

First GISFI Standardization Event

Lonavala, 26-28 February 2010

ETSI
Open for Cooperation

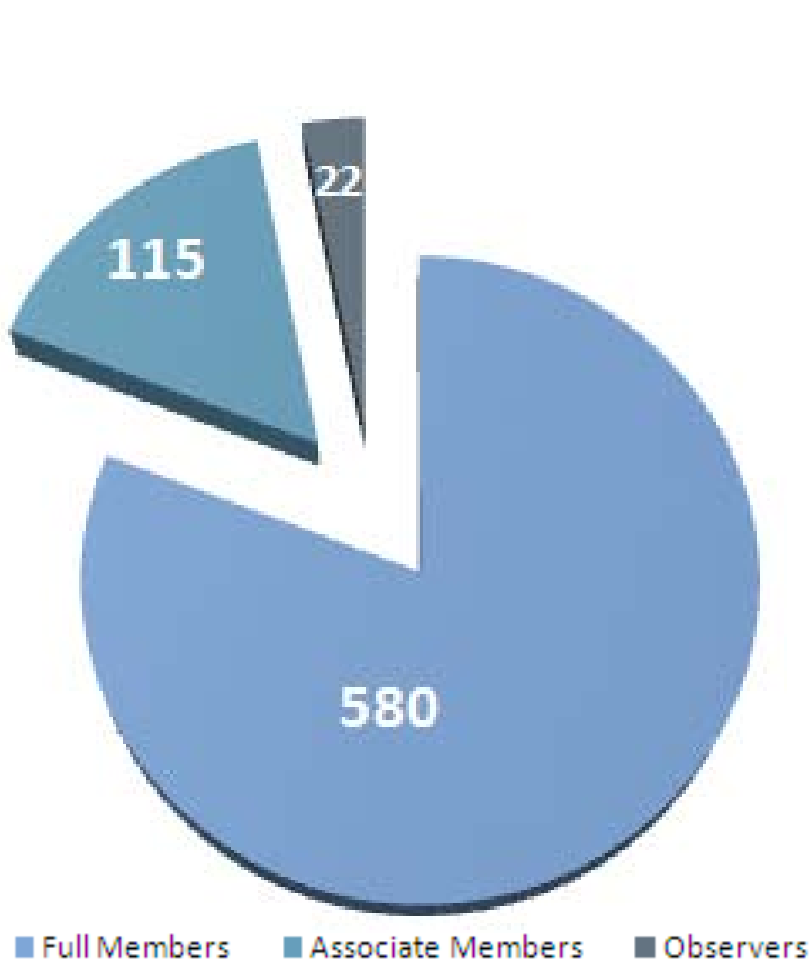
Adrian Scrase
ETSI Vice-President
International Partnership Projects

