**RIST, SRT and RTMP in a Nutshell**

This course is designed for users who want to explore the use cases and basic functions of these technologies and who want an unbiased comparison between them. After completing this course, students should understand the capabilities of these protocols, how they work, and how to select products with the right features for their applications.

Each module begins with a short video overview. Most modules include a short quiz to help reinforce key topics and check comprehension of key topics. At the end of the course, a link is provided to a knowledge test that covers the entire course. Participants who achieve a score of at least seventy percent on the knowledge test will be awarded a “Certificate of Accomplishment” for successfully completing the course.

Course Outline

Broadcast Quality Video Transport

- BQVT Defined

- Consumer, Business Class, and Broadcast Quality

- Key BQVT Attributes

- Impact of Packet Loss

BQVT Applications

- Example Application

- REMI/at Home Production

- Contribution, Distribution and Delivery

Protocol Alternatives

- Proprietary

- RTMP

- SRT

- RIST

Network Considerations

- RTT

- Public vs. Private Networks

- Connectionless vs. Connection-Oriented

- Firewalls

Protocol Capabilities

- Packet Retransmission

- TCP and Media Streams

- Null Packet Deletion

- Network Bonding and Seamless Switching

- Forward Error Correction (FEC)

- NACK-Based ARQ example using RIST

Encryption Choices

- Pre-Shared Key (PSK)

- Datagram Transport Layer Security (DTLS)

- PSK and DTLS Tradeoffs

RTMP – Real Time Messaging Protocol

- Primary Applications

- Milestones

- Protocol Building Blocks and Capabilities

- RTMP Status and Flash Phase-Out

- RTMFP

SRT – Secure Reliable Transport

- Primary Applications

- SRT Milestones

- Building Blocks and Documents

- SRT Capabilities

- SRT Handshake Ver. 4 and 5

RIST – Reliable Internet Stream Transport

- RIST Project Objectives and Milestones

- Building Blocks and Versions

- Industry Standards and Related Work

Industry Support

- RTMP

- SRT

- RIST

- Open-Specification vs. Open-Source

Performance Comparisons

- Format Usage Survey

- SRT vs. RTMP

- RIST vs. SRT