

IEEE Region 8 newsletter



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
INCORPORATED

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Regional Director: Mr. C. Reginald Russell

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H.R.H. Prince Claus

Photograph:

Royal Netherlands Embassy, London

a number of papers which look to the future, some of them especially topical in view of recent world events.

For example the session on controlling the future in relation to electricity generation includes Feasibility of solar-electro-chemical power systems by K. Denno of Newark College of Engineering, USA, Energy stored as heat by J. Schroder of Philips, Aachen, and The electric car—a world survey by A. T. Freeman, UK

In keeping with the Conference theme, the Engineer in Society, there are a number of papers on pollution, The investigation of injurious particles in foodstuffs by X-ray fluorescent equipment by N. Weichert, Germany. The engineer's duty to society in protection against noise by W. Burck, Germany, and The relation between man-made noise and social activities by J.

The Conference will be honoured by the presence of H.R.H. Prince Claus of the Netherlands who will perform the opening ceremony.

Papers received for EUROCON 74 will ensure an interesting programme for each of the six sessions — Controlling the future; instrumentation electronics; Communications for the 1980s; The computerized society; Biomedical engineering; Education and the needs of the developing countries. Besides state-of-the-art contributions there are

EUROCON 74

EUROPEAN CONFERENCE ON ELECTROTECHNICS
AMSTERDAM, THE NETHERLANDS, APRIL 22-26 1974

Dijk, K. G. Hoeleboom, and J. Maando, The Netherlands.

Aspects of equipment control are dealt with in papers on colour CRT displays in man/machine communication and on electronic displays for aircraft cockpits.

R. D. Briskman and B. L. Prigel of the Communications Satellite Corporation, Washington, will speak on New service possibilities for domestic satellite systems and H. Marin, Spain, will give a paper on forecasting space communications for the eighties. A contribution on the social need and technical potential of direct television reception from satellites comes from K. Freeman, Mullard Research Laboratories, UK, and the European space programme is featured by P. Bartholome, ESRO, The Netherlands, with the paper OTS—a forerunner of a European communication satellite system. A new dimension in communication is forecast by R. Mercier, Compteurs Schlumberger, France, in his paper on electric power lines as a means of signal transmission.

The session on the computerized society refers to the way in which the computer is giving engineers increasing influence in areas for which they have little responsibility. The total power available by linking hardware and software in a network will be referred to by Professor Licklider of MIT and other contributors. Other aspects covered are computers in management, computer aided design, and the ethical considerations of system utilization.

Papers on education include contributions on the problems of education in developing countries, electrical engineering education in the Catholic University of Leuven, and New trends in education by three members of the Department of Engineering and Systems Technology at the Polytechnic of Central London.

Further information

For further information contact the conference office at the following address:

Eurocon 74, c/o KIVI, 23 Princenessgracht, The Hague, Netherlands. Telex 33641, Telephone 070-64 6800, Telegram address KONINGSTING—THE HAGUE.

INSTITUTE NEWS

Referendum

The referendum on the IEEE corporate structure was reaffirmed the confidence of the members in the existing structure of the organisation in regard to both technical and professional activities. This is the conclusion drawn from the results of the referendum, according to President Harold Chestnut. The Tellers Committee reported that a total of more than

45,000 votes had been cast as valid ballots. Of this number more than 37,000—or over 83%—were cast against the proposal. Among voters belonging to any of the IEEE Groups and Societies which might have been affected had the proposed new corporation been established, the vote was over 81% against the proposal. Those with no Group or Society membership voted over 87% against it.

Honours

WERC (World Environment and Resources Council) elected Dr Harold Chestnut to serve on the Board of Directors in the post of Past-President. He had been Chairman of the Provisional Committee which laid the groundwork for creating this new organisation.

