

IEEE

GENERAL



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HISTORY OF IEEE REGION 10

Looking back from 1984, the Centennial Year, it is some 17 years since the first IEEE Sections were formed in Region 10, a geographical entity which covers a large part of the world, namely Asia and Pacific countries and at that time, part of Africa also.

The chronological sketch which follows records how the region, through the efforts of its regional committee, advanced to where it is today.

1967-72

The inaugural steering director for Region 10 was Dr. Shigeo Shima of Japan who was offered this task for 1967-68 by the IEEE Assembly. Then began establishment of IEEE Sections and the gradual development of a community of interest in the Asia-Pacific region.

In 1971 Mr. Tatsuji Nomura of NHK Japan, the then director, took the initiative of forming a regional committee. The existing IEEE Sections in the region namely India, New Zealand, Pakistan and Tokyo were represented on that committee and the first meeting took place at the Peninsular Hotel, Hong Kong in early July 1971. That first meeting was exploratory. Section chairmen exchanged ideas and experiences and sought solutions to problems of Section administration and Section operation.

Since then the regional committee has met annually, somewhere in the region, on occasions with IEEE Headquarters staff officers present to assist and advise. Over these years the regional committee evolved up to the present as the deliberating body for the region.

1973-76

The Region 10 Student Paper Contest, introduced in 1974, was the first major exercise undertaken on a region-wide basis. The drafting and approval of the rules of the contest was the outcome of

considerable study and discussion by the regional committee. This was a natural development of the student activities function of the committee. Also innovated in the years leading up to 1974 were important section technical conferences in India, Japan and New Zealand.

By 1976 section formation in the countries of the region was virtually complete. Moreover, in India where just one country section had been formed initially, new independent sections were being established in the important cities.

An important parallel development was the formation of multiple technical chapters of technical groups in Tokyo Section, where formation of new chapters has continued up to the present. Several chapters were also formed elsewhere in the region, in India and New Zealand.

The formation of multiple IEEE Sections in India was followed by establishment of the all India IEEE Council, the first in Region 10 with Mr. Faqir Kohli, a past regional director, as founding chairman.

The regional committee gave much study to educational activities and the arranging of lecture tours by distinguished IEEE speakers. Several such tours took place in the region.

1977-80

In the period 1977-78 region 10 office bearers were apprehensive about the growing size of the regional committee and the mounting cost of staging the annual meeting. The increase in committee membership resulted in part from formation of additional sections in countries where one section existed already. As a reaction to this situation a special formula was hammered out covering reimbursement of costs to attendees from the regional treasury.

The regional committee from inception in 1971 through until the end of 1980 was in search of its identity and mission in the region and functioned by and large as a discussion group of elected sec-

tion representatives without set parliamentary procedures and without an elected region 10 delegate. Preoccupation with side issues tended to inhibit the development of important objectives in the region.

In 1979, on the initiative of the serving director Dr.S.Y. King, the regional committee accepted the long overdue and exacting task of drafting and approving a set of Region 10 Bylaws covering election of Region 10 officers, voting procedures within the committee and the essentials of committee operation and management.

In 1979 the territory of the region was amended to exclude Africa which with the mutual agreement of other concerned was added to the territory of Region 8, namely Europe.

1981-84

Under the newly introduced and approved Region 10 Bylaws the first Region 10 Delegate and Director to be elected was Dr. V. Prasad Kodali of New Delhi who took office in 1981.

In 1981-82 the regional committee, with a new sense of purpose, gave considerable attention to forward planning and to improving the organization and administration of Region 10 to give effect to these plans. New programmes were instituted.

The Region 10 bylaws were amended in respect of election of vice chairman by the region. Procedural guidelines were introduced.

A significant first in 1981-82 for the region was the inception of TENCON, an international technical conference initiated and hosted by Hong Kong Section and co-sponsored by Region 10.

In 1981 the IEEE membership in Region 10 passed the 10,000 mark, a growth rate of better than 10 per cent having been sustained for many years. The prediction for 1984, the Centennial year is 15,000 members.

It is interesting to note that in 1971 the number of regional committee members was just 5 whereas a decade later in 1981-82 this number was 27. Also there were 8 special guests at the regional committee meeting held in 1982 in New Delhi, so the attendance possible had risen to 35. Special guests at that meeting included the IEEE President, General Manager, Vice President for Regional Activities, Vice President for Technical Activities, and Presidents of the Computer, AES, CHMT and MTT Technical Societies.

