

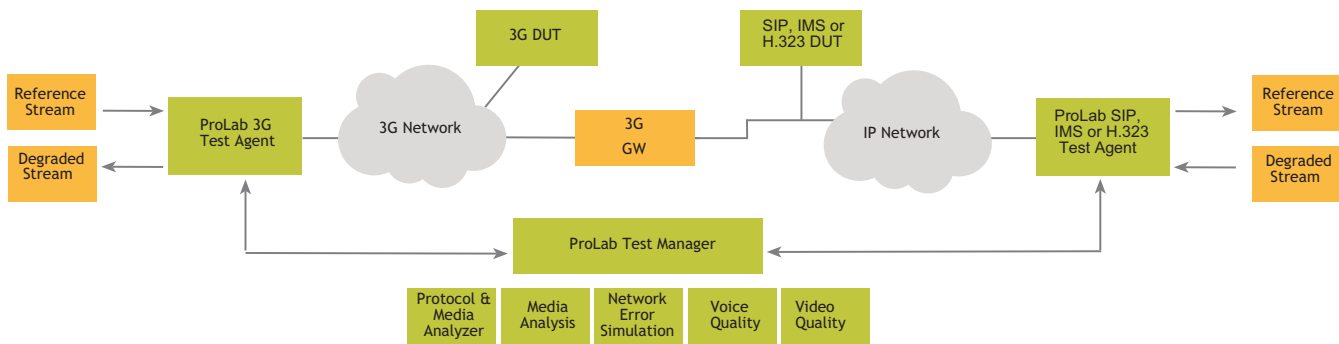
ProLab™

Protocol & Media Analyzer

A comprehensive tool for media analysis and quality testing over IMS, IP and 3G networks



The ProLab Protocol & Media Analyzer is a powerful analysis tool for media analysis and quality testing, monitoring and simulating network problems and performance. Emulating network problems is a highly effective and cost-efficient way to test network applications and equipment in laboratory conditions, providing the ability to uncover problems prior to deployment.



For SIP, IMS and H.323

Statistics are available for the following:

Total packets transmitted and received per RTP session or per scenario, general RTP information, latency, bandwidth utilization, RTCP information, Video Key Indicators and RTP delay measurement.

Automated RTP Testing

Automated RTP testing provides the ability to test a device simultaneously by running various network simulations and topologies, using different modes, such as periodic, pareto, random, and Poisson.

Network Errors Simulation and Status for SIP and H.323

This module enables simulating RTP network problems for all calls or for a specific RTP session for both SIP and H.323 Test Agents. Various types of network problems can be simulated for each RTP stream. Statistics are available for the following: packet loss, delay, corrupted payload, corrupted SSRC, duplicate packets, packets ordering.

RTP/RTCP Standards Supported:

- RFC 1889 and 1890 (RTP/RTCP)
- DTMF RFC 2833

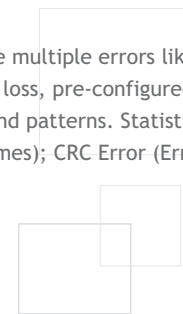
For 3G-324M

Media Monitoring and Statistics for 3G-324M

The ProLab Protocol & Media Analyzer allows monitoring of all streams sent and received by ProLab 3G-324M Test Agents. Statistics are available for the following: frame distribution; bandwidth utilization; video indicators, including the intra frame (video fast update) and video frame rate per second; stuffing; Mux layer, including statistics with regard to PDUs; Mux layer error; retransmission H.324, using H.245 as its control protocol; line utilization, including statistics on the bandwidth and stuffing per call.

Network Errors Simulation for 3G-324M

This module provides the ability to simulate multiple errors like CRC errors, synchronization errors, audio frame loss, pre-configured and user-defined bit errors, video frame loss, and patterns. Statistics are available for the following: frame loss (Frames); CRC Error (Errors); and Synch Losses (Errors).



VoIP Media Analysis & Quality Testing

The VoIP Protocol & Media Analyzer enables advanced analysis and monitoring of all the media streams, including packet loss, jitter, latency, bandwidth, and RTP delay. It also simulates multiple error network conditions, such as packet loss, duplicate packets, delay, and corrupted payload, and monitors the call signaling IMS, SIP, H.323, and SDP, as well as media quality, including audio and video.

Voice Quality

The ProLab Media analyzer analyzes Voice Quality, measured by digitized voice lines. MOS is based on the subjective opinions of actual users rating the quality of the voice line on a scale from 1-5. The model provides measurements based on packet loss, jitter, and round trip delay.

Video Quality

The new perceptual Video Quality measurement uses different video metrics. It intrusively analyzes received video streams and perceptually scores relevant degradations on a 5-point MOS scale. Additional key performance indicators (KPIs), like PSNR and blockiness, are output to allow experts to make a more detailed analysis. Video Quality measurement can be used for IMS, SIP, H.323 and 3G-324M.



Network Status Bandwidth utilization per channel Simulate network problem Allow to view multiple media simultaneously

ProLab Video Quality features: analyze video quality by call and frame; video quality report by call and frame; basic and advanced video quality analysis.

About RADVISION

RADVISION (NASDAQ: RVSN) is the industry's leading provider of high quality, scalable and easy-to-use products and technologies for videoconferencing, video telephony, and the development of converged voice, video and data over IP and 3G networks. For more information please visit our website at www.radvision.com

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ProLab Video Quality Key Metrics for video services such as video telephony over IMS, IP, and 3G networks:

Frame MOS-The frame MOS is a measure of quality of each individual video frame

Sequence MOS-Sequence MOS is the quality metric of the video sequence until the final frame is analyzed

PSNR-PSNR is the Peak-Signal-to-Noise Ratio between a processed video frame and its synchronized reference video frame

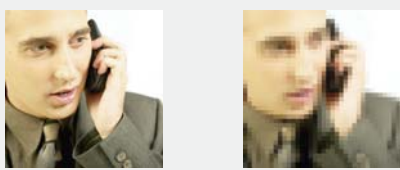
Frame freeze events-The number of times non-consecutive frame freezes occurred until the current frame

Frame skip events-The number of times non-consecutive frame skips occurred until the current frame

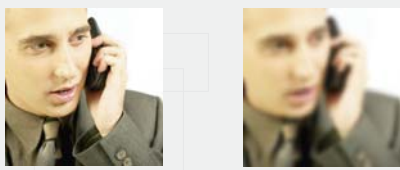
Blockiness-Block distortion is a special degradation caused by coding impairments

Blurriness-Blurriness is a spatial degradation and is mostly caused by coding impairments

Jerkiness-Jerkiness is the result of video frames being skipped to reduce the amount of video information the system is required to transmit or process per unit of time



Blockiness



Blurriness

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