REPORT

2nd ITU test event
PERFORMANCE OF MOBILE PHONES AS GATEWAYS TO CAR HANDS-FREE SYSTEMS

INFORMATION ABOUT THE EVENT

Date and venue: 23 – 25 May 2016, Geneva (ITU Headquarters)
Note: initially the test event was scheduled from 23-27 May 2016. According to the agenda of the event all submitted mobile phones have been tested within three days.

Participants: Bosch, Toyota, Jaguar Land Rover Limited, Continental Automotive GmbH

Testing laboratory: the tests were performed by HEAD acoustics
Note: the testing laboratory was selected by ITU according to the results of the call for bids which was announced by ITU in September 2015 (newslog).

Participants at the site: 6 representatives of the participating companies, 1 from TSB

Web sources: http://itu.int/go/hft-test-event-2

OBJECTIVES

This is the second test event which ITU has conducted since 2014. This event as well as the previous event is organized according to the request received from automotive industry to test mobile phones against ITU-T Recommendations which specify the transmission performance requirements for mobile phones connected with Hands-free Telephone system (HFT) using Short-Range Wireless (SRW) interface.

The key goal of this event is to draw attention of mobile phone vendors to some issues, which relate to wireless connectivity of mobile phones and quality of voice in a car, and to request them to make relevant updates in their mobile phones.

There is also intention to raise awareness of the issue among customers of automotive companies through providing them the list of mobile phones which automotive companies may recommend to use in the cars.

GENERAL OVERVIEW

All mobile phones were tested in narrowband and wideband modes against requirements described in chapter 12 of Recommendations ITU-T P.1100/P.1110 respectively.

According to the testing results achieved at the test event there are two types of issues met with unsuccessful mobile phones:

- Devices with slight limit violation (quality issue);
- Severe test fails leading to unacceptable communication quality.

This report as well as the anonymous report will be made publically available in the event's web page. *Note: the detailed testing report of all phones which were under test will be provided to the participants of the test event according to the event's Terms and Conditions.*

All phones which successfully passed the tests will be registered in the "whitelist".

The general description about the issues, common faults that have been determined at all relevant ITU test events and result audio samples are also available at the dedicated web page.

KEY RESULTS OF THE EVENT

1. The general statistics
   - 18 mobile phones (state-of-art devices) from 11 mobile phone vendors
     Note: there were verification tests of three mobile phones with new software (two of them were already whitelisted);
   - 34 tests (18 Narrowband and 16 Wideband)
   - 22 % mobile phones comply with the requirements of the ITU-T P.1100/P.1110
2. The description of key testing results:
   - All devices confirmed the AT+NREC=0 command with "ok";
   - All devices except two disabled echo cancellation and noise reduction, as expected, two devices still had either echo cancellation or noise reduction or both algorithms enabled;
   - (only) 2 state-of-the art devices performed as expected, showed full transparency according to the ITU-P.1100 and P.1110 tests and will be added to the "Whitelist" as recommended phones for use in conjunction with vehicle mounted hands-free devices;
   - The Whitelist entry of 2 phones (already listed after the 1st Event) could be confirmed with new SW versions;
   - The most critical test violations concern active equalizers, partly very strong gains on the Bluetooth link (either attenuation or amplification) or active volume control;
   - The devices failing the requirements, could roughly be separated into two groups:
     I. Devices with slight limit violations, which will in practice lead to noticeable, audible quality impairments of the hands-free system ("quality issue");
     II. Severe test fails, which makes the communication quality unacceptable for the driver and the conversation partner.
   - Devices from category (I) can most likely be easily tuned by the manufactures and can be retested within the framework of "On Demand Tests".
   - Failures of devices from category (II) should be addressed by the certification process, as communication quality is significantly and unacceptably impaired.

CONCLUSION

1. As far as the current situation does not show any progress on fixing the above issues, all mobile phone vendors are encouraged to test their phones against ITU-T P.1100/P.1110 and improve its implementations accordingly. For this purpose, ITU offers on-demand testing which is an additional opportunity for manufacturers and providers to test devices in order to get them "whitelisted". On-demand testing can be coordinated by ITU at any time and can be synchronized to the development cycle

of new phone models. Companies interested in attending on-demand testing are invited to contact TSB by conformity@itu.int.

2. Participants 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 of addressing this challenge.

During the meeting it is proposed to discuss the following possible approaches:

- automotive companies may recommend to their customers to use the whitelisted phones in the cars;
- ITU together with automotive companies may launch a procedure to granting a special logo to mobile phones which successfully passed the ITU tests – the logo may appear on the HFT's display in a car if the connected phone is whitelisted;
- ITU is going to discuss with certification bodies a possibility to establish a certification scheme for testing mobile phones against ITU-T P.1100/P.1110.

This meeting is supposed to be organized back-to-back with the next ITU test event which is preliminary scheduled to take place during the ITU Telecom World http://telecomworld.itu.int/ (14-17 November 2016). The date and time of the meeting will be confirmed and announced on ITU web page.

Companies interested in attending this meeting as well as the next ITU test event are invited to send their request to TSB by email conformity@itu.int.

More details about the next ITU test event and the above mentioned meeting will be made publically available on the ITU web page as soon as it is confirmed.

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