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Letter from the President

The Summer 1984 issue of E.M.P. News provides my first opportunity to establish a personal contact with you. In my opinion this contact is very important because it represents the only way for us to avoid the Federation becoming a philosophical abstraction. The officers and the national delegates are supposed to deal with matters of importance to you. The Federation level and the European scale should allow a better management of many problems. However, this presupposes your individual co-operation through a permanent and free contact with your delegates, the officers and the other individual medical physicists. E.M.P. News is the most convenient forum for large consultations or presentations. So, we hope that an increasing part of it will carry a flow of information from you, rather than merely a reflection of "the Master's voice"!

How is the Federation in summer 1984? Thanks to four years of continuous effort from officers, chairmen and members of the committees, plus many voluntary contributions under the enthusiastic and efficient encouragement of our former Past President, J. S. Orr and our former President J. S. Clifton, EFOMP activities have developed exponentially with time. A quantitative assessment of this development appears in the amount of papers which must be carried now by the officers when they attend a meeting! I would like to stress a few important points:

Membership. We have been happy to receive a formal application from Ireland. This new application will allow EFOMP to rally twenty national European Medical Physics Organisations. The contacts established with the few remaining European countries are still active and we hope that we will get applications soon from Czechoslovakia, Portugal, Poland and Iceland.

Committees. The committees are still working hard and we can especially congratulate the Education and Professional Committees for having completed their Policy Documents, which will soon be separately published. This publication work must be considered as one of the most fundamental duties of EFOMP. Such policy statements should be prepared in relation to the main subjects of interest and the main difficulties of European Medical Physicists. The interest generated is expected to provide practical help to physicists and to foster the promotion of Medical Physics as an independent senior discipline.

Liaison with International Bodies. Liaisons have been established with most of the important and relevant international bodies. EFOMP is now fairly recognised as 'the voice of Medical Physics in Europe', to use J. S. Clifton's phrase. The results have included the participation of EFOMP in, or the support of EFOMP for, many national and international scientific meetings. The last one, for instance, was a seminar on Quality Assurance in Medical X-ray Diagnosis held in Udine, Italy, last April. An important example of international liaison is the contract signed between EFOMP and the I.A.E.A. enabling the EFOMP Education Committee to proceed with a survey of European Training Centres for Medical Physicists from the developing countries and requiring a report to the I.A.E.A. before the end of 1984. Another example is the workshop which is planned for May 1985, at the International Centre for Theoretical Physics, Trieste, Italy, and devoted to Quality Assurance in Diagnostic Radiology, with support expected from both the W.H.O. and the E.E.C.

In order to stress our interest in such liaisons, permanent EFOMP contacts have been nominated for fourteen international bodies and they are listed elsewhere in this issue of E.M.P. News.

Organisation of Scientific Meetings. Another important activity for EFOMP must be to organise scientific meetings, providing strength from both the scientific and economic points of view. A pure EFOMP meeting could be considered for 1986, in addition to the participation in other large meetings.

Our next major engagement is in August 1985, at the VII International Conference on Medical Physics, to be held in Espoo, Finland. EFOMP is in charge of the co-ordination of two sessions, devoted to Quality Assurance in Radiotherapy and Radiation Safety and will participate in two other sessions.

Administrative Matters. The next officers meeting is planned for the end of October 1984, at the occasion of the Fourth Symposium on Clinical Radiation Physics, held at Binz, G.D.R., by the Section for Clinical Radiation Physics of the G.D.R., Society for Medical Radiology and the G.D.R. Society for Physical and Mathematical Biology. The next Council meeting is planned for August 10th and 11th, 1985, at Espoo, Finland, in correspondence with the International Conference. A decision is expected from this next Council Meeting about the EFOMP Presidential structure. An enquiry will be made to all member organisations to enable agreement to be reached on a change in the EFOMP constitution. At present any individual following the normal sequence of Vice-President, President and Past-President is engaged by EFOMP for nine years. The solution proposed is to have the standing committee chairmen designated as Vice-Presidents, the former Vice-President position disappearing. In this way the succession of Presidents could also be more easily ensured.

I would like to conclude this letter by stressing again the need for better collaboration between EFOMP and industry. Very few companies have joined EFOMP as collaborating organisations, in spite of several EFOMP scientific activities which obviously stand in the field of interest of the manufacturers. You individual contacts with suitable companies could probably improve this situation, with obvious benefits to all.

