



World premiere! 4EVER-2 is proud to deliver an Ultra HD-TV phase 2 live production, with UHD-TV « HFR » 100 frames per second and Dolby AC-4 audio

Once again, the 4EVER-2 team innovates in Ultra HD-TV with an end-to-end live production in HFR (High Frame Rate, 100 frames per second) and Dolby AC-4 audio during the ice hockey match France-Switzerland at Cergy-Pontoise, on Sunday, April 9 2017.

The **4EVER-2** project has conducted a trial of a live High Frame Rate (HFR) production on an ice hockey match preceding the world championship that takes place in France and Germany. France-Switzerland was organised by the French ice hockey federation (FFHG). To broadcast this game, 4EVER-2 has carried out a real time production with multiple cameras and a satellite transmission combining **HD-HFR and Dolby® AC-4 Audio**; a world premiere in Ultra HD-TV.

HFR enhances the rendering of movements by raising the temporal resolution. The number of frames per second is doubled on the whole transmission chain, from the camera to the consumer screen.

Current High Definition TV shows 50 interlaced frames, as the equivalent of 25 full resolution frames per second. During this live trial, the ice hockey match is captured, encoded, broadcast, decoded and displayed at 100 full frames per second, allowing a **very high fidelity in the rendering of movements on screen**, very close to the spectators' feeling when they physically watch the game at the arena.

With Dolby **AC-4's** ability to carry channel and object-based programming, broadcasters can offer viewers a personalized audio experience such as a choice of commentary and different languages when available. For this trial, content was encoded in 5.1 and broadcast using the Dolby AC-4 audio codec.

This was a fruitful collaboration between the partners of 4EVER-2, which cover the whole audio-visual chain: the technical teams of France Televisions and Orange Labs (HFR configuration and immersive audio), AMP Visual TV (OBvan and production crew), ATEME (HEVC encoder), TeamCast (DVB-S2 modulator) and Globecast (satellite transmission).

For a real enhancement of the audio-visual Quality of Experience, for this trial the 4EVER-2 consortium collaborated with the Dolby Laboratories' European team, and with LG for a successful video and audio reception on the LG-E7 TV model thanks to a prototype HFR software.

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4EVER-2, a collaborative project

The 4EVER-2 consortium (www.4ever-2.com) is a collaborative project supported by the French government and local authorities, gathering nine French academic and industrial partners: Orange, AMP Visual TV, ATEME, France Televisions, Globecast, Highlands Technologies Solutions, INSA/IETR, TeamCast and Telecom ParisTech. 4EVER-2 has established collaborations with public research centres as well as international industries and many manufacturers of consumer TV and equipment for content production.

