**3GPP SA4 Rel-18 workshop** **S4WS-210004**

**Electronic Meeting, August 17, 2021**

Title: Views on 5G Multimedia Codecs, Systems and Services Enhancements for Release 18 and Beyond

Source: Dolby Laboratories Inc.

Document for: Discussion

Agenda Item: 6

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# 5G timeline

- Release timing

Release 15 | 5G Phase 1 | Release 16 | 5G Phase 2 | Release 17 | Release 18

- Phases for the normative 5G work:
  - Phase 1 (Rel-15) addresses the more urgent subset for commercial deployments – eMBB
  - Phase 2 (Rel-16) Completes the 3GPP IMT 2020 submission (ITU-R) and addresses all identified use cases & requirements: mIoT, URLLC, New Verticals, Capacity Enhancements, Operational/Deployment Efficiency
  - Release 17 further 5G improvements
    - SA4: Headset interface, Non-traditional earpieces, Immersive teleconferencing, 8K VR and TV profiles, Edge, Multicast/Broadcast, Event exposure extensions to 5GMS…
  - Release 18 is 5G-Advanced and SA4 should identify key features to be standardized in that context


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# Overall View of Functionality Proposed to be Considered for Rel-18 - 1

Video: following FS_5GVideo study, 3GPP needs to conduct some work on next generation video coding and tools that would be appropriate for 5G in all relevant scenarios of media delivery and communication. Live and immersive 5G experiences can be expected to benefit from UHD/4K/8K, HDR, and frame rates of 50/60 fps and greater. Dolby will contribute to the testing aspects of VVC and certain scenarios of media and entertainment use cases.

Audio/Speech: IVAS codec and (closely related) ATIAS are a priority for 5G immersive communication services. The work should complete significantly before the Rel-18 functional freeze. Necessary MTSI extensions will be required to enable IVAS codec in all 5G-Advanced communication scenarios.

XR (VR/MR/AR and Cloud gaming): Rel-18 should support immersive media delivery, streaming and communication. Rel-16 5GMS and Rel-17 EDGE Compute should be extended to support XR media delivery and split/distributed computing as well as cloud gaming.

A/V Production: Rel-17 Study NPN4AVPROD may drive Rel-18 normative work.


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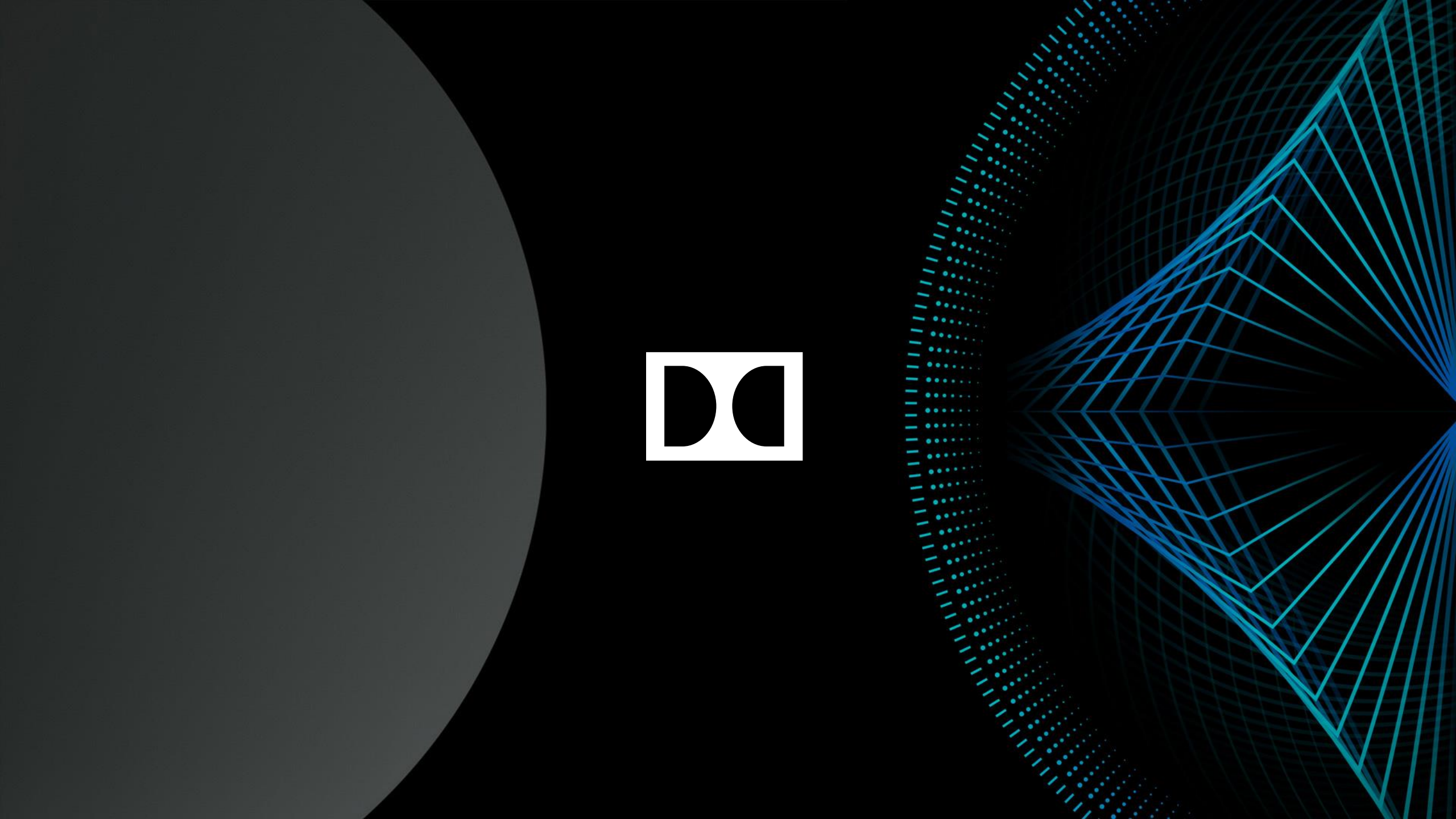
# Overall View of Functionality Proposed to be Considered for Rel-18 - 2

SA1 Media related requirements to be considered in Rel-18:

- TR 22.847 “Study on supporting tactile and multi-modality communication services”: e.g. Immersive VR games with haptics.
- TR 22.873 “Study on evolution of the IP Multimedia Subsystem (IMS) multimedia telephony service” e.g. Conference call with AR holography and AR Call.
- TR 22.874 “Study on traffic characteristics and performance requirements for AI/ML model transfer” e.g. AI-based Video streaming upgrade.
- TR 22.859 “Study on Personal Internet of Things (PIoT) networks” e.g. Media share within PINs (Personal IoT Networks)

These items could justify conducting related studies in SA4: haptics, AR and holography, AI-based multimedia, media handling within PINs.

We look forward to further discussions with interested parties, to develop more concrete details leading up to the SA4#116 in November 2021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