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Call for VR360 Content

Source: VR Industry Forum
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1 Introduction

The VR Industry Forum (VRIF) is a cross-industry Forum that has as its purpose "to further the widespread availability of high quality audiovisual VR experiences, for the benefit of consumers". VRIF builds on standards created by formal Standards Development Organizations, such as MPEG, and seeks to use these standards to enable the interoperable deployment of high-quality VR360 services.

VRIF's initial focus is on Three Degrees-of-Freedom (3-DoF) video and audio. VRIF is now calling for content, to build a content library with material for the purpose of providing public test vectors that may be used by content providers, service providers as reference, and by manufacturers of applications and devices to test implementations against the VRIF guidelines. VRIF's hope is to build a library of content that can be widely used by Industry to test and promote VR services.

VRIF prefers to receive VR360 content accompanied with 3D spatial audio. If you are willing to contribute other forms of content that may be relevant to VRIF, please contact us.

2 License

VRIF calls for content with as few restrictions as possible. It must be possible to use the content for testing purposes within VRIF, and for demonstration at private and public events by VRIF members. It is also highly desirable for the content to be available for general research, development, and for demonstration of audio/visual or image signal processing technology. It must be possible to extract single frame images from the content for inclusion in technical publications.

VRIF prefers content that is licensed under a Creative Commons License as documented here:
https://creativecommons.org/share-your-work/licensing-types-examples/

If you are considering making content available but would like to impose a few specific restrictions, then VRIF is willing to consider such restrictions as long as these are consistent with VRIF's intended use.

3 Use Cases

VRIF develops use cases that drive our Guidelines. The relevant aspects of the current use case are provided in this Section 3. The derived requirements for the test material are provided in Section 4.

A service provider offers a library of 360 A/V content. The library is a mixture of content formats from user generated content, professionally generated studio content, VR documentaries, promotional videos, as well as highlights of sports events. The content enables changing the field-of-view based on user interaction.

The service provider wants to create a portal to distribute the content to a multitude of devices that support 360-A/V and VR processing and rendering. The service provider wants to target two types of applications:

- Primarily, viewing in an HMD with head motion tracking.
- Additionally, the content provider may enable viewing on a "flat screen" with the user selecting the field-of-view through manual interaction (e.g. mouse input or swiping).

The service provider expects different types of consumption and rendering devices with different capabilities in terms of decoding and rendering. The service provider has access to the original footage of the content and is permitted to encode and transcode to appropriate distribution formats.

The footage includes different types of 360 A/V VR content, such as:

- For video:
    - One of the three
        - Pre-stitched monoscopic video, i.e. a (360 and possibly less than 360) spherical video without depth perception, with Equirectangular Projection (ERP).
        - Pre-stitched stereoscopic video, i.e., a spherical video using a separate input for each eye, typically with ERP.
        - Fish-eye content, typically user-generated
    - Original content
        - original content, either in an original uncompressed domain or in a high-quality mezzanine format.
        - Basic VR content: 4k x 2k in equirectangular projection (ERP), 8 or 10bit, BT.709, 30fps and up.

        - High-quality content: 8k x 4k (ERP), 10 bit, possibly advanced transfer characteristics and color transforms, sufficiently high frame rates, etc.
    - Sufficient metadata is provided to appropriately describe the A/V content

- For audio
    - Spatial audio content for immersive experiences:
        - Channel-based audio
        - Object-based audio
        - Scene-based audio
        - Or a combination of the above
    - Sufficient metadata for encoding, decoding and rendering the spatial audio scene permitting dynamic interaction with the content. This may include additional metadata that is also used in regular TV applications, such as for loudness management.
    - Diegetic and non-diegetic audio content.

4 Test Material Requirements

We are seeking content with the following characteristics:

- Sequences have zero or few issues in the original form (stitching, noise)
- Content:
    - Basic Video VR content: approximately 4k x 2k (ERP, 8 or 10bit, BT.709, as low as 25/30fps, but also 50/60 fps
    - High-quality Video Content: approximately 6k x 3k, 8k x 4k and up (ERP), 10 bit, possibly advanced transfer characteristics and colour transforms, possibly even higher frame rates, etc.
    - Monoscopic or Stereoscopic
    - Audio along with this:
        - preferably 3D spatial audio, timely synced and spatially aligned with the video provided in the following formats:
            - Channel-based audio
            - Object-based audio
            - Scene-based audio
            - Or a combination of the above
        - Sufficient metadata for encoding, decoding and rendering the spatial audio scene permitting dynamic interaction with the content. The metadata may include additional metadata that is also used in regular TV applications, such as for loudness management.
        - Diegetic and non-diegetic audio content.
- Duration:
    - between 30 seconds and 2 minutes.

- Type of content:
  - Sports
  - Live events (e.g. music / concerts
  - Outdoor scenery (nature or urban)
  - professionally produced indoor
- Artistic characteristics:
  - natural and synthetically generated (but still coded as video)
  - moving or static ROI
  - preference for fixed camera; optionally moving camera
- Packaging
  - Video: Raw or lightly compressed mezzanine format (to be worked out)
  - Audio: uncompressed produced Audio assets, or lightly compressed

If you have content that does not meet all requirements, please get in touch as we are interested in understanding if it would still be useful for our purposes.

5 Credits

VRIF is happy to acknowledge sponsors and contributors of the content by providing credits, in one or more of the following ways:

- on the VRIF website,
- along with the hosting (e.g., the download page)
- modestly embedded in the content itself, in a way that doesn't detract from that content.

6 Contacts

For questions or to respond to this call, please contact:

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