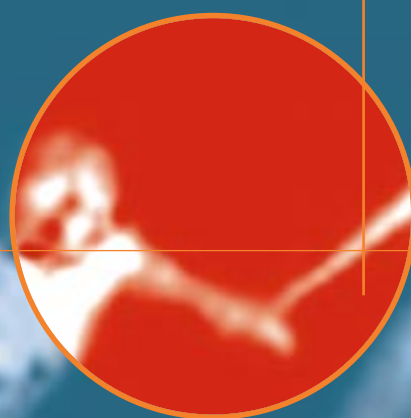


# Annual Report & Activity Report 1998



EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE

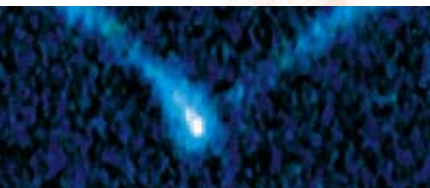
# etsi today

ETSI is a non-profit organization whose mission is to produce the telecommunications standards that will be used for decades to come throughout Europe and beyond. It is an open forum that unites nearly 700 members from 50 countries, representing manufacturers, network operators, administrations, service providers, research bodies and users.

ETSI's approach to standards making is innovative and dynamic. ETSI Members fix the standards work programme to meet market needs. In this way, ETSI's standards really satisfy market need.

ETSI promotes the world-wide standardization process whenever possible. Its Work Programme is based on, and co-ordinated with, the activities of international standardization bodies. In addition, close co-operation with partner organizations from other regions has been established, for example, with the USA, Canada, Australia, Japan and Korea.

It is this concept of partnership which characterizes all of ETSI's activities - from the fact that its membership includes all players involved in telecommunications through to its working methods, which involve bringing the relevant experts together, wide consultation and the definition of its deliverables wherever possible by a process of consensus. ETSI relies on co-operation - with its member organizations which provide the technical input to its Technical Committees and Projects, with other standardization bodies throughout the world and with the organizations which finally adopt and use its products. ETSI believes that the key to telecommunication standardization - and to effective telecommunication - lies in working together.



# business review



**Francisco da Silva**  
*Chairman of the  
General Assembly*

1998 was a landmark year. It was the year that ETSI celebrated its tenth anniversary. Regional standards bodies and other ETSI friends from around the globe gathered to help commemorate the event at meetings of the Global Standards Collaboration (GSC) and Radio Standardization group (RAST). In addition, ETSI opened its doors during a special 10th Anniversary 'State of the Art in Telecommunications Standardization' conference at which an international audience was able to look back on the achievements of the Institute and exchange points of view on future orientations in telecommunications standardization. The celebrations culminated at a gala dinner with fireworks illuminating the bay of Cannes and commemorating ten years of success in telecoms standardization.



**David Hendon**  
*Chairman of the  
ETSI Board*

The long standing partnership of the regional standards bodies in the GSC and RAST was key in fostering an environment that allowed ETSI and other standards partners, the Association of Radio Industries and Businesses of Japan (ARIB), Standards Committee T1 Telecommunications of the USA (T1), the Telecommunications Technology Association of Korea (TTA) and the Telecommunication Technology Committee of Japan (TTC), to globalize their work on Third Generation mobile communications. Work in the newly constituted Third Generation Partnership Project will build on the Universal Terrestrial Radio Access Network concept and an evolved Global System for Mobile communication (GSM) Mobile Application Part core network. Results will ultimately be taken up by each of the standards partners as well as submitted to the International Telecommunication Union in order to accelerate efforts in pursuit of the IMT-2000 recommendations.



**Karl Heinz Rosenbrock**  
*ETSI Director-General*

Making standards work efficiently in a regional or global context requires innovative tools and here ETSI has put at the service of its Members and partners a comprehensive set of electronic tools that allows a smooth operation for all participants in ETSI-related standards work. New information services include on-line European Standard (EN) approval for National Public Enquiry, an electronic telephone directory, discussion groups and automatic document numbering. Internet access to these and other ETSI on-line services has been improved through the installation of new equipment and the constant monitoring of the quality of service afforded to Members.

1998 was also the year when ETSI Members opted to ensure that standards and other deliverables were accessible to the widest audience possible, and the Secretariat took the steps necessary to distribute ETSI deliverables free of charge on the world wide web - a first for a European standards body. At the end of the year, the level of 1000 downloads per day was surpassed and the ETSI web site received in excess of 3,5 million hits per month. These tools and other marketing efforts have considerably enhanced Members' stance with regard to market access in the world.

There has been increased demand, from a wide range of Technical Bodies, for the support of the PEX Competence Centre in specification methodology and testing. In 1998, half of the Centre's time was spent on the work of Specialist Task Forces, approximately 45% provided Helpdesk services and about 5% contributed to international standards. Short enquiries ('Hotline' support) to the Helpdesk, particularly via e-mail, rose by 19% from 1997, to 357 enquiries.





Thanks to the hard work of ETSI delegates, experts and staff, 1998 was also a record year for the production of standards. 869 deliverables representing 91.837 pages were published (compared with previous records of 762 published deliverables in 1996 and 60.805 pages in 1997). ETSI Membership also continued to grow, and at the end of 1998 there were 648 Members from 50 countries, with a large proportion of new recruits from the mobile and Internet areas of activity. Special efforts have been made to extend a warm welcome to Central and Eastern Europe, and a high level ETSI delegation visited representatives of the telecoms industry and administrations in the Baltic States to intensify relations.

The work of the Operational Co-ordination Group (OCG) has continued to be very useful. The Group offers an opportunity for the Chairmen of the Technical Committees and ETSI Projects to meet together and discuss matters of common interest and it provides regular progress reports to the ETSI Board. During the course of 1998, the OCG initiated discussions about the reorganization of the technical bodies which are expected to come to fruition in 1999. The Group also set up two Ad hoc Groups: one to review Internet-related activities throughout ETSI's technical work, the second in support of activities related to the Radio and Telecommunication Terminal Equipment (R&TTE) Directive.

One of the objectives laid out in ETSI's business plan is to raise the Institute's profile in Internet-related activities, and Internet activities gained considerably more visibility in

the work of ETSI's Technical Bodies during 1998. A number of initiatives were taken to become involved in issues concerning Internet governance: ETSI holds a seat on the Council of Registrars (CORE) Executive Committee and participates in both the Protocol Supporting Organization and the Domain Name Supporting Organization.

Partnership has been a key concept in 1998 as well as over the last decade. Partnership with ETSI's sister bodies, the European Standards Committee (CEN) and the European Electrotechnical Standards Committee (CENELEC), continues, especially through the work in the Information and Communications Technologies Standards Board and common visibility projects such as the New Approach web site which provides a one-stop shop for information pertaining to standards and the new approach directives. ETSI also hosted the 1998 CEN, CENELEC and ETSI conference and meeting between European standardizers and American National Standards Institute (ANSI) counterparts.

ETSI closed the year by saluting the significant contribution made by General Assembly Chairman, Antonio Castillo (Telefonica), as well as Vice-Chairmen, Bernard Rémoville (AFUTT) and Björn Troili (Ericsson), whose terms finished in November. Elected to follow on in these positions were, respectively, former ETSI Board Vice-Chairman, Francisco da Silva (Portugal Telecom SA), Karsten Meinhold (Siemens AG) and Pierre-Yves Hébert (EDF). Two Vice-Chairmen were elected to the Board, Gerry Lawrence (Marconi Communications) and Dieter Kaiser (Siemens AG).

Francisco da Silva  
David Hendon  
Karl Heinz Rosenbrock

# membership

## Membership by type

	01-01-1998	31-12-1998
Full Members	457	512
Associate Members	43	72
Observers	81	64

## Membership by country - Full and Associate Members

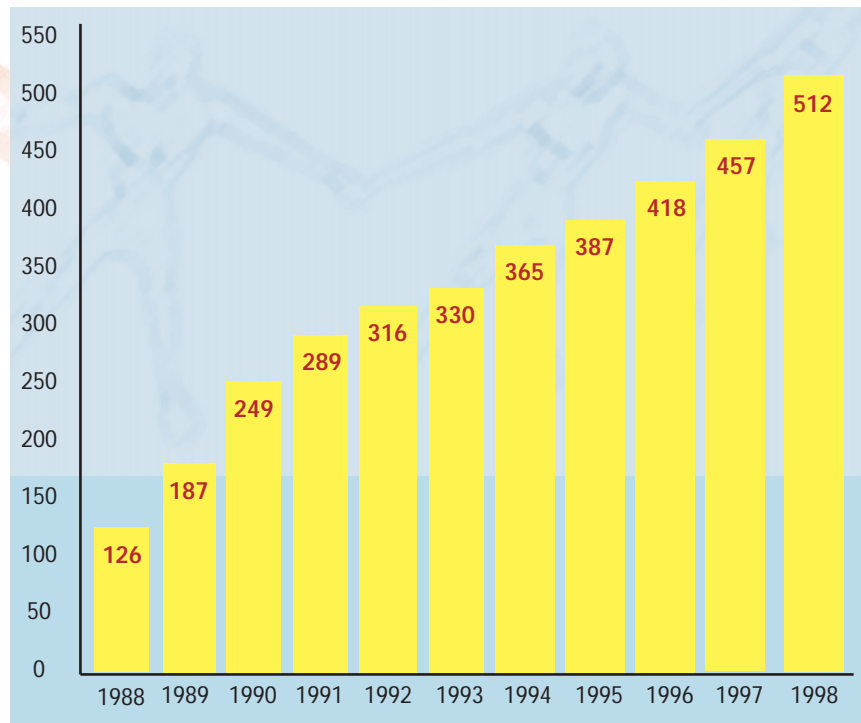
Andorra	1
Arab Emirates	2
Australia	8
Austria	6
Belgium	23
Bosnia Herzegovina	2
Bulgaria	3
Canada	4
China	1
Croatia	1
Cyprus	2
Czech Republic	3
Denmark	17
Estonia	1
Finland	10
France	72
Germany	86
Greece	5
Hong Kong	1
Hungary	4
Iceland	1
India	1
Ireland	9
Israel	6
Italy	27
Japan	2
Korea	1
Latvia	2
Lithuania	1
Luxembourg	3
Macao	1
Malaysia	1
Malta	1
Netherlands	27
Norway	5
Poland	6
Portugal	5
Romania	2
Russia	4
Slovak Republic	2
Slovenia	2
South Africa	2
Spain	10
Sweden	22
Switzerland	8
Taiwan	2
Turkey	8
Ukraine	2
United Kingdom	132
United States of America	37

ETSI experienced a large surge of interest in Membership during 1998. More than 500 information packs were sent out throughout the year, resulting in 120 new applications for Membership. Membership rose again, to a total of 648 Members from 50 countries across five continents. Full Membership increased by over 12% on 1997 figures, to 512, and, with Estonia and Latvia joining its ranks, is now drawn from 35 countries. Associate Membership has also

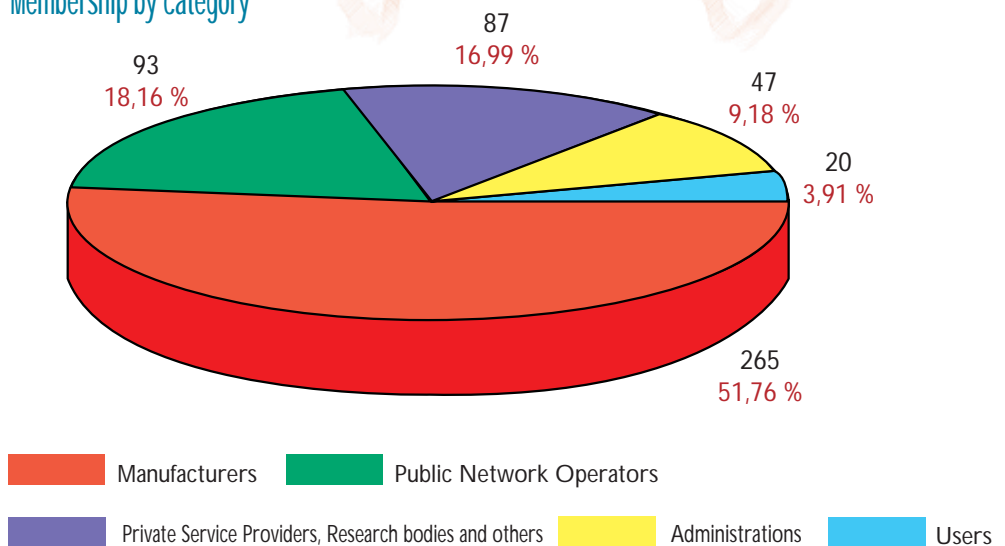
increased, from 43 to 72, coming from 15 non-European countries, and there are 64 Observers from 17 different countries.

The European Commission and the European Free Trade Association Secretariat, which hold special roles as Counsellors, attend the General Assembly and the ETSI Board and continue to play an active part in ETSI's work.

## Evolution of ETSI Full Membership - totals of Full Members



## Membership by category



# standardization strategy

## MAKING INTERNATIONAL STANDARDS HAPPEN FIRST IN EUROPE

ETSI exists to disseminate standards which are responsive to markets, in a timely way and with the aim of their acceptance and use world-wide.

The European telecommunications market is forecast to reach US\$ 265 billion in 1999 (source MDIS), and the need for standards is continuing to grow. If ETSI's Members are to continue to benefit from being at the forefront of the standards making process, ETSI must ensure that its influence in standardization does not diminish - and indeed spreads - within the global arena. The Institute has therefore drawn up a standardization policy which will guide its activities into 1999 and beyond.

