

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

78th Meeting of the

BOARD OF REGENTS

9:00 a.m., January 24-25, 1985

BOARD ROOM
Mezzanine of
National Library of Medicine

MEETING OPEN: All day on January 24 and from 9:00 to approx. 11:30 a.m. on January 25.
MEETING CLOSED: From 11:30 a.m. to adjournment on January 25 for the review of grant applications.

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. L. Thompson Bowles
- II. REMARKS BY THE DEPUTY ASSISTANT SECRETARY FOR HEALTH Dr. C. Everett Koop
- III. REMARKS BY THE DEPUTY DIRECTOR FOR EXTRAMURAL RESEARCH AND TRAINING Dr. William F. Raub
- IV. CONSIDERATION OF OCTOBER MINUTES Dr. L. Thompson Bowles
TAB I
(Agenda Book)
- V. FUTURE MEETING DATES:

Spring Meeting: June 6-7, 1985--CONFIRMED
Fall Meeting: Oct. 10-11, 1985--CONFIRMED
Winter Meeting: Jan. 30-31 OR Feb. 6-7, 1986--PROPOSED

PLEASE NOTE: Amer. Assoc. for Medical Systems and Informatics (AAMSI) - Annual Mtg. - May 20-22, 1985 - San Fran.
National League for Nursing (NLN) - Biannual Mtg. - June 2-5, 1985 - San Francisco
Institute of Medicine - Annual Meeting
October 16-17, 1985 - Washington
American College of Surgeons - Annual Meeting
October 13-18, 1985 - Chicago
Symposium on Computer Applications in Medical Care (SCAMC) - Annual Symposium - Nov. 10-13, 1985 - Baltimore
Society of Thoracic Surgeons - Annual Meeting
January 27-29, 1986 - Washington
American Library Association - Midwinter Meeting
January 18-23, 1986 - Chicago

COFFEE BREAK

VI.	REPORT OF THE DIRECTOR, NLM Discussion	<u>TAB II</u>	Dr. Donald A. B. Lindberg Board Members
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VII.	PRICING ISSUES RAISED AT IMPAG MEETING Discussion	<u>TAB III</u>	Mr. Kent A. Smith Mrs. Shirley Echelman, Discussant Board Members
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LUNCHEON CATERED IN CONFERENCE ROOM "B"	12:15-1:00
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VIII.	FOLLOWUP ON NLM PUBLIC INFORMATION ACTIVITIES Discussion	<u>TAB IV</u>	Mr. Robert B. Mehnert Dr. Lois E. DeBakey, Discussant Board Members
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IX.	MEDICAL ELECTROGRAPHIC PROGRAMS	Mr. John K. Lopez
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X.	REPORT ON BOARD OF SCIENTIFIC COUNSELORS JANUARY MEETING Discussion	<u>TAB V</u>	Dr. Harold M. Schoolman LHC Subcommittee, Discussants Board Members
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COFFEE BREAK

XI.	DEMONSTRATION OF ARTIFICIAL INTELLIGENCE SYSTEM Discussion	<u>TAB VI</u>	Dr. Lawrence C. Kingsland Board Members
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XII.	NLM LONG-RANGE PLAN Discussion	<u>TAB VII</u>	Dr. L. Thompson Bowles Mr. Julian M. Morris and Dr. Henry Riecken, Discussants Board Members
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R E C E S S * * * * *

DINNER Bethesda Naval Officers' Club
 Cocktails 6:30 p.m. "BRIDGE
 Dinner 7:30 p.m. ROOM"

SPEAKER: Dr. Robert J. T. Joy, Professor and Chairman
 Section of Medical History
 Uniformed Services University
 of the Health Sciences

TOPIC: "The History of Hemorrhagic Shock"

R E C O N V E N E: Friday, January 25, 9:00 a.m.

XIII. SCOPE AND COVERAGE TAB VIII Mrs. Lois Ann Colaianni
 Dr. Faye G. Abdellah and
 Dr. Henry Riecken,
 Discussants

Discussion Board Members

COFFEE BREAK

XIV. REPORT OF THE ASSOCIATE DIRECTOR TAB IX Dr. William G. Cooper
 FOR EXTRAMURAL PROGRAMS EP Subcommittee,
 Discussants

A. EP Budget and Funding Plans Tab A
 B. IAIMS Update Tab B
 C. Review of Board Operating Procedures
 "Guidelines for Adjustments by Staff
 in Time or Amount of Grant Award" Tab C

Discussion Board Members

 MEETING CLOSED FOR THE REVIEW OF GRANT APPLICATIONS 11:30-12:00, JANUARY 25

XV. SPECIAL APPLICATIONS (Gray Book)

A. Research TAB I Dr. Roger W. Dahlen
 B. Resource TAB II " " " "

XVI. SUMMARY STATEMENTS

A. Research TAB III Dr. Roger W. Dahlen
 B. New Investigator TAB IV " " " "
 C. Research Career Development Award TAB V " " " "
 D. IAIMS TAB VI " " " "
 E. Resource TAB VII " " " "
 F. Resource Improvement TAB VIII " " " "
 G. Publication TAB IX Dr. Jeanne L. Brand

XVII. APPOINTMENT OF NOMINATING COMMITTEE

Dr. L. Thompson Bowles

XVIII. ADJOURNMENT

12:00

Dr. L. Thompson Bowles

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS
MINUTES OF THE 78TH MEETING
JANUARY 24-25, 1985

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/
January 24-25, 1985

The Board of Regents of the National Library of Medicine was convened for its seventy-eighth meeting at 9:00 a.m. on Thursday, January 24, 1985, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. L. Thompson Bowles, Chairman of the Board of Regents and Dean for Academic Affairs and Professor of Surgery, The George Washington University Medical Center, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on December 24, 1984, the meeting was open to the public from 9:00 a.m. to 5:15 p.m. on January 24 and from 9:00 a.m. to 11:15 a.m. on January 25. The meeting was closed from 11:15 a.m. to adjournment at 12:05 p.m. on January 25 for the review, discussion, and evaluation of grant applications. A Board roster is enclosed under Attachment A.

Board members present were:

Dr. L. Thompson Bowles
Dr. Lois E. DeBakey
Mrs. Shirley Echelman
Mr. Russell L. Fenwick
Dr. Albert E. Gunn
Dr. David T. Kingsbury (Ex officio)
Dr. C. Everett Koop (Ex officio) (January 24)
Mr. John Lopez (January 24)
Dr. David O. Moline
Dr. Grant V. Rodkey
Dr. Eugene A. Stead, Jr.

Alternates to ex officio members present were:

Dr. Faye G. Abdellah, representing Dr. C. Everett Koop.
Brig. Gen. Vernon Chong, USAF, MC, representing Lt. Gen. Max B. Bralliar.
Capt. Noel Dysart, representing Vice Admiral Lewis H. Seaton.
Mr. James M. Hahn, representing Dr. John W. Ditzler.
Col. James E. Hastings, representing Lt. General Bernhard Mittemeyer.
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin.

1/For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Donald A. B. Lindberg, Director
Mr. Kent A. Smith, Deputy Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education
Mr. John Anderson, Director, Information Systems, OD
Dr. Jeanne Brand, Chief, International Programs Branch, EP
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth Carney, Executive Officer, OD
Ms. Lois Ann Colaianni, Associate Director for Library Operations
Dr. William G. Cooper, Associate Director for Extramural Programs
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Ms. Betsy L. Humphreys, Deputy Associate Director for Library Operations
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Mr. Sheldon Kotzin, Chief, Bibliographic Services Division, LO
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management, OD
Dr. John L. Parascandola, Chief, History of Medicine Division, LO
Mr. Stanley J. Phillips, Deputy Executive Officer, OD
Dr. Henry Riecken, Associate Director for Planning and Evaluation
Mr. Arthur Robinson, EEO Coordinator
Mr. Mark J. Rotariu, Chief, Office of Financial Management, OD
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP

Others present included:

Dr. John C. Duffy, Assistant Surgeon General, PHS
Dr. William F. Raub, Deputy Director for Extramural Research and Training, NIH
Mr. Kenneth Cooke, Executive Officer, National Eye Institute, NIH
Mr. Gary Goubeau, Budget Analyst, NIH Budget Office
Mr. Joseph Howard, Director, National Agricultural Library
Mr. Edward H. McManus, Deputy Director, National Eye Institute, NIH
Mr. Julian Morris, Associate Director, Planning Analysis and Evaluation, National Eye Institute, NIH
Ms. Maureen R. Mylander, Special Assistant, Office of Communications, NIH

Members of the public present:

Mr. Thaddeus Plante, Legal Assistant, Kaye, Scholar, Fierman, Hays & Handler
Ms. Patricia Williams, Reporter, "The Blue Sheet"

I. OPENING REMARKS

Dr. L. Thompson Bowles, Chairman, welcomed the Regents and guests to the 78th meeting of the Board of Regents. General Vernon Chong of the Air Force is being transferred and is attending his last meeting. Also, the Chairman noted that member Dr. Charles Edwards has resigned from the Board of Regents, citing the press of other responsibilities.

Dr. Bowles noted that at the last meeting, two new initiatives were introduced that will likely involve the Board and the Library's staff for some time to come. One concerns the Library's public affairs program, the other is long-range planning. Both items will be addressed later in this meeting.

II. REMARKS OF THE DEPUTY ASSISTANT SECRETARY FOR HEALTH

The Deputy Assistant Secretary for Health and Surgeon General, Dr. C. Everett Koop, reported on a number of items, including the campaign for a "smoke-free society by the year 2000," the increase in the use by teenagers of smokeless tobacco and the relative lack of scientific knowledge about its effects, and the use of the children's book characters--the Berenstain Bears--in a new anti-smoking campaign. Another major initiative of the Surgeon General is the problem of violence as a public health problem; a cordial atmosphere within which to discuss this matter has been established between his office and the chief executives of the TV networks. A Surgeon General's workshop is planned (October 28-29, 1985) on the subject of violence as a public health problem. A last major initiative of his office is to get the "Baby Doe" regulations promulgated; comments are now being received after publication of draft regulations in the Federal Register. Finally, in a brief ceremony, Dr. Koop and Dr. John Duffy, Assistant Surgeon General and Editor in Chief of The Ship's Medicine Chest and Medical Aid at Sea, presented copies of the new edition to the Regents. The book speaks to emergency medicine for the merchant marine, Coast Guard, and others who spend extended periods at sea and is looseleaf and printed on waterproof paper. Dr. Koop acknowledged the help of NLM in preparing the index.

III. REMARKS OF THE NIH DEPUTY DIRECTOR FOR EXTRAMURAL RESEARCH AND TRAINING

Dr. William F. Raub, NIH Deputy Director for Extramural Research and Training, spoke briefly about long-range planning at NIH. Within the institutes and divisions, such planning is along fairly traditional lines; applied to NIH overall, however, these traditional approaches do not work well. Most of the institutes can state their concerns in terms of a few broad, well-defined goals; they can rationally allocate their strategic effort between intramural and extramural activities and between contracts and grants; and they have some scheme for tracking progress and evaluating their efforts. Although there are many superficial differences among the institutes and divisions in how they conduct program planning, there is a substantial core of similarity in their conceptual approaches. The planning activity of the National Eye Institute, which the Regents will hear about later, is particularly well developed, Dr. Raub said.

Program planning as conducted by the NIH Director is quite different from that within the institutes. The rubrics he used in describing the institutes' activities do not hold for overall NIH planning. Two important preconditions under which the NIH Director operates are that (1) there are 16 different appropriations for the NIH as a whole, each associated with a different scientific constituency; and (2) because NIH presents many faces to the outside world, ardent supporters frequently pay attention exclusively to individual institutes at the expense of other institutes and the overall organization. The basic differences between the intramural and extramural responsibilities and between grants and contracts also make planning difficult. Finally, there are cross-cutting themes, such as regulations concerning small business "set-aside" funds, that are not rooted in the appropriations process. Any approach to planning by the NIH Director must take all these into account. Dr. Raub then discussed planning in relation to NIH's effort to stabilize the number of new and competing research project grants at 5,000.

IV. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Regents approved the minutes of the October 18-19, 1984, meeting without change.

V. DATES OF FUTURE MEETINGS

The Board will meet next on June 6-7, 1985. The dates of October 10-11, 1985, previously scheduled, were changed to September 17-18, 1985 (Tuesday-Wednesday). The dates of February 6-7, 1986, were selected for the following meeting.

VI. REPORT OF THE DIRECTOR, NLM

Dr. Donald A. B. Lindberg discussed the budget situation: The 1985 operating level is \$55,910,000. The 1986 budget cannot be discussed until the President releases it. The 1985 budget represents an increase of \$5,690,000 over 1984. Most of this increase has been placed within the Extramural Programs which, as Dr. Lindberg explained, may not only award grants under the Medical Library Assistance Act, but also under the PHS general research authority (Section 301).

Dr. Lindberg described the Library's three high-priority areas: The first two, Medical Informatics and Integrated Academic Information Management Systems (IAIMS), have been previously presented to the Board and will be discussed later in this meeting. The third, the proposal to create a Unified Medical Language System, is new. This is a major long-range project to remedy the lack of a standard medical vocabulary, one of the most difficult problems faced by those who would use computers in medicine. There have been a few fragmentary efforts--for example, SNOP in pathology, SNODERM in dermatology, and SNOMED as an attempt at a general language. In Dr. Lindberg's opinion, none of the specialty organizations (or any individual academic institution) is in a position to solve the problem for all of medicine. He believes that NLM is the logical lead agency to undertake the task, collaborating with such organizations as the American Medical Association,

medical specialty groups, the insurance industry, and other government agencies. Some \$300,000 has been allocated this fiscal year by NLM to test the feasibility of developing such a system. The Director also described how NLM would respond this year to issues that were raised last year by the various Congressional committees before which NLM testified. These issues included Medical Informatics, IAIMS, effective methods of information dissemination, charging for various NLM services, and support of bioethics information activities.

Dr. Lindberg reported on a number of staff-related items: the impending retirement of Dr. Clifford Bachrach, Head of the Medical Subject Headings Section and Editor of Index Medicus; the resignation of Dr. Calvin Plimpton and his appointment as President of the American University in Beirut, Lebanon; and the appointments of Dr. Henry Riecken as Associate Director for Planning and Evaluation, Dr. Philip Teigen as Deputy Chief of the History of Medicine Division, and Mr. John Anderson as Director of Information Systems.

The Director briefly reported on several legislative items, including the Medical Library Assistance Act, the Torricelli Bill (concerned with laboratory animal welfare), and technology assessment. He also noted two recent successful meetings: last November's meeting (at NLM) of foreign MEDLARS Centers representatives, and the recent meeting of the directors of the major NLM-supported training programs. The latter will be made an annual meeting in the future. The Regents will later hear more about the meeting of the foreign MEDLARS Centers directors, as well as the status of public affairs planning, the sesquicentennial, scope and coverage of NLM's collections, and the new AMA/GTE network for physicians. He ended on a positive note by announcing that, through Dr. Schoolman's efforts, NLM has finally received permission from the Department to publish a catalog of its seventeenth century holdings.

VII. PRICING ISSUES RAISED AT IMPAG MEETING

Mr. Kent Smith, NLM Deputy Director, reported on the recent meeting of the International MEDLARS Policy Advisory Group (IMPAG), where the new policy of differential pricing for foreign users of NLM databases was introduced. He discussed the subject by reviewing, especially for the new Board members, the history of the database pricing issue. This has been previously described in Board minutes of February 1982, January 1983, and May 1983. At the May 1984 meeting, the Board concluded that foreign MEDLARS Centers may be charged a higher rate than domestic users on the premise that they are not U.S. taxpayers and thus do not share in supporting the creation and maintenance of the databases. Mr. Smith summarized the price increases; they are spelled out in the background material provided to the Regents. In general, the increase is \$3 per hour and either an additional 2 cents per offline citation (for tape users) or 10 cents per page (for online users). The changes become effective April 1, 1985. Mr. Smith said that the foreign Center representatives agreed with the philosophy of differential price increases for foreign Centers and had no objection to the way the increases are being calculated and implemented. They also agreed that a lower charge for less-developed countries was appropriate in certain instances.

