RADCOM ENSURES A WORLD OF IP SERVICES IN YOUR NETWORK

RADCOM, an acknowledged leader in network test and quality management solutions, offers innovative multi-technology testing equipment for VoIP, Cellular and Datacom system performance, providing session, network and service level analysis for troubleshooting and monitoring the IP UMTS, GPRS and CDMA2000 networks, as well as a range of applications for establishing, maintaining and monitoring VoIP networks.
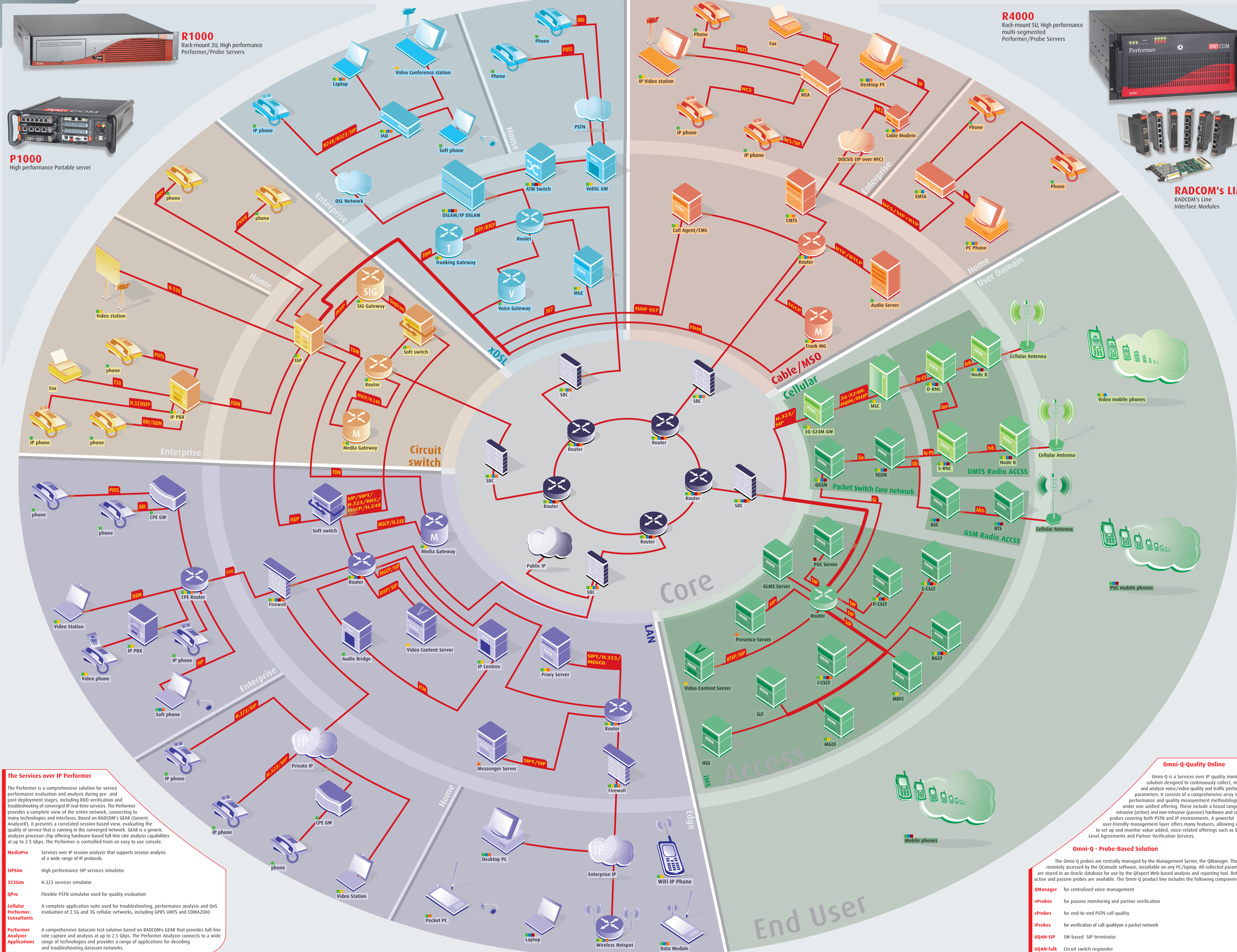
TEST-OF-THE-ART

Services

Centrex — Central Office Exchange service in which switching occurs in the local telephone station instead of at company premises

Data Service — Ability to access services which are not time sensitive, such as Web browsing, file transfer, Mail

IVR — Interactive Voice Response, an interactive voice application that accepts touch-tone telephone keypad and provides appropriate response (such as voice, fax and call-back call)

Presence & IM — Presence is a service that defines the status of a user PC, IP phone or PDA in the network. The Presence service allows the configuration of whether, and by whom to be reached.
IM (Instant Messaging) is the ability to send short messages in near real time to other IM users who are connected to the IM server, according to its status

PTT — Push To Talk over services, a half-duplex form of communication that allows users to engage in immediate communication with one or more receivers.
PTT services are used in the 2.5G & 3G cellular networks known as PoC (Push to talk Over Cellular). Working group: 3GPP, 3GPP2, IETF. Additional developed PTT-based services are PTV (Push To View).

