Agenda for Today's Webinar

➢ SRT Alliance Update

➢ About Open Source SRT

➢ Upcoming SRT Features

➢ Haivision SRT Use Cases

➢ Wowza SRT Use Cases & Upcoming Developments

➢ Combined SRT Workflows

➢ SRT Promotion – Get 10% Off Haivision & Wowza

Haivision and Wowza Form SRT Alliance Open Source Low Latency Video Streaming Initiative

SRT Alliance Members

SRT Alliance

MISSION

- Overcome the challenges of low latency video streaming, improving the way the world streams video.
- Support of a freely available open source secure video transport protocol that will accelerate innovation through collaborative development.

GOALS

- Drive SRT industry adoption
- Make SRT the de facto standard for video streaming

SRTALLIANCE
SECURE RELIABLE TRANSPORT

Watch Video on SRTAlliance.org

Overcoming Adverse Network Conditions

Network Characteristic that KILL real time video

- **Packet loss** – packets being discarded by routers

- **Jitter** – packets arriving at different times than expected

- **Delay** – the time from sender to receiver

- **Bandwidth** – the fluctuating capacity between points

Packet Loss You Should Plan for:
- <0.001% over an MPLS network
- <0.1% in a building
- <0.5% across a campus
- ~1% over the public internet (good day)
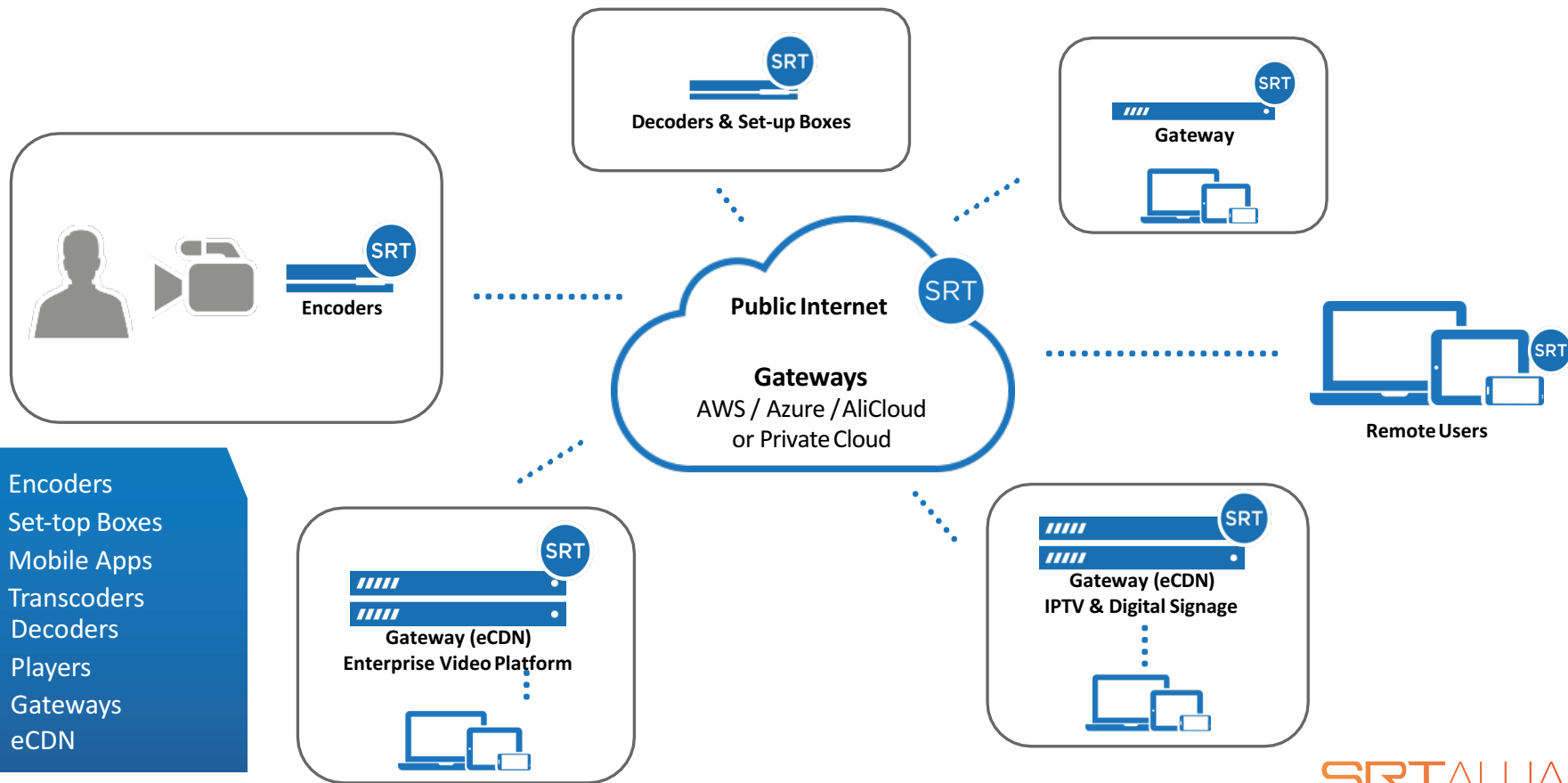- ~5% over the public internet (bad day)

