Key ITU's projects related to C&I and other testing activities

Content

1. Testing Laboratories recognition procedure (draft Rec. ITU-T Q.TL_rec_pro)
2. Conformity assessment of user equipment which is based on SIP-IMS
3. Measurements of Internet speed (draft Rec. ITU-T Q.Int_speed_test)
4. ITU Activities on fighting counterfeiting
5. Compatibility of mobile phones and vehicle hands-free terminals

Testing Laboratories recognition procedure (draft Rec. ITU-T Q.TL_rec_pro)

Background

- Most SDOs/Forums/Consortia established its own TL's recognition procedure. This approach helps them to ensure the credibility of their C&I Programmes
- TSB developed an overview on a best practice (GSMA, Continua, IECEE)
- The aim of the ITU recognition procedure is to allow TL to be recognized as a laboratory with a competence to perform tests against ITU-T Recommendations
- First draft of the Recognition procedure was proposed by Russia (C97)

Recognition procedure defines

- ✓ Requirements for TL
- ✓ Requirements for ITU-T assessors
- ✓ Relevant procedure to apply for the ITU recognition

ITU-T Conformance Assessment Steering Committee (ITU-T CASC) is an instrument to follow up the recognition procedure
ITU-T SG11 established the CG aiming to clarify this issue

Correspondence group on collaboration between ITU and TLs

- ✓ Chairman: Mr Isaac Boateng (vice-chairman of SG11)
- ✓ CG documents: http://ifa.itu.int/t/2013/sg11/exchange/wp4/q11/
- ✓ Last meetings: 20 Feb, 10 April, 14 May, 11 June, 2 July and 10 July 2014

Future activities

- ✓ All discussions are under Q11/11 of ITU-T SG11
  (Mr Isaac Boateng was appointed as an associated Rapporteur)
- ✓ Next meeting: 17 Nov 2014 (9:30-12:30 GVA) with remote participation (event's web page). Please, register online

Current outcomes

- ✓ baseline text of ITU recognition procedure and best practice (TD 474)

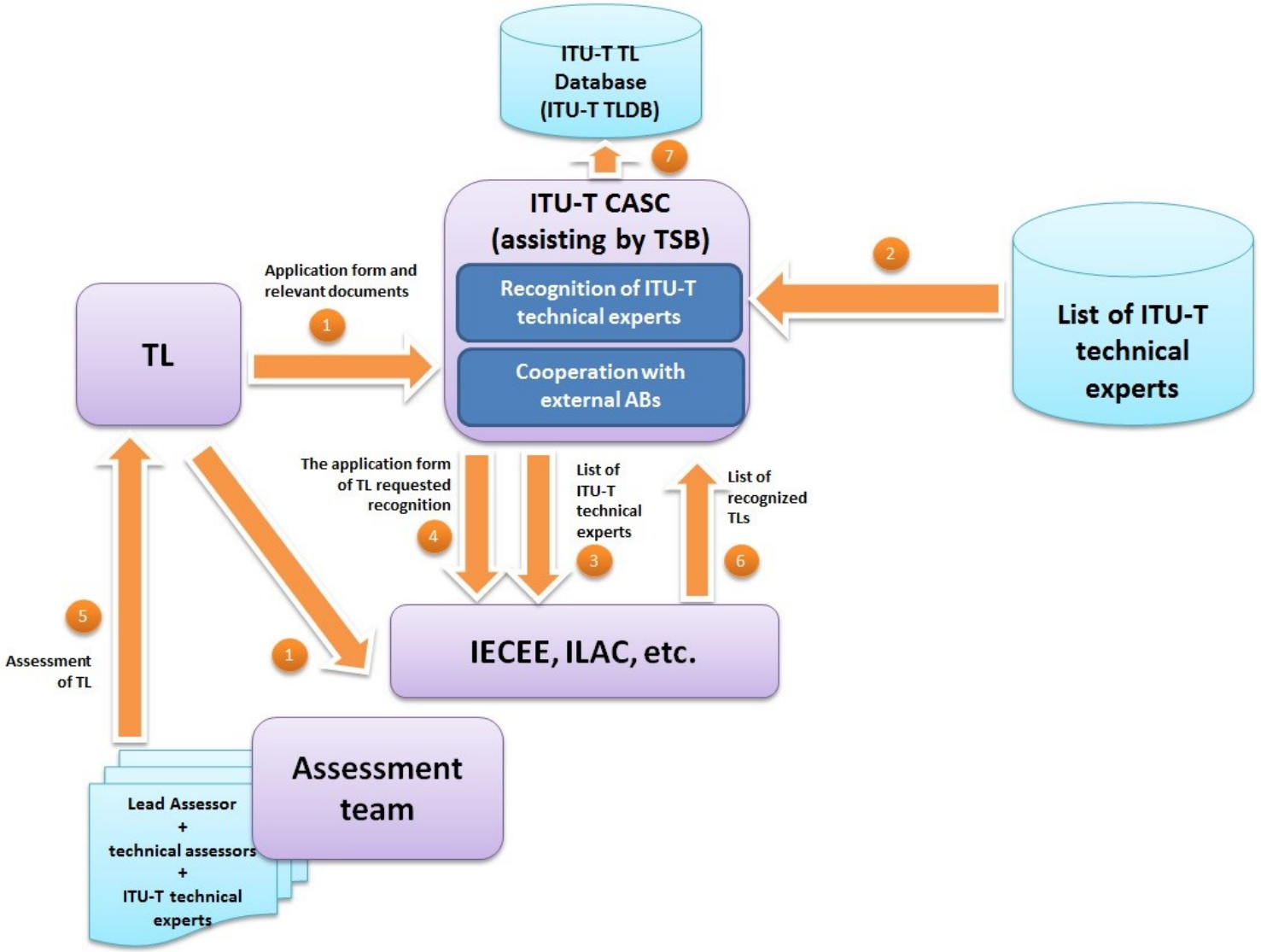
Report of the Correspondence group
(ITU-T SG11 TD 475)

