

## THE INTERVIEW

*Joaquim Nunes de Almeida. p.4-5*

## TECH HIGHLIGHTS

*The EU Rolling Plan. p.10-11*

## IN THE SPOTLIGHT

*Calling the shots. p.14-15-16*

# EUROPEAN STANDARDIZATION FOR THE DIGITAL ERA



## ETSI: a global digital player in support of European regulation.

In its European Digital Strategy released in February, the European Commission outlines 4 pillars. These include technology that works for people, a fair and competitive digital economy, an open, democratic and sustainable digital society and Europe as a global digital player, where “ICT standards are a cornerstone of the Digital Single Market”.

In this edition, our “technology that works for people” comprises AI, cybersecurity, the next generation of fixed networks in our **news roundup** while we unveil new specifications on edge computing, “a building block of 5G”, augmented reality and the next generation of the 112 emergency number.

Our exclusive interviews highlight European policies from different angles, with contributions from Mr. Nunes de Almeida, DG GROW, Mr. Holger Butscheidt, German Federal Ministry for Economic Affairs and Energy, or Mr. Jochen Friedrich, an ETSI Board member addressing the EU Rolling Plan for ICT standardization. This time, Mr. Paul Timmers, a former European Commission Director, is **In the spotlight** and drives us through the report “Calling the Shots”, commissioned by ETSI to an independent group of reputed experts

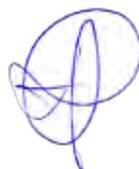
under the leadership of Mr. Carl Bildt. The report makes eight recommendations to reinforce the standardization system in Europe.

In its important role as a “global digital player”, ETSI spreads its European experience around the world, through its partnership projects with worldwide standards bodies as in 3GPP, which in this edition tells us the story behind 5G, and oneM2M, which leads us to a smart and steady progress towards a standardized IoT ecosystem. In **Europe abroad**, we introduce the ETSI, CEN and CENELEC partners for China and India. This article will also give you an overview of our International Digital Cooperation (InDiCo) project, meant to create and stimulate synergies with key partner countries: Brazil, the United States, China, Japan and South Korea.

And of course, discover our new members, new videos and much more,

Enjoy this new issue,

Luis Jorge Romero,  
ETSI Director-General



The **Interview**  
Joaquim Nunes  
de Almeida,  
European Commission.

P4/5

Meet the **New**  
**Standards** people

P6/7

The **Interview**  
Holger Butscheidt,  
Chairman of TC ERM.

P8/9

Tech **Highlights**

The EU Rolling Plan for ICT  
standardization.

P10/11

In the **Spotlight**

Calling the shots.

P13-16

**Europe abroad**

Seconded European  
Standardization Experts.

P18/19

What's **on?**

Upcoming events.

P26/27

**Enjoy! The ETSI Mag**

Edited and published by ETSI

Quarterly edition

Copyright ETSI 2020

Director of Publications: Nadja Rachow

Editor-in-Chief: Claire Boyer

Design: Le Principe de Stappler

Editorial office: ETSI,  
650 route des Lucioles,  
06560 Valbonne France

Tel.: +33 (0)4 92 94 43 35

enjoy@etsi.org

## Securing Artificial Intelligence: Chair and Vice Chairs elected

ETSI's new Industry Specification Group on Securing Artificial Intelligence ([ISG SAI](#)) met in January for its second meeting and appointed Alex Leadbeater (BT) as its Chair. Dr Kate Reed (NCSC) was appointed as First Vice Chair and Tiejian Li (Huawei) was appointed as Second Vice Chair. The Securing AI group was created to develop technical specifications to mitigate threats arising from the deployment of AI across multiple ICT-related industries. The group will work on securing AI against attack, mitigating the impact of malicious AI and using AI to enhance security measures. The purpose of the ETSI ISG SAI group is to develop the technical knowledge that acts as a baseline in ensuring that artificial intelligence is secure.

"I am delighted to be appointed as the Chairman for this exciting new group. Ensuring the security of Artificial Intelligence is a vital topic that affects many stakeholders and I look forward to seeing what work the group produces as it begins its work programme in earnest," says Alex Leadbeater, Chair of the ISG SAI.



## Security Week: programme now available

In 2020, the [ETSI Security Week](#) will take place from 8 to 11 June, and we will continue to bring together all stakeholders to debate various aspects of cybersecurity. We will first tackle 5G networks and how to deploy them securely. Then the Cybersecurity Act day will review the first schemes adopted, and discuss 5G networks and consumer IoT security certifications. The third day will address two topics in parallel: on one hand, how the Smart Secure Platform represents a disruptive change in the Secure Elements market, and on the other hand, a topic will be dedicated to advanced cryptography. Do not miss this unique opportunity where the security community will come together at ETSI to network, share, influence and learn during this week of events!

## New group on 5th Generation Fixed Network: [F5G](#)

ETSI launched a new group to specify the fifth generation of Fixed Network. The kick-off meeting of the ISG took place on 20 and 21 February, and the members of the group elected Dr. Luca Pesando (TIM) as Chair and approved the first work items.

The [ISG F5G](#), the fifth generation of Fixed Network, aims to study the fixed-network evolution required to match and further enhance the benefits that 5G has brought to mobile networks and communications. It will define improvements with respect to previous solutions and the new characteristics of the fifth-generation fixed network. This opens up new opportunities by comprehensively applying fiber technology to various scenarios, turning the Fiber to the Home paradigm into Fiber to Everything Everywhere. To achieve this, ISG F5G will address aspects relating to new ODN technologies, XG(S)-PON and Wi-Fi 6 enhancements, control plane and user plane separation, smart energy efficiency, end-to-end full-stack slicing, autonomous operation and management, synergy of transport and access networks, and adaptation of the transport network, amongst others.





*We met Joaquim de Almeida in Brussels where he shared with us the importance of standardization for the European Commission.*

***How would you summarize the main ambitions of the current European Commission?***

We are entering a new decade with a new European Commission, and with big challenges and opportunities ahead of us. To name just a few: the UK has recently left the European Union and the Commission is currently negotiating the scope and terms of our future partnership. We also find ourselves in a particular situation when it comes to the global order, with major global economies engaged in a trade war.

President Ursula von der Leyen has made it very clear that this Commission will be a geopolitical one; our ambitions will thus focus on strengthening European leadership globally, furthering European values and interests and promoting them around the world.

# Joaquim Nunes de Almeida,

Director of “Goods in the Single Market and Enforcement”,  
DG Internal Market, Industry, Entrepreneurship and SMEs,  
European Commission

Joaquim Nunes de Almeida is currently Director of “Goods in the Single Market and Enforcement” and was appointed Director of Single Market Policy, Regulation and Implementation in December 2016 having held the position of Public Procurement Director in DG MARKT for almost three years. He worked for law firms in Brussels and Lisbon from 1989 to 1994. His career

in the Commission dates back to 1995, when he joined the public procurement directorate of the Internal Market DG. In 1998, he worked as the assistant to the Director General of the Internal Market. One year later, he became a member of António Vitorino’s Cabinet, where he worked for more than four years, mostly on asylum and migration policies. He then held the position of Head of Unit

for the “Fight against terrorism and law enforcement cooperation”. In 2008, Mr. Nunes de Almeida became Head of Unit for police cooperation and access to information. He studied law at the University of Lisbon and the College of Europe in Bruges.

This Commission will be a geopolitical one; our ambitions will thus focus on strengthening European leadership globally, furthering European values and interests and promoting them around the world.

### **How would you translate this in the context of Europe's digital transformation?**

The overarching ambition of this Commission is to create a framework where Europe benefits the most from the digital transition, ensuring at the same time that European values and interests are respected, as new technologies develop. Commissioner Thierry Breton, with responsibility for the Internal Market and supported in his work by DG GROW, DG DEFIS and DG CNECT, is working on crucial priorities, such as enhancing Europe's technological sovereignty, coordinating the European approach to artificial intelligence and creating a single market for cybersecurity. As recently as in February, the Commission presented its strategy for the digital age, accompanied by the White Paper on Artificial Intelligence and the European Data Strategy, all aimed at defining the challenges and opportunities for Europe in leading the transition to a sustainable economy and a new digital world.