Responding to Mr. Smith's presentation, Mrs. Shirley Echelman, who chairs the Regents' Subcommittee on Pricing, agreed with Mr. Smith's assessment. The foreign Centers, she said, have a sophisticated understanding of NLM's domestic position vis-à-vis information vendors in the private sector. They did voice a concern that overseas use by U.S. commercial firms might shift away from the foreign Centers and toward less expensive direct domestic access. The foreign representatives also suggested that NLM consider providing a certain amount of free access to the Centers for use in their marketing and training activities.

Mr. Lopez raised the question of whether information in NLM's databases that could be used in technology development (as opposed to patient care, for example) might be embargoed to foreign users. The export of technology, he reminded the Board, is currently a hot topic. Dr. Lindberg commented that it would be extremely difficult to distinguish between the two kinds of information. Also, in the case of MEDLINE, more than 50 percent of the information is from foreign sources anyway. Mr. Welsh agreed that this is an important point; however, because the Department of Defense and the Commerce Department are very much involved in the question of technology transfer to other countries, NLM should be prepared to defend its practice.

VIII. FOLLOWUP ON NLM PUBLIC INFORMATION ACTIVITIES

Mr. Robert Mehnert, Chief of the NLM Office of Inquiries and Publications Management, reported on recent activities to increase the prominence of NLM's public information programs. At the Regents meeting last October, the Chairman appointed an ad hoc task force, headed by Dr. DeBakey, to look into this and to report to the Regents. The task force met at the Library on December 14 and, with the assistance of a consultant, Dr. Joye Patterson of the University of Missouri School of Journalism, prepared a report which has been distributed to the Regents. Mr. Mehnert briefly summarized the report, which contains a series of recommendations about publicizing the NLM sesquicentennial, special publications, radio and television announcements, articles in professional and lay publications, exhibits, and audiovisual presentations.

Following his summary of the report, Mr. Mehnert conducted the first public demonstration of the new online NLM/NIH Information Service, an electronic bulletin board available over the AMA/GTE Medical Information Network (MINET). The bulletin board contains online news items from NLM, a list of recent literature searches published by NLM (that may be ordered online without charge), a provision to send an electronic message to the NLM Director, a roster of upcoming NIH meetings of clinical interest, information about NIH Consensus Development Conferences, and a list of diseases for which NIH is conducting clinical trials. The NLM/NIH Information Service is available to the 6,000 members of MINET; this number is expected to grow sharply in the near future as the result of increased promotion by the AMA and GTE.

Following Mr. Mehnert's presentation, Dr. Lois DeBakey emphasized the importance of disseminating information about NLM to demonstrate that the Library is fulfilling its responsibilities. Public knowledge about NLM is quite limited at the present time, she said. The level of knowledge must be raised both in professional audiences and in the lay public. This will mean interesting both professional publications and the mass media in the Library. It would be desirable to have some widely known health professional (such as the Surgeon General) do a television message on behalf of the NLM. The recommendations in the report of the task force, she said, constitute an ambitious program and that the staff of Mr. Mehnert's office will need to be augmented, perhaps with the services of a contractor. The services of such a contractor should be utilized both for sesquicentennial-related items and for public affairs projects. Financial assistance for some aspects of the program could come from the new "Friends of the National Library of Medicine" organization being formed. Dr. David Moline, a member of the ad hoc task force, voiced his strong support for the group's recommendations, as did member John Lopez. Mr. Lopez added that publicizing more the Library's services might help in ameliorating future conflict with private sector information organizations. Dr. Faye Abdellah said that the involvement of the individual Regents will be important to the success of many of the report's recommendations. Speaking for the Surgeon General, she said that he would be glad to help with making spot announcements for NLM and use his influence with the media. Dr. Eugene Stead said that he would be glad to place items about NLM in the North Carolina Medical Journal (he is the editor) and to get some exposure for NLM on local television in the Duke University area.

Dr. Bowles concluded the discussion by suggesting that since there are important budgetary and staff implications in the task force recommendations, the NLM staff, with the help of the task force, prepare an orderly plan of implementation to be presented at the next meeting. Individual actions by Board members that will help out in increasing public awareness of the Library's services need not await the formulation of such a plan, however.

IX. REPORT ON BOARD OF SCIENTIFIC COUNSELORS' MEETING

Dr. Harold M. Schoolman, NLM Deputy Director for Research and Education, reported briefly on January's meeting of the NLM Board of Scientific Counselors, the advisory group for the R and D activities of the Lister Hill Center. The Board reviewed four LHC projects: the TIME (Technical Innovations in Medical Education) Project; the pathology/videodisc program in medical education; a new project on dermatology (still in its planning stage); and the AI/RHEUM system (artificial intelligence in rheumatology). In general, the Board of Scientific Counselors was pleased with the progress made, especially with the Lister Hill Center's emphasis on projects related to medical education. They did express some concern about the lack of educational creativity in some of the projects. Their comments about the TIME system were quite similar to the reaction expressed by the Board of Regents when it received a demonstration of that project in October. Nevertheless, they were basically enthusiastic about the project and their objections were about relatively unimportant issues that further work by the LHC staff will

rectify. The Counselors were very supportive of the planned dermatology project, which will be done in conjunction with the American Academy of Dermatology. They were pleased that the AI/RHEUM system was now mounted at NLM and that Dr. Lindberg and Dr. Kingsland were pursuing its development (see following agenda item).

The Counselors discussed the issue of assessing computer software in medicine (in particular, expert systems). Although the subject occupied a significant part of their deliberations, there was no agreement on how this should be approached. It was suggested that AI/RHEUM might be studied as a model to answer the question of whether and to what extent NLM should become involved in assessing medical software. They further suggested that NLM might exercise bibliographic control of the literature in this field. Dr. Schoolman noted that there were some prestigious journals that NLM currently indexes that have begun to carry reviews of medical software.

The Counselors also showed great interest in Dr. James Woods' videodisc project in radiology and discussed at some length the problem of image quality of x-rays on a standard video monitor. An experienced radiologist on the Board had difficulty in discerning what was supposedly visible as the object of the lesson. What is required is a much higher quality monitor--not 512 lines/inch resolution, but 1024 and perhaps even higher. The photomicrographs on the pathology disc were much more useful for teaching purposes than the radiographs. Dr. Schoolman commented that the problem of bibliographic control--indexing--of images is a subject of interest to both Library Operations and the Lister Hill Center.

X. DEMONSTRATION OF ARTIFICIAL INTELLIGENCE SYSTEM

Dr. Lawrence C. Kingsland III, of the Lister Hill Center, described the artificial intelligence program in rheumatology known as AI/RHEUM, a criterion-based system developed by Dr. Kingsland, Dr. Lindberg, and others. It is an expert system--a computer program which combines knowledge of a particular application area with inference mechanisms that enable the program to use this knowledge in problem-solving applications. Its intended users are practicing physicians who do not have a specialty training in rheumatology. Dr. Kingsland discussed the philosophy behind the development of expert systems, whose domain, although not broad, is deep--the restricted area of expertise of the specialist. He described how AI/RHEUM was structured and then demonstrated the system online for the Regents. The system, if it is given valid input data, makes appropriate diagnostic decisions with a high degree of reliability. In 384 test cases, AI/RHEUM agreed with the consensus diagnosis of a panel of board-certified rheumatologist/clinicians 360 times (94%). The disease hypotheses produced by the system range from definite to probable to possible, depending on the degree of confidence based on the input data; the system also provides a summary of its reasoning. Dr. Kingsland responded to various questions while demonstrating the capabilities of the system. The Regents responded favorably and recommended continued development of the system.

XI. NLM LONG-RANGE PLAN

Dr. Bowles briefly introduced the topic by recalling the discussion at last October's Board meeting about the need for the Library to engage in long-range planning. This will become more and more important as NLM must make policy decisions in the face of constrained resources. Following this introduction, Mr. Julian Morris, Chief of the Office of Program Planning of the National Eye Institute, described in some detail the planning process at that Institute. Among the material earlier given to the Regents was the formal "1983 Vision Research National Plan." Mr. Morris distributed a document that contained NEI's basic definitions, examples of "program tracking tables" and priority summaries, and tables displaying the NEI national plan for tracking funding mechanisms.

Following Mr. Morris' presentation, Dr. Henry Riecken, NLM Associate Director for Planning and Evaluation, described what he thought were the four salient features of the NEI plan. First, there is broad participation in the plan. It involves the NEI advisory council, the Institute staff, external experts, and it draws upon the knowledge and skills of the communities affected by the plan. If NLM were to adopt this model, it would involve a substantial commitment by the Board of Regents and other external experts, as well as staff time. The second noteworthy feature of the plan is the structure of its planning groups--the five groups in the different disease categories. They are not in a one-to-one correspondence with the organizational structure of the Institute's extramural programs. To emulate this structure would require NLM to invent a structure of information management that cross-cuts the organizational boundaries within NLM. Examples within a new NLM taxonomy might be knowledge representation, information synthesis, document delivery, information storage and preservation, institutional development (public affairs and legislative liaison), etc. This would have the salutary effect of unbinding our thinking and freeing us from "incremental" planning. The third feature is the plan's attempt to set priorities--to choose among equally meritorious activities. There is an important difference, however, between NLM and NEI in this regard in that the Library has a wider diversity of activity than just "research": in-house service functions, networking, and so forth, in addition to research. The last feature of the NEI plan, said Dr. Riecken, is its iterative nature. The plan has gone through successive revisions and is being improved each time. He closed by saying that there is an important task for an NLM planning office in "coordinating to coherence" the efforts of the distributed working groups to result in a credible and comprehensive plan.

Following Dr. Riecken's presentation, Dr. Bowles commented that to develop a plan such as that devised by NEI could be an extremely important step for the Library. It would require a willingness to commit resources, both staff time and monetary resources. Dr. Lindberg agreed that the NEI plan was a good model and that NLM will use it as a guide. He emphasized that such a plan would be to a large extent the Board's creation, so that the Regents must be prepared to make a major commitment. The Board unanimously approved a recommendation calling for the NLM staff to investigate how to adapt the NEI planning model to the Library and to report to the Regents in June. Mrs. Echelman and Mr. Welsh suggested that it would be important to have an outside perspective at the outset of what NLM is now doing as a sort of "zero-based planning."

XII. SCOPE AND COVERAGE

Mrs. Lois Ann Colaianni, NLM Associate Director for Library Operations, reported on recent staff activities related to updating scope and coverage criteria for the Library's collections and services. At last May's Board meeting a number of issues were raised: Where does NLM draw the line so that items in the collection are of relevance to our users and items excluded are likely to be of little potential relevance? To what extent is it desirable to have a single source of information? How much overlap with other services is necessary and desirable? These and other questions are being addressed by staff. Some of these questions arose as a by-product of efforts to revise the Scope and Coverage Manual. Other questions emerged as NLM worked with the National Agricultural Library to define collection responsibilities in the area of veterinary medicine. The NLM-sponsored Drexel Study of the Library's coverage of the medical/behavioral sciences also raised questions about scope and coverage.

Mrs. Colaianni briefly described a recent staff study that looked at five scope and coverage issues: selection and acquisition, cataloging, indexing, loan and onsite use, and presentation. The study--using the "Delphi" technique--solicited the opinions of four groups, and a summary of the findings was presented to the Regents. There were patterns of general agreement: That NLM's collection and services should be viewed as part of a broad array of available information resources; on active referral of NLM's users to other information services, when appropriate; that NLM should work with other services to make switching among complementary services easier; that format should not be a consideration in acquiring materials for the collection; that NLM should have cataloging data for all materials in its collections, and make these data available; and that the need to preserve the original format varies, but the content should be preserved in all cases. There were several areas of little agreement: to what extent NLM should collect software and machine-readable databases; whether NLM should collect all basic works in subject disciplines that intersect with biomedicine; whether NLM should acquire materials that have use restrictions; and whether NLM should provide exhaustive indexing coverage of NIH-sponsored research. Staff will implement changes arising from the areas of agreement and will further discuss the areas of disagreement and arrive at reasonable policies.

The study has already been helpful in revising the Scope and Coverage Manual, Mrs. Colaianni said. The effort began in 1982 with the advice and approval of the Board of Regents (Dr. Abdellah is the Board's liaison on the project). It has been a major undertaking, involving outside consultants as well as NLM staff. The revision is almost complete and the new manual will be issued later this year under a new title: The Collection Development Manual of the NLM. Revisions will be facilitated in the future since the text will be stored electronically. Mrs. Colaianni said the goals of the revision were to: clarify selection guidelines in problem areas; reflect medicine's growing areas better; improve the manual's format; and clarify the relationship of collection policies of the NLM, the Library of Congress (LC), and the National Agricultural Library (NAL). She briefly described how the new manual was organized and how each goal was being met, as well as reviewing the accepted definitions of the various collecting levels.

The principal areas of overlap between the LC and NLM collections is in the area of the political/economic/social aspects of health care and the health care delivery system, where LC covers the popular literature related to these and NLM the technical and scientific literature addressed to health professionals. NAL and NLM have recently agreed on a joint statement regarding veterinary science collecting policies; this has been incorporated into the revised manual. Mrs. Colaianni briefly described the respective policies of the two libraries. NLM and NAL are now looking into ways to speed interlibrary loans and comparing their indexing coverage of the journal literature.

The literature selection consultants that recommend to NLM the journals that should be indexed have recommended a policy on coverage of basic works in fields that intersect with biomedicine that is very similar to the collection policy recommended by the outside consultants for the scope and coverage manual. They have recommended that NLM not index such materials because they have insufficient direct relationship to medicine and health and they are covered by other services. This recommendation will be examined further by NLM staff. NLM is also investigating the possibility of indexing articles resulting from NIH support that are published in journals not normally indexed by the Library. Mrs. Colaianni briefly described actions taken by the staff in response to the Drexel Study of the Library's coverage of the medical/behavioral sciences: several of the recommended journals have been added for indexing; guidelines for selective indexing of journals have been revised; and, perhaps most important, the methodology devised will serve as a useful model for evaluating coverage in subjects other than the medical/behavioral sciences. Medical informatics and health services research are two such subjects scheduled for review.

Following Mrs. Colaianni's presentation, Dr. Faye Abdellah complimented the Library Operations staff on the entire scope and coverage effort and commented that this evaluation is an integral part of the long-range planning discussed earlier at the meeting. Dr. Riecken agreed that there are indeed strong implications for long-range planning. He commented that revising scope and coverage is an unending job and said that he is pleased that NLM is using the citation analysis method introduced by the Drexel Study. He is concerned, however, that certain of the recommendations about journal indexing coverage are not being implemented. Mrs. Echelman said that NLM should be complimented on its fine work in refining its scope and coverage policy. She would like to see the manual become a keystone in the efforts of the Association of Research Libraries' effort in collection development nationally. Dr. Lindberg pointed out several remaining problems. For example, we need more outside (non-librarian) opinions about the nature and extent of the services NLM should offer. Also, the immense area of engineering will be a source of ambiguity in our collection policy. Mr. Joseph Howard, Director of NAL, said they were pleased to work with NLM in the area of veterinary medicine and he hopes the two libraries will similarly cooperate in the area of nutrition.

