



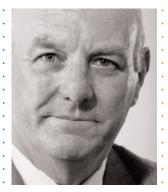






The Institution of Electrical Engineers Savoy Place London WC2R 0BL www.iee.org





### President/sulntroduction

As Europe's largest engineering body, we at IEE have long recognised the need to keep pace with the areas of knowledge we serve, together with the imperative to be at the forefront of change. This last year has been very much one of rising to these challenges.

We have made excellent progress in developing tailored services for those practising in the professions we serve, as well as for the wider community. Our new range of Professional Networks, or PNs, are now operational. These offer information, intellectual debate and stimulation to all those specialising or interested in a variety of topics, centred on electrical engineering and all its related technologies. Operating primarily as web-based communities, PNs are truly global entities. Access has been recently been enhanced by our new website, which provides a more coherent gateway to the many services of IEE.

In addition we have also re-focused our programme of events to ensure greater access and improved relevance. The work has not simply been based on individual needs: this year we introduced the IEE Business Partners programme to involve industry and encourage more activity aimed at the advancement of engineering and technology at corporate level.

To ensure we meet the needs of individuals and industry, regardless of location, we completed the transition to the new Branch structure. This was undertaken at the same time as an increase in staffing at Branch level, helping them deliver stronger services locally.

I believe that both members and staff have responded well to the pressure for change. This year we have taken important steps in modernising both the services we provide and the manner in which they are delivered. I am optimistic that next year will see us change yet further, providing increasingly tailored, relevant services for all.

Professor B Mellitt FREng CEng FIEI President 2001-2002



# Serving Society

In 2001 IEE continued to respond to broader issues relating to professional status and the development of engineering. We made 35 submissions to UK Government departments, Select Committees and other national and international agencies on subjects ranging from higher education to sustainable development.

A particular focus was the Stewart Report on mobile phone safety. An IEE working party on the Biological Effects of Low-Level Electromagnetic Radiation assessed over 1,500 research papers during the year to provide further evidence to the enquiry. Our findings were made available through a Factsheet on Electromagnetic Fields and Health, distributed widely to MPs, local authorities and public utilities, as well as being made available through our website. Further Factsheets were also developed on Fuel Cells, Dioxins and IT Industry and Sustainable Development.

As a world-first, IEE worked with the British Computer Society and the Health and Safety Executive to produce a framework within which to monitor the competence of staff working on safety-related aspects of electronics systems: Safety, Competency and Commitment – competency quidelines for safety-related system practitioners.

To improve IEE access to industry experts, we created six new Sector Panels. Covering Energy, Telecommunications, Control and Instrumentation, Manufacturing, Information Technology and Education and Training, the panels all contain leaders in the Sectors.

### **Professional** Networks

A major new offering in 2001 were the 35 Professional Networks, or PNs. These provide tailored services and information within specific fields of expertise; more will follow. Already they have attracted over 30,000 registrations, 35 percent of which are from outside the UK.

Much of the success of the Professional Networks has been down to their individual websites. Each PN website contains such services as news-feeds, discussion forums, online libraries and web directories. A special feature is access to non-IEE information. To enable this, we have negotiated several content deals such as that with the Institute of Management to provide access to key management skills and techniques checklists.

### Events

A significant area of change was our event programme. Last year nearly 70 events were held with attendance levels up over 90 percent on the previous year.

Much of its success relates to our drive to attract high-quality speakers such as Tom Winsor (Rail Regulator), who launched the Railway PN, management guru and author Charles Handy to launch the Consultants PN and Sara Parkin (Forum for the Future) to launch the Engineering for a Sustainable Future PN.

However, events were not confined to the UK. The Building Electrical Technology PN ran an event in Hong Kong and the Concepts for Automation & Control PN held an extremely successful online seminar, Interactive 2001, which attracted 220 delegates, over 40 percent of which were outside the UK. We also undertook a live online broadcast of the report International Review of UK Research in Computer Science, presented at Savoy Place, London. IEE branches, such as Teeside, Northern Ireland and many more also put on outstanding regional events.