Efforts towards achieving EU's technological sovereignty imply being at the forefront of technological and regulatory development. By pooling

Efforts towards achieving EU's technological sovereignty imply being at the forefront of technological and regulatory development.

investments in research and innovation, coordinating among different Member States and involving businesses, civil society, academia and financial institutions, we will be able to unlock the potential that various European players have to offer.

### **Can you tell us a bit more about the future industrial strategy and the role of standardization?**

The comprehensive long-term industrial strategy, adopted by the Commission in March, covers various aspects affecting European competitiveness: we stress the importance of strategic technologies and value chains as essential in achieving technological autonomy and industrial leadership, while addressing important societal challenges at the same time. To deliver on the European Green Deal, we will implement the Circular Economy Action Plan with a set of measures on low-carbon, circular and sustainable products. The implementation and enforcement of the Single Market rules will be further strengthened.

While the European Single Market is a key asset for Europe's economy, it can only deliver its benefits if it is functioning smoothly. In this context, standardization has an important role to play. During the previous Commission's mandate, standard

President Ursula von der Leyen called for boosting Europe's ability to influence global standard-setting as a mean of making Europe fit for the digital age.

setting received considerable political attention, revealed in the 2015 Single Market Communication and Digital Single Market Strategy, or in the Communication on harmonized standards in 2018. President Ursula von der Leyen also recognized the importance of standards and, in her political guidelines, called for boosting Europe's ability to influence global standard setting as a means of making Europe fit for the digital age. To achieve this, the Commission will take actions

to further enhance the functioning of the European standardization system and to promote it worldwide, along with European standards.

### **How can ETSI contribute to these objectives?**

ETSI is recognized as one of the European Standardization Organizations by the European regulatory framework; it means that – together with CEN and CENELEC – it develops harmonized standards to support EU legislation and public policy. It is crucial, taking into account the above context, that by fulfilling their tasks the ESOs actively contribute to the implementation of EU strategic and policy objectives. With this

While fulfilling their tasks the ESOs actively contribute to the implementation of EU strategic and policy objectives.

in mind, further efforts may be needed to attract and effectively engage users, SMEs and civil society in standardization work. We will also insist on reinforcing cooperation between the three ESOs in key areas, such as artificial intelligence, smart manufacturing or smart cities. When it comes to strategic fields such as cybersecurity or 5G, the Commission will take measures aimed at increasing European participation in respective standardization bodies to achieve Europe's security and interoperability objectives. I trust ETSI will actively engage in these actions, notably to support Europe's goal of achieving technological autonomy, so that we can continue to rely on our partnership when delivering on European digital policy priorities.

I trust ETSI will actively engage in supporting Europe's goal of achieving technological autonomy.

# Welcome to our **NEW** members

## **BrightSight B.V., Netherlands**

BrightSight is a security evaluation specialist providing consultancy services, training and analysis tools. Customers include international financial institutions, the IT and automotive industries, and governments. The results of their evaluations are used by EMVCo, MasterCard, PCI-PTS and Visa and by nation-specific certification schemes. BrightSight is the only lab in the world accredited by five Common Criteria Schemes (Germany, Japan, the Netherlands, Turkey and Norway).

## **Entropia, Belgium**

Entropia has been one of the leading players in the field of mobile mission and business critical communication in Belgium, the Netherlands and soon with IoT in the UK. Entropia also owns a digital TETRA and MOBITECH data network, the first wireless national packet-switched network for mobile data communication in the Benelux. This premium network is mainly used by organizations in the Public Order and Safety, where high demands are mandatory on availability and reliability.

## **F5, USA**

F5 Networks, Inc. is a transnational company (69 offices in 39 countries) that specializes in application services and application delivery networking. F5 technologies focus on the delivery, security, performance, and availability of web applications, including the availability of computing, storage, and network resources. F5 provides the broadest set of services and security for enterprise-grade apps, whether on-premises or across any multi-cloud environment.

## **Genasys, Spain**

Genasys is a global leader in long range acoustic devices and public safety mass notification solutions. It is the only unified critical communications platform that provides multi-modal, geo-targeted cell phone alerts and audible messages with industry-leading vocal clarity. Their software interface and mobile application manage and deliver life-saving notifications and information to people at risk, before, during, and after crisis situations.

## **IDnow GmbH, Germany**

IDnow is a leading provider for identity verification in Europe. Their solutions guarantee legal security throughout Europe and the highest level of data security. In the area of video identification of customers and electronic signatures, they provide the market with a legally secure solution without additional hardware. Their customer portfolio includes Commerzbank, UBS, Sixt neuwagen, Telefónica and N26.

## **IEE, Luxembourg**

IEE is a leading supplier of automotive sensing solutions. They are now developing a radar solution for exterior technology that offers unique solutions for Advanced Driver Assistance System (ADAS) safety features. They develop and manufacture cutting-edged and sensing solutions for the automotive, building management and security, sports and healthcare, and input device markets.

## **JSRPC Kryptonite, Russia**

Kryptonite was founded in March 2018. It is part of IKS Holding, a multidisciplinary IT structure whose main tasks include investment, management and consolidation in the telecom media and technology market. Their mission is to help Russian technologies develop and occupy a worthy place in the IT market.

## **Kontron Transportation France, France**

Kontron is a global leader in embedded computing technology (ECT). As a part of technology group S&T, Kontron offers a combined portfolio of secure hardware, middleware and services for Internet of Things (IoT) and Industry 4.0 applications. Kontron provides secure and innovative applications for a variety of industries. Their goal is to offer customers a complete and integrated portfolio of hardware, software and services.



### **NENA, USA**

The 9-1-1 Association improves 9-1-1 through research, standards development, training, education, outreach, and advocacy. It serves the public safety community as the only professional organization solely focused on 9-1-1 policy, technology, operations, and education issues. NENA promotes the implementation and awareness of 9-1-1 and international three-digit emergency communications systems. NENA works to facilitate the creation of an IP-based Next Generation 9-1-1 system; and to establish industry leading standards, training, and certifications.

### **NES, Poland**

The NES System is a smart grid infrastructure solution, based on Open Smart Grid Protocol (OSGP). Their technology is used in nearly 40 million smart meters and other smart end devices around the world. NES offers industry leading security built into its most reliable smart metering solution. Their system offers a unique power line technology that enables grid mapping, automatic topology management, and many more low voltage grid applications.

### **PCTEST Engineering Lab, USA**

PCTEST Engineering Laboratory provides regulatory and carrier testing services to the wireless, electronics and telecommunications industry. PCTEST has over 25 years of experience in global regulatory and wireless testing and approvals. It was established on the principle of providing manufacturers with a much needed independent facility, fully capable of testing to a comprehensive set of FCC regulatory technical requirements and getting the job right the first time.

### **SCC, Canada**

The Standards Council of Canada (SCC) is a federal Crown corporation with the mandate to promote voluntary standardization in Canada, where standardization is not expressly provided for by law. The SCC leads and facilitates the development and use of national and international standards and accreditation services in order to enhance Canada's competitiveness and well-being.

### **St. Pölten UA, Austria**

The St. Polten University of Applied Sciences stands for high quality university education, practical relevance and internationality. Their goal is to prepare their students for the increasing demand for innovative, interdisciplinary solutions to a variety of current and future challenges for entrepreneurs, industry, authorities and institutions. They are an open and internationally oriented partner for companies, industries and institutions and their needs for applied research and development.

### **TEC, India**

TEC has the mission to maintain its status as a "Centre of Excellence" in telecom to position India as a "Lead Telecom Knowledge and Manufacturing Hub" of Asia-Pacific Nations by driving telecom standards, manufacturing support and network building skill sets in the interests of this region and market. They also have active participation in professional bodies including the ITU, IETF or APT.

