IEC

Performance
2000

International Electrotechnical Commission

The IEC

Founded in 1906, the International Electrotechnical Commission prepares and publishes International Standards for all electrical, electronic and related technologies. This mandate embraces all electrotechnologies, including electronics, magnetics and electromagnetics, electroacoustics, telecommunication, and energy production and distribution. It also addresses associated general disciplines such as terminology and symbols, measurement and performance, dependability, design and development, and safety and the environment.

The Commission's objectives are to:

● meet the requirements of the global market efficiently;

● ensure primacy and maximum world-wide use of its standards and conformity assessment schemes;

● assess and improve the quality of products and services covered by its standards;

● establish the conditions for the interoperability of complex systems;

● increase the efficiency of industrial processes;

● contribute to the improvement of human health and safety;

● contribute to the protection of the environment.

Foreword

The year 2000 saw the IEC continuing to build on the solid foundations established in the latter half of the 1990s and significant results began to show very clearly. Highlights include:

– Publication of Masterplan 2000

– Increased membership

– New regional relations

– Reorganized technical department

– Move to 100% electronic standards development environment

– New technical committees and new structures

– Expansion of IEC Publicly Available Specifications (IEC-PAS)

– IECEE secretariat transferred to Geneva

– Entire IEC library available electronically

– Enhanced relationship with the World Trade Organization

– Closer cooperation with other international standards development organizations, particularly ISO and the ITU

– Embracing the principle of extending the IEC family

– Record sales

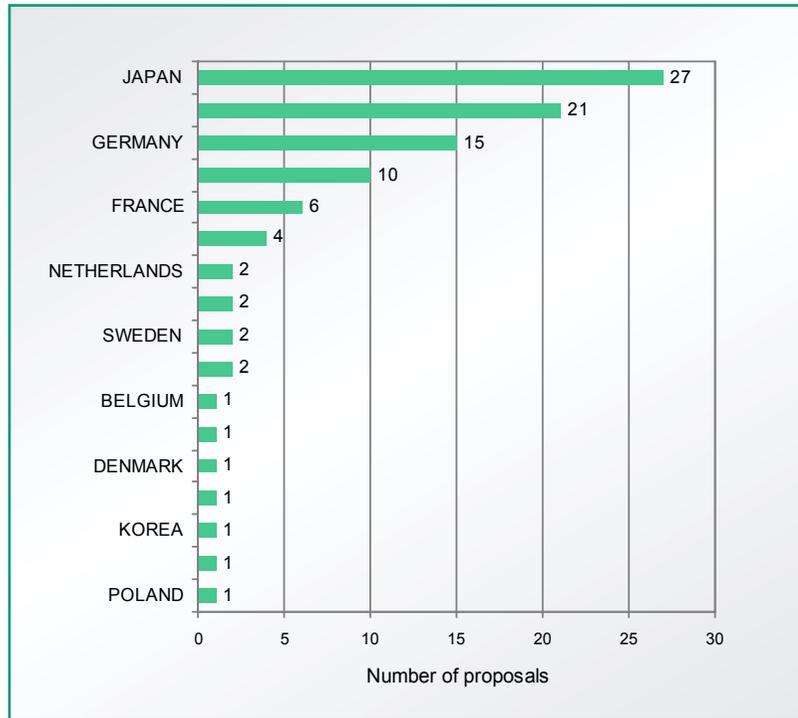IEC President Mathias Fünfschilling established "faster, better, cheaper" as his motto at the beginning of his term of office. The motto describes a process and the IEC's efforts in 2000 focused on addressing this process.

At the same time, the ongoing consolidation should lead the IEC to become the global centre for one-stop shopping when it comes to international, consensus-based electrotechnical standards and conformity assessment activities.

Global reach

Membership and regional issues

	Number of proposals
JAPAN	27
	21
GERMANY	15
	10
FRANCE	6
	4
NETHERLANDS	2
	2
SWEDEN	2
	2
BELGIUM	1
	1
DENMARK	1
	1
KOREA	1
	1
POLAND	1

New projects

Economic capacity is a reflection
of the new projects proposed by
IEC members.

The IEC is a truly international
organization and the initiatives
and results in 2000 continued to
prove the growing global reach
of the Commission. To increase
further the level of awareness of
the IEC, and to provide
information resources to the
local markets, first steps were
taken to establish an IEC
regional centre in North America
and another in the Asia-Pacific
region.

