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European Telecommunications Standards Institute





ETSI today

The European Telecommunications Standards Institute – ETSI – is an independent, non-profit organization whose mission is to produce telecommunications standards for today and for the future. Within Europe, it is responsible for standardization in telecommunications, broadcasting and certain aspects of information technology, and is officially recognized by the European Union and the European Free Trade Association as the region's competent body for standardization in these areas.

But regional boundaries around the world are becoming blurred, and ETSI's work is making an increasingly important contribution to global standardization. To make the most of the enormous potential available in Information and Communications Technologies, 'working in partnership' has become a watchword within ETSI, and the Institute is responding to the globalization of business and communications by working closely with other bodies around the world.

Based in Sophia Antipolis in the south of France, ETSI unites nearly 800 Members from five continents, and brings together manufacturers, network operators and service providers, administrations, research bodies and users – providing a forum in which all the key players can contribute.

ETSI prides itself on being a market-driven organization; its Members, which represent all aspects of the industry, decide its work programme and allocate resources accordingly. As a result, ETSI's activities – and its products – are closely aligned with market need.



A Difficult Year in Telecommunications

The landscape of telecommunications is changing rapidly. The last decade or so has revolutionized the market, with liberalization and privatization, increasing competition and the breaking up of monopolies, globalization of services, the emergence of the Internet and increasing convergence of technologies.

ETSI has always aligned its work closely to market needs, and is well used to responding quickly to meet new challenges. But 2002 was a particularly 'challenging' year, characterized both by rapid technological growth – and a consequent increasing demand for standards – as well as by a deteriorating business environment for our Members, many of which are being forced to shed staff and are seeing their share prices plummet.

It is not surprising therefore that, during 2002, finance matters dominated discussions within ETSI as we sought new ways to save money and reduce the contribution payable by Members.

The effect on ETSI of the worsening economic situation in the telecommunications industry was exacerbated by another issue, itself a symptom of the situation – for the first time in its existence, ETSI noted a decline in its membership (down 12% during the course of 2002). Some Members with several subsidiaries have lowered their investment in ETSI, and the introduction of the Basic Membership Fee led many Members, especially Small and Medium-Sized Enterprises (SMEs), to resign. These factors, together with a substantial number of acquisitions, mergers and bankruptcies, have led to a significant reduction in the membership contribution.

However, statistics show that the vast majority of Members who have left ETSI were newcomers, ie those who had joined in the last three years, at the peak of the Internet and telecom hype, and then resigned immediately when the bubble burst. Without diminishing the impact of this membership reduction or its consequences, this 'last in first out' paradigm casts an interesting light on the phenomenon; membership in ETSI followed exactly the same 'boom/burst' pattern as the so-called financial bubble.

ETSI wrestled with varying budget proposals for 2003 to meet this new situation. Deliberations have led to a significant reduction in the membership contribution to the budget and the introduction of stringent cost cutting measures. Care is being taken to ensure that adequate funding is still available for our technical work; even in a period of strong recession, we must prepare for the future and provide deliverables which support and indeed create new market opportunities.



Karsten Meinhold
Chairman of the General Assembly



Francisco da Silva
Chairman of the ETSI Board



Karl Heinz Rosenbrock
Director-General

Nevertheless - A Year of Achievement

Despite the increased demands on our staff and Members as a result of these economic pressures, ETSI can be justifiably proud that 2002 has been another year of major achievement. Nobody would say that it has been 'business as usual' this year, but our efforts have been none the less productive. The Institute operates with a clearly defined Business Plan to guide its operations and a Strategy to define its role. ETSI's achievements against these targets in 2002 demonstrate its effectiveness as a world class telecommunications and electronic communications standards-making organization in a rapidly evolving business environment.

ETSI's Core Business – high quality deliverables

2002 was another record year for ETSI deliverables, with the publication of over 2 400, far outstripping previous years' totals. This corresponds to a staggering rate of one new deliverable every three-quarters of a working hour. By the end of the year, ETSI had completed almost 10 800 technical standards and other deliverables since 1988.

These large numbers have made it difficult for users of standards to find sets of deliverables (such as 'releases' for the Global System for Mobile communication (GSM™) and the Universal Mobile Telecommunications System (UMTS™)) via the ETSI catalogue or the Publications download search engine. To improve the situation, a free packaged download, combined with instructive web site information, has been introduced, and a new procedure is to be tested to allow the automatic production on demand of CDs or DVDs containing such document sets.

Despite the increase in the flow of ETSI deliverables to be edited and managed, lead times are shorter than they were a year ago. This was achieved thanks to improvements to the processes and the document management tools used by the Editing and Document Management team. The average time from reception of a draft ETSI Technical Specification (TS) from the relevant Technical Body until publication has dropped from about a month to just five calendar days in the case of 3GPP and twelve calendar days for TSs from other Technical Bodies. The average time from end of voting until publication is now just four calendar days (including weekends and public holidays) for European Standards (ENs) and ETSI Standards (ESs).

Innovation – Stimulating New Activities

ETSI is constantly looking for new work areas to anticipate the needs of its Members and the market, and has organized some useful workshops to help stimulate activities, including one on quality of service in Munich. A highly successful Workshop on Emergency Telecommunications (EMTEL) was held in February 2002 in Sophia Antipolis, attended by 128 experts from all over the world. Subsequently, in November 2002, an EMTEL ad hoc group was set up to look at standardization requirements in this area, to interface with the European Commission (EC) and to ensure the co-ordination of work between relevant ETSI technical bodies.

A Project MESA Workshop on 'Broadband Wireless Ad Hoc Networks and Services' was held in September 2002, and ETSI Project Telecommunications and Internet Protocol Harmonization Over Networks (EP TIPON™) organized a successful Next Generation Networks (NGN) summit in Bruges, Belgium, in June, attended by over 100 delegates. ETSI Technical Committee Services and Protocols for Advanced Networks (TC SPAN) held a workshop on multi-service network technologies for NGN environments in December.

A new discussion forum web site has been set up. Based on http protocol, TelecomForum.net (<http://www.telecomforum.net/>) is a user-friendly service offering a free electronic meeting place for all interested in developing the future of telecommunications. As well as providing an opportunity for an informal exchange of ideas, this project could serve to stimulate new work areas for ETSI.