With my very best wishes for your summer holidays,

J. Chavaudra

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Notes from Council

A meeting of EFOMP Council was held in London, England on 2nd June 1984. Eleven countries sent delegates and fifteen people participated.

Membership
Progress on negotiations with four non-member countries was considered. The W.H.O. European Region list of countries was reviewed and it was agreed to be advantageous for EFOMP, in the longer term, to embrace the same geographical area. To this end informal contacts would first be made with the North African countries.

President's Report
The President reported upon the progress made since the last Council and upon the need for individual organisations and members to take an active part in the activities of the Federation.

Council accepted the view, from the meeting of EFOMP officers, held in Bad Gastein, Austria in January 1984, that carefully selected topics should be chosen for EFOMP scientific meetings. The Scientific Committee was commissioned to make firm proposals.

The President introduced a debate on the perceived need to reduce the nine-year Presidential cycle embodied in the present EFOMP constitution. It was agreed that the best solution offered was to propose that the office of Vice-President should be discontinued. Instead the Chairman of each of the four standing committees of Council should be designated Vice-Presidents. It was agreed that this Proposal should be put to the member organisations, that comments should be sought in time for the officer's meeting at Binz, G.D.R., in October and that, if approved in principle, a draft Constitution change should be prepared for the Council meeting in 1985.

Secretary-General's Report
Dr. Leetz commented upon the problems he faced in maintaining an accurate and current list of national delegates and contacts. It was appreciated that such a list is vital to the smooth running of EFOMP. Also it was recognised as important that long advance notice of proposed meetings should be given.

Honorary Treasurer's Report
Dr. Bergmann presented his audited accounts and commented upon the fact that as well as the bank account in Austria, one had also been opened in London. The main sources of income were the capitation fees and the modest advertising income from E.M.P. News. The need for other sources of income still needs to be pursued. No member organisation had objected to the proposal, made in a letter sent in February 1984 to all member organisations, that the capitation fee should be raised to 75p. A few organisations had not replied and Council agreed that the change should be implemented. The fee would be reviewed again at the next officer's meeting.

Future Meetings
I.O.M.P./I.F.M.B.E. Congress, Espoo, Finland. 11th–16th August 1985. The following EFOMP involvement was confirmed and individual members are particularly asked to bear these subjects in mind in planning work to present.

1. An EFOMP Symposium on the Radiation Protection of the Patient. The implications for medical physicists of legislation, particularly the Directive of the Council of the European Community on basic requirements for the radiation protection of persons undergoing medical radiological examination or treatment, will be considered.

Dr. J. Claude-Rosenwald is to produce a draft discussion paper on these matters for the officer's meeting in October and for the Professional Committee. Member organisations have been asked to send comments and national statements to him for possible inclusion in the first draft and his address is: Institut Curie, Section Medicale et Hospitaiere, 24231 PARIS, France.

It is envisaged that brief verbal contributions from each member organisation, telling of the role of the physicist under local legislation, will be included in the symposium.

A draft document will be discussed, from which, after the symposium, it is intended that the Professional Committee will prepare a formal paper from EFOMP, to encourage standardisation in Europe.

2. An EFOMP seminar on Quality Assurance Procedures in Radiotherapy. Council agreed that this seminar should concentrate on the physical and technical aspects of the subject. However there would be an introductory overview paper which would draw attention to the clinical requirements. Contributions will be sought from the I.E.C., the W.H.O., the I.C.R.U. and the I.C.R.P. A W.H.O. protocol is to be produced in Neuherberg in December 1984 and it is hoped that this can be presented and discussed. The seminar will include the opportunity for the presentation of proffered papers. The EFOMP contact for this seminar is Mr. J. S. Clifton, Department of Medical Physics and Bioengineering, University College Hospital, 11–20 Capper Street, London, WC1E 6AJ, England.

3. A session on Technology Assessment to be organised by the W.H.O. (Europe) with support from EFOMP and I.F.M.B.E. The EFOMP contact is Professor G. G. Poretti.

4. A session on help for developing countries to be organised by the I.O.M.P. with support from EFOMP. The EFOMP contact is Mr. J. S. Clifton (address above).