During 1999, ETSI will focus on a number of strategic initiatives. Its strategy involves five key themes, each including a number of objectives:

### To shape the future of mobile communications through partnership

- Successfully establish a Third Generation Partnership Project
- Promote the Universal Mobile Telecommunications System (UMTS™) as a driver in the IMT-2000 family
- Accommodate the new needs of regional partners
- Maintain and develop a portfolio of radio technologies
- Liaise closely with existing and new partners (such as Fora and Associations)

### Be a driver in fixed networks

- Highlight ETSI's role as the ultimate interoperability body - for all wireline technologies
- Develop new architectures with an innovative distribution of the intelligence in the networks
- Offer new service providers vehicle definition of interconnection interfaces
- Investigate the possible registration of interoperability agreements between equipment suppliers

### Raise ETSI's profile in Internet-related activities

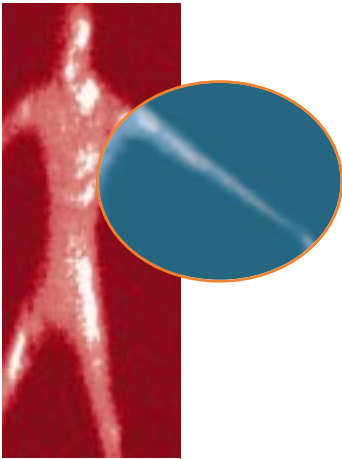
- Arrange permanent co-ordination of Internet-related activities
- Be proactive in Internet-related standardization projects
- Achieve recognition as a centre of Internet expertise, in particular through rebranding current activities
- Represent Members' interests in new Internet governance bodies
- Become operational as a register of new global, top-level domain names for the Internet

### Provide bridges to link the convergence issues in the areas of Information and Communications Technologies (ICT)

- Continue active participation in and support to the ICT Standards Board
- Liaise with the International Organization for Standardization and International Electrotechnical Commission for broader area activities
- Investigate new joint technical committees for infrastructure, security, safety

### Manage Partnerships for global success

- Use the Publicly Available Specification procedure as a tool for extending ETSI's coverage
- Sign a co-operation agreement with the International Telecommunication Union
- Ensure ETSI's continued compliance with the World Trade Organization's Code of Good Practice relating to the Technical Barriers to Trade Agreement and the Preparation, Adoption and Application of Standards



# standards production

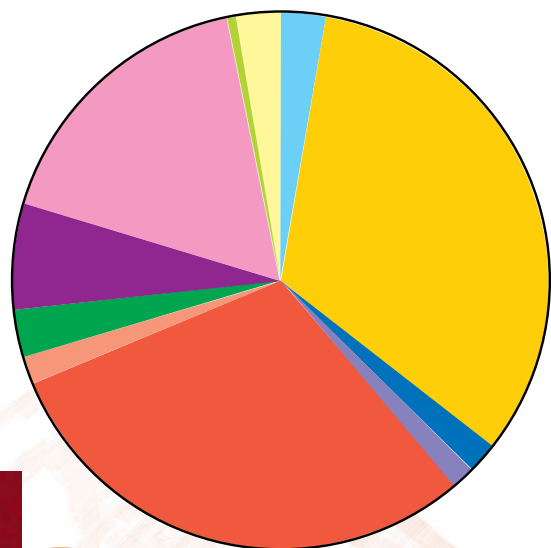
1998 was a record year for the production of standards. 869 deliverables, representing 91.837 pages, were published (compared

with previous records of 762 published deliverables in 1996 and 60.805 pages in 1997).

The number of deliverables sent for PE/UAP and Vote, and published, for each of the years 1990 - 1998 and the prediction for 1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Public Enquiry	116	79	112	227	166	269	294	201	185	
Vote	21	104	103	81	248	186	267	256	202	
One-step Approval Procedure/UAP	0	11	3	22	45	131	192	181	260	
Members' Vote	-	-	-	-	-	-	-	36	36	
Publication	18	49	186	177	275	558	761	620	869	
Prediction										1933

Distribution by type of published deliverables in 1998



- ETSI Guide (EG) 24
- European Standard (telecommunications series) (EN) 286
- ETSI Standard (ES) 14
- ETSI Technical Report (ETR)\* 12
- European Telecommunication Standard (ETS)\* 259
- Interim ETS (I-ETS)\* 15
- Technical Basis for Regulation (TBR)\* 24
- Technical Report (TR) 55
- Technical Specification (TS) 151
- Special Report (SR) 2
- GSM Technical Specification (GTS) 27

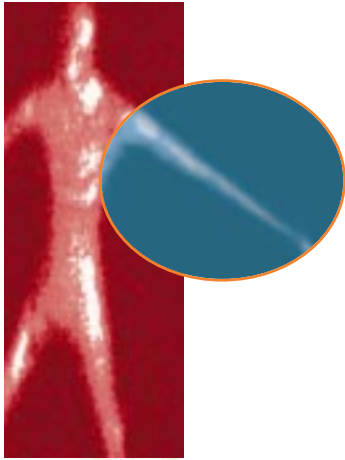
\* old deliverable regime

As previously, a small number of Technical Bodies, particularly in 1998 the Technical Committees Special Mobile Group and Signalling Protocols and Switching, were the major contributors to standards production.

On the whole, lead times in the drafting and adoption stages of the standards making process have decreased over the year, and in 1999 new electronic tools will be introduced to improve the process still further.



# specialist task forces (stfs)



During 1998, a number of specific initiatives were developed to improve the planning and management of Specialist Task Forces (STFs). As a result, the level of STF activity reached over 400 man-months (corresponding to 5 200 kEURO\* of expert labour costs) and the activity carried over to 1999 was reduced by 40% compared with last year.

Voluntary contributions from Members were significant (850 kEURO), and were invested to support several of the STFs on specific projects and for sub-contracts to laboratories, in particular for technical support for the selection of the Global System for Mobile communication (GSM) Adaptive Multi-Rate (AMR) speech codec.

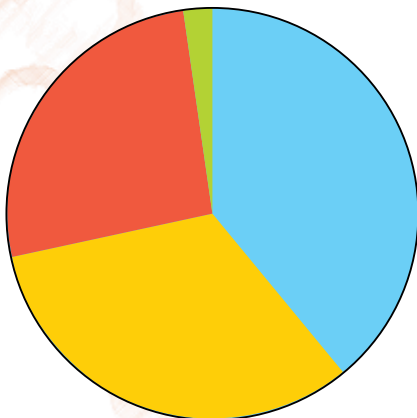
As a result, 45% of the deliverables approved by the Technical Bodies (TBs) in 1998 were drafted by TBs with the management support of STFs and 23% by the STFs. On average, 1,8 man-months was required for an STF to draft a deliverable.

1998 saw the introduction of a new system of funding by the European Commission (EC) and the European Free Trade Association (EFTA). This change in system and the consequent reduction in the total sum allocated had been predicted in 1997. New Framework Contracts between ETSI and the EC and EFTA were negotiated and completed in the first half of 1998, along with the addition of Memoranda of Understanding to cover the transitional period up to the year 2000. The result is that the EC and EFTA now contribute 1,15 MEURO per year towards STF activity (81 man-months).

With the continuous reduction of the Funded Work Programme (FWP) budget over recent years, ETSI may be confronted in 1999 with a situation where the resources available cannot match the demand from the Technical Organization. This may necessitate a review of the General Assembly's policy of steadily reducing the Membership contribution to the annual FWP.

\*EURO and ECU are used indifferently throughout this Report.

During 1998, STFs contributed to ETSI activities in the following areas:



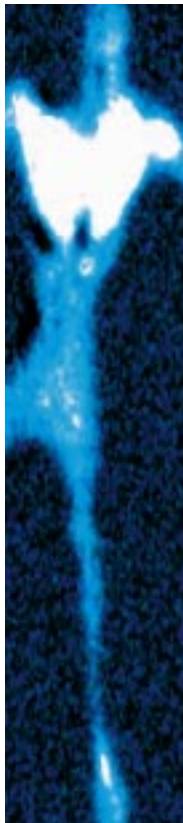
- the drafting of technical deliverables  
157 man-months  
(40% of the total resource spent)
- Project Management support for Technical Bodies (TBs) (mainly TC Special Mobile Group)  
131 man-months (32,5%)
- the production of testing specifications using formal methods  
104 man-months (25%)
- the drafting of Harmonized Standards for regulatory purposes  
10 man-months (2,5%)

The evolution of the STF activity is shown in the table below:

Year	Man-months
1989	244
1990	362
1991	397
1992	546
1993	543
1994	476
1995	437
1996	469
1997	360
1998	402

0 50 100 150 200 250 300 350 400 450 500 550  
Total

Project Team resource (in man-months) used by ETSI for years 1989-1998





# the etsi board



**David Hendon**  
Chairman



**Gerald Lawrence**  
Vice-Chairman



**Dieter Kaiser**  
Vice-Chairman

The Board is the executive arm of the General Assembly (GA). The duties of the Board include bringing matters of policy and strategic importance to the attention of the GA and offering advice and decisions on financial, technical and administrative issues.

Within this overall remit, the Board makes recommendations on applications for membership. It also advises on broad standardization policies, reviews performance and considers co-operation agreements with external bodies and Partnership Projects. It oversees the preparation of deliverables by Technical Committees and ETSI Projects, defines the ETSI Work Programme and administers the Funded Work

Programme. The Board considers recommendations for new areas of standardization, takes decisions on the creation and cessation of Technical Committees, ETSI Projects and Special Committees, sets their terms of reference and appoints their chairmen.

Membership of the Board comprises 25 elected members, together with the ETSI Elected Officials and representatives of the European Commission's Directorates III and XIII and the European Free Trade Association as non-voting ex officio members.

## Members of the Board, 1998 - 25 elected Board Members

Name	Country	Nominating organization(s)
<b>August Blunski</b>	Switzerland	Swiss Telecom, OFCOM, Pro Telecom
<b>Peter Bumann</b>	Germany	Bosch Telecom
<b>Philip Davidson</b>	UK	BT
<b>Aad Doorduyn</b>	Netherlands	Lucent Technologies EMEA BV
<b>Loïc Etesse</b>	France	Alcatel
<b>Paul Gonin</b>	France	France Télécom
<b>Wolf Haas</b>	Germany	Mannesmann Mobilfunk GmbH
<b>Pierre-Yves Hébert</b>	France	EDF
<b>Wolfgang Heidrich</b>	Germany	BMW <i>i</i>
<b>David Hendon, Chairman</b>	UK	DTI
<b>Azucena Hernández</b>	Spain	Telefónica de España
<b>Dieter Kaiser, Vice-Chairman</b>	Germany	Siemens AG
<b>Peter Kesselyak</b>	Hungary	Ministry of Transport & Communications
<b>Ingemar Klengen</b>	Sweden	Telia AB
<b>Werner Koch</b>	Germany	IBM Europe
<b>Kari Lang</b>	Finland	Nokia
<b>Kiritkumar Lathia</b>	Italy	Italtel
<b>Gerald Lawrence, Vice-Chairman</b>	UK	Marconi Communications
<b>Tom Lindström</b>	Sweden	Ericsson LM
<b>Pierre Perrichon</b>	France	CEGETEL
<b>Julio Ramires</b>	Portugal	ICP
<b>Harry Robinson</b>	UK	Nortel Networks (Europe)
<b>Jean-Marc Salles</b>	Denmark	Tele Danmark
<b>Francisco da Silva</b> (Vice-Chairman until November 1998)	Portugal	Portugal Telecom
<b>Ilias Zoiros</b>	Greece	Ministry of Transport & Communications



# etsi 1988 - 1998

ETSI was established in 1988, and a number of special events were held in 1998 to celebrate its tenth anniversary. Regional standards bodies and friends from all over the world gathered to help commemorate the occasion at meetings of the Global Standards Collaboration and Radio Standardization group (RAST).

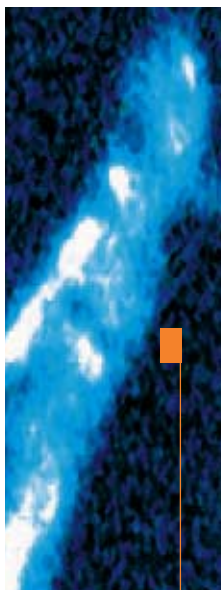


## Looking back...

In 1987 the Single European Market had just been created. Trade restrictions were relaxing and business links were multiplying between the nations of Europe. The need for an integrated communications infrastructure became vital.

The European Commission outlined its thoughts in a Green Paper, recommending the establishment of an organization to set telecommunications standards for the whole of Europe. Its ideas were

In addition, ETSI hosted a 10th Anniversary 'State of the Art in Telecommunications Standardization' conference at which an international audience reviewed ETSI's achievements and discussed the future of telecommunications standardization. The celebrations culminated at a gala dinner with fireworks over the bay of Cannes, commemorating ETSI's ten successful years.



shared by the former European Conference of Postal and Telecommunications Administrations (CEPT) which responded immediately - and ETSI was born in 1988.







# etsi 1988 - 1998

At the time, ETSI was unique in bringing together all the players involved in the standardization process - administrations, network operators, manufacturers, private service providers, research bodies and users - and this policy of working in partnership still characterizes the Institute today.



ETSI's original philosophy involved sensitivity to market needs and the need to set standards in a timely manner. That has not changed. The telecommunications sector has been transformed, particularly with deregulation and the liberalization of the market. Throughout its ten years ETSI has responded to new and growing demands with an innovative and efficient approach to standardization, introducing new ways to streamline the standards making process and pioneering the use of electronic methods of communication.

The structure of ETSI has undergone a number of changes during its life cycle, to ensure that its operations run as efficiently as possible. The first General Assembly (GA) and the Technical Assembly were formed in

1988, to be superseded in 1996 by a new Technical Organization led by a revamped GA and the ETSI Board.

