



International Electrotechnical Commission

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FOREWORD

The two most outstanding accomplishments of 2004 are that Kazakhstan became the first to move from the Affiliate Country Programme to Associate Membership in the IEC and that average development time for IEC standards continued to shorten, reaching 38 months. The Kazakhstan move is the first proof that the Affiliate Country Programme, inspired by the World Trade Organization, can help industrializing countries to become fully engaged in global electrotechnical standardization.

Speaking to the IEC Council Statutory Session during the 68th IEC General Meeting in Seoul about shorter development time for standards, IEC General Secretary Aharon Amit told participants that this is “one of our greatest achievements and everyone in the IEC had a role in making it happen.” But he also pointed out that IEC standards “still need to become more concise.”

In addition to these successes, the year 2004 can be described generally as one of minor but real achievements and small but significant firsts. This is seen in such things as the IEC completing its journey to a fully electronic-only environment, the IECEE CB-FCS issuing its first certificate of conformity, the availability of a combined IEC/ISO online database for graphical symbols for use on equipment and the launch of the IEC Communications Network.

Describing progress in meeting the goals that had been set by standards developers, General Secretary Aharon Amit told IEC Council at the 68th IEC General Meeting in Seoul, Republic of Korea: “We are doing better than expected,” but cautioned that the IEC “has to do more with fewer resources because the market is far more demanding today.”

Main results from 2004 include:

- ▶ Further reduction of the average development time for IEC publications to 38 months;
- ▶ Success of Affiliate Country Programme as Kazakhstan becomes IEC member;
- ▶ New Technical Committee 111 on environmental standardization;
- ▶ New standards in database format;
- ▶ First IEC/IEEE dual-logo standards;
- ▶ Glossary for experts;
- ▶ Refurbishing of Central Office completed, rationalizing the various departments to enhance service to the IEC community.

In addition, the IEC created a new award to honour the fundamental value of the contribution that technical experts make to IEC work. Called the 1906 Award in commemoration of the IEC's year of foundation, it recognizes exceptional, recent contribution to the technical work.

THE IEC IN FIGURES

Valid as at 2004-12-31

The organization

▶ Members	63 National Committees
▶ Technical committees / Subcommittees	172
▶ Working groups	521
▶ Project teams	138
▶ Maintenance teams	302

Publications

▶ Total publications as of 2004-12-31	5 296
▶ International Standards	4 840
▶ Technical Specifications	150
▶ Technical Reports	256
▶ IEC-PAS	50
▶ Publications issued in 2004	397 + 1 Guide
▶ International Standards	343
▶ Technical Specifications	17
▶ Technical Reports	20
▶ IEC-PAS	17
▶ FDISs issued in 2004	318
▶ In CENELEC parallel vote	246
▶ CDVs issued in 2004	482
▶ In CENELEC parallel enquiry	339
▶ Total active projects as of 2004-12-31	1 541
▶ Average development time for IEC publications in 2004	38 months

Conformity Assessment

▶ IECEE CB Scheme	
▶ Participating countries	43
▶ National Certification Bodies	58
▶ Testing laboratories	170
▶ CB Scheme certificates issued in 2004	38 000 (est.)
▶ IECQ-CECC	
▶ National Authorized Institutions (members)	15
▶ Supervising Inspectorates (certification bodies)	11
▶ IECEX	
▶ Members	24
▶ Accepted Certification Bodies (ExCBs)	20
▶ Ex testing laboratories (ExTLs)	21
▶ IECEX Certificates of Conformity issued in 2004	160

Membership

During the 68th General Meeting, held in Seoul, Republic of Korea, the IEC welcomed Kazakhstan as its newest Associate Member. Kazakhstan had been a participant in the Affiliate Country Programme since its establishment in 2001. At 31 December 2004, IEC membership stood at 51 Full Members and 12 Associate Members.

First reported in Performance 2003, administrative procedures subsequently cleared the way in 2004 for Associate Members to enjoy voting rights on the documents of four technical committees (TCs) or subcommittees (SCs) of their choice, with the emphasis being placed on choosing and focusing on relevant technical work.

Electronic-only

In 1996 the IEC began a pioneering effort to do all of its work online as a means to create far greater efficiencies not merely in the standards production process, but in all areas of IEC work. By 2001, the IEC had moved to making it mandatory that all comments and voting on technical work be done by electronic means only. In 2004, the IEC completed this journey with Council being provided with online commenting and voting. As an example of the efficiencies now built into the standards development and delivery process thanks to electronic working, as recently as 2000 the IEC used 22 million sheets of paper per year. It now uses only 2.7 million.

