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| INTERNATIONAL TELECOMMUNICATION UNION | | **Focus Group On Car Communication** |
| **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2013-2016 | | FG CarCOM-R-12 |
| **English only**  **Original: English** |
|  | ITU-T Q4/12 | Geneva, 18-19 February 2013 |
| **REPORT** | | |
| **Source:** | Chairman | |
| **Title:** | Report of FG CarCOM meeting held in Geneva, 18-19 February 2013 | |

***Abstract***

*ITU-T FG CarCOM held its 12th and last meeting in Geneva on 18-19 February 2013. There were no incoming or outgoing liaison statements at this meeting. There were 4 new contributions discussed during the meeting. Some related to previously introduced topics such as an appendix delay and buffering and on simulating the car acoustics by means of impulse response measurements and simulations. This topic was already addressed previously in the context of a simulation based test approach for signal enhancement subsystems. An updated draft of FG.VSSR was available for the meeting including missing test procedures and requirements in the signal enhancement section. This section was enhanced further and the new draft as FG.VSSR was distributed after the meeting.*

*The future of the work and different ideas how to proceed were discussed.*

**1 Introduction**

This document is a meeting report from the 12th meeting of ITU-T FG CarCOM.

The meeting documents are available on the ITU-T website and may be downloaded for free at: <http://www.itu.int/md/T13-FG.CARCOM-130218/sum/en>

In this report, the participants are identified by their initials (see the table in Annex 1). Annex 2 provides the list of documents.

**2 Review of Liaison Statements (LS)**

There were no incoming or outgoing LS at this meeting.

**3 New Contributions**

**3.1 “*Text for "Measuring and Applying Impulse Response Traces for Dynamic Test Conditions" for inclusion into FG.VSSR/Annex*” from Volkswagen AG, Technische Universität Braunschweig (C-46)**

This contribution contains proposed text for an annex in FG.VSSR that describes how to measure and simulate impulse responses in a car between the acoustical components. The contribution furthermore includes the simulation of dynamically changing impulse responses.

**3.2 “*Draft 20 of FG.VSSR Annex G "Frame process and Delay"*” from Asahi Kasei Corporation (C-47)**

This contribution provides an updated version of proposed text for an annex to FG.VSSR which is intended to give system designers some guidance on good design and how to avoid large delays due to poor implementation.

**3.3 “*Draft 20 of FG.VSSR*” from Chairman (C-48)**

This contribution contains the 20th draft of FG.VSSR which represents the input version to the current FG CarCom meeting and includes an updated version of the contribution C-45.

The draft further completes the section on signal enhancement subsystems.

**4 Discussions**

The meeting started with a discussion about how it might be possible to proceed with the work on FG.VSSR since it was foreseeable that the work could not be completed. In the FG. VSSR draft some sections are still missing and quite some limits and performance classes need to be discussed and verified by measurements with actual systems. It was recognized that any decision how to proceed will be up to ITU-T SG12. Nevertheless a few ideas were discussed: Either to work together in Q.4 meetings or to eventually create a new focus group with the main goal of validation for the FG.VSSR. The validation of the procedures and limits is highly needed and it is not possible to do such work without the support of the car industry and their suppliers. In the context of this work a test event was discussed where different subsystem realizations could be brought in and tested against FG.VSSR. This also would need the involvement of test system manufacturers providing an implementation of the tests in FG.VSSR. All delegates in the meeting supported this idea and the universities Kiel and Braunschweig volunteered to support such an event by their cars and subsystem realizations. Also Asahi Kasei, QNX, Melco and potentially Volvo may provide equipment for the tests. HEAD acoustics offered to provide the test implementation. The group asked to bring these ideas to ITU-T SG12 for discussion.

Based on the input from C-46 and the discussions during the meeting section 8.3.1 describing the test setup of the signal enhancement subsystem was modified taking better into account the different ways of simulating the acoustical subsystem. The discussions on the proposed annex as described in C-46 let to a modified text which was integrated as ANNEX H.

The proposed modification as found in C-47 led to intense discussions on how to attribute buffer delays and how to describe that an intelligent implementation would allow shorter overall delay than the sum of the subsystem delays would indicate by using the same buffer between two subsystems. A new, clearer description of the different delays in table G.1 reflects these discussions. Furthermore the remaining part of ANNEX G was updated accordingly.

The new tests and limits as proposed in C-48 starting with chapter 8.3.6 were individually discussed up to chapter 8.3.18. Due to the limited time available the discussion of the other sections had to be postponed. The changes and comments so far are found in the updated draft of FG.VSSR available on the FG CarCom website as C-49. It got obvious during the discussions that all performance parameters and limits are based on a best guess approach and verification of these limits for the different performance classes is highly needed.

A telco was held on day 1. During the telco a summary of the achievements was given and the ideas on how to proceed were discussed further.

During the wrap-up discussion at the end of the meeting **HG** once again thanked the delegates, and promised to inform the dlegates on the SG 12 discussions how to proceed. Then the meeting was closed.

**5 Remaining Action items:**

1. **SP** to add “Interpretation” columns to each of the Performance class tables
2. **PN** to work on annex/appendix containing wind buffet test procedure
3. **SP** and **HG** to draft annex which describes vehicle profiling process
4. **SP** to draft annex which describes software test program used for signal enhancement subsystem measurements
5. **HG** to further work on drafting new text for the signal enhancement subsystem
6. **HG** to provide text for an Annex for an AGC design guideline
7. **ALL: To provide input on measurements for verification of the FG.VSSR draft requirements and tests.**

Annex 1

**List of participants**

**Attended meeting in person:**

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| Mats Forsen | **MF** | Forsen Data AB- Sweden |
| Hans W. Gierlich | **HG** | HEAD acoustics GmbH – FG CarCOM Chair- Germany |
| Yoji Ishikawa | **YI** | Asahi Kasai Cooperation - Japan |
| Marc-Andre Jung | **MAJ** | Technische Universität Braunschweig - Germany |
| Yushi Naito | **YN** | Mitsubishi Electric Corporation, SG16 Chair – Japan |
| Scott Pennock | **SP** | Research in Motion- FG CarCOM Vice-Chair- Canada |
| Gerhard Schmidt | **GS** | CAU- Germany |
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**Conference call participants:**

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| Tim Fingscheidt | **TF** | Technische Universität Braunschweig, Germany |

Annex 2

List of documents



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