Workshop on Quality Assurance in Diagnostic Radiology
Trieste, Italy, 13th–19th May 1985
Council agreed that plans for this meeting and an initial announcement should go ahead forthwith. Progress will be reviewed by the officers in October. A formal announcement appears elsewhere in this issue of E.M.P. News.

Committee Reports

Education Committee
Council noted that the committee continued to collect documents about schemes to promote exchanges of scientists within Europe and encouraged it to publicise the information suitably. The committee had also identified the need for the provision of summer schools offering refresher courses and help for scientists from developing countries. Consideration would be given to EFOMP organising such summer schools.

Now that the policy document on education was complete it was agreed that a meeting on Education in Medical Physics should be proposed to the W.H.O.

The I.A.E.A. funded project to survey training departments in Europe was reported to be proceeding well. The results are likely to be presented in November.

Professional Committee
Having completed work on the policy document 'The Role and Responsibilities of the Clinical Medical Physicist' the committee is now considering the need to publish a code of ethics. This suggestion was debated and it was felt that wider discussion within the Federation was needed. Thus Dr. Asard was asked to prepare a paper for the officer's meeting and subsequent publication in E.M.P. News.

Publication Committee
The major task is the publication of the E.M.P. News and progress has been made, through member contacts, in attracting advertisements and the W.H.O. Technical Assessment lists. There is still a need for a stronger network of contacts so that more material from member organisations can be included.

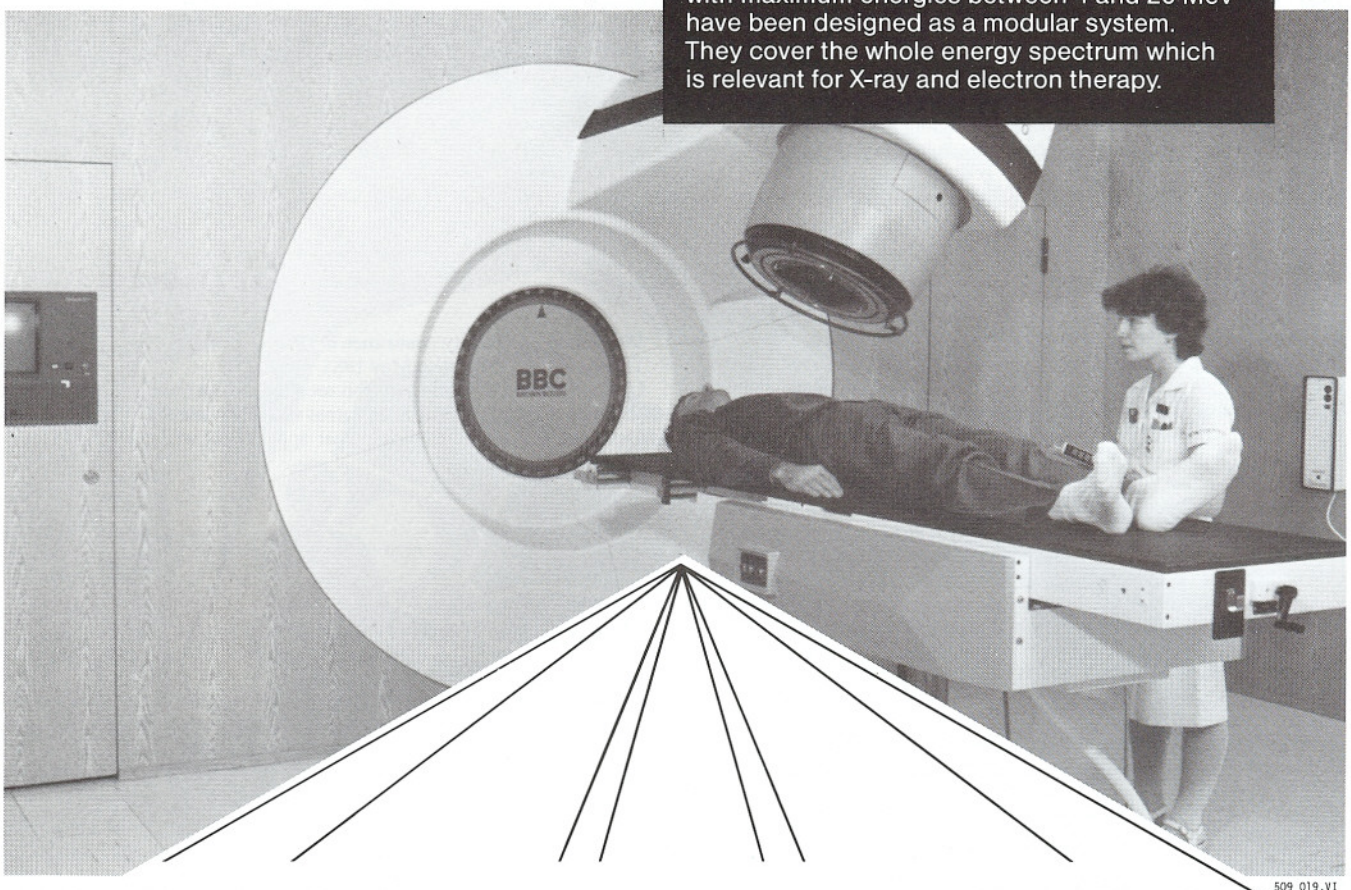
The policy documents on Professional Matters and on Education are being published and will be distributed to all members, with this issue of E.M.P. News.