SMS/MMS — SMS, Short Message Service, similar to paging service for sending text messages between phones
MMS, Multimedia Message Service, a method for transmitting graphics, video clips, etc.

Video — Enables motion pictures in addition to audio communication through the network of two participants or more. Several common video services are:
Video streaming (Video On Demand) User playback of video files through the network. Can be done by file download (clips), or real-time transmission using a buffer with no need for local storage. There are two types of video streaming applications: playback service (movie playback) and real-time streaming such as IPTV.
Video telephony Enables video and audio conversation through the network of two participants or more.
Interactive Video streaming service that can be changed during the session according to user action (such as clicking a button or digit).
Gaming Often used as video game. Service that offers interactive games played on a video screen with one or more participants in different locations.

Voice — Enables audio conversation through the network of two participants or more

Voice/Video Mail — Email system that supports voice/video. Ability to open by mail system voice and/or video messages

Technologies

ATM — Asynchronous Transfer Mode used for high data transfer

CDMA — Code Division Multiple Access Method for describing physical radio channels. CDMA2000 is CDMA technology that meets 3G requirements

DSL — Digital Subscriber Line technology that allows data transmission of up to 6.1 Mbps using ordinary telephone lines

Ethernet — Baseband LAN used to connect computers, workstations, terminals and other devices

GPRS — Offers data throughput in the 2.5G of up to 300Kbps; connects mobile cellular users to a public data network (PDN) within a GSM network

HFC — Hybrid Fiber Coax network that contains both fiber-optic cables and copper coaxial cables to carry TV signals from the head-end office to the neighborhood.

IP — IP Internet protocol (layer 3 protocol) that includes services such as address, fragmentation & reassembly, security
TCP Transmission Control Protocol; reliable octet streaming protocol
UDP User Datagram Protocol; connectionless protocol mainly used for real-time services

MBWA — Mobile Broadband Wireless Access IEEE 802.20 working group aims to prepare formal specification for packet-based an interface designed for IP services

UMTS — Universal Mobile Telecommunications System

WCDMA — Wideband Code Division Multiple Access derived from CDMA and meets 3G requirements

WiFi — Wireless Fidelity standard of Wireless Local Area Network based on the IEEE 802.11 specification

WiMax — Broadband wireless access technology based on the IEEE 802.16 working group, considered Metropolitan Area Network technology

Legend

- 🟩 Voice
- 🟨 Video
- 🟦 Data
- 🟥 PoC
- 🟧 Presence & IM

R1000
Rack-mount 2U, High performance Performer/Probe Servers

P1000
High performance Portable server

R4000
Rack-mount 5U, High performance multi-segmented Performer/Probe Servers

RADCOM's LIMs
RADCOM's Line Interface Modules

The Services over IP Performer

The Performer is a comprehensive solution for service performance evaluation and analysis during pre- and post-deployment stages, including R&D verification and troubleshooting of converged IP real-time services. The Performer provides a complete view of the entire network, connecting to many technologies and interfaces. Based on RADCOM's GEAR (Generic AnalyzeR), it presents a correlated session-based view, evaluating the quality of service that is running in the converged network. GEAR is a generic analyzer processor chip offering hardware-based full-line rate analysis capabilities at up to 2.5 Gbps. The Performer is controlled from an easy to use console.

MediaPro — Services over IP session analyzer that supports session analysis over a wide range of IP protocols

SIPSim — High performance SIP services simulator of a wide range of IP protocols

323Sim — H.323 services simulator

QPro — Flexible PSTN simulator used for quality evaluation

Cellular Performer Consultants — A complete application suite used for troubleshooting, performance analysis and QoS evaluation of 2.5G and 3G cellular networks, including GPRS UMTS and CDMA2000

Performer Analyzer Applications — A comprehensive datacom test solution based on RADCOM's GEAR that provides full-line rate capture and analysis at up to 2.5 Gbps. The Performer Analyzer connects to a wide range of technologies and provides a range of applications for decoding and troubleshooting datacom networks.