XIII. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. Cooper drew attention to two items in the agenda folder: (1) A copy of the draft proceedings of the October Symposium on Integrated Academic Information Management Systems (IAIMS). A printing of 3,000 copies is in process and will be widely distributed. (2) Announcements were made in the NIH Guide for Grants and Contracts to solicit a greater number of qualified applications for NLM's programs in Medical Informatics, IAIMS, and a Specialized Reference Center for Bioethics Literature. These announcements were also mailed to interested institutions and past and current applicants. The renewed effort for additional applications in these fields was made possible as a result of the increase in 1985 appropriations for the Extramural Programs of the Library.

Dr. Cooper shared highlights of the symposium with the Board by first giving a brief review of the history of the IAIMS program to the present. The impetus has come from studies that NLM has undertaken, beginning with the Stead Report, and continuing with the Sherman Task Force and the recent AAMC Study. The symposium involved the four original awardees of the IAIMS contracts, and their full participation and candid observations were important factors in the symposium's success. It was NLM's intention to advance a better understanding of the program not only to the rest of the community, but among the principal investigators themselves. The latter was accomplished at a presymposium meeting on the preceding day and led to detailed discussions and exchange of experiences between the principal investigators and with NLM senior staff. The symposium on the following day attracted representatives from health science institutions, as well as a number of attendees from the private sector, including information technology corporations, foundations, and professional journals. The agenda included presentations from each of the four contract awardees, beginning with Dr. Thomas Morris of Columbia-Presbyterian Medical Center, and continuing with Ms. Naomi Broering of Georgetown University, Dr. Marjorie Wilson of the University of Maryland, and Dr. Homer Warner of the University of Utah. Dr. John A. D. Cooper of the AAMC and Ms. Nina Matheson of the Welch Medical Library, who had coauthored the AAMC Report, presented perspectives on IAIMS planning and summary remarks; and Dr. William Mayer, who served as the chairman of the original advisory committee for the AAMC Study, gave his personal views and perspectives. At the conclusion of the remarks the audience was encouraged to participate in a question-and-answer session, resulting in an interesting and stimulating interaction between the audience and the presentors. It was obvious to all--presentors, observers and staff--that each institution is putting forth an intense effort reflecting long-range programmatic and fiscal commitments. Each IAIMS institution noted the value of having NLM as the initial stimulus and agreed that the NLM award made it possible to start these complex academic health care centers on their way to planning an integrated system and thinking in terms of a combined institutional effort with top leadership and fiscal support. The symposium also brought to the forefront the importance of sharing experiences. Recent NLM announcements have also identified the need for IAIMS-related research, complementing but distinguished from IAIMS strategic planning. Some of the possible research topics include:

- Computer and communications systems applications to large-scale networking and file integration.

- Organizing structures and display mechanisms--how one deals with that approach vis-à-vis the use of computer terminals for accessing individual and multiple data bases.
- Linguistic and human factors.
- Information policy--important aspects of ownership, privacy, costs and cost recovery.

Board Operating Procedures

As required annually, Dr. Cooper presented for review the Board Operating Procedures--"Guidelines for Adjustments by Staff in Time or Amount of Grant Award." The Board reaffirmed the guidelines without change.

XIV. APPOINTMENT OF NOMINATING COMMITTEE

Dr. Bowles appointed a committee to present nominations at the June meeting for next year's Board Chairman. Mr. Welsh (Chairman), Dr. Abdellah, and Mr. Hahn were asked to serve.

 MEETING CLOSED FOR THE REVIEW OF GRANT APPLICATIONS - 11:15 A.M., January 25

XV. REVIEW OF PENDING APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP, informed Board members of confidentiality and conflict-of-interest procedures and reminded them to sign, at the conclusion of the grant application review, the statement that they had not participated in the discussion of any application where conflicts of interest might occur.

The Board concurred with 41 recommendations of the Extramural Programs Subcommittee which met on January 23. The Board on January 25 reviewed a total of 45 applications of which 19 were recommended for approval and 23 for disapproval. Three applications were deferred. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment B). Interim actions taken by Extramural Programs staff since the October Board meeting were noted.

XVI. ADJOURNMENT

The meeting was adjourned at 12:05 p.m., Friday, January 25, 1985.

* * * * *

Wednesday, January 23, 1985, 1:00 to 3:00 p.m.
(EP Subcommittee--List of Attendees under Attachment C)
Thursday, January 24, 1985, 9:00 a.m. to 5:15 p.m.
Friday, January 25, 1985, 9:00 a.m. to 12:05 p.m.

* * * * *

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board called for NLM staff to investigate adapting the National Eye Institute long-range planning model to the Library and to report back at the June Board meeting.
2. The Board reaffirmed the Board Operating Procedures--"Guidelines for Adjustments by Staff in Time or Amount of Grant Award."
3. The Board Chairman appointed a committee to present nominations at the June meeting for next year's Chairman.
4. The Board concurred with the 41 recommendations of the Extramural Programs Subcommittee. Grant applications recommended for approval are listed in the summary actions (Attachment B).

* * * * *

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

Donald A. B. Lindberg 4/2/85

 Donald A. B. Lindberg, M.D. (Date)
 Executive Secretary

L. Thompson Bowles MD 4-10-85

 L. Thompson Bowles, M.D., Ph.D. (Date)
 Chairman

BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINECHAIRMAN

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 Dean for Academic Affairs and
 Professor of Surgery
 The George Washington University
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DeBAKEY, Lois E., Ph.D. (8/3/86)
 Professor of Scientific Communications
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 Associate Dean for Admissions,
 The University of Texas Medical School
 at Houston, and
 Medical Director, Rehabilitation Center
 University of Texas/M.D. Anderson
 Hospital and Tumor Institute
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 Houston, TX 77030 713-792-4711 p.m.

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STEAD, Eugene A., Jr., M.D. (8/3/88)
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EX OFFICIO MEMBERSPrimary

BOORSTIN, Daniel J., Litt.D.
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Alternate

WELSH, William J., LL.D.
 Deputy Librarian of Congress
 Library of Congress
 James Madison Memorial Bldg., Room 608
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 Washington, DC 20540 202-287-5215

Board of Regents Roster (Continued)

Primary

BRALLIAR, Max B., Lt. Gen., USAF, MC
Surgeon General
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202-767-4343

GRONVALL, John A., M.D.
Acting Chief Medical Director
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Washington, DC 20201 202-245-6467

MITTEMEYER, Bernhard, Lt. Gen., MC, USA
The Surgeon General
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Surgeon General
Office of the Chief of Naval
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Alternate

CHONG, Vernon, Brig. Gen., USAF, MC
Commander
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Continuing Education Resources Services
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HASTINGS, James E., Col., MC, USA
Chief, Graduate Medical Education Branch
Education and Training Division
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DYSART, Noel, Capt., MC, USN
Asst. for Professional Training
Office of the Chief of Naval
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EXECUTIVE SECRETARY

LINDBERG, Donald A. B., M.D.
Director
National Library of Medicine
Bethesda, MD 20209 301-496-4725

APPLICATIONS APPROVED BY COUNCIL 1/
 (ARRANGED NUMERICALLY BY PROGRAM)
 PROG. CLASS: COUNCIL DATE: JAN./FEB. 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM04100-01A1	HOSPITAL ORGANIZATION RESEARCH SYNTHESIS	01A1 39,946 02 22,666
1 R01 LM04298-01	DUALS SECONDARY REVIEW: AM COMPUTER-BASED PATHOLOGY CONSULTATION SUBMODULE	01 98,306 02 62,794 03 67,182
1 R01 LM04338-01	CATALOGUE OF MEDICAL WRITINGS IN OLD AND MIDDLE ENGLISH	01 39,590 02 26,755
1 R01 LM04341-01	THE HARVEIAN CIRCULATION: BACKGROUND AND DISCOVERY	01 35,879
1 R01 LM04342-01	YELLOW FEVER AND THE MODERNIZATION OF MEDICINE IN BRAZIL	01 17,923
1 R01 LM04344-01	CLONED DNA BY CHROMOSOME LOCATION	01 32,650 02 25,530 03 27,452
1 R01 LM04369-01	DUALS SECONDARY REVIEW: MH PSYCHOTHERAPY IN BOSTON AT THE TURN OF THE CENTURY	01 18,030
1 R01 LM04372-01	DUALS SECONDARY REVIEW: HD MIGRATION AND FERTILITY-IMP SPECIAL ISSUE	01 43,197

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations
 and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
 (ARRANGED NUMERICALLY BY PROGRAM)
 PROG. CLASS: COUNCIL DATE: JAN./FEB. 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM04375-01	DUALS SECONDARY REVIEW: MH	01 38,842
		02 41,071
	MEDICAL PROBLEM SOLVING AND CLASSIFICATION LEARNING	03 44,207

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL - DUAL REVIEW 1/
(ARRANGED NUMERICALLY)
COUNCIL DATE: JAN./FEB. 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 HS05259-01	DUALS SECONDARY REVIEW: LM	01 30,884
	SEARCHING FOR HEALTH SERVICES INFORMATION IN CONGRESS	02 18,066

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
 (ARRANGED NUMERICALLY BY PROGRAM)
 COUNCIL DATE: JAN./FEB. 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE
 PROG. CLASS:
 APPLICATION NUMBER PROJECT TITLE
 1 K04 LM00083-01
 COMPUTER-BASED PATHOLOGY CONSULTATION
 AMOUNTS
 RECOMMENDED
 01 47,798
 02 47,952
 03 48,117
 04 48,293
 05 48,481

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
 (ARRANGED NUMERICALLY BY PROGRAM)
 PROG. CLASS: COUNCIL DATE: JAN./FEB. 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G08 LM04284-01A1	INTEGRATION OF BIBLIOGRAPHIC DATA OF FIVE MEDIA CENTERS	01A1 53,264 02 53,457
1 G08 LM04325-01	UTAH PRECEPTORSHIP NETWORK	01 69,665
1 G08 LM04358-01	INTEGRATED LIBRARY SYSTEM	01 189,415 02 104,470 03 23,254

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations
 and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
 (ARRANGED NUMERICALLY BY PROGRAM)
 PROG. CLASS: COUNCIL DATE: JAN./FEB. 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G07 LM04345-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM04348-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM04354-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,250
1 G07 LM04363-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

B O A R D O F R E G E N T S

EXTRAMURAL PROGRAMS SUBCOMMITTEE MEETING

January 23, 1985

A T T E N D E E S

Subcommittee Members Present:

Brig. Gen. Vernon Chong
Dr. Lois E. DeBakey
Dr. Albert E. Gunn
Dr. Grant V. Rodkey

NLM Staff Present:

Dr. William G. Cooper, Associate Director, EP
Mr. Arthur J. Broering, Deputy Associate Director, EP
Mrs. Ruth Bortz, Grants Management Specialist, EP
Dr. Jeanne L. Brand, Chief, International Programs Branch, EP
Mr. Brian R. Campbell, Administrative/Grants Management Officer, EP
Mr. Peter Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant, EP
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Mrs. Rose Marie Holston, Program Analyst, EP
Mrs. M. Kathleen Nichols, Grants Management Specialist, EP
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Mr. Randall Worthington, Program Officer, EP
Ms. Lisa Tamaroff, Grants Clerk, EP

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

79th Meeting of the

BOARD OF REGENTS

9:00 a.m., June 6-7, 1985

Board Room
Mezzanine of

National Library of Medicine

MEETING OPEN: All day on June 6 and from 9:00 to approx. 10:45 a.m. on June 7.
MEETING CLOSED: From 10:45 a.m. to adjournment on June 7 for the review of grant applications.

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. L. Thompson Bowles
- II. REMARKS BY THE DEPUTY DIRECTOR FOR INTRAMURAL RESEARCH, NIH Dr. J. E. Rall
- III. CONSIDERATION OF JANUARY MINUTES TAB I Dr. L. Thompson Bowles
(Agenda Book)
- IV. FUTURE MEETING DATES:
- Fall Meeting: Sept. 17-18, 1985 (Tues.-Wed.)--CONFIRMED
Winter Meeting: Feb. 6-7, 1986 (Th-F)--TENTATIVE
Spring Meeting: May 22-23 OR May 29-30 OR June 5-6, 1986--PROPOSED

PLEASE NOTE: American Society for Information Science (ASIS)
Annual Meeting - Oct. 20-24, 1985 - Las Vegas
Symposium of Computer Applications in Medical Care
(SCAMC) Annual Symposium - Nov. 10-13, 1985, Baltimore
Society for Thoracic Surgeons - Annual Meeting -
January 27-29, 1986 - Washington, D.C.
American Assoc. for Medical Systems and Informatics
(AAMSI) - May 12-14, 1986 - Annual Mtg. - San Francisco
AAAS Annual Meeting - May 25-30, 1986 - Philadelphia
Medical Library Association Annual Meeting - May 16-22,
1986 - Minneapolis
Special Libraries Association Annual Meeting -
June 6-12, 1986 - Boston
American Medical Association Annual Meeting -
June 15-19, 1986 - Chicago
American Nurses Association Convention - June 13-19,
1986 - Anaheim

COFFEE BREAK

REPORT OF THE DIRECTOR, NLM

TAB II
Tabs A - F

Dr. Donald A. B. Lindberg

Discussion

Board Members

I. MEDICAL ELECTROGRAPHIC PROGRAMS

Mr. John K. Lopez

Discussion

Board Members

(Photograph to be taken of Board members
on front steps of Library.)

12:00-12:10

LUNCHEON CATERED IN CONFERENCE ROOM "B"

12:10- 1:00

II. NLM LONG-RANGE PLAN

TAB III

Dr. Henry Riecken
Board Planning Group,
Discussants

Discussion

Board Members

III. UPDATE ON PUBLIC INFORMATION ACTIVITIES

TAB IV

Mr. Robert Mehnert
Board Task Force,
Discussants

Discussion

Board Members

COFFEE BREAK

X. TIME--Stage of Development

TAB V

Dr. William Harless

Discussion

Board Members

REPORT OF THE NOMINATING COMMITTEE

Mr. William J. Welsh

I. NLM DIRECTOR'S AWARD

Dr. Donald A. B. Lindberg

R E C E S S

D E P A R T M E N T O F H E A L T H A N D H U M A N S E R V I C E S

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS
MINUTES OF THE 79TH MEETING
JUNE 6-7, 1985

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/
June 6-7, 1985

The Board of Regents of the National Library of Medicine was convened for its seventy-ninth meeting at 9:00 a.m. on Thursday, June 6, 1985, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. L. Thompson Bowles, Chairman of the Board of Regents and Dean for Academic Affairs and Professor of Surgery, The George Washington University Medical Center, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on April 24, 1985, the meeting was open to the public from 9:00 to 4:30 p.m. on June 6 and from 8:30 to 9:20 a.m. on June 7. The meeting was closed from 9:20 to adjournment at 11:30 a.m. on June 7 for the review, discussion, and evaluation of grant applications. A Board roster is enclosed under Attachment A.

Board members present were:

Dr. L. Thompson Bowles
Dr. Lois E. DeBakey
Mrs. Shirley Echelman
Mr. Russell L. Fenwick
Dr. Albert E. Gunn
Dr. David T. Kingsbury (Ex officio)(June 6)
Mr. John Lopez
Dr. David O. Moline
Dr. Grant V. Rodkey
Dr. Eugene A. Stead, Jr.

Alternates to ex officio members present were:

Dr. Faye G. Abdellah, representing Dr. C. Everett Koop.
Brig. Gen. Thomas P. Ball, Jr., USAF, MC, representing Lt. Gen. Max B. Bralliar.
Capt. Noel Dysart, representing Vice Admiral Lewis H. Seaton.
Mr. James M. Hahn, representing Dr. John W. Ditzler.
Dr. Robert Rabin, representing Dr. David T. Kingsbury (June 7).
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin.