*In this exclusive interview, Holger shares with us his thoughts on the Radio Equipment Directive.*

***What are the main objectives of the groups you are chairing?***

While OCG RED-EMCD is a more political group dealing, alongside various stakeholders, administrations and the European Commission, with the correct implementation of current regulation and new regulatory initiatives in templates for Harmonised Standards, [TC ERM](#) is a more technical group. Its 15 Working and Task Groups deal with Electromagnetic

# Holger Butscheidt

Chairman of ETSI OCG RED-EMCD and TC ERM

Holger Butscheidt works for the German Federal Ministry for Economic Affairs and Energy and has been involved in radio standardization for 18 years. In December 2013 he became the Chairman of the ETSI Operational Coordination Group for the Radio Equipment Directive (RED) and the Electromagnetic Compatibility Directive (EMCD) and the Chair of TC ERM (EMC and radio spectrum matters), the two major groups in ETSI dealing with Harmonised Standards under

RED and EMCD. Prior to that he participated as a technical expert of projects and groups of the European Commission, ITU-R as well as 3GPP, where he was responsible for the technical regulation of Emergency and Public Protection and Disaster Relief communications, 3G Mobile systems, systems beyond and wireless access networks (WAS). He is now the programme committee Chair of the ETSI Summit 2020 on European Standards.

compatibility and radio equipment from aeronautics, maritime and TV/Radio Broadcast as well as all kinds of Short Range Devices, including industry and consumer equipment. This variety also shows that all types of stakeholders dealing with radio have an interest in Harmonisation of European Standards as it gives them an excellent opportunity to declare conformity and place equipment on the market.

All kind of stakeholders dealing with radio have an interest in harmonization of European Standards.

### ***Can you tell us a little bit about the Radio Equipment Directive and the new technical requirements?***

The Radio Equipment Directive 2014/53/EU (RED) came into force on 16 April 2014 and establishes a regulatory framework for placing radio equipment on the market. The RED ensures a single market for radio equipment by setting essential requirements. Therefore it aligns the previous Radio and Telecommunication Terminal Equipment Directive 1999/5/EC (R&TTED) with the new legislative framework for the marketing of products. Based on the Directive, a new mandate M/536 was issued on 04 August 2015, which was the basis for the revision of the ETSI Work Programme related to Harmonised Standards.

The RED ensures a single market for radio equipment by setting essential requirements.

The major new technical requirements related to the former Directive 1999/5/EC were radio equipment operating below 9 kHz, radio-determination equipment, and sound and TV broadcast receivers.

It also includes other receive-only and non-receive-only equipment with regard to receiver characteristics and receiver performance parameters.

In addition to these technical requirements, ETSI had to face formal and political challenges as well.

### ***What are the formal and political challenges?***

First of all, I can say that ETSI and the European Commission managed to list most of the ETSI Harmonised Standards under the RED in the Official Journal of the European Union (OJEU) in due time to give industry the opportunity to self-declare presumption of conformity for a wide area of radio equipment.

But I have to admit that we have not yet achieved the stage where standardization of Harmonised Standards runs completely and smoothly. A lot of the OJEU-listed Harmonised Standards contain

We have not yet achieved the stage where standardization of Harmonised Standards runs completely perfectly and smoothly.

footnotes stating that they do not address requirements relating to receiver performance parameters and do not confer a presumption of conformity as regards those parameters. This means that for parts of these listed Harmonised Standards, industry cannot do a self-declaration, but has to go the Notified Body route with additional expenses.

### ***Are there any other impacts?***

Besides possible additional expenses, time is another critical factor. While it took some time to clarify formalities, which have to be fulfilled in the Harmonised Standards, the new consultation process, which was launched in April 2018, introduced another formal working layer with up to three assessments made

by Harmonised Standard Consultants (HaSC). Each assessment can take up to a maximum of 35 days.

In the meantime, the status of the OJEU-listing of Harmonised Standards has also changed and was influenced by a subsequent case law of the Court of Justice of the European Union. Whereas it was just for information in the past, it is now legislation. As a consequence, new listings will be made via a formal Commission Implementing Decision including the related European Commission internal process.

All of this takes additional time. Therefore the last listing of Harmonised Standards in the OJEU was more than one year ago, on 14 September 2018. For a sector like the radio sector with rapid technological changes, any extended delay is a risk for innovation. This applies especially, but is not limited, to Micro, Small and Medium Enterprises in Europe.

5G is going to redefine the driving experience, thanks to multi-gigabit speed.

### ***What can we do to bring the standardization system back on track?***

We are in a permanent dialogue with the European Commission to improve the process and to resolve open points. Hence we launched an ETSI Summit originally planned for 2 April, now postponed, with the intention of further improving the understanding of the new dynamics and helping to shape actions, in light of EU policy and regulatory developments, as quickly as possible. We need to clarify how the objectives of the regulatory changes can be achieved while preserving the benefits of the new legislative framework, as we have to ensure the competitiveness of European industry and the European economy for the future. This can only be done in a reasonable common approach including all stakeholders, who are therefore invited to join this Summit.

# The EU Rolling Plan for ICT standardization: why ETSI is instrumental

*The EU Rolling Plan for ICT Standardization is clearly something to get excited about. For many reasons.*

It provides a coherent overview of EU policy objectives across many sectors, and of how ICT standardization can support the implementation of those objectives. Asking for concrete actions for standardization, it lists ongoing activities in ICT standardization that contribute to the policy objectives and focusses on promoting interoperability and the use of standards.

The Rolling Plan addresses all active standards bodies in Information and Communication Technology (ICT) standardization. It is read everywhere across the globe and has an impact on standardization far beyond the boundaries of the EU, which is a driver of state-of-the-art ICT standardization and the uptake of standards and technical specifications.

In essence, this Plan is an invitation to all stakeholders to start activities in standardization in support of EU policy needs. Based on the concrete actions, new work or new developments are triggered. Working groups in standards bodies get active and provide standardization deliverables responding to the respective actions. Regular exchanges in the MSP help to coordinate the work and avoid duplication.

The Rolling Plan encourages and motivates standardization work in areas where an explicit standardization request is not foreseen, but where, in particular, interoperability and open solutions are to be promoted.

The Rolling Plan is the product of close collaboration between the European Commission services and the EU Multi-Stakeholder Platform on ICT Standardization (MSP). The MSP is an expert group of the European Commission, comprising all the EU Member States, the European Standardization Organizations, Societal Stakeholders and Industry Associations, including representatives of SMEs.

As the name “Rolling” implies, the entire process around the Rolling Plan is set up in such a way that the Plan is updated on an annual basis. Updating follows a clearly defined five-step process as shown on the graphic enclosed.

This process starts with input from the European Commission (step I). This is followed by a big consultation with all MSP members (step II). There is usually also a lot of input from ETSI during this phase, outlining available and ongoing work but also commenting on or proposing new actions. Once all inputs and comments have been consolidated the Pre-final draft is produced (step III) and circulated with all MSP members again where everyone can raise questions for clarifications (step IV). The final step (step V) is then the endorsement of the final version of the Rolling Plan and the hand-over to the European Commission for finalisation and publication.

These process steps have also been digitalised. Since the very beginning of the work on the Rolling Plan almost all meetings are conducted as electronic

meetings with web collaboration platforms. Typically twice a year this is complemented with a face-to-face workshop.

For some years now all information around the Rolling Plan process has also been centralised on a Wiki. Everything is visible there any time for all members of the MSP: the text proposed for the new version of the Rolling Plan, the inputs from others, the decisions about which input to include in which way, etc. This way of collaborative working minimises the individual workload for everyone. At the same time a high level of transparency is created, which facilitates fast resolving of any issues and thus helps avoiding misunderstandings. There is no doubt that the processes for developing the Rolling Plan can be seen as pioneering the way of working within the public private partnership of standardization in Europe.

The chapters in the Rolling Plan dealing with the various sectors and policy areas all follow the same sub-structure with three main parts: A – the policy objectives and policy and legal situation outlined by the European Commission; B – the proposed actions; and C – the information about work in progress or standards and specifications that are already available.

ETSI has been an active contributor from the first day when work started on the first version of the Rolling Plan. There is close involvement of all Technical Bodies in ETSI for collecting input to each new

## EU Rolling Plan New Version



© ETSI

version of the Rolling Plan. This also includes ISGs, and in addition ETSI is an active advocate for the work done in 3GPP and in oneM2M, making sure that their work is also listed in the Rolling Plan and in this way known to policy makers and all other stakeholders in the context of the respective actions and policy objectives.

The relevance of ETSI standards comprises a large number of the sectors listed. To almost every policy area there are ETSI standards which support some of the policy objectives and respond to needs and to the proposed actions.

