

MEDICAL INFORMATICS NEWSLETTER



A Publication of IFIP-IMIA
(International Medical Informatics Association)

Vol.15 No.1

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D.A.B. LINDBERG (North America), K.C. LUN (Asia),
A. MEHDAOUI (Africa), R.J. RODRIGUES (Latin America)

March 1990

American Medical Informatics Association Founded

The merger of the American Association for Medical Systems and Informatics the Symposium on Computer Applications in Medical Care and the American College of Medical Informatics into the new American Medical Informatics Association (AMIA) is now complete.

With the dissolution of AAMSI in November and SCAMC in January, the AMIA Board of Directors met on January 9, 1990, prepared to move forward as the single organization in the United States solely focused on computer applications in health care, education and research. Pening the meeting, the President, Donald A.B.

Lindberg, Director of the National Library of Medicine, commented on the bright future of the organization, and the active role it hoped to play in both domestic and international matters related to medical informatics.

The highly regarded and well attended Symposium on Computer Applications in Medical Care (SCAMC) will continue to be held each November, but now as the official annual conference of AMIA. The program for the 14th Annual Symposium, to be held November 5-8, 1990, is now being assembled under the leadership of Dr. Randolph Miller and the University of Pittsburgh. More than 2,000 computer and health care scientists are expected to attend. Organizations representing dentistry and veterinary medicine have joined as co-sponsors, and are expected to make major contributions. Meanwhile, AMIA announced its intention to conduct smaller, focussed medical informatics meetings in the western part of the U.S. each spring or early summer. The first of these is to be held at Snowbird, Utah, June 20-23, 1990 (cf. page 8 - COMING EVENTS). Hosting the meeting will be the Department of Medical Informatics at the University of Utah in Salt Lake City. Dr. Joyce Mitchell of the University of Missouri serves as the Program Chair.

For further information about AMIA and conditions for membership please apply to: American Medical Informatics Association
1101 Connecticut Av., NW; Suite 700
Washington, DC 20036 / U.S.A.
For information about the SCAMC Conference, contact:
SCAMC - Office of Continuing Medical Education
George Washington University
2300 K Street, NW
Washington, DC 20027 / U.S.A.



Maria Ball and Thomas Piemme represented AMIA at MEDINFO in Singapore.

Dr. Lindberg has formed the AMIA International Affairs Committee, which has begun on some of the following initiatives:

1. To make a conscientious effort to have formal American representation on each of the IMIA Working Groups.
2. To form an international travel committee to be chaired by Dr. Phil R. Manning in preparation for MEDINFO 92 and other IMIA activities, Working Groups and European meetings.

The six individuals who constitute the core group are: Dr. Marion J. Ball (Chairman), Dr. Richard K.C. Hsieh, Dr. Charles Flagle, Dr. Morris Collen, Dr. Thomas Piemme and Dr. Phil Manning.

For further information, please feel free to contact Dr. Marion J. Ball, Chairman, International Affairs Committee:

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IMIA

Aims:

- to promote informatics in health care and biomedical research
- to advance international co-operation
- to stimulate research, development and routine application
- to further the dissemination and exchange of information
- to encourage education and responsible behaviour; and
- to represent IFIP with the World Health Organisation and any other relevant professional or governmental organization

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For addresses see list of IMIA representatives.

Please apply to the IMIA Secretariat, at the address given below, for copies of the IMIA Newsletter and to be added to (or removed from) the mailing list.

The Secretariat can also answer inquiries about IMIA.

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Kindly submit material for the Newsletter two months before the publication date.

Published by:

IMIA Secretariat
16 Place Longemalle
CH-1204 Geneva/SWITZERLAND

Printed by:

Offset-Druck R. Lindenhain GmbH
Gleiwitzer Strasse 2a
D-3012 Langenhagen-Godshorn/F.R.G.

Who is Who in IMIA?

Prof. Dr. Jos L. Willems New President at IMIA

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B-3000 Leuven/BELGIUM



On December 9th, 1989, IMIA elected their new President on the occasion of their annual General Meeting held in Singapore, prior to MEDINFO (Part II).

Prof. Willems was born in 1939 in Zolder, Belgium, and graduated in medicine from the Catholic University of Leuven, in 1963. For the following six years he specialized in cardiology at Leuven and Leiden, and then spent two years (Oct. 1969 - Oct. 1971) as a Research Fellow of the World Health Organization with Dr. H.V. Pipberger in Washington, D.C., gaining experience in cardiovascular data processing.

Returning to Leuven, he was appointed firstly Assistant-Professor (1973) later Associate (1979) and then full Professor (1988) in Medical Informatics at the Medical Faculty of Leuven University. Since 1971 until to date he has been Chairman of the Division of Medical Informatics at the University of Leuven. In this function he teaches Medical Informatics to students of the Medical Faculty and the School of Public Health. Together with his team he has developed an extensive computer network for the University Hospitals of Leuven.

In 1978 he became President of Belgian Society for Medical Informatics (MIM) for a term of 4 years. Since that time he has been representing the MIM in the General Assembly of IMIA. In December 1989, he was elected President of the International Medical Informatics Association (IMIA). He is member of the editorial board of four scientific journals, and of several national and international professional societies. He is author or co-author of over 250 scientific papers.

Since 1980 he has been project leader of a large international concerted action striving at "Common Standards for Quantitative Electrocardiography" (CSE), which is supported by the European Commission. Investigators from 25 European institutes, six from North America and one from Japan participate in this project. In his role of project leader he has been very active to obtain standardization of Computerized Electrocardiography, first for standardized ECG measurement and next for diagnostic ECB computer programs. Recently he has launched a proposal to develop standards for interchange, encoding and storing of digital ECB data.

Prof. Willems is married and father of three children. Besides listening to classic music, he likes windsurfing in summer.

MEDINFO 89 SINGAPORE

**Closing Address at the 6th World Congress on Medical Informatics
MEDINFO 89, Part II in Singapore,
December, 10–14th 1989**

by Jos L. Willems, President of IMIA

Dear Prof. Kaihara, Dear Dr. KC Lun, Dear Dr. Manning, Members of the Program and of the Organizing Committee, Dear Friends,

Now that MEDINFO 89 is coming to an end, it is with great pleasure and administration – and also with some relief – that I want to thank you all for this successful Conference. This Medinfo in Singapore after a turbulent history, achieved great success on all accounts, i.e. from a scientific, organizational and social point of view.

The scientific papers were of high quality, and for this I want to thank the speakers and the session chairmen too, many of whom served as reviewers for the SPC. A number of the developments which have been presented at this conference will have a significant impact on the provision and quality of health care in the years to come. The slogan for this MEDINFO "Informatics in Support of Global Health" was well chosen.

Time is going fast and information flow almost faster. At this conference, we have observed again a significant shift from managerial applications to decision support and other developments, a shift which was already apparent at the Washington conference. I will not review the contents, neither tabulate the themes of all the papers which were presented. Many things we heard were impressive, others promising, but let us remain critical and watch our field. I dare to say, that not everything what has been said or even printed, is true or even should be true.

