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New Standard for the Measurement of Speech Amplification in Modern Hearing Instruments

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The European Hearing Instrument Manufacturers Association (EHIMA) is preparing a new method for the measurement of speech amplification in modern hearing instruments. Current standards for the measurement of amplification are based on the use of traditional test signals like pure tones, noise, or modulated noise which are not very representative for the amplification of normal speech. Also most hearing instruments require the use of a special test mode in order to bypass the special signal processing for speech signals or noise suppression. The new measurement method will be based on the typical user settings of the hearing instrument. For that the hearing instrument will be programmed using the manufacturer's standard (automatic) fitting procedure. The fitting will be based on an audiogram selected from a new set of standard audiograms and will be typical for the application range of the specific hearing instrument. For making reproducible measurements a new standard speech-like test-signal has been developed. This speech-like test signal will be unintelligible, but representative for the characteristics of most frequent spoken languages. It will be outlined how this signal has been constructed. The measurement method will be based on a third octave analysis of input and output signal for short speech segments. By that it is possible to obtain the dynamic speech amplification for the internal structure of the speech signal. The results of a typical measurement will be shown and discussed. The new procedure is under submission to the IEC and ANSI standardization committees. (Supported by EHIMA).

