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Golden Jubilee Issue

50 years of Region 8 in IEEE

Message from the IEEE President

Peter Staecker
IEEE President

AT the core of IEEE membership it is technical knowledge (especially high technology) and interest that drives the organisation forward. This has been especially true in Region 8, which has a very large membership and a high level of active involvement in the 38 IEEE Technical Societies.

The IEEE publications are respected for their quality and integrity around the world, and are the journals of choice for authors seeking to publish their work to the largest possible readership. Technical authors from the countries of Region 8 have been leading contributors to IEEE journals, and also serve on the committees and editorial boards that are essential to the success of the publications. The technical achievements and distinctions of Region 8 members can be gauged from the list of awards shown at the end of this document.

There are over 400 Society Chapters in Region 8, which, in total, hold several thousand technical meetings each year. These are mostly small scale events, attended by 20 or 30 members, and provide the main way that Society members feel that they belong to their parent body. In contrast, the major IEEE Society Conferences typically attract over a thousand participants. In recent years, Region 8 has succeeded in bringing many of these major conferences to Western Europe and other parts of the Region. In addition, the IEEE Distinguished Lecturer Program has enabled world experts to visit Region 8 Sections to give prestigious talks.

The scale of technical activity in the Region has grown steadily, and continues to grow. Since 1986, for example, Region 8 has hosted over 4,000 technical meetings in 72 individual countries. The most popular venues have been in Italy, France, Germany and the United Kingdom, but virtually all countries in the Region. The most active IEEE Society sponsors have been the Computer Society (819 meetings), the Electron Devices Society (455) and the Communications Society (436).

The Region has been involved directly in sponsoring 180 conferences, involving 73 Sections/Subsections (including some entities outside of Region 8) and over 300 Chapters. In addition, over 2,200 non-IEEE entities participated by either financially or technically sponsoring/co-sponsoring an event. These statistics give an appreciation of the scale of penetration of IEEE in Region 8. In the past few years web-based delivery methods have become more popular. The webinar, for example, is ideal for reaching members based in thinly populated areas, and also has the advantage of being downloadable for future viewing.

The Distinguished Lecturer Program has allowed world-class experts from any of the ten IEEE Regions to travel to Sections to give talks and to interact with local members. This program enhances the reputation of IEEE as the world's foremost technical society, because it gives members, especially students, an opportunity to hear some of the leading technical speakers that they otherwise would never meet.

Global History Network

WHY not contribute a short account of your own personal experiences in electronics, computing, etc.? Any member can do this by going to the IEEE History website at www.ieeeghn.org

Martin Bastiaans
IEEE Region 8 Director

Welcome from the Region 8 Director: let's celebrate our volunteers

IT is a true honour for me – the 26th IEEE Region 8 Director – to write a few words in this Special Issue of *IEEE Region 8 News* on the occasion of the Region's 50th anniversary and the 100th IEEE Region 8 Committee meeting.

Our Region was founded on 24 April 1962 as Region 9 of the IRE (Institute of Radio Engineers, one of the two organisations that merged into IEEE on 1 January 1963) and its inaugural meeting took place on 6 June 1962 in Geneva. Without changing its boundaries, IRE Region 9 was renamed IEEE Region 8 on 8 January 1963; and it was on 22 April 1963 that the first IEEE Region 8 Committee meeting took place, again in Geneva. For these reasons, the entire period April 2012 – April 2013 was used to celebrate the Region's 50th anniversary.

For the past two years, I have been digging heavily into the history of our Region, collecting and reading such documents as Region 8 Committee meeting minutes; *IEEE Region 8 News* issues; Region 8 Student Activities Committee reports; IEEE Secretary reports; relevant parts of the minutes of the meetings of the IEEE Executive Committee, the IEEE Regional Activities Board and the IEEE Member and Geographic Activities Board; and excerpts from several IEEE databases. I was struck by two aspects to which I want to draw your attention.

Fifty years ago, communication and travelling were quite different from what we are used to now: no email, no internet with its websites and social media, unreliable telephone and telex connections, slow travelling by train, expensive airline tickets, and so on. All correspondence was done by postal mail and for a direct communication with others one had to visit them in person. In spite of all these difficulties, a number of enthusiastic volunteers managed to create our Region, slowly in the beginning – as can be expected – but resulting in a firm basis which others could build on.

These early volunteers did not know about term limits: they often stayed in the same job for many years, after which they might do the same in a different job. Although this may sometimes lead to unwanted situations, I never got the impression that this has been the case. On the contrary: these volunteers treated IEEE and their task as their own child, pampered it and helped it grow, resulting in the strong Region that we have now. It is to these enthusiastic volunteers that we owe a great respect.

Congratulations on our achievements

Kurt R Richter
IEEE Region 8 Jubilee Book coordinator

DURING the last 33 years I had the privilege to serve as a volunteer in IEEE Region 8 which celebrates its 50th anniversary. This gave me the opportunity to observe and to participate in the wonderful achievements of the Region with respect to its organisation, its membership development, its professional standards, and last but not least, all within its complex political environment.

I have followed the many ups and also a few downs from all levels: from the Section, the Region and the Board level as well. Many political changes happened which often had an impact on IEEE in general, and in particular the developments within the Region. I can also mention the end of the Cold War at the end of the 1980s which was followed by a large increase in IEEE activities in the former Eastern Block Countries. Measures had to be taken to help engineers become IEEE members by reducing the fees for these so-called Low Income Countries. Furthermore, when the number of members in these countries was not sufficiently high for establishing a Section, a new type of entity, the Section in Development, was created. The members of these Sections were permitted to participate in the Regional activities. Later, many of these countries became member states of the European Union. Today all 27 EU member states are represented by 23 sections on the IEEE Region 8 Committee, which is over 30% of all Sections in the Region.

The 9/11 catastrophe in the US in 2001 was a significant setback for the Region, and in the years following many student members were lost, including a very active Student Branch in Iran.

From these examples it can be seen that, unfortunately, politics can influence the development of a Region very much. However, I never encountered any political conflicts between IEEE volunteers in our Region.

For me, IEEE Region 8 is one of the most interesting Regions in IEEE because of its diversity of languages, cultures and religions. This makes it most stimulating to be a member of this Region and to serve it as a volunteer.

I am very glad that this Special Issue of the *IEEE Region 8 News* tries to give some insight into the 50-year history of IEEE Region 8. I take this opportunity to thank all authors, the chief editor Charles W Turner and the editors Roland Saam and Zhijia Huang, for their efforts to get this Special Issue published and for the contributions to this issue.

Finally, I congratulate IEEE Region 8 on its 50th anniversary wishing a prosperous and successful future serving the IEEE members in this large geographic area.

How the organisation has changed: Region 8's past directors recall their years in the post

Kurt Richter
(1991-92)
Austria Section
One of the many highlights during my directorship was the revival of AFRICON in 1992. For political reasons, the conference could not be held in the host Section, South Africa, and took place in Swaziland. It was opened by King Mswati III, whom I had the pleasure to entertain and to invite to lunch.

Charles Turner
(1993-94)
UK & RI Section
When I became director, I discovered that Region 8 was not well understood at IEEE HQ in Piscataway. IEEE staff and the volunteers from the USA needed to know more about the growing aspirations and objectives of our members. IEEE activity in Eastern Europe and Russia was a priority, and Region 8 agreed to provide assistance to members to improve the quality of their membership experience.

Peer Martin Larsen
(1995-96)
Denmark Section
With a very few exceptions, the members in the Region 8 Sections speak their own language at their local meetings, so I believed that it was very important for the Section Chairs to meet twice per year, to share experiences and exchange ideas.

Rolf Remshardt
(1999-2000)
Germany Section
When I first started as Region 8 Treasurer the annual budget was about $25,000 and consisted of a few handwritten pages. But by the time I became Director the budget had grown to about three quarters of a million dollars. It has continued to increase since then as the Region expanded. Manual bookkeeping methods were replaced by computer-based budget and financial control programs.

Levent Onural
(2001-02)
Turkey Section
I remember the lively, friendly and productive collaboration within the Region 8 Committee. One of the difficult issues we had to deal with was IEEE operations in the embargoed countries, such as Iran. The transnational nature of IEEE, and its complexity, conflicted with the actions and regulations of some governments, but the IEEE Board used its contacts to resolve most of the problems. It is very pleasing to see young IEEE volunteers from my days move up to become influential senior officers.

Tony Davies
(2003-04)
UK & RI Section
Being an active IEEE volunteer has been a rewarding part of my life. I particularly appreciated IEEE's international/transnational character, and its lack of centralised control. This gave freedom and also opportunities to the volunteers in geographical and technical activities. Their support for students and early-career members was another good feature of IEEE.

Baldomir Zajc
(2005-06)
Slovenia Section
Law and regulations are different in each country: only local people can accommodate to them. In each of 60 Sections there is a different style of life and practice. In the Region Committee we are each learning from one another and growing together. Many new Sections are getting experience from older experienced Sections.

Jean-Gabriel Rémy
(2007-08)
France Section
My priority was to develop IEEE in the areas of Region 8 where it was almost or completely absent. Some success was achieved with the creation of new Sections and conference activity. I strongly believe that the rapid growth of IEEE in Africa will eventually lead to a change in the balance between Europe and the rest of Region 8. I was very pleased to help in the creation of the Clementina Saduwa Award to stimulate more activity by women members of IEEE in Region 8.