We should always carefully assess our data, their quality, relevance and implications, especially when they are stored and handled by computer. In this fast moving area of telematics and networking, we should be very careful indeed, and be aware about ethical implications, about confidentiality and responsibility, about the user and the patient. When Dr. TAY ENG SOON, Senior Minister for Education announced in his opening address the installment of MediNET for the health services in Singapore, he assured that confidential information will be protected. It is indeed our duty, to take all steps and to verify that confidentiality remains preserved.

We should at our future MEDINFO, and also at other conferences, have a renewed look at the various non-technical aspects of Health and Medical Informatics. It is our duty – and it is great time indeed – that we focus again on various ethical, legal and social issues of modern information technology and information handling. During my term as IMIA President, I will try to do my best to promote and watch this field.

In the footsteps of my predecessor, I will try to achieve further the objectives that he specified.

1. One – to enlarge and broaden the coordination of the scientific activities of IMIA. That shall be our prime objective. To this end I will ask for a renewed look at the objectives and structure of what we so far called the Working Groups of IMIA.

2. Two – we will try to further enhance the international scope of IMIA. For this we will be looking not only to the EAST, but also to the WEST and to the SOUTH as well: to the USSR and the Middle East, and also Africa, and last but not least, to AMIA, the newly created American Medical Informatics Association.

As many of you know, thanks to Prof. Kaihara, IMIA has become an independent organization. Over the years IMIA has grown and the age of 20 or 21 – in common accord with IFIP, its parent organization, can now stand on its own feet and be independent, let's hope indeed. Nevertheless, IMIA will and shall not forget its origin. On the contrary, together with IFIP we hope to organize joint conferences on technical issues, on software engineering and even data protection and legal issues too. And finally, we will need to solve the present financial difficulties of IMIA.

As president of IMIA, I sincerely hope that MEDINFO 92 will become a great success. I can assure you that we have a team which makes this possible and which will make this happen:

– Prof. Dr. Jean-Raoul Scherrer, Professor of Medical Informatics at the University of Geneva, as Chairman of the Organizing Committee.

– Dr. Salah Mandil, Director of the Information Support Systems of the World Health Organization, as Chairman of the Scientific Pro-

gramme Committee.

– Prof. Dr. Jochen R. Moehr of the Department of Medical Informatics of Victoria University British Columbia, Canada, as Vice-Chairman of the SPC.

– Dr. KC Lun, you all well know by now, as Chairman of the Editorial Committee.

But before handing the word to my good friend Jean-Raoul Scherrer, I still want one more Minute of your attention. As new president of IMIA I will try to do my best, but please do not compare me with Prof. Kaihara, my predecessor. He has been so exceptional.

Prof. Kaihara, during his whole term as president, but especially during these last 6 turbulent months, has done so much for IMIA, that I cannot find the words to express our gratitude. Everyone agrees that no other person than him could have solved the problems IMIA has been confronted with. His deep understanding of the cultures of the East and West, his personal touch and diplomacy, have achieved that at least some of us ultimately had not one but two successful MEDINFO Conference. Of course, much more was needed than understanding and diplomacy: hard decisions, hard currency fund rising and maybe also sleepless nights, but that of course is something that he, as a true Japanese, will never us know. For all what he did for IMIA, I want to thank Prof. Kaihara wholeheartedly.

Prof. Lun, we want to thank you too sincerely. You and your team deserve an Oscar, a special award from IMIA for your organizational talents and all the work. You have proven what these joyful, young-looking, dynamic and hard-working Chinese and other people from Singapore can achieve in this prosperous City-state. We all enjoyed being here in Singapore, eating, talking, shopping.

And now, Ladies and Gentlemen, I should stop and give the word to the Chairman of the new Organizing Committee, my dear friend Jean-Raoul, who together with his dynamic team will steer MEDINFO 92 in that beautiful country, named Switzerland. I look forward to seeing you there in three years.

MEDINFO 89 SINGAPORE – A TREMENDOUS SUCCESS

December 10–14, 1989

MEDINFO 89 SINGAPORE, Part II of the 6th World Congress on Medical Informatics, was both a resounding and astounding success. Resounding because the Congress was attended by some 800 delegates from among 47 countries. Of these, only 50 were local participants.

Astounding because the organization of the Congress was accomplished within five months and in spite of a very short lead time, delegates were treated to a first-class scientific meeting and social functions that they would long remember Singapore by. Said one US delegate, "Many of us expected to find a hastily assembled meeting with the organizers offering apologies because things didn't work out. But, my gosh, this is the best MEDINFO that I've ever attended!" The concurrent Scientific Exhibition involved the participation of 24 exhibitors, with the Association of British Healthcare Industries (ABHI) leading the group by taking up 12 booth spaces.

The venue for MEDINFO 89 SINGAPORE, which was held from 10–14 December 1989, was Singapore's premier convention centre, the Raffles City Convention Centre, which is housed within a huge hotel, business and shopping complex. The majority of the delegates were accommodated at the 5-star Westin Plaza and Westin Stamford (reputed to be the world's tallest hotel).

The Opening Ceremony was performed by Dr. Tay Eng Soon, Senior Minister of State for Education and Chairman of the Committee for National Computerisation. In his opening address, Dr. Tay announced plans for the launching of MEDINET, a computerised network that will link all medical and healthcare professionals, institutions and industries in Singapore. Also invited to attend the Ceremony was Dr. S.T. Han, Regional Director of the WHO Western Pacific Regional Office, who delivered a message on behalf of Dr. Hiroshi Nakajima, the WHO Director General.

Following the Opening Ceremony, two keynote addresses were delivered. The first address was given by Mr. Tan Chin Nam, Chairman of the National Computer Board (Singapore) who spoke on "The Role of Information Technology in Singapore's Healthcare Services Industry". The second keynote address was delivered by Mr. Michael Fahey, Director of Planning and Information Technology, Dept. of Health, UK, who spoke on "Management Information: Its Role in Health Care".

Later that evening, Congress delegates were treated to a Welcome Reception at the Empress Place Museum, located on the left bank of the historic Singapore river. During the Reception, delegates had the rare opportunity of viewing some 132 pieces of authentic treasures from the Qing Dynasty, the last dynasty of China. The exhibits, which had hitherto never been exhibited outside China, were made possible through high level contacts between the governments of Singapore and the People's Republic of China. Said Dr. Lun, "We chose the Empress Place Museum for the Welcome Reception as a consolation to those delegates who were unable to attend MEDINFO in Beijing".

The scientific meeting began in earnest on Monday, 11 December. During the four-day meeting, some 200 papers were delivered over 42 sessions. In addition, the scientific program included 21 scientific demonstrations, four pre-Congress tutorials and eight evening workshops which were all very well attended. As at the previous MEDINFO – the Meet-the-Expert sessions and the Software Exchange proved to be highly popular. Poster sessions were introduced at MEDINFO 89 SINGAPORE and much to the surprise of everyone, the 9 sessions generated very keen participation and active discussions on some 100 posters that were presented.

