
RIST

RELIABLE INTERNET STREAM TRANSPORT

Update

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RIST Activity Group Chair
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VIACOMCBS

VSF
VIDEO SERVICES FORUM

- The RIST Activity Group meets every Wednesday at 11AM ET.
- Most weeks we have an additional breakout group meeting on Mondays to deal with specific issues.
- To date the RIST AG has had 177 meetings of the main activity group.

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VIDEO SERVICES FORUM

Video Services Forum (VSF)
Technical Recommendation TR-06-1

Reliable Internet Stream Transport (RIST)
Protocol Specification – Simple Profile

June 25, 2020

VSF_TR-06_2020_06_25

VIDEO SERVICES FORUM

Video Services Forum (VSF)
Technical Recommendation TR-06-2

Reliable Internet Stream Transport (RIST)
Protocol Specification – Main Profile

March 10, 2020

VSF_TR-06-2_2020_03_10

VIDEO SERVICES FORUM

Video Services Forum (VSF)
Technical Recommendation TR-06-2

Reliable Internet Stream Transport (RIST)
Levels Annex

August 5, 2020

VSF_TR-06-2-levels-annex_2020_08_05

VIDEO SERVICES FORUM

Video Services Forum (VSF)
Technical Recommendation TR-06-3-Advanced_Profile

Reliable Internet Stream Transport (RIST)
Advanced Profile Levels

Under Development
Coming Soon

VSF_TR-06-3_2021 -Advanced-profile-levels

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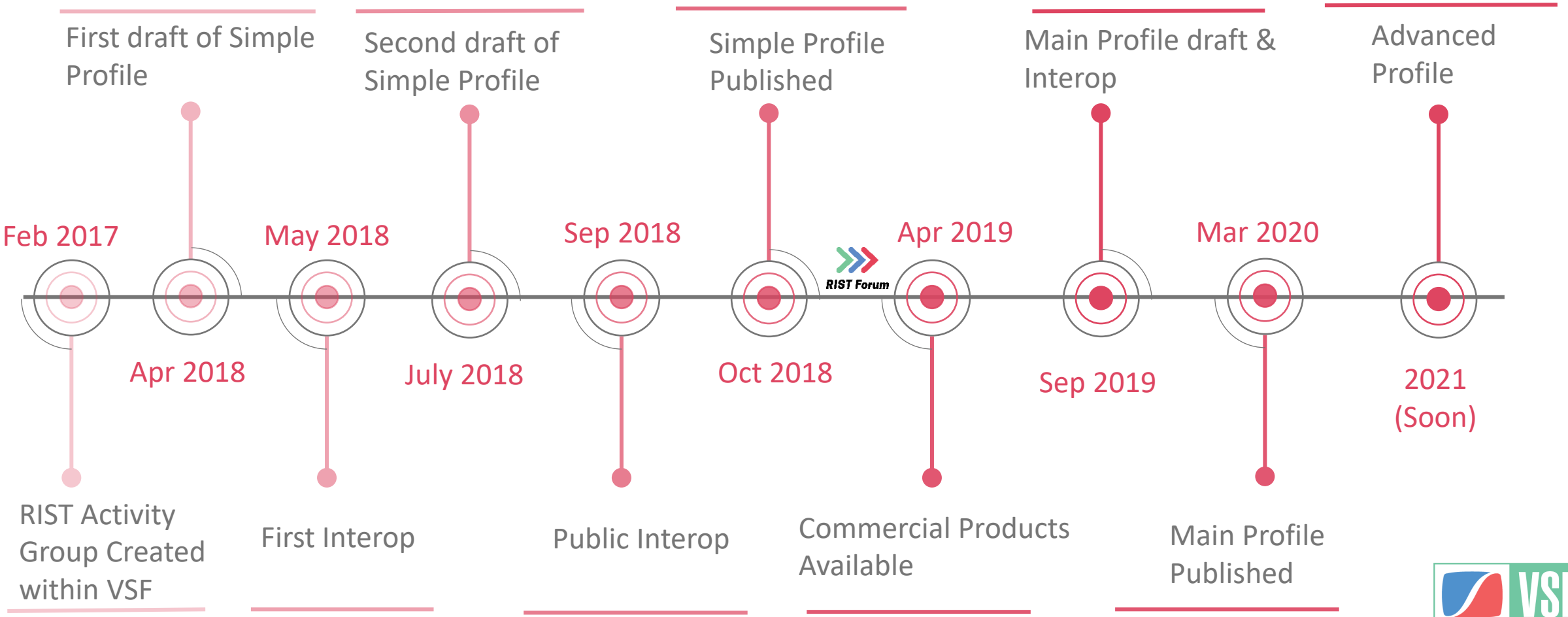
RIST Advanced Profile

