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NEED FOR A RENDERER IN NEXT GENERATION AUDIO SYSTEMS

EBU POSITION

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Need for a Renderer in Next Generation Audio Systems

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Keywords: Audio, Next Generation, Object-Based, Renderer, Metadata, Immersive, Personalization.

The EBU, considering that:

1. Next generation audio (NGA) systems will be object-based rather than purely channel-based*.
2. Audio objects will be entirely specified by technical and descriptive metadata, which effectively decouples the content production and replay environments.
3. Next Generation Audio offers considerable advantages for content producers and for the audience, facilitating:
    - Immersive audio experiences for packaged media, VR and headphone use,
    - Access services, personalization, interactivity and adaptation to different platforms.
4. A critically important element of a NGA system is a renderer that makes sense of the metadata and turns streams of audio objects into audio for use in the reproduction environment.
5. A renderer needs to be used at all points where one wants to listen to the audio content (production, monitoring, quality control, archive, consumer devices).

And that:

6. The ITU has standardized a file format for object-based, scene-based and channel-based audio and is developing a baseline renderer for production and quality control.
7. Content providers need predictable quality and behaviour at the consumer's end, which is best served by the use of open, interoperable and standardized systems in an end-to-end chain.

Recommends that:

The renderer and codec, including bit stream and associated technical and descriptive metadata be specified and standardized as part of Next Generation Audio systems based on audio-objects.

EBU perceived risks of not specifying a renderer as part of a NGA system:

The support of content providers for NGA may be lost because the practical and cost implications will outweigh the benefits of using this new technology.

Content providers will be bound to specific vendors and both the archive and contemporary productions will rely on formats that cannot be reproduced without vendor-specific technology.

Programme exchange will be severely compromised if broadcasters use different systems; exchange will rely on the willingness of the vendors to allow and build interfaces between systems.

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* Report ITU-R BS.2266 describes object-based, scene-based and channel based options for NGA systems