CG and SG11 identified two possible options for the implementation of the ITU TL recognition procedure:

First option – in the long term the ITU may have to establish ITU's own TL recognition procedure in support of the ITU's C&I programme

Second option – in the short to medium terms, is for ITU to join the existing schemes (such as but not limited to IECEE (ref: TD480), ILAC, etc.) by providing ITU's technical experts for making a TL's assessment against ITU-T Recommendations

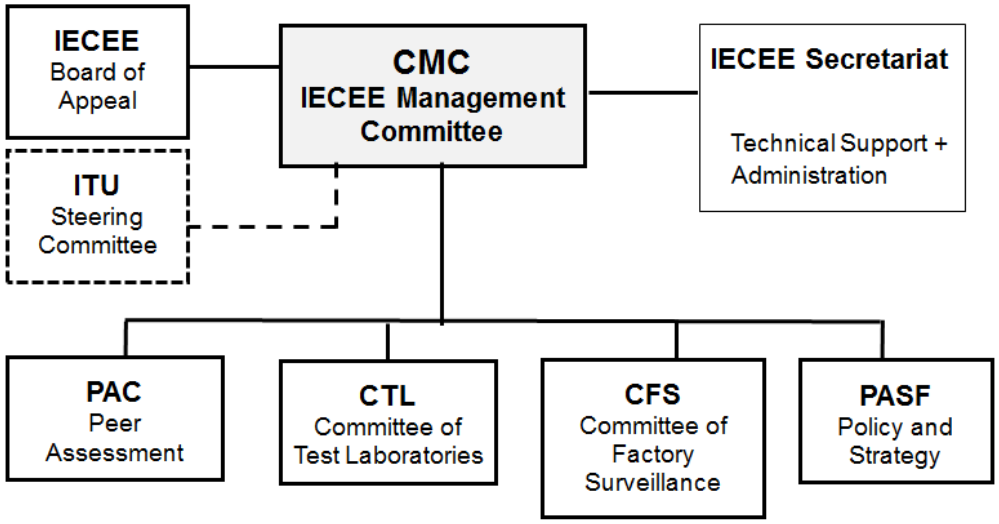
The recognition procedure of TL



TD 474 (GEN/11) "Revised version of C-97 "Proposal to establish an ITU recognition procedure of testing laboratories with competence in ITU-T Recommendations", 9-16 July 2014

ITU collaboration with IEC/IECEE
(PP-14, D63)

- ✓ ITU partner with IEC to conduct a trial of voluntary 3rd party CA of suitable ITU-T Recommendations
- ✓ A team of assessors selected by ITU-T and qualified by IECEE would recognize test labs which qualify for testing specific ITU-T Recommendations. A recognized test lab would then be able to issue certificates
- ✓ An 'ITU steering committee' would be established within the IECEE organization structure