Unable to attend:

Col. James E. Hastings

1/For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Donald A. B. Lindberg, Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education
Mr. John Anderson, Director, Information Systems, OD
Dr. Jeanne Brand, Chief, International Programs Branch, EP
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth Carney, Executive Officer, OD
Ms. Lois Ann Colaianni, Associate Director for Library Operations
Dr. William G. Cooper, Associate Director for Extramural Programs
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Mr. B. Earl Henderson, Acting Director, Lister Hill National Center for
Biomedical Communications
Ms. Betsy L. Humphreys, Deputy Associate Director for Library Operations
Dr. Henry M. Kissman, Associate Director for Specialized Information
Services
Mr. Sheldon Kotzin, Chief, Bibliographic Services Division, LO
Ms. Eve-Marie Lacroix, Chief, Reference Services Division, LO
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications
Management, OD
Mr. Stanley J. Phillips, Deputy Executive Officer, OD
Dr. Henry Riecken, Associate Director for Planning and Evaluation
Mr. Arthur Robinson, EEO Coordinator
Mr. Mark J. Rotariu, Chief, Office of Financial Management, OD
Dr. Elliot R. Siegel, Special Assistant for Operations Research, OD
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP

Others present included:

Dr. J. E. Rall, Deputy Director for Intramural Research, NIH
Ms. Grace McDonald, Extramural Associate, NIH
Ms. Ileen E. Stewart, Executive Secretary, Special Study Section, DRG, NIH

Members of the public present:

Mr. Ken Burgess, President, DataSpan, Orchard Park, New York
Mr. Thaddeus Plante, Legal Assistant, Kaye, Scholar, Fierman, Hays & Handler
Mr. Dan Triscari, National Sales Manager, DataSpan, Orchard Park, New York
Ms. Patricia Williams, Reporter, "The Blue Sheet"

I. OPENING REMARKS

Dr. L. Thompson Bowles, Chairman, welcomed the Regents and guests to the 79th meeting of the Board of Regents. He recognized a new ex officio member: Brigadier General Thomas P. Ball, Jr., Commander of the Malcolm Grow Medical Center at Andrews Air Force Base.

Dr. Bowles noted that the Library is continuing to operate in a "fascinating" Federal budgetary environment, unique to his knowledge. There is much budget negotiating taking place in the House and Senate, and it will be some time before we know exactly what the 1986 budget will contain. He also commented about the evolving interest in medical informatics and information management as applied to biological science and clinical practice. Greater and greater importance is being attached to this newly recognized field of endeavor. He and Dr. Lindberg participated in a well-attended conference on medical informatics sponsored by NLM and conducted by the Association of American Medical Colleges. Dr. Bowles concluded his opening remarks by emphasizing the importance of the discussion that would take place later in the day about the role of the Regents in NLM's long-range planning.

II. REMARKS OF THE NIH DEPUTY DIRECTOR FOR INTRAMURAL RESEARCH

Dr. J. E. Rall noted that the primary role of the Library as a collector and disseminator of biomedical information is enshrined in item one of Section 301 of the Public Health Service Act--the basic legislative authority for the National Institutes of Health. He reminisced about how literature searching by scientists has changed for the better over the last two decades, primarily as a result of services introduced by NLM. He said he hoped that the Library would be as successful in addressing the problems and opportunities of the future, and he cited NLM's plans in developing a unified medical language as one important component of this future. Dr. Rall commented briefly on the current status of budget and legislative matters affecting NIH. It was his assessment that a "reasonable" level of funding was in prospect for both NIH and NLM. H.R. 2409, introduced by Representatives Waxman and Madigan, would create two new institutes at NIH (for arthritis and nursing); a similar bill last year was vetoed by the President. The bill would authorize two new ex officio Regents for the Library: the Director of the National Agricultural Library and the Dean of the Uniformed Services University for the Health Sciences. He concluded his remarks by thanking the Regents for their support of the Library.

III. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The minutes of the January 24-25, 1985, meeting were amended by the substitution of "NIH-sponsored" for "NLM-sponsored" on page 10, paragraph 2, line 18, and unanimously approved.

IV. DATES OF FUTURE MEETINGS

The Board will meet next on September 17-18 (Tuesday-Wednesday), 1985. The dates of February 6-7 were confirmed for the winter meeting. The dates of June 5-6 were selected for next spring's meeting.

V. REPORT OF THE DIRECTOR, NLM

Dr. Donald A. B. Lindberg discussed the NLM budget situation--the President's FY 1986 budget contains \$53,320,000 for NLM, down from the FY 1985 operating level of \$55,848,000. Budget reductions will of necessity come primarily out of Library Operations, Dr. Lindberg said, with lower spending for acquisitions, processing, and publications. There is a counterview to the Administration's 1986 health budget that has been prepared by the Ad Hoc Group for Medical Research Funding. This group favors an increase of \$12,000,000 for NLM in 1986. Also testifying for an increase for the Library was the Medical Library Association, the Association of Academic Health Science Library Directors, and the American College of Medical Informatics, all of which have suggested an increase of about \$12,000,000. Dr. Michael DeBakey testified for a similar increase and drew attention to the distinguished record of the Library.

The House and Senate hearings were friendly and favorable to NLM, Dr. Lindberg said, with a number of penetrating questions being asked about IAIMS, the need for a unified medical language, and MEDLARS pricing. The bill currently before the Congress would reauthorize the Medical Library Assistance Act at the level of \$12,000,000; this would be a satisfactory level. Also, on the legislative front, Dr. Lindberg noted that Rep. Torricelli has reintroduced his bill about animal welfare; this proposed legislation would have a profound effect on the Library.

The Director announced several staff appointments: Duane Arenales, Chief of the Technical Services Division, and Eve-Marie Lacroix, Chief of the Reference Services Division. There have been several sabbatical appointments from the academic world: Dr. Dennis Fryback from the University of Wisconsin, doing research on decision-making at the Lister Hill Center; Dr. Yohannes Yesus from the University of Missouri, doing research on expert systems; Dr. Thomas Hall from Washington University, doing historical research at NLM; and Dr. Walter Holland, an NLM Fogarty Fellow from Oxford University. Dr. John Starkweather of the University of California at San Francisco will be coming on sabbatical to NLM in September 1985.

Dr. Lindberg noted several brief items about NLM information systems. (1) He lauded the Library's computer operations staff for making NLM's online databases available essentially 24 hours a day beginning June 1. (2) DOCLINE, an online service for transmitting interlibrary loan requests, became operational this spring. There was great enthusiasm for DOCLINE at the recent Medical Library Association meeting. (3) NLM is working to improve the "front end" of MEDLINE to simplify access for inexperienced users. (4) The commercial sector has been informed that NLM is willing to provide documentation of the MEDLARS retrieval software to companies that may wish to develop optimal user "front-end" interfaces for their clients. (5) There are a number of companies with whom NLM is cooperating to experiment with putting NLM online databases on videodisc. (6) By the next Board meeting there will be one or two new commercial vendors of MEDLINE. (7) NLM has started the long process of describing and justifying future computer requirements and soliciting approval for new hardware.

There is a proposed new Office of Management and Budget circular concerning Federal information management policy. It contains a section that would require Federal agencies, before offering an information product or service, to consider whether it is reasonable to expect that another organization, public or private,

would offer such a product or service if the agency did not. "If so, then the agency should not disseminate the information product or service." NLM, NIH, and such organizations as the Association of Research Libraries and the American College of Physicians have offered comments to OMB objecting to this section (among others) of the proposed policy. Dr. Lindberg sent a letter to the Office of Management and Budget on May 10 expressing his concerns about the circular. Later in the meeting, Dr. Rodkey moved that the Board formally endorse the letter, and this motion was passed unanimously.

At the Director's request, Dr. Harold Schoolman elaborated on the Symposium on Medical Informatics: Medical Education in the Information Age, held on March 7-8 at the Association of American Medical Colleges and alluded to earlier by the Chairman. The Symposium will result in a report on the state of the art in medical informatics that identifies problems in the field and makes recommendations on how the academic community should respond. The Steering Committee that is writing the report includes a number of well-known figures in the medical informatics field. A first draft of the report will be ready in about three months; final publication is expected in March 1986.

Dr. Lindberg concluded his report by mentioning briefly recent activities to form a "Friends of the Library" group; a workshop on artificial intelligence being hosted by NLM in July; the visit earlier this year by Dr. Frank Young, FDA Commissioner; and encouraging discussions with representatives of the American Medical Association about collaborating to develop a unified medical language.

Following the Director's report, there was extensive discussion about the implications of the proposed OMB Federal information policy circular. Mrs. Echelman described the activities of the Association of Research Libraries (ARL) in gathering the comments of other organizations to present them to the OMB. She distributed to the Regents the formal ARL response to the proposed policy. It is her opinion that the OMB circular is "one of the most dangerous documents to come out of a U.S. Federal agency since the Alien and Sedition Act which was adopted by Congress in 1798." She said that the policy will limit severely the availability of information of all kinds from the Federal government. The scientific community, she continued, should be made aware what it would mean to the dissemination not only of research information, but also of clinical information. It may also have a profound impact on the private sector--information heretofore provided to companies by government agencies may no longer be available to them. Several of the Regents suggested that the health community should not be too global in its objections, but should narrow its arguments to those that are pertinent to biomedicine. Mr. Welsh pointed out that there are some members of Congress who agree with the thrust of the circular and that their point of view should be considered before health organizations formulate their response. Mr. Lopez added that another aspect of the controversy is the wide concern these days for the transfer of valuable technological information to other countries.

VI. MEDICALELECTROGRAPHIC PROGRAMS

Mr. John K. Lopez, Executive Vice President of Medicalectrographic Instrumentation, Inc. (MEGI), and a member of the Board of Regents, described the innovative systems and services developed by that firm in the area of onsite diagnostic and patient management services by medical specialists. This is done through telephonic and/or satellite transmission of patient information, including

electrocardiographic (EKG), electroencephalographic (EEG), electroradiographic x-ray and image (ERG), and electropathographic (EPG) data. Mr. Lopez showed the Regents a suitcase-size, full-scale model of the satellite antenna used; the other equipment required was also quite portable, totaling 42 pounds. Aided by his colleagues, Mr. Dan Triscari and Mr. Ken Burgess, he demonstrated the "live" transmission of several high-quality radiographic images by satellite to the Mayo Clinic and back to NLM (speed: 9600 baud; resolution: 512 x 512). The system is designed to allow specialists to receive accurate images and data from remotely located patients, thus enabling the specialist to render a diagnosis without actually "seeing" first-hand the x-rays (or other images) or the patient. Because the system can use satellite communications, it also has great potential in lesser-developed countries where land-based telephone communication is unreliable or lacking altogether. The extreme ease of use of the system will also facilitate its use by untrained personnel.

VII. NLM LONG-RANGE PLAN

Dr. Henry Riecken, NLM Associate Director for Planning and Evaluation, reported on recent developments in NLM's planning. He emphasized three aspects: a planning model has been evolved; a planning process has been structured; and NLM senior staff have become actively involved in the planning operation. The evolution of the planning model was facilitated by several groups of consultants earlier this year. The model employs the concept of a 20-year goal which is not absolutely clear; that is, a "fuzzy goal." In the 10-year range there are what Dr. Riecken called "windows of opportunity"--sets of circumstances (legal, technological, economic, etc.) that allow one to make progress toward the fuzzy goal. A set of "impediments" also lurks in the 10-year range. The planning model requires that these windows and impediments be identified and that steps be taken so that within the next three to five years, progress toward these windows is facilitated and the removal of the impediments is begun. These steps, which must be undertaken within the three to five year range, are the initiatives that NLM will ask its planning panels to suggest.

The second aspect, the structure of the planning process, involves the development of a taxonomy of medical information activities and five panels of experts to help guide the process. The five information domains around which panels are organized are: building and organizing the Library's collection; locating and gaining access to medical and scientific literature; obtaining factual information from databases; research in medical informatics; and assisting health professions education through information technology. Dr. Riecken noted that NLM staff will not be appointed to membership on the panels, although their views will be represented in background papers given to the panels, and they may be called on as resource persons.

In discussing the third aspect--staff involvement--Dr. Riecken described the successful retreat of NLM senior staff on May 13-14 to discuss planning. The Director had presented his vision of NLM's fuzzy goal at the retreat and, using viewgraphs, Dr. Lindberg briefly described the goal to the Regents. He did this by contrasting NLM's goal as it might have been stated in 1965--including elements of rapid bibliographic retrieval, rapid interlibrary loan, network sharing of collection resources, and so forth. He identified several windows of opportunity and impediments that would have presented themselves. Today, he

said, we can hypothesize a fuzzy goal looking toward 2005 that posits: (1) All U.S. biomedical professionals should have computerized access to practice-linked information--citations, abstracts, full text, teaching/testing programs, expert consultant systems, and raw data appendicial files. (2) Patients shall have the right to choose the service that stores and maintains their medical records, including the possibility that they be part of IAIMS arrangements. (3) There will be a substantial cadre of well-trained library, information, and medical specialists. Windows of opportunity will involve informatics training, Dr. Lindberg said, and also automated indexing, a unified medical language, greater computational capability, health planning (lifetime costing of care), and needed legislation. He noted that for all practical purposes, if you are talking about applying a device or technique in the five to seven year range, it either exists right now (perhaps in a laboratory) or it will not be available at all.

Dr. Lindberg asked what NLM should be doing now to take advantage of those windows. Linking the literature of biomedical research with medical practice is one area. NLM has embarked on a unified medical language project; a standard abstract system planned by NLM could be a part of this. Also important is research on evaluating knowledge representation to support medical decision-making. Strengthening the NLM collection and developing linkages with other information sources are other actions that will facilitate taking advantage of the windows.

Dr. Riecken continued by mentioning a matter that was discussed in yesterday's meeting of the Board of Regents' Working Group on Long-Range Planning: the respective roles of the Regents, NLM staff, and outside advisors. He suggested that the Regents might discuss the advisability of the current membership serving on planning panels, and the desirability of not constraining panels to plan within the framework of current Board policy. He said the next steps are to appoint people to chair the five panels, compose the panels, provide them with any necessary background materials, convene the panels in a series of meetings leading to the preparation and review of a draft plan, and present the plan to the Regents at the June 1986 Board meeting.

Following Dr. Riecken's presentation, Dr. Bowles commented that there is no more important responsibility for the Board and for the Library than to plan for the future. Although he believes that the Regents should play an active role in the planning, he has misgivings about the Regents serving as active voting members on the individual panels of experts. This would lead to an awkward conflict of interest as Regents participate actively in developing parts of the plan and then, one year from now, take part in the discussion of and voting on the entire long-range plan. He was not suggesting that the Regents be excluded from the panels--they might serve as resources or consultants--but that they not be full voting members. He also asked that the Regents suggest names of people who might serve on the panels; the names will be needed by Dr. Riecken within two weeks. He also remarked that it would be unwise to prevent planning panels from questioning current Board policies and felt we should allow panelists a broad range in thinking about the future. There was discussion following Dr. Bowles' comments about the role of the Regents in the planning and about the composition of the panels. A motion was passed unanimously to accept the general outline of the planning process as presented by Dr. Riecken, with the goal of presenting to the Regents a draft plan in June 1986.

VIII. UPDATE ON PUBLIC INFORMATION ACTIVITIES

Mr. Robert Mehnert, Chief of the NLM Office of Inquiries and Publications Management, reported on progress in planning NLM's education/outreach program. This is a subject in which the Regents have shown great interest over the past year. The interest is prompted by the belief that, if the Library is to make maximum contribution to society, its services need to be better known to the scientific community. To bring this about, the Board Chairman in May 1984 appointed a Board of Regents' Task Force on Public Affairs. The Task Force presented its report at the last meeting of the Regents.