Dialogues and country visits

The IEC paid its first-ever visit to the Democratic People's Republic of Korea in July 2004 to explain the working of the IEC to experts there and to encourage them to become more active in the technical committees that interest them.

Throughout 2004, other country dialogues and visits aimed at explaining new tools or enhancing participation in IEC were held in:

- ▶ Europe: France
- ▶ Latin America: Colombia, Costa Rica, Uruguay
- ▶ Asia-Pacific: Cambodia, Japan, Laos, Malaysia and Vietnam.

In addition, workshops for electromagnetic compatibility were held in Argentina, Brazil and Iran.

Regional centres

The IEC's Asia-Pacific Regional Centre expanded its role from promotion and information to technical support as it took on responsibility for TC 47 (Semiconductor devices) and TC 110 (Flat panel display devices). To handle the increased workload, an additional staff member was also hired.

The IEC's Regional Centre for North America also grew in size as it took on responsibility for an additional 10 technical committees and 13 subcommittees. In preparation for this, the staff doubled and a move to new premises is now being planned to make it more easily accessible and to provide greater capacity for hosting meetings.



▶ **Affiliate Country Programme (ACP)**

The ACP, launched in 2001, is beginning to measure its success in many ways. With Kazakhstan being the first Affiliate to move up to Associate Member status, the Programme demonstrates that it is a viable way not only for developing countries but also for newly industrialized ones to familiarize themselves with the IEC International Standardization activities, and other Affiliates have shown the intention to become Associate members as well. Their experience as Affiliates has helped them acknowledge the need to move on and to become more involved with IEC work.

In 2004 two new countries committed themselves to the Programme: Papua New Guinea and Sudan. With 66 Affiliates as of 31 December 2004, the IEC addresses 92% of the world's population and 95% of world trade. Commenting on IEC projects has started and adoption procedures have been developed and implemented with good results, which shows the relevance of IEC Standards in those parts of the world. Most countries have now started a basic electronic library thus benefiting from IEC's most up-to-date tools to use International Standards.

ACP Leader, Mesai Girma, continues to represent the Affiliates in bringing issues to the forefront through regular dialogue with the ACP participants. As a result of his report submitted to the IEC management committees in Seoul, the Conformity Assessment Board made the commitment to provide assistance to Affiliates to help them understand how best to use, and participate in, the IEC's global conformity assessment schemes. The SMB is also now looking to receive updates on the Affiliate Programme.

The objective for 2005 is to work to increase the number of IEC Standards adopted by Affiliates and to move towards a tutorial approach, with Affiliates receiving guidance from IEC members to enhance their active participation in IEC technical work. Training could be provided on a regional basis as experimented already during the third JISC/IEC/APSG Singapore seminar. The venue for the next General Meeting, Cape Town, should also permit more Affiliates to attend the event and become even more familiar with the IEC community.

With ACP, the IEC is creating a new kind of partnership with the industrializing world and, together with other international organizations, is now playing a substantial part in helping to put the World Trade Organization's Agreement on Technical Barriers to Trade to real use.

International co-operation

The IEC contributed to a series of World Trade Organization (WTO) workshops that were designed to enhance the participation within the two organizations of all countries from a region. IEC speakers were present at WTO workshops held in Peru in April, in Mozambique in May and in Lebanon in September.

Within the context of the World Standards Co-operation, which groups the IEC, ISO and the ITU, a concerted effort was made to ensure that international standardization was included in the Declaration of Principles put forth by the World Summit on the Information Society (WSIS). The part of this document that is of greatest interest to the IEC now reads: "Standardization is one of the essential building blocks of the Information Society. There should be particular emphasis on the development and adoption of international standards." The WSIS final declaration is expected for 2005.

The double-logo agreement, signed with the IEEE in October 2002, began to produce the first candidates in 2003. Standards on protocols for digital interface for programmable instrumentation are proceeding through the IEC's internal processes in advance of publication. These standards bear the logos of both the IEC and the IEEE. ■

New deliverables

In May 2004 the IEC launched its Glossary, a compilation of electrotechnical terminology in English and French extracted from the "Terms and Definitions" clause of IEC publications. At present it contains 15 000 items and it complements the International Electrotechnical Vocabulary, especially regarding new concepts and emerging technologies. It was introduced as a tool for IEC product committees to ensure better understanding and greater consistency in use of terminology.