The journals Physics in Medicine and Biology and Clinical Physics and Physiological Measurement continue to make progress. New subscriptions are always welcome. Submission of papers from physicists working in member organisations helps greatly to consolidate these journals as our official scientific journals. At the Council meeting thanks were expressed to Mrs. Margaret Calcraft, who has retired as staff editor of the journals.

Scientific Committee
The collaboration between EFOMP and S.P.I.E., in arranging scientific meetings, continues. The next meeting is a workshop on 'Digital Imaging Techniques' to be held in Amsterdam in October 1984. A number of speakers were nominated.

It was agreed that the scientific committee should consider proposals for specialist subject meetings. These might be held in conjunction with member organisation's national meetings.

It was agreed that the position paper on scientific responsibilities, discussed at the Hamburg Congress in 1982, should be revised, with input from the Education Committee.



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Liaison with International Organisations

The following individuals have been asked to act as the principal EFOMP contacts with the listed organisations.

E.A.R.	Dr. A. Benini Mr. J. Chavaudra
E.E.C.	Dr. A. Benini
European Science Foundation	Professor G. G. Poretti
E.P.S.	Professor D. Blanc Mr. J. S. Clifton Professor G. G. Poretti
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I.A.E.A.	Dr. H. Bergman Mr. J. S. Clifton Professor J. S. Orr
I.C.R.U.	Mr. J. Chavaudra
I.E.C.	Mr. A. Piron
I.E.E.E.	Mr. J. S. Clifton
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I.O.M.P.	Mr. J. Chavaudra (Delegate) Mr. J. S. Clifton Dr. H-K. Leetz (Delegate)
N.A.T.O.	Professor J. S. Orr
UNESCO	Mr. J. S. Clifton
W.H.O.	Dr. A. Benini Mr. J. S. Clifton

Future Business Meetings

Officer's Meetings	Binz, GDR	28th October 1984
VIth Council Meeting	Espoo, Finland	10th August 1985
Officer's Meeting	Parma, Italy	November/December 1985

Video signal standards in Radiology

The following letter was wrtten by Dr. Joel E. Gray, Diagnostic Radiology Department, The Mayo Clinic, Rochester, Minnesota 55901, U.S.A. to colleagues in America. It raises issues which are equally important in Europe and so is published here.

The growth of digital imaging and video (electronic) imaging is like an explosion in diagnostic imaging departments. Our professions face a significant problem in the near future if we do not make our wishes known to the vendors immediately. Most of the equipment from different vendors cannot display images from other vendor's equipment, nor can the different brands be made to easily communicate with each other. This is particularly important to us from the cost point of view.

Vendor X sells an add-on digital radiographic system for cardiac applications. Since the fluoroscopic image is generated by the conventional equipment, it uses "standard" video signals which are displayed on your room TV monitor. After image processing the signal from Vendor X must be displayed on his special TV monitor since his equipment produces a "non-standard" signal. Also, Vendor X's TV signal will not be accepted by a standard multi-format camera for recording so that you must then buy a multi-format camera from Vendor X, at whatever price he asks. You have an interesting 10 second cardiac series which you wish to take to conference in your hospital to show the cardiologists and your residents. Your conventional U-Matic tape recorder (or VHS or Betamax) will not accept the TV signal provided by Vendor X—you must bring the conference to the cardiac laboratory.