Mr. Mehnert reported on the following actions since that time: A private firm was engaged to help with planning the education/outreach program--especially those aspects of it connected to the NLM Sesquicentennial. Plans are well along to contract with a private firm to work with the Library to carry out many of the planned activities. A calendar was distributed to the Regents listing month by month the activities planned for 1986. Mr. Mehnert reviewed the items briefly and solicited additional suggestions from the Regents. Following his remarks, Mr. Mehnert showed the Board two new videotapes: one about the Toxicology Information Program and the other a remake of the NLM film, "Communicating for Health."

During the following discussion, the Board made it clear that the Library's 150th anniversary should not be the end of the outreach process, but its beginning. Dr. DeBakey emphasized that the calendar was a fluid document and urged the Regents to suggest additional items. She also suggested that in articles about NLM written by Regents and staff they try to incorporate quotations from prominent health professionals about the value of NLM's services. Dr. Abdellah made several specific suggestions about adding more international involvement to the calendar. Dr. Bowles asked that Mr. Mehnert notify the Regents about the availability of the NLM videotape and also slides they might use in making presentations about the Library; he emphasized the importance of using the videotape at exhibits and at professional meetings. Mrs. Echelman suggested making the videotape available to large public library systems that have substantial science collections.

IX. UPDATE ON THE TIME PROJECT

Dr. William Harless of the Lister Hill Center, Director of the Technological Innovations in Medical Education (TIME) Project, discussed recent changes in the experimental interactive teaching program. "The Case of Frank Hall." This project simulates the interaction between patient and health professional and utilizes three technologies: microcomputer, voice recognition, and videodisc. It was demonstrated to the Board at their meeting in October 1984. Although the goal of the project has not changed--to investigate the state of the art in instructional technology and its application to problems in health education--a number of changes have been made in the Frank Hall program in response to suggestions made by the Regents and others. Among the changes: an interdisciplinary peer review group has been set up for the TIME project; the pace of the program has been increased; the surrogate doctor has been removed--the student is now the doctor and interacts with the patient; the possibility of a crisis has been introduced during the hospitalization of the simulated patient; built-in evaluation of the student's performance has been improved even more; background music has been reduced, and certain inaccuracies in the simulation have been eliminated.

Dr. Harless discussed the unique features of the TIME project: uncued user interaction by voice input; multiple health problems of the simulated patients which require multiple diagnoses for management; a full range of medical, social, and clinical information about the patient available to the student; the realism of the simulated clinical environment is enhanced by randomly generated probability-based occurrence of outcomes; the drama of the simulation is enhanced by a dynamic, time-related management process requiring timely and appropriate intervention by the student. All these capabilities are in the present model and can be demonstrated. In addition, there is a special vocabulary of "educational control words" that may be called on by the student to acquire more information and a deeper understanding of the situation or concept--"sounds," "interpretation," "definition," "thoughts," etc. The model has been presented to the senior staff of the Library and successfully demonstrated at a number of national meetings and for other government agencies. Dr. Harless concluded by noting that two more TIME simulations are under development to (1) determine the validity of the model in evaluating the clinical performance of medical students; (2) establish an efficient process of creating the materials; and (3) document the precise costs for developing these simulations. It is expected that the developmental phase of the project will be completed by the end of FY 1986.

X. REPORT OF THE NOMINATING COMMITTEE

Mr. Welsh, chairman of the committee to recommend a Board chairman for 1985-86, placed the name of the current chairman, Dr. Bowles, in nomination. The chairman absented himself, and Mrs. Echelman presided over his unanimous reelection.

XI. NLM DIRECTOR'S AWARD

Dr. Lindberg presented the 1985 NLM Director's Award to Karin K. Colton, NLM Committee Management Officer. She was cited for her outstanding performance in the management of NLM's public advisory committees and her efficient planning and arrangements of their meetings. The Board of Regents had enthusiastically endorsed this award, Dr. Lindberg said.

XII. SUPERFUND AND TOXICOLOGY INFORMATION PROGRAM

Dr. Henry Kissman, NLM Associate Director for Specialized Information Services, reported about the Library's activities connected to the "Superfund Act." Section 104(i) of the Act requires the "Establishment and Maintenance of an Inventory of Literature, Research, Studies on the Health Effects of Toxic Substances." A newly created agency at the Centers for Disease Control in Atlanta is the lead organization for Superfund activities in HHS. The Library's Toxicology Information Program (TIP) receives funds to carry out related projects under an interagency agreement. NLM is contributing to the effort by enhancing its existing files: CHEMLINE, TOXLINE, RTECS, and the Toxicology Data Bank. Together, these databases are the "inventory" called for in the Act. Dr. Kissman described how the files are being augmented by adding new data. Prompted by the Act, NLM's Toxicology Information Program is also working on improving access to information files, especially in the case of a chemical emergency.

Dr. Kissman described a new retrieval system that will be initiated by NLM on July 1--the Toxicology Data Network (TOXNET). It will be open to all present MEDLARS users as well as to others. Initially, TOXNET will have two online files available 24 hours a day, seven days a week: the Toxicology Data Bank (TDB), and the Hazardous Substances Data Bank (HSDB). Other toxicology and environmental data files will be added to the network later.

The two initial files have been mounted on the Data General computers of an NLM contractor. The two data banks are somewhat overlapping in content, with the HSDB containing more extensive data (140 elements compared to 94 for each of the 4100 substances they contain). The files, which have enhanced search and print features, are built and maintained online by contractors and NLM staff. A menu-driven search capability will be added to TOXNET later this year which will make the files easier to search for the novice or occasional user. An ELHILL version of the Toxicology Data Bank will remain in NLM's MEDLARS online network through the end of this fiscal year.

Dr. Kissman also described progress on developing a microcomputer workstation that could be conveniently used for rapid access to a variety of databases, especially in the event of chemical spills or other accidents. This TIP project is a collaborative one with NLM's Lister Hill Center and with the Centers for Disease Control. The chemical emergency response workstation will initially run on IBM PC/XT and PC/AT machines, but eventually will be able to run on a variety of microcomputers. The workstation, located at regional EPA and CDC headquarters and staffed by trained personnel, will have access to many remote chemical and toxicological databases. It will be connected to smaller portable microcomputers that are now being made available to the emergency response teams for transportation to emergency sites. Dr. Kissman described briefly a related project now in the planning stage: a proposed "expert" system using artificial intelligence for use by those responding to chemical emergencies.

Dr. Kissman summed up by saying that NLM's involvement with the Superfund Act has been a stimulus to the Toxicology Information Program--it has brought additional resources and prompted new and useful activities. Funding levels have been variable, however, and in recent years too low to sustain activities begun earlier. Also, it has recently been difficult for NLM to acquire additional staff to carry out the new projects.

XIII. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. William G. Cooper stated that the FY 1985 budget for the Extramural Programs remains essentially the same as discussed at the January Board meeting. He briefly touched on the IAIMS initiative and noted that it continues to be of great interest in the community. The proceedings of the October IAIMS Symposium were published recently and have been distributed widely. A copy was included in the agenda folder. Another symposium is planned for March 12, 1986, during the Extramural Programs Week of the NLM Sesquicentennial.

Dr. Cooper then commented on an issue of importance to NIH, specifically to Dr. Wyngaarden, and the research community. During the Director's Advisory Committee meeting last November and at later NIH staff meetings, discussions were held on how NIH's extramural support programs could be improved. The issue is still under discussion and centers around the element of more opportunities for

longer tenure of support mechanisms, allowing the investigator to perform research under more stable conditions. The proposal that is currently under consideration, Dr. Cooper said, is a Method to Extend Research in Time (MERIT) award and would not require preparation of a new application. NIH staff, together with Councils and Boards, would identify outstanding investigators to receive the MERIT award outright. The additional support for an investigator-initiated research award considered under this mechanism would be up to seven years. The list of investigators would be highly selective and would concentrate on those with proven track records. Dr. Bowles expressed his concern regarding the availability of funds for younger investigators if the MERIT award proposal goes into effect. It was Dr. Cooper's opinion that those outstanding younger investigators would not be severely affected. Mrs. Echelman pointed out that it would be at least useful to take into consideration whether the outstanding, experienced investigators would be able to draw on private foundation funds to continue their work, funds not available to young investigators. Dr. Wyngaarden is especially concerned about the young investigators, Dr. Lindberg said, and NIH support of their research will be considered in the decisions that will eventually be made.

MEETING CLOSED FOR THE REVIEW OF GRANT APPLICATIONS, 9:20 A.M., JUNE 7, 1985

XIV. REVIEW OF PENDING APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP, informed Board members of confidentiality and conflict-of-interest procedures and reminded them to sign, at the conclusion of the grant application review, the statement that they had not participated in the discussion of any application where conflicts of interest might occur.

The Board concurred with 66 recommendations of the Extramural Programs Subcommittee which met on June 5. Five applications, on which the Subcommittee had not acted, were deferred by the Board. In summary, the Board reviewed 71 applications of which 32 were recommended for approval, 34 for disapproval, and 5 for deferral. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment B). Interim actions taken by the Extramural Programs staff since the January Board meeting were noted.

During the review of Resource Grant applications, a policy question arose on the continued funding of library automation projects under this program. The Board unanimously passed a motion instructing the Extramural Programs' staff to review the entire Resource Grant Program criteria, specifically with regard to funding of computer hardware, and report back to the Board in September with recommendations for a possible change to the existing policy.

XV. ADJOURNMENT

The meeting was adjourned at 11:30 a.m., Friday, June 7, 1985.

* * * * *

Wednesday, June 5, 1985, 3:00 to 5:30 p.m.
(EP Subcommittee--List of Attendees under Attachment C)
Thursday, June 6, 1985, 9:00 a.m. to 4:30 p.m.
Friday, June 7, 1985, 9:00 a.m. to 11:30 a.m.

* * * * *

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board moved to endorse the letter sent by Dr. Lindberg to the Office of Management and Budget (OMB), expressing concern about the OMB circular on Federal information management policy.
2. The Board unanimously passed a motion to accept the general outline of the NLM planning process, with the draft plan to be presented to the Regents at the June 1986 meeting.
3. The Board reelected Dr. Bowles to serve as the Regents' Chairman for another year to August 3, 1986.
4. The Board unanimously passed the motion instructing the Extramural Programs' staff to review the entire Resource Grant Program criteria, specifically with regard to funding of computer hardware, and report back to the Board in September with recommendations for a possible change to the existing policy.
5. The Board concurred with 66 recommendations of the Extramural Programs Subcommittee; it deferred five applications on which the Subcommittee had not acted. Grant applications for approval are listed in the summary actions (Attachment B).

* * * * *

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

D.A.S. Lindberg, MD 7/5/85

 Donald A. B. Lindberg, M.D. (Date)
 Executive Secretary

L. Thompson Bowles, M.D. 7/12/85

 L. Thompson Bowles, M.D., Ph.D. (Date)
 Chairman

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Bethesda, MD 20209 301-496-4725

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM 03120-07	EXPERT COMPUTERIZED BIBLIOGRAPHIC SEARCH ASSISTANT	07 88,630 08 92,975
1 R01 LM 04229-01A1	PSYCHIATRIC ETHICS CASEBOOK: A MODEL FOR CLINICAL ETHICS	01A1 28,176 02 29,585 03 31,064
1 R01 LM 04327-01A1	BIOMEDICAL SCIENTISTS AND PATENTS	01A1 38,880 02 38,900 03 39,760
1 R01 LM 04336-01	EXPERT COMPUTER SYSTEMS WHICH CRITIQUE PHYSICIAN PLANS	01 104,224 02 101,859
1 R01 LM 04340-01	BOOKS IN EPIDEMIOLOGY	01 35,380 02 38,260 03 38,795
1 R01 LM 04382-01	THE NEW EPIDEMIOLOGY: ROBERT KOCH AND CHOLERA	01 12,196 02 13,523
1 R01 LM 04385-01	OCCUPATIONAL HEALTH AND SAFETY POLICIES	01 38,988
1 R01 LM 04393-01	UPDATE OF MONOGRAPH "HEPATOXICITY"	01 18,012
1 R01 LM 04398-01	A SYMPOSIUM AND EDITED VOLUME ON THE HISTORY OF PHYSIOLOGY	01 6,319

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: MAY 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM 04400-01	US AND THIRD WORLD PRESCRIPTION DRUG USE AND PROMOTION	01 29,030 02 29,300
1 R01 LM 04401-01	THE SECOND WOOD INSTITUTE CONFERENCE	01 7,750
1 R01 LM 04406-01	CONCEPTS OF CERTITUDE IN MEDICINE/PHYSIOLOGY, 1100-1600	01 31,120 02 760 03 850
1 R01 LM 04414-01	MEDIEVAL SCIENTIFIC AND MEDICAL VIEWS	01 18,930
1 R01 LM 04420-01	KNOWLEDGE MANAGEMENT FOR CLINICAL TRIAL ADVICE SYSTEMS	01 95,205 02 103,159 03 107,906
1 R01 LM 04431-01	NEURO-IMAGING EXPERT SYSTEM	01 159,047 02 130,842 03 139,009

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL 1/
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: MAY 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 04424-01	IAIMS PLANNING	111,002
1 G08 LM 04425-01	IAIMS PLANNING	118,144
1 R01 LM 04464-01	BONEMECH: A MODEL FOR PORTABLE CITATION DATABASES	95,370
1 R01 LM 04478-01	AN IAIMS FOR BIOMEDICAL RESEARCHERS	48,547
		218,096
		188,680
		198,112

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G07 LM 04379-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM 04380-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM 04389-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM 04409-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000
1 G07 LM 04416-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,253

APPLICATIONS APPROVED BY COUNCIL 1/
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: MAY 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 04358-01	INTEGRATED LIBRARY SYSTEM	01 189,415 02 104,470
1 G08 LM 04388-01	HSL/MEDLINE	01 185,644 02 51,755 03 15,396
1 G08 LM 04426-01	AUDIOVISUAL COOPERATIVE FOR EDUCATION	01 74,763 02 71,007 03 44,537

APPLICATIONS APPROVED BY COUNCIL 1/
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: MAY 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R23 LM04428-01	EIDETIC, A CONSULTANT SYSTEM FOR IMAGE-BASED DIAGNOSIS	01 35,275 02 35,835 03 36,390

B O A R D O F R E G E N T S

EXTRAMURAL PROGRAMS SUBCOMMITTEE MEETING

June 5, 1985

A T T E N D E E S

Subcommittee Members Present:

Dr. Lois E. DeBakey
Dr. Albert E. Gunn
Dr. Grant V. Rodkey

NLM Staff Present:

Dr. William G. Cooper, Associate Director, EP
Mrs. Ruth Bortz, Grants Management Specialist, EP
Dr. Jeanne L. Brand, Chief, International Programs Branch, EP
Mr. Brian R. Campbell, Administrative/Grants Management Officer, EP
Mr. Peter Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant, EP
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Mrs. M. Kathleen Nichols, Grants Management Specialist, EP
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Mr. Randall Worthington, Program Officer, EP
Ms. Lisa Tamaroff, Grants Clerk, EP

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

80th Meeting of the

BOARD OF REGENTS

9:00 a.m., September 17, 1985

8:30 a.m., September 18, 1985

BOARD ROOM
Mezzanine of
National Library of Medicine

MEETING OPEN: All day on September 17 and from 8:30 to approx. 11:00 a.m. on Sept. 18.
MEETING CLOSED: From 11:00 a.m. to adjournment on September 18 for the review of grant applications.