SRTALLIANCE
SECURE RELIABLE TRANSPORT

Facilitating Video Transmission

Decoders & Set-up Boxes

Gateway

Encoders

Public Internet

Gateways
AWS / Azure / AliCloud
or Private Cloud

Remote Users

Gateway (eCDN)
Enterprise Video Platform

Gateway (eCDN)
IPTV & Digital Signage

Encoders
Set-top Boxes
Mobile Apps
Transcoders
Decoders
Players
Gateways
eCDN

SRT Success

"

*SRT has enabled us to take advantage of freely available Internet access to send mission critical live video streams to our NY headquarters with extremely low latency. " - John Cave, **NFL***

"*With SRT, we're streaming live HD video 24/7 from our NASDAQ MarketSite in New York to Denmark using the Internet.*" - Steen Mertz, **Jyske Bank**

"*SRT guarantees not only a secure connection but a very reliable connection. It has been a game changer for us… We love SRT! *"- Roman Bojorquez, **AAGL**

New SRT Features … Coming Soon!

➤ **Fast File Transfer Mode:** For fast & encrypted data transfer such as VOD

➤ **Multiplexing Support:** For multiple SRT connections on the same UDP port, adding flexibility and further enhancing the firewall friendly attributes of SRT

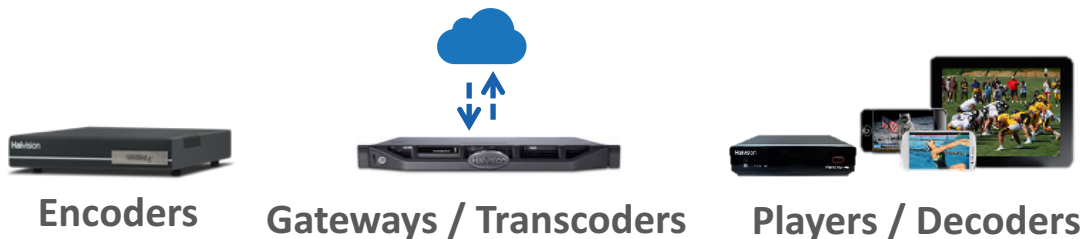➤ **Integrations:** SRT native integration with VLC, FFmpeg and GStreamer!