External relations

With markets and technologies converging, ETSI regards working in partnership as one of its top priorities. The need to co-operate with other interested parties to achieve standards that are widely acceptable and to avoid the duplication of effort has led to some important developments. The number of partnership initiatives has been growing steadily; over the years 60 Co-operation Agreements have been established between ETSI and external bodies – including six new ones during 2002 – and a web-enabled survey tool has been created to monitor their effectiveness.

The ETSI Secretariat continues to maintain good relations with the European Union (EU), with the European Free Trade

Association (EFTA), with the other European Standardization Organizations (ESOs), the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC), with the international standardization bodies and with a wide range of fora and consortia. Along with CEN and CENELEC, ETSI plays an important role in the Joint Presidents' Group of CEN, CENELEC and ETSI (JPG), the Information and Communication Technologies Standardization Board (ICTSB), the European Electronic Signature Standardization Initiative (EESSI) and the EC/EFTA eEurope initiative.

Substantial funding has been provided under the eEurope initiative for e-Standardization activities, which has helped to raise the profile of ETSI, publicizing its work to enable the Information Society and its efforts to bring its benefits to everyone in Europe.

Throughout 2002, ETSI invested considerable effort into promoting its deliverables to achieve more visibility and as wide as possible an audience for its work. In January 2002, the European Telecommunications Standards Awareness Group (ETSAG) was transformed into IMPACT (International Marketing & Promotion Activities), and given new terms of reference and new working methods, which include liaison with the Operational Co-ordination Group (OCG) and the establishment of regional focus groups.

As ETSI's influence grows on the global stage, concentrated effort has been made to forge links in Africa, Asia, Latin America, the Middle East and the Central and Eastern European Countries (CEECs), particularly in regions where ETSI standards can be implemented.

EU regulation & initiatives

ETSI has continued to support the needs of the EU and EFTA on standards production for both regulatory purposes and in the framework of initiatives such as eEurope.

eEurope – An Information Society for All initiative was launched in 2000. The ESOs have committed themselves to support the political initiative by providing standards and other types of deliverables and organizing promotional activities to encourage interoperable implementations of mainly Internet access scenarios, within the framework of a common European action plan.

ETSI undertook short studies under the 2002 eEurope Order Voucher into Internet Next Generation, the localization of emergency calls, and Broadband, which included the identification of a strategy plan and recommendations for future standardization activities.

The follow-up to the eEurope 2002 initiative was adopted by the Council at their meeting in Lisbon in June 2002. Building on the achievements of eEurope 2002, *eEurope 2005: An Information Society for All – An Action Plan* aims 'to stimulate secure services, applications and content based on a widely available broadband Infrastructure'. It has been indicated that the likely budget for standardization activity in support of this initiative will again be 12,5 M€ over three years. ETSI will continue to provide support to the specification elements required.

As part of its role in contributing to European public interest policy, the Institute has also been active in the production of Harmonized Standards in relation to the New Approach Directives (such as the Radio & Telecommunication Terminal Equipment (R&TTE) and Electromagnetic Compatibility (EMC) Directives). To date, almost 80% of the ETSI work programme under the R&TTE Directive has been formally adopted; the remainder is either in the public approval process or in drafting.

Membership evolution

The decreased membership numbers experienced in 2002 reflect the difficulties within the telecommunications industry. ETSI is taking a series of measures to recruit new Members (from both new areas of the telecom value chain and regions so far largely under-exploited). For example, as a direct result of a targeted recruitment campaign launched in January 2002, four applicants from China became Associate Members, and next in the pipeline are campaigns targeting the Information Technology community, as well as content providers and application developers.

Recognizing that a relatively large proportion of the ETSI membership are SMEs, the Institute has also made special efforts to meet the particular needs and expectations of these Members, which differ from those of large companies.

Operational matters

E-tools & Initiatives

ETSI provides world-class e-Standardization tools to help its standards makers work efficiently, and 2002 has seen the introduction of numerous improvements and new developments, such as the ETSI terms and definitions database, Teddi.

With effect from the beginning of 2002, all ETSI meeting rooms, amphitheatres and halls have been equipped with 11Mbit/s wireless Local Area Network (LAN) access points, in addition to the wired LAN (10/100Mbit/s). Mobile LAN configurations ('Mobilan'), coupled with mobile wireless access points, have also been set up for officers and assistants who support meetings outside ETSI premises. From the beginning of October 2002, all ETSI meeting rooms have become 'VPN-friendly', and delegates may now connect their laptops to the network using Virtual Private Network (VPN) -secured connections. In addition, delegates have been provided with new services such as Chat, Netmeeting, SMTP relay for outgoing e-mails, FTP and HTTP local site.

Efforts to establish effective Webcast and Collaborative Working facilities continue, and the recent progress of Session Initiation Protocol (SIP, a firewall-friendly protocol) towards H.323, T.120 and RVP, gives us cause to be optimistic about solving the problems with firewalls and Internet bandwidth.

A new internal management group (IMAP) responsible for Information Management and Policy has been created, to cover web, Portal and Intranet issues, and to encourage innovation, ensure a co-ordinated approach to the management of information and help reduce costs.

Review of the implementation of ETSI's IPR policy

As part of ETSI's ongoing monitoring of the situation regarding the use of Intellectual Property Rights (IPR), an IPR ad hoc group has been established by the General Assembly to review the implementation of ETSI's IPR Policy.

Technical Organization

The structure of the Technical Organization is constantly monitored to ensure that it continues to provide the best possible support to ETSI's standardization activities. A Technical Organization Reform (TOR) group was set up to review the committee structure, and it has been decided to return to just one type of technical body (eg Technical Committees rather than both Technical Committees and ETSI Projects). Changes have also been made to allow all ETSI Members to participate in the Operational Co-ordination Group (OCG) as observers.

Quality management

During 2002 and under the leadership of the Deputy Director-General as Quality Manager, ETSI's team of Quality Local Co-ordinators (QMS-LC) was involved in the internal audit of the ETSI Quality System and preparation of the Quality System documentation towards ISO9001-2000. The team also focused on the alignment of the ETSI Quality Indicators and Scorecards, an internal audit of training procedures, recommending a number of areas for improvement, and preparation for renewal of the Secretariat Quality certificate in 2003.

It is perhaps fitting that we should end our round-up of the major events of the year with a mention of Quality, because it is Quality that characterizes all of ETSI's work. This applies to the efficient working methods of the Secretariat, the dedication of our technical experts who work tirelessly to create the standards the market requires – when they are required – and particularly to our deliverables, whose quality, suitability and reliability are such that they are adopted and applied around the world.

