



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

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This is the sixteenth 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 annual 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 Storzum	Level 3 Communications	2014
Emory Strilkauskas	ESPN	2014
Sean Sullivan	Verizon	2014

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
- Bob Edge TV Consulting, Inc.
- Bridge Technologies co as.
- cPacket Networks
- CBC/Radio Canada
- CBS Television Network
- Cheetah Technologies
- Ciena
- Cisco
- Cobalt Digital Inc.
- Crystal Solutions
- Dan Holland Consulting
- DekTec Digital Video B.V.
- Dimetis GmbH
- DIRECTV
- Dolby Laboratories, Inc
- DVBLink
- École de technologie supérieure
- Elemental Technologies
- Embrionix
- Ericsson
- ESPN
- Evertz
- Fox Broadcasting
- HTN Communications, LLC
- 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.
- NTT Communications Corporation
- 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
- Zixi LLC

VSF Staff:

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

Meetings and Conferences:

Upcoming events:

VidTrans2013 Annual Technical Conference and Exposition will be held in Los Angeles, California at the Marina del Rey Marriott on February 26-28, 2013. Registration is open at www.videoservicesforum.org.

Recent Past events:

The **VSF October 2012 Meeting Series** was held on October 2 & 3 in Broomfield, Colorado hosted by Level 3. Over 80 people attended this meeting with a reception held on the evening of October 2. VSF would like to give a special thanks to our sponsors; **ARTEL, ATEME, ERICSSON, HARRIS, LEVEL 3 and T-VIPS.**

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:

The **HBRMT** (high bit rate media transport) Encapsulation and FEC Committee's goal was to create 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 included a Liaison with SMPTE with the mission of creating a non-conflicting worldwide standard for contribution video over IP.
3. This work which originated in the HBRMT Committee was recently completed in SMPTE 32NF Committee.

The following documents were published in the SMPTE Digital Library on November 26, 2012:

SMPTE ST 2022-5:2012, Forward Error Correction for High Bit Rate Media Transport Over IP Network

SMPTE ST 2022-6:2012, Transport of High Bit Rate Media Signals over IP Networks (HBRMT)

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

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

Co-Chairs: John Dale, Media Links, Inc. and Inge Hillestad, T-VIPS

The goal of the **Interop Workshop Activity Group** is to conduct a series of Interop events as products become available for testing. The areas of interoperability surround the newly released or emerging SMPTE 2022 standards:

1. SMPTE ST 2022-5:2012, Forward Error Correction for High Bit Rate Media Transport Over IP Network
2. SMPTE ST 2022-6:2012, Transport of High Bit Rate Media Signals over IP Networks (HBRMT)
3. Seamless Protection (Hitless Protection) Switching of SMPTE 2022 IP Data-grams
4. JPEG2000 over MPEG2TS over GbE

The Interop group is scheduled to hold the following events:

1. A Private Interop Workshop on December 11, 12 and 13, 2012 at Fox Network Center (FNC) in The Woodlands, TX
2. A Public Interoperability Demonstration at VidTrans13 Annual Technical Conference and Exposition in Los Angeles, CA.

Chair: Jack Douglass, PacketStorm Communications

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 may be scheduled in the future. Input from all interested parties is welcome.

Co-Chairs: Wes Simpson, Telecom Product Consulting and Pierre Costa, AT&T

The **Hitless Protection of SMPTE 2202 Compliant Streams** Activity Group was formed October 2011 with the overall goal of developing 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.
- The draft standard was submitted to SMPTE during the 2H2012
- The Hitless Protection for SMPTE 2022-x streams is being standardized in a sub-committee of the SMPTE 32NF-60 Committee, chaired by Michael Bany.

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 projects through the Society of Motion Picture and Television Engineers (SMPTE). Our work is being conducted under the 32NF-60 Video over IP Working Group, chaired by Brad Gilmer. Currently, the VSF project on providing hitless protection for SMPTE 2022-x streams is being standardized in a sub-committee of 32NF-60, chaired by Michael Bany.

Work on mapping uncompressed video streams and an associated FEC mechanism which originated in the VSF HBRMT Committee was recently completed in SMPTE 32NF Committee. The following documents were published in the SMPTE Digital Library on September 26, 2012:

SMPTE ST 2022-5:2012, Forward Error Correction for High Bit Rate Media Transport Over IP Network

SMPTE ST 2022-6:2012, Transport of High Bit Rate Media Signals over IP Networks (HBRMT)

Summary:

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.