Telchemy

Actively Managing Multimedia

Managing Enterprise
IP Telephony

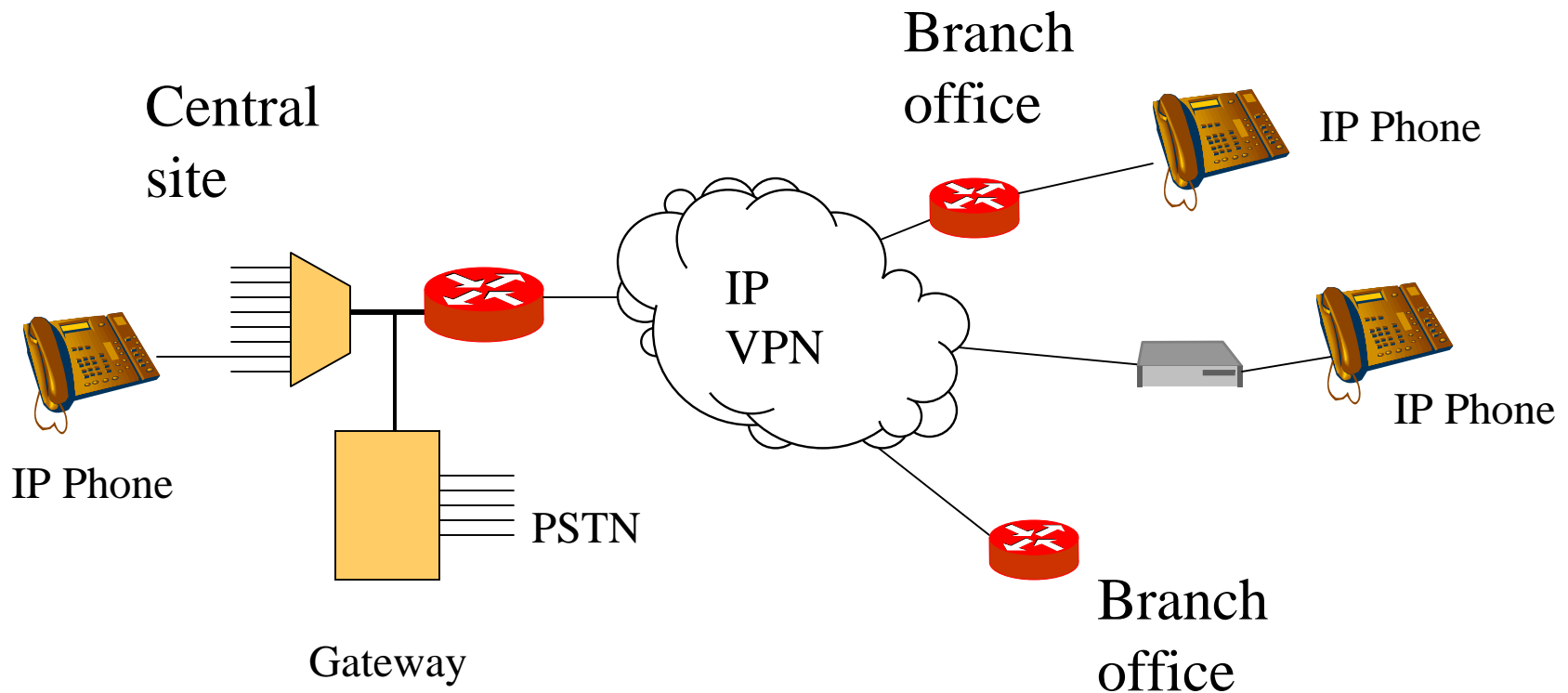John Timms

Telchemy Incorporated

Managing Enterprise VoIP

- Goals of Enteprise VoIP Management
- The Enterprise VoIP Environment
- Ideal approach to VoIP fault/ performance management
- Application to Enterprise VoIP management
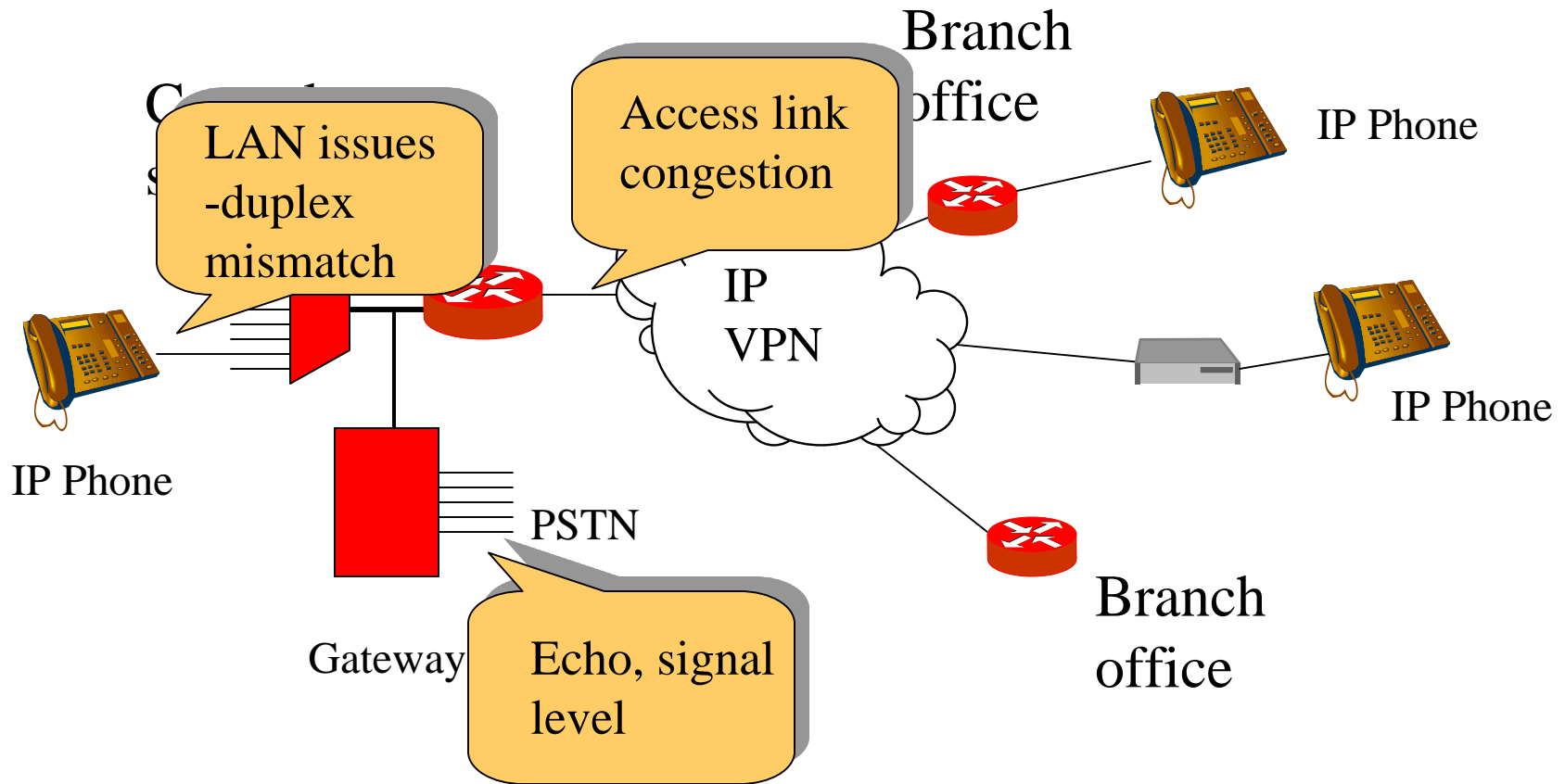- About Telchemy