Many of the big names in the computer industry gave significant contributions to the success of the MEDINFO Scientific Exhibition. In addition to the large ABHI presence, IBM, Hewlett-Packard, Digital, NEC, Toshiba, Sony, Fujitsu, SW International, Siemens, ICL and other vendors generated keen enthusiasm among Congress delegates and trade visitors with their state-of-the-art exhibits.

The success of the social functions at MEDINFO 89 SINGAPORE was largely the result of careful planning to ensure maximum participation and enjoyment of Congress delegates. In addition to the Welcome Reception, the Gala Dinner which featured a theme party "A Night in Singapore" was greatly appreciated by all who were present. Top draw among the night's entertainment must certainly be the Snake Charmer. He even charmed Dr. Phil Manning, SPC Chairman, and Dr. Kaikara into having a full-sized python coiled round their shoulders – charming company for the evening! Other social activities included tours to local scenic spots. The lurcher once took off for the sunny isles of Bali in Indonesia, Langkawi in Malaysia and Phuket in Thailand after a hectic MEDINFO in Singapore. While the friends and colleagues were braving freezing temperatures back home, they were getting sun-tanned on some of the best tropical beaches of the world.

At the Closing Ceremony, Dr. Phil Manning announced the winners of the two gold medals for the two best papers presented at MEDINFO. Dr. Thierry Barsalou of Stanford, U.S.A. won one of the medals for his paper on "Hypertext Interfaces for Decision-Support Systems: A Case Study" while the other medal went to Dr. Peter Byass from the Medical Research Council Laboratories in The Gambia for his paper on "Assessment of a Probabilistic Decision Support Methodology for Tropical Health Care".

The Ceremony continued with the passing of the gavel from the outgoing IMIA President, Dr. Kaihara to the incoming President, Dr. Jos Willems of Belgium. Then, it was time to say "Farewell MEDINFO 89" and "Welcome MEDINFO 92". A filmlet on Geneva, the venue for MEDINFO 92 was shown, followed by a short address from Dr. Jean Raoul Scherrer, Chairman of the Organizing Committee for MEDINFO 92 urging delegates to attend the next MEDINFO. On that note, MEDINFO 89 SINGAPORE was drawn to a highly successful completion.

Dr. K.C. Lun, Singapore

A MESSAGE FROM THE OUTGOING PRESIDENT

Shigekoto Kaihara, M.D.
IMIA President, 1986–1989

Now that I leave the office of President of the International Medical Informatics Association, or IMIA, I should like to express my sincere appreciation to all members for supporting the activities of our organization during my term as your president. While serving as such, I have tried my best to see that IMIA gain more influence globally in the field of medical informatics. In this pursuit, however, my aspirations often proved to be greater than my ability to achieve them. Nevertheless, I forged ahead and feel that whatever of worth that I was able to accomplish ought to be summarized, trusting that this review will prove helpful to future IMIA administrations.

1. Four Goals

When I was elected, there were four goals that I wanted to achieve: to change the basis of IMIA's relations with the International Federation for Information Processing (IFIP); to broaden the scope of IMIA's activities to include all parts of the world; to coordinate various scientific activities in the field of medical informatics; and, to make our MEDINFO 89 conference a success.

Summarizing the results of my endeavors during the past three years, though progress was made in achieving the first, second, and fourth goals, to my regret, I was unable to contribute as much as I had hoped towards realizing my third goal – the coordination of activity in the field of medical informatics.

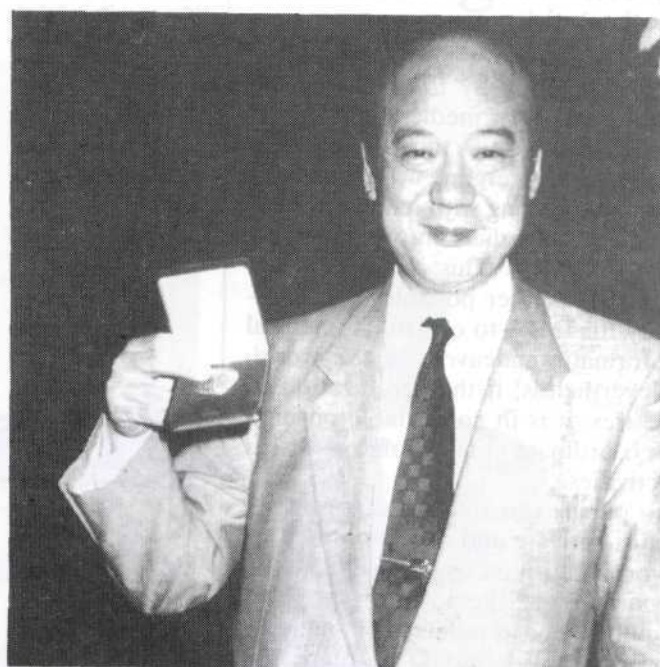
2. Independence from IFIP

To briefly recount our history, IMIA's activities had once been a specialized area of interest for a technical committee within IFIP so that its birth as an organization in 1989 developed from such a committee. From IMIA's beginning, it has always enjoyed good relations with IFIP. Two areas of concern were noted, however, when I became IMIA President in 1986.

The first area involved administrative complications. Now in most countries, membership in IMIA no longer automatically implies membership in IFIP. The situation was different when IMIA first started, when IFIP members interested in medical informatics participated in the IMIA activities. Gradually in various countries, independent organizations interested in medical informatics began to be established, with the result that they sought for IMIA membership. In these newly-formed organizations, about half of its individual members were medical doctors, who are not as interested in basic computer hardware or software as in the application of computer to their fields of endeavor.

Accordingly, as time went on, it was becoming increasingly apparent that the aims of the IFIP, the parent, and IMIA, the child, were beginning to diverge. Yet, because IMIA was still administratively a part of IFIP, it had to report to IFIP on its activities and have its budget approved yearly. This was the situation when I became president.

The second area of concern involved scientific collaboration between IFIP and IMIA. Although IFIP endeavors are mainly in the field of basic computer studies, some IFIP research touches upon computer applications of IMIA interest, though there has been very few instances of scientific collaboration in the past. Thus IMIA seemed only related to IFIP administratively but not scientifically, a situation that, for the good of both organizations, needed reversing. This I wished to accomplish.



For his significant contribution to the work of WHO in the applications of Informatics to Health and towards "Health for All by the Year 2000", Prof. S. Kaihara is the first person who was awarded a WHO Medal relating to the Informatics field.

