Getting to Know ETSI
What It Does and How

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How ETSI Sees Itself

35+ Years at the Heart of Digital Standardisation

Connectivity (5G/6G), IoT, Cybersecurity, Network virtualisation, eID, Trusted Data Framework, Artificial Intelligence, Radio, Quantum and others.

From European Roots to Driving Global Standards

ETSI is both a European Standardisation Organisation (ESO) and a globally recognised Standards Development Organisation (SDO).

We bridge efforts to translate European leadership into global action by developing standards that strengthen the EU's competitiveness and values.

Independence and WTO/TBT Principles

ETSI operates as an independent and neutral organisation.

Our work follows the WTO/TBT principles of openness, consensus, transparency and voluntary application, **ensuring trust and legitimacy for all stakeholders**.

Flexible Processes and Standards Free of Charge

ETSI offers a broad range of agile tools, including Technical Committees, Industry Specification Groups, Software Development Groups, Interop Testing/PlugTests, Special Committees, Specialist Task Forces, and the PAS process, to deliver timely results.

All ETSI standards are freely available, with over **60,000 published** and more than **26 million downloads** each year.

Over 900 Members: Direct Participation and Inclusiveness

ETSI offers a unique European platform for direct participation, fostering dialogue between governments, researchers, SMEs, technology companies and societal stakeholders.

We promote inclusiveness, including strong collaboration with Annex III organisations and the open-source community.

Global Reach and Partnerships

ETSI operates within a broad community, collaborating with the ECC and CEPT across 46 countries (radio equipment and spectrum), and the ITU.

We are a founding partner of global partnerships like 3GPP and oneM2M.

We also maintain **over 100 partnerships** and contribute to international cooperation projects like **SESEI, SESEC,GIST** and **IndiCo-Global**.

What Is ETSI

A dynamic community for ICT standardization

- Independent, non-profit organization
- Track record of almost 40 years of technical excellence in the ICT sector
- Diverse membership
  - SMEs, micro-enterprises, large companies, research entities, academia, government and public bodies, societal stakeholders
  - Almost 24% of ETSI members are SMEs and micro-enterprises
  - Members can participate in any activity on equal terms
  - And non-members are welcome to participate in a number of relevant activities
- A European Standards Organisation (ESO), officially recognised by the European Union
- Committed to global ICT standardization

Producing free standards

- ETSI IPR Policy as the overarching framework for IPR holders to be fairly and adequately rewarded
- Technology access in FRAND terms & conditions: fair, reasonable, and non-discriminatory.
  - More than 62 000 documents published overall
  - 26 million standards downloads in 2024

The ETSI Structure

Different types of technical activities

- Technical Committee (TC), only for members
  - The only ones producing formal standards and addressing EU Standardization Requests
  - Require approval from the ETSI Board
- Industry Specification Group (ISG), open to non-members
  - Steering positions for ETSI members
  - Participation requires a specific agreement to acknowledge procedures and IPR
- Software Development Group (SDG)
  - Open-source community
  - Participation requires an agreement equivalent to ISGs
- Specialist Task Force (STF)
  - Funded consultancy work on a well-focused matter
  - Participation is open, but member endorsement is required

And hosted partnerships

- 3GPP, together with other six *regional* SDOs
- OneM2M

The ETSI Deliverables

Normative

- Specifications (TC) and Group Specifications (ISG)
- The only ones that are expected to use specific normative terms (as the MUST/SHOULD/MAY/…)

Informative

- Reports (TC) and Group Reports (ISG)
- Gap analysis, prospective proposals and paths for future specification work

Reference

- Mainly, open-source results from SDGs
- Other reference implementations focused on conformance verifications

Demonstrative

- Experimental results, including interoperability assessments
- Hackathons around open-source and SDGs
- *Plugtests*, supporting early interoperability evaluations among multiple (commercial and non-commercial) products
- PoCs, evaluating early standardization tracks and/or reporting research results

CTI – The ETSI Technical Support Team

ETSI's Centre for Testing and Interoperability

- Conducts interoperability test and validation for a wide range of ICT implementations
- Facilitates demonstrative events: Plugtests and Hackathons
- Develops tools for the ETSI community collaboration

Core support for ongoing ETSI SDGs

- OSM – Open-Source MANO is developing a NFV Management and Orchestration stack aligned with ETSI NFV Information Model and APIs
- TFS – TeraFlowSDN is developing a cloud-native SDN Controller enabling smart connectivity services for future networks beyond 5G
- OSL - OpenSlice is developing a Operations Support System (OSS) to deliver Network as a Service
- OCF – OpenCAPIF is developing a Common API Framework as defined by 3GPP to enable API exposure and invoke in a secure and consistent manner
- OOP – OpenOP delivers an Operator Platform enabling operator network and testbed federation, along with standardized capability-exposure APIs

Work Lines

Directly connected to IETF work

- Access networks: cable, optical and radio
- Artificial intelligence and data infrastructures
- Crypto evolution and application
- Cybersecurity
- Digital identity
- Edge Computing
- Internet of Things
- Network Virtualization
- Operations and automation
- Satellite networks
- Sustainability

Enabling aspects and vertical environments
Relevant to industry and/or to European regulation

- Broadcasting
- eHealth
- Human factors
- Critical communications
- Safety aspects
- Telco specifics: 5G(Advanced) and 6G
- Testing methodologies and tools
- Transportation: aviation, maritime, railroads…

Most Relevant Activities: Data Issues and AI

TC DATA has been recently introduced to the NMOP WG

- Address open data infrastructures
- Support the autonomous use of data by applications
  - Semantic mechanisms and context-aware access. FAIR principles: **F**indable, **A**ccessible, **I**nteroperable, **R**eusable
  - Data governance: Access control, consistency, privacy preservation
- Direct connection with network modeling and operations activities
- And others applicable to governance issues, such as WIMSE, SCITT, SCIM or SPICE

SAI, a pioneer activity on AI security

- Threat ontologies
- Explicability and transparency
- Security controls and supply chain

Applications to network management

- Interaction with AI elements, closed-loop lifecycle and agent applications
- Data flows and lifecycle management for Network Digital Twin
- Two ETSI groups focused on these aspects: ZSM and ENI
- A process of convergence

Most Relevant Activities: Security and Network Technologies

Security-related activities

- TC CYBER as the focus point for security and privacy issues
- Crypto (quantum-safe) evolution: ISG QKD and WG QSC
- And the LI beast, within TC LI
- Some misalignments in the past
- Mainly caused by misunderstandings on roles and focus

The convergence on network technologies

- A number of existing activities, at different stages in their lifecycle
- Attempting a convergence of efforts to gain critical mass
- Defining a common ground

The special case of ORAN standardization

- Following the *Public Available Specification* (PAS) process
- Formal adoption by ETSI of public specifications independently produced by its members
- Increase visibility, provide stability and potential regulatory acknowledgement

What May Come Next

Formally: Strengthen collaboration

- A-la-3GPP
- A liaison officer to keep both sides mutually informed on how work evolves
  - Reporting as needed
- Improve awareness and avoid further misalignments
- Several prominent common active participants, and interest on this role
- Formal details need to be sorted out
  - The LLC makes it easier for ETSI to use its MoU mechanism

Less formally: ETSI playing the role of one of the possible “other bodies”

- Where work can de redirected to
  - When relevant for a particular sector
  - Or focused on a concrete, not Internet-wide scope
- And a source of operational and practical experience
  - Application environments
  - Reference and demonstrative deliverables