The Origins of IEEE Region 8

Charles Turner
Editor, IEEE Region 8 Jubilee Book

THE evolution of IEEE Region 8 can be traced back to a series of meetings and negotiations, held just over 50 years ago, involving leaders from the technical community in Belgium and the Netherlands who were members of the Institute of Radio Engineers (IRE) based in New York. Bruce Barrow, an American member of IRE working in Europe, was instrumental in driving forward a new initiative, and the idea of an official IRE presence in Europe was conceived at the end of 1959 in the Benelux Section. At that time there were about 2100 members of IRE (the forerunner of IEEE) in Europe and the Middle East. Many of these members had some previous connection with North America, through their workplace or university, and some had joined IRE whilst working over there. In general, though, the primary allegiance of professional engineers in European countries had always been to their long-established National Society, which in many cases performed a qualifying, licensing or registration role.

One of the major problems facing the proposed entry into Europe was the perceived threat to the established order of increased competition for members. An essential task of the negotiating team was to reassure the National Societies in Europe that there would be no serious threat to their long-term status. To this end a committee from IRE visited various European countries in 1961 to find out if the local electrical engineering societies would welcome the formation of a new IRE Region. On IRE's side there was not unanimous agreement about the proposal to establish a new Region outside of North America, because of some scepticism about whether the US model of a volunteer-driven society would translate readily to countries more comfortable with staff-driven organisations.

A further complicating factor in 1962 was the imminent merger between the American Institute of Electrical Engineers (AIEE) and IRE. Eventually, the Board of Directors of IRE received a petition from the Benelux Section in March 1962, which led to the creation of an IRE Region 9 on 24 April 1962, with its territory based on the European Broadcasting Area defined in the Radio Regulations of the International Telecommunication Union. The European Broadcasting Area includes – in addition to Western Europe – the Western part of the USSR, areas in the Middle East and the territories bordering on the Mediterranean, thus containing the six IRE Sections: Benelux, Egypt, France, Geneva, Israel and Italy. It was immediately after the merger on 1 January 1963 that the IEEE Board of Directors, on 8 January 1963, gave their approval for the formation of IEEE Region 8, being identical to the former IRE Region 9.

This approval reflected the strong international or transnational vision within IRE that has been embraced enthusiastically by IEEE since its formation.

The first official IEEE (at the time of their formation, IRE) Sections were formed in Israel, Egypt, Benelux, Italy, Geneva (as a proxy for Switzerland), France and – after the formation of IRE Region 9 – the United Kingdom and Eire (later the Republic of Ireland). Shortly after the merger, Norway and the Federal Republic of Germany Sections were added. The precise geographical extent of Region 8 was not finally defined until 1981 when the whole of Africa was included. In 1970, Greenland and the entire USSR were already declared to be within its boundaries.

For the first decade of its existence, Region 8 was anchored mostly in Western Europe, where the bulk of the membership resided, but after 1970 the countries of Southern and Central Europe joined, as their membership grew to reach the threshold level for Section formation. The far-sighted policies on Section development that stimulated rapid increases in membership were laid down in the period 1985-95, at a time when dramatic political changes in Eastern and Central Europe provided unusually good opportunities for recruiting new members.

The record of achievement evident in the current size and status of Region 8 has been built over the past 50 years through the efforts of thousands of IEEE members willing to serve as volunteers and officers at Region, Section, Chapter and Student Branch levels. In particular, those elected to the offices of Regional Director or Treasurer are faced with the burden of a very time-consuming meeting schedule and frequent travel to the USA.

Region 8 today is somewhat dominated by academic members, whereas in the USA, Regions 1-6 have a majority of members from industry. Typically, members in Region 8 belong to at least one of the 38 IEEE Technical Societies. In the early years the elected Regional Director came from one of the founding Sections, but more recently that has changed. Another significant difference is that the number of student members has grown rapidly. All of the leading universities with electrical engineering and computer science programs have active Student Branches.

All of the activities organised by Region 8 for its members are financed by its governing body – the Region 8 Committee – which meets twice per year. The funds that it controls are derived mainly from the annual dues (subscriptions) paid by the members, to which are added grants for special projects and the profits from conferences and other events.

Region 8 comprises a uniquely diverse group of cultures, traditions, and political systems, distributed across more than 60 countries and a host of languages. IEEE's policy of conducting its affairs in English was readily accepted from the beginning. There is also a wide variety of educational and qualifying systems for professional engineers across the Region, but this has not impeded the recruitment of members in any way.

Before the arrival of the internet, communication between members, and also contact with IEEE headquarters in Piscataway, New Jersey, was difficult and expensive. The adoption of email as the preferred medium for sending messages and documents has reduced the administrative load for volunteers and has enabled ordinary members to deal more conveniently with the staff in Piscataway. Similarly, the widespread acceptance of credit cards has overcome the problem of currency conversion, to make it easier for members to pay their dues, and for IEEE to transfer funds to Sections.

The net result of these two key changes has been to allow more ambitious projects and initiatives proposed within the Region to become feasible.

Today, relations with the National Societies in the countries of Region 8 have remained cordial, and a great deal of co-operation occurs in respect of technical conferences, meetings, and other events. This state of affairs has been helped by the fact that most IEEE members are also members of their National Society.

IEEE Region 8's past directors

1962-1964
Herre Rinia
Benelux Section

1965-1966
Jean D Lebel
France Section

1967-1968
Robert C G Williams
UK&RI Section

1969-1970
Roger P Wellinger
Switzerland Section

1971-1972
Paul G A Jespers
Benelux Section

Geographical development: how IEEE spread rapidly across Region 8

IN the years after 1970, an increasing number of engineers working in the countries of Southern and Eastern Europe joined IEEE without the benefit of the support of a local Section or Chapter and were classified as Section 99 members by IEEE.

Gradually, as the membership grew, it became possible, under IEEE Bylaws, for a new Section to be formed when the number of members exceeded 100. However, this process was not without its difficulties. For a Section to be viable, experience showed that it needed to have exceeded this threshold comfortably, and also to have a group of active volunteers willing to take on the administrative tasks running the new Section, such as electing a Chair, Secretary and Treasurer, annual reporting and so on. The Region 8 Membership Development team devised a strategy for expanding the base of the Region through a set of measures to help local groups qualify for official Section status. The three geographical areas targeted were Africa, the Middle East, and the former Soviet Block countries.

The history of the development of IEEE activities in these quite different parts of the Region demonstrates how the professional engineering community overcame political and economic barriers to international co-operation and took advantage of the new opportunities.

Eastern Europe

THERE was a very large increase in Chapters, Sections and active IEEE volunteer members, including students, in the countries of Central and Eastern Europe between 1990 and 2005.

Long before the fall of the Berlin Wall, there were a few IEEE members in the so-called Iron-Curtain countries. Typically these were senior people in government research institutes, and there was only limited IEEE activity.

The political climate was harsh with severe travel restrictions imposed, but when the Poland Section was formed in 1972 the Section Chair was permitted to attend Region 8 Committee meetings.

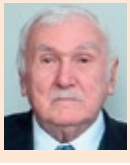
The Yugoslav Section was formed in 1971 and became moderately active in holding conferences and in providing IEEE volunteers. Membership dues could not be transferred to USA, but an arrangement was made to keep the funds in Yugoslavia using a blocked-currency account; this money was then used for IEEE activities within the country, or through IEEE, to pay for Yugoslav members to travel to conferences abroad.

The Hungary Section was formed in 1987, and the R8 Committee held a meeting in Budapest in April 1989. This reflected the liberalisation under way in Hungary, which led to a greater exchange of technical professionals and ideas.

A number of Eastern and Central European states did not have sufficient members to qualify for the status of a formal IEEE Section. To ease the path towards Section formation R C (Bob) Winton devised the concept of 'Sections in Development'. This initiative accorded the provisional status of Section, as a non-voting member of the Region 8 Committee.

A number of other steps were taken to stimulate IEEE activities in these Sections. First, visits by the Regional Director and other officers were organised, to inform the local leadership about IEEE and Region 8. Secondly, a comprehensive program of aid was begun, including a start-up grant of $1,500. Complete sets of IEEE Journals were donated on a continuing basis to selected libraries in the Sections in Development. Technical books were also donated by IEEE members in the USA and the UK. In addition, Region 8 paid for the IEEE 'All Society Magazines' package to be sent to selected Student Branches. Each of these measures helped to increase the awareness of IEEE and to grow the level of technical activity.

The main driver of the expansion of technical activity was the ▸



1973-1974
C Reginald Russell
UK&RI Section

1975-1976
F Louis H M Stumpers
Benelux Section

1977-1978
E Folke Bolinder
Sweden Section

1979-1980
Dick C J Poortvliet
Benelux Section

1981-1982
Walter E Proebster
Germany Section

formation of Society Chapters. Several IEEE Societies, notably the Electron Devices Society, became active in organising technical events and meetings, and subsidising the payment of dues to promote Chapter formation in these countries. The Region 8 Committee followed this up by financing Chapter Chair meetings in a coordinated approach to embrace all Society Chapters in the Region. The generous subsidy program and the Chapter Chair meetings were a great success and a big catalyst in enhancing the development of IEEE activity and encouragement of R8 Chapter and Section formation.

