VSF Adds Low Latency, Higher Resolutions and Broader Color Space to TR-01, a Technical Recommendation for "Transport of JPEG 2000 Broadcast Profile video in MPEG-2 TS over IP"

- Improves Interoperability for JPEG 2000 Systems -

The **Video Services Forum [VSF]** announced today, June 5, 2018 the availability of a Technical Recommendation TR-01:2018 entitled "Transport of JPEG 2000 Broadcast Profile video in MPEG-2 TS over IP".   This Technical Recommendation adds the following significant capabilities compared to the previous version, TR-01:2013:

1.   Ultra-low Latency: Enables Ultra-Low Latency (ULL) encoding of professional video using horizontal, independent JPEG 2000 stripes. End-to-end latencies of less than one video frame are possible.

2.   Higher video resolutions, frame rates and bit depths: Beyond supporting up to 120fps frame rates and 12 bit depths it also provides additional implementation options for 4K and higher resolutions by adding "block mode".

3.   Broader Color Space and Mastering Display Metadata: Expands color space to include color primaries, transfer characteristics and matrix coefficients, in accordance with the values defined in Rec. ITU-T H.273. Adds mastering display metadata as described in SMPTE ST 2086:2018

4.   Interoperability: Addresses issues with two incompatible definitions of the JPEG 2000 elementary stream header; one in Annex M of Rec. ITU-T T.800 | ISO/IEC 15444-1, and the other in Annex S of Rec. ITU-T H.222.0 | ISO/IEC 13818-1.

The Technical Recommendation, which uses existing standards to define interoperable profiles for real time streaming of a broadcast quality JPEG 2000 codestream, wrapped in MPEG2TS, with audio and ancillary data and encapsulated in IP with FEC, is available to VSF members and non-members in PDF format at no charge here: http://videoservicesforum.org/technical_recommendations.shtml

The VSF J2K-ULL Activity Group, which authored TR-01:2018, plans to hold Interoperability workshop events in late 2018 in conjunction with the VSF Interop Activity Group. If you would like to participate in the Interop sessions please contact Bob Ruhl, VSF Operations Manager (bob.ruhl1@verizon.net).

"This Technical Recommendation is the result of standards-based work by active members of the Video Services Forum, and reflects our organization's ongoing commitment to openness and innovation for all

types of video transport," said VSF President Richard Friedel, EVP, Technology & Broadcast Strategy, 21st Century Fox.

"There was significant input from our end users requesting the development of an open, interoperable Technical Recommendation for J2K transport with sub-frame latency". "We also were asked to deliver interoperable transport of better images as the industry moves to UHD". "The technical committee has done an excellent job delivering a solution to these business-driven requests," said Brad Gilmer, Executive Director, Video Services Forum.

If you would like to participate in the J2K Technical Recommendation Group or the VSF please contact Bob Ruhl (bob.ruhl1@verizon.net).

About The Video Services Forum

Founded in 1997, the Video Services Forum (VSF) is an international association composed of service providers, users and manufacturers dedicated to interoperability, quality metrics and education for video networking technologies. The organization's activities include providing forums to identify issues involving the development, engineering, installation, testing and maintenance of video networking technologies; exchanging non-proprietary information to promote the development of video networking technology and to foster the resolution of issues common to the video services industry; promoting interoperability by contributing to and supporting development of standards by national and international standards bodies. Visit VSF online at http://www.videoservicesforum.org.

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Bob Ruhl
VSF Operations Manager
bob.ruhl1@verizon.net
609-410-6767