Fortunately, Mr. A. Melby, a vice president of IFIP at the time, was receptive to this idea and in 1987, at an IFIP meeting convened to review IMIA activity, I proposed that the relationship between IMIA and IFIP be reviewed instead. Thanks to Mr. Melby, the IFIP General Assembly agreed and a committee was formed to review the matter. Both Mr. Melby and I were appointed to this committee and I fondly remember our discussion at Tivoli Garden in Copenhagen. This led to IFIP's acceptance of the committee's report, which advocated that IMIA be accorded an associate membership in IFIP, and to IMIA's administrative independence.

Achieving independence, however, did not mean that IMIA wished to see scientific ties between the two organizations severed, and so I proved that IMIA share IFIP's head office in Geneva on a fee basis, a proposal that was accepted. Dr. Scherrer's contribution towards setting up this new arrangement should be recorded. I am very pleased that this new IMIA/IFIP accord, having been approved at the IMIA Annual General Meeting in Singapore in 1989, became effective in 1990. It is my sincere hope that IMIA members enjoy their independent status and that they fully utilize their IFIP ties in the future.

3. World-Wide Activities

To achieve my second goal – to see IMIA flourish in all parts of the world, I followed a policy of holding board meetings in cities where no previous IMIA meetings had been convened. Thus, IMIA's Spring Board Meetings were held in Berlin, GDR, in 1987, and in Rabat, Morocco, in 1988 and with Tbilisi in the USSR to be the site for 1990. In addition, the 1989 Annual General Meeting was held in Buenos Aires, Argentina, and MEDINFO in Beijing, China and in Singapore. Further, a medical informatics conference, co-sponsored by IMIA, as stated previously, had held no previous activity in any of these cities, and by doing so it has given real meaning to its desire to become known as a truly international organization.

(Continued on page 6)

4. Coordination of Medical Informatics Activity

I regret that I was unable to contribute much to my third goal – the coordination of medical informatics activity. At this time many new fields are emerging in medical informatics, along with many activities related to medical informatics outside of IMIA. This is encouraging, but it is neither possible nor necessary for IMIA to control all medical informatic endeavors in the world. Nevertheless, if the organization so desires, it is in an enviable position to coordinate at least some of these activities.

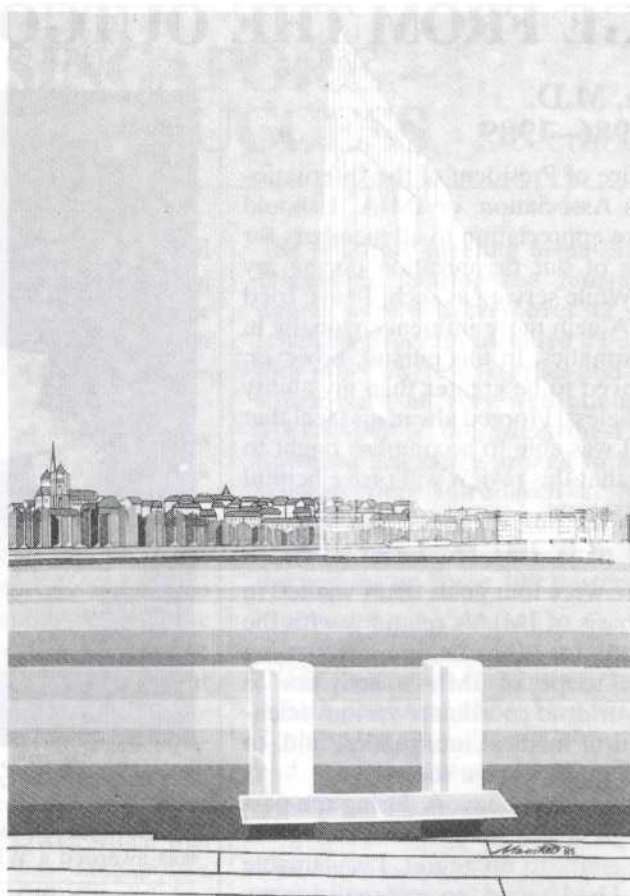
To pursue this role, however, IMIA must activate and utilize some of its working groups, as a nuclei for such coordination. Previously, few opportunities were available for planning on how IMIA should proceed and, due to the time needed for detailed discussions, the IMIA Annual General Meeting was not deemed to be the proper forum. I previously had asked Dr. Hans Peterson to organize a committee, composed of chairmen, to discuss this aspect of IMIA's endeavors but too little time was available and my intention has not been fully realized. Even so, I was pleased that some discussions were started in 1989 at the Singapore working group chairmen's meeting, and my hope is that this group will one day serve as a powerful, scientific, coordinating body in the field of medical informatics.

5. MEDINFO

Who could have predicted four years ago the unfortunate June incident in Beijing that marred our plans for MEDINFO 89? Here I do intend to repeat the steps taken to solve the problem, as this already has been reported in my letter to the members in July 1989 (see IMIA Newsletter Vol. 14, No. 1, July 1989; Ed.). I only wish to thank both Mr. Ouyang for his generous fair attitude under very trying circumstances and Dr. K.C. Lun for his kind assistance in quickly providing the additional Singapore venue. It is difficult to assess whether my decision was right or wrong, but at least I can say that IMIA was able to survive the crisis intact.

IMIA now has a new and energetic president, Dr. Jos Willems. Under his prudent guidance our organization is certain to flourish. To him and to all of you my very best wishes.

January 8, 1990



med info geneva 92

Geneva Palexpo, SWITZERLAND. The 7th World Congress on Medical Informatics, MEDINFO 92, will be presented from September 6–10, 1992 by the International Medical Informatics Association (IMIA).

The congress will endeavour to promote all aspects of medical and health care computing from all countries of the world. Participation will be sought from among health information scientists, medical computing specialists, public health and hospital administrators, physicians, nurses, other allied health personnel, and consultants in the various health fields.

The following topics will be focused on: Hospital Information Systems; Clinical Laboratory Systems; Clinical Laboratory Systems; Clinical Departmental Systems; Imaging; General Practice/Ambulatory Care; Nursing Applications; Drug Information Systems; Administration and Finance; Patient Monitoring/Intensive Care; Support of Clinical Decision Making; Evaluation of Health Care; Medical Research Support Systems; Epidemiology and Statistics; Education and Training; Privacy, Confidentiality and Security; Systems and their Environment; Community Health Care; Preventive and Occupational Care; Impact of New Technology; Networks/Distributed Systems; Software Systems; Free Text Processing; Modelling and Simulation.

For further information please contact:

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Fax: (+41.22) 786 40 80



IMIA 11th Annual General Meeting 1989

IMIA held its Annual General Meeting (AGM) in Singapore on December 9th, 1989 prior to MEDINFO 89.

These were the main decisions taken:

Membership

American representative was replaced from AFIPS to American Informatics Association (AMIA). Dr. Marion Ball was appointed as US representative. The Korean Society of Medical Informatics was accepted as a member.

Nominations

Dr. Ball (USA) was appointed as Trustee for three years. Dr. Flint was appointed as Trustee for one year. Dr. Bakker was appointed as Treasurer. Dr. Peterson was appointed as chairman of the Nomination Committee.