Conformity assessment of user equipment which is based on SIP-IMS

Background

- Most telecom operators have already implemented the IMS platform, connecting their customer's UE through SIP-IMS protocol
- Different implementation of SIP-IMS protocol can require additional operator's efforts (budgets) to adapt UE to the installed IMS platform
- The roaming of VoLTE services will be not available among operators due to an incompliance of SIP-IMS protocol's realization
- The regulation of some countries requires telecom operators to implement the set of universal services

As a consequence – the conformance testing of UE and ICT services which are based on IMS platforms plays an important role (e.g. basic call, TIP/TIR, HOLD, etc.)

Actions

- Define the requirements for Network and User sides for SIP-IMS profile for basic call and supplementary services (based on 3GPP TS 24.229) (WP1/11)
- Develop the missing conformance tests specifications of SIP-IMS profile for User and Network sides for basic call and supplementary services (ITU-T Q.3946.x series) (WP4/11).
  The User Conformance Tests for the SIP-IMS Profile have to be developed
- Develop conformance tests specifications for Integrated Access Devices (IAD) (WP4/11) *New*

Telecom operators are invited to join this activity in SG11 and initiate the relevant ITU test event

The outcome – the list of SIP-IMS based UE which complied with ITU-T Recommendations (e.g. signalling protocol, voice QoS/QoE)

Measurements of Internet speed
(draft Rec. ITU-T Q.Int_speed_test)

The key reasons

- Internet services are playing the important role in our life (social networks, OTT, etc.)
- Quality of Internet services becomes a such vexed issue (subscriber loyalty)
- Fixed and Mobile operators are playing the significant role in Internet community
- Customer is looking for the best offer of Internet access “speed/tariff”

The key issues of existing measurements systems 1

- **The existing algorithms are not suitable for operators/regulators to manage customer's SLA as there is no reliable mechanism for Internet speed checking**
  - **lack of standardized measurement framework**
    (the obtained test results, which were achieved by one method, may vary from results achieved by other method)
  - **lack of standardized measurement procedure**
    (the random measurements can be used during the testing (the testing algorithm is not specified)
  - **insufficient accuracy**
    (some of the existing methods make several attempts at different times of measurement (the measurement time period is not specified, the Busy-hour does not count)
  - **different approaches for collecting testing results**
    (the processing of the measured values assumes dropping some measurement results (sometimes up to 40%)

The key issues of existing measurements systems 2

- The existing measurement systems do not provide guarantee that testing results related only to operator's network
- Customers wishes to measure the speed between customer's terminal equipment (TE) and particular Internet resources (e.g. YouTube, Google TV, etc.).