Consequently ETSI and its members also benefit largely from the Rolling Plan. First and foremost the Rolling Plan provides clarity on the needs for standards within the full scope of policy contexts. But more concretely support actions and grants are based on the actions proposed in the Rolling Plan.

As ICT standards are instrumental for digitalization, the Rolling Plan is a cornerstone of an effective and coordinated European Commission strategy on ICT standardization. So, watch out for the 2020 version of the Rolling Plan.

Links:

<https://ec.europa.eu/growth/single-market/european-standards/ict-standardisation>

[https://ec.europa.eu/growth/content/2019-rolling-plan-ict-standardisation-released\\_en](https://ec.europa.eu/growth/content/2019-rolling-plan-ict-standardisation-released_en)

■ *Jochen Friedrich, ETSI Board member,  
Chair of ESSREV and Chair of the MSP task force  
on the Rolling Plan.*

# Augmented Reality Framework: new specification out

The ETSI Industry Specification Group on the Augmented Reality Framework (ISG ARF) aims to define a framework for the interoperability of Augmented Reality (AR) applications and services.

The group has recently published the ETSI [GS ARF 003](#) document specifying a functional reference architecture for AR solutions, identifying key components and interfaces, and defining functionalities required by an AR solution. The generic nature of the architecture was validated by mapping the workflow of several use cases to the components of the reference architecture. The adoption of the framework will allow components from different providers to interoperate via the defined interfaces. In the context of the work undertaken by ISG ARF, AR is the ability to mix in real-time spatially-registered digital content into the real world.

# Multi-access Edge Computing: building on NFV and network slicing

The ETSI Multi-access Edge Computing Industry Specification Group has recently announced the release of two major reports as part of its Phase 2 work. The ETSI report [GR MEC 027](#) studies the impact of alternative virtualization technologies. The second report, ETSI [GR MEC 024](#), examines network slicing on edge computing systems.

ETSI GR MEC 027, a report on alternative virtualization technologies, identifies the additional support that needs to be provided when MEC applications run on containers or other alternative virtualization technologies. The results and conclusion of this report highlight that most ETSI MEC specifications are virtualization-technology agnostic. In particular, all ETSI MEC defined Application Service APIs are fully agnostic to virtualization technology choice. Minor updates to other standards have been identified and recommendations made. ETSI GR MEC 024 identifies the MEC functionalities to support network slicing and the impact on future ETSI MEC specifications. It provides important use cases and examples of how network slicing may be addressed in edge computing systems.

# Two major standards for emergency calls: Next Generation 112 and Advanced Mobile Location

ETSI's Emergency Communication Special Committee has recently released ETSI TS 103 479 for NG112, the next generation of European emergency services, and ETSI [TS 103 625](#), for the specific Advanced Mobile Location function.

ETSI [TS 103 479](#) specifies the core elements of the architecture for network-independent access to emergency services, enabling interoperability of implementation for access to Next Generation by emergency services. Next Generation 112 (NG112) architecture enables multimedia communications (text, video, together with location or additional data) which is not possible with the current phone-based system.

As more than 70% of emergency calls come from a mobile phone in Europe, the Advanced Mobile Location (AML) technology using ETSI TS 103 625 is essential to provide the most accurate location of the caller. With AML, the phone's location capabilities (making use of GNSS, Wi-Fi and mobile network information) are activated when an emergency number is dialled.

To highlight the global reach of the published standards, ETSI supports further efforts to implement conformance testing tools. The conformance test for the NG112 architecture was released in [TS 103 650-1](#) and [TS 103 650-2](#). A fourth NG112 Plugtest™ event is planned for the end of this year, this time with a view to organizing international interoperability testing in conjunction with the EENA (European Emergency Number Association) and NENA (US National Emergency Number Association), a new member of the ETSI family.



# EUROPEAN STANDARDIZATION FOR THE DIGITAL ERA.

In the following pages, Paul Timmers, former European Commission Director for the Digital Society, Trust and Cybersecurity tells us more about “Calling the shots”, a report commissioned by ETSI to an independent group of reputed experts under the leadership of Mr. Carl Bildt. He confirms that all of the people working on the report whatever their background agreed that standardization is a strategic discipline and that ICT is embedded in and enabling all products and services. The final page of this insert outlines the 8 recommendations that came as a conclusion of the report to reinforce the standardization system in Europe.

*A report commissioned  
by ETSI calls on EU  
to retake global leadership  
in digital standard setting.*

# Paul Timmers

Former European Commission Director for the Digital Society,  
Trust and Cybersecurity

Paul Timmers is a Research Associate at the University of Oxford and a former European Commission Director for the Digital Society, Trust and Cybersecurity. In that function he was also a member of the management board of ENISA, the EU's network and information security agency. Co-responsible for significant parts of the EU's research and innovation programmes in several fields, he has

been a member of the Cabinet of the European Commissioner Erkki Liikanen. A manager in a large ICT company, he is a co-founder of an ICT start-up. He holds a PhD in physics from Nijmegen University in the Netherlands, an MBA from Warwick University in the UK and was awarded an EU fellowship at UNC Chapel Hill. He completed his executive cybersecurity education at Harvard.

***Paul, as one of the experts involved in the preparation of the “Bildt report”, can you tell us about the objectives and achievements of this exercise?***

In late 2018, I was contacted by ETSI, which was assembling a group of experts to discuss standardization for the digital age and prepare a reflection paper primarily, but not exclusively, for the new Parliament and the new Commission.

We worked throughout the first half of 2019 under the chairmanship of Carl Bildt. The debate was framed from the start by “the digitalization of everything” and the questions it raises, for standardizers on the one hand, and, on the other hand, how Europe can use standardization to support its ambitions to be one of the front-runners in digital technology.

Carl put it quite dramatically by saying it is a matter of survival. Certainly, the current geopolitical context forces us to take an honest look at how the EU plays the standards card, how it can learn from past successes, capitalize on assets and the role the EU grants to standardization. All of the people working on the report, whatever our background, agreed that standardization is a strategic discipline.

**All of the people working on the report whatever their background agreed that standardization is a strategic discipline.**

***What are the key findings of the report?***

In short, standardization must be seen as strategic for the EU’s future, and integrated with other policies and a coherent part of policy measures. If you look at all the blocks that Europe trades or competes with, they all have a very thought-through standardization policy, that is integrated with industrial strategy, and all of them grant a very strategic role to standardization.

**ICT is embedded in and enabling all products and services.**

Other findings were more specific, such as the fact that digitalization implies “de-siloing” standardization. ICT is embedded in and is enabling all products and services. This needs to be taken on board by standards bodies, lawmakers and industry as well.

We also discussed the EU’s assets, and how to make better use of them. For example, the New Approach, the economic strengths with R&D, the diversity of the SMEs and start-up scene, or the “wider Europe”, with the EU’s links to the CEPT, and how to make best use of all this, which you will see in the final recommendations of the report.

But this first and foremost implies that EU lawmakers must view standardization as a key element of EU industrial strategy and grant it attention at a high political level, with sufficient resources.

***In your opinion, does Europe stand a chance between the two geopolitical behemoths?***

You noticed that the keywords of the new Commission are “strategic autonomy” and “digital sovereignty”. And it is true that, in the age of global supply chains, with global companies, global technologies and global standards, the EU needs to devise its doctrine and policy in order to safeguard sovereignty, whilst also playing the global game. For that matter, strategic partnerships will be ever more important with like-minded partners and/or governments willing to uphold similar values, such as personal

**EU needs to devise its doctrine and policy in order to safeguard sovereignty whilst playing the global game.**

data protection. At the same time, Europe must continue being a champion of global standards for the common good that bring the greatest benefits for all.

***What does the report tell ETSI more specifically?***

ETSI can take onboard several findings.