Vendor Y tells you he will provide an add-on digital radiographic system which can interface to two or three rooms of x-ray equipment, providing you with with digital capabilities at a reasonable cost. After installing the system the vendor informs you that unless you purchase a new TV camera for one of the rooms he can't interface to that particular room since the video signal is "non-standard" and his computer will not function with that TV signal.

You would like to consider a central, digital storage facility in which all of your digital images can be stored on digital laser disk so than any computer based imaging system could have access to all images generated in the department. This would facilitate intermodality comparisons of images for diagnostic purposes and allow for a central, high density digital storage facility probably eliminating the need for digital magnetic tapes while providing for relatively instant access to stored digital images. However, you find that not one vendor uses the same digital information format and, therefore, the systems are not digitally compatible. In addition, you find that one vendor actually uses digital information formats and that his models of equipment can't accommodate among themselves!

Are these scenarios which I have fabricated to indicate the potential problems due to non-standard TV systems? Definitely not! These are just a few of our experiences in attempting to implement digital imaging at our institution.

There are well defined standards in the television industry which spell out in detail the format for video signals.[1,2] Consequently, there is a large quantity of video equipment (TV monitors, cameras, tape recorders, etc) available off the shelf at, in most cases, more

reasonable costs than manufacturers incur when developing their own non-standard systems and such savings could easily be passed along to our profession, and consequently to the health-care consumer.

There are two lights on the horizon. The American Association of Physicists in Medicine recently published a report on the standardization of digital data formats.[3] The Society of Motion Picture and Television Engineers (S.M.P.T.E.) recently has a Subcommittee on Recommended Practices for Medical Diagnostic Display Devices working on a document.[4] This committee is not addressing the question of standardized video signals but rather the question of how to evaluate these signals. The S.M.P.T.E. subcommittee is made up of members of the S.M.P.T.E. and A.A.P.M. as well as representatives of several vendors. Many vendors are interested in addressing the problem but the problem could be solved more rapidly if all diagnostic imaging firms were made aware of a concern in the marketplace.

Neither the A.A.P.M. Report nor the S.M.P.T.E. subcommittee can have the impact that the diagnostic imaging communitty can have as a group. Consequently, I am asking each of you to assist us in the profession. We must work together and talk to the vendors individually and through N.E.M.A. to express our concerns about the proliferations of diverse non-compatible TV and digital formats. I would ask you to send a letter to key individuals in the x-ray companies you deal with and express your concerns and indicate the need for using the television industry accepted standards[1,2] for video signals and the need for assuring that digital systems can readily communicate with one another. In addition, when you purchase equipment you should specify that the video signals must meet the RS-170 or RS-343 standard and accept only equipment that does meet those standards upon delivery.

Your assistance will be greatly appreciated and we will all benefit from our efforts by being able to provide the best diagnostic images and service possible at a minimum cost.

References

1. Electronic Industries Association (EIA) Standard RS-170, Electrical Performance Standards—Monochrome Television Studio Facilities.
2. Electronic Industries Association Standard RS-343-A, Electrical Performance Standards for High Resolution Monochrome Closed Circuit Television Camera.
3. America Association of Physicists in Medicine, Report No. 10, A Standard Format for Digital Image Exchange.
4. Society of Motion Picture and Television Engineers (S.M.P.T.E.) Subcommittee on Recommended Practices for Medical Diagnostic Display Devices, Kenneth Lisk, Chairman (Eastman Kodak Company, Rochester, New York 14650).

Nuclear Magnetic Resonance Imaging

As more clinical imaging facilities using nuclear magnetic resonance are established it is useful to review some of the available literature on acceptable limits of exposure and the supervision of the patients, volunteers and staff involved. Guidance normally relates to consideration of the exposure conditions for both staff and patient and to the arrangements for supervision of the patient.

(1) **Exposure conditions**

Three categories, static magnetic fields, time varying magnetic fields and radiofrequency fields all have to be considered. In the first category the duration of exposure is normally taken into account and different guidelines relate to operating staff and to patients. The chief consideration with regard to the latter category is the need to avoid any significant rise in the temperature of the sensitive tissues of the body.