Currency problems and a general lack of funds presented great difficulties for researchers wishing to attend conferences abroad. In 1993 the Voluntary Contribution Fund (VCF) was created by the Region 8 Committee. Under this scheme members in Region 8 make donations each year to help young members, including students, to present papers at IEEE conferences. IEEE volunteers in Region 8 had the advantage of a good appreciation of the problems faced by members in Eastern Europe. They also enjoyed friendly relations with fellow scientists and engineers, which enabled the rapid development of new Sections, Chapters and Student Branches.

A Region 8 Committee meeting was held in Warsaw in Spring 1991 during what were still difficult economic times for Poland. However, growth in membership numbers was (and still is) slow. The economic changes meant that IEEE membership was unaffordable for many professional engineers and academics.

In support of the newly formed Sections, the R8 Committee held many of its meetings in the Central and Eastern European areas. One was in Prague, Czech Republic in 1994 then in Berlin, Germany in 1999 in what had been East Berlin (part of the former GDR). Following this came Budapest, Hungary in 2002; Zagreb, Croatia in 2003; Kraków, Poland in 2004; Vilnius, Lithuania and Belgrade, Serbia in 2006; Sofia, Bulgaria and Bucharest, Romania in 2007; Riga, Latvia in 2010; and Talinn, Estonia in 2012.

Russia presented a special challenge for Region 8 – a huge country with extensive scientific and engineering activity at a high level and where one might expect to see IEEE activities expand rapidly. However, after the IEEE Russia Section was formed in 1990, membership growth was very slow because the annual dues were unaffordable. Many Chapters were formed, most with the aid of financial support from IEEE Societies. It was clear that the needs of the membership spread across a vast geographical area could not be met by a single Chapter. After a while, moves to provide some independence for activities organised in St Petersburg and Siberia produced an agreement to form three Russia Sections, one to be called 'North West' and one 'Siberia', while the original Russia Section retained responsibility for all other parts of the country.

When the three Baltic Republics (Estonia, Lithuania and Latvia) gained their independence from Russia, the Region 8 Committee management at first planned, unsuccessfully, to form a single 'Baltic' IEEE Section because the number of members was quite small. An early step was the formation of a Chapter in Estonia, which was affiliated with Finland since there was no Estonia Section. Eventually, the three Baltic countries had their own Sections. The Lithuanian Section was finally established in 2005, based mainly in Vilnius, followed by the Estonia Section formation in 2006, and the Latvia Section in 2012.

Following the Balkan Wars, the existing Yugoslav Section was split into three, with the formation of the Slovenia and Croatia Sections in 1992. The residue was initially called the Yugoslavia Section, but in 2005 it was renamed the Serbia and Montenegro Section. In 1997 a Macedonia Section was formed, and in 2005 the Bosnia and Herzegovina Section was formed.

Region 8 adopted a policy of organising visits to every newly formed Section to demonstrate its commitment and to give moral support to the local officers and volunteers. Meetings of small subcommittees were arranged in places where a meeting of the whole Region 8 Committee would have been impracticable for reasons of travel cost or visa problems for some Section Chairs. In this way a vibrant network of volunteers was established to promote the infrastructure to serve the membership.

The long and successful tradition in Region 8 of strongly supporting Student Activities was maintained in the newly emerging Sections. Student Branches were formed at the leading technical universities and some notable activities included the Technical English program initiated in St Petersburg, and 24-hour extreme programming contests, initially in Budapest.

The successful expansion of IEEE R8 activities beyond the Iron Curtain took place in a very difficult political climate. It has brought personal contacts, new opportunities and an awareness in that area of what may be called the 'IEEE way of doing things'. Each of these countries retained well-established and prestigious National Technical Societies. IEEE has learned through the experience of Region 8 that it is possible to work together to ensure that a harmonious relationship can be built on the mutual interest in advancing technology.

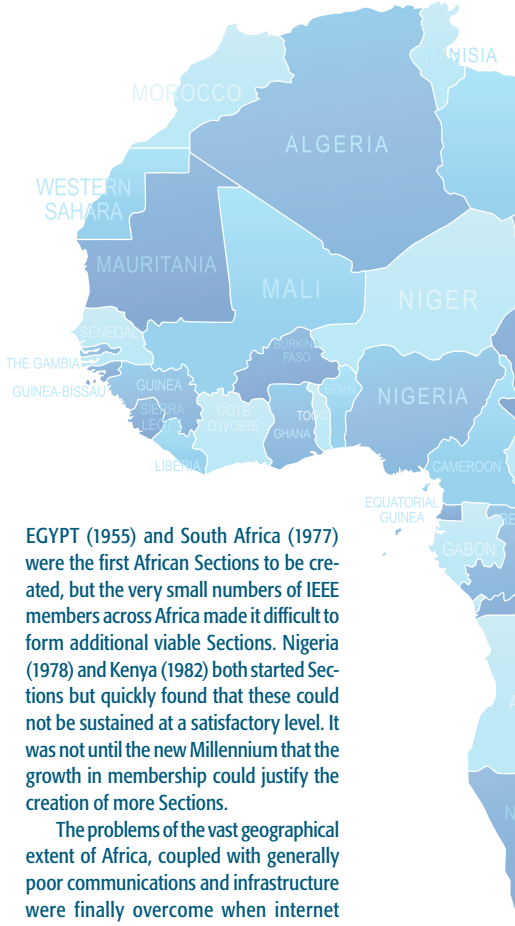
Education

VISIT the IEEE TryEngineering.org website to find out more about IEEE's involvement in education, including help for high school teachers with classroom projects and lesson plans, and providing useful information about university programs for students interested in engineering.

The Middle East

BY 1970 there were already three Sections in the Middle East: Israel, Egypt and Iran. The Section Development Team, chaired by Jaafar Ibrahim, was established by Director Rolf Remshardt in 2000. Its main mission was to promote IEEE activities in countries without Sections, to provide support for the so-called Section 99 members.

In 2000 there were nearly 5,000 of these members. Representatives from these countries were invited to attend the Region 8 Committee meetings and to take part in induction workshops for training in IEEE operations. Potential Section Chairs were given training in how to run a



EGYPT (1955) and South Africa (1977) were the first African Sections to be created, but the very small numbers of IEEE members across Africa made it difficult to form additional viable Sections. Nigeria (1978) and Kenya (1982) both started Sections but quickly found that these could not be sustained at a satisfactory level. It was not until the new Millennium that the growth in membership could justify the creation of more Sections.

The problems of the vast geographical extent of Africa, coupled with generally poor communications and infrastructure were finally overcome when internet services and mobile telephony became widely available. This remarkable story is told here.

1983-1984
Karsten E Drangeid
Switzerland Section

1985-1986
Basil W Osborne
UK&RI Section

1987-1988
Hugo Ruechardt
Germany Section

1989-1990
Sven Olaf Öhrvik
Sweden Section

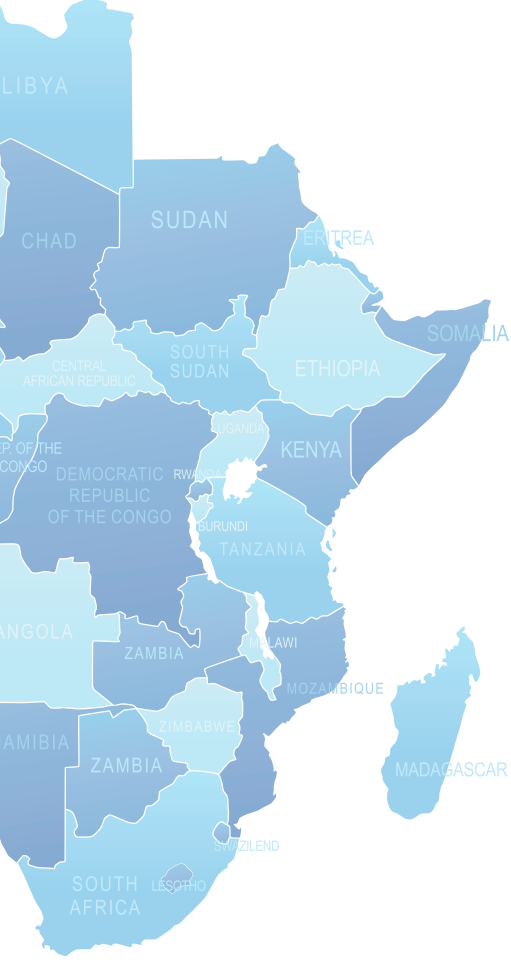
1991-1992
Kurt R Richter
Austria Section

Section and how to organise elections. The following countries took part in these meetings: Bahrain, Belarus, Estonia, Iceland, Malta, Qatar, Oman, Lebanon, Lithuania, Latvia, Tunisia, Serbia and Montenegro, Bosnia and Herzegovina, Iraq, Morocco and Jordan. Two Sections, Nigeria and Kenya, were rejuvenated to restart activities for their members.

This initiative proved to be highly successful. More than 20 new Sections and Sub-Sections were formed over the next decade. Each of the new Sections faced some difficult problems, because of a lack of funding, a shortage of experienced volunteers to serve as officers, poor access to the internet, and language barriers. It also became clear that for a viable Section to flourish, the IEEE threshold of 100 higher grade members was not really sufficient for success to be assured. The Region 8 Committee decided to set up a grant of $1,500 for each new Section.

The formation of this new group of Sections extended the reach of IEEE to vital parts of the Region, especially in areas previously subject to conflict and degraded infrastructure. It also enabled help to be directed to students and young engineers in their professional development.