Goals

- Build confidence in deploying VoIP using tools to monitor and manage

- Immediately identify and diagnose service quality affecting problems

- Extend reach of monitoring/ management tools to branch offices and teleworkers

- Integrate "best of breed" VoIP management tools into IP PBX and management system infrastructure
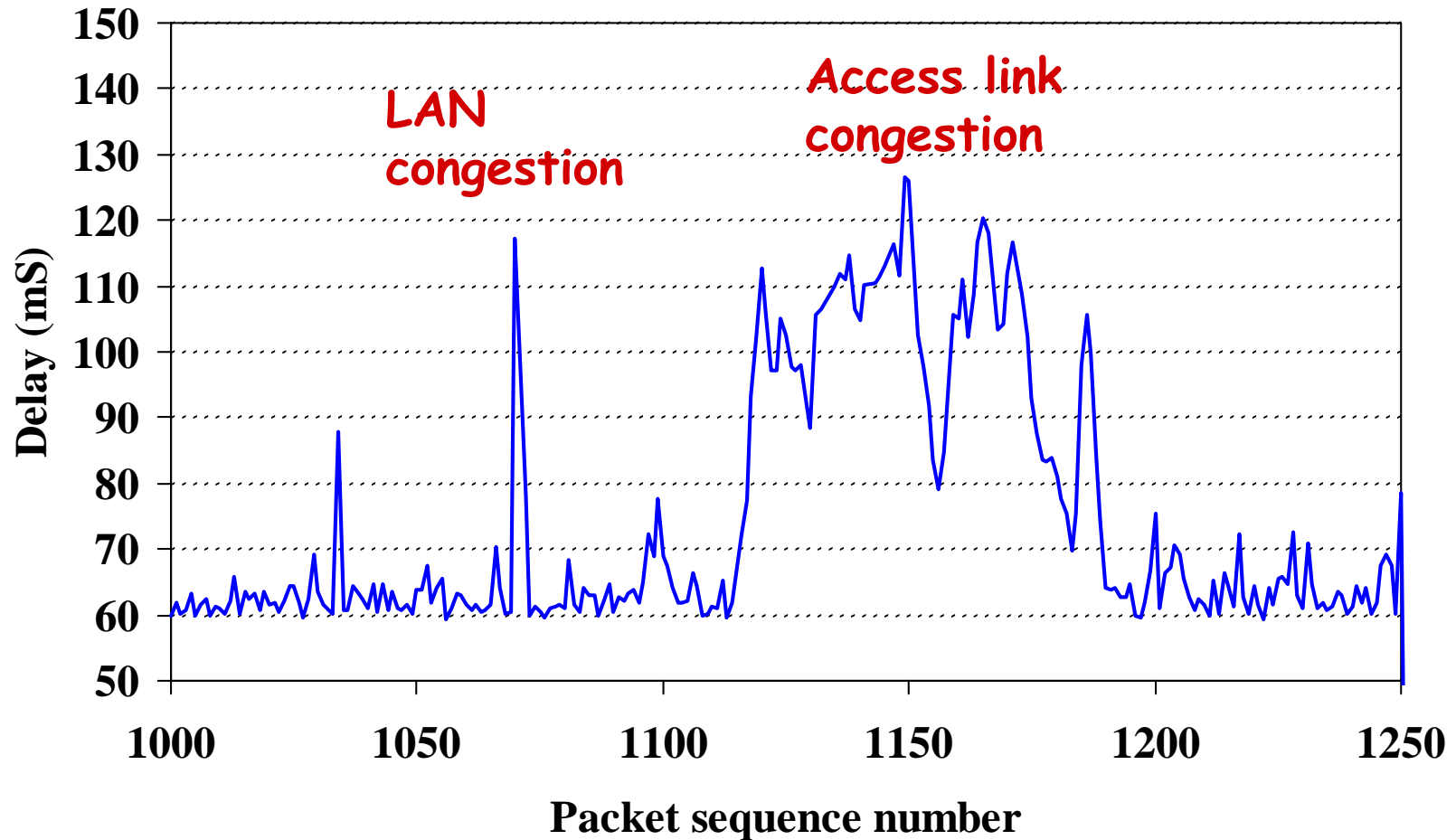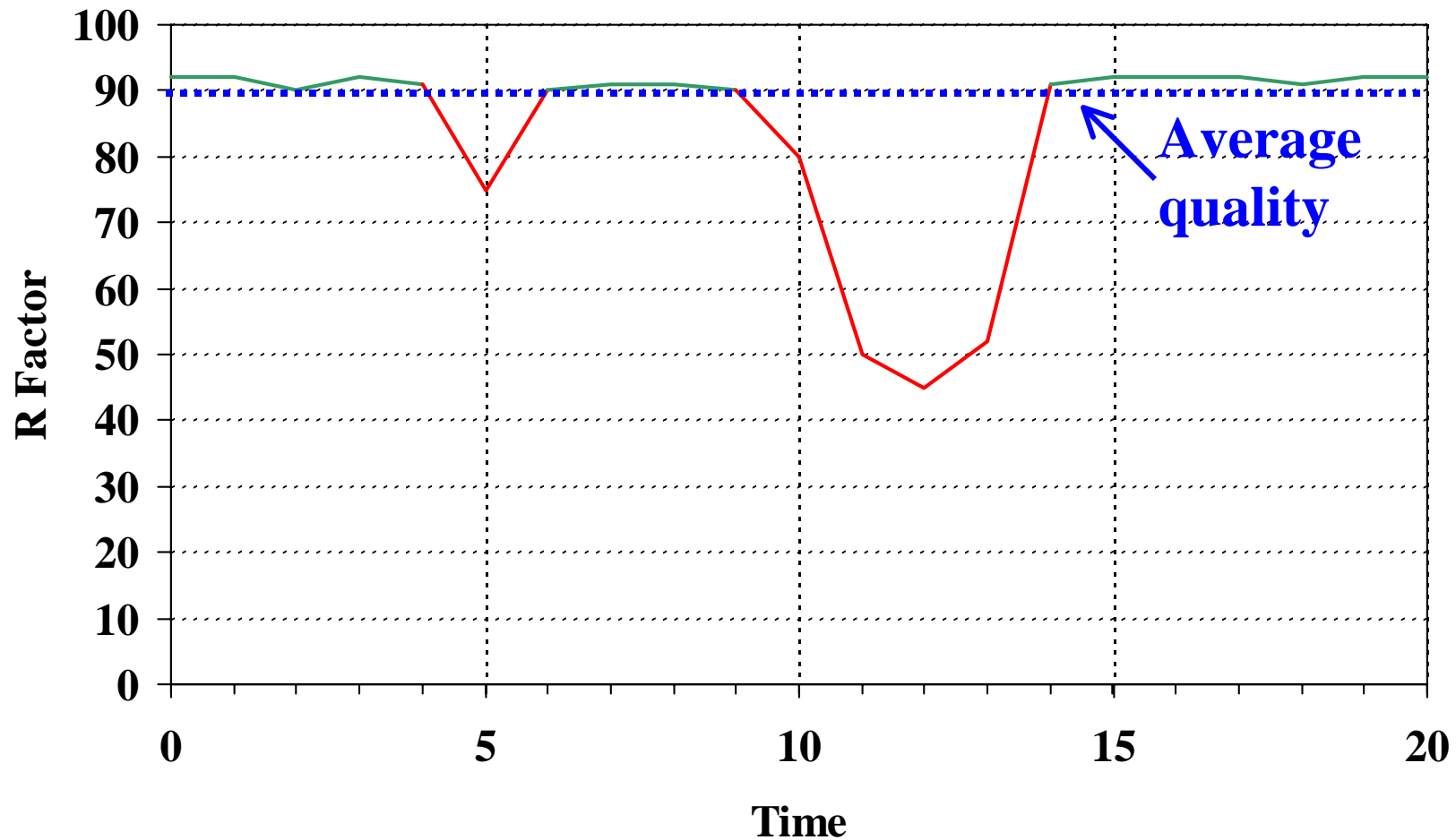
Typical Scenario

