50% of their bibliographical research on MEDLINE. Other MEDLARS bases such as CATLINE and RTECS are also used, undoubtedly less however. Only two libraries use EMBASE, BIOSIS, PASCAL, PSYCHOINFO, CHEMICAL ABSTRACTS. The preference generally accorded to MEDLARS can be explained by the activity of Istituto Superiore di Sanita', Rome in its position of MEDLARS reference centre in Italy. Istituto has been offering for years professional courses and particularly favourable conditions of data bases use to biomedical libraries.

Table 9: Services offered to users

Kind of services	Libraries
Bibliographic research on traditional sources (printed)	11
On line research	5
Quotations check	4
Xerox-copies	18
Interlibrary supply service	14
Current awareness bulletin	6
New acquisitions bulletin	8
Printing of periodicals catalogue	3
Courses and guidebooks	3
Translations	3

CONCLUSIONS

Our data show that biomedical hóspital libraries in Emilia-Romagna are extremely concentrated in a few cities and towns; the largest number of efficient and adequate structures can be observed in Bologna and Reggio Emilia. They normally rely on sufficient financial support but staff is inadequate.
As far as qualitative characteristics are concerned:
a) - documentation is treated according to the established catalographic rules only by a restricted number of libraries;
b) - information and bibliographical research services are widespread, but uniniformly used between libraries: only a small group of libraries can offer - with some variations - an adequate range of information and research services to cover effectively the various kinds of users' requirements.
c) - "sharing" experiences are still limited.

According to the bylaw 42/1983 of Regione Emilia-Romagna, Soprintendenza per i beni librari will:
a) - extend the pattern of the reckoning also to those bio-

medical libraries which operate in our region in the field of biomedical research (University, public and private bodies);
b) - create a directory of the biomedical libraries operating in our region;
c) - contribute to the professional formation of librarians and to the diffusion of the accepted catalographic rules;
d) - favour the cooperation between libraries within a comprehensive system: each library must be an entering point for the comprehensive system, in order to grant the exchange of information among various points of the network;
e) - promote the role of the library in front of administrators.

We feel however that any progress in this field is bound to the intention of biomedical librarians to cooperate, their professional role being recognized. And we apply to the administrators and librarians in order to start our work towards a common goal.

NOTES

(1) See the contribution of V. Comba in: Medical librarianship in the eighties and beyond : a world perspective / edited by F. Mackay Picken and A.M.C. Kahn. - London : Mansell, 1986, p. 205-208.
Biblioteche e centri di documentazione nella biomedicina : realta' e prospettive / a cura di V. Alberani e G. Poppi // In: Annali dell'Istituto Superiore di Sanita'. - vol. 22(1986), n. 4.
Biblioteche biomediche di Roma : guida alle strutture organizzative e alle risorse bibliografiche / a cura di V. Alberani e O. Masciotta. - Milano : Bibliografica, 1986.
(2) Le biblioteche degli enti locali dell'Emilia-Romagna / a cura di M. Bova e G. Tonet. - Bologna : Istituto per i beni artistici culturali e naturali della Regione Emilia-Romagna, 1984.
(3) Legge Regionale 27 Dicembre 1983, n. 42, Norme in materia di biblioteche e archivi storici di enti locali e di interesse locale.
(4) DPR 20 Dicembre 1979, n. 761, Stato giuridico del personale delle Unita' Sanitarie Locali.
(5) Le biblioteche e i bibliotecari nel Servizio Sanitario Nazionale / R. Iori e F. Sirocco // In: Bollettino Informazione Associazione Italiana Biblioteche. - vol. 28(1988), n. 3, p. 301-306.
(6) Regole italiane di catalogazione per autori. - Roma : ICCU, 1979.
(7) Norma UNI n. 6392-76, Documentazione e riproduzione documentaria, cataloghi alfabetici di periodici.