(2) Supervision of exposed persons

Guidelines on the use of N.M.R. imaging for diagnostic purposes, for clinical trials with patients and for work on volunteers are available in some countries. The National Radiological Protection Board (N.R.P.B.) notes used in the United Kingdom and referenced below comment specifically on the use of N.M.R. in relation to pregnancy, to cardiac pacemakers and to metallic implants.

The references given below relate to two countries, the United Kingdom and the U.S.A. No doubt there are many similar documents being considered in other countries in Europe and no doubt as time passes the exposure conditions will fall into agreement.

United Kingdom

The N.R.P.B. set up an *ad hoc* Advisory Group on Nuclear Magnetic Resonance Clinical Imaging some years ago and formal guidance was published in January 1984:

Advice on acceptable limits of exposure to nuclear magnetic resonance clinical imaging. (Document A.S.P.5.). Chilton, England. The Naticnal Radiological Board, 1984.

The following references are also relevant:

Proposals for the health protection of workers and members of the public against the dangers of extra low frequency, radiofrequency and microwave radiations: A consultative document. Chilton, England. The National Radiological Protection Board. 1982.

Use of ionising radiation and radionuclides on human beings for medical research, training and non-medical purposes. Report of a W.H.O. Expert Committee, Technical Report Series 611, Geneva, World Health Organisation. 1977.

N.R.P.B. *ad hoc* Advisory Group on Nuclear Magnetic Resonance Clinical Imaging. Revised guidance on acceptable limits of exposure during nuclear magnetic resonance clinical imaging. British Journal of Radiology, 56, 974, 1983.

United States of America

The situation in the United States would seem complex to the outside observer were it not for a document produced by the 'Guidelines, Regulatory Requirements and Safety Standards Task Group' of the American Association of Physicists in Medicine Nuclear Magnetic Resonance Committee. The document is entitled 'A Tour through the F.D.A., N.C.D.R.H., I.D.E., P.M.A. and I.R.B. N.M.R. Maze'! The authors are Dr. J. E. Gray, Dr. R. A. Phillips, Dr. J.Schenck and Dr. L. K. Wagner. Whilst dealing principally with the process required for the installation and utilisation of an N.M.R. imaging unit it also covers many other salient points, such as the informed consent of patients in trials.

As well as this particular document the A.A.P.M. Nuclear Magnetic Resonance Committee has produced an Information Packet on 'N.M.R. Guidelines and Regulatory Requirements'. The contents are listed below:

1. The role of the Bureau of Radiological Health in Assessment of Risks from Clinical N.M.R. Procedures. M. P. Anderson, T. W. Athey and R. A. Phillips.

2. The Regulatory Maze: An F.D.A. Guide to N.M.R. R. H. Schneider.

3. Letter dated Feb. 25th 1982: 'Guidelines for Evaluating Electromagnetic Risk for Trials of Clinical N.M.R. Systems'.

4. Letter dated Dec. 28th 1982: 'Guidelines for Evaluating Electromagnetic Risk for Trials of Clinical N.M.R. Systems'. A clarification of the letter in reference 3.

5. Letter dated July 28th 1982: 'Guidance on Premarket Approval Applications for N.M.R. Imaging Systems—Invitation to Review Draft'.

6. 21 Code of Federal Regulations (C.F.R.) Part 50—Protection of Human Subjects (Includes regulations concerning informed consent).

7. 21 C.F.R. Part 56—Institutional Review Boards. (Describes the make-up and procedures of an Institutional Review Board).

8. 21 C.F.R. 812—Investigational Device Exemptions (Note C.F.R. 21 Part 50 supersedes Subpart F (812.120 through 812.130) of 21 C.F.R. Part 812).

9. N.M.R. Bibliography (Prepared by the National Electrical Manufacturers' Association and presented at the Radiological Devices Panel Meeting, Rockville, MD on December 8th 1982).

Both the Task Group Document and the Information Pack can be obtained from The American Association of Physicists in Medicine, 335 East 45th Street, New York 10017, U.S.A. There is a nominal charge of $2.

German Speaking Societies to meet in Spring

On May 2nd and 3rd, 1985 a joint meeting of three German speaking Medical Physics societies (from the Federal Republic of Germany, Austria and Switzerland) will be organised in Berne, Switzerland. The meeting will be co-sponsored by EFOMP.

Further information can be obtained through Prof. Dr. G. Poretti, Radiuminstitute, Inselspital, CH-3010 Berne, Switzerland.