Plans were laid in 1981-82 for marking the Centennial in 1984. These plans included preparations for publication of a Region 10 history and for the Region to participate in commemorative activities. These plans were carried forward in 1983 and include preparations for the Region 10 Centennial Banquet to be held in Singapore during TENCON II.

This sketch of the Region 10 Committee from 1971 through until the present would not be complete without a retrospective thank-you to all the un-named committee members who have contributed to the progress of Region 10 in the past 13 years and let to the development of the present community of interest.

History of IEEE Australia Section

The first meeting of IEEE Australian members was organized by Mr. James J. Vasseleu in early 1972 and held at the Cell Block Theatre, Darlinghurst N.S.W. It was agreed by those attending that the formation of an Australian Section would be highly desirable and that Mr. Vasseleu should proceed with the preparation and submission of a petition. The area to be encompassed by the proposed section was all Australian States and Territories comprising New South Wales, Victoria, Queensland, South Australia, West Australia, Tasmania, Australian Capital Territory, Northern Territory and the Territory of Papua New Guinea. The petition was signed by 63 members and submitted to IEEE Headquarters at the beginning of June, 1972. Dr. Tatsuji Nomura from Tokyo Section, who was the Region 10 Director, supported the petition and the Australian Section was established on 16 August, 1972. At the first official meeting which was held at Neutral Bay Junction N.S.W. on 12 September, 1972, Mr. James J. Vasseleu was elected Chairman, Mr. Lennox J. Clementson Vice Chairman and Mr. James Deans Secretary/Treasurer.

Shortly afterwards the 1972 IEEE President Dr. Robert Tanner visited Australia and accompanied by officers of the newly formed Australian Section, had discussions with representatives of the two chartered Australian national societies, the Institution of Engineers, Australia and the Institution of Radio and Electronics Engineers, Australia.

Australian Section By-Laws were prepared in October, 1972 and submitted to IEEE Headquarters.

During 1973 a number of technical meetings were held in co-operation with the national societies and in early October, Dr. John D. Ryder, 1973 Chairman of the IEEE Fellows Committee, visited the section and conducted a seminar at the University of New South Wales, Kensington. N.S.W.

Mr. Vasseleu retired as Australian Section Chairman at the end of 1973 and Mr. Clementson was elected 1974 Chairman.

A full program of technical meetings was again arranged in co-operation with the national societies during 1974 and 1975.

The 1975 IEEE President Mr. Arthur Stern visited the Section in October 1975. In late 1975, as a result of an earlier petition, Victorian Sub Section was formed. Mr. Clementson retired at the end of 1975 and was succeeded as Chairman by Mr. Dennis Bradshaw who had been secretary of the Section.

During 1976 the Australian Section nominated Mr. Vasseleu for the position of Region 10 Director for 1977-78 and he was appointed by the IEEE Board of Directors in December of that year.

Dr. Ivan Getting, the 1978 IEEE President, visited the section in October, 1978.

Mr. Bradshaw retired in 1978 and was succeeded as Chairman by Dr. Ramutis Zakarevicius. Mr. Clementson died in November 1978 and in early 1979 the L.J. Clementson Memorial Student Prize was established.

The 1981 IEEE President Dr. Richard Damon visited the Section in August 1981 in June 1981 Mr. Brian Love was appointed Chairman of the Victorian Sub Section, which had been inactive for several years, and held an inaugural meeting in October 1981. A new committee was elected and the Victorian Sub Section reactivated.

At the end of 1981 Dr. Zakarevicius retired and was succeeded by Mr. Max Simons who had been Secretary of the Australian Section.

Dr. Robert Larson, the 1982 IEEE President, visited the Victorian Sub Section in the latter part of 1982.

Dr. Harry Green was elected Region 10 Director for 1983-94.

A petition to upgrade the Victorian Sub Section to full Section status was prepared and submitted to IEEE Headquarters by Mr. Brian Love in Mid 1983 and approval obtained in September, 1983.

The 1983 IEEE President Dr. James Owens and the IEEE General Manager Mr. Eric Herz, visited the Victorian and Australian Sections during September 1983. They also visited the Canberra Headquarters of the Institution of Engineers, Australia for discussions about formalising a co-operative agreement.