CONSERVATION OF MEDICAL MATERIAL WITHIN THE UNIVERSITY OF LONDON

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The concise Oxford English Dictionary defines the verb "to conserve" as "to keep from harm, decay or loss, especially with a view as to later use". The scheme which I describe is concerned with retention as a means of conservation rather than physical restoration of individual items and was set up by the London University Library Resources Co-ordinating Committee (LRCC) Subject Sub-Committee in Medicine. A brief history of the Subject Sub-Committee will help to put the programme into perspective. In 1968 a Committee on Library resources was appointed by the London University Senate under the chairmanship of Professor R.A. Humphreys. It reported in 1971. Chapter 3 of this report was entitled "Provision for Advanced Study and Research" and presented a case for a higher degree of rationalisation in the holdings of periodicals and recommended the development of a Union List of Serials which has now been in existence for some years.

The Committee thought that, as far as monographs were concerned, it was important to establish measures "to ensure, in future, the widest possible coverage with the essential minimum of duplication in specialised fields, to lead to an agreed policy for the most effective placing of material; and to provide for continuous consultation between the relevant libraries, both within and outside the University". [1]

To undertake this work the Committee recommended the establishment of Subject Sub-Committees to ensure co-ordination of library provision in various subject fields. The committees were to be made up of representatives of the Boards of Studies, the libraries of the University particularly concerned and of other relevant libraries in the London area. The Committee was to report to the Library's Council (the setting up of which was the central recommendation of the Report and the body we now know as the Library Resources Co-ordinating Committee (LRCC)) on ways in which to provide for the most effective development and conservation of resources. To enable them to carry out their work they should be entitled to recommend allocations of earmarked funds to promote the rationalisation of the collection of research materials. The principle concern should be for provision for advanced study and research but undergraduate provision should not be forgotten.

The Subject Sub-Committee in Medicine was duly set up and in 1979 produced the first subject specialisation scheme. The aim was to divide the subject of medicine between university and other medical libraries in London to ensure overall comprehensive coverage. Obviously, the post-graduate institutes assumed responsibility for their subjects, e.g.The Institute of Neurology for neurology and the Institute of Child Health for paediatrics. Libraries initially chose their own subjects and the final list indicated the main library with an asterisk but also listed those with a more than average stock. It was realised that the libraries would not be able to buy all the material in their chosen first line subject, because even in 1979 funds were not too freely available. It was, however, the intention that libraries wishing to discard material should contact the relevant subject library to make sure that the last copy of a book or sole run of a journal was not being discarded. Fortunately, the University of London has a depository at Egham in Surrey and some libraries use the private store there as a home for older and less used material. The List was revised in the 1984-85 session to take account of changes in emphasis and various forms of rationalisation which affected

medical libraries. The new list included 45 libraries, ranging from the medical school and postgraduate institutes via other University libraries, for example, Wye College and Imperial College, to outside bodies, for example, the Royal College of Obstetricians and Gynaecologists, the Health Education Council and the Imperial Cancer Research Fund. The List is arranged in subject order and, again, major collections are indicated by an asterisk. Supporting libraries are included.

The List will need revising again soon as various mergers of institutions are completed for example, the Institutes of Urology and Orthopaedics are merging with University College, the former King's College Hospital Medical School is now King's College School of Medicine and Dentistry and forms the Faculties of Clinical Medicine and Clinical Dentistry within King's College and St. Thomas' and Guy's Hospital Medical Schools have merged to form the United Medical and Dental School. Some subjects were not allocated in the 1985 list but should now be represented, for example, infectious diseases, general medicine and military medicine.

As I previously mentioned, it was not envisaged that libraries would be able to devote large amounts of money to support the Subject Specialisation Scheme, however, the LRCC had and indeed still has a Central Book Fund to help "libraries to develop their research potential but not to provide material that is required, in any case, for undergraduate or taught courses". [2] Present policy is to limit each grant to 50% of the total cost. The guidelines for application to the fund are currently being revised. However, grants for periodical subscriptions are discouraged and a minimum of £75.00 per volume was instituted in 1983. The University Library and the LRCC's futures are under discussion at the moment. A certain amount of reorganisation is inevitable and the Central Book Fund policy is awaited with interest.

For several years the Subject Sub-Committee has applied for and been granted a block allocation from the Central Book Fund. University medical librarians are asked to submit requests for appropriate named books with the proviso that they are prepared to "allow access to this material, under appropriate safeguards, to properly accredited members of the University". [3] A small Working Party of the Subject Sub-Committee members considers the recommendations and submits a final list to the SSCM for approval. I emphasise that the requesting libraries undertake to meet 50% of the cost of each title but the £75.00 minimum does not apply.

