



**Video Services Forum, Inc.
News Letter**

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This is the fifteenth issue of the Video Services Forum (VSF) News Letter. The VSF Board feels it is important to keep you informed about what is going on within the VSF; the VSF is **your** organization.

VSF Directors and Officers:

The current Board is shown below with their term expiration dates. VSF Board Members are elected by VSF Members during the VidTrans Conference and Exposition.

Director	Company	Term Expires
Rick Ackermans	Turner Broadcasting	2013
Pierre Costa	AT&T	2013
John Dale	Media Links	2013
Richard Dellacanonica	Artel Video Networks	2013
John Mailhot	Harris Broadcast Communications	2014
Steve Storozum	Level 3 Communications	2014
Emory Strilkauskas	ESPN	2014
Sean Sullivan	Verizon	2014

At VidTrans11 the following VSF Officers were elected by the VSF Board for two-year terms, which expire February 2013.

President	Richard Friedel	FOX	2013
Vice President	Carl Ostrom	System Resource	2013
Secretary/Treasurer	Roger Hatcher	Consultant	2013

VSF Member List:

- ABC Television Network
- ALDEA SOLUTIONS Inc.
- Altera Corporation
- Analog Devices, Inc.
- Artel Video Systems
- AT&T Laboratories
- ATEME
- Barco Silex
- BRIDGETECH A/S
- CBC/Radio Canada
- CBS Television Network
- Cheetah Technologies
- Cisco
- Crystal Solutions
- Dan Holland Consulting
- DekTec Digital Video B.V.
- Dimetis GmbH
- DIRECTV
- Dolby Laboratories, Inc
- DVBLink
- Embrionix
- Ericsson
- ESPN
- Evertz
- Fox Broadcasting
- Global Crossing, Genesis Solutions
- Harmonic, Inc.
- Harris Broadcast Communications
- Hibernia Media LLC
- IneoQuest Technologies
- Intelsat Corporation
- Institut fuer Rundfunktechnik
- intoPIX
- Level 3 Communications
- Macnica Americas
- Media Links, Inc.
- Merrill Weiss Group
- Motorola Mobility Inc.
- Net Insight
- Nevion
- PacketStorm Communications
- Path 1, a division of IPVN
- PESA
- Roger Hatcher - Consultant
- Sencore, Inc.
- System Resource Consulting
- T-VIPS
- Tata Communications (America)
- Telecom Product Consulting
- Turner Broadcasting
- Verizon
- Video Clarity, Inc.
- Vidyocast
- XILINX
- XTENSYS

VSF Staff:

Brad Gilmer – Gilmer & Associates, VSF Executive Director
Bob Ruhl – VSF Operations Manager

Meetings and Conferences:

Upcoming events:

The **VSF May 2012 Meeting Series** will be held on May 8 & 9 in Montreal, Canada hosted by CBC/Radio-Canada. Registration is open at www.videoservicesforum.org

The **VSF October 2012 Meeting Series** will be held on October 2 & 3 in Broomfield, Colorado hosted by Level 3.

VidTrans2013 Conference and Exposition will be held in Los Angeles, California at the Marina del Rey Marriott on February 26-28, 2013.

Recent Past events:

VidTrans2012 Conference and Exposition was held in New Orleans, Louisiana at the Marriott New Orleans on February 28-March 1, 2012. Thanks to our sponsors (A.R.G, Ericsson, FOX, Harmonic, Level 3 and T-VIPS) as well as our Exhibitors and Speakers VidTrans12 was a successful conference.

The **VSF October 2011 Meeting Series** was held on October 4 & 5 in Atlanta, GA hosted by AT&T Laboratories. Over 90 people attended this meeting and the reception held on the evening of May 11 at a local restaurant was well attended. VSF would like to give a special thanks to our sponsors; AT&T, Dolby, Ericsson & Nevion.