Checking the cash: present and former treasurer, A.R. Bakker, Netherlands (left) and J.H. Flint, Canada

Committees

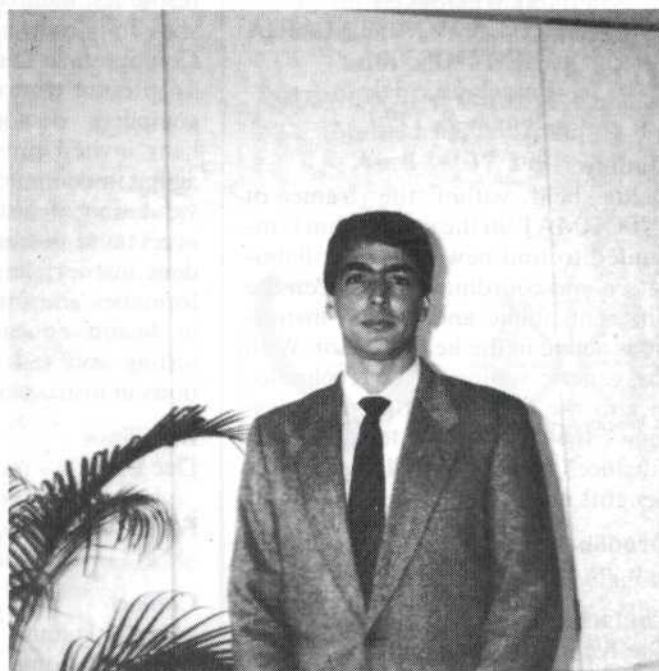
There was some change of editors of IMIA Newsletter: P. Degoulet, France, and A. Mehdaoui, Morocco were nominated additional regional editors. K. CH. Lun, Singapore and R.J. Rodrigues, Brazil remain regional editors. A.S. Gose was replaced by D.A.B. Lindberg due to the formation of a new North American Association (AMIA). O. Rienhoff remains Chief Editor.

The Public Relations Committee was terminated. Some work will be done by the Chief Editor of the Medical Informatics Newsletter.

IMIA Transformation

IMIA's transformation from IFIP-SIG to an independent organization was approved.

IMIA has its seat now at Geneva (IFIP secretariats's office) under the Swiss law. The amendments of bylaws necessary for this change was approved.



New Cuban representative: Ing. Armando Rosales Fernández of Ministerio de Salud Publica, who was also responsible for Informatica '90.

MEDINFOS

MEDINFO 89 part I

in Beijing was a success with about 700 participants.

MEDINFO 89 part II

in Singapore was an excellent conference with more than 700 participants from all over the world. Thanks to the efforts of Dr. K.C. Lun and also to the excellent facilities, this conference became one of the best MEDINFO's in the past. There were very little cancellation of the presentation of papers; all papers were of excellent quality. Two gold medals were awarded, one to American and the other to Gambian scientists.

MEDINFO 92

Dr. S. H. Mandil of WHO was appointed SPC Chairman.

Dr. K.C. Lun from Singapore was appointed Editorial Committee Chairman.

Committees members will be appointed in the near future and they will be in full operation soon.

Working Groups

Working Group 11, Dental Informatics was approved. Many new working conferences were proposed.

Next AGM

The next Annual General Meeting will be held in Glasgow, U.K. on August 18, 1990 prior to the Medical Informatics Europe (MIE) Congress.

COMING EVENTS

SYMPOSIUM INFORMATICA HOSPITALARIA SINFHOS '90 Barcelona, Spain June 6-8, 1990

Outline

Being held within the frame of INFORMAT 90 the symposium is intended to find new lines of collaboration and coordination between the different public and private institutions active in the health sector. With the generic subject "New Technologies in the Health Information Systems" the role of new technological advances and the entailed scientific benefits are to be focused on.

Deadlines

Feb 28, 1990 - Submission of papers

Contact

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First Annual Educational and Research Conference Snowbird, Utah/U.S.A. June 20-23, 1990

Outline

With its two main themes "Computers, Molecular Biology and Medicine" and "Computers in Learning and Teaching" this conference intends: (1) to provide an educational and research forum for the informatics issues involved in the Human Genome Project, molecular biology, genetics, and medicine; (2) to provide a research forum for exchanging and evaluating progress, new findings and recent innovations related to the use of computers for teaching and learning; (3) to build bridges and explore commonalities between the conference participants and the conference themes.

Computers, Molecular Biology, and Medicine: By the end of the conference the participants will have: an understanding of the biological and computing challenges which face the field of genetics and molecular biology; an appreciation of the informatics research in the fields of genetics and biotechnology; an awareness of the advances stemming from molecular biology and the Human Genome Project and how they will affect the practice of medicine and medical informatics; had an opportunity to view and use some of the national computer

resources, databases, and other software important in the field.

Computers in Learning and Teaching

To present contributed research and computer demonstrations, and to hear invited presentations on: pedagogy in computer based instruction; valuation of instructional materials; access and outreach to the independent learner; implementation of informatics and interactive technology in health education curricula; self testing and self evaluation; innovations in instructional technologies.

Deadlines

Dec 15, 1989 - receipt of abstracts of proposed participation
Feb 1, 1990 - Notification of acceptance

Contact

Michael Hamm
AMIA National Office
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6th IMEKO CONFERENCE ON MEASUREMENT IN CLINICAL MEDICINE and 8th HUNGARIAN CONFERENCE BIOMEDICAL ENGINEERING Sopron, Hungary August 29-31, 1990

Outline

The aim of this meeting is to present and discuss recent developments relating to information technology in clinical medicine. The programme will be designed to reflect the interdisciplinary nature of the subject and as such should appeal to clinicians and clinical scientists as well as to engineers and physicians. The audience will consist of people with many different backgrounds who share a common interest in solving problems in an interdisciplinary way.

The general scope of the programme will be information technology in medicine. This will provide an opportunity to discuss a wide range of topics including the following items: Intelligent sensors and transducers and their technological problems (design, production, application); New methods in physiological measurements and data processing including cardiovascular, respiratory and cardiopulmonary measurement, EEG, EMG, Model-based patient monitoring and control of physiological variables; Medical imaging with special regard to digital and computer-based radio-

graphy and ultrasonics; Biochemical measurements in medicine and data handling; Artificial intelligence and expert systems in medicine; Therapy design with up-to-date information technology; Clinical engineering (medical device regulations, quality control and insurance, education).

Deadlines

Jan 15, 1990 - submission of abstracts
Apr 15, 1990 - notification to authors about acceptance of papers

Contact

Mérés-technikai és Automatizálási
Tudományos Egyesület
(Scientific Society of Measurement and Automation)
P.O. Box 457
H-1372 Budapest/HUNGARY
Phone: (36-1) 531-406
Telex: 225792 mtesz h

IMIA Working Conference on Software Engineering in Medical Informatics (SEMI) Amsterdam, The Netherlands October 8-10, 1990

Outline

The working conference aims at providing a meeting ground to achieve a cross-fertilization between the two disciplines of Medical Informatics and Software Engineering.