Africa



HISTORICALLY, IEEE Region 8 consisted of only one Section in Africa – the Egypt Section. When IEEE regional geographical boundaries were redefined in 1981, the South Africa Section and Nigeria Section were included as new entities of Region 8. An East Africa Section was also formed in 1981 (its boundaries redefined to Kenya Section in August 1990). The inclusion of the new Sections caused Region 8 to grow in Africa, and today the trend follows an exponential curve. Sections formed in the last decade include: Morocco, Ghana, Tunisia and Zambia. Sub-Sections constituted: Botswana, Algeria, Tanzania, Sudan and Mauritius.

IEEE membership data for African Sections reveals there were approximately 6,500 members at the end of December 2012. It is estimated that another 800 members are located in areas of Africa where IEEE does not have a formally defined Section. In Egypt and Nigeria, the ratio between student and higher grade members is approximately 1:1. Other countries with large number of IEEE members include: Uganda, Zimbabwe, Swaziland and Namibia. Higher grade retention rates vary between 50 and 90%.

With the addition of a number of new Sections, and together with heightened technical activity in South Africa in 2009, some 14 new technical and council chapters were created. Some 55 technical organisational units (OUs) are present on the continent.

While a number of IEEE technically sponsored conferences have been held in Africa, Region 8 has supported the IEEE AFRICON since 1983. This conference has been held in: Lusaka, Zambia (2011); Nairobi, Kenya (2009); Windhoek, Namibia (2007); Gaborone, Botswana (2004); George, South Africa (2002); Cape Town, South Africa (1999); Stellenbosch, South Africa (1996); Mbabane, Swaziland (1992); Abidjan, Ivory Coast (1987); and Nairobi, Kenya (1983). The conference and associated series of preparatory events have served as an avenue for volunteer leadership development, and contributed to membership growth and OU formation. For instance, a Women in Engineering Affinity Group was formed shortly after the hosting of IEEE AFRICON 2007. Following the hosting of AFRICON 2004, volunteers in Botswana started a series of local International Association of Science and Technology for Development (IASTED) events, and with cooperation from IEEE Region 8, the Botswana sub-Section was formed in 2009. Preparations towards AFRICON 2013 led to the formation of the Mauritius sub-Section. Countries with the largest number of technically sponsored conferences include Egypt and South Africa.

In terms of L-31 reporting, some 300 IEEE events are hosted annually. Approximately 100 events are non-technical or organisational, and the remaining events are classified as professional and/or technical. Through the technical events, some 12,000 persons, including students and non-members, are engaged annually.

IEEE formally partners with three national or sister societies: South African Institute of Electrical Engineers, Arab Information Union (through the Communications ▸

1993-1994
Charles W Turner
UK&RI Section

1995-1996
Peer Martin Larsen
Denmark Section

1997-1998
Maurice Papo
France Section

1999-2000
Rolf A Remshardt
Germany Section

2001-2002
Levent Onural
Turkey Section

▸Society) and Moroccan Association of Electrical, Electronics and Computer Engineers (through the Communications Society).

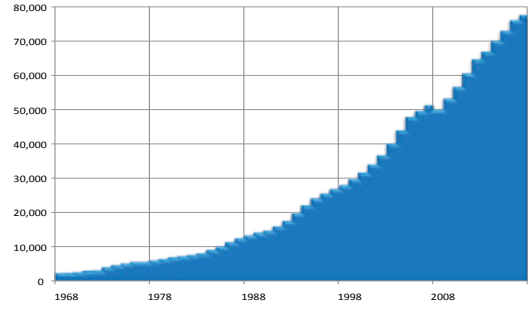
Major ongoing IEEE educational activities include Engineering Projects In Community Service, Teacher In-Service Programme, and Accreditation activities. In 2012, an IEEE-UNESCO Memorandum of Understanding (MoU) was signed with intention to implement projects to support the engineering community in Africa. "The agreement, signed at UNESCO's Headquarters, outlines initiatives that support the common goal of mobilising engineering education outreach for both students and educators in Africa, a region both organisations regard as a priority. The combination of IEEE's core strengths as a professional association (with the technical expertise of its global membership), paired with UNESCO's overall objective to mobilise science knowledge and policy for sustainable development, contributes to the partnership's effectiveness." *(UNESCO Press, February 2012)*.

Beyond a number of regional, technical and educational awards to individual members, a noteworthy achievement in South Africa, was a IEEE Milestone: First Operational Use of Wireless Telegraphy, 1899-1902. The growth of technical, educational and member activities in Africa is a positive trend for IEEE Region 8, and aligns to the emerging social and economic activities on the world's second largest and second most populous continent.

Membership growth in Region 8: a 50-year success story

THROUGHOUT the history of Region 8 the membership has increased steadily from around 2,000 in 1963 to over 70,000 today. At first, many new members were recruited because of the arrival of an IEEE presence in Europe. Later, as the developing economies in Western Europe were growing hungry for technological 'know-how', IEEE was seen to be a primary source for information vital to the 'new' industries. The main reason, historically, for members to join has been strongly related to the high quality of IEEE technical journals and conferences.

It has been noted elsewhere in this brochure that Region 8 is extremely diverse, not least in the range and type of employment across its 60-odd countries. The members working in higher education, for example, might be employed in very high technology research-orientated universities, or at the other extreme, teaching technician engineers. Those in industry, similarly, could be research workers, development engineers, product engineers, line managers, etc. It is important for IEEE membership to be attractive to this broadly based constituency, and to take account of the changing priorities and interests of individuals as they progress in their careers. This is especially true of the inter-disciplinary fields related to medicine and biology.



Membership growth over 50 years *[Aleksandar Szabo]*

Membership development has been a central focus for volunteer activities in both the Region and in the Sections, not simply to grow the numbers but also to enhance the quality of each member's experience with IEEE. The training of volunteers is also aimed to improve the service delivered to members, using workshops and online sessions. They are also responsible for ensuring that effective communication with members includes an awareness of what IEEE offers its members. Member benefits for the younger segment of the membership, which include professional development, are provided. Mid-career members are guided towards the continuing education courses in management skills. The IEEE Center of Leadership Excellence is an example of the way that members are encouraged to develop their workplace skills. Help and support are provided for job-seekers through the IEEE Job Site. Elevation to the status of IEEE Senior Member is a measure of recognition of sustained job performance at a professional level, and can be helpful in securing promotion or in applying for employment.

The geographical remoteness of Region 8 from the headquarters in Piscataway has made it essential for Sections and Chapters to create an atmosphere in which members truly feel that they belong to a 'local club' that is serving their needs. There are many examples in the Region of highly active volunteers running successful meetings and other events that not only attract new members but also help to retain existing members.

These examples demonstrate the importance to IEEE of its corps of dedicated volunteers that maintain the sense of continuity and support essential for the long-term success and viability of a professional society.

2003-2004
Anthony C Davies
UK&RI Section

2005-2006
Baldomir Zajc
Slovenia Section

2007-2008
Jean-Gabriel Rémy
France Section

2009-2010
Józef W Modelski
Poland Section

2011-2012
Marko Delimar
Croatia Section

A new approach to section development

BY the 1990s the number of members living in countries without Sections, the so-called Section 99 members, had grown to the point where a new approach to increasing the number of Sections was required.

The New Section Development (Section 99) Team was established for the first time in IEEE history in 2000 by Region 8 Director Rolf Remshardt. The Team consisted of four volunteers: Jaafar Ibrahim (Chair) from Saudi Arabia, Gerhard Hancke from South Africa, Ayhan Altintas from Turkey, and Iiro Hartimo from Finland.

The main mission of the team was to promote IEEE activities in Region 8 countries without Sections, to represent all Section 99 members at the Region 8 Committee Meetings, and to try to form new Sections in their respective countries. In 2000, the IEEE membership database showed that there were 4,651 Section 99 members (including Student Members).

As a result of this initiative, new Sections were formed in 16 countries and two Sections were brought back to active status. A total of 1,300 members were formally assigned to new Sections. The total number of Sections in Region 8 increased from 40 in 2000 to 56 through the Sections in Development project. The number of Sub-sections also increased.

The following countries were formulated: Bahrain, Iceland, Malta, Qatar, Oman, Lebanon, Morocco, Jordan, Belarus, Estonia, Lithuania, Latvia, Tunisia, Serbia and Montenegro, Bosnia and Herzegovina, and Iraq. Two sections, Nigeria and Kenya, were rejuvinated. Other sections within Region 8 were formed later by the subcommittee of New Sections Development. More than 1,300 members of Section 99 came to belong to formal sections.

Among the challenges that faced the team were:

- Insufficient higher grade members to qualify for Section status.
- Inadequate Internet capabilities.
- Language barriers where English was not taught in schools.
- Lack of funding for North African students to participate in IEEE conferences and meetings.

Promotional activities organised by the New Section Development Team were:

- New Section Chairs training sessions held at Region 8 Committee Meetings.
- Seed money of $1,500 made available to help new Sections start activities.
- Assistance in providing induction into IEEE procedures, such as election of officers, financial reporting and meeting reporting.

Promoting technical activities through meetings and conferences

AT the core of IEEE membership it is technical knowledge (especially high technology) and interest that drive the organisation forward. This has been especially true in Region 8, which has a very large membership and a high level of active involvement in the 38 IEEE Technical Societies.