Activity Group Updates

Activity Groups (AG) supply input and expertise to various industry standards bodies on behalf of the VSF. These are some of the topics that VSF Activity Groups are actively addressing:

CoP3 VBR Activity Sub-group: The Pro-MPEG Forum originally created Code of Practice #3 (COP3) for CBR MPEG-2 Transport Streams over IP networks and a companion FEC mechanism. The resulting standards, SMPTE 2022-1 (FEC) and SMPTE 2022-2 (MPEG-2 TS to IP Mapping), are published on the SMPTE website.

The VSF identified a need for a similar mapping for Variable Bit Rate (VBR) applications. The COP3 VBR Activity Group focused on creating two standards – SMPTE 2022-3 for transport of Piecewise Constant MPEG-2 VBR as defined in the ISO-13818 MPEG Standard, and SMPTE 2022-4 for the transport of Non-Piecewise Constant MPEG-2 VBR. As with 2022-1 and -2, the VSF served as the proponent for these efforts. The resulting Standards (2022-3 and 2022-4) are available on the SMPTE website. This group concluded its work, and the VSF Board terminated the Activity Group during April, 2012.

Chair: Carl Ostrom, System Resource

The **HBRMT** (high bit rate media transport) Encapsulation and FEC Committee will create and shepherd a standard for an encapsulation and FEC process for high bit rate contribution oriented video/audio services up to 3Gbps over IP/Ethernet networks. This is to incorporate both uncompressed and JPEG2000 compressed video and audio formats.

1. Define encapsulation/FEC process for SMPTE 259M/C, SMPTE 292M, SMPTE 305M, SMPTE 424M, & JPEG2000. This will include CBR RTP datagram streams (259M, 292M, 305M, and 424M).
2. This shall include Liaison with other organizations such as EBU, IETF, and JTC & SMPTE with the mission of creating of non-conflicting worldwide standards for contribution video over IP
3. Current work is ongoing in SMPTE 32NF

Co-Chairs: John Dale, Media Links, Inc., Pierre Costa, AT&T and Ryan Korte, Level 3 Communications

The **JPEG2000 Technical Recommendation Group** has been formed in the VSF with the goal of providing a technical recommendation that uses existing standards to define interoperable profiles for real time streaming of a broadcast profile JPEG2000 codestream wrapped in MPEG2TS with audio an ancillary data and encapsulated in IP with FEC. This is the first goal. A second goal will be to define interoperable profiles for real time streaming of a JPEG2000 codestream wrapped in MXF with audio and ancillary data and encapsulated in IP.

The J2K Technical Recommendation Group will liaison with DVB & EBU in order to create a recommendation that is aligned with ongoing work on J2K over MPEG2TS within these groups.

Interested parties can contact the chair of the J2K Technical Recommendation Group.

Chair: John Dale, Media Links, Inc.

The goal of the **Interop Workshop** Activity Group is to conduct a series of Interop events during 2010, 2011 & 2012 as products become available for testing. The areas of interoperability surround the emerging SMPTE 2022 standards (-3, -4, -5, -6), JPEG2000 over MPEG2TS and MXF over GbE, video over SDH/SONET, and Hitless Protection Switching of SMPTE 2022 IP datagrams.

The Interop group successfully completed private Interop Workshops on October 4 and 5, 2010 at ATT Labs in Austin, TX and on October 5 and 6, 2011 at ATT Labs in Atlanta, GA. Public interoperability demonstrations were held at the February 2011 VidTrans Exhibit and Conference in Los Angeles and the February 2012 VidTrans Exhibit and Conference in New Orleans.

Co-Chairs: John Dale, Media Links, Inc. and Jack Douglass, PacketStorm Communications

The **Quality of Experience (QoE)** Metrics Activity Group completed its report on Recommended Quality of Experience Metrics for IP Video in January 2011. The report extends the work of the VSF's Recommendation on Video over IP Metrics from 2006 to content-related QoE measurements. It includes metrics characterizing the impact of network-compression interactions (i.e. the relationship between losses and payload), compression, and content on both video and audio quality. Applications of these metrics include monitoring, troubleshooting, and generally improving end-user QoE.