A Challenge for the Future

2002 has not been easy, but the achievements have still followed thick and fast. The challenges for coming years are great. Evolving technology makes ever increasing demands as we seek to capitalize on the opportunities in the new Information Society. The difficulties faced by the telecommunications industry will not disappear overnight. But ETSI will continue to deliver the high quality standards necessary to ensure that our hopes for the future are fully realized.

Excellent Competence Centres

To support its technical bodies, ETSI has developed competence and service centres, which concentrate key skills and serve the whole organization in a way which increases efficiency, streamlines ETSI's processes and better addresses market needs.

The Mobile Competence Centre (MCC) was set up to provide technical and administrative support to the Third Generation Partnership Project (3GPP™) and to ETSI's other mobile standardization work in ETSI Projects Smart Card Platform (EP SCP) and Railway Telecommunications (EP RT) and Technical Committee Mobile Standards Group (TC MSG). The Centre currently comprises ten ETSI staff members and fifteen full-time contractors.

Despite an increasing volume of 3GPP Change Requests, process enhancements during 2002 led to a reduction in the time taken for the implementation of 3GPP Change Requests, with 90% of the revised Specifications now available within two weeks of the close of Technical Specification Group meetings, and 100% available within three weeks.

The high number of changes being made to 3GPP specifications should not be taken to imply that the 3GPP platform is unstable; these changes are largely editorial in nature, to remove ambiguities rather than to correct technical errors. 2002 saw a focus of work on the Release 5 specifications and, with large scale implementation of 3GPP-based networks still to occur, it is expected that the workload of MCC will experience a further peak in the months to come.

The Protocol and Testing Competence Centre (PTCC) assists a broad range of ETSI Technical Bodies with technical support and management of protocol specification and protocol testing standardization activities. This small nucleus of experts is a valuable resource, unique to ETSI; their skills and tools are used to improve the technical quality of ETSI standards, and shorten standardization time. Together with the Specialist Task Forces, the availability of the PTCC resource has helped to attract projects to ETSI, such as HIPERACCESS and Open Service Access.

Testing is increasingly being seen as a crucial factor in achieving interoperability, and there is a growing trend to combine the benefits of rigorous conformance testing with interoperability testing.

A significant achievement of the year was the establishment of a new testing group for Internet Protocol (IP) -related technologies, in response to demand from industry for high-quality test specifications. Established by Technical Committee Methods for Testing and Specification (TC MTS) with the assistance of the PTCC, the MTS-IPT group began work in November 2002.

In 2002, the PTCC continued its long-term commitment to the development of the 3GPP conformance test specifications, as co-ordinator and leader of a team of 11 experts from different 3GPP member companies. Together they have produced more than 700 sophisticated, high quality test cases, most of which will be used by the GSM Certification Forum.

The ETSI Plugtests™ Service is a professional unit specializing in running interoperability testing events for any telecommunications, Internet or Information Technology standard. In 2002, the service experienced major growth, successfully organizing twelve interoperability events during the year. Plugtests reduce time to market, and feedback in every satisfaction survey shows how very useful these events are to participants. The results of Plugtests events may also provide valuable feedback to other organizations such as the Internet Engineering Task Force (IETF) and 3GPP.

This year, the first virtual interoperability event was launched, with participants taking part in tests on J2ME™ (Java 2 Micro Edition), one of the classmarks of the 3GPP Mobile Execution Environment (MExE) standard, via the web, without actually attending in person. The experience gained here will be invaluable as the service makes plans for the first remote interoperability test event, in May 2003, where participants have only to attend the closest 'remote' sites in the US, Europe or Asia. Although not offering the full benefits of a 'physical' event, a virtual event means considerable savings on travelling time and costs.





ETSI has developed a proactive strategy to meet the challenge of maintaining its role as a world class telecommunications and electronic communications standards-making organization within a rapidly changing business environment. Every year, it reviews its technical activity and resets its priorities, extending the range of its work to meet the evolving standardization needs of ETSI Members and the demands of a rapidly changing market place.

In addition to core areas of work and longstanding commitments, additional strategic topics are identified from time to time as requiring closer attention. In 2002, ETSI highlighted four such areas: the work of the Third Generation Partnership Project (3GPP™) and related mobile and radio activities in other ETSI technical bodies; Internet Protocol (IP) Cable Communications (IPCablecom); Next Generation Networks (NGN) and related fixed network activities; and security across all networks.

3GPP and Related Radio and Mobile Activities

3GPP

3GPP's major achievement in 2002 was the latest series of 3G specifications, known as 'Release 5'. This builds additional features and functionality on to earlier Releases, most significantly introducing the IP Multimedia Subsystem (IMS) and High Speed Downlink Packet Access (HSDPA), which together will provide for global roaming and multimedia services.

The production of test specifications also occupied much of 3GPP's time in 2002. The joint efforts of 3GPP's working group on terminal testing and 'Task 160' of the Mobile Competence Centre (MCC), based at the ETSI premises, has resulted in the drafting of around 700 test cases.

Smart Cards

The main task for ETSI Project Smart Card Platform (EP SCP) is to create a smart card platform for 2G and 3G mobile telecommunications on which other organizations can base their system specific applications. In particular, this will allow users access to global roaming by means of their Smart Card, irrespective of the radio access technology used. EP SCP also has an important part to play in the growth of mobile commerce, by developing the standards for Integrated Circuit (IC) cards to secure financial transactions over mobile telecommunications systems.

EP SCP has continued its work to make the specifications for the Global System for Mobile communication (GSM™) independent of the bearer. A new triplet of deliverables has been approved, which provides standardized security mechanisms for the interface between a network entity and an entity in the UICC, as well as a standardized method for the secure, remote management of files and applications on the UICC.

BRAN (Broadband Radio Access Networks)

ETSI Project BRAN is developing standards for three types of Broadband Radio Access Networks: HIPERLAN2 – for private use as a Wireless Local Area Network (WLAN) -type system with superior Quality of Service (QoS) and security compared with similar technologies, as well as a complementary access mechanism in hot spot areas for public mobile network systems; HIPERACCESS – for broadband multimedia fixed wireless access and back-haul for the Universal Mobile Telecommunications System (UMTS™) as a flexible and competitive alternative to wired access networks; and HIPERMAN – aiming principally for the same usage as HIPERACCESS, but targeted at different market segments and using a different part of the spectrum. Both HIPERACCESS and HIPERMAN are being standardized with a minimum number of options to simplify implementation and interoperability. Good progress was made in all three areas during 2002.