The IEEE was commended by Dr S. Chapman, Director of the New York State Assembly's Scientific Staff. In a letter to President Chestnut he said "I believe that the IEEE and you as its President deserve much credit for bringing the serious-

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News to Editor - - - - -	March 15
Advertisements to Sweatman and Fordham - - - - -	March 15
Delivery inserts to County Secretarial Services - - - - -	April 1

ness of the energy situation to the forefront of the (NY) Assembly's attention. In my view, the Institute has distinguished itself by being the first professional scientific society to provide direct unbiased inputs to the State legislative process". Dr B. Barrow was appointed as IEEE representative to the United Nations Economic and Social Council (ECOSOC). The IEEE was allowed to participate on the Council as a non-Government organisation accredited in technical consultative status.

Frederik Philips Award

Dr W. O. Baker, President of the Bell Telephone Laboratories Inc., was presented with the Frederik Philips Award at the IEEE International Electron Devices meeting in Washington DC. The presentation was made to Dr Baker for his "leadership of an industrial laboratory where pioneering research was used to create a wide spectrum of new technology throughout the telecommunications industry". The Award was established in 1971 and is one of nine Field Awards presented by the IEEE.

World Federation of Engineering Organizations

WFE0 general assembly was attended by representatives of 42 nations at a September 1973 meeting in New York. IEEE's Executive Director, Donald Fink, is head of the US National Committee, which acted as host for the Conference. The WFE0 disseminates technical information among its members with a special emphasis on aiding under-developed nations. A two-day Conference on environmental engineering problems followed the general assembly.

IEEE Discount Schedule for Single-Sale Items

A new schedule superseded the 1972 edition and is now effective.

REGION 8 NEWS

Election of Fellows

BENELUX

Kees Teer: For contributions to television, acoustics and electronic systems, and for leadership in research.

FRANCE

Francois F. Kirchner: For contributions to the field of very-high-voltage electric energy transmission.

Jean-Jacques Muller: For contributions to microwave tubes and to television and radio-communication systems.

WEST GERMANY

Herbert Doring: For contributions to microwave electronics and to education.

Wilhelm T. Runge: For early leadership in microwave techniques.

Hans G. Unger: For contributions to the theory of multimode millimeter waveguides.

ISRAEL

Moshe Zakai: For contributions in the field of statistical communication theory.

UNITED KINGDOM AND REPUBLIC OF IRELAND

Colin Adamson: For contributions to engineering education and to protection of high-voltage direct-current transmission systems.

Frederick J. Miranda: For contributions to the design and development of extra-high-voltage cables.

Region 8 News in "Spectrum"

At the Region 8 Committee meeting last Spring it was announced that one page was to be made available in each issue of "Spectrum" to enable rapid publication to be given to news items from the Region. These were to be channelled through Bill Devenish, but this has proved a thankless new responsibility as no items have been submitted to him.

News for the March issue must be in New York by 4 February; for April by 11 March; for May by 8 April; and for June by 3 May. Please note these deadlines and make use of this

experimental arrangement.

Changes of Address

Since your Editor has also been acting as the Secretary of the UKRI Section, he has been notified by some members of changes in their addresses. It is of course essential that this information be sent by them to Headquarters in New York so that the necessary change is made to the master computer record from which all mailing lists are generated. This should be done as soon as the change is definite and the date is fixed since many of the label print-outs for mailing Group/Society Newsletters and Transactions are run off weeks in advance.

An up-dated copy of all the relevant changes read into the computer is sent every month to each Section office so that apart from exceptional circumstances no member need inform his Section direct.

Public Relations Newsletter

"This Newsletter, which will be issued every other month, is intended to provide basic information on how IEEE Section and Chapter executives can tell their story to the Press. The four-page Newsletter, of which Section Officers have copies, is based on the American scene, but contains many points which are equally appropriate in Region 8."

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Outstanding Speaker

Prof. Dr J. F. Szablya of Washington State University, USA, is now Visiting Professor at the Institut für Hochspannungstechnik, Technische Universität Braunschweig (Postfach 3329, D-33 Braunschweig, West Germany).

