

# the MediaPro

## Online, Session-oriented IP Multi-media Analyzer

The MediaPro™, a cutting-edge, high-performance, session-oriented IPMM (IP Multi-media) analyzer, provides accurate problem detection, fast troubleshooting and IP network performance analysis.

Intended for the QA Engineer testing high volume next generation architectures and solutions, or for the engineering team in charge of deployment and maintenance of the increasingly loaded IPMM live network, the MediaPro provides complete signaling and media analysis, including QoS, video and voice quality. It detects problems such as inefficient bandwidth utilization, inefficient packet loss recovery mechanisms, poor compression mechanisms, non-optimal jitter buffer length, quality degradation under stress, inadequate VAD (Voice Activity Detection) mechanisms and long signaling setup durations. In addition, full drill-down capabilities enable isolating every level of the signaling and media planes.

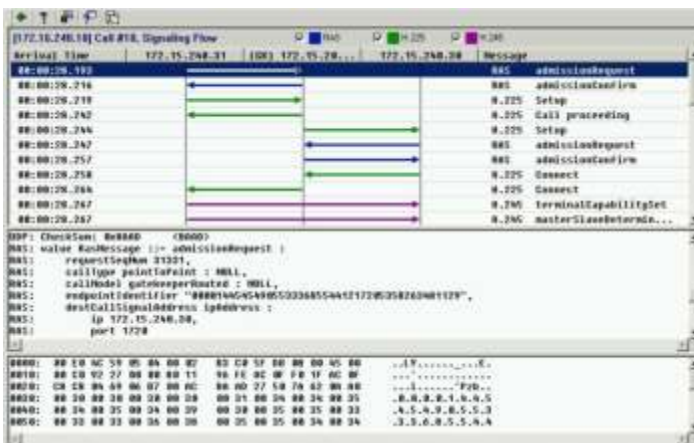
The MediaPro associates signaling and media per call-base, and provides a full view of the calls executed by VoIP/PSTN devices in the VoIP network. It is the ultimate solution for IPMM troubleshooting, debugging and regression tests.

The MediaPro provides high performance session analysis using dedicated hardware, based on the GEAR (GEneric Analyzer), RADCOM's processor chip.



### Highlights

- ▶ Allows real-time IPMM network analysis.
- ▶ Provides high performance capture capability.
- ▶ Uses dedicated hardware, based on RADCOM's GEAR chip.
- ▶ Connects to 10/100/1000 Mbps Ethernet and other networks.
- ▶ Associates signaling, voice and video streams per call base.
- ▶ Provides an embedded jitter buffer consultant.
- ▶ Evaluates non-intrusive voice quality monitoring based on the industry standard ITU-T G.107 E Model (MOS and R-Factor evaluation).
- ▶ Evaluates objective voice quality using PESQ (ITU-T P.862) and PAMS.
- ▶ Supports multi-IPMM signaling, including SIP, H.323, MGCP, Megaco, SCCP, NCS, TGCP, SIPT, C-SIP and more.
- ▶ Calculates enhanced jitter and inter-packet delay variation using an automatic expected packet length mechanism.
- ▶ Allows audio transparent playback taking into account jitter, packet loss, silence suppression and packet order.
- ▶ Allows video transparent playback taking into account jitter and packet loss.
- ▶ Provides statistic reports and graphs.
- ▶ Provides enhanced hardware filtering capability including:
  - Protocol filtering.
  - Source and destination IP addresses.
  - Calling party number, called party number.
  - Closed call filter of signaling failed calls.
- ▶ Provides automatic test capabilities through the MasterScript, a powerful scripting tool.
- ▶ Provides analysis of cRTP traffic.