DECT™

In Digital Enhanced Cordless Telecommunications (DECT), there is growing demand for the support of data services and a continuous desire to increase available data rates by adding high bit rate modes. The major achievement of 2002 in ETSI

Project DECT was an update of the multi-part base standard including provision for higher bit-rates up to 7 Mbit/s, and introducing additional modulation schemes and forward error correction (FEC) using Turbo Codes to improve transmission quality. Work continues and, in 2003, with the introduction of broadband DECT, about 20 Mbit/s will be supported. This capability will permit, for example, very fast Internet access and the creation of WLANs based on DECT.

DECT is one of the five terrestrial radio interfaces of the International Mobile Telecommunications 2000 (IMT-2000) standard. The latest updates of the DECT base standard, the GAP and DECT Packet Radio Service (DPRS) standard, were approved by the International Telecommunication Union (ITU) and included in their Recommendation which specifies the IMT-2000 air interfaces, underlining the importance of DECT as a global standard.

Satellite communications

Developments in satellite communications reflect the increasing global collaboration within the standardization arena. Technical Committee Satellite Earth Stations and Systems (TC SES) is one example of a European group which has influence world-wide. For example, 100 Technical Specifications have been published by ETSI and the Telecommunication Industry Association (TIA) of the USA on the use of geostationary satellites as an interface with the GSM core network, and new enhancements to take account of the move of terrestrial GSM to the General Packet Radio Service (GPRS) are imminent.

The co-ordination of standards for Broadband Satellite Multimedia activity between Europe (under ETSI) and the USA (under TIA) continues, and TC SES has obtained funding for two Specialist Task Forces (STFs) to work on Internet via satellite.

Terrestrial Trunked Radio (TETRA)

TETRA is a modern digital Private Mobile Radio (PMR) and Public Access Mobile Radio (PAMR) technology used by the emergency services and others. One of the most significant achievements of the year within ETSI Project TETRA was the selection of the technology for the second phase of TETRA high speed data standardization, or TEDS (TETRA Enhanced Data Service).

In addition, NATO has chosen a voice codec as part of their communications system. Interoperability between the communications systems of the military and public safety and emergency relief teams is becoming increasingly important, as they co-operate in the face of national disasters. Work has started to incorporate this codec into the TETRA standard.

Fixed wireless access mechanisms

ETSI is also working on fixed radio systems (Wireless Local Loop) of various types, using several technologies with different bandwidths.

IP Cable Communications

IPCablecom is an innovative access technology for the delivery of communication services, including telephony and Internet access, via cable TV infrastructures. During 2002, Technical Committee Access and Terminals (TC AT) completed a Technical Specification which forms the centrepiece of ETSI's work to facilitate the implementation of IPCablecom in Europe. This deliverable virtually completes the first phase of IPCablecom standardization as a preliminary to interconnection with NGN.

Other committees whose work has implications for IPCablecom include EP Telecommunications and IP Harmonization Over Networks (EP TIPHON™), Joint Technical Committee Broadcast, TC Services and Protocols for Advanced Networks (TC SPAN) and TC Speech Processing, Transmission and Quality Aspects (TC STQ). Activities in this area are co-ordinated by the Operational Co-ordination Group (OCG) ad hoc group on IP Cable Communications (OCG IPCC).

The second generation Data Over Cable Service Interface Specification (DOCSIS) standard was also launched in 2002.

NGN and Related Fixed Network Activities

ETSI Project TIPHON organized a successful workshop on end-to-end Quality of Service (QoS) in Munich. In June, an industry summit on TIPHON was held in Bruges, introducing important developments in Voice over Internet Protocol (VoIP) and the benefits of migration towards NGN. The Summit confirmed that TIPHON is well on the way to providing a generic platform for new service provisioning in NGN environments and to solving the interoperability problems between emerging VoIP technologies, which is the key to its successful commercialization.

During 2002, the basic core elements of TIPHON Release 3 were extended with the addition of extensive supplementary service features to improve marketability. TIPHON Release 4 is expected to be finalized in June 2003; Release 5 is currently in the definition phase and should be completed during 2004.

TC SPAN organized a seminar on NGN, which raised the expectation that ETSI would have a large, high profile role in spearheading the work on NGN throughout the world telecommunications industry. The event has also led to the initiation of 92 new NGN-related work items in TC SPAN.

TC SPAN also completed the major deliverables required for Dynamic synchronous Transfer Mode (DTM), the new transport network technology designed for the anticipated explosion of real-time media content in NGN.

In September 2002, a new technology-independent Working Group, NGN@Home, was launched in TC AT to deal with NGN in the home environment. The group will act as a focal point for matters concerning terminals supporting current and next generation services for home networking and intelligent home device technologies and their applications, independently of the access technologies. TC AT also published an ETSI Technical Report listing the functionalities of legacy terminals, which will facilitate the interworking between NGN, the 'Plain Old Telephone Service' (POTS) and other conventional services.

TC STQ continues to work on the quality aspects of IP and is following closely the important developments in codecs and network equalization designed to handle the impairments in IP-based networks. TC STQ has also initiated work on the quality issues of Internet access.

TC AT and TC SPAN have been working on the introduction of message 'texting' – the Short Message Service (SMS) – for the fixed network (PSTN analogue and digital (Integrated Services Digital Network) terminals). TC SPAN concentrates on the service description and TC AT on terminal access to the SMS Service Centre. With the publication of two ETSI Standards in 2002, one specifying the protocols, one for testing, a user-based solution has been provided to complete the application of SMS to fixed network terminals. This work will both extend revenue opportunities for network operators and manufacturers, and lead to lower costs for customers. It will be further developed in 2003 with the evolution to MMS – the Multimedia Message Service.

ECMA TC32 (Communication, Networks and Systems Interconnection) has continued its standardization activities in the field of private/corporate telecommunications networks.

Security across all Networks

During 2002, the former TC Security's two Working Groups, on lawful interception and electronic signatures and infrastructures, were each accorded TC status, and an OCG ad hoc group on Security was created to co-ordinate security issues and ensure the avoidance of duplicated or conflicting work.