Membership

The IEC welcomed five faces
into its family in 2000, some
new, some familiar. Both Brazil
and Iran rejoined as members,
while Malta and Tunisia joined
as associate members.
Columbia changed from
pre-associate status to associate

member while Costa Rica
became a pre-associate.

At the General Meeting in
Stockholm in September, the
IEC decided to create "affiliates"
(replacing pre-associates), a
non-paying status that may lead
to membership. The changed
status will make it easier to
access IEC information, will
involve enhanced training and
participation in IEC activities and
allows for more flexibility in
becoming an IEC member.

On 31 December 2000 the IEC
consisted of 60 members (of
which nine were associate
members) and 4 affiliates.

Global reach

Cooperation

Cooperation with regional bodies

At the IEC General Meeting in Stockholm, we signed a co-operation agreement with CANENA, the Council for Harmonization of Electrotechnical Standards of the Nations of the Americas. Together we agreed to cooperate in a number of areas, particularly in promoting the use of IEC standards with CANENA members and enhancing technical cooperation in standards development. This agreement will be instrumental in ensuring rational use of available resources in standardization activities and transparency of the standards process. It will also accelerate the standardization process and promote the development and implementation of IEC standards in response to market demand.

Our good relations with CENELEC, as defined in the Dresden Agreement, continue to be profitable to both of us. The harmonization of CENELEC standards with those of the IEC continues to operate in a smooth and efficient manner.

The IEC's Asia Pacific Steering Group was mandated to represent the IEC in APEC, the Asia-Pacific Economic Cooperation. The IEC also continued to focus on the Gulf States by holding a forum in Bahrain.

International cooperation

We continued to participate actively in the World Trade Organization by contributing to key initiatives relating to the WTO Technical Barriers to Trade Agreement.

At the same time, together with ISO, the International Organization for Standardization, we held the first meeting of the 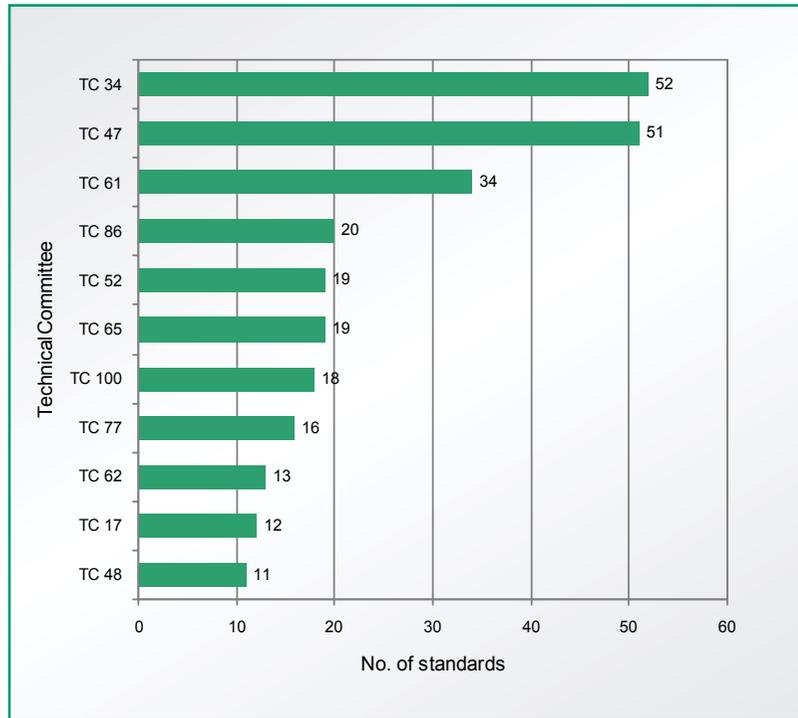Joint Technical Advisory Board. JTAB will help to improve the coordination of technical work that does not fall clearly to one or the other organization. In addition, the presidents of IEC and ISO prepared a joint paper, endorsed by both the IEC Council Board and ISO Council, which identified key areas for increasing the cooperation between us.

We also enhanced our ties with the International Telecommunication Union by improving coordination and participation.

Production

Transformation and extension

Technical Committee

TC 34	52
TC 47	51
TC 61	34
TC 86	20
TC 52	19
TC 65	19
TC 100	18
TC 77	16
TC 62	13
TC 17	12
TC 48	11

No. of standards

TC production

Eleven technical committees produced more than 10 standards each.