The state of the art will be presented in keynote addresses. Future prospects of Software Engineering in Medical Informatics will be discussed.

Conference topics will be: Integrated programming environments; Programming techniques: modularity, reusable code, object-oriented programming; Analyst workbenches and structured design; Fourth-generation languages and program generators; Maintenance management and version control; Prototyping.

Deadlines

Jan 31, 1990 - final deadline for abstracts
Feb 28, 1990 - notification to authors about acceptance of abstracts

Contact

SEMI - Conference Secretariat
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Fax: +31 (10) 4088118
E-Mail: SEMI at HROEUR51.BITNET

COMING EVENTS

Latinamerican Seminar on applications of Mathematics and Computer Science to Biology La Habana, Cuba October 31st – November 3rd, 1990

Outline

This seminar will take place during the XI Scientific Seminar of the National Centre for Scientific Research, coinciding with the XXV anniversary of the foundation of The National Center for Scientific Research of Cuba (CENIC), who are the who are the organizers of the seminar together with the Latinamerican Society of application of Mathematics and Computer Science to Biology.

Scientific sessions will include conferences, contributed papers, workshops and poster sessions. Conferences will be held by distinguished guest scientists. Papers will be presented orally for a limited number of collaborations. The remaining collaborations will be in posters. The topics comprise:

Mathematical Models of Biological Systems; Artificial Intelligence in Biological Research; Computer Assisted Molecular Modelling; Biological Signal Processing; Image Processing in Biological Research.

Deadlines

May 31, 1990—submission of abstracts
Jul 31, 1990—notification to authors about acceptance of abstracts

Contact

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Centro Nacional de Investigaciones Científicas
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1st Hong Kong (Asia-Pacific) MEDICAL INFORMATICS CONFERENCE "Getting Started" Hong Kong November 15–18, 1990

Outline

The conference will focus on the task of initiating experimental and evaluation work, using the techniques and methods of medical informatics, in the context of routine clinical practice. The Conference is sub-titled "Getting Started" to indicate that it is intended to be a source of support for the inexperienced and uninitiated.

However, it is also intended as an attraction to specialists in a wide range of disciplines who will be invited to present their work and indicate how it might be applied in Asia and the Pacific rim.

For the purpose of the conference, medical informatics will encompass: Computing in health & medical care; Medical records & clinical information management; Clinical information systems; Clinical epidemiology biostatistics & clinical decision analysis; Operational studies in health & medical care evaluation of medical care, including economic appraisal.

Contact

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hkusc!hkuccl!hdmrajh at munnari.uucp (ACSNET)

IMAC 91 The Second International Conference on Image Management and Communication in Patient Care: Implementation and Impact Kyoto/Japan April 11–13, 1991

Outline

The dates for IMAC 91 begin just after the 23rd General Assembly of the Japan Medical Congress. The Congresses are held every four years, alternating between Kyoto and Tokyo. The Congress will cover all aspects of medicine and a variety of new concepts in medicine. It is expected to be a highly informative meeting. IMAC participants will have the opportunity to attend the meetings and exhibits of the Congress. In addition to the conference, many PACS facilities throughout Japan will host site visits.

Deadlines

April 1990 – Dispatch of second circular

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4th International Conference on Nursing Use of Computers and Information Science NURSING INFORMATICS '91 Melbourne, Australia April 14–17, 1991



Outline

Under the Theme "Nurses Managing Information in Health Care" this conference is convened by the Nursing Computer Group Victoria Inc. and cohosted by the College of Nursing, Australia under the auspices of Working Group 8 of the International Medical Informatics Association.

The conference will focus on:

a) Managing/Using Information in Administration /Service Management, b) Managing/Using Information in practice settings, c) Managing/Using Information in the Educational Environment, d) Uniformity of Data, is it necessary? A help or hinderance. e) Evaluation of the Impact of Use of Information Systems, f) Access to Information e.g. Retrieval Systems, g) Strategies for Influencing Vendor Development of Systems, h) Evolving Roles in Nursing Informatics, i) Influence of Information Systems on Nurse Recruitment and resource allocation, j) Preparation of Nurses for Managing Information in Health Care, k) Evaluation and Development of Nursing Knowledge Bases, Phenomena and Science – Expert Systems/Decisiration of Computers and Nursing; Nursing Role Changes.

Deadlines

Nov 30, 1989—submission of abstracts
May 1990 – notification of acceptance of papers

Contact

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ADVANCED TECHNOLOGIES FOR MEDICINE AND HEALTH CARE (AIM)

— A PROGRAMME OF THE EUROPEAN COMMUNITY —

In 1989 37 international research projects have started work on the use of advanced information and communication technologies in the field of medicine and health care. Projects have been selected following a public call for proposals under the European Community's AIM programme (AIM = Advanced Informatics in Medicine) which had resulted in 215 project proposals.

The financial volume of these proposals summed up to more than ECU 400 Million. The present level of funding from the Community budget is ECU 20 Million, to be matched by the same amount coming from project partners.

The disproportion of available and requested funding obliged independent experts, evaluating all the incoming proposals, to be extremely severe in the application of selection criteria. Their choices and proposals were approved by the AIM Management Committee which is made up of Member State representatives.

Work under the AIM programme will be complementary to the other Community programme such as RACE, DELTA, DRIVE or ESPRIT and the same working principles will be applied.

These principles include the **transnational** character of projects, concentration on **precompetitive** R+D, work to follow jointly defined **strategic** orientations, the sharing of costs and of R&D results.

The 37 AIM projects involve some 250 independent partners. Half of them are Universities and Research Institutes, 25% represent industry (information and communications industry, pharmaceutical industry and others) and 25% represent hospitals, medical practitioners and other users. Current AIM projects are planned to be completed by mid 1990.

Like the other above-mentioned programmes, AIM will be managed by the Commission's Directorate General XIII (Telecommunications, Information Industries and Innovation).

Background

The Aim programme is to be seen against the background of general trends and problems facing the medical and health care sector:

The economic/financial problems: Member States of the European Community spend an ever increasing proportion of their GDP (almost 10%) on medicine and health care systems without medium and long term solutions for the structural problems of the sector being in sight.

The technological problem: The introduction of new technologies (e.g. information and communication technologies) into medicine, biotechnology and health care systems is the basis for scientific progress whilst at the same time requiring the constant development and acquisition of new equipment and services, the setting up of new clinical units, the training of staff etc.

The human and medico-social problem: the demographic trend, the increased concern of individuals about their state of health and their quality of life, the urgent need to combat diseases like cancer and AIDS taken together

create an increasing demand for the further expansion of medical services.

All the actors involved in these developments (i.e. public health authorities, insurances, hospitals, medical professions, industries and academia) agree that advanced technologies must be used in order to

- improve the quality, flexibility and availability of health care services,
- improve the productivity of biomedical and biotechnological research,
- monitor more effectively health care expenditure and better assess its economic impact.