2002 was a busy year for TC Electronic Signatures and Infrastructures (TC ESI). Three new Technical Specifications (TSs) were published, together with five Technical Reports (TRs) which will form the basis for future standardization activities in this area. Three of the first TSs produced for the European Electronic Signature Standardization Initiative (EESSI) were also updated in 2002, in response to market feedback and new developments. With the publication of these deliverables, TC ESI is well on the way to completing the current phase of work laid down in EESSI. This work is essential in establishing trust in the use of electronic signatures to facilitate e-Commerce and other e-Transactions in open and cross-border environments.

ETSI has also been working on mobile signatures to enable m-Commerce. The STF set up to accelerate work in this area completed a Technical Report on mobile signatures in support of business self-regulation, specifying an interface between Mobile Service Operator (Signature Proxy) and a Primary Service Provider.

In 2002, TC Lawful Interception (TC LI) produced an updated version of the ETSI Standard and a corresponding TR on the handover specification for the lawful interception of telecommunications traffic. This Standard is the first official international standard designed for this purpose, and demonstrates the TC's world-leading expertise in this field. The Standard will become operational in the Netherlands in 2003, and the UK is expected to implement it shortly.

ETSI's Security Algorithms Group of Experts (SAGE) provides ETSI's standards makers with cryptographic algorithms and protocols specific to fraud avoidance and unauthorized access to public and private telecommunications networks and user data privacy. The highlight of 2002 for SAGE was the design of a new encryption algorithm for GSM. Published in July, the new security algorithm, known as A5/3, provides users of mobile phones based on GSM with an even higher level of protection against eavesdropping than previously available.



SAGE also created a new example authentication algorithm for GSM, based on the example algorithm, MILENAGE, which was developed for UMTS.

Other Technical Achievements

As well as innovative new areas which have been identified recently and those required to implement European initiatives, a number of committees are involved in the important work of maintaining the successful standards which have been produced in the past and which form the basis of modern telecommunications. ETSI also continues to channel its efforts into the standardization of core technologies.

DSL (Digital Subscriber Line) Access

Working Group 6 of TC Transmission and Multiplexing (TC TM) (TM6), in co-operation with TC AT, works on xDSL (the family of DSL technologies). Special attention has been given to xDSL splitters and co-existence with existing terminals, and the first set of deliverables has been produced.

Powerline telecommunications (PLT)

PLT work in ETSI covers both in-house and access applications. PLT 'home networking' systems (in-house PLT) are aimed at delivering broadband services and applications over the electricity cables inside a building to each power socket. For high speed, low cost, 'no new wires' Internet broadband access, PLT offers tremendous potential for access and greater choice for every user, including those living in rural areas.

In the long term, TC PLT is working towards the full interoperability of powerline equipment, regardless of its manufacturer. In addition to having published an ETSI Technical Specification on access – in-house co-existence, TC PLT is currently finalizing a TS on in-house – in-house co-existence, defining a mechanism which will allow the PLT market to continue to grow until the full interoperability standard is successfully completed.

New work has been initiated on detailed architecture and protocols and on programmable Power Spectral Density (PSD), which will ensure interoperability for in-home PLT networks and standardize the way that PLT systems adapt to electromagnetic compatibility (EMC) requirements.

Testing

Testing is a critical part of good standards production.

TC Methods for Testing and Specification (MTS) is responsible for the identification and definition of advanced specification and conformance testing methods. Its major achievement of 2002 was the revision of its highly successful standard for Testing and Test Control Notation version 3 (TTCN-3).

In November 2002, a new testing group, MTS-IPT, was set up to improve the quality of IP-based technologies and ensure the convergence of telecommunications and IP. Established by TC MTS with the assistance of ETSI's Protocol and Testing Competence Centre (PTCC) in response to demand from industry for high-quality test specifications, the group will cover conformance (compliance), performance and interoperability testing.

Environmental Engineering

In 2002, TC Environmental Engineering (TC EE) extended its work on the current interface A standards series for power supply with a new power architecture and a high voltage dc interface derived from the rectified mains. A new ETSI Technical Report is in preparation, which will provide guidance for power distribution to interface A. The TC's Thermal Management Group has prepared a European Standard in response to concern about increasing heat densities within racks and cabinets. A guidance document is also being written to help suppliers, operators and integrators install new equipment with legacy equipment.

Supporting the EU and EFTA eEurope initiative

ETSI plays an important role in support of the European Commission (EC)/European Free Trade Association (EFTA) eEurope initiative. Launched in 2000, *eEurope 2002 – An Information Society For All* aims to bring the benefits of the latest Information and Communication Technologies (ICT) within reach of all European citizens. The eEurope Action Plan contains a list of eleven key targets, grouped under three broad headings: a cheaper, faster and secure Internet; investing in people and skills; and stimulating the use of the Internet.

The expanded objectives of eEurope 2005 are to provide Europe with modern on-line public services including e-Government, e-Learning and e-Health services, and a dynamic e-Business environment. To enable these services, the EC is supporting the development of the widespread availability of broadband access at competitive prices, IPv6 and a secure information infrastructure. The intention is to make the European Union (EU) a dynamic knowledge-based economy with improved employment and social cohesion by 2010. ETSI is undertaking activities relating to most of the Action Lines and has already produced a large proportion of the standards necessary to achieve eEurope.

For example, the progress made in 2002 by TC ESI, TC LI, EP SCP and others in the security area will be instrumental in achieving eEurope's targets. Their work will help establish the trust necessary for the electronic communication of personal information, enabling e-Commerce, e-banking, e-voting, health on-line etc. Similarly, ETSI's work on access technologies is helping to open up the Internet to a wider audience.

Broadening access to the Information Society – e-Accessibility – is central to the whole eEurope strategy, and responsibility for the human aspects of accessibility falls to TC Human Factors (TC HF). 2002 was the busiest year ever for TC HF – and its most productive – dominated by the activities of the thirteen STFs funded under eEurope. The first five STFs completed their work in June 2002, and a total of eight deliverables were published in a wide range of areas. Six new STFs started work in January 2002 (three of these had completed their work by the end of the year, the other three will finish in June 2003), and two new STFs were set up.



Activities in the Special Committee User Group were boosted in 2002 with the award of eEurope funding to establish two STFs to work on users' criteria for QoS for Internet access and interoperability.