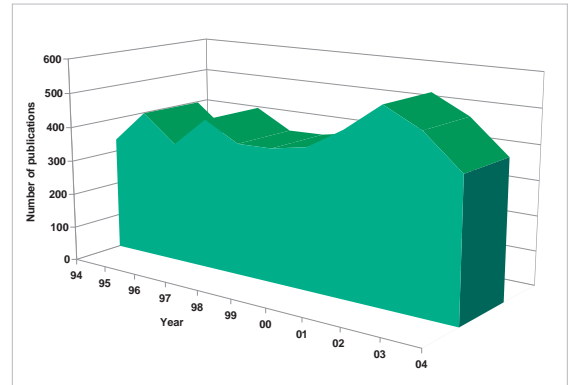
In June, the IEC and ISO launched a new combined graphical symbols database containing the IEC 60417 and ISO 7000 collections of symbols. The IEC's experience since the late 1990s in offering this type of product helped to convince the ISO to use the IEC model for the database product. The IEC and ISO combined database can be offered to customers by IEC and ISO members alike.

Publications

Production of IEC publications, which covers international consensus-based standards, technical reports, technical specification and publicly available specifications, fell by about 20% from 491 in 2003 to 397 in 2004.

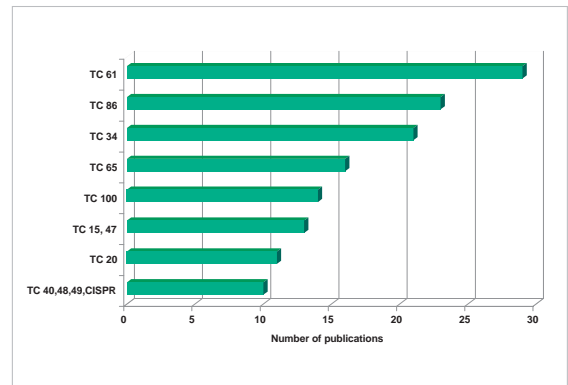
Nearly 5 % of all IEC standards (a total of 16) were developed from start to finish in less than one year. At the same time, 20 % (66 standards) were developed between 12 and 24 months, while 24 % (78 standards) were prepared in 25 to 36 months. Overall, more than 49 % of IEC publications are being prepared in less than three years.

PRODUCTION OF PUBLICATIONS



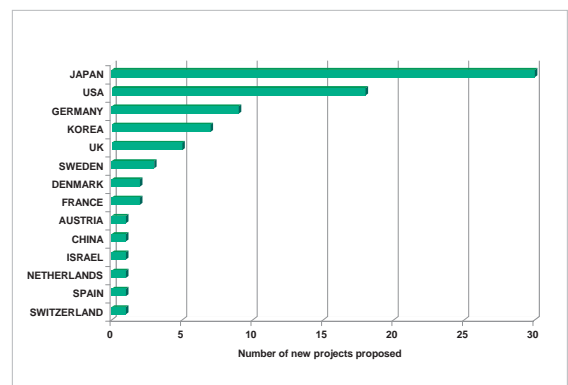
The number of publications issued by the IEC in 2004 continued to return towards more traditional levels of production.

TCS PRODUCING 10 OR MORE PUBLICATIONS



With TC 61 (Safety of household and similar electrical appliances) leading the way, 10 IEC TCs along with CISPR (International Special Committee on Radio Interference) each produced 10 or more publications in 2004.

NPS BY PROPOSERS (FROM NATIONAL COMMITTEES)

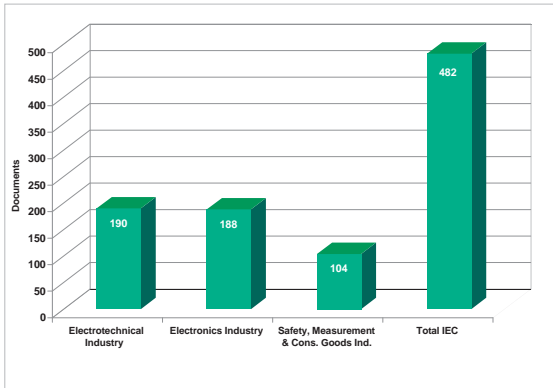


The IEC began work on 140 new projects (NPs) in 2004, with Japan leading the way in proposing new work.

