Technical Specification Group Services and System Aspects TSGS#09(00)0397Meeting #9, Kapolei, Hawaii, USA, 25-28 September 2000Agenda Item: 7.4.3Tdoc S4-						
3GPP/SMG Meeting S4#12 Bethesda, Maryland, USA, 4-8 September 2000						<b>372/00</b> <sup>3</sup> GPP use the format TP-99xxx or SMG, use the format P-99-xxx
	С	HANGE F	REQU	EST p	lease see embedded help age for instructions on hov	file at the bottom of this to fill in this form correctly.
GSM (AA.BB) or 3G	(AA.BBB) specification	<b>26.132</b>	CR		Current Vers	
For submission t	o: <mark>3GPP SA#</mark>	9 for ap for infor		X	strate non-strate	egic (for SMG egic use only)
Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ttp://ttp.3gpp.org/Information/CR-Form-v2.doc   Proposed change affects: (at least one should be marked with an X) USIM ME UTRAN / Radio Core Network						
Source:	TSG-SA WG4	ŀ			Date:	25 Sept. 2000
Subject: Handheld hands-free Test Setup						
Work item:   3GPP SA4 WI 5 (Acoustic Specification for 3G terminals)						
Category:FA(only one categoryshall be markedCwith an X)	CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 99Editorial modificationRelease 00X					
<u>Reason for</u> <u>change:</u>	During the June, 2000 SA#4 meeting in Versailles, an off-line editing session for TS 26.132 was held. During the editing session, several modifications to TS 26.132 were agreed, but could not be completed for computer reasons. The agreed modifications are attached In section 5.1.3, Figure 1 has been changed, Figure 2 is added. Figures 3, 4, and 5 have been changed.					
Clauses affected: clause 2, clause 5.1.3 (and all sub-clauses under 5.1.3)						
affected:	Other 3G core specifications $\rightarrow$ List of CRs:Other GSM core specifications $\rightarrow$ List of CRs:MS test specifications $\rightarrow$ List of CRs:BSS test specifications $\rightarrow$ List of CRs:O&M specifications $\rightarrow$ List of CRs:					
Other comments:						

## 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.
- [1] 3GPP Technical Specification 3G TS 26.132: "Narrow-band speech telephony terminal acoustic characteristics test methods"
- [2] ITU-T Recommendation B.12 (1988): "Use of the decibel and the neper in telecommunications"
- [3] ITU-T Recommendation G.103 (1998): "Hypothetical reference connections".
- [4] ITU-T Recommendation G.111 (1993): "Loudness ratings (LRs) in an international connection".
- [5] ITU-T Recommendation G.121 (1993): "Loudness ratings (LRs) of national systems".
- [6] ITU-T Recommendation G.122 (1993): "Influence of national systems on stability, talker echo, and listener echo in international connections".
- [7] ITU-T Recommendation G.711 1988): "Pulse code modulation (PCM) of voice frequencies".
- [8] ITU-T Recommendation P.11 (1993): "Effect of transmission impairments".
- [9] ITU-T Recommendation P.38 (1993): "Transmission characteristics of operator telephone systems (OTS)".
- [10] ITU-T Recommendation P.50 (1993): "Artificial voices".
- [11]ETSI 0358 601 (TR101110) Digital Cellular Telecommunications System (Phase<br/>2+) Characterisation test methods and quality assessment for hands-free mobiles.[12]IEC Publication 60651 "Sound Level Meters"

### 5.1.3 Setup for hands-free terminals

#### 5.1.3.1 Vehicle mounted hands-free

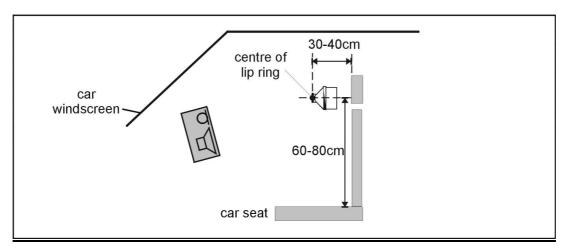
Vehicle mounted hands-free may be measured either in a vehicle or in an anechoic room. For both of these two types of test environments, the setup will depend on whether HATS or a discrete artificial mouth and discrete microphone are used as the acoustic test equipment.

