

CASE STUDY: ETSI

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Work in progress, comments most welcome!

Basic facts about ETSI

Webpage

<http://www.etsi.org/>

Organization tagline

ETSI is a broad ICT standardization organization recognized by the EU.

Main standardization areas

ICT in general with a focus on telecommunications

Best known standards

[GSM](#)

Classification

Formal, European, with a general focus. ETSI is one of three standardization organizations recognized by the European Commission and can deliver de jure European standards.

Does the SSO have any explicit or implicit policy relating to interoperability?

ETSI states “to provide services in the area of Interoperability testing, Fora hosting and development of protocol and testing specifications in support of ETSI members and other organizations producing ICT standards for the global market place” as one of their strategic goals. ETSI’s views and activities in interoperability are further described on [ETSI’s webpage](#).

Is there an explicit strategy to facilitate or contribute to interoperability?

ETSI facilitates plugtests and interoperability showcase events, delivers test specifications, have a specific process called “standards engineering” to facilitate clarity in standards in order to create interoperability, have a “Centre for Testing and Interoperability” and provides a white paper on technical interoperability. ETSI also provides the Interopolis service which centralizes several interoperability related activities.

Procedures for testing of a proposed/developed standard with respect to interoperability and backward compatibility?

Specifications go through several testing stages but the focus for testing is of implementations, for which ETSI have substantial support.

What are the procedures (internal or external) for implementation?

ETSI provides several services to facilitate implementation.

How is compliance enforced and what are the consequences of defections and deviations from the standard?

ETSI does not enforce validity of standards but the EU New Approach puts compliance into focus for Harmonized ETSI standards.

Did the SSO develop competing standards for the same or similar type of technical problem?

ETSI is deeply involved in the GSM family of standards which has a direct competitor in the America- and Qualcomm-based [CdmaOne](#) family of telecom standards.

What is the value of interoperability in the specific area in which the SSO is active?

As a recognized EU SSO ETSI relies heavily on interoperability. For the EU interoperability can be considered mandatory and by extension it also becomes mandatory on a global scale.

What is the value of selection and conformity in the specific area in which the SSO is active?

The fact that standards have a specific recognition by the European Commission means that selection is of the highest importance within the region. Globally selection might not be as important since non-compatibility is geographically divided, as evident from GSM/CdmaOne. Conformance in the EU will be mandatory but not globally.

Standardization Process

- The European Telecom Standards Institute (ETSI) has been active in standardization since 1988 and has 700 members.
- The scope of ETSI is broad but has a particular focus on telecom. ETSI has produced 20 000 specifications, 4,200 ETSI European standards and 500 ETSI standards.
- Membership is open to any organization.
- There are three membership classes: Full, Associate and Observer. Fees range from 3000 to 154 720 EUR depending on turnover (companies) or national GDP (for national standardization bodies). NFP organizations and universities pay 2000 EUR and observation membership is 4000 EUR.
- Full and associate members are allowed to participate in working groups. Only Full members (members located in the [CEPT](#) geographic region) may vote on approval of specifications and approval is officially granted by the Technical Committee responsible. Approval of standards is conducted by all Full and Associate members unless in the EN series, in which case the National standard Organizations casts the votes. Approval requires 71 % majority and votes are weighed by membership fee. Appeals of decisions are possible.
- Standards are publicly available for free. Meeting minutes and working documents are generally only available to members. The votes of individual members are not made public.
- The process to begin new standardization work requires the support of at least four members.

Improvement activities

- In 2008 ETSI launched “Interopolis”, a service intended to improve, enlarge and centralize ETSI’s portfolio of interoperability testing and validation.

- Public review is usually conducted prior to approval of a standard. The public review is carried out by the national standardization organizations.
- The ETSI Industry Specification Groups which can be set up by ETSI members and also include non-members are suited for quick approval. The ISGs are semi-autonomous but are hosted within ETSI and receive full support benefits of the organization.
- ETSI pursues the development of standards within the scope of telecommunications, electronic communication networks and services and related areas. The purpose is to achieve a unified approach in the European market and to contribute to worldwide standardization in afore said areas.
- ETSI's strategic areas include; providing telecommunication and electronic communication standards for the global market place; providing European ICT standards; providing interoperability testing; Fora hosting and developing testing specifications and protocols to ETSI members and third parties. The aim of ETSI is to become a renowned, worldwide, and highly respected standard organization.
- ETSI is active in the same area of standardization as [CEN](#), [Ecma](#), [IEEE](#), [ISO](#), [ITU](#), [OASIS](#) and [W3C](#). Cooperation occurs with, among others, [3GPP](#), CEN, [CENELEC](#), [EBU](#), Ecma, [ICTSB](#), ISO, ITU, [MESA](#) and W3C. Formal liaison exists with 3GPP, CEN, CENELEC, ETSI, ISO, MESA, W3C and the European Commission.