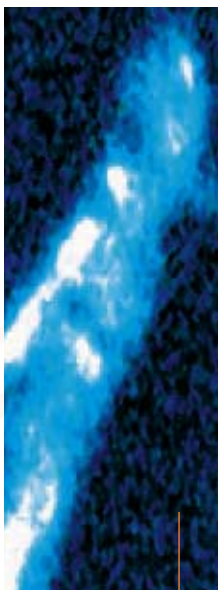
ETSI's achievements over the years have been considerable. By March 1998, 2803 deliverables had been produced, with a further 29 adopted and awaiting publication and 496 in the process of adoption. Lead times in standards production have fallen steadily over the years and the rate of production has risen year by year. The number of projects in ETSI's Work Programme is now too many to enumerate.

Membership of ETSI has also grown - every year since its inception - and is now drawn from 50 countries from all over the globe, reflecting ETSI's growing influence in international circles.

As for the future, the development of telecommunications is limited only by the imagination. There will probably be more collaboration with other organizations; ETSI is already forging new associations and partnerships on a world-wide basis. There is also likely to be increased competition. What is certain is that ETSI has an open mind and will adapt to new market demand as it has always done. It is now well established, with an efficient infrastructure and talented people, and will always be at the forefront of technological progress.



# the financial situation



The management of the finances of ETSI is described by

- the budget accounting which is set up in ECU
- the financial statements which are established according to the French laws and regulations.

Mr Pierre Casagrande, nominated auditor by the 30th General Assembly, has audited the 1998 ETSI accounts and certified that the annual financial statements are true, sincere and give a fair view of the activities carried out during the past financial year. The resulting loss of 2 332 372 FRF represents the accumulation of foreign exchange fluctuations since the creation of ETSI. As the EURO/FRF exchange rate is now fixed, the total loss has been written off in the 1998 account.

## BUDGET MAINTENANCE

ETSI's 1998 Budget shows a surplus of 4.7 MECU reflecting 5.2 MECU higher income and 0.5 MECU higher expenditure compared with the initial budget approved by the General Assembly. The key points of the budget management, compared with 1997, are the following:

1. Expenditure - Capital expenditure (mainly computer equipment) has decreased by 19% due to a reduction in hardware prices. Operating expenses have decreased by 4% due to savings, especially in staff costs. The Funded Work Programme includes mainly the costs of 402 man-months of Specialist Task Force (STF) actually spent during the year 1998.

2. Income - The cost of existing Members' contributions decreased by 3%. New Members joining ETSI and existing Members increasing their class of contribution have almost compensated for the reduction by 22% in the cost of one unit of contribution. EU/EFTA funding increased by 73%, mainly due to the settlement of old contracts. Sales income was nearly constant, despite the free availability of ETSI publications on the web.

## 1998 BUDGET

INCOME		EXPENDITURE	
Members' contributions and Observer fees	13 248 KEUCU	Operating expenses	11 818 KEUCU
Financial income	618 KEUCU	Capital expenditure	765 KEUCU
Sales of documents	1 953 KEUCU	Funded Work Programme	6 225 KEUCU
EU/EFTA funding	6 652 KEUCU	<i>(part financed by Members' statutory contributions)</i>	2 180 KEUCU
Members' Voluntary funding	1 033 KEUCU	<i>(part financed by Members' voluntary contributions)</i>	1 041 KEUCU
		<i>(part financed by EU/EFTA)</i>	1 495 KEUCU
		BALANCE carried forward into 1999	4 696 KEUCU
<b>TOTAL INCOME</b>	<b>23 504 KEUCU</b>	<b>TOTAL EXPENDITURE</b>	<b>23 504 KEUCU</b>





# the financial situation

Financial Statements for the Year 1998

The final accounts and the balance sheet are summarized below. The amounts are in French Francs. Final account period 1 January 1998 - 31 December 1998.

## Statement of Income and Expenditure

	Income (FRF)	Expenditure (FRF)
Income	154 974 674	
Purchases		72 928 749
Expenses		87 258 604
Financial Income	1 971 103	
Loss on exchange		2 342 116
Financial expenses		38 492
Contributions for investment	4 012 346	
Extraordinary income	974 751	
Extraordinary expenses		1 685 045
Taxes on financial income		12 240
1998 loss	2 332 372	
<b>TOTAL</b>	<b>164 265 246</b>	<b>164 265 246</b>

## Summary of the Balance Sheet

### ASSETS

Net amounts at:	31 December 1998 (FRF)	31 December 1997 (FRF)
Fixed assets	9 637 533	10 753 448
Credits	18 107 705	18 388 450
Miscellaneous		999 496
Securities	80 717 726	53 250 055
Available	2 296 456	3 989 450
Adjustment accounts	116 431	1 972 103
<b>TOTAL ASSETS</b>	<b>110 875 851</b>	<b>89 353 002</b>

### LIABILITIES

Net amounts at:	31 December 1998 (FRF)	31 December 1997 (FRF)
Capital	19 442 526	22 915 611
Provision for risks & expenses	37 418 951	14 610 578
Contributions received in advance	10 357 563	13 602 611
Payables/related amounts	40 885 797	35 403 469
Fiscal and social debts	2 771 014	2 820 733
<b>TOTAL LIABILITIES</b>	<b>110 875 851</b>	<b>89 353 002</b>

# elected officials of etsi

## Chairmen of the General Assembly



**Francisco da Silva**  
(from November 1998)

## Vice-Chairmen of the General Assembly



**Pierre-Yves Hébert**  
(from November 1998)

## Chairman of the ETSI Board



**David Hendon**



**Antonio Castillo**  
(until November 1998)



**Karsten Meinhold**  
(from November 1998)

## Vice-Chairmen of the ETSI Board



**Gerald Lawrence**  
(from November 1998)

## ETSI Director-General



**Karl Heinz Rosenbrock**



**Bernard Rémoville**  
(until November 1998)



**Dieter Kaiser**  
(from November 1998)

## ETSI Deputy Director-General



**Bridget Cosgrave**

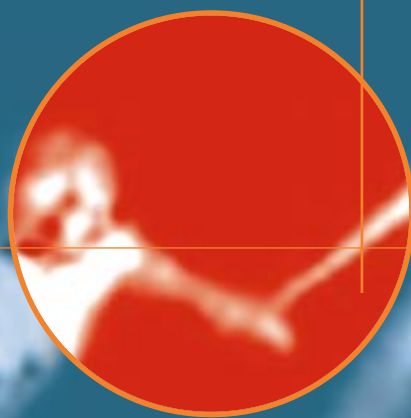


**Björn Troili**  
(until November 1998)



**Francisco da Silva**  
(until November 1998)

# Activity Report 1998



EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE

# contents

## TECHNICAL COMMITTEES

15	<b>TC EE</b> Environmental Engineering	22	<b>TC SMG</b> Special Mobile Group
16	<b>TC ERM</b> EMC and Radio Spectrum Matters	23	<b>TC SPS</b> Signalling Protocols and Switching
17	<b>TC HF</b> Human Factors	24	<b>TC STQ</b> Speech Transmission Quality
18	<b>TC MTS</b> Methods for Testing and Specification	25	<b>TC TM</b> Transmission and Multiplexing
19	<b>TC NA</b> Network Aspects	26	<b>TC TMN</b> Telecommunications Management Network
20	<b>TC SEC</b> Security	27	<b>ECMA TC32</b> Communication, Networks and Systems Interconnection
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## ETSI PROJECTS

28	<b>EP ATA</b> Analogue Terminals and Access	34	<b>EP PTS</b> Pay Terminals and Systems
29	<b>EP BRAN</b> Broadband Radio Access Networks	35	<b>EP TETRA</b> Terrestrial Trunked Radio
30	<b>EP CTM</b> Cordless Terminal Mobility	36	<b>EP TIPHON™</b> Telecommunications and Internet Protocol Harmonization Over Networks
31	<b>EP DECT™</b> Digital Enhanced Cordless Telecommunications	37	<b>EP UMTS™</b> Universal Mobile Telecommunications System
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33	<b>EP EASI</b> ETSI Project ATM Services Interoperability		

## OTHERS

38	<b>3GPP™</b> Third Generation Partnership Project	41	<b>JTC Broadcast</b> Joint Technical Committee of the European Broadcasting Union, the European Committee for Electrotechnical Standardization and ETSI
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40	<b>GMM CG</b> Special Committee Global Multimedia Co-ordination Group	43	<b>SAGE</b> Special Committee Security Algorithms Group of Experts
		44	<b>Special Committee User Group</b>



# tc ee

ENVIRONMENTAL ENGINEERING

M A U R I Z I O G R O S S O N I



*Responsible for defining the infrastructure and environmental aspects for all telecommunications equipment, including that installed at subscriber premises*

TC EE currently comprises two Working Groups: EE1 (Environmental Conditions) and EE2 (Power Supply).

Environmental conditions account for the majority of the activity in TC EE. A formal co-operation agreement was reached between ETSI and the International Electrotechnical Commission (IEC) and EE1 now collaborates closely with its international counterpart, IEC TC 104.

Work within EE1 is continuing on a multi-part standard covering the classification of environmental conditions and equipment tests. Four parts of this standard have already been revised and have recently been released for Vote. Because of the enlargement of CEPT/ETSI country membership, attention is now turning to the wider international considerations. At the same time, work being carried out by IEC TC 104 WG1 on the issue of world-wide environmental conditions is being closely monitored by the group.

The experts of EE1 will continue to be a major influence on the development of environmental conditions and test methods, feeding the IEC on an international level and reflecting developments in further releases of the EN 300 019 series of standards. Discussions are taking place on the subject of lower humidity tests which could result in a new work item for EE1. There is also the possibility of a new work item involving Outdoor Enclosures.

In the area of Power Supply, an Ad hoc group, consisting of WG EE2, representatives from the European Electrotechnical Standards Committee (CENELEC) TC 74 and ETSI TCs Analogue Terminals and Access (ATA) and Digital Terminals and Access (DTA), has been formed to revise the old ETSI standards on electrical safety and ISDN accesses. In October 1998, however, a new Technical Body on Safety was formed to cover this area and part of the EE2 work programme was transferred to this new group.

EE2 has produced two European Standards (ENs) on Outdoor Enclosures which are fully compliant with IEC standards. The Working Group is also currently drafting a new ETSI Guide (ETSI EG) on Additional Requirements for Power Supply. Future work for EE2 is expected to include Power Distribution Inside Equipment; Battery Technologies; Overvoltage Protection on Various Supply and Signal Lines; Safety and Energy Efficiency of Telecommunication Equipment; and DC Power Source or an AC Power Source for Telecommunication Centres.

Recognizing the increasing overlap between telecommunications and computing equipment, TC EE is considering a liaison with the Association for Standardizing Information and Communication Systems (ECMA) to address environmental matters. Concern about these issues is widespread and EE plans to undertake further investigations with a view to supporting a seminar to help to develop ideas for the benefit of the whole telecommunications industry.

# tc erm

EMC AND RADIO SPECTRUM MATTERS

O L I V E R W H E A T O N



*Responsible for a range of radio product and electromagnetic compatibility (EMC) standards and the overall co-ordination of radio spectrum matters*

1998 was a year of consolidation and steady progress for TC ERM, with the former remaining TC Radio Equipment and Systems (RES) groups re-established as radio project activities within TC ERM.

In the core areas of EMC and radio spectrum, numerous EMC standards were published in the Official Journal of the European Community, and the EMC Working Group had a healthy work programme which included, for example, a generic EMC radio standard and a resistibility report.

Co-operation with the European Radiocommunications Committee of the European Conference of Postal and Telecommunications Administrations (CEPT-ERC) was reviewed, and the CEPT/ETSI Memorandum of Understanding was updated. Key issues have included the potential conflict between HIPERLAN (EP BRAN) and the Mobile Satellite Service (MSS) (TC SES) feeder links at 5GHz and the need to identify new spectrum.

A major task relates to the CEPT Detailed Spectrum Investigation (DSI) Phase III activity. A Task Group was set up to focus on this topic, and an initial response has already been offered to the CEPT-ERC.

The radio projects side has been equally active. In the maritime field, for example, new deliverables have included a standard for a maritime VHF watchkeeping receiver, and maritime EMC has been studied in depth via a Task Group.

In the aeronautical sector, the commercial success of the Terrestrial Flight Telephone System (TFTS) is evident, and standards are now being prepared for VHF ground stations to complement those for the aircraft prepared by the European Organization for Civil Aviation Equipment (EUROCAE).

The land mobile sector has been busy creating new standards, for example, for generic short range devices, for road transport and traffic telematics, for narrowband (5kHz) mobile radio equipment and for the provision of two-way paging services for ERMES.

The TC established a Task Group that has had a beneficial dialogue with the European Vehicle Constructors (ACEA), in order to address the issues raised by the Automotive EMC Directive in the area of vehicle mounted radio equipment.

At the request of the Citizen's Band (CB) community, the existing CB standards are being revised and a Task Group is looking at the interference potential of AM/SSB emissions at 27MHz.

In response to the Radio and Telecommunication Terminal Equipment (R&TTE) Directive, TC ERM established Task Group 6 to define the implementation measures needed within ETSI. The Task Group was subsequently adopted by the Operational Co-ordination Group (OCG), to ensure the wider involvement of all interested parties.

The preparation of Harmonized Standards in support of the R&TTE Directive, will form a major part of the work of TC ERM in 1999.



# tc hf

HUMAN FACTORS

K N U T N O R D B Y



*Responsible for standards and guidelines dealing with ease of use and accessibility of telecommunication equipment and services, including the requirements of older and disabled people*

Ease of use is a key factor for the commercial success of any telecommunication product or service. The growing complexity of telecommunication services and equipment makes this aspect increasingly important.

Membership of TC HF includes representatives from research bodies, manufacturers, service providers, users and consumers. The TC contributes to the following work areas: user interfaces for the Internet, mobile communications, multimedia and videotelephony, user interfaces for network management and numbering, addressing and service codes.