Diagnostic Imaging Applications

During the European Conference on Optics, Optical Systems and Applications, (ECOOSA '84), in Amsterdam, on October 8–9, 1984, a Workshop will be held on 'Diagnostic Imaging Applications: Matching Technological Advances to Medical Need'.

The Workshop is organised by the Jet Propulsion Laboratory (J.P.L.) of the Californian Institute of Technology and by EFOMP. The Workshop topics, listed below, will be introduced by an invited group of experts from both Europe and the U.S.A. The main topics are:

CAT scanners—the next generation
N.M.R. Imaging
Automated Cytology
Radiographic Digital Imaging Techniques
Positron Emmission Tomography

Further information can be obtained from:
Dr. A. Donszelmann
Zeeman Laboratory, P.O. Box 20150,
100 HD Amsterdam, The Netherlands.

Workshop on Quality Control in X-Ray Diagnosis

An International Workshop on Quality Control in X-Ray Diagnosis, organised by EFOMP, is to be held on May 13th to 19th, 1985 at the International Centre for Theoretical Physics, Trieste, Italy.

The Workshop will be aimed particularly at individuals who have responsibility for the technical assessment, maintenance and quality assurance of diagnostic radiological equipment. Thus, depending upon the national health care organisation, these individuals may be employed in Diagnostic Radiology, Medical Physics or Engineering Departments; however, a basic technical background will be assumed. The Workshop is intended for personnel from European and North African countries. The official language will be English.

The Workshop will include formal lectures, seminars and practical sessions. The main subject areas will be:

Technical aspects of X-ray equipment
X-ray equipment performance considerations
Techniques for Quality Assurance
The evaluation of available equipment for Quality Assurance
The development of protocols and Quality Assurance programmes

Practical work will form an important part of the proceedings and so the number of places at the Workshop will be limited to about 20. Full board and accommodation will be included within the workshop fee. It is possible that some discounted, or free, places will be available.

Further information will be provided, upon request, by Dr. A. Benini, Medical Physics and Bioengineering Department, Ospidale Maggiore, 43100 PARMA, ITALY.

Forthcoming Meetings

Clinical Engineering Conference
October 7–12, 1984; University de Compiégne (France)
C.E.C. 84, Secrètariat des Congrés, Université de Compiègne, BP 233, 60206 Compiègne Cedex, France.

4th Symposium on Clinical Radiation Physics (G.D.R. Society for Medical Radiology).
October 28–November 4th, 1984; Binz, Rugen Islan, G.D.R.
Dr. M. Tautz, Spezialabteilung Strahlenphysik, Stadtisches Klinikum Buch, Wiltbergstrasse 50, D.D.R.–115 Berlin-Buch, G.D.R.

Skin Blood Flow Measurement and the Microcirculation.
22nd March 1985, Ninewells Hospital, Dundee, Scotland.
Biological Engineering Society, Royal College of Surgeons, 35/42 Lincoln's Inn Fields, London WC2A 3PN, England.

Radiology '85: Information Technology in the Radiological Sciences (43rd B.I.R. Annual Congress).
17–19 April, 1985; Manchester, England.
Programme Chairman, Department of Diagnostic Radiology, University of Manchester, Manchester, M13 9PT, England.

Doppler Ultrasound Techniques in Cardiology.
20th June 1985; St. Bartholomew's Hospital, London, England.
Information from the Biological Engineering Society, address above.

7th International Conference on Medical Physics and 14th International Conference on Medical and Biological Engineering.
August 11–16, 1985; Helsinki, Finland.
Mr. Hannu Seitsonen, 7th I.C.M.P. Secretary-General, P.O. Box 105, 00251 Helsinki, Finland.

Medical Informatics Europe 85.
August 24–29, 1985, Helsinki, Finland.
MIE-85 Secretary General, Raija Tervo-Pellikka, The Finnish Hospital League, Toinen linja 14, SF-00530 Helsinki 53, Finland.

European Nuclear Medicine Congress.
3–6 September, 1985; London, England.
European Nuclear Medicine Congress (1985), Institute of Nuclear Medicine, Middlesex Hospital Medical School, Mortimer Street, London W1N 8AA, England.

