

Introduction to ITU-T STUDY GROUP 17 (including ITS security)



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Overview of ITU-T SG17



Terms of Reference approved at WTSA-16

□ WTSA-16

- is responsible for **building confidence and security in the use of information and communication technologies (ICT)**. This includes studies relating to security, including cybersecurity, countering spam and identity management.
- It also includes security architecture and framework, security management, protection of personally identifiable information (PII), and security of applications and services for the **Internet of things (IoT)**, smart grid, smartphone, software-defined networking (SDN), Internet protocol television (IPTV), web services, social network, cloud computing, mobile financial system and telebiometrics.
- Study Group 17 is also responsible for the application of open system communications, including directory and object identifiers, and for technical languages, the method for their usage and other issues related to the software aspects of telecommunication systems, and for conformance testing to improve quality of Recommendations.

□ Lead Study Groups

- Lead study group on security
- Lead study group on identity management (IdM)
- Lead study group on languages and description techniques



New Management Team at WTSA (2017-2020)

Chairman	Heung Youl YOUM	Korea (Republic of)
Vice-Chairmen	Vasily DOLMATOV	Russian Federation
	Gökhan EVREN	Turkey (Republic of)
	Inette L. FUREY	United States
	Muataz Elsadig ISHAG	Sudan (Republic of)
	Patrick-Kennedy KETTIN ZANGA	Central African Republic
	Wala TURKI LATROUS	Tunisia
	Zhaoji LIN	China (People's Republic of)
	Hugo Darío MIGUEL	Argentina (Republic of)
Yutaka MIYAKE	KDDI Corporation	



Study Group 17- Security

Building confidence and security in the use of ICTs

Cybersecurity

Countering spam

Cloud computing
security

IoT security

ITS security

SDN security

Mobile (phone)
security

Identity management

Information Security
Management

Application security

Big Data analytics
security

PKI, PMI, Directory

Telebiometrics

Languages
(ASN.1, SDL, MSC, TTCN-3 ...)

Smart-grid
security

Blockchain-DLT
(future item)

Future Perspective of SG17

ICT security (I)



Security



Global Experts

Collaboration

Centre of excellence

**Separation of security
responsibilities within
ITU-T**

SG17 | **SG13**
SG20



**Attractiveness of
participation**



ICT security (II)

SG17



Cybersecurity



ITU-D

SG17 as centre of security competence

Implementation of ITU-T Recs

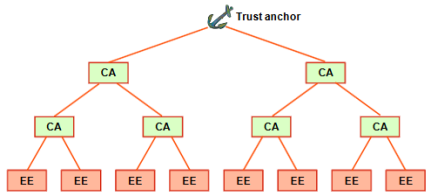
Development of security approaches

Strengthening the trust framework

Information Society



ICT security, PII, PKI



Public key infrastructure (PKI)

Protection of Personally Identifiable Information (PII)

Smart grids

Protection of Children Online

SG17 as lead study group for security

Internet of things (IoT)

Intelligent Transport System



SG17



Questions – LSG – JCAs – Projects

SG17 proposed **12** Questions for the next study period and they shall all continue.

SG17 should be the lead study group responsible for:



Languages
and
description
techniques

**IDENTITY
MANAGEMENT**

**JCA-IdM and JCA-COP
as well as ASN.1 & OID **Projects**
need to continue given their
important contributions.**

Activities related to ITS security

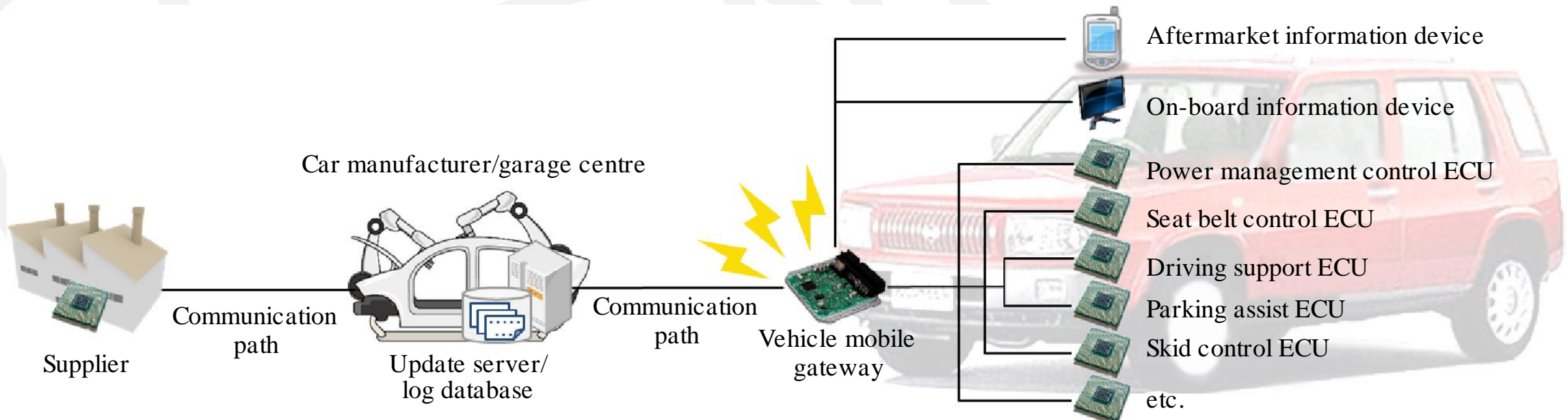
Relevant Questions related to ITS security

- ❑ **Question 6** (Security aspects of telecommunication network and services)
 - IoT security, **ITS security**, SDN security, smart-grid security, mobile security, mobile phone security, IPTV security and content protection, ubiquitous network security framework, ...
 - 2 new Recs; 3 new Supplements, 3 in TAP
 - 6 under development
- ❑ **Question 4** (Cybersecurity)
 - In support of WTSA-12 Resolution 50.
 - Finalized **cybersecurity information exchange (CYBEX)**, X.1500 series.
 - Intense work program; many collaborations with principal forums of the cybersecurity community.
 - 9 new Recs, 8 Amendments, 2 new Supplements (1 revised); 2 in TAP
 - 3 under development.

Relevant Questions related to ITS security

- **Question 11** (Generic technologies to support secure applications)
 - X.500-series on Directory including **X.509 on PKI**, computerized directory assistance, Abstract Syntax Notation One (ASN.1), Object Identifiers (OIDs) and associated registration authorities, ODP, certified e-mail.
 - ASN.1 and OID project (see separate slide)
 - 4 new Recs, 23 revised Recs, 14 technical corrigenda to X.500 series; 1 TR; 8 under development.

Principal modules around a vehicle



X.1373(16)_F01

(Source: X.1373)

Draft Recommendation X.1373 (X.itssec-1) - Secure software update capability for intelligent transportation system communication devices

□ Under TAP (Traditional approval Process)

