3GPP TSG SA WG 4 Meeting #108-e TDoc S4-200640

**2nd – 9th April 2020, e-meeting**

**Title: Draft reply LS on Audio ‘Headset’ Requirements in 3GPP TS 26.132**

**Response to: Audio ‘Headset’ Requirements in 3GPP TS 26.132 (10DCR-CC-028 / S4-200537)**

**Release:**

**Work Item:**

**Source:** **3GPP SA4#108-e**

**To: GCF CAG**

**Cc: -**

**Contact person: Peter Isberg**, peter.isberg[at]sony.com

**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

**Attachments:**

# 1 Overall description

3GPP SA4 would like to thank GCF CAG for the liaison statement on headset requirements.

Question 1: “Initially these concerns centred on how conformance testing should be performed either with the Headset supplied with the device or the manufacturers default Headset.”

Answer 1: The requirements for a “Headset UE acoustic interface” in 3GPP TS 26.131 are specified for the complete paths between the acoustic reference points and the POI. The requirements apply to the device under test in combination with a headset, and require the complete paths be available for testing. The situation is the same w.r.t. other modes such as hand-held handsfree, desktop handsfree, etc; If the complete paths, including acoustic interfaces, are not available with the device under test, testing is not possible. 3GPP currently does not specify any requirements for a headset *interface*, e.g. an audio jack/plug interface or other headset interface. Additionally, 3GPP does not have any concept of “default Headset”. A technical report covering some aspects of headset electrical interface testing is available in [1].

Question 2: “…if when testing could results differ depending on a number of factors such as the positioning methods”

Answer 2: Indeed, the results may vary with positioning. This is addressed to some extent by ITU-T P.380 which is referenced from 3GPP TS 26.132.

Question 3: “TS26.132 is not clear on what a ‘Headset’ is (ITU-T P.380 states: Apparatus for telephony comprising essentially a “hands-free” handset which is typically secured to the head of the wearer)”

Answer 3: We thank GCF for raising this concern, we may consider defining the term or reference an existing definition in case it would be beneficial. In the meantime, we can also note that the term is commonly used for a device attached to the user’s head, consisting of at least one earphone and at least one microphone. This would include devices with and without a headband. We can also note that ITU-T P.10/G.100 Amendment 1 (06/19) has another definition, similar to the one in P.380.

Question 4: “Suitability of above test cases for inclusion as conformance tests given the concerns raised as outlined in the above summary.”

Answer 4: When manufacturers do not include a headset in the UE sales item (device under test), conformance testing is not possible.

Question 5: “If the above test cases are performance test cases rather than conformance.”

Answer 5: A Headset UE acoustic interface is 3GPP compliant when it meets all the 3GPP Headset UE minimum performance requirements specified with “shall” status. Such 3GPP compliance is only applicable/possible to test when the full path from acoustic to electric is available with the device under test (see also above answers). TS 26.131/132 Headset UE test cases and performance requirements are only applicable to be used for paired phone/headset combinations.

Obviously, more potential performance issues can be found with a larger test coverage. The relevance of headset presentation is acknowledged by 3GPP and further updates beyond the testing of the Headset UE acoustic interface are under discussion for future 3GPP releases.

[1] TR 26.954 Test plan for speech quality and delay through a headset electrical interface

# 2 Actions

**To GCF CAG**

**ACTION:** None.

# 3 Dates of next TSG SA WG 4 meetings

3GPP SA4#109-e 2020‑05‑25 - 2020‑05‑29 e-meeting (slight modifications to dates may happen)

3GPP SA4#110 2020‑08‑24 - 2020‑08‑28 US (to be confirmed)