ETSI in a nutshell

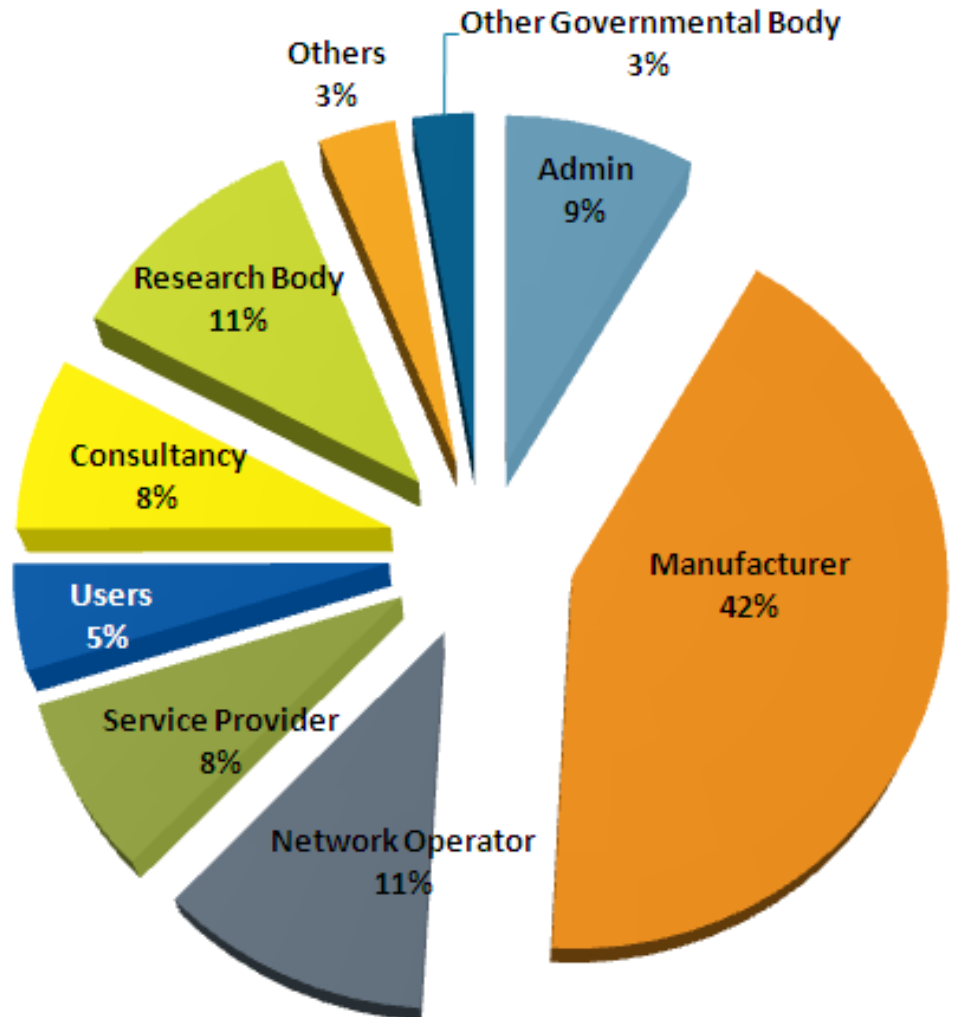
- ICT standards organization
- Global membership (717 Members from 62 countries)
- Direct participation
- 2 Partnership projects, 40 Technical bodies (incl. 5 Industry Specification groups), 90+ working groups, 6000 industry experts/year
- Globally applicable specifications and European Norms (EU recognition)
- Enabler of a series of worldwide industrial success stories
- Global web of alliances e.g.
 - *Founding partner & service provider for 3GPP*
- Major focus on Interoperability
 - *Formal test specifications, validation and testing techniques, Interoperability testing "Plugtests™"*
 - *"Classic and light", i.e. physical layers and service layers*

<http://www.etsi.org>

Membership (1)