Interoperability

- The IPR policy of ETSI requires that technology is available on RAND terms. Copyright of submitted material is held by ETSI.
- All contributors to the Technical Committees are requested to disclose any related patents they are aware of. There is also a general encouragement to all members to disclose known IPR related to standards under development.
- ETSI provide several services relating to testing and validation but do not certificate implementations. This is however provided by third parties in many cases.
- Interoperability is recognized as the central concern of the organization and ETSI has several approaches suited to alleviate concerns over interoperability. These include: providing specialized languages for greater clarity, testing specifications, verifying implementations, validating standards and providing information and training services.

Case study

The European Telecommunications Standards Institute (ETSI) was founded in 1988 since it was considered that a European standards setting organization was needed specifically for the telecommunications field. ETSI is a not-for-profit organization which develops global standards for information and communications technology (ICT) within a wide range of areas, for example mobile, radio, internet, broadcasting and medical systems. ETSI is officially recognized by the European Commission (EC) as a European Standards Organization, which implies that ETSI standards are adopted by the EU member states.

In contrast to the other standard organizations recognized by the EC, ETSI is open for any organization from any country. Among the approximately 700 members from over 60 countries there are not only the national standard bodies of the EU member states, but also a number of companies and other organizations. ETSI membership exists in three different tiers: full-, associate- and observer membership. Full membership is only open for members from the geographical area of CEPT (The European Conference of Postal and Telecommunications Administrations), whereas associate membership is available for others. Observer status is available for anyone who does not wish to fully participate in the work conducted by ETSI. Annual membership fees for companies range from 3 000 EUR up to 154 720 EUR depending on the size of the company, while universities and not-for-profit organizations pay 2 000 EUR and observers pay 4 000 EUR. ETSI is composed of a General Assembly, a Board, a Secretariat and a number of Technical Bodies.

The development of standards is done by the various technical bodies, where all full and associate members have the right to participate. The technical bodies are in most cases technical committees which are semi-permanent groups, each responsible for standards within a number of specified technical areas. There are also temporary groups, ETSI Projects, which are based around a specific market rather than a technology, and ETSI Partner Projects which are collaborations with other standards development organizations. A technical committee delegates the task to develop standards, specifications and other papers to small working groups of experts. Once such a working group is done drafting a standard, the committee has a ballot on whether to approve it or not. Approval requires at least 71 percent of the votes, where votes are weighted in accordance with the membership fee. Members of the committee may appeal the ruling of a vote to the ETSI Board.

Since a technical committee is semi-permanent, it continues to support approved standards with regular reviews, tests and validations. If a committee is dissolved it needs to provide recommendations on how the future supports of its standards are to be conducted since ETSI is committed to support approved standards until removal.

The working documents and meeting minutes in ETSI are only made available for ETSI members while all approved standards and specifications are made publicly available. The IPR of all contributions done by members is owned by ETSI and ETSI grants the right to freely use and copy the standard documents.

Any contributor in a technical committee is requested to disclose any related patents they are aware of to make sure that work is not conducted in areas where patent claims could prohibit the introduction of a new standard. Holders of such patents have to offer irrevocable licenses on Fair, Reasonable and Non-Discriminatory terms before such technologies may be included in a standard.

ETSI is widely recognized as the standards development organization which developed the GSM standard for mobile communications and ETSI has also been involved in the cooperation 3GPP which develops standards for third generation mobile systems. ETSI has developed a large number of standards with the ITC field and since it is recognized by the EC ETSI obviously holds great influence.

ETSI to a large extent overlap the scope of the International Telecom Union and can be considered to be a regional competitor. Considering the leading role of ETSI in 3GPP it also competes with the [3GPP2](#) project, responsible for the development of the CMDA2000 standard which is a direct competitor of 3GPP's WCDMA. Being engaged in the standardization of wireless communication ETSI also competes with other standards like [WiFi](#) and [WiMAX](#) and their parent organization IEEE. Several of the other technologies with which ETSI works also overlap with the work of other standard setting organizations. However, ETSI is also very focused on cooperation with other organizations. Together with the other European organizations CEN and CENELEC, ETSI participate in the Information Communications Technologies Standards Board. ETSI also cooperate with the international organizations ISO, IEC and ITU, and with industry organizations such as [EMTEL](#), MESA, [ICANN](#) and [GSC](#). Further, memorandums of understandings have been signed with numerous organizations, such as OASIS and [ERCIM](#).

Key success factors

- By balancing the voting power by annual fees this induces fairness to the relative power of members and works as a heightened incentive for both small and large members to participate.
- Due to ETSI's status as a recognized European Standard Organization adoption of approved standards is more or less guaranteed within Europe. Thereby the influence of ETSI is enhanced.
- The large membership count guarantees participation from several different interest groups and thereby increases the recognition of ETSI approved standards.