MPEG Standardization Roadmap

October 2017 Version
Why a Standardisation Roadmap?

- MPEG has created, and is still producing, media standards that enable **huge markets to flourish**
- MPEG works on **requirements from industry**
- Many industries represented in MPEG, but not all of MPEG’s customers can or need to participate in the process
- MPEG wants to inform its customers about its **long-term plans** (~ 5 years out)
- ... and **collect feedback and requirements** from these customers
- ... including in this session
What is in the Roadmap

- Our roadmap is a short document.
- It briefly outlines MPEG’s most important standards.
What is in the Roadmap

• Our roadmap is a short document.
• It briefly outlines MPEG’s most important standards
• It then gives an overview of MPEG’s activities
MPEG’s Areas of Activity

- MPEG-1,2,4,H,I
- MPEG-7
- MPEG-21
- MPEG-A
- MPEG-B,C,D,DASH
- MPEG-E,M
- MPEG-U,V

- Compression of video, audio and 3DG
- Technologies for content e-commerce
- Description of video, audio and multimedia for content search
- Systems, video, audio and transport
- Multimedia Platform Technologies
- Multimedia Application Formats (combinations of content formats)
- Device and application interfaces
What is in the Roadmap

• Our roadmap is a short document.
• It briefly outlines MPEG’s most important standards
• ... it then gives an overview of MPEG’s activities
• ... and then an overview of all MPEG’s standards
All acronyms are explained in the companion document to this presentation
Significant Developments Shape MPEG’s Roadmap

• The relentless increase of IP-distributed and Mobile media
• Higher quality
• More immersive media (UHD, VR, AR)
• The Internet of Media Things & Wearables
• Cloud-based media processing, storage and delivery
Coding

- Internet Video Coding
- Descriptors for Video Analysis (CDVA)
- Network Media Processing Interfaces
- AR/VR Audio extension
- Point Cloud Compression
- New, Immersive Video Codec
- Light Field Coding
- HDR TR
- HDR TR 2
- Cross-platform Media Distribution
- Hybrid Natural Synthetic Scenes
- Media Orchestration
- IoMT
- OMAF
- OMAF v2
- VR360, on-demand and live (3 DoF)
Coding

- Internet Video Coding
- Descriptors for Video Analysis (CDVA)
- Network Media Processing Interfaces
- AR/VR Audio extension
- Audio Wave Field Coding
- Point Cloud Compression
- Genome Compression
- New, Immersive Video Codec
- Light Field Coding
- Combining Natural and Synthetic content

Systems and Tools

- Network Media Processing Interfaces
- Media Orchestration
- IoMT
- HDR TR
- HDR TR 2
- Hybrid Natural Synthetic Scenes
- Cross-platform Media Distribution
- VR360, on-demand and live (3 DoF)
- OMAF
- OMAF v2
- Immersive Media with 6 Degrees of Freedom
New MPEG project: ISO/IEC 23090

Coded Representation of Immersive Media

8 parts currently envisaged:

1. Architectures
2. Omnidirectional Media AF
3. New & Immersive Video Coding
4. New & Immersive Audio Coding
5. Point Cloud Coding
6. Metadata for Immersive Services and Applications
7. Metrics for Immersive Services and Applications
8. Network-Based Media Processing
## New & Immersive Video Codec – Timeline (MPEG-I pt. 3)

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Questions to MPEG’s Customers

• Which **needs** do you see for **media standardisation**, between now and years out?
• What MPEG standardisation **roadmap** would best meet your needs?
• To accommodate your use cases, what should **MPEG's priorities** be for the delivery of specific standards? For example, do you urgently need something that may enable basic functionality now, or can you wait for a more optimal solution to be released later?