The IEEE publications are respected for their quality and integrity around the world, and are the journals of choice for authors seeking to publish their work to the largest possible readership. Technical authors from the countries of Region 8 have been leading contributors to IEEE journals, and also serve on the committees and editorial boards that are essential to the success of the publications. The technical achievements and distinctions of Region 8 members can be gauged from the list of awards shown at the end of this document.

There are over 400 Society Chapters in Region 8, which, in total, hold several thousand technical meetings each year. These are mostly small-scale events attended by 20 to 30 members and provide the main way that Society members feel that they belong to their parent body. In contrast, the major IEEE Society Conferences typically attract over 1,000 participants. In recent years, Region 8 has succeeded in bringing many of these major conferences to Western Europe and other parts of the Region. In addition, the IEEE Distinguished Lecturer Program has enabled world experts to visit Region 8 Sections to give prestigious talks.

The scale of technical activity in the Region has grown steadily, and continues to grow. Since 1986, for example, Region 8 has hosted over 4,000 technical meetings in 72 individual countries. The most popular venues have been in Italy, France, Germany and the United Kingdom, but virtually all countries in the Region are represented. The most active IEEE Society sponsors have been the Computer Society (819 meetings), the Electron Devices Society (455) and the Communications Society (436).

The Region has been involved directly in sponsoring 180 conferences, involving 73 Sections/Subsections (including some entities outside of Region 8) and over 300 Chapters. In addition, over 2,200 non-IEEE entities participated by either financially or technically sponsoring/co-sponsoring an event. These statistics give an appreciation of the scale of penetration of IEEE in Region 8. In the past few years, web-based delivery methods have become more popular. The webinar, for example, is ideal for reaching members based in thinly populated areas, and also has the advantage of being downloadable for future viewing.

The Distinguished Lecturer Program has allowed world-class experts from any of the ten IEEE Regions to travel to Sections to give talks and to interact with local members. This program enhances the reputation of IEEE as the world's foremost technical society because it gives members, especially students, an opportunity to hear some of the leading technical speakers that they otherwise would never meet.

Meetings

EVERY year IEEE organises thousands of technical meetings in Region 8, all open to members and non-members. Your local Section can provide details of upcoming events. It's a great way to network!

Roll Of Honour
IEEE Medal Winners From Region 8

IEEE Major Medals

Alexander Graham Bell Medal **for exceptional contributions to the advancement of communications sciences and engineering.**

1979 A Christian Jacobaeus, *Sweden Section*
For pioneering work in the theory of switching systems and technical leadership in the development of telecommunication systems.

1992 James L Massey, *Switzerland Section*
For contributions to the theory and practical implementation of forward-error-correcting codes, multi-user communications, and cryptographic systems; and for excellence in engineering education.

2000 Vladimir A Kotelnikov, *Russia Section*
For fundamental contributions to signal theory.

2003 Joachim Hagenauer, *Germany Section*
For contributions to soft decoding and its application to iterative decoding algorithm.

Edison Medal **for a career of meritorious achievement in electrical science, electrical engineering or the electrical arts.**

1973 B D H Tellegen, *Benelux Section*
For a creative career of significant achievement in electrical circuit theory, including the gyrator.

1999 A Kees Schouhamer Immink, *Germany Section*
For a career of creative contributions to the technologies of digital video, audio, and data recording.

2005 Peter Lawrenson, *UK & Rep of Ireland Section*
For outstanding contributions to the field of electrical machines, most notably the development and commercialisation of switched reluctance drives.

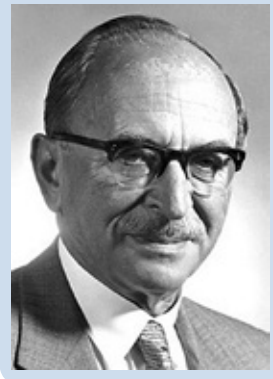
2008 Dov Frohman-Bentchkowsky, *Israel Section*
For pioneering the development of the MOS Erasable, Programmable Read Only Memory (EPROM), a key enabler of the information age revolution.

Jack S Kilby Signal Processing Medal **for outstanding achievements in signal processing.**

2003 Hans W Schuessler, *Germany Section*
For his role in the early development of the field of Digital Signal Processing, especially the theory, design, and implementation of analog and digital filters.

Medal of Honor

THE IEEE Medal of Honor is the highest IEEE award. The Medal was established in 1917 and is awarded for an exceptional contribution or an extraordinary career in the IEEE fields of interest.



1970 **Dennis Gabor**
UK & Rep of Ireland Section
For his ingenious and exciting discovery and verification of the principles of holography.

1993 **Karl Johan Åström**
Sweden Section
For fundamental contributions to theory and applications of adaptive control technology.

James H Mulligan, Jr Education Medal **for a career of outstanding contributions to education in the fields of interest of IEEE.**

1971 Franz Ollendorff, *Israel Section*
For contributions to the teaching of electrical engineering, especially the preparation of classic texts on electromagnetic fields, and for leadership in building a distinguished program in a new institute.

2007 Andrew S Tanenbaum, *Benelux Section*
For contributions to education in computing, especially computer organisation, networking and operating systems.

Medal for Engineering Excellence **for exceptional achievement in applications engineering**

1994 Heiner Sussner, *France Section*
For engineering leadership in the demonstration of one gigabit per square inch storage density on a digital magnetic rigid disk.

Founders Medal **for outstanding contributions in the leadership, planning, and administration of affairs of great value to the electrical and electronics engineering profession.**

1998 Alan W Rudge, *UK & Rep of Ireland Section*
For distinguished leadership in the field of telecommunications and for advancement of the electrical and electronic engineering profession.

Richard W Hamming Medal **for exceptional contributions to information sciences, systems and/or technology.**

1994 Gottfried Ungerboeck, *Switzerland Section*
For the development and application of trellis modulation to digital communications.

1995 Jacob Ziv, *Israel Section*
For contributions to information theory, and the theory and practice of data compression.

1996 Mark S Pinsker, *Russia Section*
For outstanding contributions to information theory, statistical estimation and coding theory.

2003 Claude Berrou and Alain Glavieux, *France Section*
For the invention of turbo codes, which have revolutionised digital communications.

2006 Vladimir I Levenshtein, *Russia Section*
For contributions to the theory of error-correcting codes and information theory, including the Levenshtein distance.

2007 Abraham Lempel, *Israel Section*
For pioneering work in data compression especially the Lempel-Ziv algorithm.

2012 Amin Shokrollahi, *Switzerland Section* and Michael G Luby
For the conception, development, and analysis of practical rateless codes.

Heinrich Hertz Medal **for outstanding achievements in electromagnetic waves.**

1995 Jean Van Bladel, *Benelux Section*

2001 Adrianus T De Hoop, *Benelux Section*

Lamme Medal **for meritorious achievement in the development of electrical or electronic power apparatus or systems.**

1992 Dietrich R Lambrecht, *Germany Section*
For outstanding contributions to the advancement of turbine-generator engineering and technology, particularly superconducting rotor winding.

1994 Michel E Pouloujadoff, *France Section*
For advancements in the theory and application of high-power electromagnetic apparatus, including transformers and electronically controlled machine drives.

1997 André J Calvaer, *Benelux Section*
For outstanding contributions to the analysis of the dynamic performance of electric power systems, including the vital role of reactive power.

2000 Joachim Holtz, *Germany Section*
For pioneering inventions related to magnetically levitated high-speed trains, AC drive systems for railway traction and modulation theory of power converters.

Jun-ichi Nishizawa Medal **for outstanding contributions to material and device science technology, including practical application.**

2007 Nicolaas Frans De Rooij,
Switzerland Section
For pioneering contributions to microsystem technology and effective transfer into industrial products and applications.

2008 Wolfgang Helfrich, *Germany Section*, Martin Schadt, *Switzerland Section* and James Fergason
For pioneering development of twisted-nematic liquid crystal technology.

Dennis J Picard Medal for Radar Technologies and Applications **for outstanding accomplishments in advancing the fields of radar technologies and their applications.**

2009 Philip M Woodward,
UK & Rep of Ireland Section
For pioneering work of fundamental importance in radar waveform design, including the Woodward Ambiguity Function, the standard tool for waveform and matched filter analysis.

2010 Alfonso Farina, *Italy Section*
For continuous, innovative, theoretical and practical contributions to radar systems and adaptive signal processing techniques.

Robert N Noyce Medal **for exceptional contributions to the microelectronics industry.**

2011 Pasquale Pistorio, *Switzerland Section*
For contributions to, and leadership in, the technology, business and environmental development of the global semiconductor and electronics industry.

Simon Ramo Medal **for exceptional achievement in systems engineering and systems science.**

1986 Arnaldo Maria Angelini Enel,
Italy (Central & South) Section
For technical and managerial leadership in the integration of the Italian electric power system and for contributions to education in Systems Science and Engineering.

2004 Boris E Chertok and Nikolai N Sheremetevsky, *Russia Section*
For significant contributions to systems engineering and technical leadership of control systems design for the orbiting space station Mir (Peace).

John von Neumann Medal **for outstanding achievements in computer-related science and technology.**

1997 Maurice V Wilkes,
UK & Rep of Ireland Section
For a lifelong career of seminal contributions to computing, including the first full-scale operational stored program computer and to the foundations of programming.

2002 Ole-Johan Dahl and Kristen Nygaard,
Norway Section
For the introduction of the concepts underlying object-oriented programming through the design and implementation of SIMULA 67.