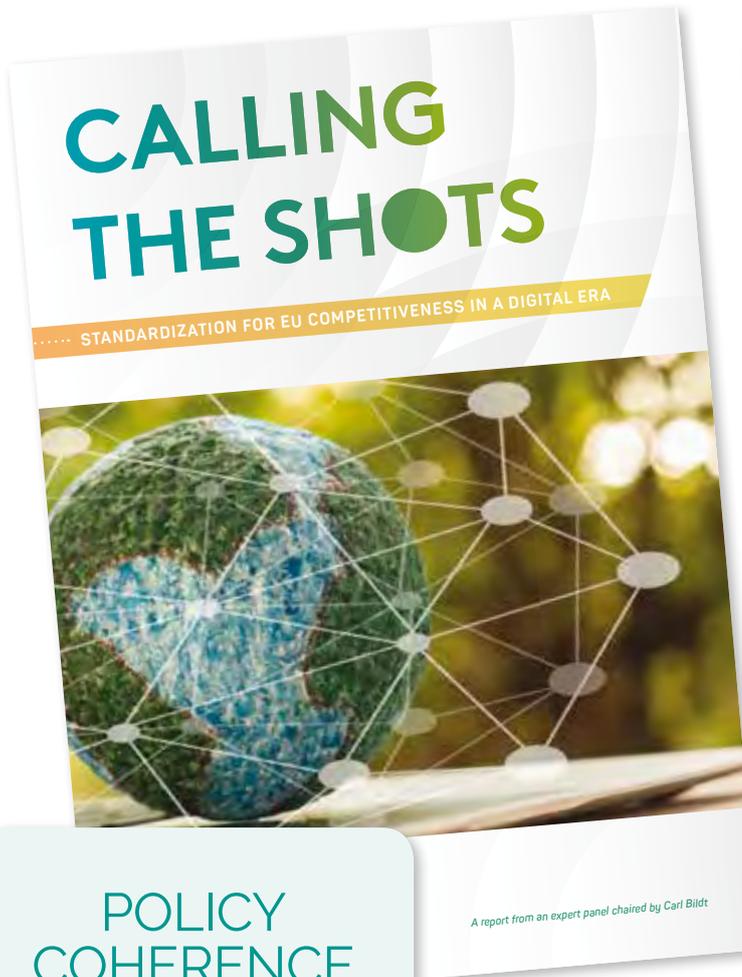
The “de-siloing” recommendation obviously applies to ETSI, whose DNA is ICT. The onboarding of companies from other sectors should be further developed.

Moreover, ETSI may need to boost its relationship with governments. Governments – driven by sovereignty concerns – are seeking to get a tighter grip on standardization (i.e., 5G). Whilst standardization at ETSI is essentially industry-driven, governments play an increasingly critical role, and further developing relations with them will increase ETSI’s relevance.

It is also important that, whilst developing standards that support the EU’s broad policy and strategic objectives, ETSI does not get hampered by geo-politics. Standardization needs a careful division of private-public responsibilities to deliver state-of-the-art, globally usable specifications. This may need some innovative thinking about governance!

ETSI has a track record of leadership in setting global standards and needs to continue displaying this. ‘Display’ is an important word: you need to tell the story. Standardization in general is too often under the radar, when in fact it contributes greatly to the EU’s competitiveness and leadership. A positive, telling example of oneM2M with ETSI support is the IoT standard that is considered for adoption as a national standard in India.

Even if the digital era induces a need for all organizations to adapt, I trust ETSI is well placed to continue playing a central and strategic role in standardization in support of the EU’s competitiveness and values.



## POLICY COHERENCE

### RECOMMENDATION 1

Standardization must be upheld as a crucial strategic part of the EU and its member states' digital and industrial strategy. It must be asserted as a driver for growth, competitiveness and strategic autonomy, innovation, security and safety of consumers, and sustainability.

### RECOMMENDATION 2

The EU and its member states need to step up efforts to de-silo their approach to standardization, coordinate and connect it to their industrial strategy and corresponding policies, especially in the areas of innovation, competitiveness and digitalization.

A report from an expert panel chaired by Carl Bildt

## RESOURCES

### RECOMMENDATION 3

A coordinator at very high political level, with clear responsibilities and scope, must be tasked with devising the EU strategy for standardization.

### RECOMMENDATION 4

Allocate proper management resources at administrative level in the Commission to ensure efficient implementation of the above strategy.

## REVIEW CONCEPTS & TOOLBOX

### RECOMMENDATION 5

In line with a unified political direction, streamline, adapt, clean up and manage the extended standardization machinery, as well as the processes that govern it.

### RECOMMENDATION 6

Engage with stakeholders to perform a health check and refresh of the New Approach. Do not alter the fundamentals but boost the use of this regulatory technique.

### RECOMMENDATION 7

Connect research to standardization "by design", e.g. in Horizon Europe programmes.

### RECOMMENDATION 8

Increase political and strategic coordination with the CEPT beyond radio matters, to expand the outreach of EU policy making in standardization.

# A focus on the Annex III organizations

*Standardization is not just a technical activity: it impacts our lives and how we use technology, hence the need to involve societal stakeholders in the process.*



Technology has an impact on our environment, our working conditions, and the competitiveness of businesses in open markets. Standardization must therefore be an open and inclusive process by design, where all actors in society have an opportunity to highlight their use cases, express their requirements and be involved in the design of technical solutions to meet these requirements. ETSI's membership is a testimony to these principles being translated into reality. As an example, over 25% of our membership is comprised of SMEs, some of them holding leading roles in our committees, as seen in our new SME video.

Annex III of the most recent European legislation on standardization, Regulation (EU) 1025/2012, further reinforces the principle of inclusiveness for European Standardizations Organizations (ESOs), namely CEN, CENELEC and ETSI. The Regulation requires them to ensure that societal stakeholders are able to participate effectively. Following the implementation of the Regulation, ETSI has established the 3SI Programme as a focus for inclusiveness, and has nominated the 3SI Advocate as a figure who can consider the matters raised and propose improvements.

Annex III of the Regulation provides for the selection by the European Commission of four European organizations representing societal stakeholders who need to be involved in the standardization process. Currently these organizations are:

- [ANEC](#), representing consumers;
- [ECOS](#), representing environmental interests;
- [ETUC](#), representing social interests (i.e. the interests of workers);
- [SBS](#), representing the interests of small and medium-sized enterprises

These four full members of ETSI bring a wealth of technical expertise to the standards development process. Through their participation, standards development benefits from perspectives that may be otherwise missing. Furthermore, the direct participation in ETSI of all interested stakeholders, locally and globally, allows Annex III organizations to network with peers and exchange best practices.

A successful example of ANEC involvement, one of the 4 selected organizations, is their role in the development of ETSI [TS 103 645](#), the

first globally applicable standard for consumer IoT security. Stephen Russell, their Secretary-General comments:

“We are pleased to have contributed to a standard which focuses on the technical and organizational controls that matter most in addressing significant and widespread security-shortcomings. It should be a landmark specification for consumers and industry alike”.

Another example is the decision by the ETSI Board in January 2020 to improve guidance to Technical Committees to help identify all new standards projects with specific impact on societal stakeholders and SMEs. This decision was helped by Small Business Standards (SBS), as an elected Board member of ETSI.

As part of the 3SI Programme, senior ETSI officials (GA and Board Chairs, Director-General), meet the Annex III organizations at a biannual Round Table.

Contact the 3SI Advocate at:  
[3SI.Advocate@anec.eu](mailto:3SI.Advocate@anec.eu)

■ John Ketchell, 3SI Advocate

# Seconded European Standardization Experts

*China and India are important trade partners for Europe and they have been identified as countries where increased awareness of the European regulatory and standardization frameworks and deliverables is required. Discover why.*

## SESEC, SESEI

European stakeholders need to understand how market access rules, in addition to the related policies and supporting standards, are evolving in these two regions.

For these reasons, the decision was taken a few years ago to establish a full-time presence in China and India with a liaison office and a team headed by an expert capable of understanding and promoting European standards locally, as well as analysing and reporting on changes in domestic standards.

It goes without saying that one of the main expectations is to be able to act as an intermediary and facilitator between European and local stakeholders, with a view to aligning approaches on standardization and ideally adopting common standards, which ultimately contributes to reducing Technical Barriers to Trade.

The experts were respectively named SESEC and SESEI (Seconded European Standardization Expert in China/India) and two projects with the same names fund and structure their work.

Both projects have the same five partners: the European Commission (EC), the European Free Trade Association (EFTA), CEN, CENELEC and ETSI. CEN is project manager for SESEC while ETSI manages SESEI.