Titles of his lectures are "Time Dependent Vector Functions in Electrical Engineering" (an approach reaching beyond tensors), "The World's Most Powerful Laboratory—A Proposal" (with 56 GVA direct capability at Grand Coulee, USA) and, together with his wife, Mrs H. M. Szablya, well-published American free-lance writer, "Energy and Culture" (an area unexplored by engineers) and "The Engineer and his Family" (an experimental programme with married and unmarried students). Their languages are English, German, Hungarian, and, additionally for Mrs Szablya, French and Russian. They are available until the middle of July 1974. Abstracts are available. Contact Prof Szablya at the above address, with copies to the Director of IEEE Region 8, Mr C. Russell, 14 Warwick Road, Ealing, London, England, W5 3XJ.

MEETINGS IN REGION 8

1975 Electromagnetic Compatibility Symposium

An International Symposium and Technical Exhibition in the field of Electromagnetic Compatibility will be held from 20–22 May 1975 in Montreux on Lake Geneva, Switzerland. The date of the Symposium has been chosen just to precede the biennial (ninth in 1975) International Television Symposium in Montreux from 23–29 May 1975. Most likely also, the Working Groups of the Comité International Spécial des Perturbations Radioélectriques (CISPR) and the IEC Group on Electromagnetic Compatibility, TC77, will meet at Montreux in liaison with the planned EMC Symposium. Patron of the Symposium is Mr F. Locher, Director-General of the Swiss Federal Post and Telecommunications Authority. Co-sponsors are the Union Radio-Scientifique Internationale, the Group on Electromagnetic Compatibility of the IEEE and the Committee AE-4 on EMC of the Society of Automotive Engineers. Co-sponsorship is further expected by national societies of electrical engineers of Western Europe and some other international organisations.

Further information may be obtained from: EMC Symposium, Box 97, 1820 Montreux, Switzerland.

The Quantitative Performance Interface between Telemetry Transmitting and Receiving Systems

A one-week course with the above title is being held at the DFVLR Research Center, Oberpfaffenhofen, West Germany, from 27–31 May 1974. The course is sponsored by the IEEE Aerospace and Electronic Systems Society, and full details are given in the leaflet enclosed with this Newsletter.

1974 International Zurich Seminar on Digital Communications

The seminar will be held at the Swiss Federal Institute of Technology 12–15 March 1974 and will deal mainly with sound encoding, channel encoding and modulation, and digital communication loops. Technical visits will be organized. The insert with this Newsletter gives details of the programme and registration forms or write to Secretariate 1974 International Zurich Seminar, Institute fuer Fernmeldetechnik, Sternwarstrasse 7, CH-8006 Zurich, Switzerland.

REGION 8 COMMITTEE MEETING

A year-end message from the

Regional Director



C. Reginald Russell
Director Region 8

1973 has seen the number of Sections in the Region increase to a total of 18—the Poland Section was formed in the Spring and the Finland Section in the Autumn. Mr. Tadeusz Dryzek, President of the Polish Engineering Society, SEP, together with Dr Stanislaw Grzybowski, Vice Chairman of the Poland Section, visited New York early in December to sign a co-operative agreement between SEP and IEEE. Also the arrangement with the Italian Society, AEI, has been extended for a further two years—the sum of the separate basic dues of the IEEE and AEI amount to \$60 but, by this arrangement, joint membership is available of both Societies for \$48.

At the Regional Committee Meeting held in Munich on Friday and Saturday, 26th and 27th October, at which President Harold Chestnut and President-elect John Guarrera were present, there was a discussion of the Computer Society referendum on which the entire membership of the Institute was asked to vote. Members will recall that this was a proposal by the Computer Society for a split of the technical activities of the Institute (Note: Subsequently the voting figures became known: 37,746 or 83% voted against the formation of a separate corporation and 7,527 or 17% voted for it, so that the Institute's corporate position remains as it was). The recommendation of the Board of Directors was that the proposal be "not proceeded with".