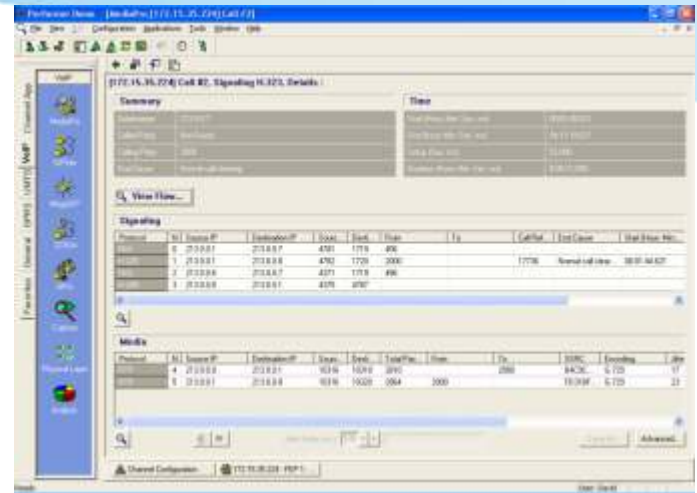
Call signaling flow

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## Signaling Analysis

The MediaPro supports IPMM signaling, including SIP, H.323, MGCP, Megaco, SCCP, NCS, TGCP, SIPT, C-SIP and more. The MediaPro associates all the signaling streams, RTP and RTCP streams per call-base, providing a clear flow of the signaling call messages, including all the signaling endpoints that participate in the call. The MediaPro provides an accurate timestamp of each perceived signaling and media packet in the network, enabling accurate measurement of call setup durations. In addition, a CDR (Call Detail Record) is provided for each call in the network.

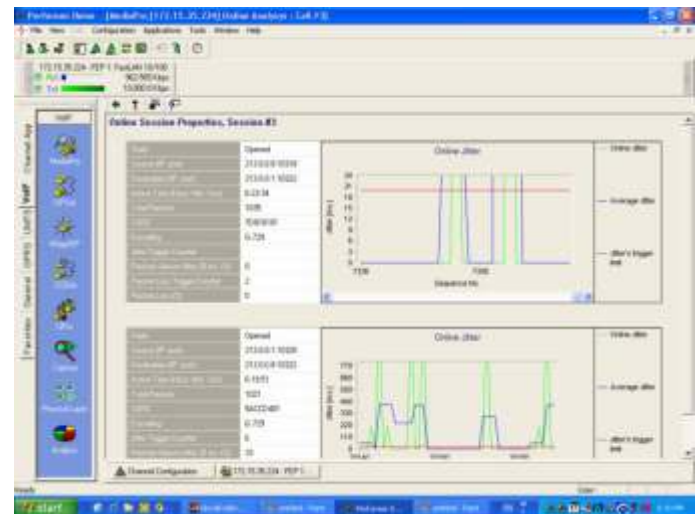


## Media Analysis

The MediaPro provides expert diagnosis and analysis of the voice and video streams.

## RTP Packet Analysis

The MediaPro provides detailed packet analysis of RTP streams by evaluating packet delay variation, packet loss, jitter and other parameters that help benchmark the performance of the DUT (Device Under Stress), including the jitter buffer. Furthermore, the MediaPro identifies the "problematic packets" (such as duplicated packets, out of sequence, etc). The MediaPro supports audio playback of G.711, G.723, G.729, G.726, GSM-AMR and GSM-FR RTP streams and video playback of H.263 and MPEG4 RTP streams.



## Non-intrusive Objective Voice Quality Monitoring

The MediaPro objectively evaluates the media quality of any live traffic-based calls according to the MOS scale (ITU-T P.800), based on the network succession industry standard ITU-T G.107 E model (which provides R-Factor evaluation) and voice quality evaluation.

## Objective Voice Quality Evaluation

The MediaPro provides objective intrusive voice quality testing based on PESQ (Perceptual Evaluation of Speech Quality) ITU-T P.862s, and PAMS (Perceptual Analysis Measurement System) for calls of complementary system components that activate calls and simulate the network environment.