Other regulatory work in support of the EU/EFTA

The Institute has been active in the production of Harmonized Standards in relation to the New Approach Directives (such as the Radio & Telecommunication Terminal Equipment (R&TTE) and EMC Directives), and contributed to the initial version of the Framework Directive's article 17 'List of Standards'. Work on Harmonized Standards for the R&TTE Directive is co-ordinated in the OCG R&TTE Steering Committee.

TC EMC and Radio Spectrum Matters (TC ERM) is working on standards for the ground-based elements of air traffic management systems and Galileo local components, in response to a new mandate (M/318), which was adopted early in 2002.

TC ERM covers diverse activities, ranging from medical implantable devices to maritime, aeronautical and automotive issues. During 2002, the TC also made good progress in radio spectrum collaboration and overall EMC matters, especially in the area of radio standards; an important ETSI Guide on the integration of radio and non-radio equipment and for radio equipment operating simultaneously on multiple frequencies was published.

TC TM completed the harmonization of the existing 25 standards on Point-to-Point microwave technologies into a

single, multipart European Standard (EN) which includes the relevant R&TTE Harmonized sub-parts. Work is still ongoing in co-operation with TC ERM, on Point-to-Multipoint systems and technologies, to harmonize the existing 32 ENs into one multipart EN. When completed, the existence of the Harmonized Standards will simplify future standards maintenance by ETSI and make it easier for all interested parties to understand the whole standardization framework for fixed radio.

TC AT also contributed to the implementation of the EU regulatory framework on electronic communications (networks and services) and RTT&E.

Emergency Telecoms

Work world-wide on the development of emergency telecommunications facilities escalated following September 11th 2001. ETSI held a dedicated workshop in February 2002, bringing together users, governments, public safety services and other interested parties with ETSI's standards experts. As a direct result, ETSI set up the EMTEL ad hoc group to agree common standardization requirements in this area, to interface with the EC and to ensure the co-ordination of work between relevant ETSI technical bodies.

Project MESA was initiated as a co-operative effort between ETSI and the TIA, to develop broadband specifications to meet the technology needs of public safety workers for wireless data transport and the distribution of rate intensive data. In 2002, the Project finalized a Statement of Requirements – the first time that public safety bodies from Europe and the USA have set down in a single document their needs for public safety communications. Work can now begin in earnest on the development of technical standards.

In addition, the European Union has initiated work orders for feasibility studies and protocol development in relation to emergency telecommunications, which are being undertaken in TC SPAN.

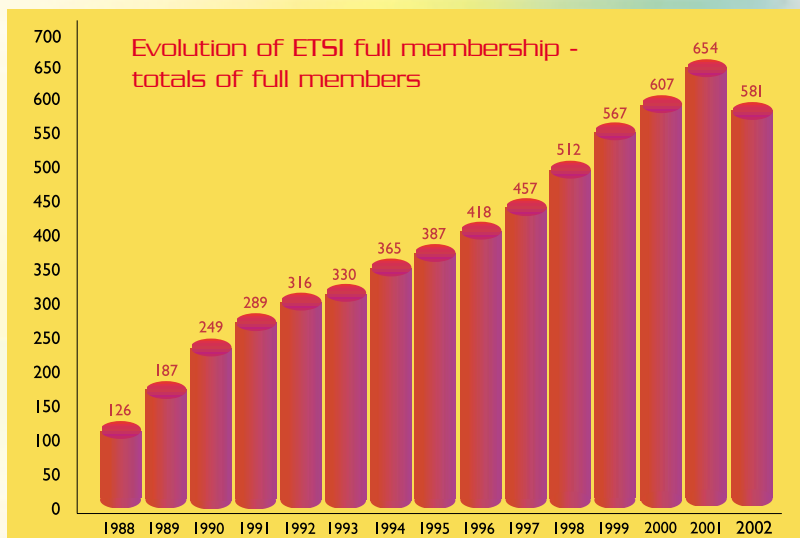
Membership



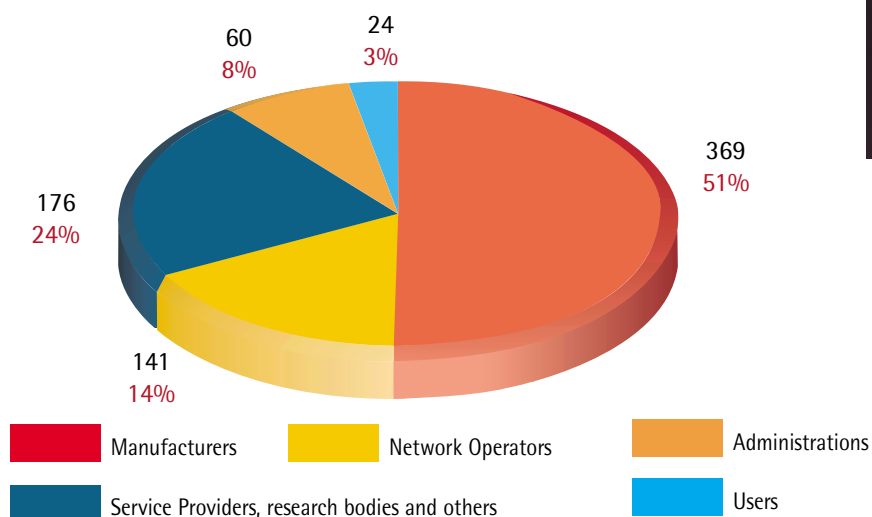
As a direct result of the downturn in the telecommunications industry, the ETSI membership fell for the first time in ETSI's history, to a total of 770 Members from 55 countries across five continents (down 12% compared with 2001). Full membership dropped by 11% on 2001 figures, to 579, drawn from 35 European countries. Algeria joined ETSI, bringing the total number of countries represented to 55, and associate membership dropped, from 173 to 149, representing 20 non-European countries. At the end of 2001, there were also 40 Observers from 18 different countries.

Despite the severe financial constraints on many companies in the telecommunications sector, interest in membership of ETSI is still high; during 2002 there were 84 new applications for membership (46 for Full Members, 35 for associate membership and 3 for Observer).

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.



