

MPEG Standardization Roadmap

October 2017 Version



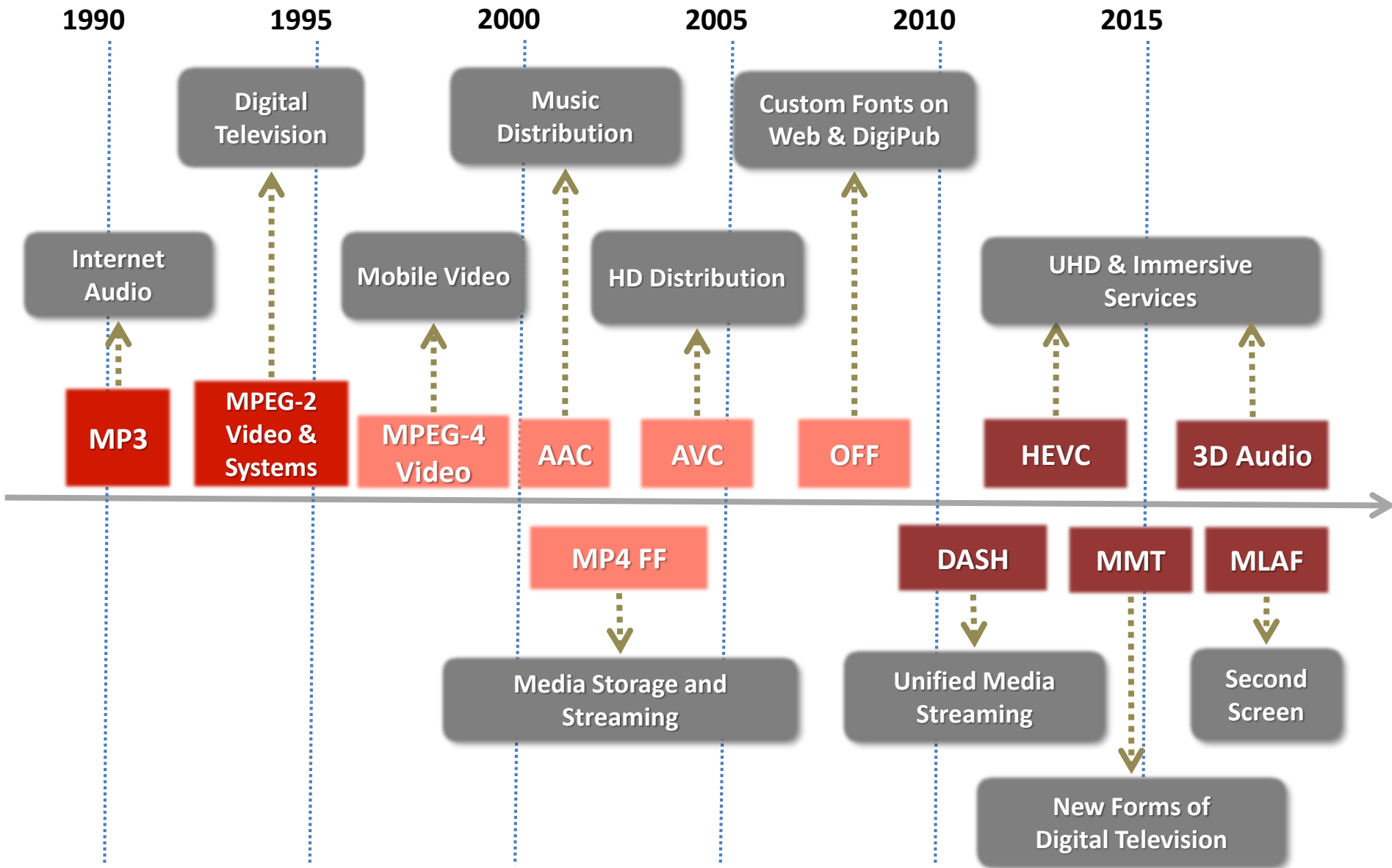
Why a Standardisation Roadmap?