Feature	Description
Auto Configuration.	Add auto stream configuration, of basic parameters; Client Stream IP: Port, Client/Server Buffer setting, Protection setting, Rate limit etc. to do so we can extend the JSON signalling.
Dynamic Reconfiguration	Similar to 'Auto configuration', add ability to change critical parameters like buffering, protection, rate limit and add additional paths (bonding/loadshare) to react to network conditions
Messaging.	Define a formal way to create messages in the tunnel level - this will be the infrastructure for configuration messages, congestion control, timing etc.
Content Selection	Add a way to choose content to pull/describe the content we push.
Congestion Control.	Add Congestion control signalling, by way of RTCP and by inbound limits
VBR Support	Add support for VBR streams. We propose to add a capped CBR capability that will allow a RIST enhanced profile to pad an input stream to a predefined CBR level. The padding will be done by adding virtual null packets, these packets will be dropped of by the recover. This way a 3-5 Mb/s VBR stream can be encapsulated into a 6Mb/s stream. On the receiving side the receiver will strip of the virtual null packets to output the original stream. The Virtual Null packets will be clearly marked as such.
Internet/Satellite Hybrid Model	Develop a RIST profile that can operate in a mixed Internet and Satellite Hybrid environment.
Common Management API, mib	Add a common management API/SNMP mib/ REST/NETCONF OPEN Config
Timing control based on common clock	Add synchronized stream playout. In some application a timed and synchronized playout is needed, for example betting application, E-gaming, Live sports, Live events etc. The Application may be to tie the RTP time stamps of the source to a common RTP clock for then be playout with minimal difference across multiple destinations.
Adaptivity Framework Support	Add a frame work to allow RIST users to add Adaptive streaming capabilities to their implementation. As this is a Patented technology by VideoFlow, a frame work/signaling may be a way around it.
VPN	Add the use of an agreed VPN to allow the use of a VPN instead of a tunnel to those that are ok with VPN support
IP Payload Compression (VPN Breakout)	LZ4, RFC 3173 or other.
RIST Tunnel ARQ	Add support for RIST main tunnel Error recovery on a tunnel basis (new RTCP messages?).
IGMP listener	Add IGMP signaling and IGMP query for multicast optimization. the capability will allow to drop/add multicast streams based on available listeners
Rendezvous point for automated firewall traversal	Add support for RIST senders and receivers that are behind a firewall to connect to a rendezvous point out in the Internet for automatic firewall traversal

RIST Timeline



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RIST Activity Group vs RIST Forum

How everyone works together

The RIST Activity Group meets every Wednesday at 11AM ET.
* You must be a member of the VSF .

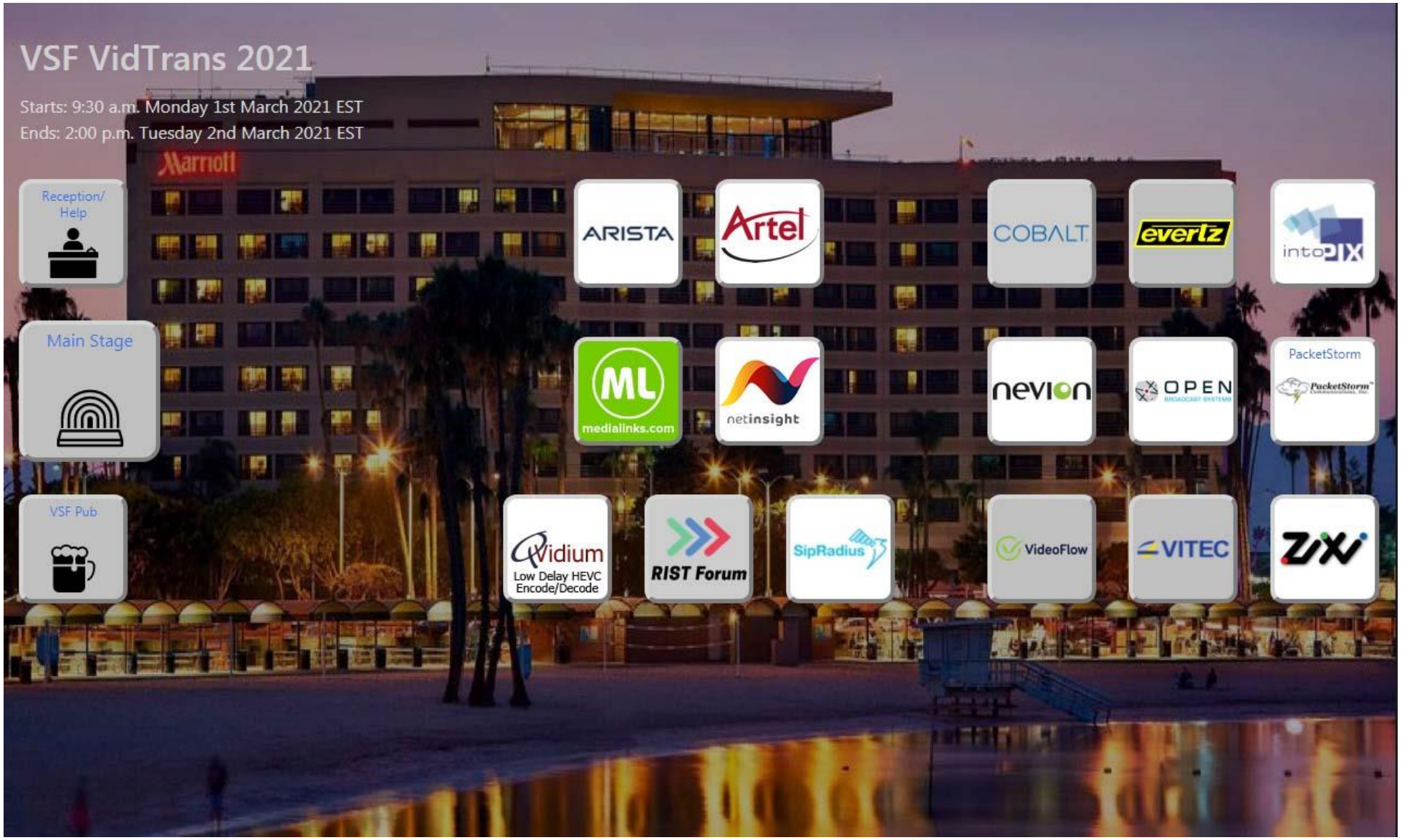
The RIST Forum meets every other Wednesday at 12 Noon ET.

RIST Activity Group

The tech people

RIST Specification

The marketing people



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Thank You..

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