Full and associate membership by category



Membership by type

	01-01-2002	31-12-2002
Full Members	654	581
Associate Members	173	149
Observers	47	40
Total	874	770

Membership by country - full and associate members

Algeria	1
Andorra	1
Australia	6
Austria	12
Belgium	28
Bosnia Herzegovina	3
Bulgaria	4
Canada	13
China	7
Croatia	2
Cyprus	2
Czech Republic	4
Denmark	22
Egypt	2
Estonia	1
Finland	21
France	85
Georgia	1
Germany	92
Greece	5
Hong Kong	1
Hungary	5
Iceland	2
India	7
Ireland	12
Israel	19
Italy	31
Japan	3
Korea	1
Latvia	3
Lithuania	1
Luxembourg	4
Macao	1
Malaysia	1
Malta	2
Netherlands	28
Norway	8
Poland	6
Portugal	2
Romania	3
Russian Federation	8
Singapore	4
Slovakia	2
Slovenia	2
South Africa	2
Spain	16
Sweden	25
Switzerland	15
Taiwan	8
Tunisia	1
Turkey	9
Ukraine	1
United Arab Emirates	2
United Kingdom	151
United States of America	72
55 countries in total	

Standards Production

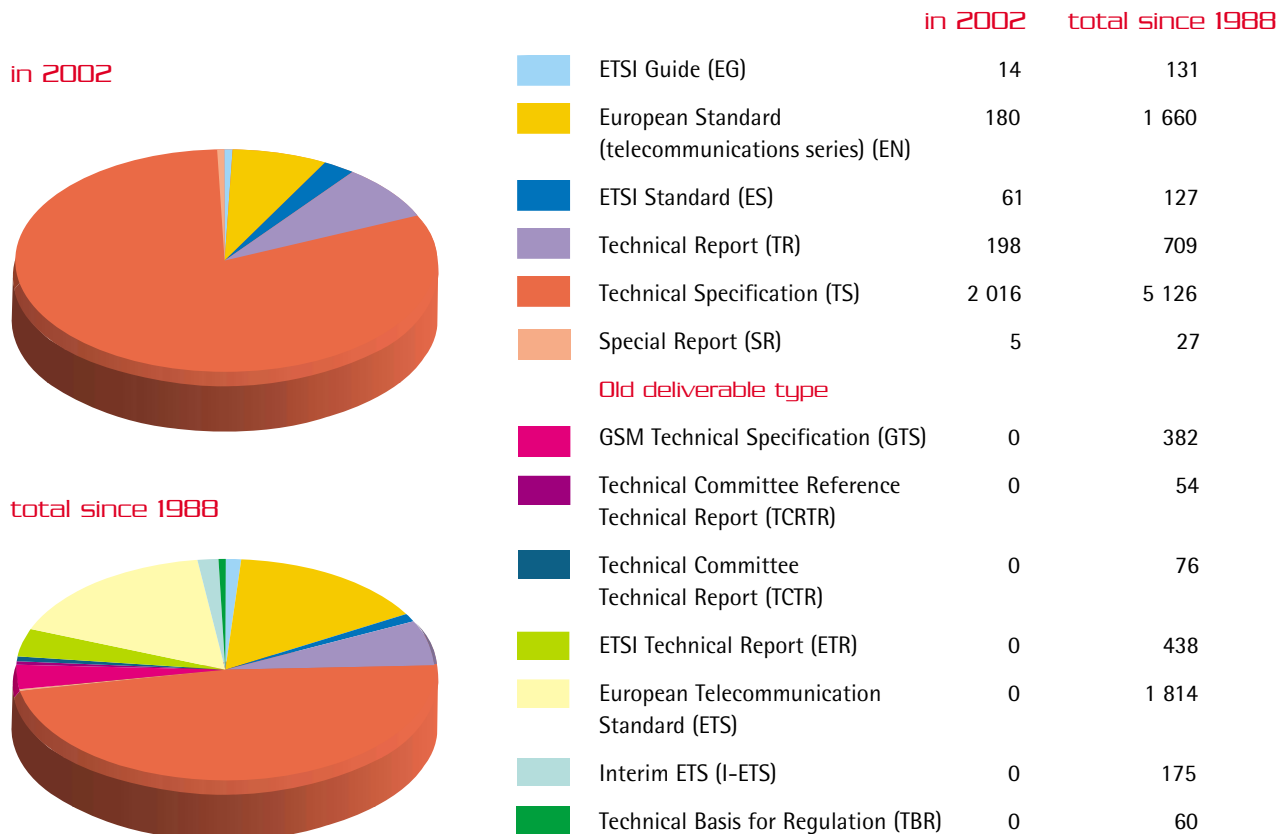


2002 was another record year for the production of standards. 2 474 deliverables, representing 258 362 pages, were published (compared with previous records of 2 172 deliverables and 207 400 pages published in 2001). By the end of 2002, ETSI had published a total of nearly 10 800 deliverables since 1988.

The number of deliverables sent for Public Enquiry (PE), Vote, One-step Approval Procedure (OAP), Membership Approval Procedure (MAP) and published, for each of the years 1990 - 2002 and the prediction for 2003.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Public Enquiry	116	79	112	227	167	269	294	201	185	236	119	82	17	
Vote	21	104	103	81	248	186	267	256	202	196	221	129	30	
One-step Approval Procedure	0	11	3	22	51	131	192	181	260	265	311	168	93	
Members' vote	-	-	-	-	-	-	-	36	36	46	37	43	99	
Publication	18	49	185	176	274	557	762	637	869	897	1 717	2 172	2 474	
Prediction														3 302