Regarding dues payments, there had earlier been discussion in the Institute about a proposal received from the West Germany and UKRI Sections that the cut-off date for dues payments from overseas regions be extended from the present deadline on the 28 February to 30 April in each year in order to allow time for payments to reach New York and be entered into the computer. The meeting was informed that the Board of Directors had agreed to this proposal and that it would become operative with the dues payments for 1974. The Section Chairmen and the Regional Director welcomed this on behalf of their members but nevertheless urged all members to ensure that their payments are made in good time to avoid any break in the supply of publications.

As members may know, the Institute is divided organizationally in two ways—geographically into Regions and Sections, and technically into Divisions, Groups and Societies which cover specialized interests and which publish their separate Newsletters and Transactions. At local level, technical activity in these specialized fields takes place through Chapters devoted to the various technical specialisms. Region 8 has exceptionally high Group/Society membership but has very few Chapters and the attention of members is drawn to this anomaly. A minimum number of ten members can get together to form

a Chapter, and interested members are urged to contact their Section Chairman. Such Chapters could hold regular meetings and possibly encourage one of the Groups or Societies to hold its annual meeting in Region 8 in association with them. As an example, the Educational Technology Chapter of the Educational Group in the United Kingdom is co-operating with various national Institutions to hold the annual conference of the Group entitled "Frontiers in Education" in London in July 1974. The arrangements for Eurocon 74 are going well and at the time of the meeting close to 200 abstracts had been received. As members are aware, due to various technical difficulties associated with production and mailing in Holland, the deadline for receipt of abstracts of papers was extended until mid-December to help those members who received their notices late.

Student activities are growing and many student branches have been formed throughout the Region. A contest for the best written paper from students is to be held; runners-up being invited to present their papers at Amsterdam in April 1974 during the Eurocon convention.

The meeting heard with great pleasure that the Award in International Communication in honour of Hernand and Sosthènes Behn had been presented to Dr Kotelnikov of the USSR. Dr Kotelnikov is a Fellow of the Institute and a Vice President of the Soviet Academy of Sciences. The citation reads "For fundamental contributions to communication theory and practice, and for pioneering research and leadership in radar astronomy". The David Sarnoff Award went to Frederik J. L. Sangster. Mr Sangster is a Senior Member and is an Electrical Engineer with Philips Research Laboratories, Eindhoven. His citation reads "For the invention of the integrated bucket-brigade delay line and ingenuity in finding new realizations and applications of this principle".

In 1973, the basic membership dues were raised to \$30. However, the membership of the Region increased during the year and presently stands at around 6,400, the highest total ever. The meeting was told of the initiative of Dr Andreas Rannestad, who is the Chairman of the Membership and Transfers Committee for the Region, in sending out a postcard with the last Newsletter. This postcard invited existing members to draw the attention of their colleagues to the benefits of Institute membership, so that they could write to Dr Rannestad or to their local Section in order to join. Members are urged to return these cards.

A Nomination Committee is to be convened in the New Year to consider nominees for Regional Director for 1975-76 and to recommend which should be put forward for election by the members. Region 8 has always welcomed enthusiastically the Speakers Tour programme, whereby specialists travelling abroad offer to give lectures by arrangement with local Sections although there had been some falling off in the numbers presenting themselves in 1973. Members who are travelling abroad and are willing to lecture, should contact either their local Section Chairman or M Rémy of the IEEE French Section, 46 rue Barrault, 75634 Paris Cedex 13, who will make the necessary arrangements. This should be accompanied by a short synopsis or at least a title of the subject offered.

In closing this report I would like to send my best wishes for the New Year to all in Region 8.