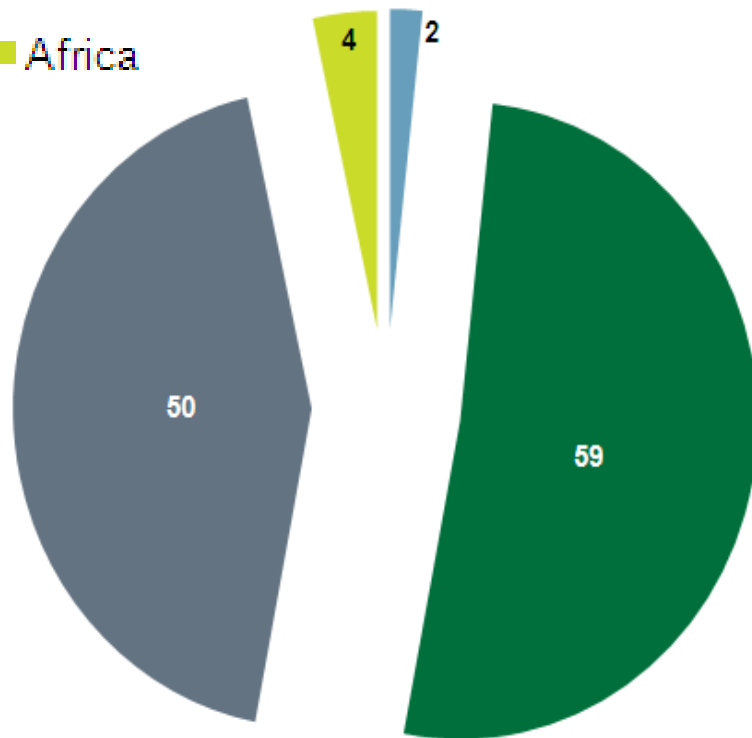
Status



Category

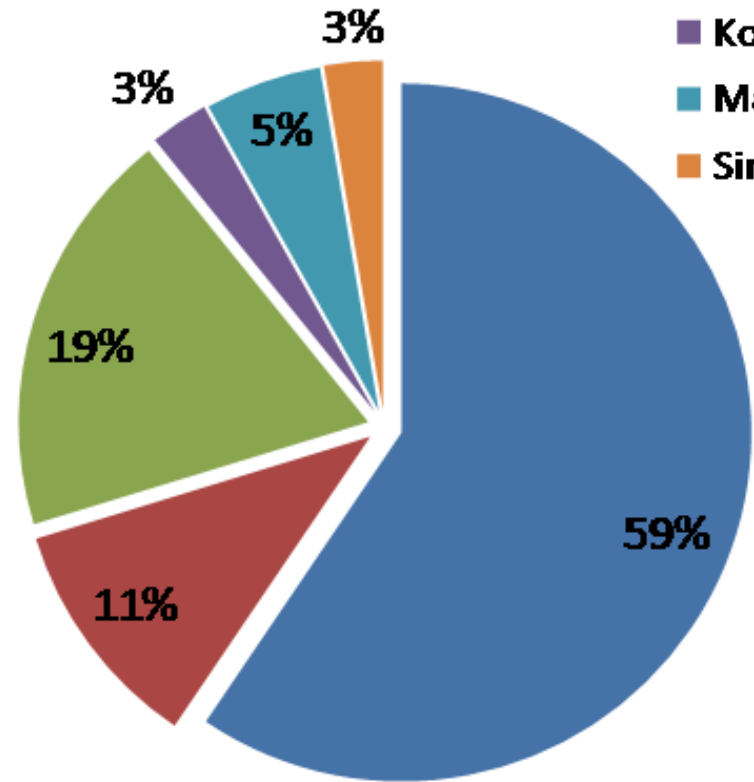
Membership (2)

- Australia
- America
- Asia
- Africa



**Associate members
Geography breakdown**

- China
- India
- Japan
- Korea
- Malaysia
- Singapore



Focus on members in Asia

History

Mid 80's

- Emergence of mobile communications
- Industrial and political will to work on a common set of standards for EU
- Industry in the driving seat