Publications

Production of international consensus-based standards and other deliverables, including technical reports, specifications and publicly available specifications, by the IEC rose to 423 in 2000. Eleven TCs produced 10 or more publications during the year 2000 (as indicated in the chart opposite). However, it should be emphasized that the IEC focuses on the quality, not the quantity, of its deliverables, and we continued to improve the overall timeliness of document processing and publication. The number of publications available in the IEC library totalled 4 605 at the end of the year.
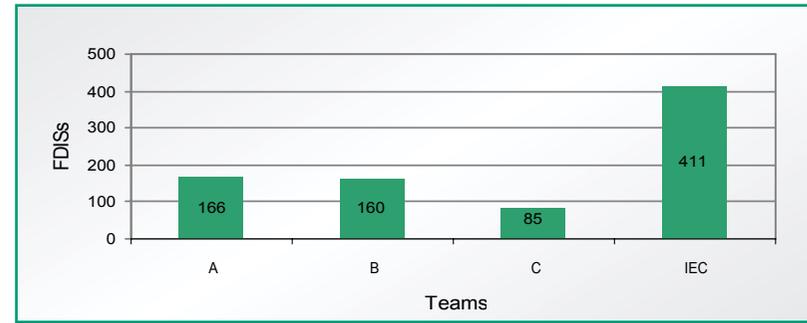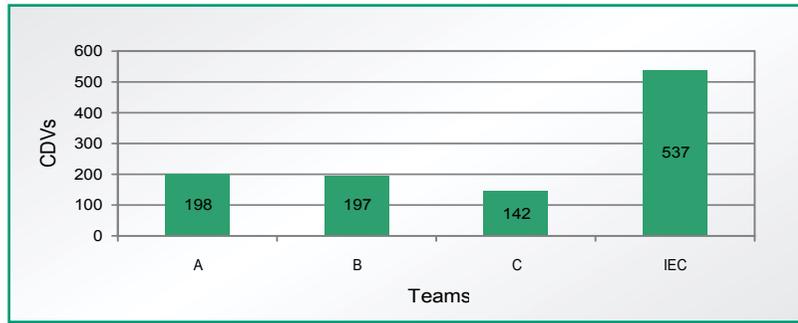
New deliverables

The number of IEC-PAS in progress rose sharply in 2000, from four to 51, with final delivery rising from seven to 42. As for ITAs, the IEC started developing several addressing information technology.

Production

Broad product base

Circulated CDVs

In 2000 we produced 537 Committee Draft for Vote documents.

Key

A Electrotechnical industry

B Electronic industry

C Safety, measurement and consumer goods industry

Circulated FDISs

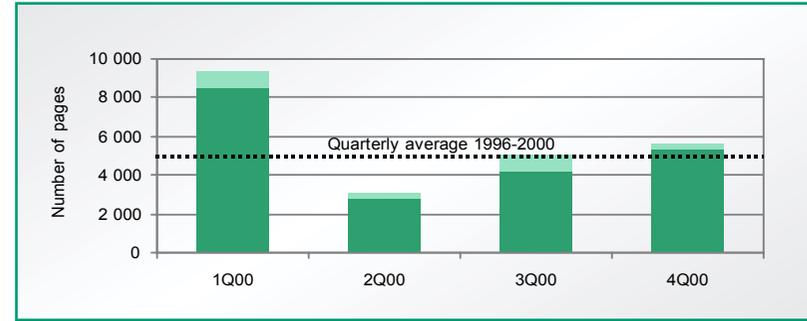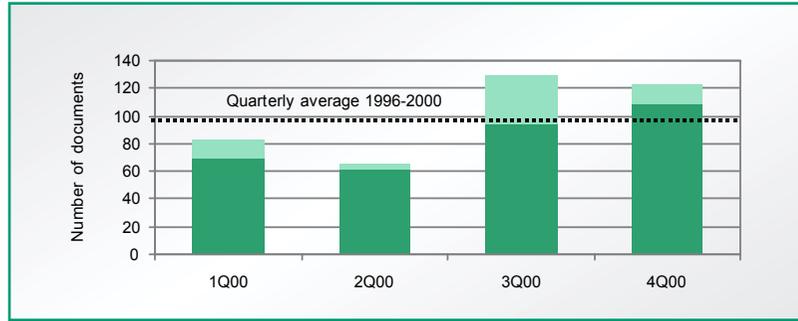In 2000 we produced 411 Final Draft International Standards.

