ETSI
World Class Standards

Methods for Testing and Specification

About ETSI

ETSI is one of the world's leading standards development organizations for Information and Communication Technologies (ICT). Founded initially to serve European needs, **ETSI** has grown rapidly to become highly-respected as a producer of technical standards for worldwide use.

ETSI membership is composed of manufacturers and network operators – all the "big names" and many smaller companies too – plus national administrations, ministries, regulators, universities, research groups, consultancies and user organizations. A powerful and dynamic mix of skills, resources and ambitions, all working together to bring the very best ICT solutions to the global marketplace. Geographically, our membership of over 700 companies and organizations is drawn from more than 60 countries on 5 continents.

ETSI is independent of all other organizations and structures, a key feature for ensuring neutrality and trustworthiness. That brings benefits not only in the acceptance of our standards and other publications, but also in our growing range of ancillary services, such as interoperability testing. And because standardization inevitably draws upon the bright ideas of our members, we have an Intellectual Property Rights (IPR) policy in place that has become the model for many other organizations.

Your company can be part of this dynamic organization. For more information, please visit and contact:

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As standards and interoperability have become crucial factors in market success, the way that standards are written is of critical importance. **ETSI's** aim has always been to produce documents that are easy to understand and easy to use. **ETSI's** Methods for Testing and Specification Technical Committee (TC MTS) creates standards related to testing and specification languages, and provides frameworks and methodologies to enable the other **ETSI** committees to achieve this goal.

TC MTS works very closely with **ETSI's** Centre for Testing and Interoperability (CTI) to develop the background material which they then use in their support of other **ETSI** committees as well as other relevant standardization bodies such as ITU Study Group 17. Much of work done by TC MTS has also been adapted and used beyond **ETSI** by other organizations, fora, and industry globally.

TC MTS is attended by a mixture of experts from major network operators, test service providers, telecommunication equipment vendors, test tool vendors and acclaimed research institutes. They come to MTS meetings to further develop, profile and adapt state-of-the-art test and specification technologies, to enable a competitive tool market for these technologies, and to be part of the development of guidelines how use them in the standardization context.

TC MTS achievements to date

TC MTS has made significant achievements in the development and use of specification languages. Many of the well-known **ETSI** base standards such as GSM™, UMTS™, LTE™, DECT™, and IMS™ have accompanying test suites to ensure that devices can be tested for conformance to the appropriate standards as well as their interoperability. In the area of IP-based technologies TC MTS has responded to our members' needs by developing established test suites for SIP-based Voice over IP (VoIP) and IPv6. These test suites are normally written in TTCN (Testing and Test Control Notation), a standardized test specification language that has been developed by MTS and endorsed internationally by ITU as Recommendation Z.140.

Frameworks and guidelines

TC MTS has developed numerous methodologies and testing frameworks and provides guidelines for standards engineering. A specific example of the latter is our "Making Better Standards" website (http://portal.etsi.org/mbs/). The committee's work on interoperability testing has already been put to practice in numerous **ETSI** Plugtests™ test events. Similarly, on the specification side TC MTS has developed guidelines which show how the Specification and Description Language (SDL), the Unified Modelling Language™ (UML) and Message Sequence Charts (MSC) can be written in a way that is easy to read and understand. Some of these techniques have been adapted for the specification of Next Generation Network (NGN) security standards.
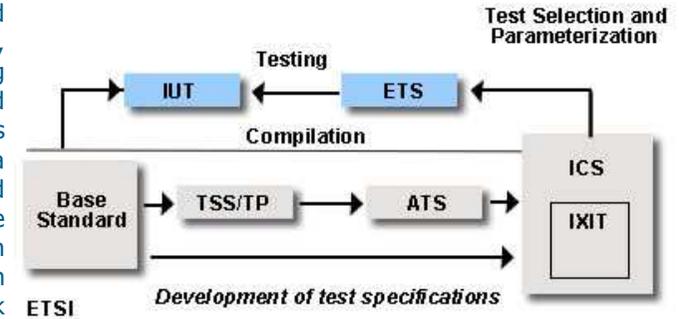
A very busy future for TC MTS

The evolution of the TTCN language and the development of guidelines for its use will continue to be major activities as new testing requirements are identified and global industrial uptake continues to grow – especially in India and China. Recently, many industrial testing activities have moved to such countries, and TC MTS especially encourages **ETSI** members from those countries to join its activities.

Model-based testing is another testing technique that has gained increasing attention. Model based testing has already proven itself in industry as a mature testing technology that leads to significant increase of productivity. It can also provide implementers of standards access to much wider test sets. TC MTS is focusing on promoting the deployment and adaptation of this technology to the needs of standardization and thereby to consolidate **ETSI's** reputation as a leader of test and specification methods.

In addition, TC MTS intends to continue and expand its work on frameworks and guidelines: further activity on security related topics is one example. Another significant area is the further development of standards engineering material to reflect the latest trends, especially in the area of validation techniques.

Visit: http://portal.etsi.org/mts for details of the committee's ongoing activities.