**Ms. Betty Xu** is the SESEC. With her team in Beijing, she leads the project's work in China, focusing on priorities set by the partners:

- Technical priorities: 5G, IoT, ITS, AI, medical devices / healthcare, energy efficiency and environment.
- Political priorities: China Standards 2035, Belt and Road Initiative, standardization reform and implications, Made in China 2025, Institutional changes in the government of the PRC, Certification and China Compulsory Certificate (CCC), China and international/global standards.



**Mr. Dinesh Chand Sharma** is the SESEI. Based in Delhi with his team, he is the main driver for the implementation of the project, with the following priorities:

- Technical priorities: Automotive, Information and Communication Technology (ICT) including 5G, IoT, Electrical Equipment including Consumer Electronics, Smart Cities. There is also a focus on environmental aspects (standards enabling resource efficiency and the circular economy), as well as Machinery Safety and Research and Innovation building on standards.
- Political priorities: Make in India, Digital India, Smart Cities Mission, Swachh Bharat (Clean India Mission), Indian National Standardisation Strategy, Conformity Assessment Rules, Mandatory Testing and Certification of Telecom Equipment.

SESEC and SESEI are both currently in their fourth phase, as all partners unanimously saw the benefits of raising awareness in China and India of the European standardization system as well as receiving structured and focused information in Europe about Chinese and Indian standardization and regulatory initiatives in the chosen priority sectors. This economic and policy cooperation continues to be high on the agenda of all the partners, and the presence of the SESEC and SESEI has ensured consistent, durable relationships between Europe and both China and India. The permanent presence of a team on site in the two countries has clear added value: it notably enables partners

to anticipate developments requiring an action and to prepare such a response thanks to a solid local network that was progressively built around both projects. These networks and this presence also help catalyse other European projects underway in these countries.

**Learn more about the projects:**

- SESEC Newsletters (every two months) and subject-specific reports are available at <http://www.sesec.eu/>
- SESEI Newsletters (quarterly – one focusing on India for European stakeholders and one focusing on Europe for Indian stakeholders) and subject-specific reports are available at <http://www.sesei.eu/>

## InDiCo

InDiCo is the name coined for the ICT standardization component of the EC-funded project on International Digital Cooperation. InDiCo is managed and implemented by ETSI. It focuses on promoting shared visions of a digital society and increasing collaboration and alignment regarding the supporting policies, regulations and standards.

The InDiCo project seeks to create and stimulate synergies with key partner countries and regions in the field of ICT standards, enabling the Digital Single Market (DSM), fostering interoperability at a global level and contributing to building a larger market for industry players in the EU and selected partner countries, namely Japan, South Korea, China, India, Brazil and the USA in addition to their surrounding regions where relevant.

The technical focus of the project builds on the ICT standardization priorities outlined by the European Commission for the DSM, i.e. 5G, Internet of Things (IoT) and Cybersecurity, to which the topics of Intelligent Transport Systems (ITS) and Distributed Ledger Technologies (DLT) have been added.

The project holds workshops and targeted events with a view to building the necessary bridges to foster cooperation. It involves European players as part of its Stakeholders Group, which helps to gather input, issues guidance for project activities and serves as a platform for the involvement of European actors in these events, meeting with their local counterparts in the partner countries.

InDiCo will be instrumental in enabling a harmonized vision of a digital society and the related data economy, supported by global standards.

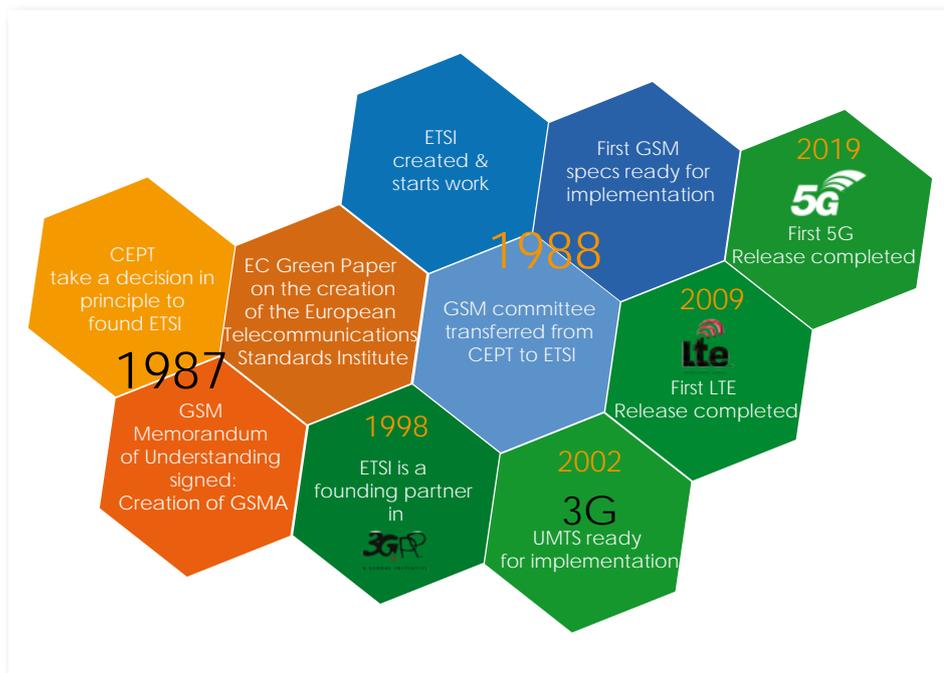
**Learn more about the project and its activities at :**  
<https://www.indico-ictstandards.eu/>

■ *Xavier Piednoir,*  
*Head of External Relations, ETSI.*



# 3GPP it started here

*In this special European edition of the Enjoy! magazine, we can allow ourselves a celebration of the success of ETSI's role as a driving force in the project.*



Although standards go back a long way - think sun, moon, stars and the emperor's foot - the organization of work into standards committees only started in the late 19th and early 20th Centuries - with the creation of engineering standards for the first industrial revolution.

A variety of industrial sectors have since developed standards, initially for National markets, but increasingly for International use. In Europe, there has been a coordinated approach to standards across the region since the early sixties, for a variety of products and by 1988 a youthful telecom sector, alongside the European Commission, had embraced the standardization trend by starting a process that would allow the Conference of Postal and Telecommunications Administrations (CEPT) to transfer its work on technical specifications in to

a new European Telecommunications Standards Institute. With that, ETSI was born.

Once established, the ETSI GSM standard soon enabled the new system's use across the Continent. This success in Europe paved the way for the expansion of GSM into geographies further afield and eventually led (in 1998) to the creation of an international 3rd Generation partnership to evolve that same GSM technology for data usage - across all regions.

ETSI played the leading role in creating 3GPP, by providing a great deal of the project's support, but crucially; by opening up the copyright of the GSM standards to effectively share the specifications with the other Standards Organization Partners from Asia and

North America. Doing that created a level playing field for everyone - from whichever region - in 3GPP.

That spirit of cooperation on systems for 3G was an important soft factor, that encouraged confidence in ETSI and in the GSM standards process, as the partners studied its long term evolution in 2008. By that time, all of the legacy national and regional varieties of cellular technologies were set on a path towards adopting a single Global mobile broadband system, which became a reality from 4G onwards -with LTE and LTE-Advanced networks.

This history helps us to understand how important ETSI can be to 5G standards going forward. As 3GPP runs under an increasingly tight schedule, where features have to be rationed with 'Time Units' and new work can get pushed out to the next release, and perhaps even the next.

ETSI can help share the load, as the incubator for some exciting new projects. In 2020, ETSI's groups work on network virtualization, multi-access edge computing, zero-touch networks, cognitive network management and millimetre wave transmission have matured at a pace, providing features that can also be used in 3GPP 5G studies and normative work.

With 5G, ETSI and Europe are back where they began; at the heart of mobile and looking forward as it evolves towards the new era of communications technologies for an increasingly connected world.

■ Kevin Flynn,  
3GPP Marketing Communication Officer.

# Smart and steady progress towards a standardized IoT ecosystem

*In this article oneM2M outlines its Release 3 features and unveils Release 4.*



IoT technologies are an increasing and ever-present part of everyday life. They improve the management of critical resources, often in remote locations. They help industrial firms to reduce waste and boost efficiencies. Their impact benefits the environment and delivers convenience to consumers. Smart cities, Industrie 4.0 factories and smart homes are three examples of the potential of IoT. With the promise of tremendous market growth, IoT standardization is key to unlocking its full potential.