- 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

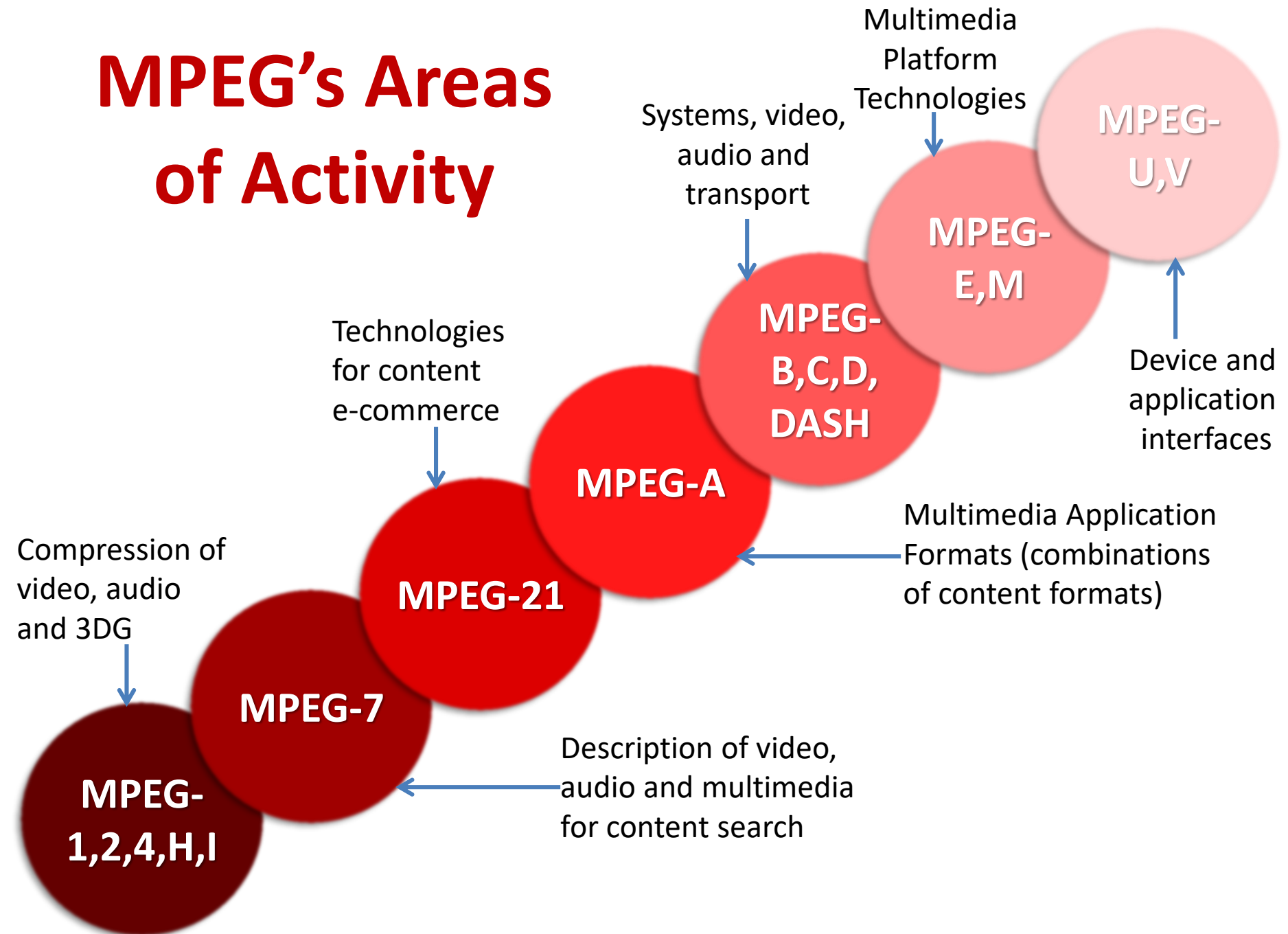
MPEG Standards



What is in the Roadmap

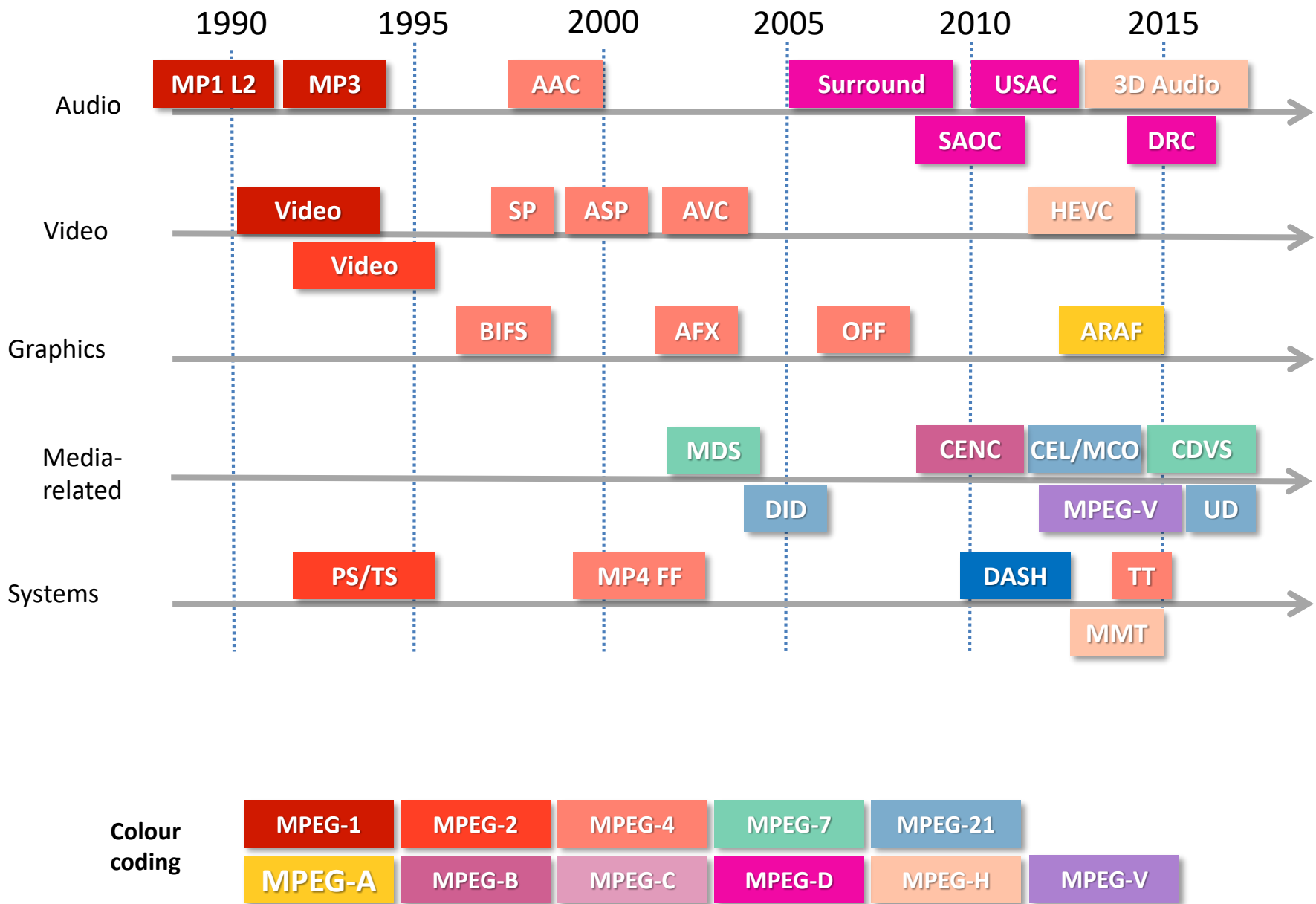
- Our roadmap is a short document.
- It briefly outlines MPEG's most important standards
- It then gives an overview of MPEG's activities

MPEG's Areas of Activity



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

Jan 2017

2018

2019

2020

2021

2022

Coding

Genome Compression

Descriptors for Video Analysis (CDVA)

Network Media Processing Interfaces

AR/VR Audio extension

Audio Wave Field Coding

Internet Video Coding

Point Cloud Compression

New, Immersive Video Codec

HDR TR

HDR TR 2

Light Field Coding

OMAF

OMAF v2

CMAF

Hybrid Natural Synthetic Scenes

IoMT

Media Orchestration

Systems and Tools

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VR360, on-demand
and live (3 DoF)

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Cross-platform
Media Distribution