Central site

Branch office

IP Phone

IP Phone

IP Phone

IP VPN

IP Phone

PSTN

Gateway

Branch office

Typical Challenges

Impact of network issues
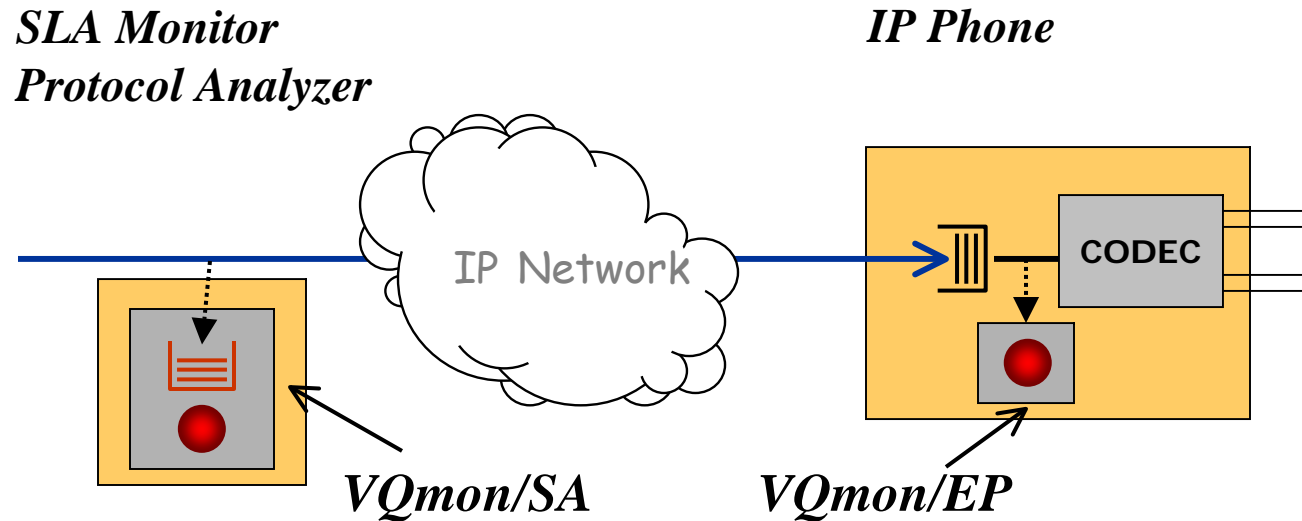
Result - time varying quality

Key message!!!!!!