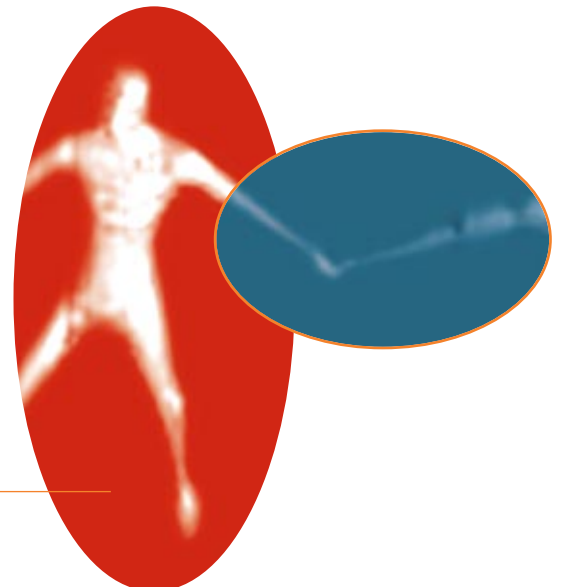
During 1998, work in these areas resulted in the publication of two European Standards, five ETSI Standards, two ETSI Guides (ETSI EGs) and two Technical Reports (ETSI TRs).

Three Specialist Task Forces (STFs) completed their work during 1998: one dealt with videotelephony on the Integrated Services Digital Network

(ISDN), another generated and tested symbols for hearing impaired people and the third created a register of supplementary service codes for use throughout ETSI.

Ongoing work includes naming and addressing systems in future converging services and networks such as the Universal Mobile Telecommunications System (UMTS™). This should lead to the replacement of long telephone numbers with a more meaningful system of names and addresses.

TC HF collaborates closely with European Union funded projects and continues to support the aims of the European Commission by producing the necessary standards to allow universal access to information and communication technology (ICT). Accommodating the needs of the growing numbers of older users is also a high priority for TC HF.







# tc mts

METHODS FOR TESTING AND SPECIFICATION

DIETER HÖGREFE

*Responsible for the identification and definition of advanced specification and conformance testing methods, which take advantage of formal approaches and innovative techniques to improve the efficiency and economics of both the standard description and associated conformance testing processes*

MTS completed its update of guidelines for using Systems Definition Language (SDL) in more user-friendly, illustrative ways in the Autumn, and its work is expected to be published as an ETSI Guide (ETSI EG) during 1999.

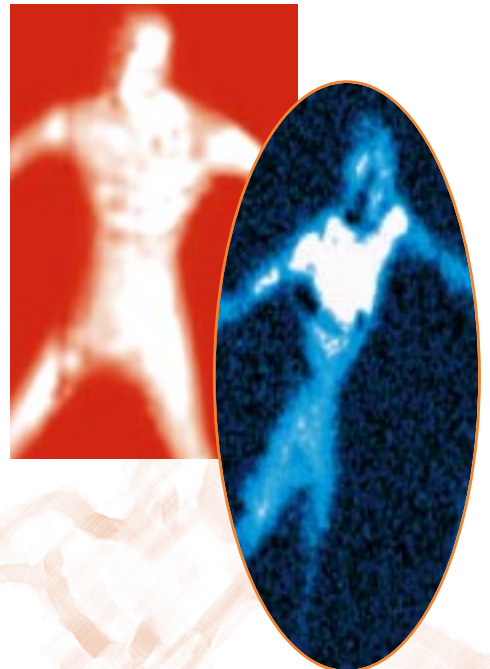
Significant progress had been made by the end of 1998 in the area of language issues and the harmonization of ASN.1, which currently exists in three different versions: ASN.1 94, ASN.1 as defined in SDL and ASN.1 as defined in Tree and Tabular Combined Notation (TTCN). The work is scheduled for completion early in 1999.

In response to requests from ETSI Members, TC MTS plans to produce version 3 of TTCN, introducing new functionality and simplifying the language. This is a natural extension of the harmonization of TTCN and ASN.1 and is expected to be offered to the International

Telecommunication Union for world-wide application by the end of 1999.

Two new ETSI EGs were prepared and passed for Voting in 1999: the first on the use of SDL for the validation and development of tests, the second an updated style guide to the production of TTCN and conformance testing.

Finally, the TC is embarking on an important new area of work in 1999: developing guidelines on the use of Unified Modelling Languages (UML) within the ETSI standardization process by the year 2000.





# tc na

## NETWORK ASPECTS

H A N S V A N D E R V E E R

Acting Chairman



*Responsible for general network aspects for all existing and new telecommunications networks*

During 1998, NA organized successful workshops to initiate standards development in two very important and related areas: service providers' access to public networks and interoperability/interworking with the Internet.

Work continued throughout the year on numbering, addressing, routing, services and charging capabilities, with emphasis shifting towards Internet-related work. Work has been started on service requirements for Global Virtual Home Environment (VHE) and progress has been made on Fixed-Mobile Convergence (FMC).

Progress was also made on Broadband ISDN (B-ISDN) resource management, traffic control and network sizing/dimensioning methods, general performance issues, user plane performance and Operation, Administration and Maintenance (OAM) in B-ISDN. To increase levels of participation here, however, it was proposed that these areas should be merged into other Technical Committees, such as Speech Transmission Quality (TC STQ).

Activities on Intelligent Networks (IN) expanded in 1998 to include work on service provider access requirements from both the service providers' and the Public Telecommunications Network Operators' perspectives; a reinforcement of security activities, especially on the lawful interception of IN-based services; and a renewed focus on the fixed network evolution toward the Universal Mobile Telecommunications System (UMTS™), with specific work items on mobility management and the virtual home environment being studied.

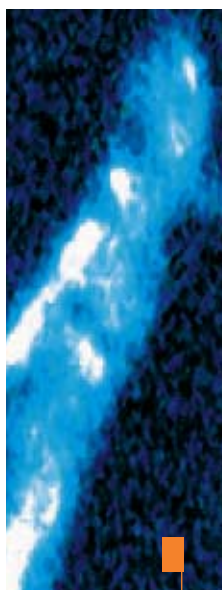
Functional modelling for IN interworking also includes interworking between the Intelligent Network and the Internet Protocol (IP) network, a subject which is being widely studied in co-operation with TC Signalling Protocols Switching (SPS3), Study Groups 11 and 16 of the Telecommunications Sector of the International Telecommunication Union (ITU-T) and the Internet Engineering Task Force (IETF).

A Technical Report (ETSI TR) was finalized on network architecture evolution which clarifies many of the architectural concepts related to the Global Information Infrastructure, the European Information Infrastructure, Global Multimedia (GMM) and IMT-2000 and the relationships between them. Contributions were also made towards the work of ETSI's GMM Architecture Group and to Question 29 of ITU Study Group 13 which deals with network architecture evolution.

In the area of interworking, an ETSI Guide (ETSI EG) to Hybrid Fibre Coax (HFC) access interworking with narrowband networks and IP-based networks was published, and good progress was made towards a similar specification dealing with interworking between HFC Access and Broadband and digital mobile networks.

An analysis of Internet-related topics to be studied within ETSI was compiled for the Operational Co-ordination Group and a study of the parameters and mechanism for charging in IP-based networks from the network point of view was prepared.

Finally, in the interest of efficiency and to increase effectiveness, a major re-organization was initiated which will see a merger between TC NA and TC SPS in 1999.





# tc sec

SECURITY

G Y Ö R G Y E N D E R S Z

*The focal point for security standardization within ETSI*

The context within which TC SEC is operating is becoming increasingly pressured. Market demand is urgent and expert resources within the information security area are scarce, now and in the near future, with an insufficient number of graduate trainees being produced. Nevertheless, 1998 has been a particularly eventful year for TC SEC.

An important decision taken early in the year was to re-focus the work of the Trusted Third Party (TTP) Ad hoc Working Group from confidentiality (encryption)-related standardization to the Electronic Signature area. This was done in response to preferences expressed by European standards bodies and the initiative of the European Commission (EC) for the creation of a harmonized technical and legal framework for Electronic Signatures, a major prerequisite of global electronic commerce.

The first phase of activity resulted in the ETSI Report 'Electronic Signature Standardization' which defined the interoperability requirements for business transactions, especially the standardization of the format and content of certificates and signatures to be exchanged during transactions, as the primary targets for ETSI's work in this area. To keep pace with market demand, the work programme is intense, and the target date for approval of these standards has been set at September 1999. TC SEC activity is in line with the EC mandate to ETSI, CEN and CENELEC for the development of standards for Electronic Signatures. There is close co-ordination and liaison through ETSI's participation in the work of the European Electronic Signature Standardization Initiative (EESSI) to avoid any duplication of effort.

This is only one of a number of new tasks upon which SEC embarked during 1998. In the area of the lawful interception of telecommunications traffic, the Lawful Interception Ad hoc Working Group of TC SEC continued its definition of the handover interface between a transport network and a Law Enforcement Agency. After having published the requirements document last year, 1998 saw an ETSI Standard published, containing a general architecture, a functional and a role model of the handover interface and requirements for network functions. The third document of that series, containing the details of delivery information and a protocol specification, was started during 1998 and is expected to be published as an ETSI Standard by September 1999.

In addition, TC SEC is working with ETSI Project TIPHON™ (Telecommunications and Internet Protocol Harmonization Over Networks) on threat analysis and on the definition of a security framework to ensure the secure interoperation of infrastructures and terminals operating across the Internet and Circuit Switched Networks. A new TIPHON™ Security Ad hoc Working Group was created to carry forward this work in close co-operation with security activities within EP TIPHON™.

At the end of 1998, a new chairman and secretary were appointed to SEC and a review of the work programme and working procedures was initiated with the aim of further improving market take-up and the global harmonization of the TC's deliverables.

# tc ses

SATELLITE EARTH STATIONS AND SYSTEMS

A L A I N R I C H A R D



*Responsible for all aspects relating to satellite communications*

1998 was a year of expansion for TC SES.

Several Working Groups were created to deal with new work, including one on the Geostationary Radio Interface for satellite handsets using geostationary satellites to interface with the GSM core network. This Group will work in close co-operation with the Telecommunication Industry Association (TIA) of the USA, and is expected to produce around 200 Technical Specifications (ETSI TSs) by the year 2000. The first batch of ETSI TSs should be on the ETSI server early in 1999.

In November, ETSI signed a Co-operation Agreement with the European Co-operation for Space Standardization (ECSS), an initiative established by the European space community (industry and space agencies) to develop a coherent, single set of user-friendly standards for use in all European space activities. ETSI's role in this initiative is to develop standards for communications between satellites and ground stations and interfaces with the terrestrial network, and a new Working Group has been set up by TC SES for this purpose.

A third Working Group on the Satellite Component of the Universal Mobile Telecommunication System

(UMTS™)/IMT-2000 was established, to prepare a Harmonized Standard conforming with the new Radio and Telecommunication Terminal Equipment (R&TTE) Directive. This standardization work will be performed in co-operation with a number of other bodies: the Third Generation Partnership Project, ETSI Project UMTS™ and Task Group 8/1 of the Radio Sector of the International Telecommunication Union.

TC SES's Technical Report (ETSI TR) on Multimedia using Satellite was published in October 1998. This report covers Phase 1, mainly the identification of the relevant market players. Phase 2, covering standardization, is scheduled for publication early in 2000.

The standards for Satellite Interactive Terminals (SITs) for geostationary satellites in the Ku/Ka bands and the Ka band, were approved by TC SES for Vote. When finalized, these standards will enable broadband access to the Internet, allowing users to access all video servers on the Web quickly and making interactive video on demand a reality. The Harmonized Standards to conform with the new R&TTE Directive were also launched, which will allow manufacturers to self-declare conformity with the R&TTE Directive.



# tc smg

SPECIAL MOBILE GROUP

F R I E D H E L M H I L L E B R A N D



*Responsible for ETSI's work on GSM (the Global System for Mobile communication) in the 900 and 1800 MHz bands, and UMTS™ (Universal Mobile Telecommunications System)*

Growth in GSM has been enormous, with over 135 million users by the end of 1998 in 118 different countries. Although mobile technology is already moving into the third generation with the development of UMTS™, GSM is so widespread and so successful that it is still being developed with the addition of new functionality. The main task of the year was 'Release 98', the latest package of standards for GSM, which offers over 20 new features including a new speech coding system (codec) for GSM called Adaptive Multi-Rate (AMR), which allows the network operator to prioritize capacity or quality per base station. Although targeted primarily at GSM, it is also the leading candidate for the default speech codec for the emerging UMTS™ standard.

Other significant features of Release 98 include Transcoder Free Operation (TFO) for improved speech quality on mobile to mobile calls, Enhanced Data rates for GSM Evolution (EDGE), Mobile Execution Environment (MExE), Fraud Information Gathering System (FIGS) and Immediate Service Termination (IST), which allows a network operator to terminate a call believed to be fraudulent even when roaming, Mobile Number Portability (MNP) and the Cordless Telephony System (CTS).

In the area of UMTS™, TC SMG has added support for multimedia functions (Internet, E-mail, video and fixed pictures), with emphasis on packet data. This is leading to greater speed, new opportunities for services

such as electronic shopping, and more economical billing (paying only when using the service), which are fundamental features of UMTS™.

TC SMG took a major step forward in January 1998 by agreeing the radio interface for UMTS™. The UMTS™ Terrestrial Radio Access (UTRA) draws on both W-CDMA and TD-CDMA technologies to cater for both the long range (cellular) and the shorter range in a spectrum allocation as small as 2,5 MHz (cordless). Work on the specification of UTRA began in March. By the end of the year, the service principles and requirements for UMTS™ had been agreed, significant steps had been taken on the radio side and progress made towards the architecture on the telecommunications side.