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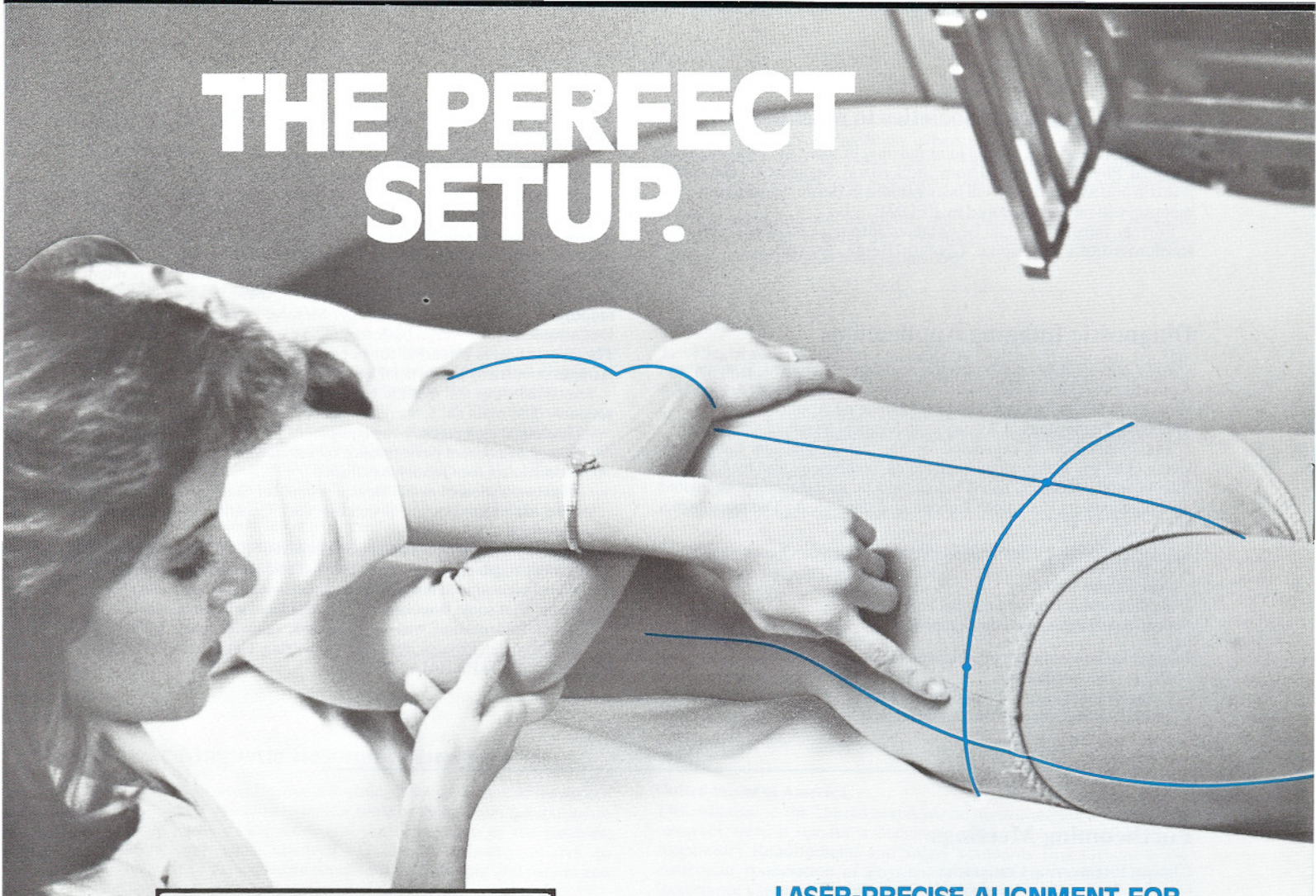

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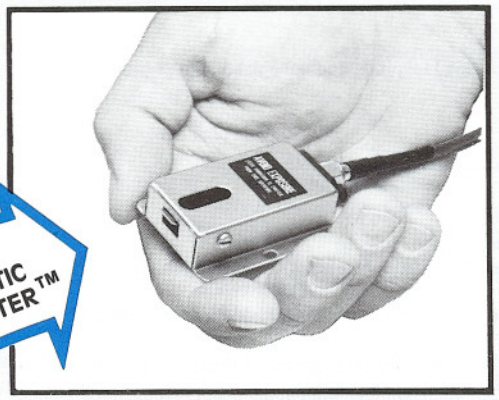

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