Omni-Q - Quality Online

Omni-Q is a Services over IP quality monitoring solution designed to continuously collect, monitor and analyze voice/video quality and traffic performance parameters. It consists of a comprehensive array of voice performance and quality measurement methodologies, all under one unified offering. These include a broad range of intrusive (active) and non-intrusive (passive) hardware and software probes covering both PSTN and IP environments. A powerful user-friendly management layer offers many features, allowing users to set up and monitor value-added, voice-related offerings such as Service Level Agreements and Partner Verification Services.

Omni-Q - Probe-Based Solution

The Omni-Q probes are centrally managed by the Management Server, the QManager. They are remotely accessed by the QConsole software, installable on any PC/laptop. All collected parameters are stored in an Oracle database for use by the QExpert Web-based analysis and reporting tool. Both active and passive probes are available. The Omni-Q product line includes the following components:

QManager — for centralized voice management

vProbes — for passive monitoring and partner verification

cProbes — for end-to-end PSTN call quality

iProbes — for verification of call quality on a packet network

UQAN-SIP — SW-based SIP terminator

UQAN-Talk — Circuit switch responder

Protocols

3G-324M — Standard that represents real-time streaming of wireless multimedia services over existing circuit-switched wireless networks

BICC — Bearer Independent Call Control Implementation of SS7, a recommendation of ITU Q.BICC or ANSI T1.BICC

BRI — Basic Rate ISDN

DOCSIS — Data Over Cable Systems Interface Specification consisting of standards (such for modems and related equipment for data communications via cable television systems

H.320 — ITU standard for ISDN conferencing of video, audio and data

H.323 — IP protocol that is extension of ITU-T H.320 that enables multimedia

ISDN — Integrated Services Digital Network that allows high-speed access to the Internet using the telephone network

ISUP — ISDN User Part used to manage trunk circuits that carry voice and data over PSTN

Loopstart — Signaling used by analog phone lines which allows indication of onhook / offhook and ring / no-ring

Megaco — Media Gateway Control

MGCP — Media Gateway Control Protocol

NCS — Network-based Call Signaling

POTS — Plain Old Telephone Service

PRI — Primary Rate ISDN

RTP — Real-Time Transfer Protocol used in IP networks to provide end-to-end transport of delay-sensitive multimedia traffic

RTCP (Real-time Control Protocol) protocol that monitors the QoS of the RTP connection and reports on the on-going quality of the RTP stream

RTCP XR (Real-Time Control Protocol Extended Report) conveys information assessing the IP call quality and diagnosis problems

RTSP — Real-time Streaming Protocol

SGCP — Simple Gateway Control Protocol

Sigtran — Signaling Transport used to bridge between SS7 signaling and VoIP networks

SIP — Session Initiated Protocol

SIP-T — SIP for Telephones a mechanism that facilitates the interconnection of the PSTN with SIP-based networks

T.30 — ITU recommendation for document facsimile transmission in the general switched telephone network

T.38 — Standard that represents transmission of fax over IP

TGCP — Trunking Gateway Control Protocol

Glossary

BGGF — Breakout Gateway Control Function

BSC — Base Station Controller

BTS — Base Transceiver Station

CMS — Call Management Server

CMTS — Cable Modem Termination System

CPE — Customer Premises Equipment any terminating hardware owned by the user and not by the telephone company

D-RNC — Drift Radio Network Controller

DSLAM — DSL Access Multiplexer

EMTA — Embedded Multimedia Terminal Adapter

FTTC — Fiber To The Curb

FTTH — Fiber To The Home

FTTN — Fiber To The Node or Neighborhood

GGSN — Gateway GPRS Support Node

GLMS — Group and List Management Server

HFC — Hybrid Fiber-Coax

HSS — Home Subscriber Server

HSS — Home Subscriber Server

IAD — Integrated Access Device

I-CSCF — Interrogating Call Session Control Function

IMS — IP Multimedia Subsystem IP Multimedia and telephony core network defined in the 3GPP and 3GPP2 standards

MGC — Media Gateway Controller

MGCF — Media Gateway Control Function

MRFC — Media Resource Function Controller

MRFP — Media Resource Function Processor

MSC — Mobile Switching Center

MTA — Multimedia Terminal Adaptor

Node B — UMTS Base station

P-CSCF — Proxy Call Session Control Function

POC — Push-to-talk Over Cellular

PSTN — Public Switched Telephone Network

SBC — Session Border Controller new layer 3 network element that provides carrier grade, secure, protocol-aware session-based network translation, firewall traversal, and QoS/SDM functionality for real-time, multimedia communications

S-CSCF — Serving Call Session Control Function

SGSN — Serving GPRS Support Node

SLF — Subscriber Location Function used in large IMS network where there are several HSS entities

S-RNC — Serving Radio Network Controller

UMA — Unlicensed Mobile Access roam between WiFi and GSM / GPRS networks