



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

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This is the fourteenth issue of the Video Services Forum (VSF) News Letter. The VSF feels that it is important to keep you informed about what is going on within the VSF since 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
John Mailhot	Harris Broadcast Communications	2012
Steve Storozum	Level 3 Communications	2012
Emory Strilkauskas	ESPN	2012
Brian Wilson	Verizon	2012
Rick Ackermans	Turner Broadcasting	2013
Pierre Costa	AT&T	2013
John Dale	Media Links	2013
Philippe Lemonnier	Thomson Video Networks	2013

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

Administrative and Technical Staff:

Brad Gilmer – Gilmer and Associates, VSF Executive Director

Bob Ruhl – VSF Operations Manager

VSF Member List:

- ATEME
- AT&T Laboratories
- Altera
- Analog Devices, Inc.
- Andrew Perkis - NTNU
- Artel Video Systems
- Barco Silex
- BRIDGETECH A/S
- CBC/Radio Canada
- Cheetah Technologies
- Cisco
- D. Technologies
- Dan Holland Consulting
- DekTec Digital Video B.V.
- Dimetis GmbH
- DIRECTV
- Dolby Laboratories, Inc
- DVBLink
- Embrionix
- Envivio, Inc
- Ericsson
- ESPN
- Evertz
- Fox Broadcasting
- Global Crossing, Genesis Solutions
- Harmonic, Inc.
- Harris Broadcast Communications
- Hibernia Media LLC
- IneoQuest Technologies
- intoPIX
- Level 3 Communications
- Linear Systems Canada Ltd
- Markus Berg - Institut fuer Rundfunktechnik
- Media Links, Inc.
- Media Transport Solutions
- Merrill Weiss Group
- Mixed Signals Inc.
- Motorola Mobility Inc.
- Net Insight
- Nevion
- Path 1, a division of IPVN
- Packet Storm
- PESA
- Roger Hatcher - Consultant
- Sencore, Inc.
- System Resource Consulting
- T-VIPS
- Telecom Product Consulting
- Thomson Video Networks
- Turner Broadcasting
- Verizon
- Video Clarity, Inc.
- Vidyocast
- VQLink Incorporated
- Vyvx
- Xlinix

Meetings and Conferences:

Upcoming events:

The ***VSF October 2011 Meeting Series*** will be held on October 4 & 5 in Atlanta, GA hosted by AT&T Laboratories. Registration is open at www.videoservicesforum.org

VidTrans2012 Conference and Exposition will be held on February 28 – March 1, 2012 in New Orleans, Louisiana at the Marriott New Orleans.

Past events:

The **VSF May 2011 Meeting Series** was held on May 11 & 12 in Bristol, CT hosted by ESPN. Over 100 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; **Dimetis, ESPN, Global Crossing, Genesis Solutions, Level 3 Communication, and Net Insight.**

VidTrans2011 Conference and Exposition was held in Los Angeles, California at the Marina del Rey Marriott on February 1-3, 2011. Thanks to our sponsors (AT&T, Harris and FOX) as well as our Exhibitors and Speakers. VidTrans11 was a successful conference.

The **VSF October 2010 Meeting Series** was held on October 19 & 20 in Austin, TX hosted by AT&T Laboratories. At this meeting we also held an Interop plug fest that included Artel Video Systems, Media Links, Thomson Video Networks and Packet Storm.

Activity Group Updates

(AGs) 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 work, defined as CoP3 for CBR MPEG2 transport streams over IP networks with FEC, was completed by the VSF and submitted to SMPTE and approved as SMPTE 2022-1 & 2022-2. The CoP3 VBR Activity Sub-group continues that work for VBR MPEG2 transport streams. This work was divided into two application focused activities. One work defines an interoperable standard for Piecewise Constant MPEG2 transport streams as defined in the ISO-13818 MPEG document. (See SMPTE 2022-4) The other work defines an interoperable standard for Non-Piecewise Constant MPEG2 transport streams as often found in large scale distribution networks.

Both works have been completed and submitted to the SMPTE 32NF Technical Committee. The Piecewise Constant work has completed the SMPTE standards process and is in the publication phase as SMPTE 2022-3/2010. The Non-Piecewise Constant work is currently in the ballot process within the 32NF Technical Committee.