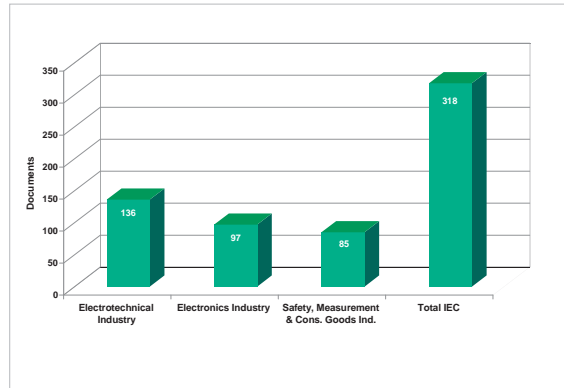
PRODUCTION



CIRCULATED CDVs

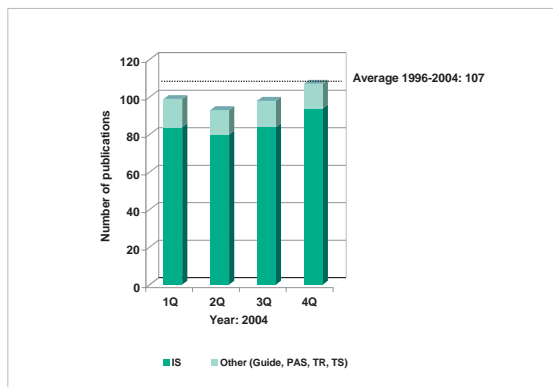


CIRCULATED FDISs

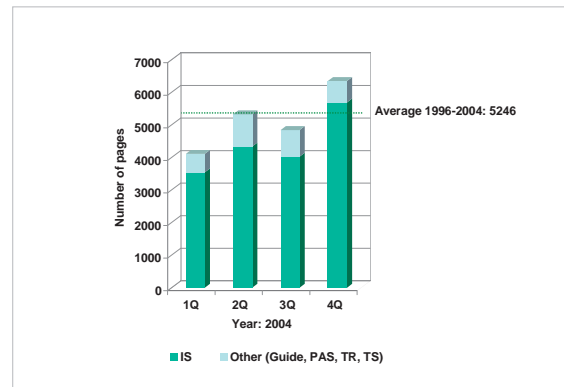


In 2004 the IEC circulated to its National Committees 482 Committee Draft for Vote documents and 318 Final Draft International Standards.

NUMBER OF PUBLICATIONS ISSUED (BY QUARTER)

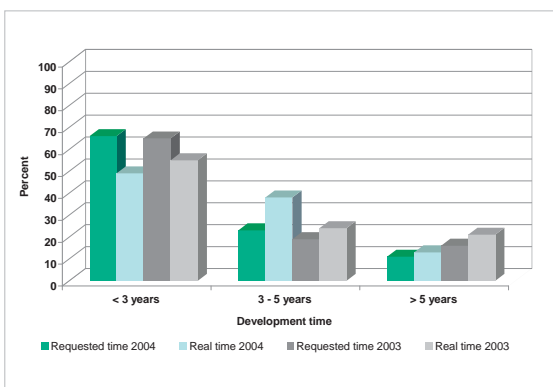


NUMBER OF PAGES ISSUED (BY QUARTER)



Throughout most of the year, the IEC remained somewhat below its historical average for the number of publications it issued. At the same time, these publications as seen in the number of pages issued were on average about the same length as in past years.

AVERAGE DEVELOPMENT TIME



For standards that take fewer than three years to produce, the IEC took less time ("real time") in 2004 than was planned for ("requested time") when the projects started. Projects that take more than three years to produce, however, tend to overshoot the estimated development time. Compared to 2003, there is a slight improvement in meeting target dates for projects that take fewer than three or greater than five years to produce. For projects in between, some work is needed to improve efficiencies in the standards development process.

TECHNICAL WORK

Experts Management System

The IEC's Experts Management System came online in 2004 as a way for National Committees to keep accurate track of who is participating in IEC standardization work from each member. From April to December, a total of 39 212 changes were made to the system, indicating that this is a tool that is very widely used.