Ready to get started? Contact us at www.SRTAlliance.org or info@srtalliance.org

Haivision

Haivision – Video Streaming & Media Management Solutions

STREAMING

Encoders   Gateways / Transcoders   Players / Decoders

MEDIA MANAGEMENT

Enterprise Video Platform   Enterprise IPTV   Digital Signage

VERTICALS

DEFENSE   ENTERPRISE   BROADCAST
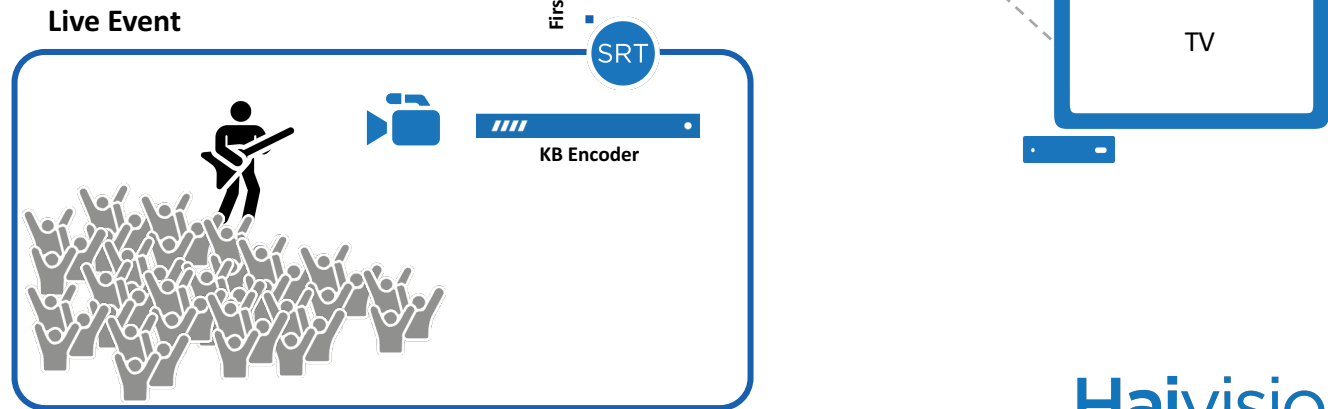
Haivision

Live Event Internet Streaming

KB Mini with SRT for First Mile Contribution

- Live video streaming from the source to the cloud, reliably and securely
- Delivered at the highest quality possible with SRT even when local internet performance is unpredictable
- High-quality first mile contribution ensures best viewer experience

Public Internet

Delivery Formats

Mobile

Desktop

TV

First Mile Contribution

SRT

Live Event

KB Encoder

Haivision

KB Series | Internet Streaming Encoders/Transcoders

*Award-winning **KB Series of H.264 & HEVC Internet Streaming Encoders** and Transcoders provides you with multiple options for live event streaming, helping you deliver the highest quality live video to your global Internet audience.*

KB Mini Encoder/Transcoder

- Ultra-Compact, Full Cascade ABR to 1080p HD
- H.264/HEVC, RTMP/HLS/DASH/SRT, CPU/GPU Balanced Performance

KB Encoder/Transcoder

- Server, Full Cascade ABR to 1080p HD, 1, 2, 4 Channel Input
- H.264/HEVC, RTMP/HLS/DASH/SRT, CPU/GPU Balanced Performance

KB 4K Encoder/Transcoder

- Server, Full Cascade ABR to 2160p HD, 1x4K Channel Input
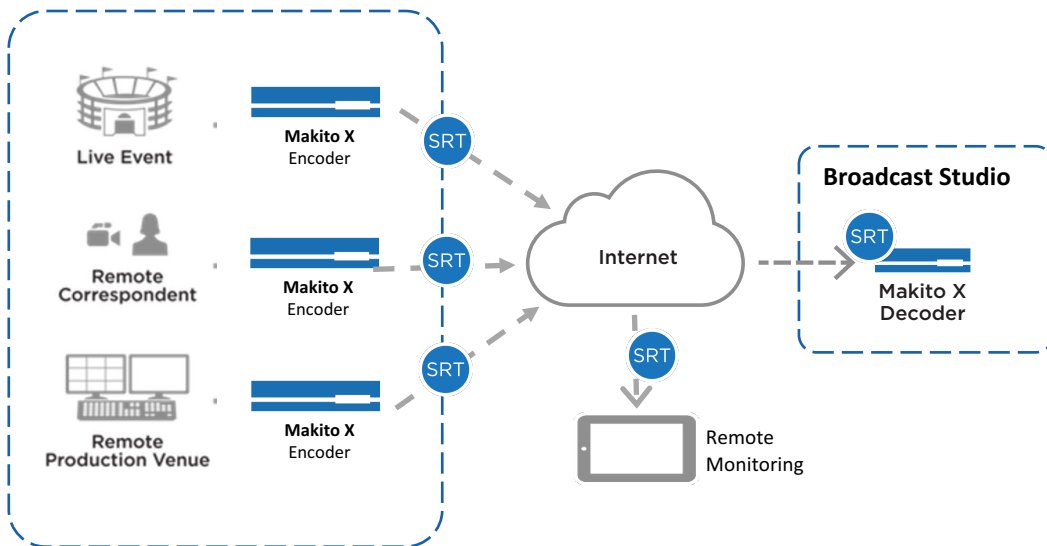- H.264/HEVC, RTMP/HLS/DASH/SRT, CPU/GPU Balanced Performance