European
Commission

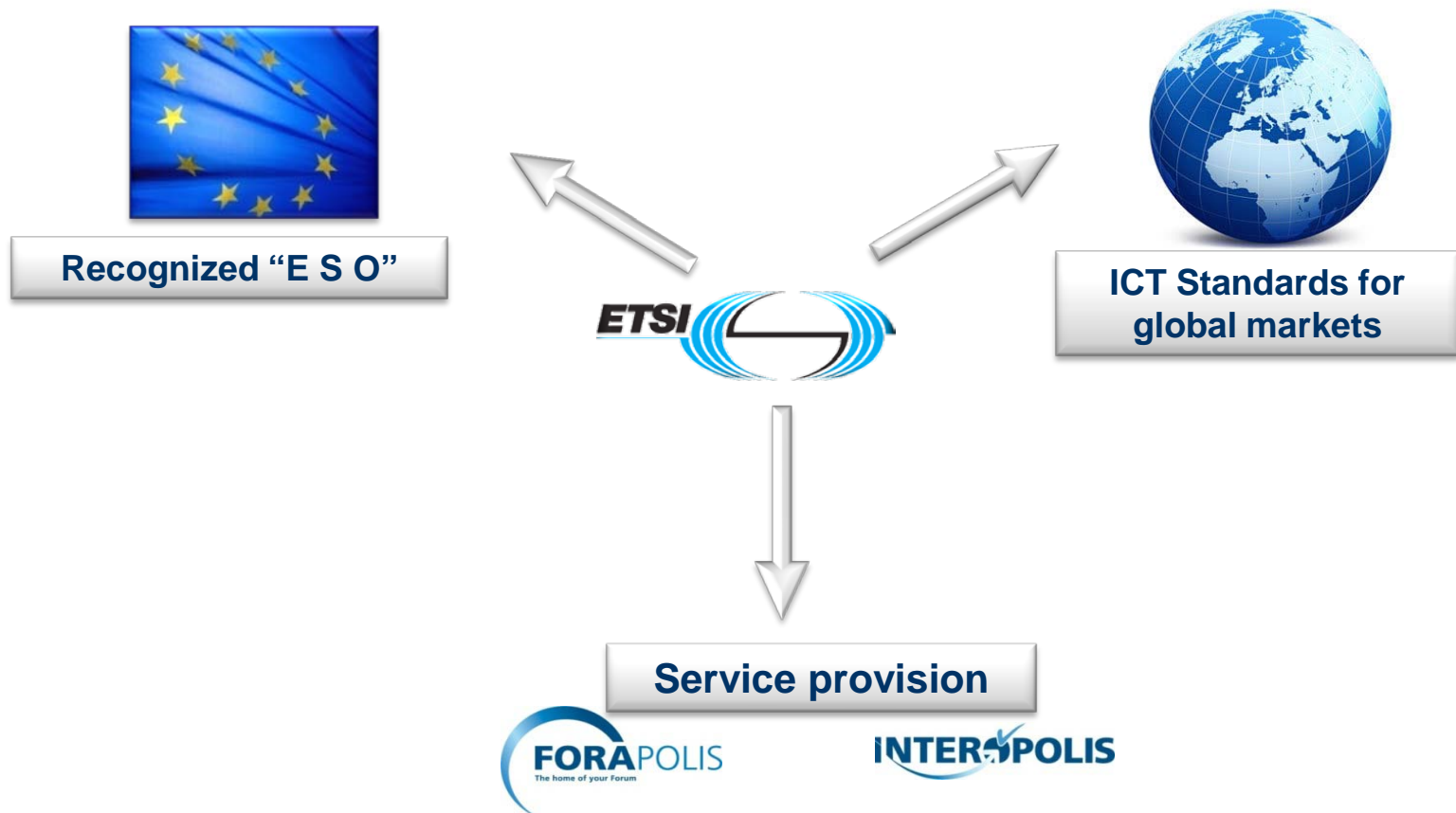


CEPT
(Conference of European Posts
& Telecommunications)

MoU (1988)



The three dimensions of ETSI business



Attributes of ICT standards associated with EU legislation and policies

- **The following attributes should always be respected in standardization processes**
 - Openness
 - Balance
 - Transparency
 - Consensus

- **The following attributes should be reflected in the standards themselves**
 - Relevance
 - Quality
 - Intellectual Property Rights
 - Neutrality and stability
 - Maintenance
 - Availability

*Source: Modernising ICT Standardisation in the EU - The Way Forward
EU Commission Whitepaper (Sep. 2009)*

Standards in support of EU regulation

- ❑ Harmonization required for Internal Market (27 member States)
- ❑ ETSI is officially recognized by the EU as a European Standards Organization (along with CEN/CENELEC)
- ❑ Directives as legal instruments, e.g.
 - 2004/108/EC on Electromagnetic compatibility
 - 1999/5/EC on Radio and telecommunications terminal equipment
 - 2006/42/EC on Machinery
- ❑ Harmonized Standards
 - essential requirements
- ❑ CEPT/ECC
 - ETSI members can initiate spectrum allocations
 - European acceptance/harmonization can be tabled on international level, e.g. ITU



A robust IPR Policy

Objectives

- Solve the tension between IPRs and Standards
 - *IPRs destined for private exclusive use*
 - *Standards intended for free, collective use*
- Make the standardisation process transparent and patented technology accessible
- Take into account all interests involved
- Foster technical contributions and technology competition
- Secure a legal environment to facilitate standards implementation

Means

- ✓ No technical reservation for the inclusion of IPRs in standards.
- ✓ Early identification and disclosure of essential IPRs.
- ✓ Ensuring the future applicability of the standards in full respect of the rights of the IPR owner by requesting FRAND licensing declaration.
- ✓ Voluntary, unilateral, public ex ante disclosures of licensing terms are not prohibited under the ETSI IPR Policy.
- ✓ No involvement of ETSI in any commercial discussion on IPR matters.