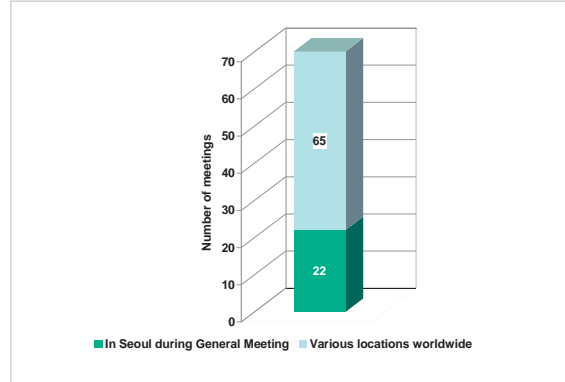
IEC/IEEE

The agreement signed with the IEEE in October 2002 covering dual-logo standards produced its first results in mid-2004 with the appearance of standards on protocols for digital interface for programmable instrumentation and on a precision clock synchronization protocol for networked measurement and control systems. These standards bear the logos of both the IEC and the IEEE. The agreement between the two organizations seeks to rationalize the development process for international standards. Where relevant IEEE electronic, power generation, telecommunication and other standards already exist, these can be proposed to the IEC for publication as IEC/IEEE Dual Logo International Standards.

Standards development time

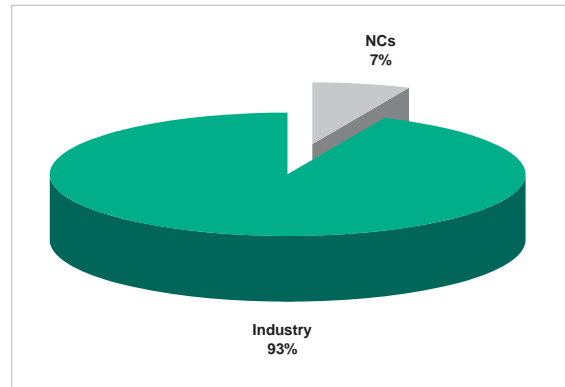
The Standardization Management Board decided that starting in the last quarter of 2004 the time allowed to technical committees for preparing IEC International Standards would be shortened from six to five years.

TECHNICAL COMMITTEE AND SUBCOMMITTEE MEETINGS



IEC technical committees and subcommittees held a total of 87 meetings in different places around the world in 2004.

TC/SC OFFICERS' AFFILIATION



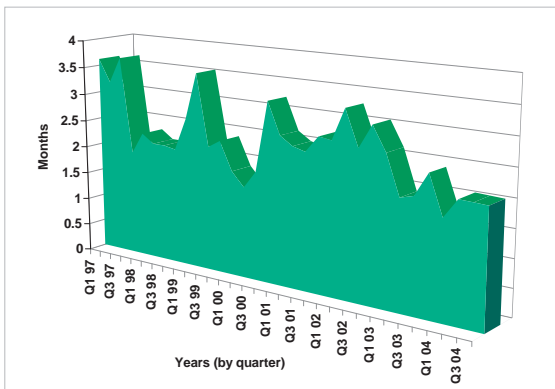
Industry remains the predominant source for TC and SC officers.

TECHNICAL WORK

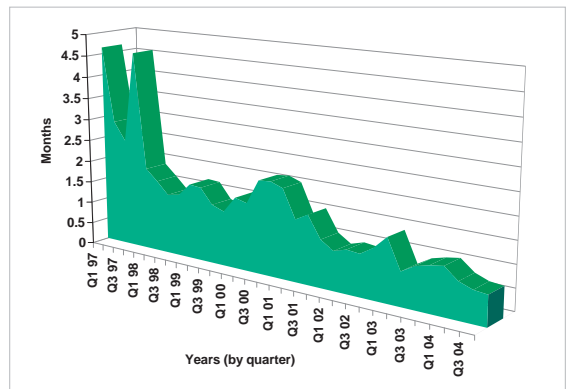


Circulation time for publications

AVERAGE CIRCULATION TIME FOR FDIS BY QUARTER (1997-2004)



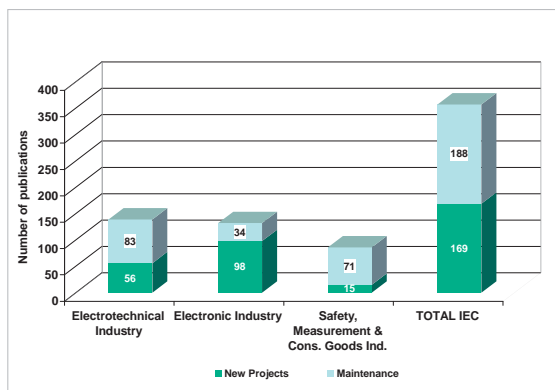
AVERAGE CIRCULATION TIME FOR PUBLICATIONS BY QUARTER (1997-2004)