A separate Working Party of the Subject Sub-Committee has, during the past 18 months, looked at various aspects of rationalisation within medicine and is considering in more detail the roles of conservation and relegation, which are intertwined. We began to consider guidelines as we thought a policy sounded too mandatory. The wishes of individual institutions cannot be overriden by the Subject Sub-Committee in Medicine. The relevant minutes are as follows and represent the present state of our deliberations:

a) Books - titles to be discarded
   i. Should be offered to the relevant specialist library, either as unique copies to that collection or as substitutes for damaged copies.
   ii. Should be offered to the alma mater of the author.
   iii. Items could be valued then offered for bids within the University or sold commercially.

b) Journals
   i. Back runs of cancelled titles should be offered to the specialist library or the British Medical Association, Royal

Society of Medicine, Royal College of Surgeons or the British Dental Association.

ii. Back runs should then be offered to current holders of the title.

iii. The possibility of the LRCC Libraries Bulletin publishing lists of journals to be discarded, including duplicates and new subscriptions, with a view to receiving back runs, should be explored.

iv. finally proceed as (a) iii.

c) General Points:

i. Any funds raised from the sale of discarded items should be used for conservation of existing collections in preference to being absorbed into the general book fund.

ii. It was queried whether the LRCC would permit Central Book Fund monies to be used to support unique titles at risk.

iii. The possibility of the LIBERTAS Automation System, now being installed in the University of London libraries, producing a centralised duplicates list should be investigated.

iv. It was pointed out that the transfer of titles from a large general to a smaller specialist library could lessen the availability. This would have to be accepted.

CONSERVATION

a) Books and journals in the subject specialisation category should be bound. It was appreciated that problems could arise with little used unique titles which libraries were not prepared to bind.

b) It was suggested that the Subject Sub-Committee should notify publishers of the disadvantages of perfect bindings and point out that many librarians would be willing to pay extra for a more permanent unbound copy.

c) The role of the Depository in conservation was discussed.

d) The necessity to restore older material was emphasised. It should not be left to deteriorate in environmentally unsuitable conditions and the following options were mentioned:

i. Sponsorship of repairs eg. adopt a book.

ii. Apply to the British Library for a grant for conservation.

iii. Sell duplicates and copies which would cost more to restore than they were worth to sell.

OR

iv. restore volumes to increase their value prior to selling. [4]

We wrote to ask librarians to let us know whether they have a conservation and/or relegation policy written or understood. Replies indicated that such policies are rare. It seems, therefore, that the Subject Sub-Committee could fill a need by considering the guidelines further.

e) The archival aspects of material were mentioned but felt to be outside present terms of reference.

Earlier I made a brief mention of the University's Depository Library. It is situated 30 miles from the centre of London and provides two types of storage - co-operative and private. Material can usually be retrieved within 48 hours. The future of the Depository is under discussion at the moment and the Working Party has submitted its thoughts to the relevant Committee. We suggested that the Depository should assume a more active role as an important part of the London University Library System. We thought that a change of title, for example London University Co-operative Library, would create a more positive impression. The Library should be included in the University's Automated system. The Librarian should

ensure that if he retains only one copy of a journal or monograph there is another available elsewhere in Britain - for preference at the British Library. To facilitate the use of the Depository collection we suggested that FAX be installed and a photocopying service introduced. The present delivery service could be improved and visitors more actively encouraged. We were very aware of the financial consequences of our recommendations and suggested that top-slicing of library budgets and the possibilities of sponsorship should be investigated. [5]

The conservation scheme I have described is somewhat idiosyncratic and incomplete because of the unique features represented by a Federal University. There are elements, however, which could be applied elsewhere.

1. University of London (1971) Report of the Committee on Library Resources Chairman: R. A. Humphreys. London University. para 102 p39.
2. University of London. LRCC. (1983) Memorandum of guidance to libraries making applications to the Central Book Fund. para 1
3. ibid para 13(1).
4. University of London LRCC Subject Sub-Committee in Medicine (1988) Working Party minutes 18 and 19.
5. University of London LRCC Subject Sub-Committee in Medicine (1988) Working Party Minute 23.