A TOOLSET FOR THE PRODUCTION AND DISTRIBUTION OF IMMERSIVE CONTENT ACROSS DEVICES

OBJECTIVES

OBJ 1
Create a new cinematographic language where the specificities of immersive displays are taken into account, and which conciliates immersive paradigms with traditional storytelling techniques.

OBJ 2
Extend the production pipeline to create omnidirectional content for a multi-platform environment.

OBJ 3
Re-design the distribution chain to address the specific technical challenges that omnidirectional content imposes in terms of capture, compression, distribution, reception, and rendering.

OBJ 4
Maximize the quality of the end-user experience, across devices, and within the technical limitations of existing production structures, distribution facilities and reception devices to create an optimal immersive experience.

OBJ 5
Maximize the impact of the ImmersiaTV solutions within the ecosystem of content creators, broadcasters, and consumers.

PROJECT WORKFLOW

1. Capture
   - Capture and stitching: New models of omnidirectional camera shooting multiple 4k videos that are processed and stitched together by advanced VahanaVR software.

2. Production
   - Off-line and live: Set of tools for off-line and live production of omnidirectional video content, combined with traditional 2D video portals and new features such as transitions and effects in 360° media content.

3. Encoding
   - New lightweight and low-latency video codec with Regions of Interest and QoE evaluation enables efficient encoding basing on real-time user’s viewport feedback.

4. Distribution
   - Adaptive MPEG-DASH streaming of omnidirectional video with multi-platform content synchronization (DVB-CSS) and metadata defining interactive video portals.

5. Display
   - Multi-platform player based on Unity3D engine enables synchronized displaying of omnidirectional content with additional video portals on HMD, phones, tablets and TV sets.

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BUDGET 3.8M€

To achieve these objectives, ImmersiaTV has assembled a unique combination of content creators (Lightbox), broadcasters (VRT), tooling specialists (Video-Stitch, Cinegy), and research centers covering the whole production chain, from capture (iMinds), encoding (EPFL, iMinds) and delivery (i2CAT, PSNC).

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