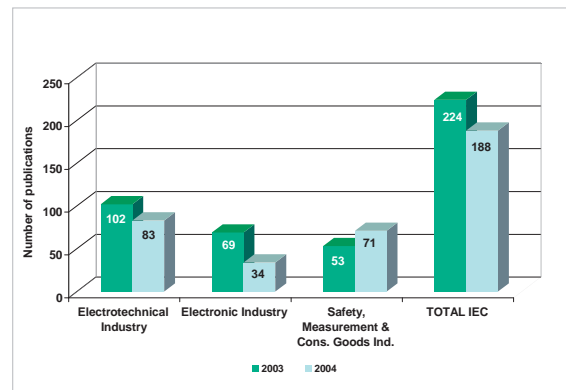
In a demonstration of the ongoing efficiency of its administrative procedures, the IEC continued to maintain a quick turnaround on circulating Final Draft International Standards at about two months and also continued to transform these into publications in one month or less.

Maintenance and new development (by sector)

DEVELOPMENT OF NEW PROJECTS COMPARED TO MAINTAINING EXISTING PUBLICATIONS



MAINTAINING EXISTING PUBLICATIONS IN 2004 AS COMPARED TO 2003



In 2004 the IEC gave slightly more of its attention to maintaining existing standards than to developing new ones.

CONFORMITY ASSESSMENT

The IEC Conformity Assessment Board worked steadily throughout 2004 to develop closer relations with other international organizations, notably the International Laboratory Accreditation Cooperation and the International Accreditation Forum. In both cases, the aim is to find ways to make accreditation for testing laboratories and for certification bodies more efficient and thereby less costly.

IECEE

At the end of 2004 there were about 140 000 valid IECEE CB Scheme test certificates in use and roughly 5 000 manufacturers benefiting from the CB Scheme. The scheme finished the year with 43 participating countries, 58 National Certification Bodies (NCBs) and 170 testing laboratories. The CB Scheme issued an estimated 38 000 new test certificates during the year.

The CB Full Certification Scheme issued its first conformity assessment certificate, to BP Solar for its solar electric modules manufactured in India, China, Spain and Australia. In 2004 CB-FCS ended the year with 14 participating countries and 16 NCBs.

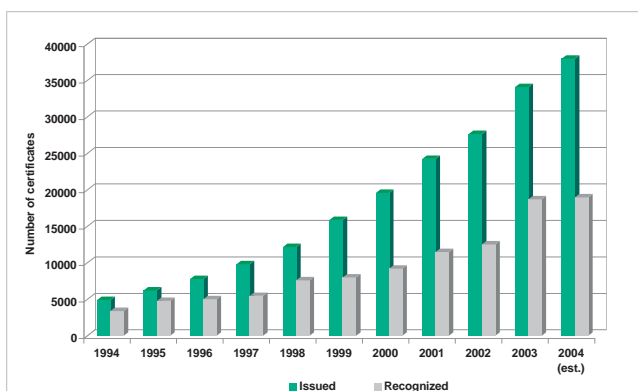
IECEX

The IECEX expanded into certification to cover Ex repair service providers. This is significant because Ex equipment is very costly to replace and it is therefore often cheaper to repair or overhaul it several times. The Scheme also introduced full online public access to IECEX certificates of conformity via the internet, which also gives full search capabilities for selecting Ex apparatus. The IECEX finished the year with 23 member countries (meaning countries that issue certificates of conformity), 20 IECEX Certification Bodies and 21 IECEX Test Laboratories, with more bodies applying to join.

IECQ-CECC

The IECQ-CECC welcomed a new chairman, Dave Smith, from the United Kingdom and it embarked on developing a strategic business plan to help it focus on its market in the years ahead. Approval of avionics manufacturers to IEC Technical Specification 62239 on electronic component management plans (ECMP) gathered momentum, with the approval of an air transport systems manufacturer in the USA and an engine controls systems manufacturer in the United Kingdom. IEC TS 62239 has become the unique specification for ECMP preparation in the avionics industry worldwide and is supported by leading aircraft manufacturers in the USA and Europe for all new work.

CB TEST CERTIFICATES ISSUED



The strong growth in number of CB Test Certificates continues, with an estimated 38 000 issued in 2004.

Results

Total sales in 2004 of CHF 4,2 million were slightly down (2 %) on 2003. The expected fall-off in sales of standards through the traditional distribution channel continued, with sales made by the IEC Central Office to National Committees (for onward resale) down 28 % on 2003. Direct sales were up 10 % on 2003 at CHF 3,2 million. Sales through the IEC web store were up 2 % in 2004 at CHF 2,08 million.