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. L. Thompson Bowles
- II. REMARKS BY THE DEPUTY ASSISTANT SECRETARY FOR HEALTH Dr. C. Everett Koop
- III. REMARKS BY THE DEPUTY DIRECTOR FOR EXTRAMURAL RESEARCH AND TRAINING, NIH Dr. William F. Raub
- IV. CONSIDERATION OF JUNE MINUTES TAB I Dr. L. Thompson Bowles
(Agenda Book)
- V. FUTURE MEETING DATES: Dr. L. Thompson Bowles

Winter Meeting: Feb. 6-7, 1986 (Th-F)--CONFIRMED
Spring Meeting: June 5-6, 1986 (Th-F)--CONFIRMED
Fall Meeting: Sept. 16-17, 1986 (T-W) OR
Sept. 18-19, 1986 (Th-F)--PROPOSED

PLEASE NOTE: Society of Thoracic Surgeons, Annual Meeting, September 25-28, 1986 - Toronto
For potential September American Society for Information Science conflicts. (ASIS), Annual Meeting, September 26-October 4, 1986 - Chicago

COFFEE BREAK

Agenda, Board of Regents' Meeting, September 17-18, 1985

* * * * *

R E C O N V E N E: Wednesday, September 18, 8:30 a.m.

* * * * *

XII. MEDLARS UPDATE

TAB VIII

Mr. John Anderson
Mr. Russell L. Fenwick,
Discussant

Discussion

Board Members

COFFEE BREAK

XIII. REPORT OF THE ASSOCIATE DIRECTOR
FOR EXTRAMURAL PROGRAMS

TAB IX

Dr. William G. Cooper
EP Subcommittee,
Discussants

- A. EP Budget and Funding Plans
- B. Review of Resource Grant Criteria

Tab A
Tab B

Dr. Grant V. Rodkey,
Discussant

Discussion

Board Members

MEETING CLOSED FOR THE REVIEW OF GRANT APPLICATIONS 11:00-11:45 A.M., SEPT. 18

XIV. SPLIT VOTES

(Gray Book)
TAB I

Dr. Roger W. Dahlen

XV. SUMMARY STATEMENTS

TABS II - X

Dr. Roger W. Dahlen
Dr. Jeanne L. Brand

XVI. ADJOURNMENT

Dr. L. Thompson Bowles

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS
MINUTES OF THE 80TH MEETING
SEPTEMBER 17-18, 1985

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/
September 17-18, 1985

The Board of Regents of the National Library of Medicine was convened for its eightieth meeting at 9:00 a.m. on Tuesday, September 17, 1985, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. L. Thompson Bowles, Chairman of the Board of Regents and Dean for Academic Affairs and Professor of Surgery, The George Washington University Medical Center, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on August 13, 1985, the meeting was open to the public from 9:00 to 4:45 p.m. on September 17 and from 8:30 to 10:25 a.m. on September 18. The meeting was closed from 10:25 to adjournment at 11:00 a.m. on September 18 for the review, discussion, and evaluation of grant applications. A Board roster is enclosed under Attachment A.

Board members present were:

Dr. L. Thompson Bowles
Dr. Edward N. Brandt, Jr.
Dr. Lois E. DeBakey
Mr. Russell L. Fenwick
Dr. Albert E. Gunn
Dr. C. Everett Koop (Ex Officio)(September 17)
Mr. John Lopez
Dr. David O. Moline
Dr. Ann K. Randall
Dr. Grant V. Rodkey
Dr. Eugene A. Stead, Jr.

Alternates to ex officio members present were:

Dr. Faye G. Abdellah, representing Dr. C. Everett Koop on September 18.
Dr. John C. Duffy, Assistant Surgeon General, PHS, representing Dr. C. Everett Koop on September 17.
Capt. Noel Dysart, representing Vice Admiral Lewis H. Seaton.
Dr. Charles N. Brownstein, representing Dr. David T. Kingsbury.
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin on September 17.

Unable to attend:

Brig. Gen. Thomas P. Ball
Col. Howard E. Fauver
Mr. James M. Hahn

1/For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Donald A. B. Lindberg, Director
Mr. Kent A. Smith, Deputy Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education
Mr. John Anderson, Director, Information Systems, OD
Dr. Jeanne Brand, Chief, International Programs Branch, EP
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth Carney, Executive Officer, OD
Ms. Lois Ann Colaianni, Associate Director for Library Operations
Dr. William G. Cooper, Associate Director for Extramural Programs
Mr. John Cox, Deputy Director for Development, OCCS
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Mr. B. Earl Henderson, Acting Director, Lister Hill National Center for
Biomedical Communications
Ms. Betsy L. Humphreys, Deputy Associate Director for Library Operations
Dr. Henry M. Kissman, Associate Director for Specialized Information
Services
Ms. Eve-Marie Lacroix, Chief, Reference Services Division, LO
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications
Management, OD
Mr. Stanley J. Phillips, Deputy Executive Officer, OD
Dr. Roy Rada, Editor, Index Medicus
Dr. Henry Riecken, Associate Director for Planning and Evaluation
Mr. Arthur Robinson, EEO Coordinator
Mr. Mark J. Rotariu, Chief, Office of Financial Management, OD
Dr. Elliot R. Siegel, Special Assistant for Operations Research, OD
Dr. John Starkweather, Special Assistant to the Deputy Director for Research and
Education, OD
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP

Others present included:

Dr. William F. Raub, Deputy Director for Extramural Research and Training, NIH
Mr. Gary Goubeau, Budget Analyst, DFM, NIH
Mr. Joseph Howard, Director, National Agricultural Library
Dr. J. Timothy Sprehe, Senior Statistician, OMB

Members of the public present:

Mr. Joseph Leiter, Private Citizen
Mr. Greg Pearson, Reporter, "The Blue Sheet"
Mr. Thaddeus Plante, Legal Assistant, Kaye, Scholar, Fierman, Hays & Handler

I. OPENING REMARKS

Dr. L. Thompson Bowles, Chairman, welcomed the Regents to the 80th meeting of the Board of Regents. He noted the presence of two newly appointed members: Dr. Edward N. Brandt, Jr., Chancellor of the University of Maryland at Baltimore, and Dr. Ann K. Randall, Professor and Chief Librarian of the City College of CUNY. The Chairman also congratulated Dr. Lindberg on being elected to the Institute of Medicine of the National Science Foundation.

II. REMARKS OF THE SURGEON GENERAL, PHS

Dr. C. Everett Koop, Surgeon General, reported that two Public Health Service teams have just successfully completed extensive mock disaster exercises in cooperation with the armed forces. Later in September, the PHS will dedicate a ward and open a service at the Baltimore City Hospital for a study on incontinence among the elderly, a problem that costs the nation about \$8 billion annually. The PHS is also cooperating with the Administration on Aging to develop programs on accident prevention, proper use of medication, improved nutrition, and physical fitness. A media campaign on these themes will begin in October. Dr. Koop said that because of recent public criticism of the military medical services, the Public Health Service was investigating the credentials of all PHS health professionals. Several years ago three PHS officers were assigned to the Navy to establish a physical fitness program there; the resulting program could serve as a model for other services as well. Finally, in another cooperative effort with the Department of Defense, the PHS (FDA) is helping to develop a teleradiology system for use at an outpost in wartime. Images would be recorded electronically and transmitted electronically to be read by an expert behind the lines. The communication both ways would be almost instantaneous.

III. REMARKS BY THE NIH DEPUTY DIRECTOR FOR EXTRAMURAL RESEARCH AND TRAINING

At the request of NLM senior staff, Dr. William F. Raub described a proposed new NIH grant category called the "MERIT Award" (MERIT is an acronym for "Method to Extend Research in Time"). Such awards were initiated by the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), and NIH is now considering making them NIH-wide. These make seven-year research project grant awards available to selected principal investigators. Unexpended funds may be carried over from one year to the next by the principal investigator without the prior approval of either the awardee institution or the NIH. Both of these features required special approval to deviate from the PHS grants policy.

An interesting feature of the MERIT award, said Dr. Raub, is that the individual investigator does not apply for it. The awarding unit selects especially deserving applicants from the pool of competing renewals and offers them MERIT awards. Over 100 such awards have been made by NINCDS over the last two years. This is about five percent of the competing renewals. The scientific community has been enthusiastic about the awards.

IV. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Regents approved the minutes of the June 6-7, 1985, meeting without change.

V. REPORT OF THE DIRECTOR, NLM

Dr. Donald A. B. Lindberg reported on the status of the NLM budget: \$55.9 million was spent in fiscal year 1985 (\$5.6 million over 1984). The President's budget for fiscal year 1986 is \$53.3 million (although presumably NLM will enter the fiscal year with a Continuing Resolution). NLM would require \$58.8 million to maintain current operating levels. Citizen witnesses for NLM recommended various figures, ranging as high as \$70 million. Such an amount would allow NLM to put additional funds into Extramural Programs (especially Medical Informatics and the IAIMS initiative) and to begin to develop a Unified Medical Language System.

Dr. Lindberg said the situation as to staffing levels is likewise dreary. The full-time-equivalent (FTE) ceiling placed on NIH has been systematically reduced over the last several years; NLM's prorated share was brought down to 526 FTEs (from 547). An additional reduction of 10 is being proposed for 1986. The Library has objected to this further reduction, arguing that services would be seriously damaged as a result. Dr. Lindberg said that over the years NLM has established an excellent track record, both in contracting out work and in using new technology to increase productivity. NLM is reaching the limits of the help that can be expected from these sources, however. The Director noted that NLM regrets the loss of Dr. William Cooper, Associate Director for Extramural Programs, who will be resigning in October. He also noted the naming of Dr. Roy Rada as Head of the Medical Subject Headings Section and Editor of Index Medicus, and the arrival of Dr. John Starkweather of the University of California at San Francisco for a year's sabbatical at NLM. Two notable awards were recently made to NLM staff members: the Marcia C. Noyes Award of the Medical Library Association to Thelma Charen of the Indexing Section and a gold medal from the Nebraska Educational Videodisc Competition to Dr. William Harless and the TIME project's production of "Frank Hall."

As to legislative matters, Dr. Lindberg said that omnibus bills have been introduced into both the House and Senate that would, among other things, reauthorize the Medical Library Assistance Act (MLAA). The House bill would reauthorize the Act's programs for one year at a level of \$12 million; the Senate bill is for three years at levels of \$12, \$13, and \$14 million. The limit on NLM resource grants of \$200,000 (the result of the original MLAA 1965 legislation) would be eliminated in the Senate bill. This would be desirable from NLM's point of view, especially for funding future IAIMS development. Dr. Lindberg announced that Representative Claude Pepper (FL) and Senator Charles Mathias (MD) have introduced a joint resolution into the two houses of Congress that declares 1986 the Sesquicentennial Year of the National Library of Medicine. Finally, on legislative matters, NLM has been requested to testify before the Government Information, Justice, and Agriculture Subcommittee of the House Committee on Government Operations, chaired by Rep. Glenn English of Oklahoma. The Subcommittee is holding hearings on plans by Federal agencies for the electronic collection and distribution of information; NLM has been asked to describe to the Subcommittee the history, structure, and operations of MEDLARS.

Dr. Lindberg concluded by mentioning briefly several items: Progress is being made in arranging for a MEDLARS Center in the People's Republic of China (Beijing); a very successful workshop on artificial intelligence, cosponsored by the Library and the Division of Research Resources, was held at the NLM in July; and two important international events will be held in October 1986--the MEDINFO-86 meeting in Washington, D.C., of members of the medical informatics community--and a meeting of the directors of the foreign MEDLARS partner institutions at NLM.

Following the Director's report, there was a general discussion about NLM's budget prospects. Several Regents commented that a Continuing Resolution at this year's level might be the best that NLM can reasonably expect. Captain Dysart asked how NLM was progressing with the videodisc-based program on geriatric care, the second in the series begun by the Frank Hall disc. The LHC Acting Director, Mr. Earl Henderson, and, later, Dr. Harless, gave a brief report on the program.

VI. DATES OF FUTURE MEETINGS

The Board will meet next on February 6-7, 1986. The dates for the spring meeting, tentatively set for June 5-6, were changed to June 16, 17, 18 to permit a special reception at the Ford's Theatre on the evening of June 16. The dates of September 17-18 were selected for next fall's meeting.

VII. LONG-RANGE PLAN

Dr. Henry Riecken, NLM Associate Director for Planning and Evaluation, reported on the formation of planning panels to assist with the NLM long-range planning effort. At their last meeting, the Regents approved the undertaking of such a plan. The five panels and their chairpersons are:

Building and Organizing the Library's Collection
Robert Hayes, Ph.D.

Locating and Obtaining Medical and Scientific Literature
Nancy Lorenzi, Ph.D.

Obtaining Factual Information from Data Bases
Ruth Davis, Ph.D.

Research in Medical Informatics
Edward Shortliffe, M.D.

Assisting Health Professions Education Through Information Technology
Octo Barnett, M.D.

Members have been appointed to all panels, and the panels are meeting individually at NLM this month. An integrated planning report reflecting the findings and recommendations of the panels is scheduled to be made to the Board of Regents in June 1986. Dr. Bowles said that he hoped Dr. Riecken would be able to share with the Board at their meeting in February the "evolving substance" of panel thinking, prior to the writing of the overall report in

time for the June meeting. He offered the assistance of the individual Regents as the planning panels see fit. Dr. Lindberg asked the Regents to suggest names of possible consultants/reviewers for the plan. Mr. Welsh emphasized the importance of giving detailed feedback to all the panel members about the Board's reaction to the plan and the actions to be taken by NLM as a result of the plan.

VIII. FEDERAL INFORMATION MANAGEMENT POLICY

Mr. Kent A. Smith, NLM Deputy Director, noted that Dr. Lindberg had briefed the Regents at their last meeting about a draft policy issued for comment by the Office of Management and Budget on the subject of the management of Federal information resources. The policy addresses general information matters, information technology, privacy, and maintenance of Federal records, all under the aegis of the Paperwork Reduction Act. At the last meeting, the Regents discussed the comments NLM sent to OMB and the general implications should such a policy become official. Mr. Smith reviewed NLM's comments to OMB. Although there were critical comments, there were also positive comments on such topics as the policy and rationale for pricing Federal information products and services on the basis of access costs. Because of widespread apprehension throughout the library and information community about the draft policy, reflected in the many comments received by OMB, the Library invited an official of the OMB, Dr. J. Timothy Sprehe, to address the Regents about these matters.

Dr. Sprehe said that of the 350 comments received by the OMB, 52 percent were from libraries. The comments were split: the librarians, academicians, and general public tended to concentrate on the policy as it addressed the collection and dissemination of information, cost benefit analysis; the Federal agencies tended to concentrate on the Privacy Act, cost recovery, computer security, and information system and information technology aspects of the circular. The OMB has analyzed the comments and is making certain modifications to the circular as a result. Dr. Sprehe said there were three "touchstones" the policy framers kept in mind: to minimize the paperwork burden on the public, to minimize the cost to the Federal government of collecting, processing, and disseminating information, and to maximize the usefulness of government information products. The Paperwork Reduction Act has much to say about collecting information, but little about disseminating it.

Dr. Sprehe forthrightly said that one of NLM's recommendations--that scientific and technical information be treated separately from other sorts of information--was not accepted by the OMB. Others have argued for exemptions, for example, of statistical information. OMB declined in all cases. One distinction the OMB did draw is between access to information and dissemination of information. Access is an agency providing information on request (a passive posture); dissemination is the active distribution of information by agencies. The Freedom of Information and Privacy Acts cover access. There is no statute covering dissemination. How does the public know what is available? The Freedom of Information Act, the Privacy Act, the Sunshine Act, and the Paperwork Reduction Act all require the Federal government to disseminate information about what is available. The draft circular's section on dissemination received the most comments. OMB accepted the criticism that requiring dissemination be either mandated by law or essential to agency mission was too narrow, and that it failed to emphasize the positive value of the government's obligation to inform its citizens. The draft has been rewritten to reflect this broader and

more positive perspective. Dr. Sprehe criticized, however, the confused thinking reflected by those who carelessly use the catch phrase "free flow of information." "The free flow of information is quite distinct from the flow of free information and the flow of information for free," he quoted from a British source.