ITU's standardization activities

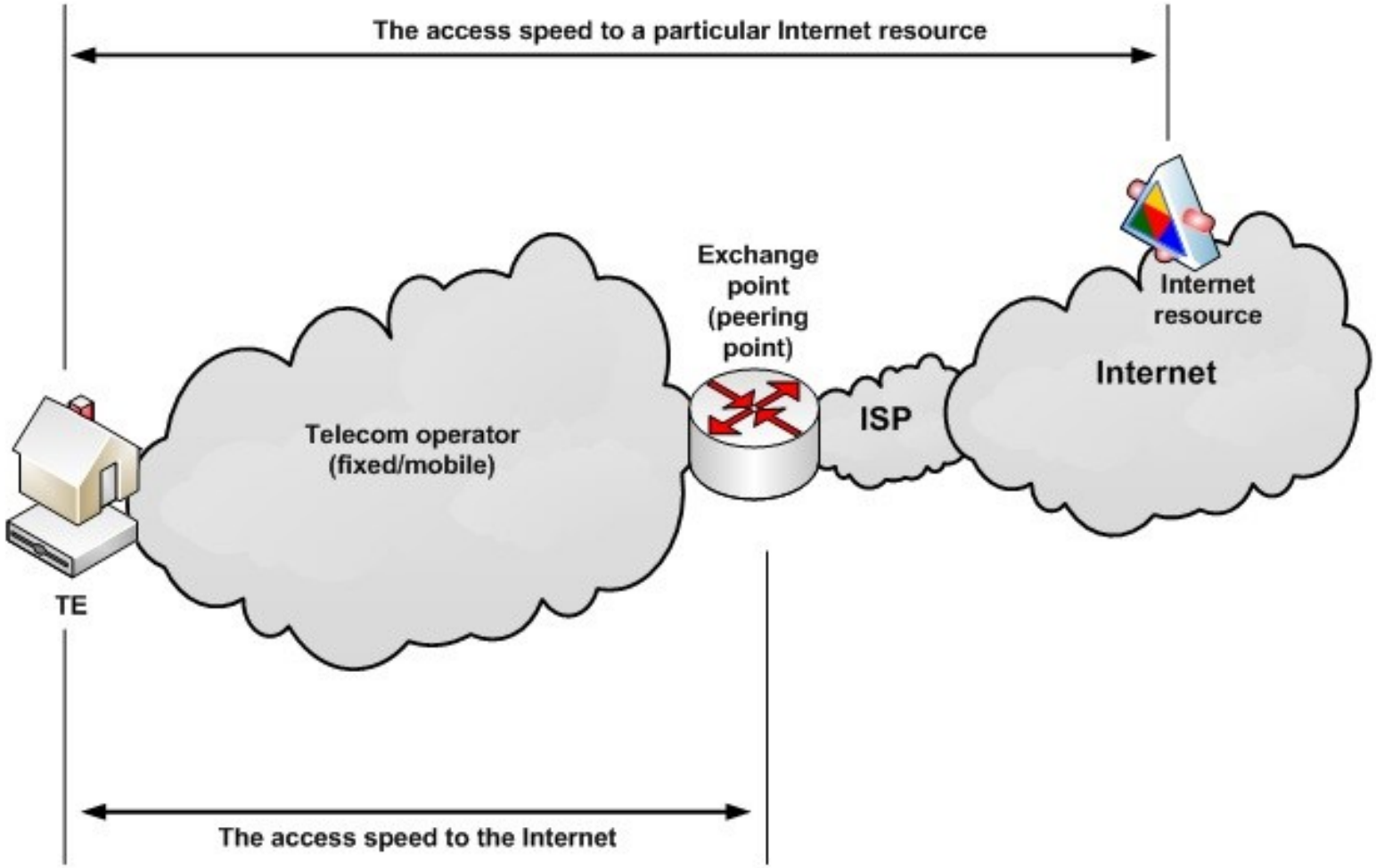
ITU-T SG11 Q15/11 "Testing as a service TAAS"

Q.Int_speed_test "Unified methodology of Internet speed quality measurement usable by end-users on the fixed and mobile networks"

There are two types of measurement of Internet speed:

- **the measurement of access speed to the Internet (e.g. the absolute value of the measured speed, bit rate, between customer's terminal equipment (TE) and an operator's exchange point (peering point) which is used for exchanging traffic with Internet Service Provider (ISP))**
- **the measurement of access speed to a particular Internet resource (e.g. an absolute value of the measured end-to-end speed, bit rate, between customer's TE and relevant Internet resource)**

Framework of Internet speed measurements



ITU Portal on Internet speed measurements

http://www.itu.int/en/ITU-T/C-I/Pages/IM/Internet-speed.aspx

Measurements of Internet speed

YOU ARE HERE HOME > ITU-T > ITU CONFORMITY AND INTEROPERABILITY

SHARE

Background

The measurement of Internet speed becomes an important matter, when ICT players (e.g. operators, regulators, customers) try to assess whether it is compliant with the speed value indicated in relevant customer's Service Level Agreement (SLA).

The Internet's access speed is normally advertised by fixed and mobile operators, however in most cases customers do not have a global standardized mechanism to verify it.

Currently, the Internet provides various ways to assess the Internet speed. However most of them measure the speed between customers and servers which are located outside of the operator's network, therefore this measure can't be compared with the value written in the customer's SLA.

Actually, customers are mostly interested in the assessment of the access speed to a particular Internet service (e.g. movie on YouTube, TV on Google TV, web surfing, etc.), as this would allow them to compare the offers from various operators.

Taking all this into account, the development of a unified approach to measure the Internet speed would be advantageous. The establishment of such a framework would inspire greater consumer confidence in advertised speeds and ensure that accurate comparisons can be made between offerings from different operators.

This webpage provides all interested parties with ITU-T's relevant activities on Internet speed measurements.