TC SMG also made good progress in 1998 on the Virtual Home Environment which allows the user to keep his own subscription profile and service appearance, even when roaming. This is based on a greater emphasis on service creation using standardized tools, rather than by specifying exact services. While the drive for this is UMTS™, it should also be applicable to GSM, using the Customized Applications for Mobile networks Enhanced Logic (CAMEL), MExE and the Subscriber Identity Module (SIM) Toolkit features.

Finally, in December 1998, five of the world's major standards development organizations, including ETSI, became Organizational Partners, launching the 3rd Generation Partnership Project (3GPP™) (see page 38). TC SMG will work closely with the Project, which will take over responsibility for the development of UMTS™, freeing SMG to concentrate mainly on GSM in coming years.



# tc sps

SIGNALLING PROTOCOLS AND SWITCHING

DIETER KAISER

*Responsible for defining the information flows, call handling sequences and signalling in public networks, including the techniques for transferring user-to-user information, user-to-node communications, inter-node communications and protocols for mobile service applications (e.g. Customized Applications for Mobile networks Enhanced Logic (CAMEL)). The TC's work also covers consistency between public, private and mobile networks signalling and protocols, including signalling architecture requirements.*

By the end of 1998, TC SPS had completed all the standards for Phase 1 of Cordless Terminal Mobility (CTM), allowing individual cordless terminal users in a household or business to roam between the coverage areas of their different base stations and to make and receive calls independently of each other.

In addition, all the standards for ISDN were finalized, including a complete set of conformance testing standards for signalling protocols.

As part of its work on the convergence of fixed and mobile networks services, standardization of the signalling protocols for short message services has already started, and number portability and personal number portability have been scheduled into the work programme for 1999. This work is aimed at allowing the user to have just one number, wherever he or she is, in whichever network, and to roam across network boundaries.

Future activities also include the provision of support to other ETSI projects, including TIPHON™

(Telecommunications and Internet Protocol Harmonization Over Networks), and specialist work for the ISDN user part of Signalling System Number 7. SPS will contribute to the new ETSI Project on the Universal Mobile Telecommunications System (EP UMTS™) as far as the signalling aspects for fixed networks are concerned, and support the network aspects of Virtual Home Environment. A major new challenge facing the TC in 1999 will be interoperability between telecommunications networks and the Internet, including the Access- and Network-to-Network Internet supporting capabilities of the relevant signalling protocols .

Finally, in view of the rapidly changing and competitive environment of telecommunications, information technology and computer standards, ETSI is required to work in the fastest and most efficient way possible. At the same time, there has been a recognition of a growing overlap in the technological areas covered by SPS and TC Network Aspects (NA).

Fragmentation and duplication of resources and effort, however, has to be avoided. During the course of 1998, extensive discussions were held about the future operation of Technical Committees NA and SPS and, in November 1998, the amalgamation of the two TCs was agreed. The merger is expected to take effect in April 1999, saving significant resources, both in terms of manpower and finances, and accelerating the progress of standardization in this area.



# tc stq

## SPEECH TRANSMISSION QUALITY

J O H N H O R R O C K S



*Responsible for the standardization relating to end-to-end speech quality in existing and future fixed and mobile networks and their terminals*

Participation in the work of TC STQ increased during 1998. A workshop, attended by some 60 delegates, was held in October, when eight companies presented transmission quality measurement tools which they have developed and which implement the latest techniques from the Telecommunications Sector of the International Telecommunication Union (ITU-T).

A number of European Standards and Technical Reports (ETSI TRs) were completed during the year including an introduction to objective comparison measurement methods for one-way speech quality, for use by network operators. Another, outlining the objectives and principles for the transmission performance of multiple interconnected networks, will benefit network planners, and guidance was offered to network designers on writing specifications and test for non-linear and time variant telephony terminals. Guidance on transmission planning for telephony in private networks, applicable for Europe and North America, for use by network

planners, was also completed.

In addition, STQ developed a wallchart road map describing the factors that contribute to voice quality and the TC's activities in relation to them. *(Free copies of this wallchart may be obtained from the ETSI Secretariat.)*

Much of the work of STQ is now focused on the quality issues of Voice over Internet (VoIP) and several STQ experts are attending and supporting the work in ETSI Project TIPHON™. Different classes of quality have been defined and are expected to form the basis for different subscriptions to VoIP services. The next stages of the work related to TIPHON™ will concentrate on the performance of PC-based voice terminals, methods for providing specific levels of quality, which will involve the use of the Diff Serv protocol for queue management in IP networks, the management of quality between interconnected networks and extension of the E-model to handle VoIP.

In addition, STQ is close to completing specifications for feature extraction algorithms for distributed speech recognition for use with radio based man-machine interfaces.





# tc tm

TRANSMISSION AND MULTIPLEXING

G Ü N T H E R   Z E D L E R



*Responsible for all aspects of the standardization of transport networks and their elements (including fixed radio relay, but excluding satellite systems) and for transmission aspects of transport network interfaces*

TC TM succeeded in publishing a total of 52 deliverables in 1998, with an additional 35 completed, subject to formal approval procedures.

Among the main achievements of the year was significant progress in the area of optical fibre cables. Interim European Telecommunication Standards (I-ETSS) on optical fibre cables for indoor and underwater applications were submitted to the European Electrotechnical Standards Committee (CENELEC), on the basis of the joint co-operation agreement, to be published as European Standards (ENs). A number of I-ETSS on passive optical components, standardizing the functional and system parameters of components for optical fibres, were published. A new series of ENs on the generic requirements of transport functionality of Synchronous Digital Hierarchy (SDH) equipment and on the related Implementation Conformance Statement (ICS) proforma specifications were published. Good progress on the generic requirements of ATM transport functionality within equipment was also achieved and work continues on optical networking.

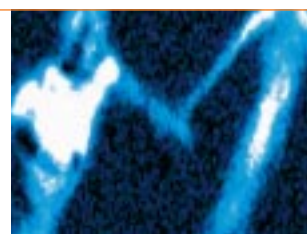
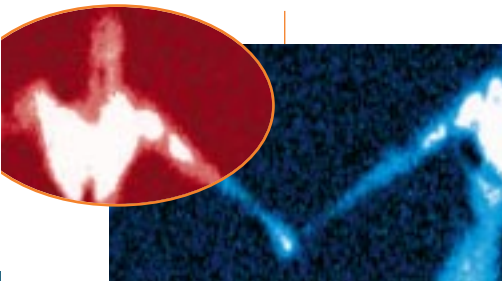
Two standards were completed for core networks, on the characteristics of SDH leased lines, and work continues in this area. An important Technical Specification (ETSI TS) covering generic functional architecture for access networks was finalized and has become the main input for a new ITU-T Recommendation for passive optical broadband networks.

Good progress made with radio relay systems included three ENs on Point-to-Multipoint (P-MP) Digital Radio Relay Systems (DRRS) in the band 24,5 to 29,5 GHz and two on P-MP systems in the band 1 to 3 GHz for different applications, as well as one on Point-to-Point (P-P) Plesiochronous Digital Hierarchy (PDH) low and medium capacity DRRS and Direct Sequence-Code Division Multiple Access (DS-CDMA) P-MP digital systems in the 3 to 11 GHz band.

TC TM has been very successful in the area of xDSL systems, finalizing an ETSI TS for High bit rate Digital Subscriber Line (HDSL) Systems. Europe has led the way in this work, and this ETSI TS has been sent directly to the International Telecommunication Union (ITU) where it has been adopted as an ITU Recommendation. A further Recommendation for Asymmetrical Digital Subscriber Line (ADSL) Systems, which is to be adopted in 1999, includes a section dealing with ADSL over European ISDN which was provided by TC TM. The first part of the work on the ETSI TS for the Very high speed Digital Subscriber Loop (VDSL) was also published.

In addition, a report on the SDH project was virtually completed, showing the bodies responsible for each of the various aspects of the operation of SDH. This will be used to harmonize activities in different quarters, to ensure that all issues are covered and to avoid duplication of effort.

The Access Network (AN) report was published as a European Guide early in 1998. This report embraces work within ETSI, the European Broadcasting Union (EBU) and CENELEC, and covers means of transmission, services transmitted over networks, interfaces, operation aspects and maintenance.



# tc tmn

TELECOMMUNICATIONS MANAGEMENT NETWORK

F R A N K P E E T E R S



*Responsible for the creation of network management standards for the telecommunication network, with the aim of providing consistent and harmonized management standards across all technologies under the umbrella of ETSI standardization activities*

The greatest achievement of 1998 was probably the completion of centralized charging in the Q3 interfaces series.

Also finished was a framework document on Intelligent Networks produced after a comprehensive study undertaken in co-operation with Study Group (SG) 11 of the International Telecommunication Union (ITU).

TC TMN introduced network routing into the Telecommunications Sector of the ITU, which will lead to the publication of an ITU Specification during the course of 1999.

The TC established a new group (TMN5) on the management of the Universal Mobile Telecommunication System (UMTS™), concentrating particularly on network management aspects. The new committee produced its first deliverable in September 1998, an ETSI Standard (ES), and two further ESs are in the pipeline for 1999. This work is being carried out in co-operation with the Third Generation Partnership Project (3GPP™).

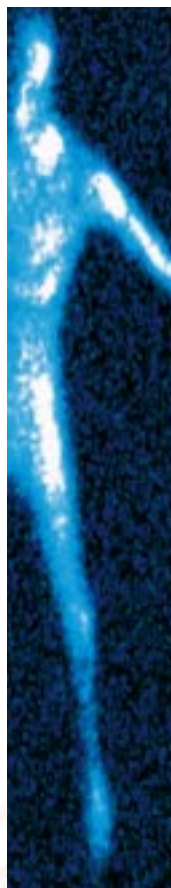
Good progress has also been made on the X-interface between network operators, between the equipment to be managed and the equipment doing the managing. With the growing

number of operators, this is an increasingly important issue; diversity is now so great that standardization has become an urgent necessity and will form the main focus of the TC's work in 1999.

TC TMN was originally formed by the amalgamation of a number of existing groups within ETSI and has been careful to preserve those committees' links with external organizations. Co-operation with the Telecommunications Industry Association and with committee T1M1 (the technical subcommittee in the American National Standards Institute responsible for internetwork OAM&P standards) is well established in the area of the X-interface. TMN is also working with T1M1 and with ITU SG4 to expand security requirements.

Unified Modelling Language (UML) is now widely accepted and, in 1999, TMN is sponsoring a course for ETSI, in an effort to introduce this new methodology to a wider audience.

Finally, the big challenge for 1999 is the management of the Internet, and discussions have already been initiated on this subject with the Internet Engineering Task Force to avoid the duplication of effort. The proliferation of network management issues in a variety of different areas is such that the TC is beginning to find its resources overstretched.



# ecma tc32

COMMUNICATION, NETWORKS AND SYSTEMS INTERCONNECTION

J O H N E L W E L L



*TC32 is a Technical Committee of the Europe-based Association for Standardizing Information and Communication Systems (ECMA). Under a co-operation agreement between ECMA and ETSI, by which the two organizations agree to share responsibility for standardization in the field of private/corporate telecommunications networks, TC32 acts as a Technical Committee of ETSI.*

Because corporate networks, unlike public networks, must operate homogeneously across national boundaries, their standards need world-wide applications, so standards created within TC32 are fed into the international standardization organizations (Joint Technical Committee 1 (JTC1) of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)).

Major focus in the past has been on the conception and development of 'QSIG' standards for corporate networking between different switches serving the various sites of a corporation. By the end of 1998, the majority of standards for Private Integrated Services Networks had been finalized on an international basis and published on CD-ROM and the ECMA and ETSI web sites.

In addition, work on the standards for mobility within corporate networks progressed well during the year, with completion at the international level of the initial batch of standards for Cordless Terminal Mobility and the submission of standards on Personal User Mobility to ISO/IEC JTC1.

During 1998, there was a gradual shift of focus towards the use of Internet Protocol (IP) in corporate networks.

Two new Task Groups were established to look at Internet ScreenPhone and IP-based Multimedia Communications in corporate networks.

Although it currently does not fall within the ECMA/ETSI agreement, 1998 saw the completion of version 3 of a number of standards on services and protocols on Computer Supported Telecommunications Applications (CSTA), together with implementation guides. These were submitted to ISO/IEC JTC1 during 1998. The application of this work to IP-based communications is now being investigated.



# ep ata

## ANALOGUE TERMINALS AND ACCESS

N U N O E N C A R N A Ç Ã O



*Responsible for the standardization of terminals and terminal access to ensure the timely and economic development of equipment with an analogue interface*

ETSI's influence now extends well beyond the borders of Europe and this is clearly apparent in EP ATA. At the end of 1998, a plenary meeting was held in South Africa, hosted by the South African network operator, Telkom, which is one of the Project's most active participants.

This meeting was symbolic in a number of ways. In theory, ETSI Projects have a life of two years, during which they should complete all their work. Since ATA was founded early in 1997, the meeting in South Africa marked the end of its first term of activity. The Project's top priority had been the harmonization of the Telecommunications Terminal Equipment (TTE) analogue interface. With the completion in 1998 of three Technical Bases for Regulation (TBRs), this has now been achieved, but the EP has been extended for a further two years to undertake new work.

During 1998, TBRs 21 (access to the network) and 38 (voice transmission for simple telephones), which establish the minimum requirements for terminals to access the European market, were published and adopted by the European Union as Common Technical Regulations (CTRs). TBR 37 (now EN 301 437), which extends the application of TBR 21 to telephones, and an Interim CTR on the subject are expected in the first half of 1999. Together these CTRs (21, 37, 38) represent a formal recognition of the full harmonization

of terminals for the analogue interface of the Public Switched Telephone Network (PSTN).

In parallel with this work, ATA has been making solid progress in the area of enhanced services. In particular, several deliverables have been published which establish protocols and existing service description adjustments to provide analogue interfaces with services available in Integrated Services Digital Networks.

