



Overview of the outcomes of the ITU-T test events on performance of mobile phones as gateways to car's hands-free systems (2014-2017)

BACKGROUND

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

LIST OF ITU EVENTS

First test event (May 2014)

Second test event (May 2016)

Third test event (November 2016)



VIDEO ABOUT TEST EVENT (ITU TELECOM WORLD, 2016)

<https://www.youtube.com/watch?v=9sU622H6ooY>



BRIEF OVERVIEW OF ITU'S ACTIVITIES (1/2)

- TSB informed SG12 about the Call for Expression of Interest (EOI) for the first ITU-T test event (Dec.2013, [TD325](#))
- ITU conducted first test event (12-16 May 2014, [web page](#))
- TSB presented a brief report of the first test event in SG12 meeting (Sept.2014, [TD455](#))
- Automotive industry urged ITU to publish Whitelist (2015, [C24/15](#) of the ITU Council-15, [newslog](#))
- TSB announced a call for bid for selecting testing laboratory which will perform tests at the ITU test events which ITU started organizing on the regular basis (Sept.2015, [newslog](#))



BRIEF OVERVIEW OF ITU'S ACTIVITIES (2/2)

- HEAD Acoustics was selected to perform the tests at the ITU test events
- ITU conducted second test event
(23-27 May 2016, www.itu.int/go/hft-test-event-2)
- Anonymous testing reports are available on the events' web pages
([first test event](#), [second test event](#))
- SG12 informed SG11 on the Recommendations which are suitable for C&I testing (e.g. P.1100/P.1110 are among them – [TD998r1](#)) (June 2016)
- P.1100/P.1110 were proposed as a candidates for new joint certification scheme ITU/GCF (report of CASC – [TD1306](#) and [iLS-TD17](#)) (July 2016)
- ITU conducted third test event
(15-16 November 2016, www.itu.int/go/hft-test-event-3)



GOAL OF THE TEST EVENT

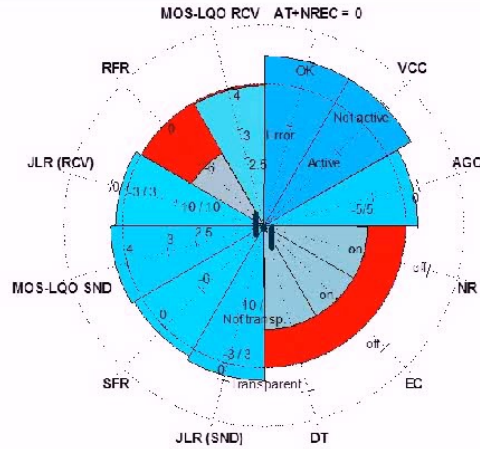
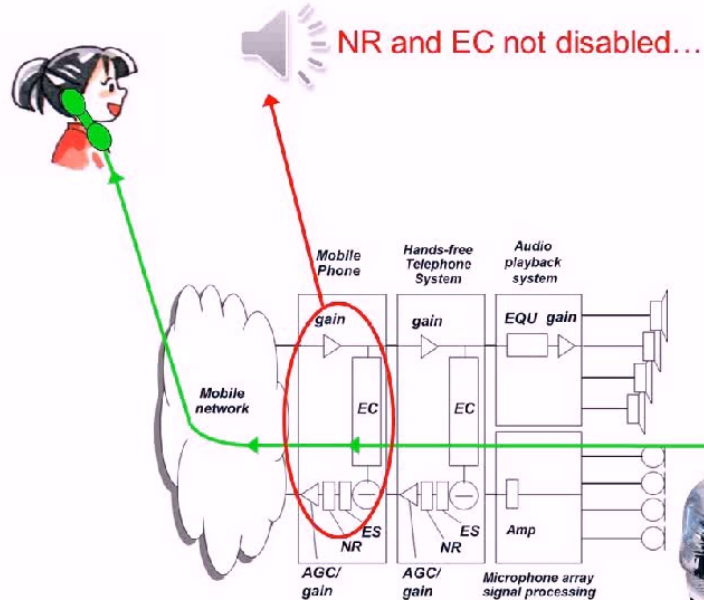
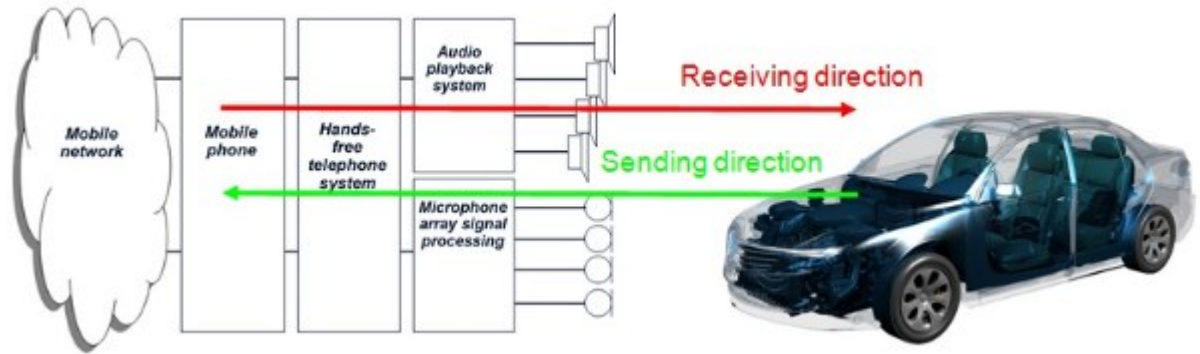
To assess performance and quality of the voice communication of mobile phone in conjunction with vehicle-mounted Hands-free telephone systems in accordance with Chapter 12 (“Verification of the transmission performance of short-range wireless (SRW) transmission enabled phones”) of Recommendations ITU-T P.1100 and ITU-T P.1110