Related links | Documents, presentations | News

- Draft Recommendation ITU-T Q.Int_speed_test *New*
- ITU newslog

Forthcoming events

Q15/11 Rapporteur's meeting *New*
Date: (13 November 2014, 1&2 Sessions)
Venue: ITU Headquarters

QUICK LINKS

- ITU C&I Portal
- ITU testing events
- ITU-T SG11 "Protocols and test specifications"

HOW TO PARTICIPATE

Experts who are interested in participating in these activities are invited to send contributions to Question 15 of ITU-T Study Group 11 and may subscribe here to the Q15/11 mailing list t13sg11q15@lists.itu.int

For more information please contact

DESCRIPTION OF ISSUE

As the accessibility of Internet resources is important for customers, this resource contains a description of the common issues of the existing global Internet measurement systems which are not suitable for managing the customer's SLA.

BEST PRACTICE

Some regions and countries have successfully launched their own approaches aiming to evaluate Internet access speed.

The Organization for Economic Co-operation and

Next meeting of Q15/11:
13 November 2014

- Online registration
- Web page of the event

ITU Activities on fighting counterfeiting

ITU Activities

- ITU-T SG11 launched a new work item "Technical Report on Counterfeited and Substandard ICT Equipment". Some international organizations have been involved to this activity (e.g. WTO, Interpol, WCO, MMF, WIPO, etc.)
- WTDC-14 Resolution 79 "The role of telecommunications/information and communication technologies in combating and dealing with counterfeit telecommunication/information and communication devices"
- ITU-T PP-14 New Resolution "Combating counterfeit telecommunication/ICT devices"

ITU-T PP-14 New Resolution "Combating counterfeit telecommunication/ICT devices"

Recognizing

…..

e) that ITU-T Recommendation X.1255, which is based on the digital object architecture, provides a framework for discovery of identity management information;

f) that some of the measures adopted by the countries rely on unique telecommunication/ICT device identifiers, such as the International Mobile Equipment Identity, to limit and deter counterfeit ICT devices;

…..

considering

b) that ITU and other relevant stakeholders have key roles to play in fostering coordination between the parties concerned to study the impact of counterfeit devices and the mechanism for limiting their use and to identify ways of dealing with them internationally and regionally;

…..

resolves to instruct all Directors

1 to assist Member States in addressing their concerns with respect to counterfeit telecommunication/ICT devices through information sharing at regional or global level, including conformity assessment systems;

2 to assist all membership, considering relevant ITU-T Recommendations, in taking the necessary actions to prevent or detect the tampering and/or duplication of unique device identifiers interacting with other telecommunication SDOs related to these matters,