Standards for the 21st century

A whole new game

- **The different flavors of « convergence »**
 - ICT players bound to liaise with new business partners, e.g. broadcast, transports, banking, utilities, etc.
- **Hyper fragmented -and volatile- standards market**
 - **Myriad of agents in the standardization process (accredited SDOs, forums, companies)**
 - ICT standards specified in “islands”
 - Even more so for complex and pervasive ICT systems e.g. Intelligent Transports, Internet of things, etc
 - **Interworking/interoperability/overall architecture?**
- **A changing global picture**
 - **New entrants (e.g. GISFI!)**
 - **Tension between need for global standards and regional strategies**

How ETSI addresses the challenges

1. **Addressing business areas rather than technology silos e.g. « @home », « content delivery », « transportations »...**
2. **Close link to research**
 - **members from science/research**
 - **cooperation with research organisations**
3. **Interoperability services second to none**
4. **Partnerships: the preferred way**

1. Business areas rather than technology silos

**Wireless
networks**

**Efficient
interop**

**Content
Delivery**

**Living with
things**

**Public
Safety**

@home

**Wired
Networks**

Security

Transportation

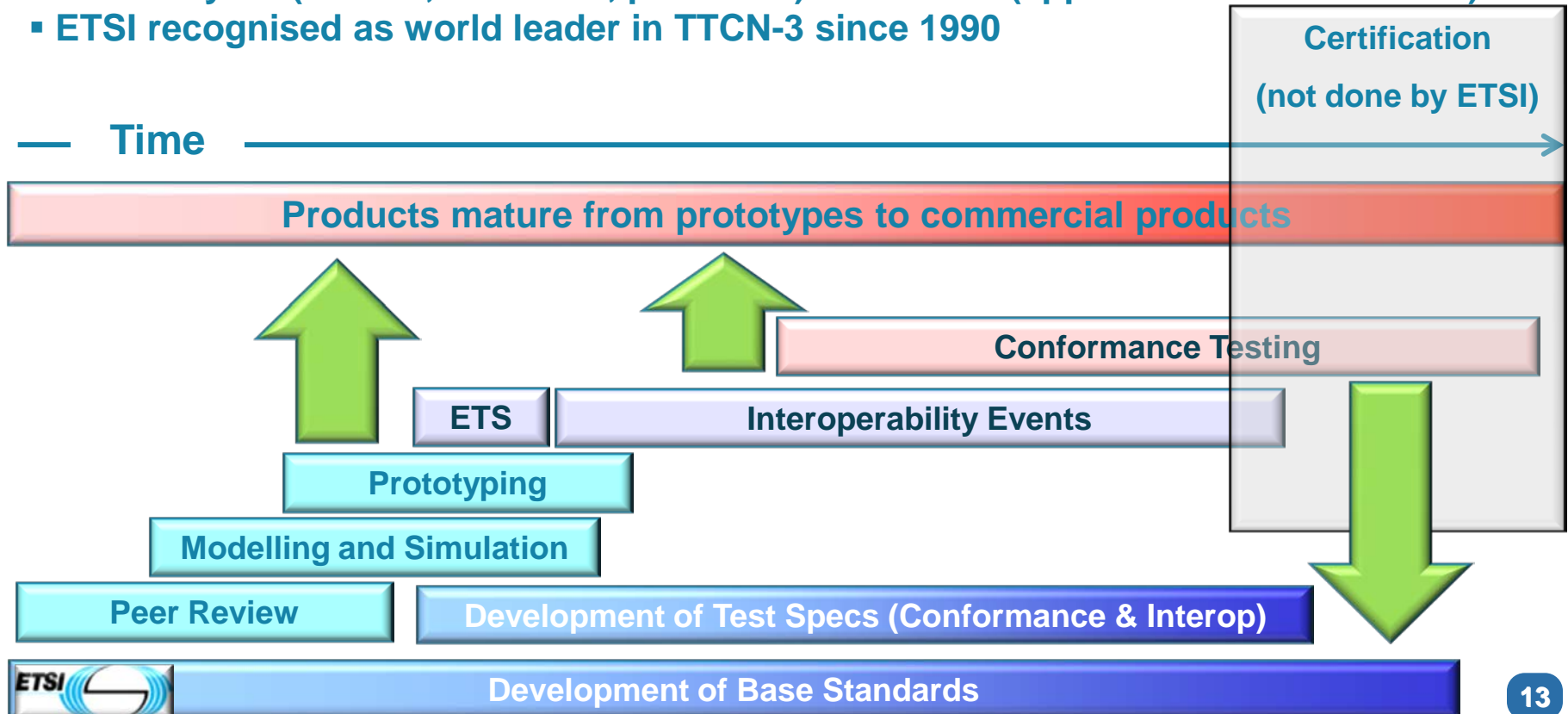
People & social responsibility

2. A distinctive feature Interoperability engineering

Validation of Standards and Testing

ETSI CTI (Centre for Testing & Interoperability)

- For ETSI, 3GPP and 3rd parties
- Lower layers (access, networks, protocols) and above (applications and services)
- ETSI recognised as world leader in TTCN-3 since 1990



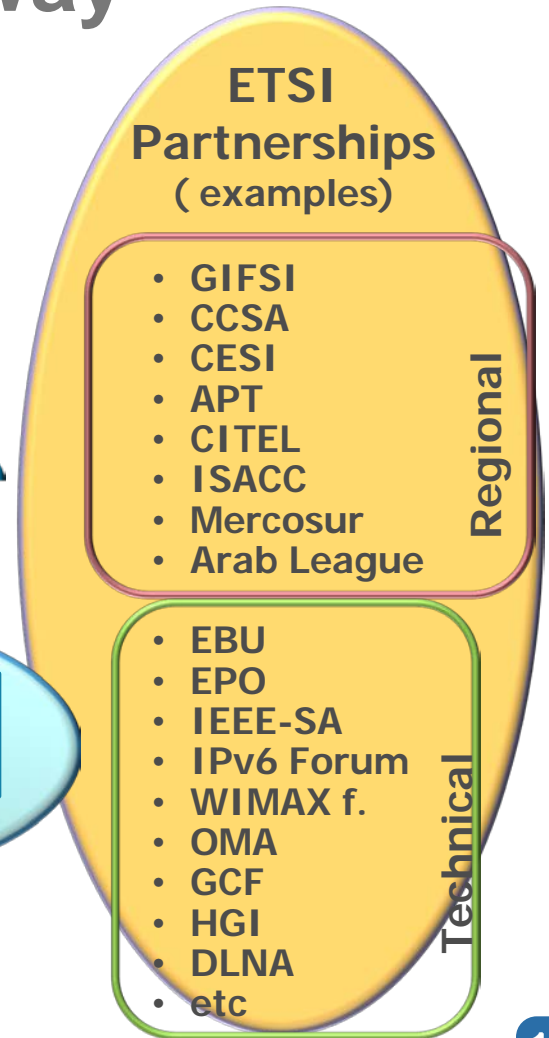
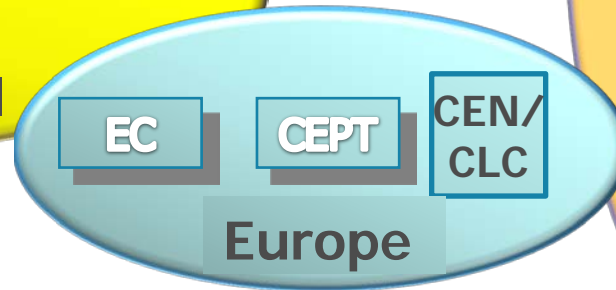
Typical ETSI Test Specifications

- **Cellular: GSM, 3G UMTS, LTE**
- **Wireless: HiperMAN, HiperACCESS, WiMax**
- **VoIP: H.323, IETF SIP, SIGTRAN**
- **Service Creation: OSA/Parlay (API, IDL, Java)**
- **IPv6: Core, Security, Mobility, v4-v6, DHCP**
- **Radio communications: DECT , TETRA, DMR**
- **Access terminals: FSK, SMS**
- **Broadband: ISDN, DSL**
- **Smartcards: Readers, cards, security modules**
- **Intelligent Transport Systems (ITS): DSRC**
- **NGN: IMS**