SRT
SECURE RELIABLE TRANSPORT

H.264 MPEG-4/AVC

HEVC
H.265 - HIGH EFFICIENCY VIDEO CODING

READERS' CHOICE AWARDS 2016 STREAMING MEDIA MAGAZINE

2016 BEST of SHOW VIDEOEDGE

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Broadcast | Backhaul & Contribution

Makito X Series: Video Encoders & Decoders for Broadcast Workflows

- To transport secure, high-quality H.264/HEVC video with low latency delivery from any location into studio environments
- Leveraging readily available public Internet connections
- Helping broadcasters distribute more content at less cost and meet the growing demands of their viewers

Haivision

Makito X Family

THE SOFTWARE BEHIND THE STREAMING REVOLUTION

WOWZA STREAMING ENGINE™

WOWZA STREAMING CLOUD™

WOWZA PLAYER™

WOWZA GOCODER™

WOWZA POWERS
15 million
LIVE VIEWING HOURS **PER DAY**

- **20,000** PAID CUSTOMERS

- **345,000** HOURS LIVE TRANSCODING PER DAY
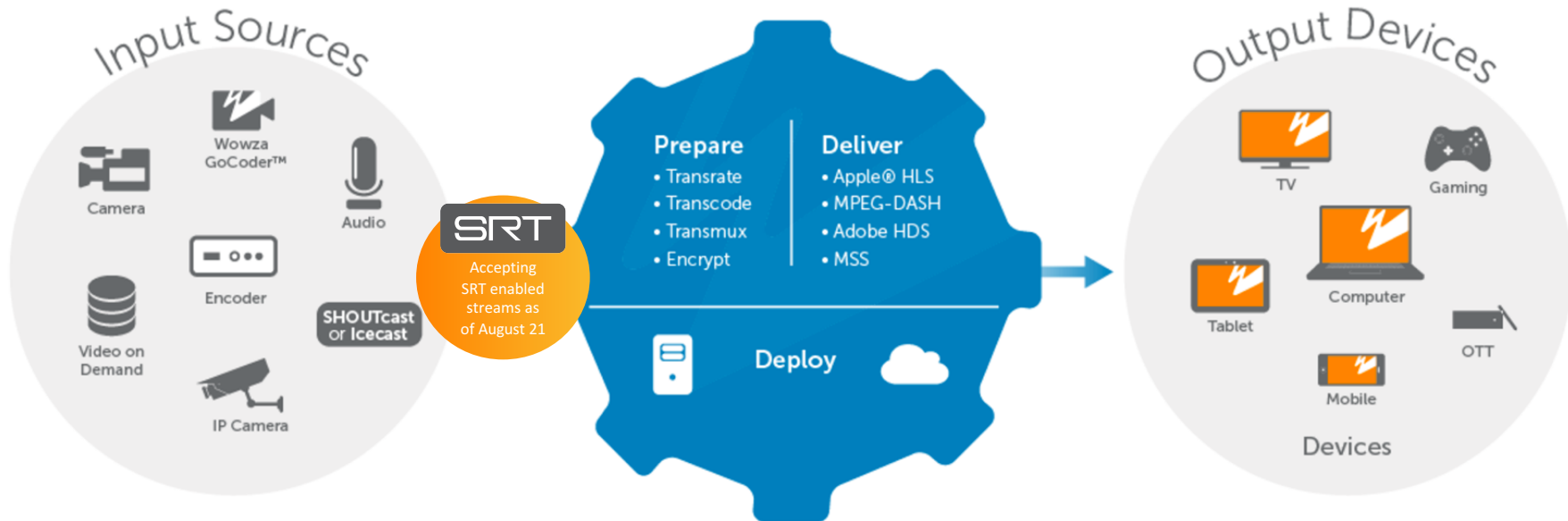
- **43 MILLION** LIVE BROADCASTS PER YEAR

