

EXHIBIT 4



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About ETSI

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The European Telecommunications Standards Institute (ETSI) produces globally-applicable standards for Information and Communications Technologies (ICT), including fixed, mobile, radio, converged, broadcast and internet technologies.

We are officially recognized by the European Union as a European Standards Organization. The high quality of our work and our open approach to standardization has helped us evolve into a European roots - global branches operation with a solid reputation for technical excellence.

ETSI is a not-for-profit organization with more than 700 ETSI member organizations drawn from 62 countries across 5 continents world-wide.

In this section you will find a more detailed description of ETSI, information on how we work, how we are structured, our role and useful information for visiting ETSI.



It takes less than 5 minutes to learn about ETSI, its services and membership !



Our history

About ETSI





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Diodato Gagliardi (Director General, 1988 - 1990)	Karl-Heinz Rosenbrock (Director General, 1990 - 2006)	Walter Weigel (Director General, 2006 - 2011)	Luis Jorge Romero Saro (Director General, 2011 - today)

Some landmark events...

- 2009: Publication of ETSI book 'ICT Shaping the World'
- 2008: ETSI's 20th Anniversary
- 2008: Introduction of ISGs
- 2008: Launch of Interopolis
- 2006: election of Walter Weigel, Director General
- 2006: Smart Cards - decision taken to use USB Inter Chip technology as the basis for high speed protocol
- 2006: 60 million DECT™ terminals were sold throughout the world. Work starts on New Generation DECT™ (Wideband voice and IMS compatibility)
- 2006: ETSI's Lawful Interception handover standard deployed in Europe, Australia & USA
- 2005: the start of a Membership revival after the 2001 telecoms 'bust'. First increase in Membership since 2001 (489)
- 2005: ETSI BRAN committee and the ETSI PTCC provide expertise in the creation of test specifications for WIMAX
- 2005: ETSI TISPAN committee completes Release 1 of the ETSI NGN Standard - 70 deliverables
- 2004: Release 6 of the 3GPP™ specifications is frozen. Over 530 new specifications produced in the year...IMS phase2, Lawful Interception, WLAN interworking, MMBroadcast, PoC, DRM, Presence...
- 2004 ETSI TISPAN committee starts work on Release 1 of the ETSI NGN Standard
- 2003: ETSI signed the @LIS contract with the European Commission to provide a 'dialogue for standards' in Latin America.
- 2003: contract with OMA for Fora-hosting services signed, ETSI to provide a technical secretariat and electronic working platforms for the Alliance.
- 2002: 4.75 million euro invested by ETSI Members in Funded Projects and Specialist Task Forces (STF), to speed up the production of urgent standards.
- 2002: all ETSI rooms fitted with 11Mbit/s WLAN access points
- 2002: ETSI hosts an Emergency Telecommunications (EMTEL) Workshop, leading to the creation of ETSI EMTEL Special Committee
- 2002: ETSI publishes 2400 deliverables - EN's, TS's, TR's, etc.
- 2001: election of Jorgen Friis, Deputy Director General
- 2001: ETSI hosts 321 meetings with 7200 participants
- 2001: a difficult year for Telecoms, Stock Market value of telecoms operators and manufacturers becoming half of their 2000 peak (Source FT Sept 2001)
- 2000: eEurope - An information society for all, launched by the European Union with 12.5 million euro allocated to ETSI for Standardization work.
- 2000: Project MESA created to define requirements for mobile broadband systems for emergency services
- 2000: ETSI sets up a 2 person team to support 'fora hosting', the first customer is the Location Interoperability Forum
- 2000: 3GPP™ produces 300 specifications in its first year
- Unit of contribution reduced to 5000 ECU by 2000
- 1999: 400 reflector lists in ETSI email list server with 35,000 subscribers
- 1999: the Powerline Telecommunications Project created in ETSI
- 1999: ETSI creates the Mobile Competence Centre to support the 3GPP™ - A model for Radio, Fixed and Protocols & testing Centres later on
- 1999 The ETSI BAKE-OFF service (later to become Plugtests™) is created
- 1999: ETSI makes all standards freely available on the web. Paper sales plummet, downloads rocket to 1500 per day
- 1998: ETSI technical committee TIPHON™ (Telecommunications and Internet Protocol Harmonization Over Networks) makes available at no charge all committee documents and standards drafts on the ETSI server
- 1998: 208 reflector lists in ETSI email list server with 8000 subscribers
- 1998: UMTS™ radio access technology chosen
- 1997: First TETRA networks deployed (by 2006 - 1000 contracts awarded and deployed in over 88 countries)
- 1997: GSM Phase 2+ implementation. Common specifications agreement with ANSI T1P1, GSM North America
- 1997 ETSI starts to create ENs (European Norms), replacing the European Telecommunications Standards (ETSS)

- 1995: the GSM Phase 2 specifications were 'frozen'. GSM Phase 2 specifications published as either European Telecommunication Standards (ETS) or ETSI Technical Reports (ETR)
- 1994: total of 18 million sheets of paper used at ETSI
- 1992: GA14 decide to create PEX - Permanent Experts to assist the Technical Committees
- 1992 TR 010 published - listed all the ISDN services to be implemented in the Euro-ISDN.
- 1991: first GSM system operational. TC-GSM name changes to TC-SMG (Special Mobile Group) to avoid confusion with the acronym of the system itself; Global System for Mobile communications (GSM)
- 1991: Extension of the present headquarters
- 1991 Work on TETRA starts. Consensus reached on TDMA technology with 4 timeslots in 25 kHz

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Technologies

ETSI technology leaflets at a glance

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» Broadcast

DECT

» Digital Mobile Radio

EMC

Emergency

Environmental Aspects

» Fixed-line Access

Grid and cloud computing

» Human Factors

» Intelligent Transport

M2M

Maritime

Media Content Distribution

» Medical

» Mobile

Next Generation Networks

OSA

OSS

Powerline

» Protocol Specification

» Quality of Service

Quantum Key Distribution

» Radio

» Regulation & Legislation

» Safety

» Satellite

» Security

SmartGrids

» Smart Cards

» Testing

TETRA



The technologies section of our website gives information on the technologies standardized by ETSI or touched by our standardization.

The 'Overview' provides a basic description of the technology and its applications. More technical details and the relationship of ETSI work with this technology are given under 'Our Role and Activities'. Finally non-exhaustive lists of ETSI standards relating to the technology are available.

The boxes down the right-hand side provide links leading to further information either within the ETSI website or external sites and to ETSI technical committees working in the area.