The reformulation of the circular, Dr. Sprehe said, acknowledges that all agencies are required by law to disseminate information describing agency organization and operation. Beyond that, agencies should disseminate products and services specifically required by law or are necessary for the proper performance of agency functions (as determined by the head of the agency). This language is new. The OMB also agreed with NLM's position that it was not practical for a Federal agency to try to guess what information products or services could "reasonably" be expected from the private sector and to refrain from issuing such a product or service. The OMB has introduced a section that requires an agency to follow "notice and comment" procedures before introducing a new major product or service or terminating an important information product or service that the public has come to depend on. Giving the private sector opportunity to comment on a proposed new major product or service would fulfill the intent of the previous section.

As to user charges, Dr. Sprehe said that if an agency can demonstrate that existing user charges are a significant barrier to the dissemination of information important to the agency's mission, that constitutes a basis for modifying the fee structure. Related to this, agencies that are the sole suppliers of certain information must guard against allowing a contractor exercising monopolistic control over the electronic distribution of that agency's information. Finally, he noted that, as a result of the expressed concern of librarians, the policy has been modified to reinforce the Federal Depository Library System.

Responding to a question, Dr. Sprehe said that it has not yet been decided by OMB whether to republish the policy in the Federal Register and again solicit public comment. Dr. Randall voiced the concern of the library community that information created with taxpayers' money would become too expensive if the private sector is intimately involved in its dissemination. Dr. Sprehe replied that although it is not the intent of OMB to make economic criteria the basis for having access to government information, the OMB wants to guard against Federal agencies competing unfairly in the information marketplace. In this regard, he believes that existing Federal policies have not been altered by the revised circular. Dr. Sprehe ended the discussion by thanking the Library for detailing Ms. Sally Burke to OMB during the time the circular was being developed and written.

IX. UPDATE ON NLM SESQUICENTENNIAL

Mr. Robert Mehnert, Chief of the NLM Office of Inquiries and Publications Management, brought the Regents up to date on the planning for NLM's Sesquicentennial Year in 1986. He reported that a contractor, Moshman Associates, Inc., has been engaged to assist NLM in (1) planning and carrying out a science writers' seminar, (2) planning and carrying out two one-day symposia, (3) design a logo, and (4) to help with outreach to the Regional Medical Libraries. Since the last Regents meeting, an NLM Coordinating Committee of senior staff and seven Subcommittees have been established to oversee various

aspects of the Sesquicentennial Year celebration. The Subcommittee for the Science Writers' Seminar has set the date of February 5 for that event; four information-seeking scenarios will be presented to the science/medical writers attending, and there will be demonstrations of NLM information retrieval systems and tours of NLM facilities. The subcommittee working on the one-day symposia has recommended that two be held: Medicine and the Arts (April) and Computers and Medicine (November). It is hoped these will attract a wide audience to the Library. The Extramural Programs Week Subcommittee is planning a full week of events next March; this was reported at the last meeting. The Subcommittee setting up a special Regents program for next fall's meeting is recommending a day devoted to morning presentations about "NLM Past"; afternoon demonstrations and tours about "NLM Present"; and afternoon presentations about "NLM Future," centered around the planning panel chairmen. There would be an evening banquet in the NLM Reading Room (cleared for the occasion). The Social/Cultural Events Subcommittee is planning an evening program and reception at Ford's Theatre next June in conjunction with the Board meeting. There is a Subcommittee on International Events (mostly planned for the latter half of 1986) and one for the NLM Open House and Picnic. The Open House is now planned for April 11, in conjunction with the annual Leiter Lecture.

Among new items added to the calendar of events since the last Regents meeting, Mr. Mehnert noted a monthly newsletter for NLM staff devoted to Sesquicentennial happenings; an article about NLM in the American College of Physicians Observer; a MEDLARS-based Literature Search about the Library, published and available for dissemination; an exhibit at the American Student Medical Association; a brief presentation by CBS on John Shaw Billings, part of the network's series "An American Portrait," will air on November 7 and again on May 8 at about 8:58 p.m.; and an NLM medical film festival in October, presented in cooperation with the Muir Film Festival scheduled to be held in California next June. Following Mr. Mehnert's presentation, Dr. Lindberg briefly reported on recent conversations he has had with officials at the Smithsonian Institution about that organization and NLM cooperating to sponsor a joint symposium (with a resulting publication). NLM is now considering the feasibility of such an undertaking, perhaps on the theme of "knowledge representation in medicine," late in 1986 or 1987.

Dr. Lois DeBakey, who chairs the Board's Task Force on Public Information, complimented the NLM staff for the thoughtfulness and breadth of the Sesquicentennial plan. She urged that the planned events not be considered finite, but the beginning of a continuing program of public information. She urged that public service TV spots be made for NLM by the Surgeon General and other well-known physicians. She was enthusiastic about the idea of a symposium on Medicine and the Arts; she suggested Norman Cousins as a possible participant. Also, it would be a good idea to have announcements of major Sesquicentennial events published in major medical journals. She emphasized the need to devise arresting titles for the various programs and to ensure that the speakers themselves are exciting; only then can NLM ensure wide participation by health professionals and attendance by reporters. Dr. Rodkey suggested that a "preview" of the Sesquicentennial be held at the AMA's House of Delegates meeting in Washington this December. Dr. DeBakey suggested AIDS, and Dr. Stead Alzheimer's disease, as possible topics of current interest for the Science Writers' Seminar or for developing collaborative programs with other professional organizations. Dr. Bowles concluded the discussion by noting that the Sesquicentennial is a milestone year that will help the Library's public education and outreach program for years to come.

X. REPORT ON PRESERVATION

Ms. Betsy Humphreys, Deputy Associate Director for Library Operations, reported to the Regents on recent steps taken by NLM to determine the physical state of its collections and to plan a course of action to preserve them for future generations. The term preservation includes such diverse activities as maintaining an appropriate storage environment, minimizing harmful use practices, providing physical or chemical protection, and making copies of items in archival formats. The biggest threat to paper-based library materials is the high-acid-content paper on which they are printed and which becomes brittle and disintegrates over time. The need to either treat this paper or to copy the items into a more durable medium is a huge and staggeringly expensive undertaking. Although many libraries can fulfill their functions with a collection of current material, research libraries such as the NLM have a responsibility to preserve also the older and more vulnerable material. Preservation of the biomedical literature by NLM is specifically mandated by its 1956 legislation. Much NLM activity has been devoted to preservation since the passage of the NLM Act--archival copies of significant items have been made, favorable practices and conditions for storing and using library materials have been established, the Lister Hill Center has built a prototype Electronic Document Storage and Retrieval System which can be used in research related to archival preservation, and there has been a Board of Regents policy on preservation since 1976. About \$1 million is spent annually on preservation-related activities.

Ms. Humphreys said that because of new technological developments bearing on preservation, and current widespread interest in the subject by the library community, NLM has reexamined its preservation policies and practices. A senior NLM preservation planning team was appointed in 1984; their final report was submitted to the NLM Director in July 1985. Ms. Humphreys described the methods of the study and then summarized its principal findings. Brittleness of paper in the collection, although serious, was not as widespread as initially feared: approximately 8.8 percent of the post 1801 materials are affected. Surveys of other major libraries (Yale, Library of Congress) have turned up much higher percentages in their collections. The audiovisual materials are generally in good condition, with the exception of the 16mm films. Overall, the condition of the collection is better than had been anticipated. By taking immediate action, Ms. Humphreys said, we can ensure the preservation of the content of the endangered volumes and extend the life of the remainder.

In addition to the self-destructing properties of the library materials themselves, such environmental factors as temperature and relative humidity, atmospheric pollutants, light, mold, and insects/rodents all affect the life of the materials. NLM's conditions in this regard are good, with the exception of higher than recommended levels of sulphur dioxide and nitrogen dioxide and low humidity in some parts of the building. Physical processing, handling, and use are a third factor affecting the life of library materials. Current processing and use practices are not having a serious negative effect on the NLM materials, Ms. Humphreys said.

The preservation team also investigated current preservation techniques. There are relatively few such techniques now available for mass preservation; current research offers promise in the areas of mass deacidification, strengthening of paper, and mass disc storage. These techniques are in addition to microfilming, film-to-film transfer (16 mm), a variety of manual methods for preserving rare books, manuscripts, and prints and photographs, and the acquisition of new

materials in archival formats. Ms. Humphreys described the pros and cons of each method and the costs involved. She also discussed briefly the problems of preservation attendant to the newer forms of electronic publication. Related to these will be issues of property rights in electronic publication--who will be reimbursed for what kinds of use of what kinds of materials.

After careful evaluation of available operations, the preservation planning team has recommended several actions:

- o The Board of Regents policy on preservation should be modified to link NLM's preservation program more explicitly to its collection development guidelines; NLM's responsibility for preserving the content as opposed to the format of the literature should be made clear; and NLM's role in assisting the preservation of significant biomedical literature held by other libraries should be defined.
- o NLM should expand significantly its preservation activities, since its vast collection of biomedical literature is a unique world treasure. The goals should be for the Library to have, by the year 2005, a preservation of every item in the NLM collection that falls within the core biomedical literature or that NLM collects on the research level. To achieve this goal, NLM should take three steps: obtain deacidification service for large numbers of volumes (100,000 annually beginning in 1989); begin in 1986 a four-year microfilming program for brittle monographs and serials; and expand efforts to preserve items in the special historical collections.
- o The Lister Hill Center should continue its development of disc-based storage technology.
- o NLM should cooperate with other libraries and with library organizations to persuade editors and publishers to publish in archival formats.

Following Ms. Humphreys' presentation, Mr. Welsh complimented the work of the preservation planning team. He emphasized that the problem is of such a magnitude and so widespread as to be a genuine crisis in libraries. He agreed with the general statement that it is paramount to preserve content over format; there must be some artifacts preserved for future generations, however. He also suggested that NLM go one step beyond linking the preservation policy with the collection development policy--by looking at all the operations within the Library as a sort of continuum from acquisition to preservation. At the time an item is acquired, its destination in the preservation scheme should be determined. He stated that NLM cannot afford to preserve everything and that the Library's efforts in preservation should be undertaken cooperatively with other libraries and institutions. Microfilming is necessary, he said, but because of its cost should be looked on as a temporary expedient. Mass deacidification holds much more promise, but he could make no commitment to NLM's being able to use the Library of Congress' future deacidification facility.

Mr. Welsh questioned the fact that the planning team recommended no increase in staff positions for preservation activities. Also, he believes that some other solution should be found to funding--he doubted that NLM could get additional

appropriated funds for preservation activities. He is a strong supporter of using acid-free paper. Unfortunately, libraries use only one percent of the total paper output, so they are not a driving force in the marketplace. Finally, Mr. Welsh noted that there will be very serious public vs. private issues as electronic publications come into wider use.

There was considerable discussion by the Regents about the report and its recommendations. Copyright, the obsolescence of certain formats, how to encourage the use of acid-free paper, and the budgetary implications of preservation were all discussed. Dr. Albert Gunn moved that the Regents accept the principles expressed in the report of the preservation team (allowing for modification of details), and that NLM staff investigate further the budgetary and staffing implications of implementing the report's recommendations. The Board unanimously approved his motion.

XI. REPORT ON BOARD OF SCIENTIFIC COUNSELORS' MEETING

Dr. Harold M. Schoolman, NLM Deputy Director for Research and Education, reported briefly on the July 17-18 meeting of the NLM Board of Scientific Counselors. The Board meets periodically to review and advise on the Lister Hill Center's technology and research-related projects. The meeting was divided into two parts. First, there was a review of LHC projects to develop educational materials in collaboration with professional societies and a review of the Carnegie-Mellon contract to develop a natural language and improved machine access to the literature. The second part of the meeting was devoted to a discussion of using the Board of Scientific Counselors as consultants for NLM's long-range planning effort. Dr. Schoolman referred the Regents to the published minutes of the July meeting of the Counselors, but singled out several areas worthy of special comment.

The Board of Scientific Counselors was gratified by the Lister Hill Center's progress in developing working relationships with professional societies such as the Academy of Orthopedic Surgeons and the Academy of Dermatology. Responsibilities of the various parties and the sharing of costs have been spelled out in some detail and the model arrangements seem to be working out well. Also, Dr. Schoolman said, there has been a sharpened focus for the Lister Hill Center's experimental objectives. The Board was pleased with the progress made in developing LHC's Learning Demonstration Center (LDC). There remain unanswered questions, however, such as how to assess the effectiveness and efficiency of computer-mediated materials, whether the content of the learning materials being demonstrated in the LDC is totally relevant to the health sciences and truly exemplary of what is available, and how to bring down to an operational level the abstract work now going on under the Carnegie-Mellon University contract in developing machine-language interfaces. Concerning this last point, the Counselors were enthusiastic about NLM bringing to bear the expertise of linguistic analysts on problems of machine-aided indexing in medicine and improved retrieval mechanisms.

XII. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. William G. Cooper drew attention to several items in the latest NLM NEWS: The announcement of new members, Drs. Brandt and Randall. The listing of new NLM grant awards for FY 1985. The Artificial Intelligence in Medicine Workshop held in July at NLM--a number of the participants have received NLM research grants. A day-long overview of NLM activities in July for the National Health Council, coordinated by Mrs. Frances Howard.

Continuing with budget matters, Dr. Cooper noted that the Extramural Programs is very close to its projected FY 1985 target. The final figure of total awards will be close to 113, a slight decrease from the original estimate of 120, because of overall cost increases per award. The increase in the Extramural Programs budget has generated an increase in applications from the medical informatics community. The IAIMS initiative continues to be an important activity. The four original contract awardees have successfully completed their planning phase. They are now moving into Phase II--the development phase. Oregon, which was funded individually by Congress, has requested an extension for completion of its planning phase. Four additional institutions are currently conducting their planning phases.

Dr. Cooper then responded to the Board's request at the June meeting that the Extramural Programs' staff review NLM's support of library automation projects and make recommendations to the Board at its September meeting. With the aid of viewgraphs, copies of which were distributed to the members, Dr. Cooper pointed out that the Medical Library Assistance Act authorizes grants for "establishing, expanding, and improving basic resources" in libraries, including applications of new technologies. This authority established the Medical Library Resource Project Grant Program which remains the only federally funded program for health science libraries. Through this program, NLM has continued to respond to current needs for collection development, learning resource centers and library automation. The IAIMS initiative grew out of the AAMC Report and assumes an institutional level of technological development for eligibility. The Piemme/Ball Report addressed the computerization of information at academic health science centers. More recently, the Association of Academic Health Science Library Directors and the Medical Library Association published guidelines on library automation and projected needs. All studies were concerned with the important function of a library to be able to provide the basis for networking capabilities through up-to-date automation techniques, which make the library a modern information resource. The entire national issue of the state of the viability of the research infrastructure of academic institutions is currently being questioned, especially regarding the status of the equipment available for research activities, Dr. Cooper noted. The Congress asked the National Science Foundation to carry out such a review, and the details are highlighted in the agenda book. More recently, Congress has displayed a high level of interest in the issue and has included libraries as an important part of the academic institution. NIH, and specifically the Division of Research Resources, is encouraging requests for research equipment in proposals to study sections.

Dr. Cooper continued with a statistical analysis of the Resource Project Grant Program over the last five years. Total applications received under the program were 144 for a total request of \$23.9 million. Approvals amounted to 66 for \$8.9 million. Actual awards were 31 for a total of \$3.9 million. Indirect costs are not allowed for this type of program, Dr. Cooper emphasized,

which in effect means that the institutions are sharing a part of the costs. Of the 144 applications received over the last five years, 38 included proposals for computerization projects, of which 15 were approved and 7 were awarded for a total of \$1.5 million. Eleven proposals included integrated library systems, of which seven were approved and four were awarded for a total of \$1.1 million. Concluding his report, Dr. Cooper presented four options for the Board's consideration: (1) Continue support, (2) eliminate support, (3) support 50% of the costs, and (4) limit NLM support to a specified number and amount based on the completion of the long-range plan.