WOWZA™
media systems

Wowza Streaming Engine

Wowza Streaming Engine

WOWZA STREAMING ENGINE™

Input Sources

- Camera
- Wowza GoCoder™
- Audio
- Encoder
- SHOUTcast or Icecast
- Video on Demand
- IP Camera

SRT
Accepting SRT enabled streams as of August 21

Prepare
- Transrate
- Transcode
- Transmux
- Encrypt

Deliver
- Apple® HLS
- MPEG-DASH
- Adobe HDS
- MSS

Deploy

Output Devices

- TV
- Gaming
- Tablet
- Computer
- OTT
- Mobile

Devices

WOWZA media systems

SRT in Wowza Streaming Engine – Today

Locations with "dirty" networks

Capture and Encode with SRT Enabled Equipment

Eliminate Expense and use the Internet

Ingest SRT into Streaming Engine Origin for Packaging

Delivery to any device, anywhere

SRT to Origin for:

- **Expensive Bandwidth**

- **To Increase Quality**

- **Poor Connectivity**

SRT Provides:

- **Reliability**

- **Low-Latency**

- **Security**

WOWZA media systems

Roadmap: Mobile Capture

Locations with "dirty" networks

Capture via Mobile Encoder enabled with SRT

Eliminate Expense and use the Internet

Ingest SRT into Streaming Engine Origin for Packaging

Delivery to any device, anywhere

Mobile Capture & Encode:
- **Send via Cellular or Internet**
- **True Mobility with Highly Reliable Streams**

WOWZA media systems

Roadmap: Origin-Edge

| Locations with "dirty" networks | Capture and Encode with SRT Enabled Equipment | Eliminate Expense and use the Internet | Ingest SRT into Streaming Engine Origin for Packaging | Long Haul transport from Origin to Edge servers | Delivery to any device, anywhere |

SRT Origin-Edge:
- **Improve Long-haul Quality**
- **Decrease Long-haul Network Costs**
- **Improve Long-haul Latency**

Roadmap: Cloud Distribution

Locations with "dirty" networks

Capture and Encode with SRT Enabled Equipment

Eliminate Expense and use the Internet

Inject SRT into Streaming Engine Origin for Packaging

Distribution via Cloud CDN

Delivery to any device, anywhere

SRT Server to Cloud:
- **Distribute via Wowza Streaming Cloud**
- **Easy CDN target**

WOWZA
media systems

SRT in Wowza Streaming Engine

➢ Secure, reliable, transport to the origin server if you have:

- Poor network conditions

- Replace expensive bandwidth (Satellite or Dedicated Network)

- Desire to increase the quality of your video without increasing bandwidth

➢ Help build engaging, two-way video streaming applications

➢ Reliably syndicate your stream from any SRT enabled encoders

➢ Provide flexibility for your ingest infrastructure

➢ Replace proprietary Transport Protocol platforms

SRT READY

WOWZA
media systems

Upcoming SRT Alliance Activities – Don't Miss it!

Date	Activity
September 2017	10% Promotional Discount Offers
Sept. 15-19	IBC 2017 – Get your SRT Demos! Visit Haivision (14.L16) & Wowza 14.C08) at IBC. Book a meeting! Get your pass! VIP Code 13819
Sept. 17 12:15-2:15pm	SRT Alliance Open Meeting – Presentation & Lunch by Haivision & Wowza Room G105 at the RAI in Amsterdam
Sept.17 2:30 - 4:00pm	SRT Alliance Members Meeting Room G105 at the RAI in Amsterdam

ibc 2017

SRTALLIANCE
SECURE RELIABLE TRANSPORT

Limited Time Offer!

10% Discount

10% Off Perpetual License for the Streaming Engine
10% Off Makito X Encoder and/or Decoder
10% Off KB Mini Encoder/Transcoder

PROMO CODE: WowSRT17
Limited time offer! Certain conditions apply.

Q&A

Questions about SRT & the SRT Alliance?
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