For in-vehicle measurements, if HATS test equipment is used, it should be positioned in the car as per ITU-T Recommendation P. 581. If in-vehicle measurements are made with a discrete microphone and discrete artificial mouth, they should be positioned in the car as per Figure 1 and Figure 2, respectively. The artificial mouth should comply with ITU-T Recommendation P. 51. The microphone should be a pressure-field microphone complying with IEC 60651. If in vehicle measurements are made with a discrete artificial mouth and discrete microphone, they should be positioned in the car as per Figure 1 below, respectively. The artificial mouth should comply with ITU-T Recommendation P. 51. The artificial mouth and discrete microphone, they should be positioned in the car as per Figure 1 below, respectively. The artificial mouth should comply with ITU-T Recommendation P. 51. The artificial mouth should be positioned with the lipring in the position as indicated in Figure 1. The microphone should be a pressure field microphone

complying with IEC 618. The microphone should preferably be fitted with a random incidence corrector. A vehicle simulator may be used instead of an actual car. A standard vehicle simulator is described in ETSI 0358 601 (TR101110) Digital Cellular Telecommunications System (Phase 2+) Charactersation test methods and quality assessment for hands-free mobiles. The hands-free equipment is mounted in the car as specified by the manufacturer.

car windscreen

# Figure 1: Test Configuration for Vehicle mounted hands-free, receiving characteristics, with discrete measurement microphone.



### Figure 2: Test Configuration for Vehicle mounted hands-free, sending characteristics, with discrete P. 51 artificial mouth.

Specification testing of vehicle-mounted hands-free equipment in an anechoic room is for further study.

### 5.1.3.2 Desktop operated hands-free

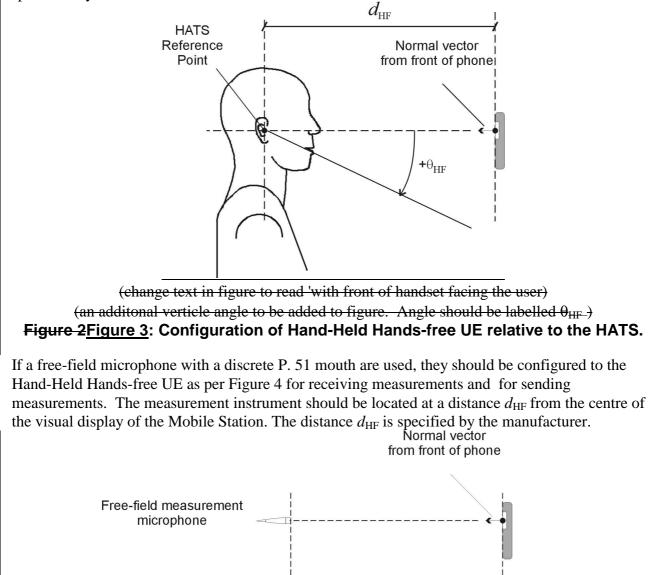
For HATS test equipment, definition of hands-free terminals and setup for desktop hands-free terminals can be found in ITU-T Recommendation P.581. Measurement setup using a free field microphone and a discrete P.51 artificial mouth for desktop hands-free terminals can be found in ITU-T Recommendation P.340.

### 5.1.3.3 Handheld hands-free

Either HATS or a free-field microphone with a discrete P. 51 artificial mouth may be used to measure Hand-Held Hands-free type UE.

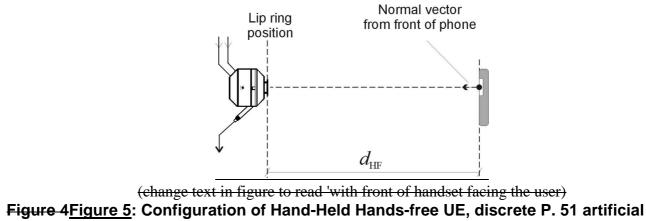
If HATS measurement equipment is used, it should be configured to the Hand-Held Hands-free UE according to Figure 2Figure 3. The HATS should be positioned so that the HATS Reference Point

is at a distance  $d_{\rm HF}$  from the centre point of the visual display of the Mobile Station. The distance  $d_{\rm HF}$  is specified by the manufacturer. A vertical angle  $\theta_{\rm HF}$  may be <u>specified by the manufacturer</u>. specified my be manufacturer.



(change text in figure to read 'with front of handset facing the user) Figure 4: Configuration of Hand-Held Hands-free UE, free-field microphone for receiving measurements.

 $d_{\rm HF}$ 



mouth for sending measurements.