Key

A Electrotechnical industry

B Electronic industry

C Safety, measurement and consumer goods industry

Production

Development time

Number of documents

In 2000 the average number of documents produced per quarter remained below the quarterly average for the preceeding

years. But, as always with the IEC, the principal issue when it comes to production is quality, not quantity.

■ International Standard

■ Other (TS, TR, Guide, PAS)

Number of pages

As with the average number of documents, the average number of pages produced per quarter also remained below the quarterly average for the preceeding years.

■ International Standard

■ Other (TS, TR, Guide, PAS)

Technical work

Streamlining process and structures

Reorganization

The technical department at IEC Central Office ensures that the work flows smoothly all along the IEC's "production line". In 2000 this department was reorganized to establish vertical responsibility for the standards work done, which should ultimately create a more efficient workflow. Three teams, each independent of one another, handle a different, broad area of IEC work. The teams are responsible for every stage of all projects falling within their field. This division into three means the work can now be handled more efficiently.
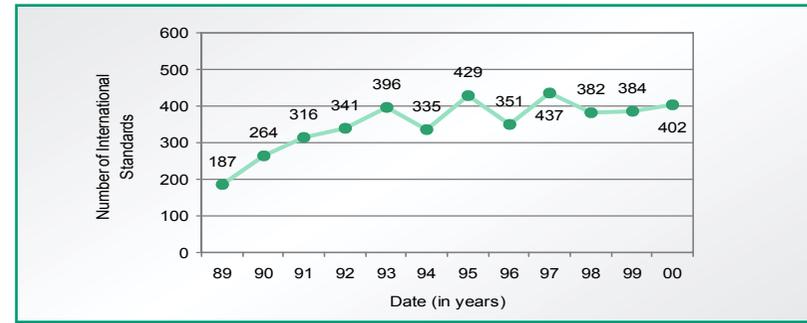
Adapting, developing

The IEC improved the standards development process, particularly through the use of electronic tools and increased emphasis on the internet as a means of carrying out the work, and it also introduced greater quality control.

The Commission experimented with transforming Technical Committee 3 (Information structures, documentation and graphical symbols) into a more efficient structure. Its subcommittees have now become maintenance agencies with validation teams. If the experience is positive, the same could be extended to other TCs.

At the same time, the IEC transformed TC 100 (Audio, video and multimedia systems and equipment) to give it a lighter and more flexible structure. Project teams have replaced the working groups and technical areas have replaced the subcommittees. The idea is that the structure of IEC TCs can adapt to the evolution of technology.

The IEC also created two entirely new technical committees: TC 106 (Methods for the assessment of electronic, magnetic and electromagnetic fields associated with human exposure) and TC 107 (Process management for avionics).
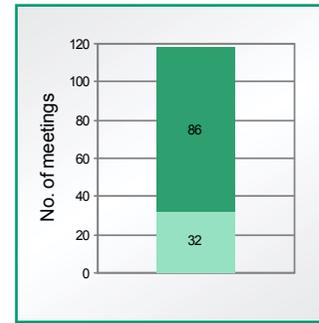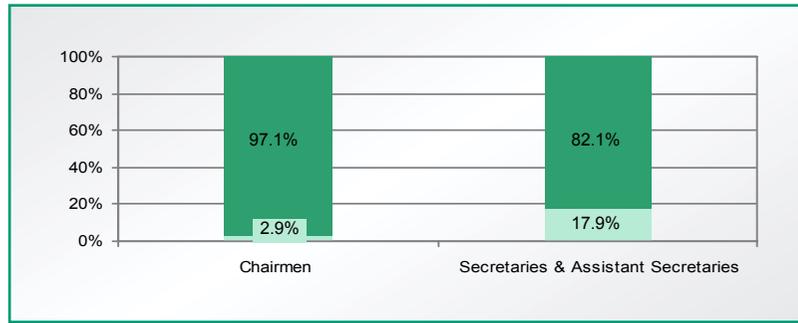
Publications

Production of consensus-based International Standards rose to 402 in 2000. But it should be emphasized that the IEC focuses on the quality, not the quantity, of its deliverables. The number of publications available in the IEC library totalled 4 605 at the end of the year.

Line chart: Number of International Standards vs Date (in years). Values: 187 (89), 264 (90), 316 (91), 341 (92), 396 (93), 335 (94), 429 (95), 351 (96), 437 (97), 382 (98), 384 (99), 402 (00).