We also built on our reputation for organising first-class events. In October we arranged the IEEE International Telecommunications Energy Conference in Edinburgh. Over 1,100 participants from over 40 countries were attracted to the five-day conference and exhibition.

Following a successful bid, IEE undertook the registration, logistics and venue management for Building the 21st Century, the annual conference for the Council on Tall Buildings and Urban Habitat. Held at the QEII Centre, London, architects, engineers, planning and construction professionals gathered to hear the views of HRH The Prince of Wales, Lord Foster of Thamesbank and London Mayor Ken Livingstone.

We developed the BS 7671:2001 (16th edition Wiring Regulations) seminar, which has proved so popular that extra dates needed to be arranged. And we also attracted over 1,000 delegates to the CIRED international conference and exhibition on electricity distribution. For the first time in its 30 year history the event was held in Amsterdam combining exhibitions, interactive poster displays, presented papers and an academic village.

# Working with Industry

Through the Industry Affiliate Scheme IEE continued to work in partnership with industry. A programme of networking events attracted high-profile speakers including Hermann Hauser, Andrew Pinder (the UK Government's e-Envoy) and Trevor Bayliss. However, during the year we took the decision to modernise our dealings with industry following extensive consultation. In February 2002 we announced that a new programme, IEE Business Partners, would replace the Industry Affiliate Scheme.

Open to all companies and organisations with an interest in engineering, Business Partners will provide an enhanced range of services and benefits to participants. Furthermore, it will enable greater involvement in policy recommendations

to the UK Government, as well as broader issues relating to the professional status and development of engineers.





# $\textbf{Engineering} \\ \textbf{ if or} \\ \textbf{ ITomorrow}$

To encourage tomorrow's engineers, IEE undertook a number of projects spanning all age ranges and many disciplines. We awarded scholarships, prizes and grants worth over £90,000 to school leavers, undergraduates and postgraduates of outstanding ability. Eight travel awards worth £6,000, including the Princess Royal Scholarship for service in a developing country, were also given.

IEE joined with fifteen other engineering organisations to support the Today's Engineers Help Us Every Day national painting competition for five to seven year olds. The competition attracted thousands of entries throughout the UK as well as positive feedback from participating schools. Alexander Bridle, aged seven, from the Brook First School, Crawley scooped first prize at the final in June 2001. He received his prize from broadcaster Johnny Ball for his colourful illustration of energy exploration technologies.

Around 30,000 school children, teachers and members of the public saw the 2001-2002 IEE Faraday Lecture, Smart Living @ Home With Technology, during its 3 month tour of the UK. The travelling lecture, presented by the ECA and the University of Sussex, focused on the development of interactive environments in the home through integrated command, control and communication systems. The lecture was broadcast throughout Europe, the US, Canada and Australia, further widening its reach.

### Providing a Professional Home

Up-to-date guidance on health and safety issues continued to be provided to professional engineers. A new series, Lessons to be Learned from Health and Safety Case Law, was made available through the IEE website offering advice on safe working environments and how to avoid expensive litigation.

### Standards and Technology

The Joint IEE/BSI National Committee (JPEL/64) agreed and IEE published BS7671:2001 on 1 June 2001 following a review of the 16th Edition which had been in force with amendments since 1991.

IEE continued to develop valuable industry Codes of Practice. In particular the revision of the Code for In-service Inspection and Testing of Electrical Equipment was published in June 2001 and the first five parts of a Code of Practice to support the Ships and Offshore Regulations and Recommendations were also completed.

### **Higher Education**

The accreditation of engineering courses remained a key activity. This year IEE made over 20 accreditation visits to UK universities and advised in excess of 100 companies, many in relation to professional development accreditation. We also established an external examiners

The Faraday Lecture also formed the basis of two television programmes. 'Beyond the Square Window' was broadcast as a Channel 4 'Science in Focus' special in November 2001.