The next phase of ATA's work is expected to build on the existing harmonization and apply it to a larger range of sectors, using lessons learned in Europe to benefit other parts of the world. A high priority will be an examination of the implications of the new Radio and Telecommunications Terminal Equipment Directive (R&TTE, 99/5/EC) and the conversion of ATA's TBRs into appropriate deliverables, depending on preliminary decisions of the Regulatory Authorities.

Other items scheduled for 1999 include work on the reference description of the Network Termination Point of the analogue interfaces of PSTN, the updating of existing documents to ensure compatibility with emerging technologies and the implementation of enhanced services.

# ep bran

## BROADBAND RADIO ACCESS NETWORKS

J A N K R U Y S



*Responsible for the standardization of Broadband Radio Access Networks*

EP BRAN was set up to provide facilities for access to wire-based networks in both private and public contexts by the year 2000. The Project addresses wireless access systems with bit rates of 25 Mbit/s or more, operating in either licensed or license-exempt spectrum and with applications for both business use and residential access. Fixed wireless access systems are intended as high performance, quick to set up, competitive alternatives for wire-based access systems.

1998 saw the culmination of almost two years' work with the definition of the key characteristics of HIPERLAN/2 (High Performance Radio Local Area Network). This standard defines a high performance multimedia 36Mb broadband Radio Local Area Network (RLAN) for private and public applications. This technology will complement the Universal Mobile Telecommunications System (UMTS™) by providing interfaces into Asynchronous Transfer Mode (ATM), Internet Protocol (IP) and UMTS™. The basic version for IP access is expected to be finalized during 1999 when product development can start. The detailed specification of the radio and link control and IP interworking layers is in progress. New work on conformance testing specifications is also included in the programme for 1999.

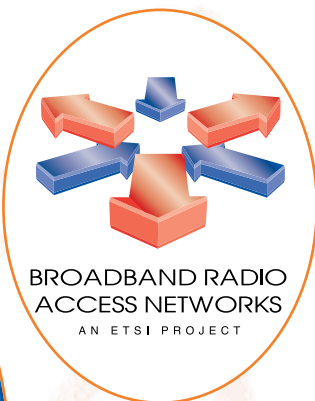
Three Technical Reports (ETSI TRs) were published in 1998: one on the technologies and techniques for broadband access, a second on

HIPERLAN/2 requirements and architectures and the third on HIPERACCESS requirements and architectures.

Close co-operation has been developed with Wireless LAN Committee P 802.11a of the Institute of Electrical and Electronic Engineers (IEEE) and the Multimedia Mobile Access Communications Promotion Council (MMAC) in Japan. This has led to agreement on the content of a common standard for 5GHz radio technology and a common approach to world-wide spectrum allocations.

In the area of HIPERACCESS, for broadband multimedia fixed wireless access, EP BRAN succeeded in defining the requirements for a broad range of applications, providing the basis for standardization of special services and selected applications. Co-operation was established during the year with committee 802 N-WEST of the IEEE. During 1999, there may be an opportunity for work to be divided between ETSI and the IEEE as the drafting of standards begins.

Finally, after 15 years in standardization, Jan Kruijs has resigned as chairman of EP BRAN to concentrate on other aspects of his work. His successor inherits an enthusiastic and dedicated project team that is well on its way to achieving its goals.



# ep ctm

## CORDLESS TERMINAL MOBILITY

G R A H A M C R I S P



*Responsible for the standardization of Cordless Terminal Mobility (CTM) to enable the development of products and services which allow users of digital cordless terminals to roam freely between different base stations and networks using a single CTM service registration, directory number and subscription*

CTM standards build on the latest developments in Digital Cordless technology (CT2 and DECT™), Intelligent Network (IN) Capability Set 2 and public and private network ISDN standards.

The most significant achievement of 1998 was the approval of the essential CTM Phase 1 standards. These standards enable conformant products and services to be developed. These products and services will in turn allow users with digital cordless terminals (CT2 or DECT™) to originate and receive telephone calls when they roam between different residential, business and public base stations, connected to a single public network. The remaining Phase 1 standards, enabling roaming between public and private networks, are in the pipeline.

Work is also progressing in parallel on CTM Phase 2 standards which includes enhancements for in-call

handover between cordless access systems, emergency calls without a terminal registration, Message Waiting Indication (MWI) and support for ten CTM Supplementary Services.

In addition, work is well advanced on a number of CTM Phase 2+ Feature Packages (FP):

- FP1 Circuit Switched data services 32 and 64 kbit/s UDI
- FP2 CTM Point-to-Point Short Message Service (SMS)
- FP3 Public CTM/GSM internetwork roaming Feasibility Study and
- FP4 Point-to-Point Protocol (PPP) interworking for Internet access and general multi-protocol datagram transport.

Having identified the key CTM work areas and initiated necessary work in the appropriate technical bodies, EP CTM has now completed its original purpose and closed, leaving the ongoing co-ordination of the few remaining work items to take place directly between the technical bodies.





# ep dect™

DIGITAL ENHANCED CORDLESS TELECOMMUNICATIONS

G Ü N T E R   K L E I N D L



*Responsible for the development and maintenance of standards for Digital Enhanced Cordless Telecommunications (DECT™)*

Since standardization of DECT™ began in the mid 1980s, the system has become one of the most successful wireless standards in the world. Current work in ETSI centres on enhancing the system's specifications, especially to cover high bit rates and multimedia applications, and considerable progress was made in these areas in 1998.

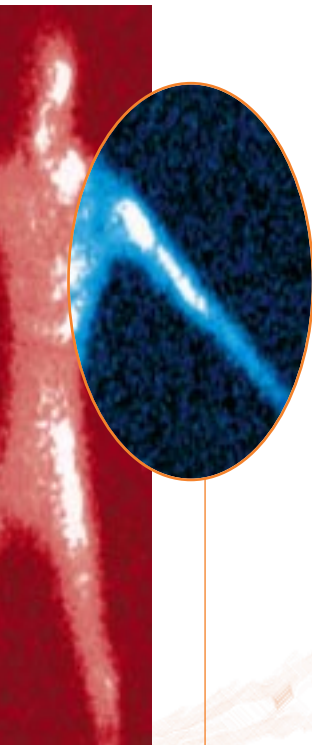
The Project responded to the growing demand for the support of data services and the continuous desire to increase available data rates by adding high bit rate modes to DECT™ (2 Mbit/s). This will support the transmission of high speed data, for example, very fast Internet access and wireless Local Area Networks (LAN), and is a prerequisite for IMT-2000. This standard passed the Public Enquiry stage in 1998 and Voting is expected early in 1999.

Work on the DECT™ Packet Radio Service (DPRS) in support of data applications was also completed and a new European Standard (EN) approved for Public Enquiry in 1999.

Development of the Multimedia Access Profile (MMAP) has been completed, and an EN was finalized for Public Enquiry in 1999. Mainly targeted at the small office and home markets, this combines a selection of DECT™ services with optional voice services, allowing terminals to provide a fully integrated multimedia service of voice and data.

In June, DECT™ was proposed to the International Telecommunication Union (ITU) as a potential family member of IMT-2000 and, in November, the ITU confirmed that DECT™ fulfils all the necessary requirements. The Project will continue to contribute to the development of the Third Generation Mobile System in 1999.

Also scheduled for coming months is work on mobile Internet technology in co-operation with ETSI Project TIPHON™ (Telecommunications and Internet Protocol Harmonization Over Networks), the introduction of high data rates into DPRS and further applications of MMAP in the business environment.



# ep dta

## DIGITAL TERMINALS AND ACCESS

D A V I D M A X E Y



*Responsible for the standardization of digital terminals and access to digital networks, thus ensuring the timely and economic development of terminal equipment for use with existing and future telecommunications services offered by Public Network Operators*

Much of EP DTA's work in 1998 concentrated on the harmonization of type approval requirements for terminal equipment for use on datacoms. A European Standard (EN) which will replace Technical Bases for Regulation (TBRs) 1 and 2 (and widen their combined Scopes) was completed and went for Public Enquiry in 1999.

Significant progress was also made on the harmonization of the type approval requirements for access to Broadband systems and an ETSI Guide (ETSI EG) was published on design for Broadband terminals.

During 1998, DTA drew up a number of liaison statements which have been agreed in principle by the regulatory bodies, allowing the Project's advice to influence the future direction of type approval activities.

These developments are particularly important for terminal manufacturers. By providing a one-stop approval mechanism, time to market is

significantly reduced and manufacturers need approval only once for the whole of Europe instead of in each individual country, resulting in savings of both time and cost. Network operators also find that the availability of a large, readily identifiable range of approved equipment with which to connect increases the sales of their services.

Perhaps the most important new development which will affect the future of EP DTA is the new Radio and Telecommunication Terminal Equipment (R&TTE) Directive. DTA's immediate task in 1999 will be to examine existing deliverables and, where necessary, bring them into line with the Directive. This will be done in close co-operation with the newly formed R&TTE Directive Steering Committee and its Specialist Task Force.

Other issues for the future include a review of Open Network Provision (ONP) digital leased line standards to identify those that require updating in the light of developments with modern digital network platforms, and participation in the ETSI xDSL discussions.

# ep easi

ETSI PROJECT ATM SERVICES INTEROPERABILITY

MIKE BEXON

*Responsible for bringing together a complete specification to enable network service and management interoperability for the next generation of commercial broadband networks, initially in Europe, but with the intention of global application*

EP EASI was set up in October 1997 to determine a complete set of standards for interoperable Asynchronous Transfer Mode (ATM) networks and interoperable ATM services. This was in response to the activities of the ATM Working Group, started by the Association of European Public Telecommunications Network Operators (ETNO) at the beginning of 1997, producing a Memorandum of Understanding (MoU) to be signed by any network operators intending to offer services using ATM technology.

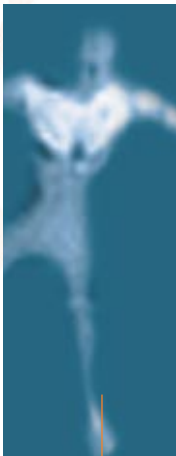
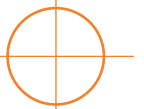
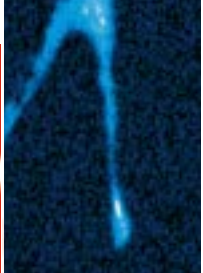
The aim is to produce standards which will enable industry to provide a common level of functionality at network interfaces, allowing a standard level of interoperability between different operators' networks. This will make high performance broadband services commercially viable and promote the introduction of new types of high speed multimedia services.

Progress has been slow during 1998 because EASI was waiting for the ATM MoU to be signed by network operators so that they could work together to finalize the technical requirements for Phase 1, and later for Phase 2 of the MoU. Not until October was it clear that the MoU would not be signed and that EASI would have to carry on without it. In November, therefore, EASI drafted new terms of reference to remove its

dependence on the MoU. Since then the Project has been working to enhance the technical documents which were associated with the MoU and turn them into a set of ETSI Technical Specifications entitled 'Technical Framework for the Provision of Interoperable ATM Services'.

A major part of the ATM MoU was concerned with the network management aspects of setting up and operating ATM-based services, and EASI has therefore established a link with the relevant European Institute for Research and Strategic Studies in Telecommunications (EURESCOM) project, P813. Regular, co-located meetings are being held with joint sessions, so that ETSI and EURESCOM can work together, primarily to develop the network management aspects. Significant enhancements have already been made to the specifications from the former MoU work, and eventually these will become the ETSI Technical Specifications from EASI on network management. Formally, part of the output from EURESCOM P813 will be as contributions to the development of the network management specifications within EP EASI.

Early in 1999, EASI intends to publish an 'Overview' as an introduction to the series of specifications, and the initial (Phase 1) User & Control Plane Specification. The Phase 1 Network Management specification is expected in the Autumn of 1999, and Phase 2 specifications during 2000: the User & Control Plane early in the year, with the Network Management specification ready by Autumn.





# ep pts

## PAY TERMINALS AND SYSTEMS

G E R H A R D R A I M A N N



*Responsible for the standardization of equipment and systems for use with IC card systems for wired payment telecommunications terminals. This includes aspects such as applications, system architecture, security and conformance testing.*

In producing generic standards for application independent IC-cards for telecommunications, PTS works closely with TC224 (Machine Readable Cards) of the European Standards Committee (CEN). In fact, membership of PTS is nearly identical to CEN TC224 WG9, and generic standards produced by PTS under mandate from CEN are published as ETSI Technical Specifications (ETSI TSs) while waiting to complete CEN's formal approval procedure for European Standards (ENs). In this way, ETSI and CEN together help to meet urgent market need in a timely fashion.

The most important achievement of 1998 was the conversion of PTS's seven-part tool box standard for application independent chip card requirements (EN726 series) into an EN. In addition, the conformance testing standard which makes the tool box standard a complete package has passed Public Enquiry via CEN and is expected to be approved as an EN in 1999.

In co-operation with Working Group 9 of TC Special Mobile Group (SMG9 Generics), PTS will also undertake the maintenance of the generic IC card standard, EN726.

EP PTS is now turning its main attention to bridging the gap between telecommunications and financial needs in the area of pay terminals, especially payphones. In 1999 the Project will be addressing the very special requirements for the use of intersector electronic purses on payphones. Today the market for prepaid cards used in around 270k payphones in Europe and around 750k world-wide is worth around 3 billion EUROS in Europe and around 8 billion EUROS world-wide.



# ep tetra

TERRESTRIAL TRUNKED RADIO

B R I A N O L I V E R



*Responsible for the design and standardization of Terrestrial Trunked Radio (TETRA).*

The first edition of the TETRA Technical Basis for Regulation (TBR 35 - Emergency Access) was published in 1998 and good progress was made during the year on Edition 2, which will be published as a Harmonized Standard in two parts: part 1 will cover Civil TETRA access (excluding Direct Mode Operation (DMO)); part 2 will deal with Emergency Access including DMO.