- ❑ In operation since 1999
- ❑ Over 100 events, more than 3000 engineers
 - GRID
 - IMS
 - Bluetooth
 - IPv6
 - Triple Play over xDSL
 - SIM/Handset
 - WLAN IRAP
 - RFID
 - STQ (Speech Quality)
 - WiMAX
 - SIGTRAN
 - Femtocell
 - OSA/Parlay (ParlayX)
 - B2B (Business-to-Business)
 - ITS (Car2Car)
 - SIPit
 - J2ME
 - High Definition Multimedia Interface (HDMI)
 - Air Traffic Control (EUROCAE)
 - Electronic Signature (XadES, CadES)
 - Lawful Interception
 - Optical Fibre (GPON)
 - Power Line (PLT)
 - Intelligent Transport Systems
 - Femtocell
 - Fixed Mobile Convergence (FMCA)
 - ENUM; H323 ... and more ...

3. In a fragmented landscape, Partnership is the way



Openness is essential

- **Open planning:** Members set the work programme through the selection and approbation of work items
- **Open participation:** any interested party can join and contribute to the standards development process
- **Open to business:** Industry representatives participate directly in the technical bodies, not via a national delegation or a NSO
- **Open decision making process - consensus**
- **Open IPR rules (FRAND):** IPR holders must identify themselves during the standards setting process.
- **Open access to meeting documents (drafts and completed) for Members.**
- **Open deliverables:** all ETSI deliverables are available online free of charge.

A look at some recent activities

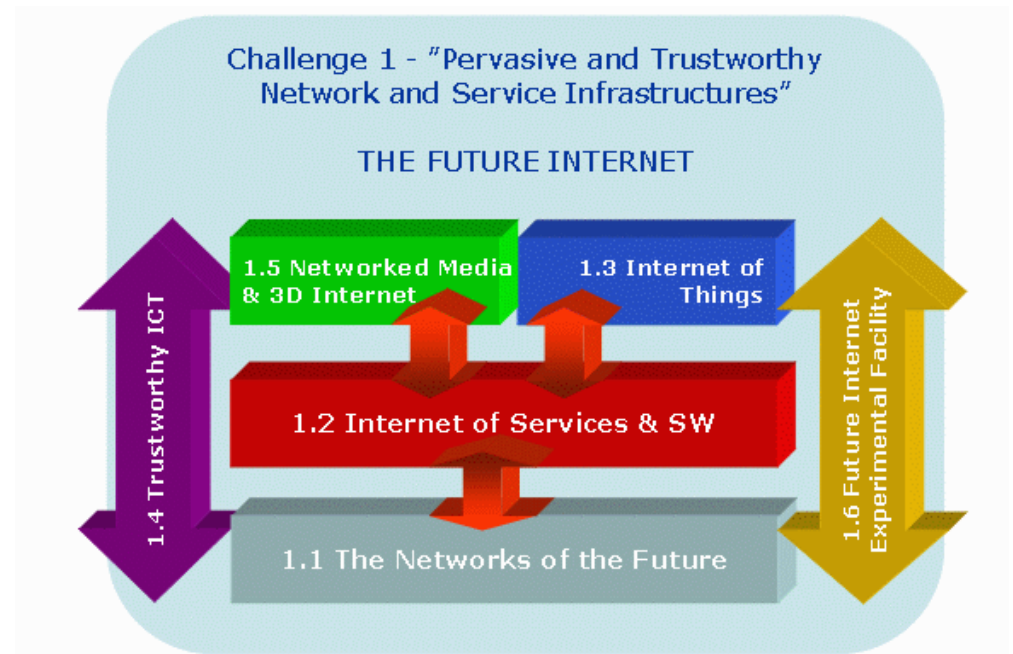
ETSI is working in many new areas, for example:

- **Future Internet/Future Networks**
- **The Internet of things/Machine to Machine Communications**

These are further explained in the following slides

Future Internet, Future Networks

- Future Internet (FI): many (research) domains
 - Future Networks
 - Internet of Services
 - Internet of Things
 - Networked Media and 3D Internet
 - Trust & Identity
 - Future Internet Experimentation



