

**DATASHEET**

# Hammer Call Analyzer

**Intuitive VoIP Protocol and Media Analysis and Diagnostics  
Designed to Minimize Debug Time**

## FEATURES

- Real-time, multi-stage, multi-protocol, call flow display
- Auto-association of messages across signaling domains
- RTP media quality analysis, MOS scores, save and playback
- Full VoIP protocol decodes
- Intuitive, protocol aware searching, filtering and capture
- Pre-trigger packet capture
- Import standard libpcap traces for analysis
- Export standard formats for documentation

## BENEFITS

- Configurable filters and buffered triggers help capture just the data you need
- Automatically trace individual call flows to simplify analysis of complex network problems
- Advanced media analysis and displays simplify diagnosis of voice quality problems
- Analyze VoIP, IMS, and TDM calls using a single integrated analysis tool and interface
- Use third-party tools and traces to leverage advanced HCA analysis and reporting capabilities
- Flexible product licensing options for individual or team use

## ADVANTAGES COMPARED TO FREWARE ANALYZERS

- Designed specifically for VoIP analysis and troubleshooting
- Comprehensive and integrated VoIP diagnostic tools
- Supports both IP, ISDN, and SS7 for converged networks
- Comprehensive media analysis with voice quality scoring
- Secure and tested code-base
- Dedicated technical support via phone, web, or email
- Roadmap supported by a full-time development team



## Overview

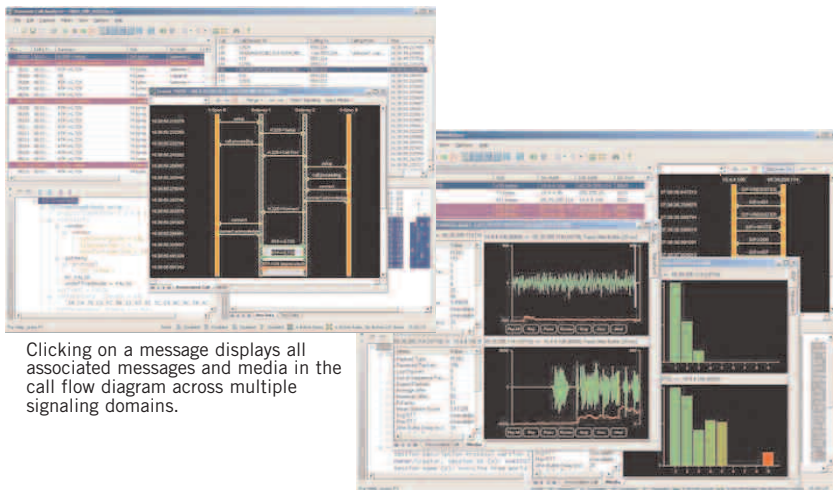
Problem diagnosis in VoIP and IMS environments is often a complex and tedious job. With calls traversing multiple devices (perhaps spanning multiple domains with different protocols), call flow, signaling, and equipment-related problems are difficult to wrestle down in even the most straightforward NextGen/IMS network implementations. This kind of troubleshooting often requires protocol experts to spend hours sifting through reams of cryptic data collected by multiple capture tools.

Fix your VoIP and free up your day with the Hammer Call Analyzer, the industry's premier tool for troubleshooting VoIP systems. Heralded by TMC Labs as "the dream tool for VoIP developers, VoIP service providers and network administrators," the analyzer speeds the debug process and dramatically boosts engineering productivity in tracing media and signaling problems through networks.

## Solve Problems Faster

The Hammer Call Analyzer is a revolutionary tool for VoIP environments. Unlike other network analyzers, the Hammer Call Analyzer is VoIP protocol-aware. With powerful capabilities designed to help engineers find the few needles in the protocol haystack.

For example, the unique multi-stage call flow display walks users through the legs of a particular call. This enables engineers to visualize problems in the way messages are exchanged between the various devices along the way and to quickly solve those problems. Similarly, comprehensive media analysis tools enable users to quickly visualize and diagnose media problems.



Clicking on a message displays all associated messages and media in the call flow diagram across multiple signaling domains.

Media metrics, color-coded waveform display with jitters graph, and Stream Quality Signature display.

## Features

### Real-Time, Multi-Stage Call Flow Display

- Graphically display call legs in real-time
- Trace signaling and correlate calls through multiple protocols, SS7, TDM, and IP
- Automatically associate all messages across multiple domains of a call (including TDM/IP) by clicking on a message
- View intuitive hierarchical display of decoded data by network layer
- Save trace data for easy sharing, or export diagrams in .emf format

### Media Display and Analysis

- Display RTP and RTCP streams and RFC 2833 digits in call flows
- View quality metrics including R-factor, jitter, packet loss on individual streams
- Visualize media problems with unique analysis tools
- Playback, analyze, and listen to streams with emulated jitter buffer
- Analyze Fax over IP (T.38)
- Measure Talker Echo (TELRL)

### Time Saving Search, Filter, Capture, and Configuration Features

- Display or capture frames based on protocol or field values
- Import and export filter and display configurations with project files
- Search for static values or use regular expressions for more flexibility

### Call List

- View real time list and status of individual call sessions
- Display summary information for each call

### VoIP and TDM Decodes

- VoIP:
  - SIP (IETF and 3GPP IMS), SIP-T, SIP over TLS, SIMPLE, H.323 (H.225, H.245, QSIG), MEGACO (H.248 V1-V3), MGCP, PacketCable NCS, Diameter, Skinny (SCCP)\*, Cisco PRI Backhaul (ISDN, QSIG), STUN, SIGTRAN M3UA & IUA, TBCP, GTP, RTP, RTCP, RFC 2833, T.38, UDP, TCP, SCTP, IP, HTTP
  - \*Authorized by Cisco
- TDM:
  - ISDN (Q.921, Q.931), QSIG
  - SS7 (ISUP, SCCP, TCAP, TUP, MTP2), CCITT/ITU and JNTT variant support

### Protocol-Aware Capture Triggering

- Monitor network traffic for specific events that will trigger a capture session
- Send e-mail notification when a trigger occurs
- Set a pre-trigger buffer to capture frames on the network just prior to a trigger event
- Start, stop, control, and configure via Command Line Interface, including remotely

### Compatibility

- Display packets captured in Sniffer, Ethereal, NetMon, any libpcap format with full Hammer Call Analyzer functionality
- Import and decode Broadsoft and Sonus logfiles

### Audio Codecs

- G.711 A-law and  $\mu$ -law, G.723.1, G.726, and G.729A/B, iLBC, GSM, AMR-NB, AMR-WB, EVRC, SMV

### Product Specifications

- Portable PC configuration for combined TDM/IP analysis
  - One or two T1/E1 interfaces per system
  - Quad Ethernet NIC
- Rack mount server configuration for combined TDM/IP analysis
  - One or two T1/E1 interfaces per system
  - Quad Ethernet NIC
- Software version for IP-only analysis
  - Windows 2000 with SP3, Windows 2003 Server, Windows XP
  - Minimum 1.0 GHz Pentium 4 CPU, 256 MB RAM
  - Flexible floating and subscription license models



Empirix is the leading provider of voice application testing and monitoring solutions. For a complete list of offices worldwide, or to find an authorized distributor in your area, please visit [www.empirix.com/contactus](http://www.empirix.com/contactus).

© 2008 Empirix. All rights reserved. All descriptions, specifications and prices are intended for general information only and are subject to change without notice. Some mentioned features are optional. All names, products, services, trademarks are used for identification purposes only and are the property of their respective organizations.