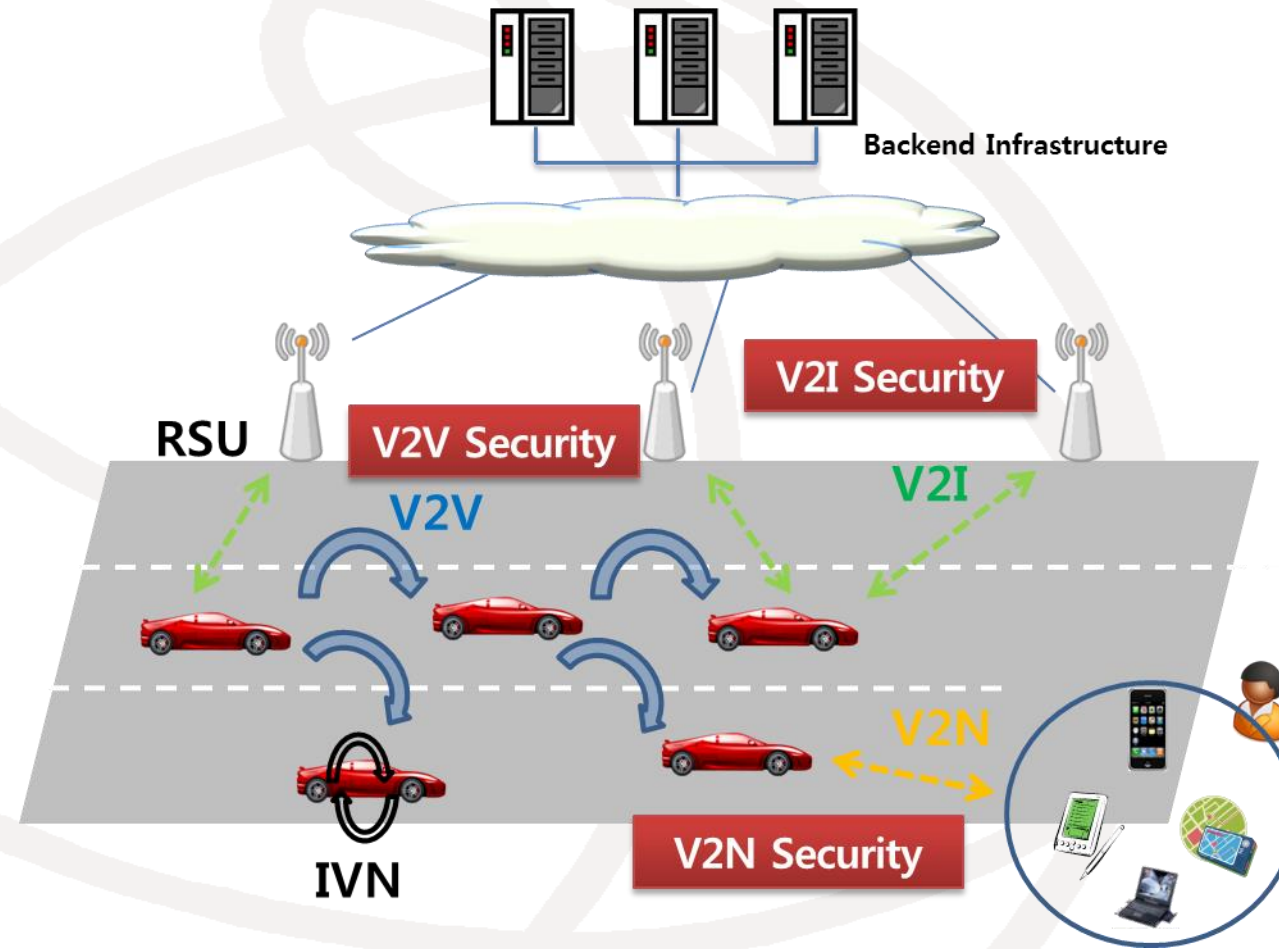
- by 2400 hours UTC on **13 March 2017** whether your Administration assigns authority to ITU-T Study Group 17 that these draft Recommendations should be considered for approval at the Study Group meeting.

□ Scope

- In the context of updates of software modules in the electric devices of vehicles in the intelligent transportation system (ITS) communication environment, **this Recommendation aims to provide a procedure of secure software updating for ITS communication devices for the application layer.** This includes a basic model of software update, its threat and risk analysis, security requirements and controls for software update and a specification of abstract data format of update software module.
- **The procedure related to in-vehicle communication is the out of scope of this Recommendation.** For reference, the procedure used in-vehicle in this Recommendation is informative.
- The procedure is intended to be applied to communication devices on ITS vehicles under vehicle-to-infrastructure (V2I) communication by means of the Internet and/or ITS dedicated networks. The procedure can be practically utilized by car manufactures and ITS-related industries as a set of standard secure procedures and security controls.



An overview of the vehicular communication



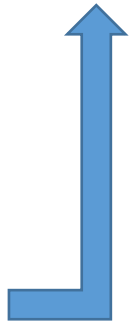
(Source: X.itssec-2)

Draft Recommendation X.itssec-2 - Security Guidelines for V2X Communication Systems

- Under **Development**
- Scope
 - This Recommendation provides **security guidelines for V2X communication systems**. V2X means V2V (Vehicle-to-Vehicle), V2I (Vehicle-to-Infrastructure) and/or V2N (Vehicle-to-Nomadic Devices).
 - This Recommendation includes **analysis of threat** for V2X communication systems. In addition, this Recommendation provides the **security requirements** for V2X communication systems.

Conclusions

Conclusion



Increased Participation above 150 participants

SG17 achieved significantly **build-up** of participation and energy in:

Identity Management

Cybersecurity

Cloud Computing Security

SG17 has successfully **evolved** to:

cover new security issues (e.g., **security aspects for connected cars**)

address new security challenges

SG17 has **built strong relations** with other key bodies working on security and conducted numerous **collaborative** efforts

with security experts in core Questions.