Technical work

Direct participation

100%
80%
60%
40%
20%
0%

97.1%

2.9%

Chairmen

82.1%

17.9%

Secretaries & Assistant Secretaries

TC/SC officers affiliation

The IEC has the unique position that the great majority of technical committee and subcommittee officers come from the market, not from national standards bodies.

■ Industry

■ National Committees

120
100
80
60
40
20
0

No. of meetings

86

32

TC and SC meetings

IEC technical committees and subcommittees held a total of 118 meetings in 2000.

■ Various locations worldwide

■ In Stockholm during the GM

Industry at the table

That the IEC continues to be maintained by industry for industry is best seen in the proportion of the chairmen and secretaries who head up our technical committees and subcommittees: 98% of chairmen and 81% of secretaries and assistant secretaries come directly from industry.

Technical work

Listening and acting

TC/SC Workshop

During the General Meeting in Stockholm, the IEC held a particularly important workshop for TC and SC officers. It focused on the issues that confront the chairmen and secretaries as they carry out the work of the IEC. This included: procedures and processes, training, improvements in document access and distribution, cooperation with regional groups and consortia, and promoting standards in educational institutes. The Workshop highlighted the areas where the IEC is doing a good job in supporting the technical work and identified several areas where improvements could be made. The IEC has put into action a majority of the suggestions emerging from this workshop that were both practical and easy in logistical terms.

Directives review

The IEC's standardization work is – as that of ISO – governed by the ISO/IEC Directives, which were revised in 2000 to bring them up to date.
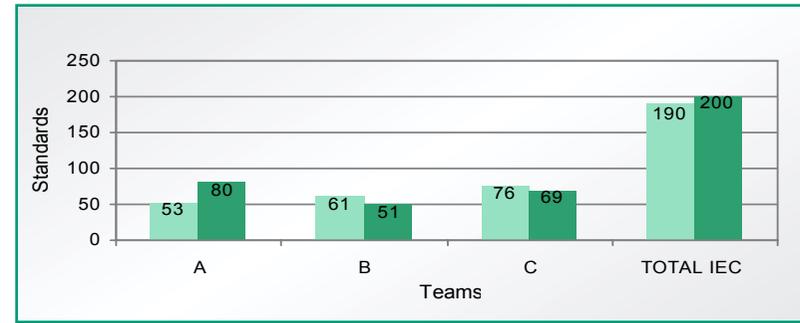
Maintenance

Maintaining International Standards that continue to be used by industry – and that therefore remain of value to the market – is nearly as important in terms of the amount of effort we expend as is creating new standards for new technology.

Key

A Electrotechnical industry

B Electronic industry

C Safety, measurement and consumer goods industry

Maintenance

■ New projects

Resources and tools

Preparing for the future

The year 2000 saw the end of the IEC's paper era and the beginning of the exclusively electronic standards development procedure.

New IT tools

With a view to keeping abreast of the fast-paced world of technology within which the IEC operates, we continued towards the goal of making our standards development process fully electronic. This will go a long way toward making the process more efficient and more economical.

Accompanying this change, effective on 1 January 2001, was a series of training seminars and documentation to help National Committees prepare for the final steps to electronic-

only standards preparation. Thus, electronic voting was extended to cover all IEC technical documents, with the aim of having all voting done by electronic means by 1 April 2001.

In addition, the IEC's permission system now allows National Committees to manage access to IEC documents for their experts. An email notice now informs those concerned of the presence of new documents on the IEC servers, while "MyIEC" notifies users that documents of interest to them are available.
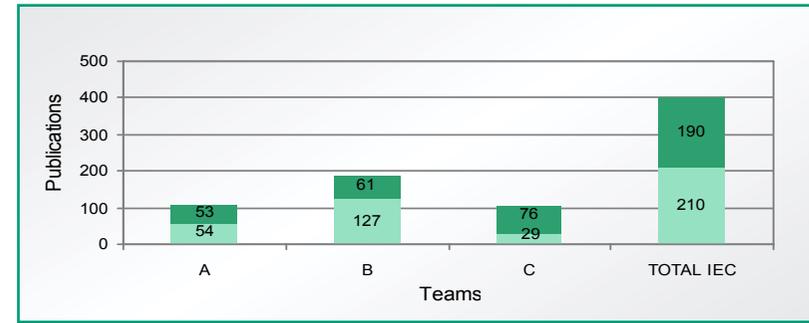
Publications

"Publications" includes other documents produced by the IEC, not just standards. But, as with standards, maintaining existing publications and producing new ones are equally important for the market.

