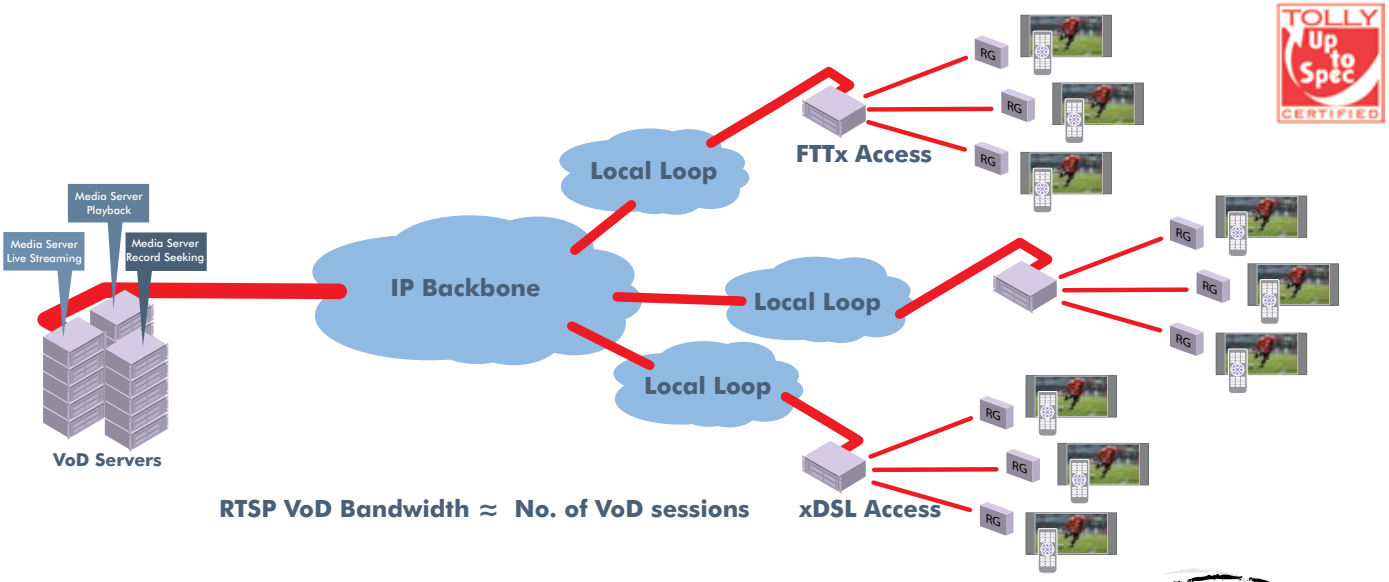
Testing VoD with diversifEye™

Implementing Video on Demand over IP networks has the potential to become a true 'killer application' for service providers hungry for new revenue sources. However, performance of VoD services becomes key for end customers who will naturally demand high levels of video quality of experience in a variety of converged IP application scenarios, such as triple play. Those responsible for the deployment of VoD services must be aware of the practical limitations of their network from video head end to end viewer. Providers must have a clear indication of what their customers will experience under a variety of network conditions. Key decisions such as whether to implement a unicast real time streaming (RTSP) approach or to deploy multicast (IGMP) methods must be based on pragmatic and realistic quality and performance assessment. Shenick diversifEye™ provides the essential tools to determine key performance and quality metrics under a multitude of easily configurable network conditions. The results are increased confidence in deploying high quality optimised VoD services infastructure coupled with accelerated return on investment.