Chair: Carl Ostrom, System Resource

The original **HBRAV-IP** activity group has been renamed to HBRMT (high bit rate media transport) The **HBRMT 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 both CBR RTP datagram streams (259M, 292M, 305M, and 424M) and VBR RTP datagram streams for JPEG2000
2. This shall include Liaison with other organizations such as EBU, IETF, JTC & SMPTE with the mission of creating of non-conflicting world wide standards for contribution video over IP

It is split into two working areas, Uncompressed/Wrapped media and JPEG2000 over MPEG2TS over IP. Currently both uncompressed/wrapped media and JPEG2000 over MPEG2TS over IP work is being continued in SMPTE 32-NF Video over IP Ad Hoc Group.

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

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 including 2022 3,4,5,6 and J2K work as well as video over SDH/SONET.

The Interop group successfully completed a private workshop to be held on October 4 & 5, 2010 at ATT Labs, Austin TX. An interoperability demonstration was also successfully conducted during the February VidTrans exhibit and conference in Los Angeles.

The activity group will continue to determine:

1. Number of participants that are willing to participate in various interoperability events throughout 2011/2012.
2. Type of interoperability most important to participants (i.e. HD-SDI 292 over 10GbE and JPEG2000 over MPEG2TS over GbE, etc.)
3. When further interoperability tests will be held
4. Type of video clips to be utilized, testing methods and pass/fail criteria
5. Participation criteria (like be a VSF Member, active participant, agree to terms)
6. Actual testing requirements, set up and test plan

Chair: John Dale, Media Links, Inc.

Methodologies for Testing FEC Implementations for Real-Time Video Transport

The Methodologies for Testing FEC Implementations for Real-Time Video Transport Activities Group has the following goals:

1. Work closely with Interop Workshop Activity Group to define Interop test configuration, test conditions, test plan and assist in Interop events
2. Define methods for validating FEC implementation and packet correction capability
3. Define methods validating interoperability, compliance and conformance to FEC Standards
4. Create engineering document(s) for release to appropriate standard body(s)

Any interested party can contact the Methodologies for Testing FEC Implementations Activity Group Chair person listed below to participate.

Chair 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 has now started a new work item on quality metrics for 3DTV, 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 and.

The draft document is in the process of being submitted to SMPTE.

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

The **Video Content Project (VCP)** has made significant progress over the past year on creating test materials that can be used by VSF member companies for codec testing and a variety of other purposes. The group has agreed on creating original, uncompressed HD content in the format of 1080p 59.94Hz with a 4:2:2 color space. This content will be captured directly from a camera using SMPTE 372-2009 dual-link operating at 2.967 Gbps on a high-performance digital recorder that will store all video content in uncompressed image files. Transformations of this original file into 1080i and 720p files may also be done in post-processing at a later date. Ambient audio is also being recorded during each shooting session and will be merged with the video clips during the editing process.

Currently, the group is working with a team at the University of Texas, Austin and the first test clips have been captured. This initial content was displayed at the May 2011 VSF meeting, in both compressed and uncompressed formats. Additional shooting is scheduled for the spring and summer of 2011. The team is also starting to work on the licensing terms for this content; input from all interested parties is welcome. Please contact Wes Simpson or Pierre Costa if you are interested in participating in the team that is managing this project.

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

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

SMPTE Committees:

The VSF is providing resources to move several projects through the Society of Motion Picture and Television Engineers (SMPTE). Our work is being conducted under the 32NF Networking Technology Committee. There are two ad-hoc groups, both chaired by Brad Gilmer, Executive Director of the VSF. The first group is the VBR group. The second is the Video over IP group.

SMPTE 2022-4 Non-Piecewise Constant VBR over IP: This document is, for all intents and purposes, a SMPTE Standard. It is currently in review for Draft Publication, which means that from this point on, no additional technical comments or changes will be accepted. It is now a matter of making sure SMPTE rules and procedures have been followed. I expect to receive the final draft prior to publication in the next few weeks.

SMPTE 2022-5 and 2022-6, High Bitrate Media Transport over IP: This document completed its first ballot for technical comments, and we received a fairly significant number of inputs. John Dale and Brad Gilmer have worked their way through about half of the comments, but NAB and other demands have gotten in the way. We expect to complete our review and propose responses to each of these comments within one month.

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

Other News:

We did change the VSF **members-only single access code** for VSF Meetings and VidTrans conference presentations located in the archive section on December 31, 2010. 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**.