TETRA is now well established, and a significant number of commercial contracts have been placed for TETRA equipment, including orders from a public access network operator based in the UK for three TETRA networks for public use in the UK, France, and Germany. With the rapid development of services (including roaming and PSTN access) in the Public Access Mobile Radio market, EP TETRA is liaising with TC Network Aspects on the subject of international numbering in TETRA networks. Contracts for the supply of a public safety network in Belgium have been placed (the Astrid project) and negotiations are well underway in the Netherlands for a similar network. (*The TETRA Memorandum of Understanding has a full list of TETRA contracts.*)

Increasingly TETRA is being adopted in countries outside Europe. For example, during 1998, a dialogue was initiated with China. In May, a joint ETSI/TETRA MoU presentation was made at a seminar in Beijing organized by the Chinese, and the Chinese government is now looking for TETRA suppliers to establish a test site in China. The police force in New Zealand has awarded a contract for a TETRA system, and TETRA has been

ordered for the Mass Transit Railway in Singapore. Because of the growing world market for both Public Safety and Civil systems, EP TETRA has asked ETSI's special Security Algorithms Group of Experts (SAGE) to develop additional encryption algorithms for world-wide use.

EP TETRA's work on the Digital Advanced Wireless Service (DAWS) is continuing, and links are being developed with the Association of Public-Safety Communications Officials (APCO) Project 34 to enable joint working on a standard for high speed mobile wireless data networks applicable to public safety organizations on a global basis. Project 34 is a public safety industry-wide effort within the United States, supported by a number of local, state, and Federal organizations including APCO.

Work on Lawful Interception in TETRA and on the TETRA Subscriber Identity Module (SIM) was completed in 1998. The Project is now looking into the development of version 2 of the SIM. Technical requirements for managed Direct Mode have been completed. (Direct Mode enables communication directly between handsets outside network coverage, using a repeater if necessary to extend the range). Work on managed Direct Mode is expected to be completed in 1999 for the application of Direct Mode within the civil sector.

Other future work in TETRA includes the establishment of a Working Group to oversee the maintenance of standards, and preparation of information for the writing of Harmonized Standards in compliance with the new Radio and Telecommunication Terminal Equipment (R&TTE) Directive.

# ep tiphon™

TELECOMMUNICATIONS AND INTERNET PROTOCOL  
HARMONIZATION OVER NETWORKS

H E L M U T S C H I N K

*Responsible for the standardization to enable voice communication and related voiceband communication between Internet Protocol (IP) based networks and PSTN, ISDN and GSM*

co-operative development of test specifications. A four-day interoperability event was successfully held, and H.323 and TIPHON™ specifications were tested and revised in the light of the results.

At the meeting of the Project in Helsinki in July 1998, key milestones were reached on the road to seamless interoperability of IP telephony systems. Formal approval was given for specifications describing fundamental issues such as signalling, numbering and addressing and quality of service levels. These specifications define important additions and profiles of the H.323 standard that forms the basis for the work of the Voice over IP (VoIP) community in the USA, Europe and Asia. EP TIPHON™ has now completed a set of specifications to allow full interoperability between terminals on conventional telephone sets such as PSTN, ISDN and GSM and privately operated IP-based networks.

A co-operation agreement has been signed with Committee T1 of the American National Standards Institute (ANSI), which will help to raise the profile of TIPHON™ in the United States, and one is planned with the Internet Engineering Task Force (IETF).

TIPHON™ has begun work on mobility aspects, aimed at end-to-end IP-based mobile networks which should produce a quick solution to a specific part of the Universal Mobile Telecommunication System (UMTS™).

Co-operation with a number of International Telecommunication Union (ITU) Study Groups (SGs) has been strengthened during the year. TIPHON™ initiated a debate with SG 2 on numbering and provided input to SGs 16 and 12 in the area of architecture and quality of service.

Finally, TIPHON™ Net has been established. Consisting of several gateways and used by the industry to perform tests, it has already contributed significantly to the increasing confidence in IP Telephony.

ETSI has signed a co-operation agreement with the International Multimedia Teleconferencing Consortium, Inc. (IMTC) designed to facilitate the validation needed to enable Voice over IP networks to interwork with Switched Circuit Networks and to ensure interoperability amongst equipment of different vendors. The terms of the agreement include conducting joint interoperability testing and





# ep umts™

UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM

P I E R R E P E R R I C H O N

*Responsible for the development of UMTS™ standards*

Towards the end of 1998, ETSI established a new ETSI Project - EP UMTS™ - to assess the mid and long term aspects of UMTS™.

The EP's interim terms of reference give it responsibility for the development of UMTS™ standards, covering mobile communications systems which deliver seamless, customized, multimedia services from a converged network of fixed, cellular, wireless and satellite components.

Specifically, EP UMTS™ is charged with generic aspects applicable across different UMTS™ systems (eg Global System for Mobile communication (GSM), Integrated Services Digital Networks, Internet Protocol platforms) on subjects such as the Virtual Home Environment (VHE), interoperability between different UMTS™ architectures and multi-mode terminal behaviour, together with aspects beyond the initial phase for all UMTS™ systems, including cross-phase compatibility. The EP will also identify services, features and network requirements.

The tasks of EP UMTS™ include:

- Establishing a long term vision for UMTS™ and IMT-2000
- Developing scenarios for the evolution from existing 2nd generation mobile systems (eg GSM), the initial phase of UMTS™ (G-UMTS™) and fixed access towards the long term vision
- Identifying UMTS™ target service and feature requirements
- Developing concepts and requirements for realizing the VHE
- Developing an overall UMTS™ system architecture, encompassing cellular, fixed,

wireless and satellite access technologies within the context of public, private and domestic scenarios

- Identifying detailed UMTS™ requirements (eg signalling, addressing) as input to other ETSI bodies responsible for developments outside the EP's area of responsibility
- Identifying enhancements to the UMTS™ Terrestrial Radio Access Network (UTRAN) as input to other ETSI bodies responsible for developments outside the EP's area of responsibility
- Ensuring that UMTS™ forms an integral part of the International Telecommunication Union (ITU) IMT-2000 development and satisfies the requirements of an IMT-2000 Family Member
- Co-ordinating an overall UMTS™ work plan, including standards development within EP UMTS™ and other ETSI bodies
- Ensuring that conformance test specifications for networks and terminals are met.

To achieve its aims, EP UMTS™ will work in close co-operation with other ETSI bodies and external organizations such as the UMTS™ Forum and other industry groups, the ITU, the Europe-based Association for Standardizing Information and Communication Systems (ECMA), the Internet Engineering Task Force and the International Organization for Standardization/International Electrotechnical Commission Joint Technical Committee 1.

Plenary meetings of the EP have been scheduled for February, May and November/December 1999.

# 3gpp™

## THIRD GENERATION PARTNERSHIP PROJECT

In December 1998, a major step forward was taken in the development of 3rd generation mobile systems when the five main standards development organizations (the Association of Radio Industries and Businesses of Japan, Standards Committee T1 Telecommunications in the USA, the Telecommunications Technology Association of Korea, the Telecommunication Technology Committee of Japan and ETSI) launched the 3rd Generation Partnership Project or 3GPP™.

The concept of Partnership Project was introduced in 1997 to facilitate practical co-operation with other organizations in specific market sectors. The five founding partners of 3GPP™ - the 'Organizational Partners' - have agreed to co-operate for the production of globally applicable Technical Specifications (ETSI TSs) for a 3rd Generation system based on the evolved Global System for Mobile communications (GSM) core networks and the associated technologies already proposed to the International Telecommunication Union (ITU).

The aim of the Project is to provide users with global roaming and seamless communications - anytime, anywhere. This co-ordination will also give manufacturers and service providers access to new markets, with expected additional benefits to users in the form of new services, high speed data, reduced costs and greater freedom of choice.

3GPP™ results will be transposed into relevant standards by the Organizational Partners using their established processes. The 3GPP™ work will also form the basis of ITU members' contributions in accordance with existing procedures and will support inter-working between IMT-2000 family members. This will accelerate the IMT-2000 standardization activities.

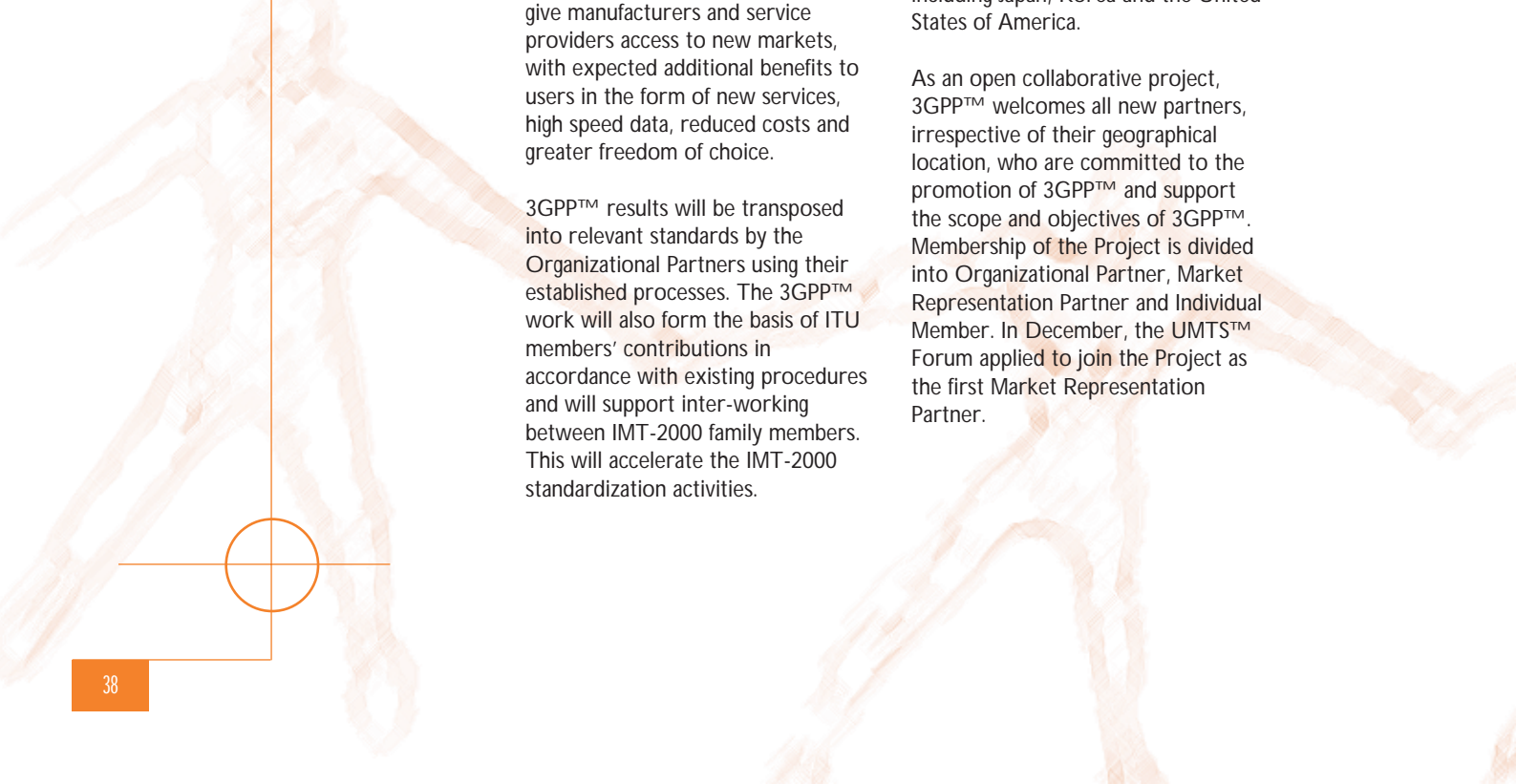
The technical work areas covered by the 3GPP™ will include:

- 3GPP™ system and service aspects;
- Universal Terrestrial Radio Access Network (W-CDMA in the Frequency Division Duplex mode and TD-CDMA in Time Division Duplex mode);
- Core Network with third Generation networking capabilities evolved from GSM (these capabilities include mobility management and global roaming); and
- Terminals and advanced SIM card solutions.

3GPP™ is market driven and will be characterized by a minimum production time for Technical Specifications (ETSI TSs) from conception to approval, using the latest electronic working methods. It is intended that the 3GPP™ specifications will enable the 3G system to be rolled out by the year 2001.

Work began as soon as the Project was established, with the first technical meeting held in December 1998, hosted by ETSI and attended by 325 delegates from 19 countries including Japan, Korea and the United States of America.

As an open collaborative project, 3GPP™ welcomes all new partners, irrespective of their geographical location, who are committed to the promotion of 3GPP™ and support the scope and objectives of 3GPP™. Membership of the Project is divided into Organizational Partner, Market Representation Partner and Individual Member. In December, the UMTS™ Forum applied to join the Project as the first Market Representation Partner.





# etsag

EUROPEAN TELECOMMUNICATIONS STANDARDS AWARENESS GROUP

R O L A N D S T R A U S S

*ETSAG is an interest group of ETSI members working to develop the world-wide market acceptance of ETSI standards.*

ETSAG's goals are threefold: to increase participation in ETSI standards making activities by organizations outside the European Union, to increase awareness about ETSI products and promote their distribution globally and to provide assistance for the recruitment of new Associate Members and the establishment of new Partnership Agreements of any kind.

ETSAG therefore works in close co-operation with the ETSI Secretariat on the definition and implementation of the ETSI Marketing Plan, and represents a neutral platform to complement member companies' own marketing efforts.