Although no Student Branches have been established in the Australian and Victorian Sections, Australian students have participated in all the Region 10 Student Prize Competitions held since 1972 and have been quite successful. Dr. Robert Radzyner has been responsible for all Student Activities, including the screening and submission of entries for the Region 10 Competition.

Since the inception of the IEEE Australian Section the membership has grown over five-fold and at the commencement of the IEEE 1984 Centenary year the combined total for the Australian and Victorian Sections is in excess of 1700 members.

Members in West Australia, South Australia and Queensland are moving toward Section status and it is proposed that an Australian Council will be established to cater, eventually, for five Australian Sections comprising:

Queensland/Papua-New Guinea
New South Wales/Australian Capital Territory
Victoria/Tasmania
South Australia/Northern Territory
WEST AUSTRALIA

When this occurs IEEE membership in Australia should expand considerably and be in excess of 3000 members within five years.

History of Electrical and Electronics Engineering Development in Australia

- 1838 - Edward Davey, Inventor of the relay (1835), settled in Adelaide, South Australia.
- 1858 - Adelaide, Melbourne and Sydney linked by telegraph lines.
- 1859 - Under sea telegraph cable laid between mainland Australia and Tasmania.
- 1863 - First recorded use of electric light, in Australia, at Sydney observatory. The power was supplied by batteries.
- 1872 - Overland telegraph line between Adelaide and Darwin completed. Adelaide, Sydney and Melbourne now had direct link with Europe via overland telegraph to Darwin and from Darwin via submarine cable to Java.
- 1875 - Work begins on the telegraph line between Adelaide and Perth, a distance of 2532 KM across the Nullabor Plain.
- 1877 - Henry Sutton (Ballarat, Victoria) within 12 months of bells announced invention in Scientific American in 1876 had made 20 versions of his telephone. He probably set up Australia's first telephone link in 1877 between Suttons store and music factory in Ballarat.
 - Telephone used between Launceston and Campbelltown in Tasmania.
- 1878 - First commercial telephone service commissioned in Melbourne.
- 1880 - First telephone exchanges opened, in Melbourne, Sydney and Brisbane.
 - First record of company formed for supply of electricity. In Melbourne (Victoria) for lighting in nearby markets and a public hall.

- 1881 - Henry Sutton (Ballarat, Victoria) "invented" carbon filament lamp 16 days after Edison but due to poor communications was not aware of this until later. Also invented vacuum pump to go with above which was subsequently used by in England.
- 1882 - Demonstration of public street electric lighting in Brisbane.
- 1884 - Chair of engineering established at Sydney University.
- 1888 - First public lighting installation in Australia, and the Southern Hemisphere, commissioned at Tamworth. Two 18 KW generators supplied the power.
- 1890 - Lambton power station in Newcastle opens, at this time it was the largest in Australia having two 130 H.P. Westinghouse compound engines. Steam was supplied by 2 B and W tubular boilers.
 - First Australian member (Associate) of IEEE Mr. Wilford J. Spruson of Hepburn and Spruson, Sydney.
- 1891 - Mr. Gustav S. Fischer, tramway construction, Sydney joins IEEE.
- 1892 - First hydro power scheme started. 435 KW "Duck Reach" power station on South Esk River near Launceston Tasmania.
- 1893 - Queensland's first hydro electric generation at Thargomindah. Water from an artesian bore powered a water wheel, made by local blacksmith, to drive two 8 KW dynamos.
- 1895 - 435 KW "Duck Reach" hydro station commissioned.
- 1898 - First recorded use of wireless in Australia (Adelaide, South Australia): transmission over about 500 metres.
- 1899 - First public power station opened in Sydney by the department of railways. The station comprised four 850 KW, 600 V D.C. generators each driven by a horizontal cross compound condensing steam engine.