■ Maintenance
■ New projects

Key

A Electrotechnical industry

B Electronic industry

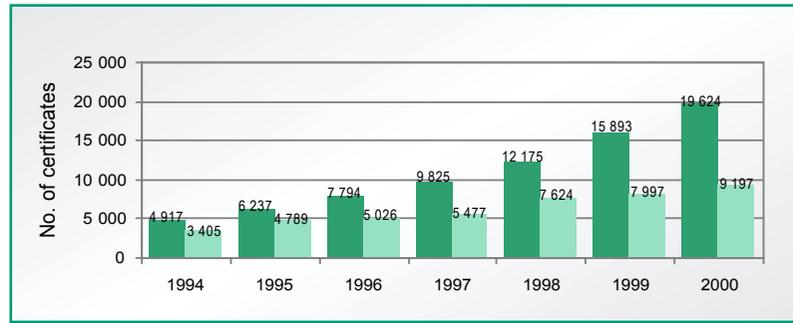C Safety, measurement and consumer goods industry

Conformity assessment and certification

Going global

IECEE

The IEC's System for Conformity Testing and Certification of Electrical Equipment (IECEE) moved its secretariat to Geneva to consolidate its efforts with those of the IECQ, the IEC's approval and certification for electronic components.

No. of certificates

Year	Issued	Recognized
1994	4 917	3 405
1995	6 237	4 789
1996	7 794	5 026
1997	9 825	5 477
1998	12 175	7 624
1999	15 893	7 997
2000	19 624	9 197

■ Issued
■ Recognized

The IECEE operates two schemes: the CB Scheme and the CB-Full Certification Scheme. The first, dealing with mutual recognition of test certificates for electrical equipment, is a multilateral agreement among participating countries. The second is an extension of the first. At the end of 2000, the CB Scheme had 40 participating countries, 54 National Certification Bodies and 121 testing laboratories while the CB-FCS had 15 participants from around the globe. In 2000 the IECEE maintained 80 000 valid CB Test Certificates while 3 300 manufacturers from all over the world enjoyed the benefits of using the CB Scheme.

# Conformity assessment and certification

Increased growth

IECEX

The IEC scheme to facilitate international trade of apparatus used in explosive atmospheres (IECEx), which has been operational since September 1999, had 20 countries participating throughout the year. It enjoys the presence of 9 Accepted Certification Bodies and 10 Ex Test Laboratories. In 2000 the IECEx Scheme produced its first assessment and test reports, which are issued and recognized for national certification (mutual recognition of test and assessment results by all IECEx members).

IECQ

Dedicated programmes in China and the Republic of Korea strongly promoted the IECQ. The scheme continued its close cooperation with the Global Approval Program for Photo-voltaics, for which it is providing the approvals service, and with the Quality Excellence for Suppliers of Telecommunications (QuEST) Forum (TL 9000).
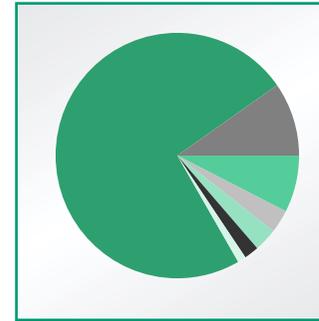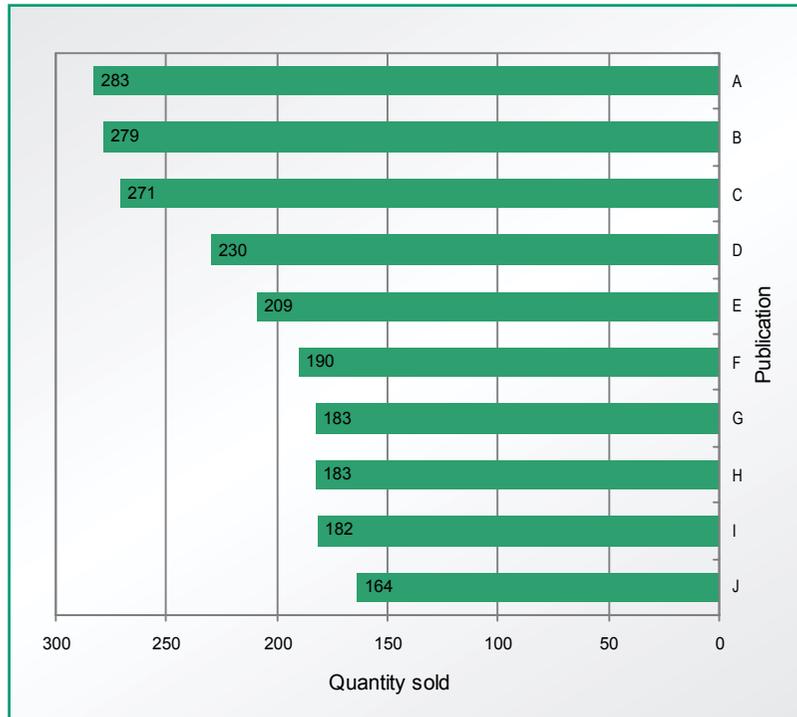