The report was completed in close collaboration with the ATIS IPTV Interoperability Forum (IIF). As a result, many of the metrics in the VSF QoE Metrics report have been included in the recent update to the ATIS-0800008 standard.

The QoE Metrics Activity Group recently decided not to pursue quality metrics for 3DTV and is now focusing on Streaming applications (to hand-held devices, etc.), again in collaboration with ATIS IIF.

Co-Chairs: Jeremy Bennington, Cheetah Technologies, and Pierre Costa, AT&T

The **SMPTE 2022 over SONET/SDH Committee** The SMPTE 2022 over SONET/SDH Committee has created a draft Recommended Practice for transporting SMPTE 2022 IP datagrams over point-to-point SONET, SDH and PDH paths using the GFP-F encapsulation protocol. The primary reason for the Recommended Practice is to facilitate interoperability on the SONET Data Link level between SMPTE 2022 equipment used to transport video over SONET/SDH networks. This document is comprised of two main sections defining SMPTE 2022 to Ethernet and Ethernet to SONET/SDH. The committee has utilized existing standards where possible to define a solution for vendors.

The final document is in the process of being formatted as a VSF document to be posted on the VSF site.

Co-Chairs: Mike Bany, DVBLink and John Mailhot, Harris Broadcast Video

The Video Content Project (VCP) was formed to create test materials that can be used by VSF member companies for codec testing and a variety of other purposes. The first set of test clips has been produced; these original clips are uncompressed HD content in the format of 1080p 59.94fps with a 4:2:2 color space. This content was captured directly from a camera using SMPTE 372-2009 dual-link operating at 2.967 Gbps on a high-performance digital recorder that stored all video content in uncompressed image files. Ambient audio was also recorded during the shooting sessions and has been merged with the video clips during the editing process.

This first set of these clips was publicly unveiled and used for interoperability testing of SMPTE 2022 transport devices which occurred during VidTrans 2012 in February. Several member companies also used the clips for demonstration purposes at NAB 2012. Currently, the group is working with a team at the University of Texas, Austin to select suitable clips from a pool of content that has been captured at an on-campus sporting event. Additional shooting is planned for the summer of 2012. Input from all interested parties is welcome.

Co-Chairs: Wes Simpson, System Resource and Pierre Costa, AT&T

Hitless Protection of SMPTE 2202 Compliant Streams Activity Group

Activity Group was formed October 2011 and overall goal is to develop a standard definition for Hitless protection of SMPTE 2022 video traffic.

- Determine and create use cases for Hitless Protection Switching
- Create a draft standard allowing interoperability for Hitless Protection Switching of SMPTE 2022 compliant streams by replication of RTP packets.
- Submit the draft standard to SMPTE or issue a VSF Recommendation

- Define functionality tests.

Chair: Mike Bany, DVBLink

To learn more about VSF Activity Groups please visit:
<http://www.videoservicesforum.org/about/index.htm>.

SMPTE Committees:

The VSF is providing resources to move our work through the Society of Motion Picture and Television Engineers (SMPTE). Our work is being conducted under the 32NF Networking Technology Committee. The 32NF-60 Video over IP Working Group is chaired by Brad Gilmer, Executive Director of the VSF.

SMPTE 2022-5 and 2022-6, High Bitrate Media Transport over IP: This document is in comment resolution, having completed its first Full Committee Draft ballot. John Dale, John Mailhot, Philippe Lemonnier, Pierre Costa and Brad Gilmer have worked their way through all of the comments. John Mailhot has prepared a new draft which we believe addresses all of the comments received. Currently there is only one commenter with unresolved comments. The group continues to work with this person to resolve the comments.

Please contact Brad Gilmer (brad@gilmer.tv) if you would like to participate in any of these activities.

Other News:

We have changed the VSF **members-only single access code** for VSF Meetings and VidTrans conference presentations located in the archive section as of March, 2012. VSF Members were provided with the new access codes prior to the change.

That's it for now. If you have any comments or suggestions, or if there is a topic that you would like to see covered in the next issue of the News Letter, please contact Bob Ruhl at **bob.ruhl1@verizon.net**.