2007 FROST & SULLIVAN Global Product Innovation Award

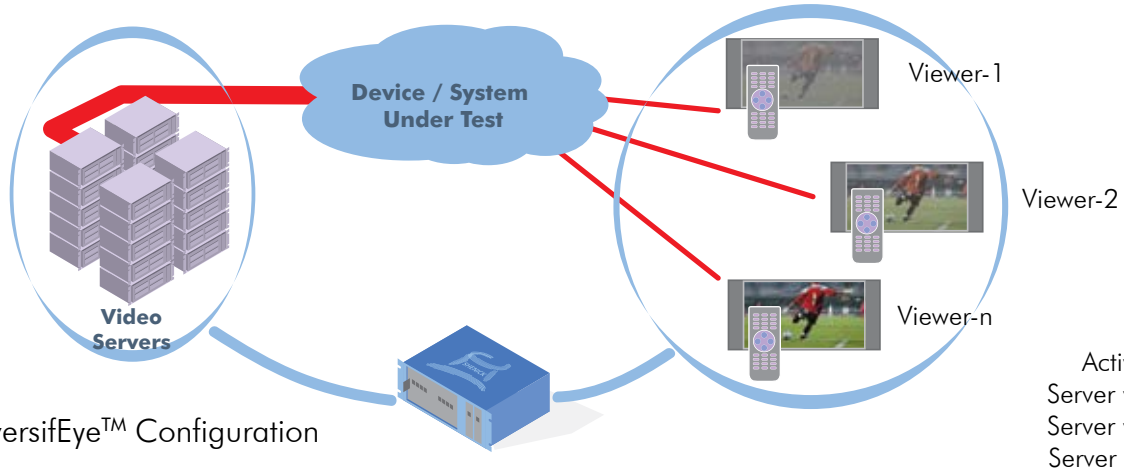
TOLLY Up to Spec CERTIFIED



Sample VoD test scenarios

REALITY CHECKED™ SHENICK

- **Passive and Active Video Analysis.**
  diversifEye™ offers video perceptual analysis capabilities for both active, i.e. comparison of source media stream and subscriber received stream and passive which applies real time analysis to any video stream.
- **Performance of VoD services as part of triple play package offerings.**
  In practical terms VoD services will share with other VoIP, IPTV and high speed internet data applications.
- **VoD under demand surge conditions.**
  Major TV event emulation where viewers create simultaneous demands.
- **Test RTSP video on demand server and middle-ware functions.** VoD Server vendors offer a variety of value add feature and middle-ware access mechanisms which can be tested with diversifEye™
- **Assessment of unicast RTSP versus multicast IGMP deployment.**
  Unicast methods such as RTSP naturally consume multiples of bandwidth greater than multicast but also offers other advantages such as independent stream control and true 'on demand' service. Test both scenarios.
- **Test of RTSP based value add services.**
  Individual and collective response to pause, rewind and input buffering etc.



Sample diversifEye™ Configuration

Active MOS Scores for:
Server vs Viewer-1 = 1.33
Server vs Viewer-2 = 2.67
Server vs Viewer-n = 4.67

Software Specification

- Per RTSP based VoD viewer configuration, emulation and quality of experience analysis.
- RTSP VoD Server testing of vendor specific value added services.
- Test RTSP supplementary services such as pause, rewind, buffer control.
- Collective aggregate view of overall VoD performance for all viewers.
- Residential gateway emulation, with per IP flow QoS (diffServ code point (DSCP/ToS) support). Assign multiple application flows per subsystem.
- Passive real time TV/Video channel and Active (PEVQ) Video analysis. Emulate video head end server with IGMP channel change capability. Analyze any video format (MPEG2,4 etc.) full suite of ITU J.144 derived quality metrics including perceptual quality, blockiness, chrominance, bluriness etc.
- DHCP & PPPoE support.
- Compare RTSP against IGMP based VoD (support for IGMP v1,1,3, MLDv2).
- Full RFC compliant TCP stack with configurable TCP stack parameters.
- Support for concurrent data application emulation (HTTP, SMTP/POP3) and attack emulation (Virus/Worm, DDoS, Spam).
- IPv6 Test Full interworking IPv4 and IPv6 (MLDv2 supported).
- Captured PCAP file replay (TCP/UDP).
- Demand surge condition generation.

KEY FEATURES AND BENEFITS

- Test ability of network to handle real world VoD traffic scenarios under normal, high demand and attack conditions.
- Test key RTSP features such as buffering, pause/rewind capability.
- Compare both unicast (RTSP) and multicast (IGMP) VoD models for performance and quality.
- Test under converged IP test conditions such as the triple play of VoIP, IPTV/VoD, Data.
- Determine key performance metrics from VoD server, network and individual viewer quality of experience.
- Highly scalable test platform supporting emulation of thousands of VoD users.
- Completely integrated test system with low cost of ownership and ease of use. Avoids necessity for multiple test systems and non integrated software applications.

Europe | Brook House, Corrig Avenue, Dun Laoghaire, Dublin, Ireland. **Tel:**+353-1-236-7002 **Fax:**+353-1-236-7020
North America | 533, Airport Boulevard, Burlingame, CA 94010, USA. **Tel:**+1-650-288-0511 **Fax:**+1-650-745-2641
web: www.shenick.com **email:** info@shenick.com

(Shenick Version No. - v1.1)