IECQ approvals

- Manufacturers: 74%
- Qualification approvals: 10%
- Testing laboratories: 7%
- Distributors: 3%
- Capability approvals: 3%
- Specialist contractors: 2%
- Technology approvals: 1%

Sales, marketing and information

Record sales

Quantity sold (Publication)

- A: 283
- B: 279
- C: 271
- D: 230
- E: 209
- F: 190
- G: 183
- H: 183
- I: 182
- J: 164

Sales rose by 34% over 1999 to new heights with total gross sales at CHF 5,2 million. Sales of publications to NCs for onward sale were up 15%. New policies now give more overall coherence to the IEC's sales effort and new pricing models will apply to future database products and applications. We also decided to create a free, online limited version of the International Electrotechnical Vocabulary while lowering the cost of the CD-ROM version of the Multilingual Dictionary.

Best sellers

A. Multilingual Dictionary

B. 60529 (1989-11): TC70

C. 60950 (1999-04): TC74

D. 60529-am1 (1999-11): TC70

E. 61508-1 (1998-12): SC65A

F. 61000-4-2 (1999-05): SC77B

G. 61508-7 (2000-03): SC65A

H. 61508-3 (1998-12): SC65A

I. 61508-5 (1998-12): SC65A

J. 61508-4 (1998-12): SC65A

Sales tools

A newly created network of sales professionals among the National Committees adds to the promotion of IEC products and services. Subscriptions to our Just Published email alert service grew to 7 000. We produced for the last time in significant quantities a paper version of the *Catalogue of Publications*. As of next year, and in consideration of the growing use of the online catalogue, a standalone electronic alternative will be developed.
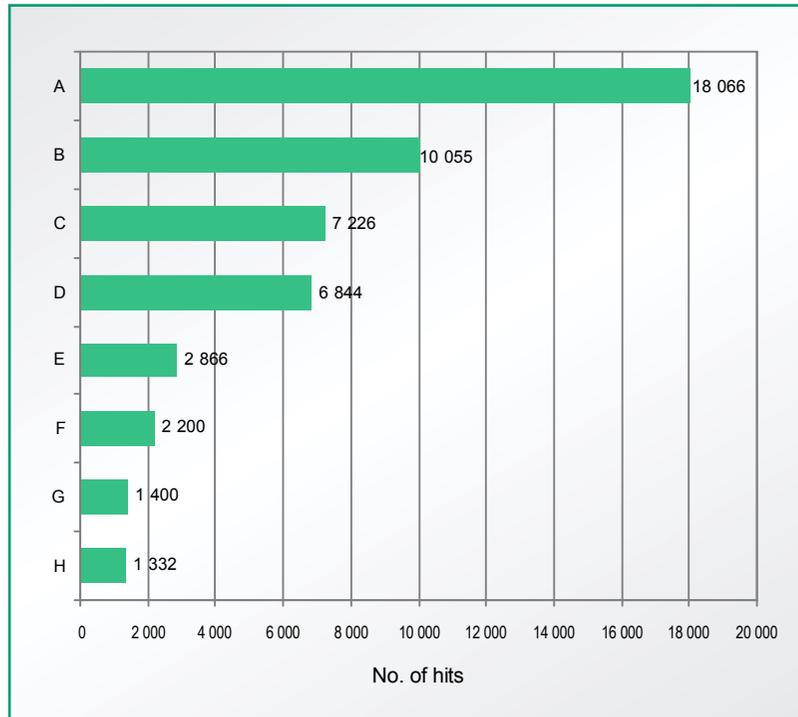
Sales, marketing and information

Serving the market

Chart axis labels (y-axis A–H, x-axis "No. of hits"):

Label	No. of hits
A	18 066
B	10 055
C	7 226
D	6 844
E	2 866
F	2 200
G	1 400
H	1 332

x-axis: 0, 2 000, 4 000, 6 000, 8 000, 10 000, 12 000, 14 000, 16 000, 18 000, 20 000