These objectives imply a multi-sectoral and multi-disciplinary strategy which no individual company or a single Member State can successfully put into practice.

Joining forces and pooling resources across frontiers is the only appropriate approach for the solution of these problems.

The European Community's initiative is designed to organize and stimulate this process of collaboration and coordination.

MIE 91 Tenth International Congress

Vienna, Austria. From August 19-22, 1991, the 10th International Congress, MIE '91 is organized by the European Federation for Medical Informatics (EFMI), the Austrian Computer Society and the Austrian Society for Biomedical Engineering.

Endeavouring to promote all aspects of medical informatics and health care computing the organizers expect as participants medical informatics and health information scientists, public health and hospital administrators, physicians, nurses, other allied health personnel, and consultants in the various health fields.

The following topics will be covered: Information Systems; Health Care Systems; Expert Systems and Decision Making; Coding, Classification and Nomenclature; Imaging and Signal Analysis; Biometry and Biostatistics; Biomedical Engineering; Hardware and Software Design; Network Systems in Health Care; Computer-Based Tutoring; Medical Informatics Curricula; Legal and Ethical Issues; Miscellaneous.

For further information please contact: MIE 91

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From: IFIP newsletter, Vol. 6, no. 4, December 1989, published by IFIP Secretariat, Geneva/Switzerland

IFIP ISSUES WORLDWIDE WARNING ON COMPUTER VIRUSES

In view of the potentially serious and even fatal consequences of the introduction of "virus" programs into computer systems, IFIP urges

- all computer professionals, worldwide, to recognize the disastrous potential of computer viruses
- all computer educators to impress upon their students the dangers of virus programs
- all publishers to refrain from publication of the details of actual virus programs
- all computer professionals not to knowingly distribute virus code, except for the purpose of legitimate research in a controlled environment and all developers of virus detection and prevention systems to stop distribution of virus codes for test purposes
- governments, universities and computer systems manufacturers to devote more resources to research into and development of new technologies for protection of computer systems
- governments to take action to make distribution of viruses a criminal offense.

The IFIP General Assembly (GA) passed the preceding forceful resolution at its meeting in September in San Francisco. With the identification of hundreds of computer virus programs and even more variations on these, the disastrous implications for computer systems must be recognized by all countries. The consequences of "viral attack" on computer systems include serious economic and personal loss and could potentially become a threat to human life; for example, in computer-controlled health care systems and industrial installations. The social and economic losses due to virus infiltration into computer systems are large. Those losses and their effects are becoming, moreover, of international significance as computer networks take on global information roles in many enterprises.

Prof. William Caelli (AUS), chairman of IFIP's Technical committee on Security and Protection in Information Processing Systems (TC11), supported by the chairman (effective in September) of the TC on Relationship between Computers and Society (TC9), Prof. Klaus Brunnstein (D), proposed the resolution to the IFIP Technical Assembly (TA). The TA supported it and brought it to the GA, which adopted it.

Caelli and Brunnstein drew the attention of the GA to the growing number of virus programs (and similar programs, such as "worms" and "Trojan horses") being published in inexpensive, widely available books. Such code may easily be used and adapted for illicit purposes. They also noted that in some cases, actual virus programs are distributed with virus detection and protection software packages, in order to test and demonstrate those packages. This practice must stop, IFIP urged, simply because it is too easy for such test viruses to be further copied and disseminated, even, inadvertently, or for them to be modified further, with unpredictable results.

All IFIP Member societies are urged to publicize this resolution to their memberships and governments.

Unified Medical Language System

A major project of the US National Library of Medicine in Washington

The Unified Medical Language System (UMLS™) project is a long-term effort to build an increasingly intelligent automated system that understands biomedical terms and their interrelationships and uses this understanding to help users retrieve and organize information from machine-readable sources. Its goal is to facilitate retrieval and integration of information from a variety of machine-readable information sources, including descriptions of the biomedical literature, clinical literature, clinical records, factual databanks, and medical knowledge bases. The UMLS will compensate for the differences in the terminologies used in these disparate systems and for variations in the language employed by users themselves.

The UMS is not an attempt to impose a single standard vocabulary that must be used in the creation, storage, and retrieval of all biomedical information. Nor is it a plan to develop a standard patient record format or to create a single unified medical knowledge base to assist with diagnosis and treatment.

UMLS Development Strategy

A long-term project of the breadth and complexity of the UMLS requires the knowledge and skills of experts in many fields. For this reason the UMLS development strategy involves a combination of internal research and development at NLM itself, competitively awarded contracts for research assistance with several U.S. universities, and a private company, and advice from professional associations and other interested groups in the private sector. The American Medical Association is assisting NLM by coordinating input from the private sector groups.

UMLS Components

Two categories of UMLS components will be developed: knowledge sources or databases and functional features or programs. Eventually these components will be used directly by health professionals, as well as by special purpose application programs, to interpret questions, identify information sources, translate queries into a variety of different target vocabularies, and retrieve, evaluate, and organize information relevant to a particular query. The first UMLS components to be issued

will be knowledge sources of interest primarily to those involved in the development of information systems.

The UMLS will include at least three new machine-readable knowledge sources: a "Metathesaurus", a Semantic Network, and an Information Sources Map. The Metathesaurus will contain information about biomedical concepts and their representation in different vocabularies and thesauri. It will represent a variety of relationships among terms and will support mapping from the user's terms to appropriate controlled vocabularies and among different controlled vocabularies. The Semantic Network will contain information about the types or categories (e.g., "Disease or Syndrome", "Virus") of terms in the Metathesaurus and the permissible relationships among these types (e.g., "Virus" can cause "Disease or Syndrome" but not vice versa). The Information Sources Map or directory will contain both human-readable and machine-"processable" information about the scope, location, vocabulary, syntax rules, and access conditions of biomedical databases of all kinds.

The UMLS knowledge sources are expected to be of general use to those building information systems in a variety of biomedical and health-related environments. Although it may be necessary for system developers to create local addenda to support particular applications, we hope that use of the central UMLS knowledge sources can substantially reduce the level of effort required to build effective user interfaces to biomedical information.

The three UMLS knowledge sources ultimately will be used by several functional components in interactions with users or special purpose applications systems as well as in interactions with available files of machine-readable biomedical information. The functional components of the UMLS will probably include: (1) a query interpreter to analyze the user's input; (2) a graphical display to provide a picture of the relationship among terms and types represented in the Metathesaurus and the Semantic Network; (3) an interactive search formulator to help refine the user's query and translate it into the syntax suitable for searching relevant databases; (4) a search transmitter to



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Bethesda, Maryland, U.S.A.

transmit the formatted search statements to the computer systems which house the relevant databases and receive the information retrieved from these systems; and (5) an output processor to merge, organize, evaluate, and rank the information retrieved to its relevance to the user's query.