## A solid foundation for standardization

IoT standardization has several dimensions. The first and most important deals with the basic activities involved in every IoT solution. A familiar example is device management. Imagine that it is possible to configure and remotely update

every IoT device in the same way. That would allow systems integrators to source devices from many different vendors and capitalize on economies of scale.

Next, imagine that these devices use the same approach for data management. Now, an application developer can source data from his IoT devices as well as other devices belonging to a different application. This is fundamental to breaking down application silos and enabling interoperability. Standardization can turn this into a seamless process.

Finally, consider how the IoT market and technologies are evolving. New concepts are constantly emerging from early-adopter markets. These give rise to new IoT requirements and add to the standardized toolkit. A smart approach to standardization builds from a broad base. It begins by satisfying the most common requirements. A smart approach also evolves. It integrates new requirements in a coherent and consistent manner.

## oneM2M's early releases

In 2015, oneM2M launched Release 1 of its global, IoT standard. This defined a minimum deployable horizontal IoT service layer, covering foundational services. Examples include device and data management, registration, and security services. To serve a wide user base, the standard provided bindings to a core set of internet protocols (CoAP, HTTP and MQTT).

By 2016, Release 2 included enhancements borne out of conformance and interoperability testing. It added interworking to other IoT networking technologies as well as an enhanced security framework. The standard also provides new services to support semantic

interoperability. These include the ability for developers to describe and discover IoT devices and data.

oneM2M delivered Release 3 of the standard in 2018, adding 3GPP interworking capabilities. Mobile network operators can now layer value-added IoT services on top of 3GPP network services. Release 3 also extended oneM2M's interworking framework to address industrial sector opportunities. This accommodates OPC UA, OSGi and Modbus technologies. For the smart home sector, oneM2M Release 3 defines a home domain information model. This provides a simple, modular and agnostic framework to manage applications and devices in the home.

## Forthcoming oneM2M Release 4

oneM2M plans to issue Release 4 of the standard in Q4 of 2020. This will provide enhancements for security, semantics and 3GPP Interworking. The new release will add support for new and emerging developments in the IoT landscape. One example is the new support capabilities for Fog/Edge computing technologies. Release 4 will specify common services for provisioning and service pooling functions. Another example addresses automotive sector innovations and the need to support vehicle-to-vehicle and vehicle-to-roadside device communications.

As an active and evolving standard, oneM2M continues to host developer hackathons and interoperability testing events around the world. These broaden the user base and feed improvements that contribute to the robustness of the oneM2M standard.

■ *Roland Hechwartner,*  
*oneM2M Technical Plenary Chair*

# European standards, who makes them?

*The European standardization system relies on three organizations formally recognized by European institutions to develop and deliver standards to support European legislation and policies. These organizations, collectively referred to as European Standardization Organizations or ESOs, are CEN, CENELEC and ETSI.*



## EUROPEAN STANDARDIZATION ORGANIZATIONS

While they have similar missions, their respective scopes of activity differ, but the interfaces between the ESOs' respective domains are developing as industry sectors increasingly intersect. It is for this reason that there is longstanding cooperation between them, formalized in the tri-partite "CEN-CENELEC-ETSI Basic Co-operation Agreement".

This agreement defines a framework for coordination and collaboration between the three ESOs:

- At the management level, the Joint Presidents Group brings together the most senior officials from CEN, CENELEC and ETSI (GA and Board Chairs, GA Vice-Chairs and Directors Generals), with the purpose of ensuring coordination on topics of common interest to the mission of the ESOs within the formal European context and the best way of delivering European standards. The JPG acts as a platform to prepare for concerted interactions with European institutions, to issue joint messages to various stakeholders on the value of

standards and provide ways of getting involved in standardization. The latter is especially relevant for SMEs, which make up the majority of European industry. The JPG also reviews the progress of work undertaken in international projects involving the three ESOs (SESEC and SESEI). Lastly, the JPG is where the ESOs coordinate to prepare for joint events (collaborative workshops are held regularly, e.g. on cybersecurity) and joint visits (the ESOs have an ongoing dialogue with ANSI in the US).

- At the working/technical level, for topics requiring the ESOs to work together, the agreement defines five modes of collaboration, which range from an informal status update, issued by the party performing the work to the other parties, to fully integrated collaboration, where all parties contribute to developing a deliverable that will be published by the ESOs involved.

Many deliverables have been developed using the different modes of collaboration,

with recent highlights being the delivery of [EN 301 549](#) on e-Accessibility, which is the result of work between the three ESOs using mode 5 (EN 301 549 is published by CEN, CENELEC and ETSI). The EN 303 645 on cybersecurity for consumers IoT devices, building from [TS 103 645](#) and elaborated in collaboration with CEN and CENELEC members, is on EN Approval Procedure.

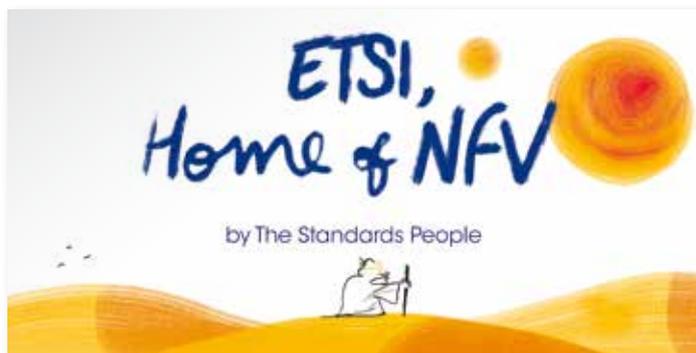
Multiple coordination groups have been created addressing areas of common interest. They usually relate to topics that are the subject of standardization requests from the European Commission.

Access the mapping of the committees between the ESOs and the related topics by scanning this code.



## A new **SME PROMOTION CAMPAIGN** launched!

ETSI has just launched a [video](#) in which five active members from the SME community share their views on how participation in ETSI has helped them and their business. A quarter of ETSI's Members are Small, Medium or Micro Enterprises and have understood the value of participating in ETSI. The video comes with a promotional [flyer](#) and will be part of an online information campaign. Do not hesitate to distribute this video and the associated flyer!



## New video: **NFV IN A NUTSHELL**

Since 2012, ETSI has been the home of Network Functions Virtualization, or NFV in short. ETSI's diversity is its strength and our constantly expanding international community made up of operators, manufacturers, IT and cloud players, big and small, has been developing specifications and Open Source components for NFV. These key specifications have proven to be essential for the world of tomorrow. Our new two-minute video explains the importance of virtualizing network functions. Watch it now!

## New version of the **WRITING WORLD CLASS STANDARDS GUIDE**

ETSI standards are used the world over and have enabled technologies which have changed the way people live, work and do business. Over the years, we have developed working methods and detailed drafting rules to ensure the quality and the reliability of our standards. The Writing World Class Standards Guide is intended for anyone involved in creating ETSI, 3GPP and oneM2M standards, both for our delegates and our staff members.



## **NEW OSM** **white paper**

The orchestration and management provided by OSM is a key part of next-generation BSS/OSS automating many high cost operational processes, but telecoms operators can benefit from this automation now. This white paper describes how the interconnection features of OSM enable integration with existing systems, reaping the main benefits early and yet still evolving to the NG-BSS/OSS vision. It also describes how the same interconnection features allow OSM to support 5G applications spanning network slicing and MEC of multiple MNOs.

# Latest news in the Secretariat



## Improved service for delegates at ETSI meetings

Every year ETSI welcomes thousands of delegates attending Technical Committee meetings, Board and GA, workshops, summits and conferences in our meeting centre in Sophia Antipolis, France.

ETSI now offers a modern and efficient way of checking-in for all those meetings.

When you register for a meeting in ETSI you will receive a confirmation mail that includes a unique QR code image. This code allows you to check in for the meeting at one of the four stations available in the main entrance. When you arrive at our premises you go directly to a check-in station and scan your meeting QR code either from your smartphone or from a print out of your registration confirmation mail.

Immediately, when you scan your QR code a meeting badge will automatically be printed for you and your attendance for the meeting is recorded in our database.