No. of hits

Most visited IEC web site areas

A Home page
B Database searches
C Web Store

D Catalogue
E Public information
F TC information

G FAQs – site tree
H Download

IEC Web Store

From the IEC Web Store (www.iec.ch/webstore), the entire IEC library became available in electronic format in March 2000 with the addition of the older (pre-September 1996) publications in scanned image portable document format. This brought the total available items to some 4 700 and 210 000 pages ready for purchase in paper and/or electronic format. In 2000, a record 5 938 orders were placed through the Web Store representing revenues of CHF 1.38 million. Of these, CHF 1,07 million were for sales of electronic versions of the IEC publications.

Customer service

On average, every month, the Customer Service Centre:

– processed 800 orders from National Committees, sales outlets and individual customers;

– received and responded to 1 400 emails;

– processed 290 faxes;

– answered 220 telephone calls.

Sales, marketing and information

A dynamic approach

Information tools

A new publication called *iec e-tech* replaced the *IEC Bulletin*, while Performance 1999 replaced the annual report. In both cases, the newness focused on better delivery of information and a more dynamic, contemporary appearance. The IEC also produced an interactive CD-ROM that provided an overview of the IEC, allowed for hyperlinking to the IEC's website and included brochures in PDF. The Information Services Department also lent its resources and expertise to promoting TC activities.

Marketing tools

The IEC published two important brochures focusing on how industry benefits from the IEC.

The first covered small-to-medium-size enterprises and used companies from the UK, Germany and Turkey as examples. The second focused on multinational corporations and used companies from France, Switzerland, the UK, Germany and the USA. More case studies covering new technologies and how governments benefit from the IEC are planned for the future.

17

The way ahead

Putting the Masterplan into action

Masterplan 2000

Without a doubt, the most significant event of 2000 was the publication of the IEC Masterplan 2000.

Published roughly every three years, the Masterplan gives the IEC its strategic vision and helps to set short-, medium- and long-term goals. The year 2000 saw the most recent revision of this document, which spelled out six principal issues that face the IEC, and eight goals that the Commission has set for itself to achieve in response to these issues. The issues include:

– improving market perceptions of the IEC;

– expanding industry involvement and participation in IEC work;

– making IEC conformity assessment and certification more global;

– maximizing the efficiency of IEC work;

– tailoring processes to products.

Masterplan 2000 was endorsed by the membership of the IEC during the General Meeting in Stockholm.

In the year 2000 we focused on identifying and prioritizing the major challenges ahead for the Commission, and setting out clear goals in the shape of the Masterplan 2000. The years ahead will see the plan being put into action.

Participating countries

As at 31 December 2000

AUSTRALIA

AUSTRIA

BELARUS

BELGIUM

BOSNIA-HERZO. (AM)

BRAZIL

BULGARIA

CANADA

CHINA

COLOMBIA (AM)

COSTA RICA (PA)

CROATIA

CUBA (PA)

CYPRUS (AM)

CZECH REP.

DENMARK

EGYPT

ERITREA (PA)

ESTONIA (AM)

FINLAND

FRANCE

GERMANY

GREECE

HUNGARY

ICELAND (AM)

INDIA

INDONESIA

IRAN

IRELAND

ISRAEL

ITALY

JAPAN

KOREA, REPUBLIC OF

LATVIA (AM)

LITHUANIA (AM)

LUXEMBURG

MALAYSIA

MALTA (AM)

MEXICO

NETHERLANDS

NEW ZEALAND

NORWAY

PAKISTAN

PHILIPPINES

POLAND

PORTUGAL

ROMANIA

RUSSIAN FEDERATION

SAUDI ARABIA

SINGAPORE

SLOVAKIA

SLOVENIA

SOUTH AFRICA

SPAIN

SWEDEN

SWITZERLAND

THAILAND

TUNISIA (AM)

TURKEY

UKRAINE

UNITED KINGDOM

UNITED STATES OF AMERICA

URUGUAY (PA)

YUGOSLAVIA

AM = ASSOCIATE MEMBER   PA = PRE-ASSOCIATE

For further information

International Electrotechnical Commission

3, rue de Varembé
CH-1211 Geneva 20
Switzerland
Telephone: +41 22 919 02 11
Telefax: +41 22 919 03 00
E-mail: info@iec.ch
Web: www.iec.ch

2001-04