Distribution by type of published deliverable





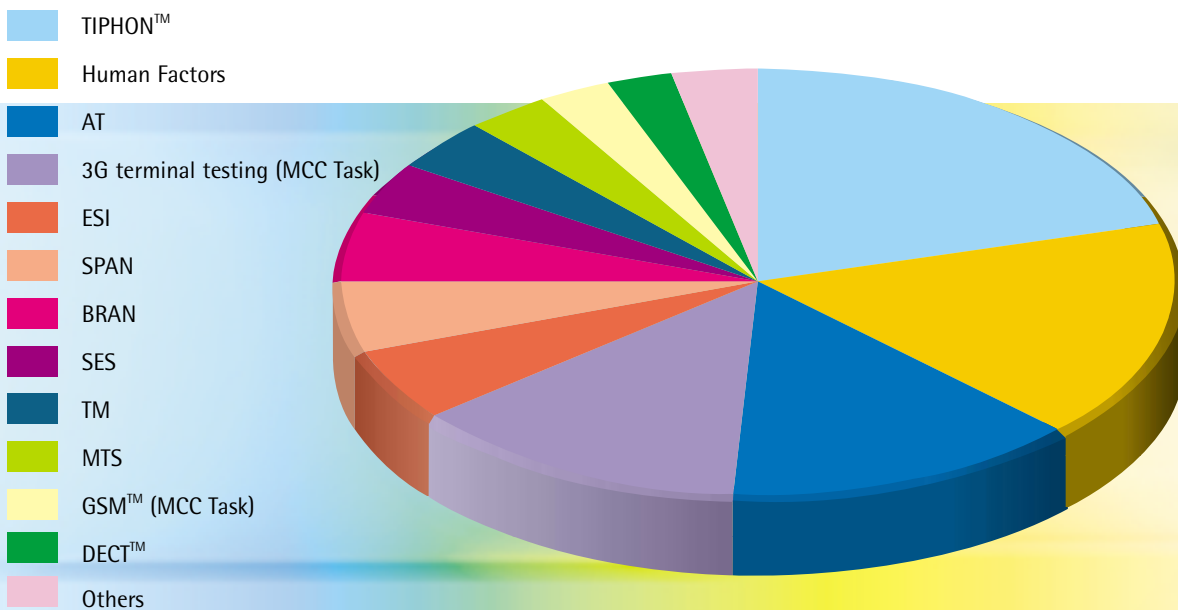
Funded Projects and Specialist Task Forces (STFs) are specific ETSI tools to accelerate the production of urgent standards. An STF is a group of highly skilled experts brought together to perform specific technical work under the direction of a Technical Body. In addition, ETSI can organize funding to provide other types of technical support, eg subcontracts for study and investigation, workshops etc.

In 2002, STFs were funded from the ETSI budget, the voluntary contributions of Members and by the EC and EFTA, mainly under the eEurope initiative. The total amount spent on experts' work in 2002 was about 4 M€.

In addition, the 3GPP partners and ETSI funded 'MCC Task Forces', to deal with formal test methods for 3G terminal equipment and for the review of the GSM A5/3 encryption algorithm.

In total (and including MCC Tasks), 59 STFs were active during the year, involving 152 experts and costing a total of about 4,75 M€.

About 4.75 M€ was invested in ETSI Funded Projects in 2002 (including MCC Tasks). covering the following areas:



EC/EFTA funding

For the year 2002, the EC and EFTA contribution to the ETSI standardization infrastructure was 2,29 M€. Their contribution to the activities to be performed in specific contracts in 2002 was 1,5 M€, which was committed to support the eEurope 2002 initiative, while a further 500 k€ was committed to support mandated and other standardization activities. This funding was finalized by Order Vouchers signed between September and December 2002. The funding provided will cover standardization activities to be performed up to the middle of 2004, although the majority of the work will be performed during 2003.

A proportion of the funding includes support to the Plugtests service plus other visibility actions, as well as a contribution to the Joint CEN/CENELEC/ETSI conference, held at the end of March 2003.

The decision of the European Council to move the eEurope activity into a new phase (eEurope 2005) has resulted in a provisional budget of 12,5 M€ for standardization activities over the next three years. ETSI hopes to be able to play a full role in supporting this policy and in obtaining further financial support for well-defined projects.

The Financial Situation



The management of the finances in ETSI is described by

- the budget report
- the financial statements (balance sheet and income & expenditure statement) which are established according to the French laws and regulations.

Since 1st January 2000 ETSI has been fully liable to corporate taxes.

Mr Pierre Casagrande, nominated auditor by the 30th General Assembly, has audited the 2002 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.

Budget Maintenance

The key points of the budget management, compared with 2001, are the following:

Expenditure – In total, expenditure increased by 10% but is 1% lower than the budget. Secretariat costs increased by 1.9%. 4,3 M€ were spent for the Mobile Competence Centre (MCC) and 1.8 M€ for the Protocol & Testing Competence Centre (PTCC) (+28%). The remaining Funded Work Programme Budget amounted to 2.7 M€ (+92%) due to the eEurope contract funded by the EC and EFTA.

Income – Almost 60% of the budget was funded by Members' contributions (13.5 M€). 3GPP Partners contributed significantly to the 3G Project (3.2 M€). Sales income decreased by 30% due to the automatic membership subscription to the documentation service. EC/EFTA contributions amounted to 4,3 M€, mainly for the development of the eEurope programme.

2001 Budget

INCOME (k€)		EXPENDITURE (k€)	
Members' contributions and Observer fees	13 471	Secretariat	11 073
EC/EFTA funding	4 338	Mobile Competence Centre (MCC)	4 376
3GPP & MESA Partners	3 294	Protocol & Testing Competence Centre (PTCC)	1 799
Members' voluntary funding	767	Funded Work Programme	2 660
Sales	610	Depreciation	738
Financial income	380	Taxes	344
Other income	498	Contingencies, provisions and other expenditure	2 040
Carry-overs to 2003	- 328	Result of the year	0
TOTAL INCOME	23 030	TOTAL EXPENDITURE	23 030

Financial Statements for the Year 2002

The final accounts and the balance sheet are summarized below.

Fiscal account period is 1 January 2002 - 31 December 2002.

Statement of Income and Expenditure Year 2002

	Income (€)	Expenditure (€)
Income	22 575 036	
Purchases		12 210 338
Expenses		10 741 313
Financial income & expenses	380 883	8 061
Extraordinary income & expenses	74 559	51 770
Corporate Income Tax		18 996
TOTAL	23 030 478	23 030 478

The account result is null.

Summary of the Balance Sheet

Assets

Net amounts at:	31 December 2001 (€)	31 December 2002 (€)
Fixed Assets	2 295 476	1 884 950
Debtors	3 466 698	2 796 005
Securities/cash	9 927 576	11 151 039
Adjustment accounts	26 560	13 063
TOTAL ASSETS	15 716 310	15 845 057

Liabilities

Net amounts at:	31 December 2001 (€)	31 December 2002 (€)
Equity	8 331 645	8 331 645
Provisions	150 000	150 000
Creditors	6 187 795	6 087 933
Adjustments	1 046 870	1 275 479
TOTAL LIABILITIES	15 716 310	15 845 057



ETSI-NEWS

ETSI-NEWS is an electronic newsletter that provides the latest information on the activities of ETSI Technical Bodies, ETSI press releases, forthcoming ETSI meetings, ETSI and 3GPP events etc...

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