As of today, you must wear the badge visible at all time when you are in ETSI. This badge is also introducing a new feature where your role in the meeting is displayed in a coloured banner at the button of the badge. You will indicate your role when you register for any meeting by selecting from a list of eligible roles.

Our Meeting Support staff will continue to be available on site to help you with any questions you may have with regard to your participation in meetings at ETSI.

■ *Jørgen Friis, Former ETSI Senior Advisor,  
now Retired Friend of ETSI*



# Welcome to our new staff members



**Anthony (Ton) Brand**  
*Director Standards Development Centre*

Ton began his career in the 1980's as a business development consultant, helping the digital transition of several companies. Then as a Project Officer of the European Commission, he was involved in freight and fleet management projects for satellite and mobile communications. In this new era, he was later in charge of developing telecommunications networks in lesser developed regions.

In the Netherlands, he ensured that people could benefit from the best infrastructures, liaising with city authorities and operators to install broadband. He joined GSMA in 2005 as a Programme Director where he supported the business development of M2M and IoT services in the field of health, consumer electronics, automotive and smart cities. After 4 years at the Wireless Broadband Alliance, he went back to consultancy and gave Masterclasses on smart cities, IoT or 5G standards for operators and regulators in Malaysia, the Middle East and Saudi Arabia. He joined ETSI in January 2020.



**Lea Belloulou**  
*Funded Project Coordinator*

Lea worked as a financial and administrative coordinator for European projects for almost 10 years, in ERCIM for 5 years and in another European company, where she promoted FP6, FP7 and H2020 projects. This enabled her to initiate good relationships with the European Commission. In 2018, she was given a temporary position in ETSI as an administrator of funded projects.

She was hired for a short-term project as an event manager in a communication agency in Monaco. Her mission was to organize the first edition of the World Free and Special Economic Zones Summit or "SU-MEET" in cooperation with the United Nations Industrial Development Organization. This first global edition gathered over 200 high level executives from all around the world at the Monaco Fairmont hotel. As a manager of 4 people, Lea was instrumental in making this event a success. Coming from a multicultural environment, Lea speaks English, French, Italian, Spanish, German and Hebrew.



**Cátia Borges Ormonde**  
*Project Manager ITC*

Cátia achieved her BA and decided to continue her studies, in Portugal, to acquire a Master in Computer Engineering. She also worked as a web developer during part of her studies.

After this she worked on a thesis on data cleaning at INESC-ID, a Research Centre in Lisbon. The goal was to develop a framework in Java to allow the creation and execution of the ETL (Extract/Transform/Load) processes to clean data. Her end users were researchers within INESC-ID, who are today using her tool.

Willing to work abroad, she joined ALTEN after her thesis, as a Business Analyst for Amadeus. Having a functional position there, she applied to ETSI as project management seemed to her a natural career progression.

Cátia enjoys literature and used to be a firefighter when she was a teenager.



**Therese Christoffersen**  
*Event Professional*

At 11 years old, Therese came to France with her family. After learning French in a school in Cannes, she was selected to enter the US section of the CIV (International Centre of Valbonne) in Sophia Antipolis before going to University where she acquired a BA in Events.

In 2014, she came to ETSI as a trainee for a few months. Subsequently, she flew to London for 3 years where she joined the famous Buddha Bar in London as an events and sales manager. She organized private and corporate events with her team with as many attendees as 300 people. Back in France she created her own sustainable events organization.

Her customers, from the Scandinavian film industry, were involved in the Cannes film festival. In parallel, she worked as a beach manager for two years at the famous Plage 45 beach in Cannes. Therese speaks Danish, French, English and Swedish. She joined ETSI in March.

# Hear from us in conferences and meet with us at exhibitions.

Find more information and register on our website at: [www.etsi.org/events](http://www.etsi.org/events)

*Due to the **coronavirus outbreak**, we would advise that you regularly visit the event's page on our website ([www.etsi.org/events](http://www.etsi.org/events)) as events might be postponed or cancelled.*

*Thank you.*

## May 2020



### 5G India 2020 20-21 May, Mumbai, IN

This event, endorsed by ETSI, will spread awareness of the capability and benefits of 5G to sectors such as education, agriculture, manufacturing or health to achieve the goals of Digital India.

## June 2020



### OSM#9 Hackfest 1-5 June, London, UK

The ETSI OSM community will meet again to demonstrate the latest OSM features and functionality, and help users get hands-on experience in these areas.



### ETSI Security Week 8-11 June, ETSI, Sophia Antipolis, FR

This event will address 5G network secure deployment, the Cybersecurity Act, and how the ETSI Smart Secure Platform represents a disruptive change. It will also cover advanced cryptography.

## June 2020



### London Tech Week/TechXLR8 2020

**9-11 June, London, UK**

The event, endorsed by ETSI, will include AR & VR World, TechXLR8, the AI Summit, 5G World, and Blockchain for Business Summit.



### NFV&MEC Plugtests

**15-19 June, ETSI, Sophia Antipolis, FR**

This event will offer NFV and MEC solution providers and open-source projects an opportunity to assess the level of interoperability of their solutions, while they validate their implementation of NFV and MEC specifications and APIs.



### Critical Communications World

**17-19 June, Madrid, ES**

Endorsed by ETSI and 3GPP, this event brings together users, from both the public and private sector, the latest technology services, regulators and many more. Come and visit us on our booth.

## July 2020



### Joint ETSI-OAI Workshop: Open Software for 5G

**1-2 July, ETSI, Sophia Antipolis, FR**

Open software for 5G is becoming a reality with several groups showing promising results. This event provides an overview of these initiatives with a focus on the OpenAirInterface project. It is preceded by one day of tutorials on the OpenAirInterface 5G software on 30 June.



### 2<sup>nd</sup> mWT Plugtests

**6-10 July, ETSI, Sophia Antipolis, FR**

ETSI is pleased to invite you to the second mWT (millimetre Wave Transmission) Plugtests™ event. This edition of the Plugtests event will focus on proving the ability of Software Defined Network (SDN) to operate from an end to end service point of view.



### Internet of Things India 2020

**7-9 July, New Delhi, IN**

ETSI is pleased to endorse the IoT India 2020 expo which will explore the impact of the Internet of Things (IoT) on industries, such as manufacturing, transport, supply chain, insurance, logistics, government, energy and automotive.



### 2<sup>nd</sup> ETSI C-V2X Plugtests

**20-24 July, Klettwitz, DE**

In partnership with the 5GAA and hosted by DEKRA, the 2nd ETSI C-V2X Plugtests event will further validate the interoperability of ETSI and 3GPP C-V2X ITS standards through a combination of testing in a laboratory environment and outdoors on a test track.

# ETSI SNAPSHOT

**917**  
members

**59**  
standards  
Jan-Feb.2020



**26%**  
SMEs

**725**  
standards  
under development

**+100**  
technical groups

**2963**  
standards' downloads  
Jan-Feb.2020

**71**  
face-to-face  
meetings  
Jan-Feb.2020

**1839**  
participants  
to F2F meetings  
Jan-Feb.2020



**856**  
eMeetings  
Jan-Feb.2020

**11 398**  
eParticipants  
Jan-Feb.2020

**6**  
conferences  
& Plugtests  
Jan-Feb.2020

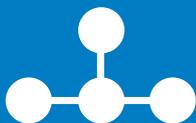
**@ETSI**  
Secretariat

ETSI  
650 Route des Lucioles  
06560 Valbonne France  
Tel: +33 (0)4 92 94 42 00

**124**  
people

**19**  
nationalities

**110**  
partnerships



Members  
from  
**65**  
countries

## About ETSI

ETSI provides members with an open and inclusive environment to support the development, ratification and testing of globally applicable standards for ICT systems and services across all sectors of industry and society. We are a not-for-profit body with more than 900 member organizations worldwide, drawn from 65 countries and five continents. Members comprise a diversified pool of large and small private companies, research entities, academia, government and public organizations. ETSI is officially recognized by the EU as a European Standards Organization (ESO).

For more information please visit: [www.etsi.org](http://www.etsi.org)

For any information on Enjoy!,  
to contribute, to be removed from the list of hard copies or subscribe to it, contact us at: [enjoy@etsi.org](mailto:enjoy@etsi.org)



Follow us on:    