2011 C A R (Tony) Hoare,
UK & Rep of Ireland Section
For seminal contributions to the scientific foundation of software design.

IEEE/RSE Wolfson James Clerk Maxwell Medal **for groundbreaking contributions that have had an exceptional impact on the development of electronics and electrical engineering or related fields.**

2012 Gerhard M Sessler, *Germany Section*
For pioneering contributions to electroacoustic transducers, the development of silicon microphone technology, and seminal work on electroactive materials.

IEEE Recognitions

Honorary Membership

IEEE Honorary Members are elected by the IEEE Board of Directors from among those who have rendered meritorious service to mankind in IEEE's designated fields of interest and who are not members of the IEEE.

1982 Brian D Josephson,
UK & Rep of Ireland Section
For his prediction (discovery) of pair tunnelling between superconductors which constitutes the basis of a Josephson junction technology for high speed and low power computing elements and memories.

1992 Mark Krivocheev, *Russia Section*
For technical contributions to television and leadership in developing international standardisation.

1994 Michel A G Carpentier, *Benelux Section*
For leadership in pioneering the R&D and policy initiatives at the European Community level in the areas of environment and information and communication technologies.

1995 Lars H Ramqvist, *Sweden Section*
For distinguished and far-sighted leadership of the Ericsson Group in a period of rapid technology change and market development.

1997 Pekka J Tarjanne, *Switzerland Section*
For outstanding leadership and contributions to the implementation of new working methods and structures for the International Telecommunications Union.

2003 Jorma Ollila, *Finland Section*
For contributions to launching mobile communications, a major global industry that has fundamentally changed the way people communicate.

2007 Ian C McRae, *South Africa Section*
For contributions to electrification and development of the electrical grid in Southern Africa.

IEEE Service Awards

Haraden Pratt Award

The IEEE Haraden Pratt Award was established in 1971 and is presented to recognise individuals who have rendered outstanding service to the IEEE.

1986 Robert C Winton, *UK & Rep of Ireland Section*
For outstanding service to the IEEE in furthering its transnational activities in Region 8.

1996 Walter E Proebster, *Germany Section*
For outstanding leadership and service to the Institute, especially for fostering a variety of activities and membership growth in Region 8.

2003 Charles W Turner, *UK & Rep of Ireland Section*
For his outstanding leadership in extending the transnational activities of the IEEE into Eastern & Central Europe.

2008 Maurice Papo, *France Section*
For furthering IEEE transnational activities and for conceiving and implementing major operational improvements leading to more effective and efficient IEEE volunteer activities.

2011 Levent Onural, *Turkey Section*
For leadership in the worldwide promotion of the values embraced by IEEE.


The First Submarine Transatlantic Telephone Cable System (TAT-1), 1956
Oban, Scotland
Code-breaking at Bletchley Park during World War II, 1939-1945
Milton Keynes, England
Maxwell's Equations, 1860-1871
Castle Douglas, Kirkcudbrightshire, England
Benjamin Franklin's work in London, 1757-1775
London, England
Fleming Valve, 1904
London, England
Callan's Pioneering Contributions to Electrical Science and Technology, 1836
Maynooth, Ireland
Shannon Scheme for the Electrification of the Irish Free State, 1929
Ardnacrusha, County Limerick, Ireland
County Kerry Transatlantic Cable Stations, 1866
Waterville, County Kerry, Ireland
Transmission of Transatlantic Radio Signals, 1901
Poldhu, England
First Transatlantic Television Signal via Satellite, 1962
Doonhilly Downs, Cornwall, England
Discovery of Radioconduction by Edouard Branly, 1890
Paris, France
Invention of Public Key Cryptography, 1969–1975
Cheltenham, England
CERN Experimental Instrumentation, 1968
Geneva, Switzerland
Early Developments in Remote-Control, 1901
Madrid, Spain
First Transatlantic Reception of a Television Signal via Satellite, 1962
Pleumeur-Bodou, France
First Operational Use Of Wireless Telegraphy, 1899-1902
Cape Town, South Africa

IEEE Milestones in Region 8

THE IEEE Milestones in Electrical Engineering and Computing program honours significant technical achievements in all areas associated with IEEE. Milestones recognise the technological innovation and excellence for the benefit of humanity found in unique products, services, seminal papers and patents. Milestones can be proposed by any IEEE member, and are sponsored by an IEEE Organisational Unit (OU) such as an IEEE Section, Society, Chapter or Student Branch. The program is administered by the IEEE History Committee through the IEEE History Center.

Participants at Region 8's Student Branch Congress 2012 in Madrid, Spain

Student activities in Region 8

The growth of student membership has continued to be one of the success stories in the development of the Region. The students are a rich volunteer resource for the future and provide a strong IEEE presence in higher education.

How they got started

DURING the IEEE Region 8 Committee's Fifth Meeting, held in Geneva, Switzerland, on April 26, 1965, Director Mr J Lebel expressed his concern about subscription rates for students, the interests of graduate students, and how to encourage student membership without competition with the national societies.

Four Student Branches existed at that time: the University of Roma, established in 1961 with Prof Barzilai as Counselo; the University of Padova, established in 1963 (Prof Cariolaro); the E.T.S.I.T. Madrid, 1964 (Prof Millan); and the University of Louvain, 1965 (Prof Jespers).

The first Region 8 Student Activities Committee was chaired by Prof Paul G A Jespers and consisted of the Chair, the Counsellors of all Student Branches, and several members of the Region 8 Committee.

The period 1965–1970 was characterised by rather large exchange programs between Headquarters and Region 8: the winners of the Region 8 Contest were invited to participate in the Contest at the Institute level and to attend the IEEE Convention. Student Branch representatives were also invited to a meeting during the Convention.

In 1984, the IEEE centennial year, each Region selected a Centennial Student to be invited to the centennial celebrations in Boston. The Region 8 Centennial Student was Philippe Siraut from Louvain-la-Neuve. His alternate was Lex van Gijsel from Eindhoven.

A Region 8 Student Activities Committee in its present form was established during the 44th Region 8 Committee meeting in Herzlia, Israel, on 24–25 March 1985. The first committee comprised Dick C J Poortvliet, Chair; André Vander Vorst, Past Chair; and the aforementioned Region 8 Centennial Students. Since then, the Region 8 Student Activities Committee has always included at least one student. The first officially appointed Region 8 Student Representative was Mikko Katajamäki in 1988.

Topics and themes

The main topics in Student Activities keep recurring as themes:

- Student Paper Contest.
- Student Meetings on international basis.
- Retention problems after graduation.
- Student member dues and payments.

These topics from the early days of R8SAC are still valid today:

- Several Memoranda of Understanding have been signed between national and European student bodies and IEEE to exchange knowledge and competencies.
- IEEE R8SAC keeps connections to EESTEC, BEST, EUREL and several other student bodies across its Regional boundaries.
- Cooperation with career platforms has been established, granting special benefits for IEEE applicants.
- Student Branches routinely organise international trips.
- In 2009, the Twin Branch Program gave a label to inter-branch cooperation and increased the links between Region 8 branches.

Region 8 student activities: what drives students?

The SAC goals have always included but were not limited to

- Professional advancement of students.
- Excelling in leadership skills.
- Exchange between peers, Branches, Sections.
- Bring more fun to IEEE.
- Growing the leaders of the future.

Top: SBC 2010 in Leuven, Belgium
Left: SBC 2008 in London, United Kingdom
Above: SBC 2006 in Paris, France

Evolution of Student Branches

THE number of Student Branches in Region 8 evolved from the first Branch in 1961 at University of Roma to 31 in 1972, 41 in 1982, 70 in 1992, and exploded to 177 in 2002. In the 50th anniversary year, at the end of 2012, there were 415 registered Branches. Connecting, activating and supporting these branches has been the main task of all Student Activities Committees from the early days.

Region 8 was the first Region to have a web page, even before IEEE had one. It was set up in 1995 and was hosted at Bilkent University, Ankara, Turkey, the site of the Region 8 SAC (Levent Onural). Email was used from 1993 onwards to communicate with the branches.

In 1998, the biennial series of what is now known as IEEE Region 8 Student Branch and GOLD Congress (SBC) started with the first official Region 8 Student Meeting in Istanbul, Turkey. Prior to 1998, Transnational Student Meetings were organised where representatives of Region 8 Student Branches met. Besides leadership and training workshops, IEEE sessions and interaction, the core of the SBC is a multicultural evening, where each participant shares their customs, foods and traditions.

The Region 8 Committee approved in 1982 a system of grants to help Student Branches organise trips abroad and encourage inter-branch and international contacts.

In 2005, a noteworthy initiative was born. Ricardo Varela and Marko Delimar started the first IEEEXtreme. This 24-hour programming challenge was moved to global IEEE a year later and has doubling the number of participants every year since.

Interestingly, the position of Region 8 SAC Chair seems to be a base for several IEEE leadership careers. Out of the 14 SAC Chairpersons between 1966 and 2012, seven took office as Region 8 Directors. This reflects the important status that Student Activities enjoys in Region 8.

The student membership is now over 20,000 and continues to grow year by year, which is a credit to the great work of generations of student volunteers.

A number of special awards at both Region and global IEEE level are available annually for Student members, Student Branch Counsellors and Student Branches. The role of Student Branch Counsellor has always been vital to the success of Student Branches. Region 8 has been very fortunate that a succession of highly dedicated teachers have been willing to advise and support their students.