Dr. Cooper asked Dr. Rodkey for his comments. The underlying mission of the Library, Dr. Rodkey noted, was to provide access to pertinent medical information to the widest possible community of users. In order to accomplish that, the base of financial support needs to be expanded. He therefore recommended that NLM (1) broaden the base of support through private funds, and (2) use the limited funds that are now available in a discretionary manner in concurrence with Option 4 and based on the outcome of the long-range objectives of the Board. Dr. Gunn voiced his concern about the diminishing resources and felt that equipment should not be part of the Resource Project Grant Program. Responding to Dr. Gunn's concerns, Dr. Cooper stated that the ability for the local and resource libraries to accommodate the information exchange is a critical element in the biomedical communication network of which NLM is the focal point. Dr. Randall stated that the Extramural Programs Subcommittee on the preceding afternoon considered the leadership, development, and potential of the integrated library systems. Through the review process, there will be an opportunity to comment on the selecting merit of some of these systems, and it would perhaps be useful at this time if NLM could continue that thrust, subject to review and pending the outcome of the planning process. With the long-range planning process in operation, Dr. Brandt said, NLM has to think about its constituency, and shifting policy suddenly is not going to help NLM's credibility in the community. It would be better to keep the present policy in place until the long-range planning activity is completed. People on the outside are doing a lot of planning based upon current policies, he emphasized. A number of Regents voiced the opinion that the policy should not be changed in mid-stream and that it would be advisable to keep the policy in place until the long-range planning activity is completed. Dr. Welsh presented a motion to accept Option 4. The Board moved to adopt Option 4 and defer the policy question, subject to Board review, pending the outcome of the planning process. The motion carried. Dr. Stead voted against the motion for the reason that the amount of money now available for individual grants is too small to make any difference without a matching requirement.

XIII. MEDLARS UPDATE

Mr. John Anderson, Director of Information Systems, NLM, said that he had hoped that MEDLARS III would be ahead of schedule enough to allow him to demonstrate (1) a new catalogers' workstation for creating bibliographic data, (2) a new retrieval capability for that data, and (3) an interlibrary loan system for the material represented by the cataloging data. The first project--the workstation--although it is not behind schedule, is not ahead of schedule to allow it to be demonstrated today. The other two systems will be demonstrated later in his briefing. Mr. Anderson then recapitulated briefly the progress of the MEDLARS III development to date. The second contract of the three-contract action is just underway and, overall, the project is on schedule.

Following his presentation, Mr. Anderson introduced a new "user-friendly" information retrieval system developed under NLM's auspices. The program allows access to MEDLINE without the need for the services of a trained search intermediary. It eliminates the problems of complicated access protocols and unfamiliarity on the part of users with NLM's controlled vocabulary, MeSH (Medical Subject Headings). The new program takes about two-thirds of a floppy disc and may be run on any IBM PC or PC-compatible microcomputer. A demonstration search on the subject of "computer diagnosis in medicine," was successfully conducted online by Rosemarie Woodsmall of the NLM Planning Office. After retrieving 10 references, she asked Dr. Schoolman to identify the relevance of each and, based on his evaluation, the system then suggested other search strategies for further information on the same subject. There was considerable discussion about the system by the Regents, including the possibility of having it provide access to older MEDLINE material.

Ms. Woodsmall then introduced Ms. Eve-Marie Lacroix, Chief of the Reference Services Division, who, assisted by Ms. Carol Ditzler, Acting Head of the Circulation and Control Section, described and demonstrated DOCLINE. DOCLINE is NLM's automated interlibrary loan request and referral system, Ms. Lacroix said, developed to improve service to health professionals by electronically routing requests for library materials throughout the Regional Medical Library (RML) network. When completely installed throughout the RML network, a librarian will be able to easily and efficiently input a request and have it routed automatically to the appropriate library holding the material. The new system eliminates much of the time-consuming and tedious work associated with requesting an interlibrary loan. DOCLINE is being phased into the network incrementally. Ms. Ditzler described various powerful features of the system as she actually entered a request online and had it routed to a holding library. The seven Regional Medical Libraries were brought online to DOCLINE in February, and all network members (some 2,000) will have it available by the end of 1986. Of the total two million interlibrary loan requests generated within the network each year, it is estimated that DOCLINE will handle about 90 percent.

Following the demonstration, Mr. Fenwick said that both of the systems demonstrated this morning are welcome additions to the inventory of NLM computerized services. As to MEDLARS III, although there have been some hitches along the way, the project is targeted in the right direction and generally on schedule. The October 31 target date to preview the selection/acquisition/cataloging functions workstation is a very important milestone. If the contractor fails to meet this deadline, NLM should look very carefully at remedying the problems.

MEETING CLOSED FOR THE REVIEW OF GRANT APPLICATIONS, 10:25 A.M., SEPT. 18, 1985

XIV. REVIEW OF PENDING APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP, informed Board members of confidentiality and conflict-of-interest procedures and

reminded them to sign, at the conclusion of the grant application review, the statement that they had not participated in the discussion of any application where conflicts of interest might occur.

The Board reviewed 67 applications of which 33 were recommended for approval, 31 for disapproval, and 3 for deferral. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment B). Interim actions taken by the Extramural Programs staff since the June Board meeting were noted.

XV. ADJOURNMENT

The meeting was adjourned at 11:00 a.m., Wednesday, September 18, 1985.

* * * * *

Monday, September 16, 1985, 3:00 to 4:30 p.m.
(EP Subcommittee--List of Attendees under Attachment C)
Monday, September 16, 1985, 2:00 to 4:30 p.m.
(LHC Subcommittee--List of Attendees under Attachment D)
Tuesday, September 17, 1985, 9:00 a.m. to 4:45 p.m.
Wednesday, September 18, 1985, 8:30 a.m. to 11:00 a.m.

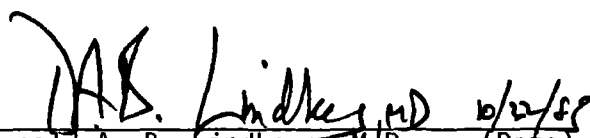
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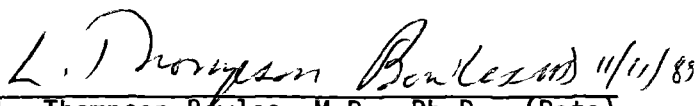
ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board accepted the principles expressed in the report on the preservation of NLM's collection and asked NLM staff to investigate budgetary and staffing implications in implementing the report's recommendations.
2. The Board decided to continue the current policy of review of library automation projects as individual grant requests, and to defer its decision on a possible general policy for this class of resource grants, pending the outcome of the planning process.
3. The Board concurred with 67 recommendations of the Extramural Programs Subcommittee. Grant applications for approval are listed in the summary actions (Attachment B).

* * * * *

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.


Donald A. B. Lindberg, M.D. (Date) 10/22/85
Executive Secretary


L. Thompson Bowles, M.D., Ph.D. (Date) 11/11/85
Chairman

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APPLICATIONS APPROVED BY COUNCIL
 (ARRANGED NUMERICALLY BY PROGRAM)
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE
 COUNCIL DATE: AUGUST 1985

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
2 R01 LM04139-03	THE NAMES OF CULICIDAE	03 38,380
1 R01 LM04239-01A2	COMPUTER TRANSLATION OF MEDICAL TEXT	01A2 104,913 02 103,989 03 110,633
1 R01 LM04433-01	MEDICAL FLORA OF SOUTH AMERICA	01 20,233 02 20,037
1 R01 LM04434-01	DUALS SECONDARY REVIEW: CA CANCER AND CULTURE IN MODERN AMERICA	01 23,303 02 23,120
1 R01 LM04435-01	COMMUNITY HOSPITAL IN UPPER NEW YORK STATE 1880-1940	01 20,927 02 21,988 03 22,218
1 R01 LM04437-01	DUALS SECONDARY REVIEW: MH MH LAW: CLINICAL AND LEGAL ISSUES FOR CLINICIANS	01 24,500
1 R01 LM04443-01	THE WORLD HEALTH ORGANIZATION'S RESEARCH PROGRAM	01 10,800 02 5,535
1 R01 LM04447-01	DIAGNOSTIC TECHNOLOGY IN AMERICAN HOSPITALS, 1895-1925	01 28,343 02 30,030 03 25,389

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM04450-01	IAIMS-ENHANCING INTERDISCIPLINARY PATIENT CARE	01 200,000 02 200,000 03 200,000
1 R01 LM04455-01	PREPARATION OF A BOOK - HEALTH POLICY USA: A PRIMER	01 39,075
1 R01 LM04460-01	REVIEW OF THE ETHNICS OF LIFE SUPPORT	01 10,000
1 R01 LM04481-01	DUALS SECONDARY REVIEW: HL EPIDEMIOLOGY OF BLOOD PRESSURE: REVIEW OF 120 SURVEYS	01 30,685
1 R01 LM04483-01	MIGRATION AND HEALTH: IMR SPECIAL ISSUE	01 45,197
1 R01 LM04485-01	DIAGNOSTICITY AND HEURISTICS IN MEDICAL DECISION MAKING	01 77,452 02 80,993 03 83,724
1 R01 LM04487-01	COMPUTER-BASED EXERCISE IN PATHOPHYSIOLOGIC DIAGNOSIS	01 130,647 02 114,769 03 98,026 04 63,005 05 69,132
1 R01 LM04493-01	DUALS SECONDARY REVIEW: RR ARTIFICIAL INTELLIGENCE AND CLINICAL DECISION MAKING	01 791,638 02 737,163 03 777,591 04 820,257 05 865,293

APPLICATIONS APPROVED BY COUNCIL
 (ARRANGED NUMERICALLY BY PROGRAM)
 COUNCIL DATE: AUGUST 1985
 INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE
 PROG. CLASS:

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 LM04496-01	DUALS SECONDARY REVIEW: EY NEW HIER.NOMEN.SYS.OF OCUL.SUR.	01 9,524
1 R01 LM04552-01	DUALS SECONDARY REVIEW: AMAGAICADEGM	01 82,322
	CENTENNIAL YEAR HISTORY OF NIH RESEARCH GRANT & EXTRAMURAL PROGRAM	02 18,900

APPLICATIONS APPROVED BY COUNCIL - DUAL REVIEW
(ARRANGED NUMERICALLY)
COUNCIL DATE: AUGUST 1985
INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE
PROG. CLASS:

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R01 CA39625-01A1	DUALS SECONDARY REVIEW: LM	01A1 217,299
		02 219,508
	DEVELOPMENT OF A PROTOCOL WRITER FOR INVESTIGATIONAL CAN	03 232,194

APPLICATIONS APPROVED BY COUNCIL
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: AUGUST 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 R23 LM04440-01	DUALS SECONDARY REVIEW: HL	01 34,513
	STEPPED-CARE COLLEAGUE: AUTOMATED THERAPY REVIEW IN HYP	02 35,487
		03 37,500

APPLICATIONS APPROVED BY COUNCIL
 (ARRANGED NUMERICALLY BY PROGRAM)
 PROG. CLASS:

COUNCIL DATE: AUGUST 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G08 LM04392-01	GEORGETOWN PILOT IAIMS	01 200,000 02 200,000 03 200,000
1 G08 LM04411-01	IAIMS PILOT IMPLEMENTATION	01 200,000 02 200,000 03 200,000
1 G08 LM04429-01	INDEPENDENT LIBRARY DATABASE USERS (ILDU)	01 127,937 02 135,323 03 91,966
1 G08 LM04466-01	MELVIN MEDLINE PROJECT	01 185,381 02 184,736 03 161,685
1 G08 LM04475-01	CE FOR NURSES: A LIBRARY'S OUTREACH TO RUAL NEW MEXICO	01 22,026
1 G08 LM04480-01	HAWAII MEDICAL LIBRARIES COMPUTER NETWORK (HMLNET)	01 200,000 02 145,597
1 G08 LM04498-01	OUHSC INTEGRATED LIBRARY SYSTEM	01 195,646 02 189,762

APPLICATIONS APPROVED BY COUNCIL
(ARRANGED NUMERICALLY BY PROGRAM)

COUNCIL DATE: AUGUST 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 G07 LM04439-01	MEDICAL LIBRARY RESOURCE GRANT APPLICATION	01 4,000
1 G07 LM04448-01	MEDICAL LIBRARY RESOURCE GRANT APPLICATION	01 4,000
1 G07 LM04472-01	MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT	01 4,000

APPLICATIONS APPROVED BY COUNCIL
(ARRANGED NUMERICALLY BY PROGRAM)
PROG. CLASS: COUNCIL DATE: AUGUST 1985

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	PROJECT TITLE	AMOUNTS RECOMMENDED
1 P50 LM04492-01	NATIONAL REFERENCE CENTER FOR BIOETHICS LITERATURE	01 251,572 02 242,244 03 286,764 04 288,324 05 306,785
1 P50 LM04497-01	NATIONAL REFERENCE CENTER FOR BIOETHICS LITERATURE (NLM)	01 285,740 02 284,974 03 309,707 04 339,268 05 366,409

B O A R D O F R E G E N T S

EXTRAMURAL PROGRAMS SUBCOMMITTEE MEETING

September 16, 1985

A T T E N D E E S

Subcommittee Members Present:

Dr. Lois E. DeBakey
Dr. Albert E. Gunn
Dr. Ann K. Randall
Dr. Grant V. Rodkey
Dr. Eugene A. Stead, Jr.

Dr. L. Thompson Bowles, Chairman, Board of Regents

NLM Staff Present:

Mr. Kent A. Smith, Deputy Director, NLM
Dr. William G. Cooper, Associate Director, EP
Mr. Arthur J. Broering, Deputy Associate Director, EP
Mrs. Ruth Bortz, Grants Management Specialist, EP
Dr. Jeanne L. Brand, Chief, International Programs Branch, EP
Mr. Brian R. Campbell, Administrative/Grants Management Officer, EP
Mr. Peter Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant, EP
Dr. Roger W. Dahlen, Chief, Biomedical Information Support Branch, EP
Mrs. Frances H. Howard, Special Assistant to the Associate Director, EP
Mrs. Frances E. Johnson, Program Officer, EP
Mrs. M. Kathleen Nichols, Grants Management Specialist, EP
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Mr. Randall Worthington, Program Officer, EP

B O A R D O F R E G E N T S

LISTER HILL CENTER SUBCOMMITTEE MEETING

September 16, 1985

A T T E N D E E S

Subcommittee Members Present:

Dr. Edward N. Brandt, Jr
Dr. Charles N. Brownstein
Capt. Noel Dysart
Mr. John K. Lopez
Dr. David O. Moline

Dr. L. Thompson Bowles, Chairman, Board of Regents

NLM Staff Present:

Dr. Donald A. B. Lindberg, Director, NLM
Dr. Harold M. Schoolman, Deputy Director for Research and Education, NLM
Mr. B. Earl Henderson, Acting Director, Lister Hill National Center for
Biomedical Communications, NLM
Mr. Charles M. Goldstein, Chief, Information Technology Branch, LHNCBC
Mr. James S. Main, Chief, Audiovisual Program Development Branch, LHNCBC
Dr. George R. Thoma, Chief, Communications Engineering Branch, LHNCBC
Dr. John Starkweather, Special Assistant to the Deputy Director for Research
and Education, NLM
Dr. William Harless, Special Assistant to the Director, LHNCBC
Mr. Charles E. Herbert, Assistant Director for Program Planning and
Coordination, LHNCBC