- 1903 - First government tests of wireless in Australia between Moreton Island and naval stores in Brisbane
- 1906 - First practical demonstration of wireless, for possible commercial use, in Australia between Queenscliff(Victoria) and Devonport (Tasmania), - a distance of 300 kilometres.
- 1910 - Australian wireless experimenters form "Wireless Institute of Australia", first such society in British Empire.
- 1911 - By this year a total of 26 private experimental wireless stations were operating in Australia.
 - Australia's first private automatic telephone exchange placed in service in Sydney.
- 1912 - Australia's first public automatic telephone exchange (and the first in the Southern Hemisphere) opened in Geelong (Victoria)
- 1918 - First commercially built wireless receiver using three electrode valves designed and manufactured in Sydney.
 - First direct wireless messages transmitted from England to Australia.
 - First electric train service opened in Australia (Melbourne)
- 1919 - Pioneering wireless telephone tests, between land stations in Australia and ships at sea, successfully carried out.
 - First demonstration of wireless broadcasting given in Sydney.
- 1920 - First manufacture of radio valves in Australia.
- 1922 - First mobile police car in Australia (Victoria) equipped with radio.
- 1923 - First high powered broadcasting station opened in Sydney. Australian designed and manufactured.
 - The sealed (wavelength) set introduced to Australian radio listeners.

- 1924 - First transmission of human voice (Marconi's) between Chelmsford, England, and Sydney.
- 1927 - Beam wireless service opened between Australia, Great Britain and Ireland.
- 1928 - First recorded monitoring over long distances of aeroplane in flight - captain Kingsford Smiths "Southern Cross" from the time it left San Francisco until it reached Brisbane.
- 1929 - First picturegram service opens between Sydney and Melbourne.
- 1930 - Australia sets a world record for a land line telephone call - from Geraldton, Western Australia and Cairns(Queensland) - a route distance of 7662 kilometres.
- 1934 - Longest radio - picturegram service in the world and the first in Australia opened between Melbourne (Victoria) and London.
- 1948 - Demonstration of the first Australian designed and manufactured television receiver.
- 1954 - First 220 KV transmission line commissioned in Australia.
- 1955 - Design and manufacture of transistorized radios.
- 1956 - First television transmissions in Australia.
- 1957 - Messers D.G. Lampard and M. Thompson publish significant paper on electrical measurements, "a new theorem in electrostatics with application to calculable standards of capacitance". IEE (U.K.) heaviside prize awarded for this paper.
- 1959 - First 330 KV transmission line commissioned.
- 1967 - First monolithic silicon integrated circuit produced in Australia.

- 1968 - First 500 KV transmission line commissioned in Australia.
- 1970 - During this decade csiro division of radiophysics perfected "Interscan" a microwave aircraft landing guidance system. now adopted by all world airlines.
- 1976 - FM broadcasting commenced in Australia.

Most wireless/radio milestones listed above were result of work done by amalgamated wireless (Australasia) limited.

History of IEEE Bombay Section

IEEE activities started in India fifteen years ago with less than four score members. A band of dedicated engineers started IEEE - India Section at Bombay and today, the IEEE India Council, as it is now termed, has a membership approaching 2000. Over the years, Sections at Bombay, Bangalore, Madras, Delhi and Calcutta and Sub-sections at Kerala, Kanpur and Hyderabad have been formed. Out of the Sub-sections, Kerala and Hyderabad have already made petitions for elevation to full-Sections. IEEE-Society Chapters in Power, Industrial Applications, Computer, Electronic Aerospace, Nuclear Plasma, Industrial Electronics, were formed. Student Branches came up at various Engineering Colleges. Thus with a small beginning at Bombay, IEEE activities have spread over the length and breadth of India and Bombay Section, the eldest in the family, continues to assist and guide IEEE Members all over India.

Bombay Section has been very active at Regional level, having given it in Mr. F.C. Kohli the first Indian Region 10 Director, the Regional 10 Secretaries in Dr. V.P. Kodali and Mr. T.V. Balan, as well as Mr. D.N. Purandare and Mr. T.V. Balan as Region 10 Membership Development Chairman and Mr. Kirit J. Sheth as Educational Activities Chairman. Prof. P.V.S. Rao and Dr. B.D. Pradhan were selected as distinguished speakers to tour Region 10 and deliver lectures on computer technology.

The IEEE8s all India Annual Activity in the form of 'Annual Convention and Exhibition' (ACE) which first started in Bombay ten years ago has now become a regular annual feature and Bombay Section has played host to six such functions so far, at some of which IEEE Presidents and Past Presidents were present. Bombay & Delhi Sections played joint hosts to 1984 SMC Conference held in January 1984.

Amongst the other activities, Student Activities of Bombay Section are well organised and annual paper contest is a regular feature. A few students of Bombay who had entered Region 10 Student Paper Contests, won top awards. The Section's News-letter too has been regularly published.