Tackling Future Internet Problems

□ Future Networks tackle current Internet problems

- Developed piece-meal, reaching saturation
- Not designed for mobility or wireless access with regular connection and disconnection
- Need to optimise architecture for integration of optical networking
- Internet of Things or wireless sensors means that support of 'only' billions of devices is no longer sufficient
- Internet of Information, not Internet of Nodes
- Internet is now a Critical Infrastructure
- Security and trust are not supported
- Addressing is broken (e.g. trust in addressing)
- Energy consumption

Future Internet in ETSI Technical Committees

Future Internet gradually enters the horizon of established committees

❑ TISPAN

- ETSI's principle Fixed and Core-network technology committee
- Starts investigating standardization needs for FI

❑ M2M

- Destination for Internet of Things related standardization

❑ GRID

- Evolution towards Cloud Computing and Internet of Services

❑ Media and Broadcast standardization

- Emergence of 3D Internet and Networked Media

❑ 3GPP

- Mobile Networks will be key access technology to Future Internet
- Role of LTE-Advanced
- Work on Self-Organizing Networks (SON)
- Evolution of core networks may use FI research results

Future Internet in ETSI ISGs

FI more directly addressed by new ISGs

- ❑ **Industry Specification Groups (ISGs)**
 - Fast, flexible specification group, ideal for pre-standardization
 - Direct, early results from research
 - Non-members of ETSI can participate

- ❑ **AFI – Autonomic network engineering for a self-managing FI**
 - Defining a Generic Autonomic Network Architecture, information models, and interfaces for governance of an autonomic network

- ❑ **MOI – Measurement Ontology for IP traffic**
 - Need to measure & compare existing traffic flows before improving
 - Information models and anonymisation rules for IP traffic measurements

- ❑ **INS – Identity and access management for Networks and Systems**
 - Identity Management protocols and architectures
 - taking the Future Internet perspective into consideration

Future Network Technologies Workshop

- ❑ **ETSI Workshop, 10-11 March 2010, in Sophia-Antipolis, France**

- ❑ **Goals**
 - **Identify potential needs for standardization or pre-standardization of Future Network Technologies at ETSI**
 - **Link European Future Internet research with ETSI standardization experts**

- ❑ **Focus on technologies which may be relevant for deployment in networks in 3-5 years**

- ❑ **Free and open to all**

- ❑ **More information**
<http://www.etsi.org/FutureNetworkTechnologies>

Work on Internet of Things: Machine to Machine related

- In the context of this presentation M2M is considered to be “Machine-to-Machine”
- Machine-to-Machine involves communication without (*or only limited*) human intervention. The human is not the input, but only (optionally) the output
- M2M is about combining electronics, telecommunication and information technologies in order to connect remote devices and systems, and occasionally people
- M2M can use both types of infrastructure: **wireless** (e.g. cellular, radio, satellite) and **fixed line** (e.g. PSTN, Powerlines)

Existing M2M Applications



ETSI TC M2M - Responsibility

- ETSI TC M2M has the responsibility:
 - to collect and specify M2M requirements from relevant stakeholders
 - to develop and maintain an end-to-end overall high level architecture for M2M
 - to identify gaps where existing standards do not fulfil the requirements and provide specifications and standards to fill these gaps, where existing standards bodies or groups are unable to do so
 - to provide the ETSI main centre of expertise in the area of M2M
 - to co-ordinate ETSI's M2M activity with that of other standardization groups and fora e.g. European Commission Mandate M/441 – Smart Metering

M2M Summary

- ❑ **M2M business has the highest potential growth**

- ❑ **Standardization is essential for long term development of the technology and for interoperability of networks and services**
 - **Horizontal replaces Vertical**

- ❑ **Standardize is key and enlarging it to a global response could be very valuable for the industry => development of global standards**

- ❑ **Importance to scope topics and identify areas of possible collaborations to develop global standards**
 - **Joint deeper analysis needed to identify the areas of priorities to define global standards.**

Conclusions

- The World is getting smaller!**
- Working in partnership is a key component of the standards setting landscape of the future**
- ETSI has a very vibrant and active portfolio of standards activities**
- ETSI would be pleased to work with GISFI on areas of mutual interest**

ETSI open for Cooperation

Thank you



adrian.scrase@etsi.org