And the 2001 Engineering in Health Week was another success for IEE, with the support of CPE (the Campaign to Promote Engineering), EMTA (the Engineering and Marine Training Authority), IPEM (the Institute of Physics and Engineering in Medicine) and GlaxoSmithKline. Artificial joints, robotic surgeons and smart metals were just some of the topics chosen to urge young people to think again about careers in engineering. The campaign attracted over 2,000 pupils to events in London, Birmingham and Glasgow.

register to help the higher education sector understand accreditation issues and good practice. There were 80 registrants by 1 January 2002.

In January 2002 IEE won a five year contract to accredit multidisciplinary degrees on behalf of 15 engineering and technology organisations as hosts to the Degree Accreditation Board for Chartered Engineers (DABCE).

And IEE, together with UMIST, UCL, the University of Bristol and the Higher Education Funding Council for England (HEFCE), provided funding for a project to evaluate the use of Problem Based Learning (PBL) in MEng and BEng Electrical and Electronic Engineering degree courses.

### **Professional Development**

One of IEE's highest priorities is to raise professional standards. During 2001 almost 1,500 men and women were elected or transferred to Member status and over 200 became Fellows of IEE.

Specific initiatives included:

- the launch of an endorsement service to encourage and raise the standards of providers of courses and events
- a project to define core competencies required by engineers working in Control
- an intensive study with Sussex and Brighton Universities into work-based learning

Across Europe, IEE continues to contribute to professional development policy-making. This includes participation in:

- the Engineering Council IPD/CPD Forum
- the Interprofessional CPD Forum
- the Universities' Association for Continuing Education
- the EUREL Working Group on Continuing Engineering Education

In addition to these IEE plays an integral role in the steering groups for the Department for Education and Skills and the Department of Trade and Industry.

#### Archives

To commemorate the International Day of Electricity, IEE organised an exhibition spanning the full history of electrical engineering – from the thirteenth Century manuscript 'On the Magnet' by Peter Peregrinus to the twentieth Century album of lithographs illustrating modern power stations, 'Temples of Power'.

The archives website has been updated to enable the enhancement of many of the images held. Reflecting earlier technological improvements, a recent donation depicts the challenges faced by John Willoughby Meares as he built a hydroelectric generating station in the tropical jungle near Darjeeling in the 1890s.

#### INSPEC

The INSPEC database reached the seven million mark in August 2001 with level of scientific and engineering literature available dramatically increasing over recent years. INSPEC was also made available to subscribers in CD-ROM and web-based format, together with improved search and retrieval facilities.

### **Membership Publications**

Tasked with giving our publications a more modern feel, the Editorial Advisory Panels for all titles issued to members have been busy reviewing each magazine. The results of the research will come to fruition during 2002/2003.

#### **Professional Publications**

IEE Professional Publications continue to ensure we provide valuable information to the profession and contribute well to research activities. We have seen particularly strong growth in our joint package with IEEE, called IEL – the IEEE/IEE Electronic Library. Many subscribers to this service are now able to access the entire information portfolio through their desktops.

#### Book

The number of new publications for the year reached 20, greater than at any time over the past decade. This growth, together with the return of a healthy operating surplus, demonstrates the strength and quality of IEE services in the publishing world in the face of fluctuating market conditions.

IEE won the contract to publish the new titles under the BTexact Communications Technology Series and have to date published the first three titles. We also published the first book in a new semiconductor materials processing series and have a number of other contracts signed for the future. And one of our titles, Restoring Baird's Image by Don McLean won second place in the prestigious 2001 Kraszna-Krausz awards.

### Member Services

Extensive research has been undertaken to identify the needs of younger Members, as well as other target groups such as ICT. Further work to meet these requirements will take place in 2002/2003.

The transition to the new Branch structure was completed in September 2001. Already IEE Regional Executives have begun to establish strong links with industry, academe, Regional Development Agencies and other key organisations, as well as undertaking local market research. All this has been done as part of our drive to modernise and tailor our services.