Student representatives on Region 8 Committee

From 1984 onwards the following students were appointed as Representatives to the Region 8 Committee.

1985	*Philippe Siraut / Lex van Gijsel* (Centennial)
1986	*Lex van Gijsel / Klaus Diepold*
1988-90	*Mikko Katajamäki*
1991-92	*Gözde Bozdağı Akar*
1993-94	*Roman Mittendorfer*
1995-96	*Andrej Zemva*
1997-98	*Jens Klimaschewski/Hannemann*
1999-00	*Jorge-Luis Sánchez-Ponz*
2001-02	*Giorgia German*
2003-04	*Basak Yüksel*
2005-06	*Ricardo Varela Iglesias*
2007	*Michael Gloegl*
2008-09	*Pablo Herrero*
2010	*Amélie Anglade*
2011-12	*Jorge Soares*
2013	*Christian Schmid*

Region 8 Student Branch (and GOLD) Congresses

1998	*Istanbul, Turkey*, 10–13 August 1998
2000	*Eindhoven, Netherlands*, 14–19 May 2000
2002	*Cairo, Egypt*, 1–5 May 2002
2004	*Passau, Germany*, 4–7 September 2004
2006	*Paris, France*, 30 August – 3 September 2006
2008	*London, United Kingdom*, 28–31 August 2008
2010	*Leuven, Belgium*, 4–8 August 2010
2012	*Madrid, Spain*, 25–29 July 2012

Student Paper Contest

ON 7 September 1967, the first Region 8 Student Paper Contest (SPC) was carried out in Lausanne.

This inter-Branch competition for the best student papers received five submissions, which were awarded prizes, and included in the international contest organised by the IEEE in New York.

Since it was first held, interest in this contest has grown: the Student Paper Contest is the oldest regional student activity in Region 8. The 45th contest was held in 2012 during MELECON in Hammamet, Tunisia.

The Dick Poortvliet Award (a plaque and a cash prize of $250, funded by the regional SAC, for the Student Branch of the Student Paper Contest winner) was established on 7 November 1996, to honour the 1995 Student Paper Contest Coordinator Dick C J Poortvliet, who died on 25 June 1995.

IEEE Region 8 conferences


EUROCON 2007

ONE of the first goals of the IEEE Region 8 Committee was to organise technical conferences, similar to those held in the US. This could be done, at first, only in cooperation with the European National Societies. In 1970, 12 National Electrical Engineering Societies agreed to participate in the Conferences, and in 1972 EUREL was founded as a partner with IEEE Region 8.

The first joint activity of IEEE Region 8 and the National Societies was to hold EUROCON 71, the first European Conference on Electrotechnology, at the Palais de Beaulieu, Lausanne, Switzerland, on 18–22 October 1971. The theme of the conference was the technological progress in electronics and computer engineering being made in Europe, and to provide a forum for the new generation of engineers to present their work. The topics presented at the EUROCON 1971 sessions included automatic timers, biomedical engineering, telecommunications, electric power distribution, electronic data processing, and integrated circuits. The major objectives set by the conference steering committee – as published in *IEEE Spectrum* of October 1970 – were as follows:

'EUROCON '71 provided specialist conferences in selected areas, as well as general reviews and discussions on the state of the art and interactions of technologies. The conference intends to present an educational program of in-depth treatment of advanced technologies.'

EUROCON 1971 was followed by EUROCON 1974 in Amsterdam, and EUROCON 1977 in Venice, where a special session was devoted to 'Communications in Developing Countries' which was considered to be an important item not only for these countries but for the future of the whole world. The EUROCON Conferences actually fulfilled their aim 'To provide an environment conducive to the informal interaction of engineers, scientists and technical managers. They will be able to make professional contacts and follow them up by attending successive conventions.'

The first series of EUROCON Conferences were held at the following venues: Lausanne 1971, Amsterdam 1974, Venice 1977, Stuttgart 1980, Copenhagen 1982, Brighton 1984, Paris 1986 and Stockholm 1988.

Primarily it was Central Europe that had profited from the interaction provided by these Conferences, but a lack of demand for broadly-based conferences led to falling attendances and so the series was suspended in 1992. At the same time, a new geographical area began to develop technologically: the Mediterranean Countries. In response, the Israel Section initiated MELECON, the Mediterranean Electro-technology Conference. The first MELECON, held in Tel Aviv, in the presence of the President of Israel and the IEEE President, had over 1,200 attendees. The complete list of venues comprises: Tel Aviv 1981, Athens 1983, Madrid 1985, Rome 1987, Lisbon 1989, Ljubljana 1991, Antalya 1994, Bari 1996, Tel Aviv 1998, Limassol 2000, Cairo 2002, Dubrovnik 2004, Malaga 2006, Ajaccio 2008, Valetta 2010 and Yasmine Hammamet 2012.

As electro-technology began to develop in Africa it was decided to create a new series of conferences, known as AFRICON, to serve the emerging electrical engineering community. The first AFRICON Conference was held in Nairobi in 1983. It was hoped that bringing IEEE technical activities to Africa would help to arrest the brain-drain that had led to many engineers and technicians leaving the continent to work abroad. This would also provide a platform for the presentation of papers by local members. The AFRICON Conferences were held at the following venues: Nairobi 1983, Abidjan 1987, Mbabane 1992, Stellenbosch 1996, Cape Town 1999, George (South Africa) 2002, Gaborone 2004, Windhoek 2007, Nairobi 2009, Livingstone 2011 and Flic en Flac (Mauritius) 2013.

In Europe, a new wave of demand for technological knowhow arrived with the fall of the Berlin Wall in November 1989 and the restoration of the former Soviet Block countries. The second EUROCON series was redesigned to meet the new challenge, and it was agreed to revive the conferences. The new series of EUROCON conferences venues were: Bratislava 2001, Ljubljana 2003, Belgrade 2005, Warsaw 2007, St Petersburg 2009, Lisbon 2011 and Zagreb 2013.

Although previous experience with an attempt to run specialised conferences , such as COMPEURO, was not successful, a new demand for more specialised conferences led Region 8 to organise SIBIRCON (Novosibirsk 2008 and Irkusk Listvyanka 2010) and ENERGYCON (Manama 2010 and Florence 2012).

As the Region matured, the interest in the history of technology grew, in parallel with the growth of Life Member Groups, and HISTELCON Conferences were held in Paris 2008, Madrid 2010 and Pavia 2012.

Since 1981, Region 8 conferences have been organised by a Conference Committee, chaired by the Conference Coordinator, an officer appointed by the Regional Direc-


Right: MELECON 2012
Below: AFRICON 2009

Standards: the most visible role of IEEE

IEEE Standards are an important part of the broader IEEE activities, and provide an essential area of contact between IEEE and industry. In fact, the IEEE brand is probably best known by the general public in most countries because of its leading part in developing key standards for internet and other applications, such as the IEEE 802 series on wireless communications.

In the past decade, the IEEE Standards Association (IEEE-SA) and Region 8 have accomplished significant interaction and collaboration, and have increased the awareness of standards among members in Region 8. IEEE's program of Continuing Education includes tutorials on standards topics, and the IEEE Standards Education Committee promotes the image of standards in the technical community. These programs aim to demonstrate the importance of the role of standards in product design, and to encourage engineering teachers to incorporate standards into academic programs. The IEEE Standards Education website serves as a focal point for the delivery of information on education about standards, and includes tutorials, case studies, and student application papers.

The IEEE-SA Speakers' Bureau has been a popular resource, assisting with providing expert speakers for technical meetings. Region 8 members have made use of this, for example with Smart Grid-focused events in Denmark in 2012. IEEE-SA has also been a participant in several Region 8 flagship conferences, including AFRICON, ENERGYCON and MELECON, and looks forward to continued participation in Region 8 conferences.

The continuing collaboration between IEEE-SA and Region 8, facilitated by having the officer position of a Standards Coordinator, has served as a model for other Regions to follow, and has succeeded in raising the profile of the standards work in IEEE.

Standards

YOU can inform yourself about the IEEE Standards in your own technical field by visiting the IEEE Standards Association website.

tor. The details of the Conference (venue, date, theme etc) are discussed by the Conference Committee and brought for approval to the Regional Committee. The Conference Coordinator makes sure that the Conference is held according to IEEE regulations, both organisationally and financially. Conferences are one of the main income sources of IEEE worldwide. In Region 8, where consecutive conferences are held by different Sections, the Region 8 Committee has consistently provided financial support in the form of advance funding, with the expectation of modest surpluses. The policy towards conferences has been underpinned by the belief that they provide a useful service and benefit for members, especially in the smaller Sections, and therefore represented a good investment.

Technical Conferences are a major activity of IEEE worldwide and in Region 8 especially. Experience has shown that this is the best way to convey technological knowhow, to promote personal contacts between members, and also to attract new members. These conferences, organised by the IEEE Technical Societies, are specific to one of several themes in a narrow technical field.

In contrast, Region 8 conferences were, from the beginning, 'horizontal' conferences, covering a wide range of subjects. IEEE Technical Society conferences are typically held at major metropolitan venues, whereas the IEEE Region 8 Conferences are usually held in smaller countries, to provide a vehicle for exchange of technical information, especially between young engineers.

GOLD: Graduates of the Last Decade

GRADUATES emerging from university engineering programs and starting their careers in industry as young professionals face a number of important challenges. IEEE identified this problem a decade ago and established the GOLD (Graduates of the Last Decade) community specifically to support younger members at the beginning of their careers.