ITU-T [P.1100](#) "Narrowband hands-free communication in motor vehicles"

ITU-T [P.1110](#) "Wideband hands-free communication in motor vehicles"



COMMON PRINCIPLES



WEB RESOURCES

https://www.itu.int/en/ITU-T/C-I/Pages/HFT-mobile-tests/HFT_testing.aspx

- **TESTING REQUIREMENTS AND METHDOLOGY**
- **TECHNICAL PROBLEMS OBSERVED**
- **WHY MY MOBILE PHONE DOES NOT SOUND GOOD IN A CAR**



KEY ISSUES

- **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**

GENERAL STATISTIC


- 58 mobile phones (state-of-art devices)
- 89 tests (55 Narrowband and 34 Wideband)
- 30 % mobile phones comply with the requirements ITU-T P.1100&P.1110 (1st event)
- 22% mobile phones comply with the requirements ITU-T P.1100&P.1110 (2nd event)




WHITELIST

www.itu.int/go/phone_whitelist

Best hands-free performers



Committed to connecting the world



What would you like to search for?

- Home ITU
- General Secretariat
- Radiocommunication
- Standardization**
- Development
- ITU Telecom
- Members' Zone
- Join ITU

- About ITU-T
- Study Groups
- Events
- All Groups
- Join ITU-T
- Standards
- Resources
- Workshops
- Regional Presence

Compatibility of mobile phones and vehicle hands-free terminals

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

SHARE    

'Whitelist' of the best hands-free performers

A mobile phone connected via short-range wireless communication (Bluetooth®) to a vehicle's hands-free telephone system must satisfy certain requirements to achieve high-quality voice conversations.

The phones listed are proven to achieve the desired quality of voice conversation by meeting the requirements of the 'Chapter 12 tests' of Recommendations ITU-T P.1100 (narrowband) and/or P.1110 (wideband), standards for communications involving motor vehicles.

For a demonstration of the desired quality, listen to an audio [sample of high quality](#) in comparison with a [sample of substandard quality](#).

More audio samples are available [here](#).



RELATED LINKS

- Why my mobile phone does not sound good in a car
- Testing requirements and methodology
- ITU-T Recommendation P.1100 "Narrow-band hands-free communication in motor vehicles" (01/2015)
- ITU-T Recommendation P.1110 "Wideband hands-free communication in motor vehicles" (01/2015)
- Technical problems observed
- Roundtables
- Roundtable *New* (10 March 2017)
- Test events

Mobile phone	Vendor	Software	Compliant with	ITU test event



OUTCOMES

- Automotive industry urged ITU to publish a “whitelist” of mobile phones which meet the requirements
- Published the "whitelist" which lists the phones successfully passed the tests
- Details of tests are provided to participating companies
- Discussed the testing results between the participants (e.g. automotive industry, mobile phone vendors, etc.) for improving the voice quality
- Anonymized testing results are made available on the events' web pages
- Revised Recommendations ITU-T P.1100 and P.1110



ROUNDTABLE

BACKGROUND

Participants of the 2nd test event requested TSB to organize one day meeting among automotive industry and mobile phone industry which aim is to discuss the current status of this issue and a possible way to address this challenge

REASON

As evidenced by the results of the ITU test events, the connectivity and voice quality of mobile phones wirelessly connected with vehicle hands-free terminals (HFTs) are still key issues for the automotive industry and have not been improved so far

GOALS

to discuss among carmakers and phone vendors possible approaches to address such issues, including the feasibility of establishing a special logo which may appear on a HFT's display in a car when a 'whitelisted' phone connects to it