ITU event

Combating counterfeit and substandard ICT devices

17-18 November 2014

Online registration

Web page of the event

Compatibility of mobile phones and vehicle hands-free terminals

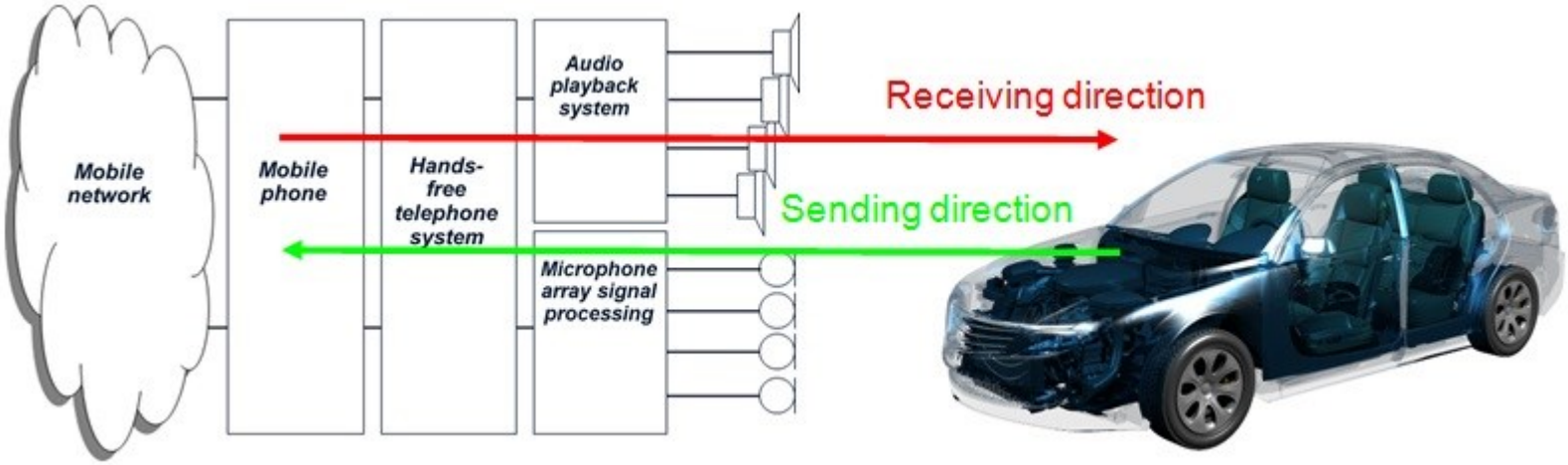
Key issues

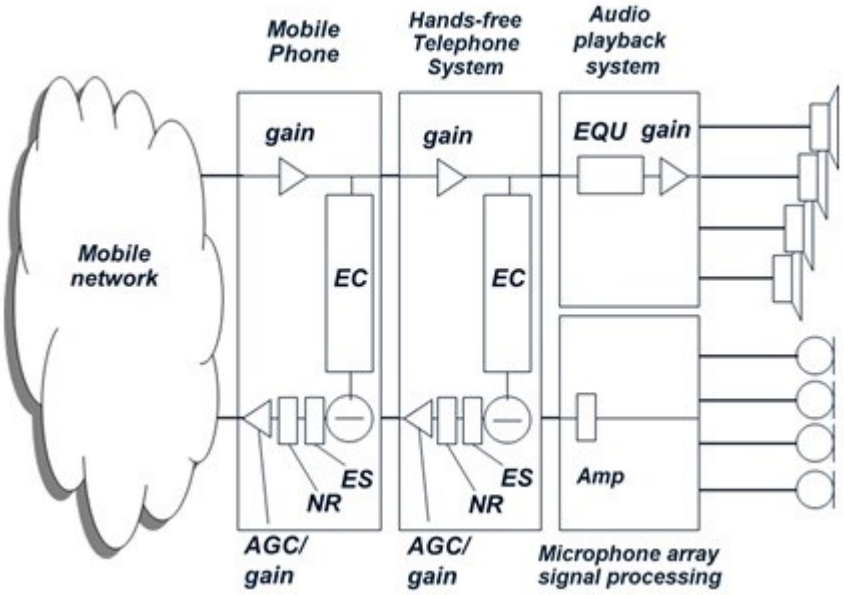
An incorrect behavior of the mobile phone in the wireless connection to a vehicle's HFT