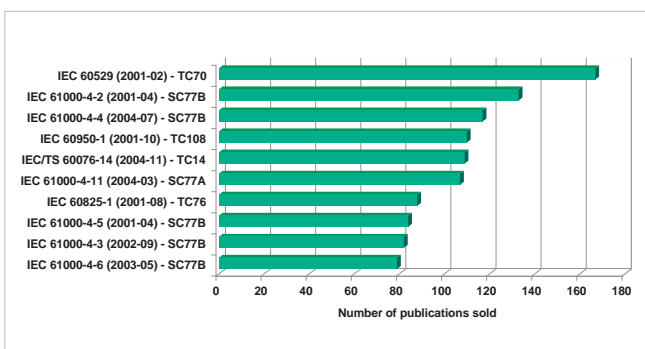
Revenues from royalties however showed solid growth in most countries in 2004 – both in terms of revenues from National Committees and from IEC reseller agreements. The increased revenues from NCs are the result of many members making use of the IEC central library collection of standards for both paper reproduction and sales of standards in electronic format.

New products and services

2004 saw the introduction of the series collections of the more popular IEC families of standards. The series group together multipart standards into a convenient “zip” file and offer the customer the benefit of “one stop” shopping for the collection as well as a discount on the equivalent multipart price. The current series cover: CISPR 16; IEC 60076; IEC 60601-1; IEC 61158; IEC 61400; IEC 61508; IEC 61511; IEC 61850 and IEC 62271.

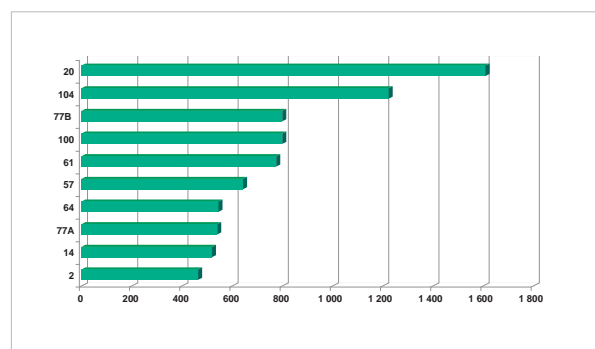
A new preview feature in the IEC web catalogue helps customers identify relevant standards. It allows free browsing of the front matter of each standard, including cover, table of contents, foreword, introduction, scope and normative references – known as the “free parts”. The objective of this service is to give customers more information to help them in making their choice of standards to buy. The “free parts” are also available for use by IEC members and IEC resellers in their own respective web stores.

BEST SELLERS BY NUMBER



The IEC International Standard that deals with degrees of protection provided by enclosures tops the list as the single best-selling publication, but overall it was the subject of testing and measurement techniques for electromagnetic compatibility that was most popular in 2004.

TC/SC SALES: TOP 10 BY QUANTITY



With 1 610 as the total figure, publications from TC 20 (Electrical cables) took the top spot for sales while TC 104 (Environmental conditions, classification and methods of test) took second spot with 1 224 publications sold.

Sales and marketing workshops

The seventh sales and marketing workshop was held at the IEC Asia-Pacific Regional Centre in Singapore from 3-4 March. The event was attended by 26 participants from 17 countries. The workshop explored the theme "Maximizing the Electronic Age to Secure Future Business" and focused on customer relations management and digital rights management. Like previous workshops, the event helped to

MARKETING

maximize sales and market awareness of IEC products and services, and further strengthened the network of IEC sales and marketing professionals. In addition, it gave all participants the opportunity to look to improvements from the IEC Central Office in its support to members' sales and marketing activities, including the IEC's Sales Solutions Network.

Sales Solutions Network

The area on the IEC website dedicated to supporting sales and marketing – the Sales Solutions Network (<http://www.iec.ch/ssn/>) – continued to evolve in 2004 in accordance with the feedback from the IEC sales and marketing network of professionals. All IEC sales policy is available here, together with information and marketing material on new products. The information helps the IEC members and resellers to prioritize marketing efforts on those standards that are expected to perform well in terms of sales. In addition, sales statistics are available by country and product. Regular email alerts are sent to those sales and marketing professionals who have subscribed to the SSN services.

