

**Title:** Proposal for a change of tolerance masks in TS 26.131  
**Source:** HEAD acoustics  
**Document for:** Discussion  
**Agenda Item:** 12.6

## 1. Introduction

During various discussions in ITU-T and ETSI the use of artificial ears type 3.2, 3.3 and 3.4 was discussed. One result of this discussion was a change of the receiving tolerance mask in order to take into account the low frequency roll off at lower frequencies when using artificial ears providing an acoustical leak and the different frequency response at higher frequencies due to the different ear impedance when using ERP devices (types 3.2, 3.3 and 3.4). For this purpose a tolerance mask was developed which is wider than the traditional tolerance scheme in GSM 11.10 but more realistic since the acoustical leak is taken into account. This tolerance mask can be found already in ETSI TBR 10 and TBR 38.

## 2. Proposal

It is proposed to replace the current tolerance mask in TS 26.131 in section 5.3.2 by the following:

**Table 2: Receiving sensitivity/frequency mask**

Frequency (Hz)	Upper limit	Lower limit
100	-10	-
200	2	-
300		-9
1 000	(see note 2)	-7
3 400		-12
4 000	2	-

NOTE 1: All sensitivity values are expressed in dB on an arbitrary scale.

NOTE 2: The limit at intermediate frequencies lies on a straight line drawn between the given values on a log (frequency) - linear (dB) scale.

The proposed frequency tolerance mask is applicable for all types of artificial ears (type 1, type 3.2, type 3.3 and type 3.4).