They can be helped by means of training and mentoring, and by access to information on employment issues using, for example, the monthly IEEE GOLD Webinars program delivered online. The GOLD activities in Region 8 are designed to provide this help by encouraging every Section to organise GOLD events for their younger members. These activities, such as leadership skills, project management and 'people' skills, also help to strengthen the links between IEEE and industry by making available the abundant resources that IEEE can offer, to enhance the training given to their employees. Young members move jobs fairly often: GOLD offers good networking opportunities and members can also call upon the IEEE Job Search facility for assistance.

The GOLD Book is a good example of a project conceived within the Region 8 GOLD Committee: it gives an overview of what the Committee has achieved and the lessons that have been learned from recent experiences. The GOLD team is also active in celebrating IEEE Day, encouraging members throughout the Region to participate in a worldwide celebration of engineering.

Social networks have become a way of life for GOLD and Student Members: they are also used extensively in IEEE circles for informing members about events and spur-of-the-moment activities. GOLD activities also include humanitarian projects and collaboration with other IEEE entities, such as Student Branches and the Professional Activities groups.

The creation of the GOLD groups in Region 8 has added value to IEEE membership for the younger members by bringing together a community with common interests in engineering employment.

Professional Activities workshop program

PROFESSIONAL Activities have been established in Region 8 for more than a decade. They comprise a set of complementary non-technical skills that equip engineers in a well-rounded manner for management and leadership roles. The general goal is to raise awareness of life-long professional development and career vitality, especially among younger engineers and students. Our aim in Region 8 is that regionally coordinated Professional Activities should provide a platform for interdisciplinary collaboration and networking. These activities target every member and at the same time they encourage collaboration between different technical societies.

Each year, several events are organised and coordinated by the Region 8 Professional Activities Sub-Committee in Sections all over Region 8. These local and regional events have great potential for increasing Professional Activities awareness. For example, better relations between Students / GOLD members and local industry, indirectly targeting employment issues, are enabled by a better understanding of the current economic situation in a country. Members need to have the opportunity to learn about and to practice Professional Activities in a practical way, in some kind of interactive experience. Students and young professionals are especially keen on acquiring these skills. From our experience volunteering gives them numerous opportunities to benefit directly from IEEE membership, such as experience in the fields of Project Management and Leadership Skills.

The workshop environment provides a very effective way to impart these skills. For almost a decade Region 8 Professional Activities workshops have been organised by the Region 8 Professional Activities Committee, in collaboration with local volunteers in Sections. These workshops were initiated by Kurt Richter and Margaretha Eriksson in 2000. They also began to train other volunteers who conducted almost 100 workshops on a wide range of professional activity topics for over 2,000 members. Full-day events have been organised by Sections all over Region 8 using these PA trainers and speakers. Workshop topics range from Leadership Skills and Project Management to Emotional Intelligence and Innovation Management, for example. New topics are being introduced on a continuing basis.

In 2004 a 'Train the Trainer' Workshop was held in Zagreb, organised by the IEEE Croatia Section. The participants from Croatia, Serbia, Turkey, Slovenia and UK and later became Leadership and/or Management workshops trainers in Region 8. Later Junior Trainers assisted during workshops in Turkey, the United Emirates and Bahrain for example. Recently, workshops were conducted in Austria, Morocco, Spain, Nigeria, Jordan and Kuwait.

The idea of a professional activities summit, to bring trainers to a single event to enable interaction between trainers and participants, was supported from the beginning. Up to now two summits have been held, the first In 2010 in Leuven, Belgium as part of 2010 SBC, and the second in 2012 in conjunction with 2012 SBC in Madrid. The feedback from students and GOLD members was very positive and the long term goal is to have Professional Activities Summits become major Professional Activities events in Region 8. Within such events the Region 8 PA team aims to introduce a 'Thought Leadership' program. The idea is rather similar to the well-known IEEE Distinguished Lecturer Program organised by the IEEE Technical Activities Board. In this case the program would focus on Professional Activities where trainers would provoke or encourage people to break out from the current boundaries in their thinking. Several pilot events have been already conducted, with trainer Han van Loon leading this initiative.

In this article we have emphasised the importance of Professional Activities in Region 8 and how the program of workshops under the leadership of Matej Zajc has been designed to serve our members throughout their careers. As a final observation, Professional Activities have a positive influence on recruitment and retention in IEEE, and therefore is consistent with the global vision of IEEE.

Milestones

IS there a memorable achievement in science and technology that IEEE should recognise in your community by the award of a Milestone plaque?

IEEE Life Members in Region 8

REGION 8 IEEE membership includes about 1,500 Life Members: those older than 65 years whose sum of age and years of membership equals or exceeds 100. Assuming 50 years of technological experience for each Life Member, this venerable group holds 75,000 man-years of knowledge and experience!

Many of IEEE Region 8 Life Members have been involved in the development of modern electro-technology and actively participated in the advances that have made the past half-century 'The Electronics Age', contributing to the dramatic rise in living standards and to the development of the devices and appliances that define modern life.

Many have held senior positions in major high-technology companies, such as Siemens in Germany, Philips in the Netherlands, Nokia in Finland and Elbit in Israel, or were professors in major technical universities. Others worked in infrastructure organisations, or in government service.

Region 8 has Life Member Affinity Groups located in ten Sections, organising technical meetings, giving presentations in secondary schools and sponsoring Student Branches. One of the main activities of Life Members in the Region is to propose and to promote the IEEE Milestones program. They also assist in initiating 'Oral History' interviews and in writing Topic Articles and First-Hand Histories, all to be preserved in the IEEE Global History Network (**ieeeghn.org**).

Life membership provides an incentive for members to continue their interest in electro-technology after their retirement and to use their extensive experience and technical knowledge for the benefit of others.

Younger IEEE members are encouraged to continue their membership until reaching LM status, in order to get the benefits of Life Membership and to contribute to the education and personal development of the rising generation.

Women in Engineering

REGION 8 has supported Women-in-Engineering (WIE) activities for over a decade. The principal aim of WIE is to help women engineers realise their full potential in their engineering career. There has been a long history of discrimination in employment that has only recently been addressed, but also of neglect on the part of employers of a potentially valuable segment of the workforce. The changing nature of engineering employment, and the broadening scope of companies that increasingly invest in socially relevant products and services, together are opening up new opportunities for women engineers. Examples can be found especially in multi-disciplinary fields, such as the green energy sector, environmental engineering and medical applications.

Women have contributed significantly to the development of IEEE as an organisation. In 2005 Region 8 created the Clementina Saduwa Award, presented annually to recognise outstanding performance by a female IEEE member.

The twin goals of increasing the number of women engineers, and raising awareness in schools of the full range of career opportunities, are the top priorities for WIE. IEEE has recognised that teachers and parents, too, need to be better informed so that early choices made in secondary education keep alive possibilities for technical careers. Region 8 aims to be in the vanguard of this campaign by organising events where the issues can be presented in front of educators, employers and government.

Women in Engineering

HAVE you thought about contacting your local schools to find out how girls are being taught maths and science in a way that keeps an engineering career open as a realistic possibility?

Your editors: Zhijia Huang and Roland Saam

Jubilee is a good time to look ahead as well as back

IT'S exciting to be part of the team to bring you the Jubilee Book issue of *IEEE Region 8 News*.

The idea for a special edition is to mark the 50 years in operation our IEEE Region 8 began two years ago. The name *Region 8 Jubilee Book* was quickly decided. It would be a 'keeper' for members with cover and content distinguished from the normal *IEEE Region 8 News* publications.

Many ideas came up. How could we celebrate technology developed within our boundaries? Which specialties to write about (since IEEE has more than 40 societies)? Theory? Principles? Practices? Technology? Very few have remained within our geographic boundaries.

Under the guidance of the Jubilee Book editor, Charles Turner, we offer this result. These pages introduce you to some of the persons and activities over 50 years in Region 8. We hope you will enjoy and keep this issue. Please refer to our 'R8News Newsletter' page on the Region 8 website at **www.ieeer8.org**, where you can read and download every issue of *IEEE Region 8 News*.

This is also my opportunity to tell you that Zhijia Huang has agreed to be your editor-in-chief of *IEEE Region 8 News*. Zhijia has been working alongside me for several years and we form a good team. He has many new ideas which he would like to develop in terms of editorial coverage, website delivery, smoother reporting of activity news, production workflow, and more.

It's important that I now step aside and give my support to his initiatives when I can.

I've been your editor since February 2002 when Region 8 Director Levent Onural asked me to do it. I would like to thank everyone who has helped make *IEEE Region 8 News* the bestnewsletter in the IEEE. Being a volunteer in IEEE fills an important part of my life, and you readers have become my best friends. Keep your articles flowing in!

Roland Saam

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We welcome news, articles and letters from any member of the IEEE. Please send these to the editor as plain text by email to r8news@ieee.org, remembering to type '**Region 8 News**' in your email subject line. If sending photos or graphics, please make sure they are high-resolution files. Read our full guide to writing and submitting articles at www.ieeer8.org –> **R8News Newsletter –> Tips for contributors**.

Deadlines for upcoming issues

June 2013 issue.....*deadline: 1 April 2013*
September 2013 issue.....*deadline: 1 July 2013*
December 2013 issue.....*deadline: 1 October 2013*
March 2014 issue.....*deadline: 1 January 2014*

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