C. REGINALD RUSSELL

NEWS OF THE SECTIONS

Israel Section

The Israel Section organized, in co-operation with the Israeli Ministry of Communications, a one-day Seminar on "Trends in Digital Communications". This was held on 2 July 1973 in Bat-Yam, near Tel-Aviv. Registration was about 250 engineers. The organizers took advantage of the scheduling of the IEEE International Information Theory Conference in Israel at the end of June and invited some of the members of that Conference to contribute a lecture to the Seminar.

The programme of the Seminar consisted of six lectures. Dr E. R. Kretzmer, of Bell Laboratories, Holmdel NJ, discussed "Trends in Data Communications", describing the evolution of data transmission over telephone networks and the future services to be provided by Bell in the USA. Prof. H. Marko, of the Technische Hochschule, Munich, West Germany, lectured on "High-Speed Digital Communications", reviewing developments in faster transmission media, cables, waveguides and glass fibre light guides. Dr J. Salz, of Bell Laboratories at Holmdel NJ, described "Digital Modulation Techniques" specifically for telephone networks, reviewing several modulation-demodulation schemes and discussing practical methods of selecting optimal schemes. Dr R. D. Gitlin, also of Bell Labora-

tories, in a lecture "A Survey of Adaptive and Automatic Equilibration Techniques", gave a review of the subject, with a theoretical discussion of a method developed in Bell Laboratories. Dr I. M. Jacobs, of Linkabit Corporation, California, discussed "Coding and Digital Communication", shifting the attention from the problems of transmission dealt with this far to the question of improving the throughput of a noisy channel by proper coding. The last lecture, delivered by Prof. R. Pickholz, of George Washington University, was on "Computer Networks". The speaker reviewed computer network topologies and pointed out basic problems encountered in constructing such networks.

United Kingdom and Republic of Ireland Section

Each year the Section holds a competition for the award of a Travelling Scholarship valued at £300. The last competition produced two competitors so good that it was not possible to differentiate between them and the award was shared between the two competitors. One of them used the Scholarship to attend a conference on laser engineering and applications in Washington DC, and he has now described the new developments reported in an article "Advances in Fibre-Optical Communication Systems" in "Electronics and Power" (the Journal of the IEE).

The officers and members of the Section Executive Committee for 1974 will be—

CHAIRMAN: Mr R. H. Davies, Ferranti Ltd, Hollinwood, Lancs, OL9 7JS.

VICE-CHAIRMEN: Mr C. C. Barnes, Mead Cottage, 24 Mead Crescent, Sutton, Surrey; Mr R. W. Addie, Commercial Director, Electronic Components Division, Plessey Co. Ltd., Woodburcot Way, Towcester, Northants, NN12 7JN.

TREASURER: Mr B. J. Cory, Department of Electrical Engineering, Imperial College of Science and Technology, Exhibition Road, London SW7 2BT.

SECRETARY: Mr W. H. Devenish, Electrical Research Association, Cleeve Road, Leatherhead, Surrey, KT22 7SA.

ASSISTANT SECRETARY: Dr A. G. Constantinides, Department of Electrical Engineering, Imperial College of Science and Technology, Exhibition Road, London SW7 2BT.

COMMITTEE MEMBERS: Dr G. H. Byford, RAF Institute of Aviation Medicine, Farnborough, Hants.; Dr R. C. Cuffe, Electricity Supply Board, Lower Fitzwilliam Street, Dublin 2; Prof. A. J. Ellison, Department of Electrical and Electronic Engineering, The City University, St. John Street, London EC1V 4PB; Mr J. B. Kuipers, Preece, Cardew & Rider, Paston House, 165 Preston Road, Brighton, Sussex, BN1 6AF; Mr F. J. Lane, 21 Sandown Way, Hastings Road, Bexhill-on-Sea, Sussex; Sir Francis McLean, Clent Cottage, Thornford Road, Crookham Common, Newbury, Berks.; Mr H. B. Rantzen, 1 Southbury, 144 Loudoun Road, London NW8; Dr R. W. Sillars, GEC Power Engineering Ltd., Trafford Park, Manchester, M17 1PR; Dr K. R. Sturley, Wood Norton, Hilbury Close, Amersham, Bucks., HP6 5LB; Mr D. H. Tompsett, Great Cheveney House, Marden, Tonbridge, Kent.