## The Performer

The Performer is a comprehensive solution for pre- and post-deployment stages, R&D verification, stress testing, troubleshooting and recurring IPMM, Cellular and VoD system performance testing. It generates realistic network environment stress levels on new VoD devices and applications, and then tests the quality and grade of service delivered. Additionally, the Performer provides session-oriented Consultants, using a wide range of interfaces based on the GEAR. The GEAR is a proprietary generic analyzer processor chip offering hardware-based full line rate analysis capabilities at up to 2.5 Gbps.

### IP Multi-media Performer Suite

The IP Multi-media Performer is a comprehensive IP test solution integrating both GEAR based hardware and software. Controlled from an easy-to-use console, the complete Performer SoIP suite includes the SIPSim™, 323Sim™, IPMM call generator, MediaPro™ session-oriented IPMM consultant and QPro™ voice quality evaluation tool.

## Target Users

Developers use the MediaPro to analyze equipment under stress, verify standard compliance and assess signaling integrity during development stages.

QA labs utilize the MediaPro to analyze equipment in order to substantiate Quality of Service and voice quality.

Service providers and carriers use the MediaPro to test different systems, analyze price-performance, verify system integrity for the deployment stage and confirm standard compliance verification for interoperability issues.

3G cellular operators use the MediaPro to evaluate and employ IP services in their cellular networks.

Field service personnel utilize the MediaPro to identify and troubleshoot network segments that may affect audio quality.

## Specifications

Full wirespeed Fast Ethernet and Giga Ethernet

Analyses up to 20,000 simultaneous calls and 2,000 RTP streams per segment

Jitter resolution:  $\pm 1$  msec

Packet delay variation resolution:  $\pm 1$  mSec

Packet loss resolution:  $\pm 0.01\%$

MOS (Mean Opinion Score) resolution:  $\pm 0.01$

Identifiable stream types: H.323, Megaco, Skinny, SIP-compliant signaling streams, MGCP-compliant signaling streams RTCP, and RTP media streams on IP

Audio playback of G.711, G.723, G.729, G.726, GSM-AMR and GSM-FR RTP streams

Video playback of H.263 and MPEG4 RTP streams

Compatible product for offline mode: RADCOM's PrismLite™, Sniffer (.CAP, .ENC)

### Cellular Performer Suite

The Cellular Performer is a comprehensive cellular test solution for vendors, QA and integration labs, R&D and operators. Based on the field-proven Performer platform, it integrates RADCOM's proprietary GEAR. The complete Cellular Performer suite offers a range of applications for troubleshooting 2.5 and 3G networks, including GPRS, UMTS and CDMA2000.

### Performer Analyzer

The Performer Analyzer is a comprehensive datacom test solution. Based on the field-proven Performer platform, it integrates RADCOM's proprietary GEAR which provides hardware-based full line rate capture and analysis at up to 2.5 Gbps.

The Performer Analyzer uses RADCOM's proprietary powerful hardware-based GenFEP, offering a flexible and upgradeable solution as well as a wide range of full line rate technology and protocol independent capabilities. The complete Performer Analyzer suite offers a wide range of technologies and applications for analyzing, decoding and troubleshooting datacom networks.

### Performer Console

PC: Pentium IV 1.4 GHz, 512 MB RAM or more (recommended)

Monitor: VGA 1024 x 768

Hard disk: Minimum 4 GB free for program files  
At least 2 GB recommended for data storage

Operating system: Windows 2000/XP

### Performer Servers

R1000, Rack-mount 2U, Performer Server (single segment)

Number of FEPS: Up to 2 plus Sync cards

Dimensions: w x d x h: 440 x 470 x 89 mm (17.5 x 18.7 x 3.5 in)

R4000, Rack-mount 5U, Performer Server up to 4 segments

Number of FEPS: Up to 8 plus Sync cards

Dimensions: w x d x h = 430 x 680 x 220 mm (17 x 27 x 8.7 in)

P1000, Portable Server

Number of FEPS: Up to 3, plus Sync cards

Dimensions: w x d x h: 360 x 480 x 130 mm (14.17 x 18.9 x 5.11 in)

### Ordering Information

PA-MediaPro

PA-MediaPro-PESQ

PA-MediaPro-PAMS

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