It is probable that multiple implementations of the UMLS functional components will evolve, each tailored to the needs of particular groups of users or to specific hardware and software environments. NLM itself will develop these functional capabilities within GRATEFUL MED®, the microcomputer search interface to the MEDLARS® databases. GRATEFUL MED has already been modified to include basic versions of some of the proposed UMLS components. We expect that other interfaces which make use of the UMLS knowledge sources will be developed by other institutions and companies, with or without support from NLM.

To ensure that UMLS components get actual use as soon as possible, they will be developed through a series of successive approximations of the capabilities ultimately desired. Early versions of UMLS components will offer relatively modest enhancements to current systems with respect to their representation of the interrelationships among biomedical terms and concepts. Complexity will be added in subsequent versions as actual use shows it to be necessary.

Meta-1 and the UMLS Semantic Network, First Version

In mid-1990, NLM will distribute two UMLS components: the first version of the UMLS Metathesaurus, to be called Meta-1, and the first version of the UMLS Semantic Network. The base set of terms in Meta-1 will include all terms in both MeSH® (NLM's Medical Subject Headings) and DSM-III (The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders). In addition, a set of terms

(Continued on page 13)

for clinical problems and manifestations frequently encountered at four ambulatory care facilities will be included. All ICD (International Classification of Diseases), and SNOMED (the College of American Pathologists' Systematized Nomenclature of Medicine) terms and a small number of CPT (the AMA's Current Procedural Terminology) terms that can be related to this base set by lexical matching techniques will also be incorporated and identified as identical matches, synonyms, or related terms. LCSH (Library of Congress Subject Headings) terms for which NLM has established equivalent MeSH expressions will be incorporated. Meta-1 will contain over 30,000 fully edited records and another 50,000 abbreviated records for names of chemical substances. All terms in Meta-1 will be assigned one or more semantic types or categories (e.g., "Disease or Syndrome", "Plant", "Idea or Concept").

The first version of the Semantic Network will contain as its nodes approximately 130 semantic types that have been assigned to concepts in Meta-1. A repertoire of about 30 relationships will be used to describe the useful and permissible relationships among the broad types or categories in the Network.

Arrangements for Distribution of UMLS Components

Meta-1 and the first version of the UMLS Semantic Network will be available for experimental use in mid-1990. Those who wish to test the application of these tools in particular biomedical information environments will be required to sign a one-year experimental agreement with NLM. The general provisions of the agreement will be as follows:

1. There will be no charge for the UMLS products for the duration of the experimental agreement, although there will be a charge for subsequent versions of UMLS products.
2. Those receiving the UMLS products must provide feedback to NLM on how the products are being used and on any changes or enhancements that would make them more useful.
3. Those receiving the UMLS products may not redistribute them except as an integral part of the computer applications they develop.

NLM wishes users of Meta-1 and the first version of the UMLS Semantic Network to be fully aware that there may be substantial changes in the content or format of subsequent versions of these UMLS products.

Distribution Formats

The UMLS products will be distributed in multiple formats on a single

CD-ROM (High Sierra Format). Meta-1 will probably be available in an ASCII "relational" format, an ASCII unit record format, and as a Hypercard application. A single Copy of the Meta-1 file will occupy 120-130 megabytes of storage. The Semantic Network will be relatively small, less than half a megabyte. Sample sets of Meta-1 records will be available on either IBM compatible or Macintosh diskettes prior to the distribution of the complete file.

Application Procedures

Those interested in obtaining copies of the initial UMLS products under the terms outlined above should submit a letter describing specifically how they propose to use the products and whether they prefer to receive sample records on IBM PC compatible or Macintosh diskettes to:

Betsy L. Humphreys
UMLS Project Officer
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

In the spring of 1990, NLM will distribute packets with sample records, documentation and Copies of the experimental agreement to those who have expressed an interest. To obtain the complete versions of Meta-1 and the Semantic Network, individuals or institutions will then complete and sign the experimental agreement and return it to NLM.

The Agency for Health Care Policy and Research and the National Library of Medicine

In the Omnibus budget Reconciliation Act of 1989 (P.L. 100-239) the U.S. Congress created a new government organization that will offer important challenges to medical informaticians. The Agency for Health Care Policy and Research, within the Public Health Service, will be responsible for conducting and supporting research into the effectiveness ("outcomes") of health care services and for developing guidelines for medical practice.

This work is quite different from the traditional basic research sup-

ported by the National Institutes of Health. It is meant to be focused on the quality of life and productivity of patients subject to the different treatment regimens, including the treatment of "watchful waiting". The diseases initially selected for study are four patient problems that account for more than \$ 27 billion in Medicare costs each year. These diseases are benign prostatic hypertrophy, cataracts, low back pain, and acute myocardial infarction.

The legislation assigned to the National Library of Medicine re-

sponsibility for acquiring and organizing the scientific literature of health services research and for providing informatics support to those writing and using the practice guidelines. Research on patient care practices and their outcomes is heavily dependent not only on good medical record keeping but on the application of sophisticated analytical techniques. The work of a new Agency is likely to place added emphasis on the potential contributions that automated information systems of various sorts can make.

LIST OF IMIA NATIONAL MEMBERS AND REPRESENTATIVES



s = member society · r = representative · c = corresponding member (academic titles have been omitted)

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IMIA-CALENDAR

DATE	CITY	COUNTRY	TITLE
1990			
April 2-5	Brighton	United Kingdom	Working Conference: The State of the Art in Primary Care Computing
April 20-21	Tbilisi	USSR	IMIA Board Meeting
August 18	Glasgow	United Kingdom	IMIA Board Meeting
August 19	Glasgow	United Kingdom	IMIA Annual General Meeting
August 20-23	Glasgow	United Kingdom	Medical Informatics Europe Congress
September 3-7	Prague	Czechoslovakia	Working Conference: Medical Informatics and Medical Education
October 8-10	Amsterdam	The Netherlands	Working Conference: Software Engineering in Medical Informatics (SEMI)
October 22-26	Montpellier	France	Working Conference: Methodological Approaches of Medical Technology Assessment, with Special Emphasis on Informatics applied to Medicine and Health
November 19-22	Rotterdam	The Netherlands	Working Conference: Telematics in Medicine (TELMED)
1991			
January		India	Working Conference: Appropriate Medical Informatics Technology for Developing Countries
April 14-17	Melbourne	Australia	Working Conference: Nursing Informatics '91 Fourth International Conference on Nursing Use of Computers and Information Science
June 17-21	Stockholm	Sweden	Working Conference: Dental Informatics
June 18-21	Brussels	Belgium	EFMI Working Conference on DRG
August 19-22	Vienna	Austria	Medical Informatics Europe Congress
November	Washington D.C.	U.S.A.	IMIA Annual General Meeting
1992			
September 4	Geneve	Switzerland	IMIA Board Meeting
September 5	Geneva	Switzerland	IMIA Annual General Meeting
September 6-10	Geneva	Switzerland	MEDINFO 92