### Awards and Honours

Sir Robin Saxby received the prestigious Faraday Medal in recognition of his outstanding contribution to the electronic engineering industry. The award is the highest distinction offered by IEE, given in recognition of notable scientific or industrial achievement in electrical engineering, or for conspicuous service rendered to the advancement of electrical science.

Sir David Davies was elected as Honorary Fellow for his outstanding contributions to engineering research, education and railway safety. Mr N R Narayana Murthy was elected as Honorary Fellow for his outstanding contribution to software engineering industry.



### Summary||of||Financial Results||for||2001|

Consolidated Statement of Financial Activities for the Year Ended 31 December 2001

### Financial Highlights from:2001

### Honorary Treasurer's Report on the Financial Results for 2001

£41.5m of income was generated during the year, the majority from the area of publishing and information services. The income levels compared to 2000 (£40m) have been matched by an increase in Charitable Expenditure of some £4.8m to £41.7m.

The value of IEE funds has been affected by the global fall in equity values related to economic slow-down and the impact of the events of 11th September. IEE maintains a reserves policy to limit the

impact of such fluctuations on its ability to deliver planned activities and provide funds to develop new initiatives in accordance with its charitable objectives. Major ICT enhancements have been implemented in respect of World-Wide-Web service architecture, publishing production and financial systems. A major refurblishment of the administrative offices in Stevenage has also been initiated.

Despite expectations that the economic slow-down will continue to impact elements of IEE income, notably within publishing, the forthcoming year will see further investment in the development of Professional Networks and a range of initiatives to introduce new products and services of greater relevance to the electrical engineering community. All these developments, and the enhancement of the Marketing function, are intended to improve our organisation capabilities.

	Income £000s	Expenditure £000s
Membership Subscriptions	6,393	-
Publishing and Information Services	22,271	15,923
Meetings and Exhibitions	4,514	8,926
Members Support	218	4,280
Trading Companies	5,306	3,191
Building and Facilities Refurbishment	-	3,152
IT and IT Infrastructure	-	1,457
Other	749	4,553
Operating Activities	39,451	41,482
Investment Income	2,031	221
Restricted Income	11	-
Totals	41,493	41,703

### Balance sheet as at 31 December 2001

	£000s
Fixed Assets	16,817
Investments	69,249
Current Assets	21,642
Less Current Liabilities	(21,115)
Net Assets	86,593
General Funds	28,397
Designated Funds	53,996
Unrestricted Funds	82,393
Restricted Funds	4,200
Total Funds	86,593

The summarised accounts may not contain sufficient information to allow for a full understanding of the financial affairs of the charity. For further information, copies of the full annual accounts, unqualified auditors' report and the Trustees' Annual Report may be obtained by writing to the Chief Executive at Savoy Place.

#### Trustees' Statement

The summarised financial statements are extracted from the full unqualified audited accounts prepared in accordance with the Charities Act 1993, which were approved by the Trustees on 6 March 2002. These accounts will subsequently be submitted to the Charities Commission.

W S Jones, Honorary Treasurer 6 March 2002

#### Auditors' Statement

# Auditors' Statement to the Trustees of the IEE We have examined the summarised financial statements

We have examined the summarised financial statements for the year ended 31 December 2001.

### Respective Responsibilities of Trustees and Auditors

You are responsible as Trustees for the preparation of the summary financial statements. We have agreed to report to you our opinion on the summarised statements consistency with the full financial statements, on which we reported to the Trustees on 6 March 2002.

### Basis of Opinion

We have carried out the procedures we consider necessary to ascertain whether the summarised financial statements are consistent with the full financial statements from which they have been prepared.

#### Opinion

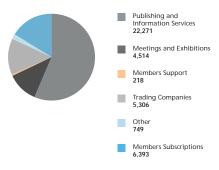
In our opinion, the summarised financial statements are consistent with the full financial statements for the year ended 31 December 2001.

#### Arthur Andersen

Chartered Accountants and Registered Auditors 6 March 2002

## Operating Activities

#### Income £000s



### Expenditure £000s