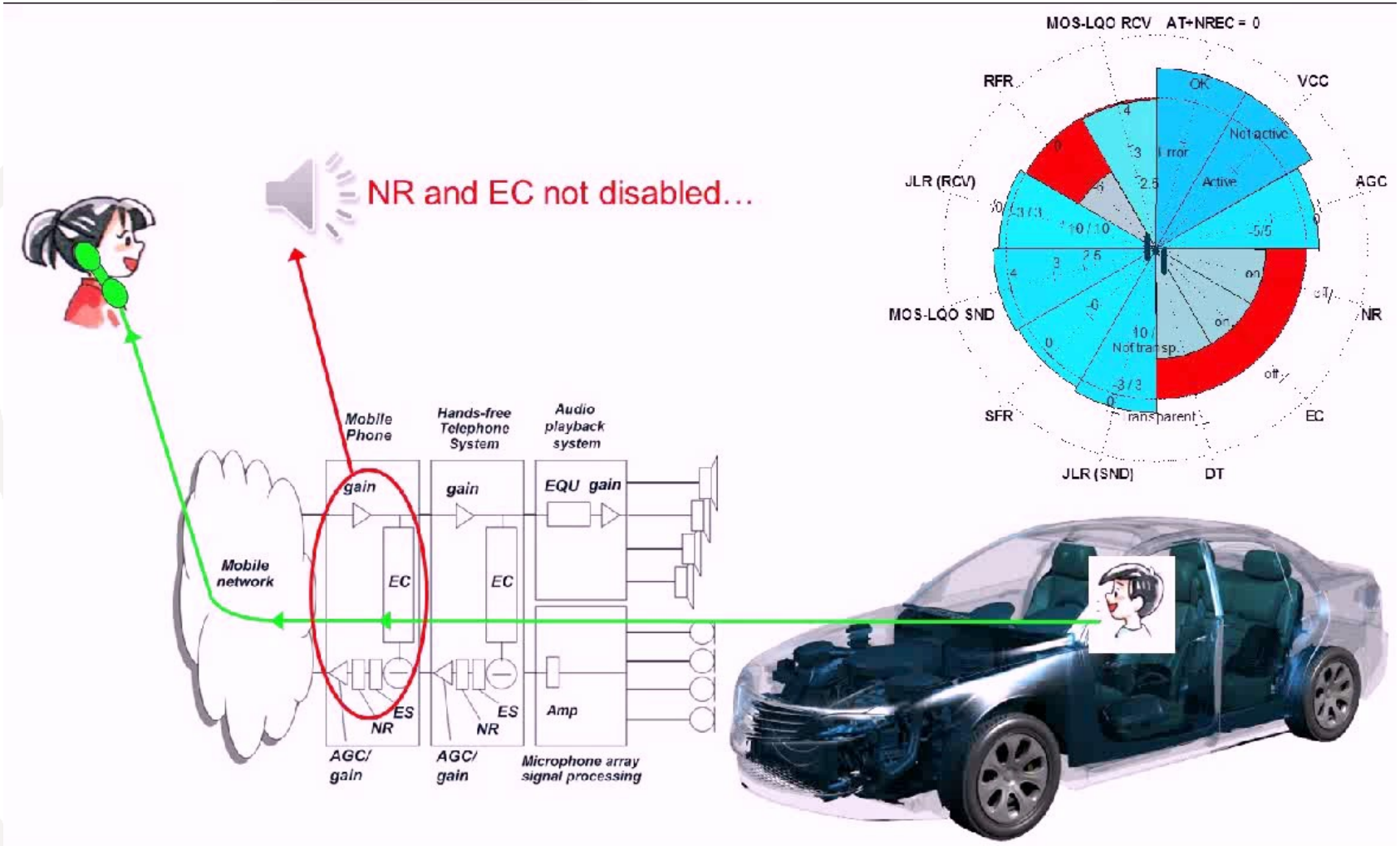
The phone does not react correctly to the specific commands of vehicle's HFT, requesting phone to deactivate some features

- ✓ *Noise reduction*
- ✓ *Echo canceller*
- ✓ *Attenuation or equalizer*

As a result, an unacceptable quality of a voice-call inside the car and outside the car for the conversational partner


Mobile network
Mobile phone
Hands-free telephone system
Audio playback system
Microphone array signal processing
Receiving direction
Sending direction


Mobile Phone
Hands-free Telephone System
Audio playback system
Mobile network
gain
gain
EQU gain
EC
EC
ES
NR
ES
NR
Amp
AGC/ gain
AGC/ gain
Microphone array signal processing


NR and EC not disabled…
Mobile Phone
Hands-free Telephone System
Audio playback system
gain
gain
EQU gain
Mobile network
EC
EC
ES NR
ES NR
Amp
AGC/ gain
AGC/ gain
Microphone array signal processing
MOS-LQO RCV AT+NREC = 0
RFR
VCC
JLR (RCV)
AGC
MOS-LQO SND
NR
SFR
EC
JLR (SND)
DT
OK
Not active
Error
Active
Not transparent
Transparent

ITU Test Event
Performance assessment of mobile phones in conjunction with vehicle's HFT in accordance with Recs. ITU-T P.1100/P.1110 www.itu.int/go/test-event

Background

Many mobile phones do not work properly with HFT's system and thereby significantly degrading the speech quality of the complete system

Findings

- ✓ an incorrect behavior of the mobile phone in the wireless connection to a vehicle's HFT
- ✓ an unacceptable quality of a voice-call inside the car and outside the car for the conversational partner

Only 30 % of phones passed the tests !!!!!

Key outcomes

- ✓ New web portal describing the existing issues
- ✓ A "white list" of mobile phones recommended by major car manufactures
- ✓ Updated Recs. ITU-T P.1100/P.1110 with the new values of performance

Venue: ITU Headquarters
TL: HEAD Acoustics
Date: 12-16 May 2014
Participants: Mercedes-Benz, Volvo, Bosch, Toyota
Number of tests: 40 (30 phones)
ITU press-release

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