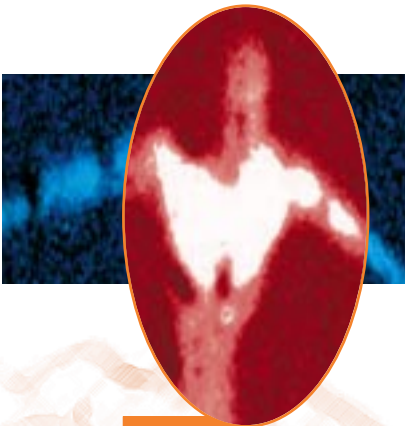
There are two dimensions to the work undertaken by ETSAG: one is geographical, the other relates to technology.

From the geographical point of view, ETSAG has appointed co-ordinators for China, India, Latin America, Asia Pacific, Russia, Central Asia and the Central and Eastern European countries (CEEC). Their tasks include evaluating the local telecommunications standards making process and advising on appropriate

actions, including the preparation of seminars and participation in important events. Major activities are planned for 1999 in the Mercosur countries, India and the CEEC. ETSAG will also consider joint activities in developing countries with the Development Sector of the International Telecommunication Union.

On the technological side, ETSAG has defined 'high focus areas' including the Universal Mobile Telecommunication System/Global System for Mobile communication (UMTS™/GSM), Digital Enhanced Cordless Telecommunications (DECT™), Terrestrial Trunked Radio (TETRA), Telecommunications and Internet Protocol Harmonization over Networks (TIPHON™), Broadband Radio Access Networks (BRAN) and ETSI Project ATM Services Interoperability (EASI). The work of related fora is directly relevant to the activities of ETSI. A principal objective on the ETSAG agenda for 1999 is to create closer ties with a number of these fora and to invite them to a special ETSAG event in September. As a consequence, ETSAG is also looking for co-ordinators for the priority technologies.

The Visibility Fund has been extended and participation in short notice events can again be guaranteed in 1999.







# gmm cg

SPECIAL COMMITTEE GLOBAL MULTIMEDIA CO-ORDINATION GROUP

P E R B J Ö R N D A H L

*Responsible for co-ordinating the standardization of Global Multimedia (GMM) within ETSI*

After a period of hibernation in the early part of the year whilst ETSI studies into Fixed-Mobile Convergence (FMC) were being carried out, GMM CG re-launched its Architecture Framework Group (AFG). Its immediate task was to review the GMM Report produced in 1996 to check its continuing validity in the light of developments such as FMC, the very rapid deployment of mobile systems and the expanding role of the Internet Protocol.

Extensive discussions were held in the AFG during the second half of the year and a Specialist Task Force was funded to help collate and consolidate ideas. As a result, it was agreed that the original GMM Model is still valid but should be re-drawn (or

expanded) in different ways to show new scenarios, particularly with respect to the supply of services and applications. This work is continuing and is expected to come to fruition in the second quarter of 1999.

With the GMM Report review completed, work for 1999 will focus on issues such as tracking of GMM related work items within ETSI and an analysis of the implications of Fixed-Mobile Convergence.



# jtc broadcast

JOINT TECHNICAL COMMITTEE OF THE EUROPEAN BROADCASTING UNION, THE EUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION AND ETSI (EBU/CENELEC/ETSI)



P H I L L A V E N

*Responsible for the standardization of broadcast systems for television, radio, data and other new services via satellite, cable, SMATV and terrestrial transmitters, and for the transmission of programmes*

As other Joint Technical Committees are envisaged, the name of the JTC has been changed to JTC Broadcast to avoid any confusion.

During 1998, the Committee continued its work on a wide range of standards, mainly associated with digital broadcasting.

Although the basic standards have already been defined for Digital Video Broadcasting (DVB) via satellite, cable and terrestrial transmissions, effort has been devoted to production of implementation guidelines for use of these complex specifications. To permit interactive TV services and data broadcasting, standards have been defined for 'interaction' using various types of return channels, such as GSM, Digital Enhanced Cordless Telecommunications (DECT™) and Local Multipoint Distribution Services

(LMDS). As an extension of DVB satellite standards, standards for Digital Satellite News Gathering (DSNG) have also been defined.

On Digital Audio Broadcasting (DAB), standards have been agreed which allow broadcasters to deliver DAB signals from studios to transmitters, as well as standards for delivery of 'multimedia objects'.

# safety

CENELEC/ETSI CO-OPERATION

R I C H A R D H U G H E S



*Responsible for co-ordinating safety requirements between CENELEC and ETSI*

The primary responsibility for creating electrotechnical standards in Europe in the field of safety rests with CENELEC. However, many ETSI standards have - for completeness - contained reference to safety aspects. For some years, members of ETSI have attended the CENELEC TC74 Working Group on the safety of telecommunications equipment on an ad hoc basis.

During 1998, however, the two standardization bodies agreed to set matters on a more formal footing and, in April 1998, ETSI approved the creation of a new Joint CENELEC/ETSI Technical Committee on the safety of telecommunications equipment. Approval in principle was also obtained in CENELEC TC74.

The new Technical Body was tasked to prepare guides for the application of safety standards and to ensure that any safety requirement within an ETSI deliverable is correct. In addition, within ETSI, it will support other

technical bodies in maintaining standards relating to the product safety of telecommunications equipment.

A first meeting was held in November and work has already commenced.

A new ETSI Guide (ETSI EG) on electrical safety and the interfaces for equipment to be connected to telecommunication networks has been published (and the same document has been produced as a CENELEC Technical Report).

Priorities now include evaluating the safety statements contained in existing ETSI deliverables. A review of existing deliverables is also to be undertaken, with the Electromagnetic Compatibility (EMC) Working Group of TC EMC and Radio Spectrum Matters (ERM) (ERM-EMC), with a view to withdrawing ETSI deliverables which duplicate CENELEC standards.

Work has also started on clarifying the implications of the new Radio Equipment and Telecommunications Terminal Equipment Directive.





# sage

SPECIAL COMMITTEE SECURITY ALGORITHMS GROUP OF EXPERTS

G E R T R O E L O F S E N



*Responsible for standardization in the area of cryptographic algorithms, products specific to fraud prevention and unauthorized access to public and private telecommunications networks, and in maintaining the privacy of user data*

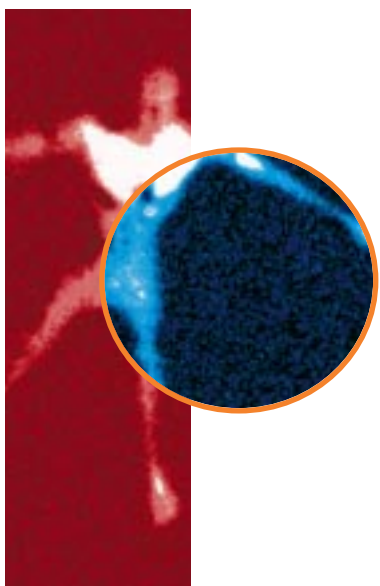
SAGE is a special committee of ETSI, working on security issues, especially designing cryptographic algorithms for ETSI standards. It provides a service to all of ETSI's Technical Committees (TCs) and Projects (EPs) and, during 1998, responded to a number of specific needs.

The work begun at the end of 1997 on an algorithm for the General Packet Switched Radio Service (GPRS) was finalized by the middle of 1998. This algorithm will protect the transfer of information within the new Global System for Mobile Communication (GSM) data service. Discussions are already underway regarding a second GPRS algorithm.

New work was started in 1998 on a set of algorithms for authentication and key generation within the GSM Cordless Telephone Services (CTS). This is expected to be completed in the first half of 1999 and will enable secure, easy and cheap connection access when using a GSM handset as a cordless telephone about the home.

SAGE also began to design two new encryption algorithms for the Terrestrial Trunked Radio (TETRA) system. These will be complementary to the two TETRA encryption algorithms already specified by SAGE. It is envisaged that one of the new algorithms will be used by police organizations outside Western Europe; the other will be for more general use within TETRA systems.

The algorithms which SAGE will design in 1999 will take into account the new export control policies for cryptographic algorithms as agreed in December 1998 by the 'Wassenaar Arrangement', a consortium of 33 major industrial countries. This new policy will allow for the design of cryptographic algorithms that are more widely exportable than before.



# special committee user group



## PIERRE - YVES HÉBERT

*Responsible for formalizing users' views and requirements for other ETSI bodies, in order to improve standards and their relevancy*

Two main issues have concerned the User Group during the year: the need to improve levels of co-operation between the Group and the rest of the Technical Organization of ETSI, and to increase user participation.

To achieve these ends, the Group published an ETSI Guide (ETSI EG) in the summer, outlining how user requirements should be taken into account by ETSI in general and its technical bodies in particular. This was approved by a 95% majority. Perhaps its main merit was in highlighting user issues; now the Group must find other ways to improve co-operation. Attendance at technical meetings is necessary if users are to acquire an adequate understanding of the issues involved to enable meaningful input to ETSI's technical work and feedback to the Group. However, attendance at meetings requires resources, and funding of the Group's activities remains an unresolved issue for the future. The appointment of a consultant to liaise between the Group and the technical bodies is one solution which is being considered.

To encourage wider participation, a consultant has been appointed to gather information on users' needs and views in respect of

standardization. The selected consultancy, Ovum, has access to a European user panel of 100 of the main telecommunications consumers in Europe, and their survey is expected to offer considerable insight into user needs. It is hoped that the results will be presented to ETSI at a workshop in April 1999.

Two Technical Reports (ETSI TRs) were published in 1998: one on Local Area Network interconnection, the other on addressing and directories. This latter outlines the general requirements of public directories together with some of the concepts and presentations which could be shared by both public and private directories to enable the exchange of information.

New work began during the year on testing and certification. The results are expected before the end of 1999.

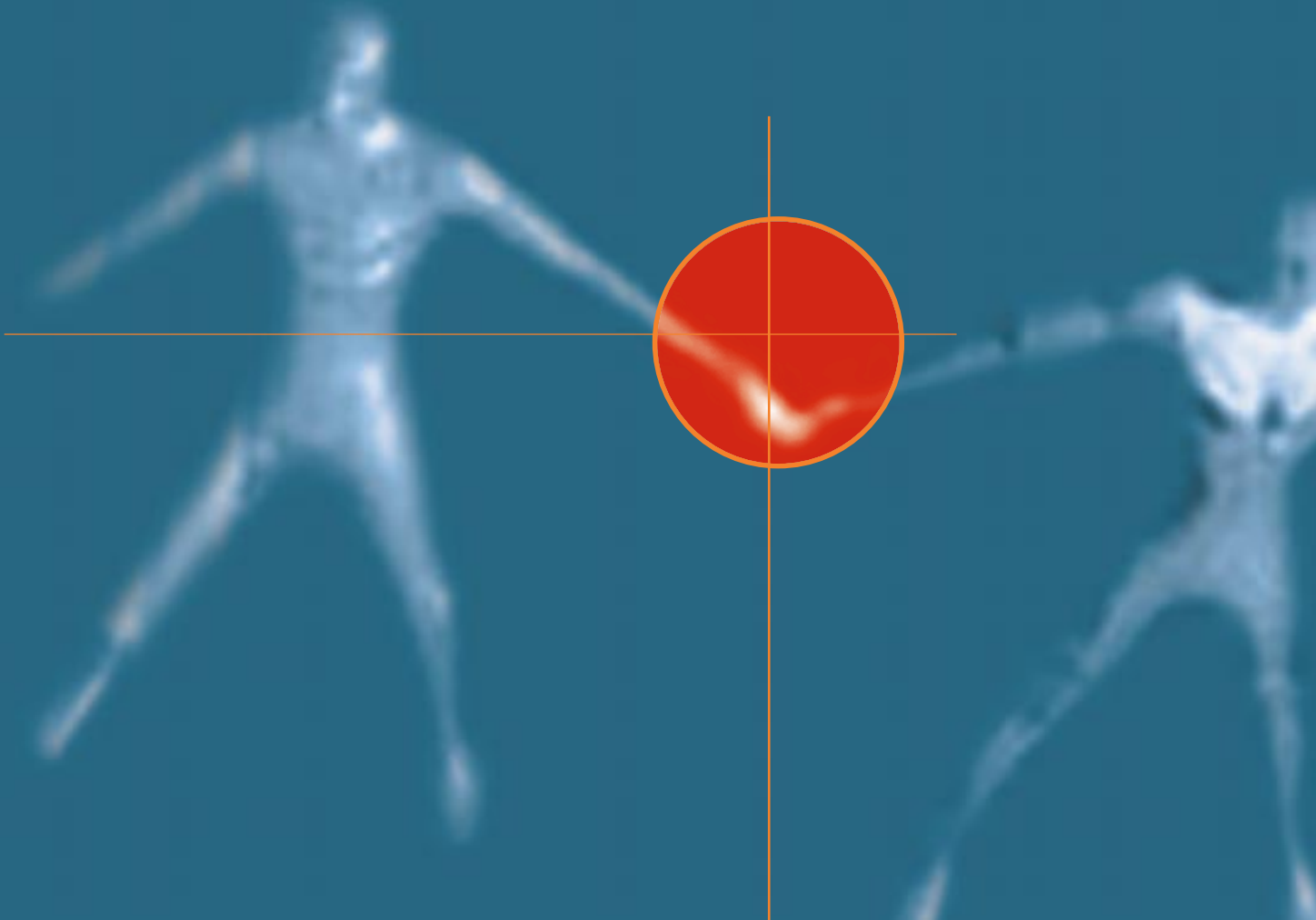
Finally, the Group is working with the European Telecommunication Informatics Service on the preparation of a draft which will help enable users to consolidate the management information provided by network operators and service providers and to make well informed choices as to the quality and value of different products.

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Published in June 1999

Produced by Kingston Public Relations, Hull, UK





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