

Standardization of hearing support function

at SS8 and AGS
on 20, 22 April, 2015
In Milano, CEI
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History

- At Seattle AGS meeting, hearing support function was proposed as a health issue under TC 100. AGS recommendation merged it with SS8.
- At Tokyo AGS meeting, measurement method for hearing support function is presented. Also other activities were awarded.
 - TC 29 is for electroacoustics that studies hearing aids.
 - CEA and FDA also study this kind of things.
- The scope under TC 100 for hearing support was discussed.

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Scopes

- TC 29 Electroacoustics

- Scope

To prepare International Standards related to instruments and methods of measurement in the field of electroacoustics.

Excluded from the scope are:

- a) standards for sound and video recording as dealt with by TC 100;
- b) standards for equipment in the field of audio and audio-visual engineering as dealt with by TC 100;
- c) standards and terminology for ultrasonic techniques dealt with by TC 87.

NOTE.- Close co-operation shall, however, be maintained with TC 87 in the fields of common interest.

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- TC 100 Audio, video and multimedia systems and equipment

- Scope

To prepare international publications in the field of audio, video and multimedia systems and equipment.

These publications mainly include specification of the performance, methods of measurement for consumer and professional equipment and their application in systems and its interoperability with other systems or equipment.

Note: Multimedia is the integration of any form of audio, video, graphics, data and telecommunication and integration includes the production, storage, processing, transmission, display and reproduction of such information.

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- With TC 29 member Mr. John Woodgate, the scope regarding assistive listening is studied.
 - TC100 should study the multimedia products that have assistive listening as a feature, while TC29 studies assistive listening devices that have no other function ('dedicated assistive listening devices').
 - John-san will consult TC29 officers and WG22 members about TC100 activity. (He had already contacted.)
 - TC100 liaises with TC29.
 - CEA also has a liaison with TC29 and TC100.

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Hearing aids and assistive listening/hearing support functionality

- Hearing aids
 - IEC TC 29
 - Pharmaceutical law
- Hearing support functionality
 - IEC TC 100 equipment and systems provide this functionality.
 - Not a device but functionality.
 - Listening and hearing support functionality to experience AV&IT multimedia.



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Problems to be solved

- Many of the current AV&IT equipment and systems that have a hearing support function, but they do not provide sufficient quality of listening.
 - Some of hearing support equipment's frequency response tend to similar to hearing aid, it means not for enjoying music.
 - Sometimes audio feedback occurs.
 - Dynamic range control, compression and loudness is not appropriate to hear natural sound.
 - Anyway, sound is not natural.
 - Some portable music players and headphones can provide a good quality of music experience for ordinary user, but not for elder or having small hearing difficulty people.
 - User cannot understand what ability it has because there is no evaluation or measurement method for this kind of functionality.

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Solution

- There are various kind of equipment and systems of this hearing support system.
 - Standard for each equipment and systems can be a solution for the problems.
However, this needs many dedicated standard.
- One general reason of the problems is that there is no measurement method for hearing support function.
- This method will makes it clear that the ability of the hearing support equipment and systems.

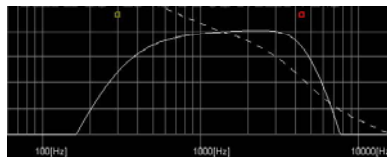
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Outline of NP on hearing support/ assistive listening functionality

- International Standard
- Title
 - Measurement method for hearing support/assistive listening functionality
- Object
 - The health support portable or wearable equipment or systems that have input function of audio signal input or microphone, and output function of earphone or loudspeaker, for assist audio and music experience of user.
- Scope
 - Specifies measurement method for assistive listening functionality

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- Functionalities
 - Provide frequency response dedicated for impaired hearing ability. It can be divided to sub bands.



- This frequency response will be varied depending on input level nonlinearly.
- With dynamic range control
- With loudness control
- etc..

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- Measurement objects
 - Frequency response and other related characteristics
 - Dynamic range control function and characteristics
 - Compression function and characteristics
 - Loudness control function and characteristics
 - Audio feedback margin
 - Time domain characteristics (in stereophonic)

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- Addition in annex
 - Indication of characteristics

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PG for SS8

- In JEITA, the PG for SS8 was established. PG will study wearable system and equipment.
- Also the PG includes persons who come from the manufactures that make such hearing support equipment , they will discuss on this issue and make NP.

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