MEETINGS OUTSIDE REGION 8

IEEE Computer Society International Conference

A second COMPCON for 1974 will be held from 10–13 September in Washington DC, with the theme "Minis and Microws", the ever-growing world of mini-computers and micro-processors. The Eastern COMPCON for the Autumn of 1974 will complement the eighth IEEE Computer Society International Conference, COMPCON 74, to be held from 26–28 February in San Francisco. Complete information on COMPCON 74 in San Francisco or COMPCON 74/East in Washington DC may be obtained from the IEEE Computer Society, PO Box 639, Silver Spring, Maryland 20901, USA, or the War Department, 1020 Corporation Way, Palo Alto, California 94303, USA.

IEEE Power Engineering Society Summer Meeting

The 1974 Summer Meeting of the IEEE Power Engineering Society will be held from 14–19 July 1974 in Anaheim, California, USA. This meeting will include an Energy Resources Conference to accentuate the latest developments in energy resources to meet the current and anticipated energy requirements. The technical programme will also include all other subjects in the power field.

IEEE International Symposium on EMC

The Symposium will be held in San Francisco from 16–18 July 1974, with the theme "EMC Spans the Spectrum". Complete typed versions of papers ready for the Symposium record will be due by 15 March 1974 and should be sent to: Mr A. K. Johnson, Chairman Technical Papers Committee, 1974 IEEE International Symposium on EMC, PO Box 836, Mountain View, California 94040, USA.

IEEE G-AP International Symposium

Several related technical meetings (listed below) will be held in Atlanta on or near the Georgia Institute of Technology campus in June 1974; you may find it convenient to attend more than one.

G-AP and URSL technical programmes will be arranged separately except for appropriate co-ordination. Authors for both meetings are invited to submit summaries or abstracts of papers in their fields of interest. They should be submitted by 4 February 1974 to Dr R. C. Johnson, Engineering Experiment Station, Georgia Institute of Technology, Atlanta, Georgia 30332, USA. Meetings in Atlanta are **5–7 June:** International Conference on Submillimeter Waves and their Applications; **10–12 June:** 1974 IEEE/G-AP International Symposium; **11–13 June:** USNC/URSI Meeting; **12–14 June:** 1974 IEEE G-MTT International Microwave Symposium; **12–14 June:** Twelfth Symposium on Electromagnetic Windows.

IEEE International Conference on Engineering in the Ocean Environment

This Fifth Conference on Engineering in the Ocean Environment will be held in Halifax, Nova Scotia, Canada, from 21–23 August 1974, and will emphasise research and development in "temperate and Arctic waters" and technology developed for high latitude environments. Major advances in other areas will be welcomed, especially those that have wide application to the oceans as a whole. Contributions should accentuate new technology developed in response to scientific and engineering needs or resulting from operational difficulties in achieving specific goals.

For information about the Conference write to Ocean '74, PO Box 1000, Halifax, Nova Scotia, Canada.

STUDENT ACTIVITY NEWS

Annual Report

Annual Report and Financial Statement forms were mailed on 15 November to every Student Branch. Make sure they are completed and returned to Headquarters by 1 February. You must have the reports in to receive your rebate cheque.

Ham Directory

The Ham Directory of IEEE Student members, Branches, their

call letters and addresses has now been published. Over 140 hams are listed in the first issue. Free copies are available to anyone sending a self-addressed 10 cm x 20 cm envelope with an International Reply Coupon to Bob Asdal at Headquarters in New York. The *Student* Newsletter would like to hear from hams who make contact as a result of the Directory for a possible future article.

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Service available for professional meetings contributing to the IEEE learned society programme.

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