Trade shows: ELEC

In Paris in December 2004, the IEC participated in the international exhibition ELEC, along with the French National Committee, UTE, and CENELEC (the European Committee for Electrotechnical Standardization). The two main objectives were to create contacts for marketing standards and other products and to demonstrate, through a common presence on one stand, the cohesion between the three organizations representing the national, regional and international levels of standardization. The exhibition saw 68 000 visitors, 1 100 companies and 588 exhibitors. ■

COMMUNICATIONS

Communications Network

In 2004 the IEC launched its Communications Network, which is a password-restricted part of IEC website primarily to help National Committees promote the IEC. National Committee and National Standards Body magazine editors have been included for direct, efficient service. Those who have access can find news releases, articles and associated photographs that they may use to help promote the work of the IEC and of their national committee within their countries.



Centenary issues

As part of the preparations for the upcoming 100-year anniversary in 2006, the IEC arranged to have three articles written and distributed to all National Committees. They covered developments ►



in electricity from about 1820 to 1904, the 1904 St. Louis World's Fair where the IEC was first proposed, and the period 1904 to 1906 when specific steps were being taken to create the IEC.

In commemoration of the meeting where the IEC was first proposed 100 years ago, the United States National Committee of the IEC held its bi-annual meeting in St. Louis, Missouri, USA, on 22 and 23 September. In honour of the event, the mayor of St. Louis issued a proclamation declaring 22 and 23 September to be 'IEC Day'.

TC News

The IEC re-launched TC News with a new look and a regular publication schedule. Delivered monthly to the IEC community, it primarily conveys SMB decisions to IEC experts in a straightforward reporting style. Other articles considered relevant also appear in TC News, which is open to contributions from readers.

ISO/IEC Information Centre

Together with ISO, the IEC launched a new website located at www.standardsinfo.net for the joint ISO/IEC Information Centre. It features general information on the role of International Standards and Conformity Assessment, and shows how important these are to world trade. Visitors can access IEC and ISO standards catalogues, find information on standards under development, as well as a dedicated enquiry service. The main aim of this service is to fulfil the important obligation of the ISO/IEC Information Centre in the context of the World Trade Organization's Technical Barriers to Trade Agreement.

The IEC in brief

A new eight-page colour brochure was produced in 2004 that outlines the IEC's role, structure, functioning, products and services. It is designed for those with little or no knowledge of the IEC, giving them an overview of the Commission in succinct terms. It filled a gap in the IEC's communications array of products by providing information at a very basic level.

Web zones

Two new technology-specific zones appeared on the IEC website.

The Colour Management zone

This web zone contains an overview of the basic issues at hand, an explanation of the IEC's role in developing standards that help to ensure colour integrity, a description of colour management and how it works, and a glossary of terms. It serves as a brief and basic introduction to the world of colour management.

The Plugs and Sockets zone

Both informative and practical, this second web zone provides information on the plugs, sockets and voltages used around the world, along with illustrations of the various plugs and sockets that are commonly used by consumers. It also helps to explain the history of the international standards for this technology, why the end-user still faces a multitude of plugs and sockets in use today, and what the IEC is doing to help resolve this matter. ■

THE WAY AHEAD

It is clear that the global market is becoming a more and more challenging place in which to do business. The market wants many things that bring pressure to bear and the IEC must continue to innovate in finding responses to these pressures and demands. There is no doubt that the electronic environment is one of the main means of meeting them and evolution in that environment will by itself give rise to some of those solutions. In addition, the IEC is now preparing the next edition of Masterplan, which will specify the principal long-term objectives and suggest some of the routes to them. Underpinning it all, however, is the need for a united response to the market as a whole. Teamwork coupled with vision is key to success. ■

PARTICIPATING COUNTRIES

List of member countries

(as at 2004-12-31)

Argentina	Japan	Turkey
Iceland (AM)	Slovenia	Egypt
Portugal	Canada	Malta (AM)
Australia	Kazakhstan (AM)	Ukraine
India	South Africa	Estonia (AM)
Romania	China	Mexico
Austria	Korea, D.P.R. of (AM)	United Kingdom
Indonesia	Spain	Finland
Russian Federation	Colombia (AM)	Netherlands
Belarus	Korea, Republic of	United States of America
Iran	Sweden	France
Saudi Arabia	Croatia	New Zealand
Belgium	Latvia (AM)	Vietnam (AM)
Ireland	Switzerland	German
Serbia and Montenegro	Cyprus (AM)	Norway
Bosnia & Herzegovina (AM)	Lithuania (AM)	Greece
Israel	Thailand	Pakistan
Singapore	Czech Republic	Hungary
Brazil	Luxembourg	Poland
Italy	Tunisia (AM)	
Slovakia	Denmark	
Bulgaria	Malaysia	AM = Associate member



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