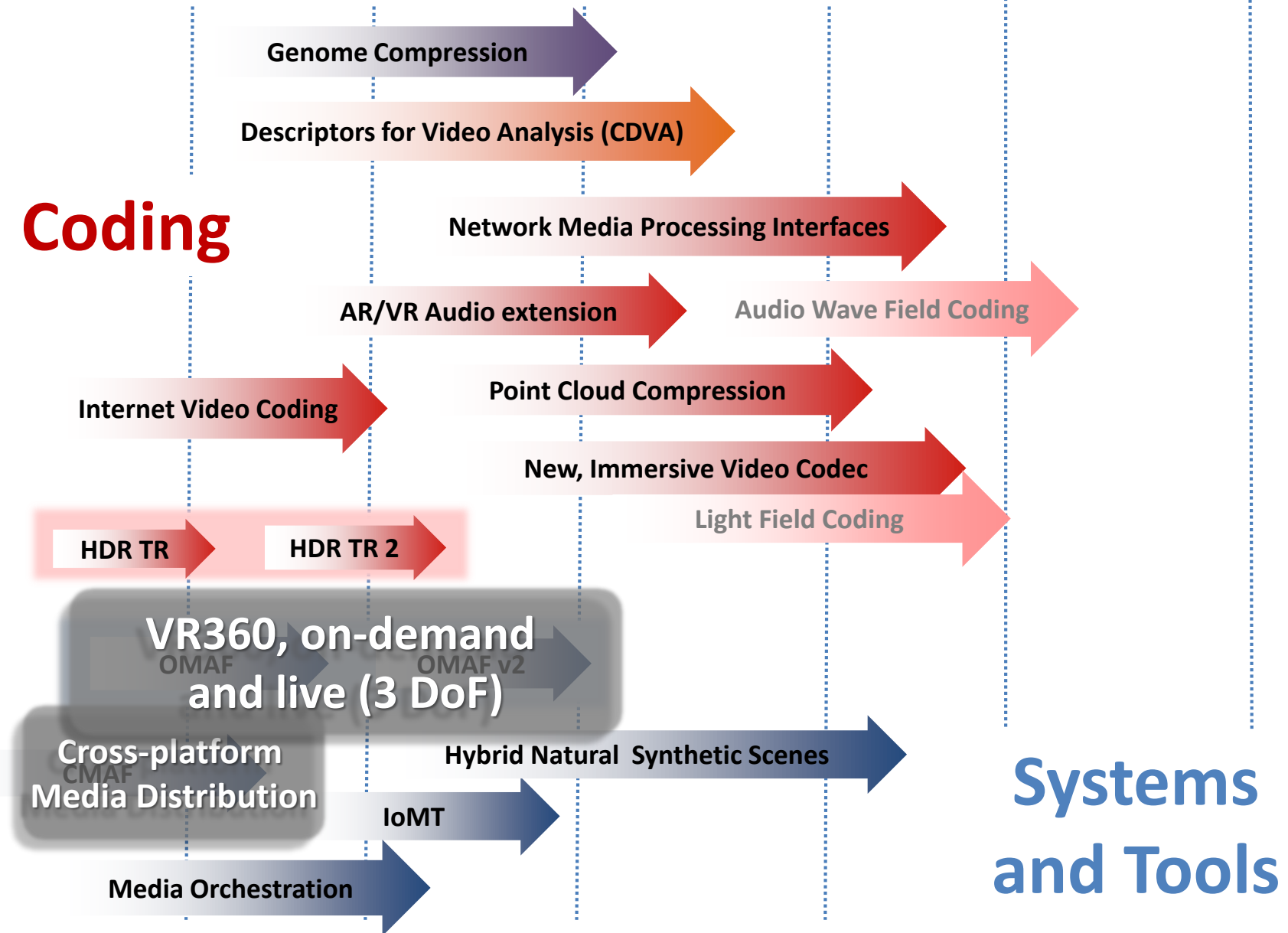
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**Immersive Media
with 6 Degrees of Freedom**

Point Cloud Compression

New, Immersive Video Codec

HDR TR

HDR TR 2

**Combining Natural
and Synthetic content**

Light Field Coding

**VR360, on-demand
and live (3 DoF)**

OMAF

OMAF v2

**Cross-platform
Media Distribution**

CMAF

Hybrid Natural Synthetic Scenes

Systems and Tools

IoMT

Media Orchestration

MPEG-I

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)

Step	Year	Month
Collection of test material	2017	Jan
Preliminary CfE	2017	Jan
Final CfE	2017	Apr
Assessment of CfE responses	2017	Jul
Preliminary CfP	2017	Jul
Final CfP	2017	Oct
Bitstream submission	2018	Feb
Subjective tests	2018	Apr
Delivery of standard	2020	Oct

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?