- Not enough to look at average packet loss, jitter or call quality derived from these
  - Call can have a 1% average loss rate and 5mS of jitter but be severely impaired
  - Call may have 5% average loss rate and 20mS of jitter but sound acceptable
- Ideal tool – *detect and diagnose the problems that your users/subscribers would notice and potentially complain about*
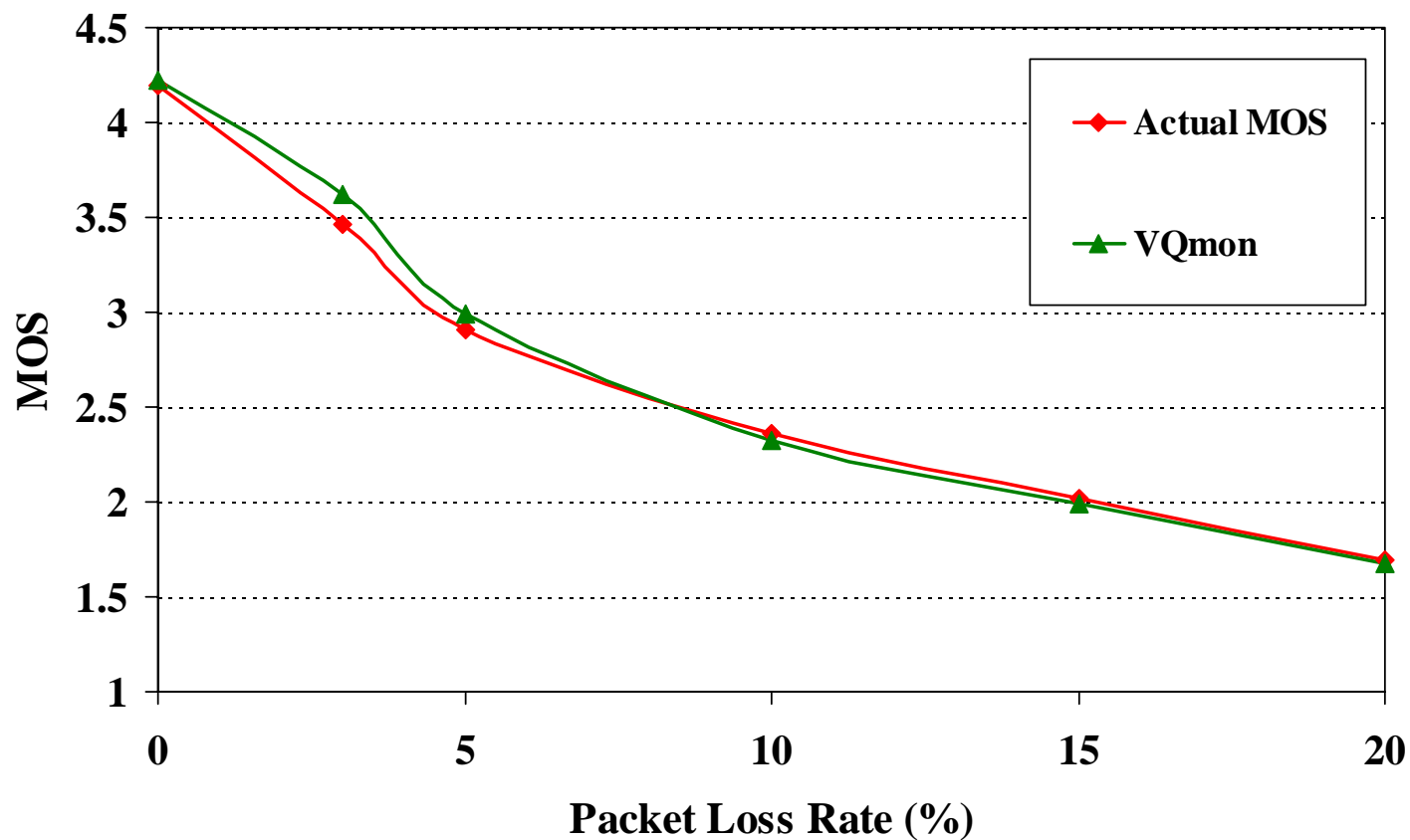
Embedded call quality monitoring

**SLA Monitor
Protocol Analyzer**

IP Phone

IP Network

CODEC

VQmon/SA

VQmon/EP

VQmon provides *real time monitoring* of large numbers of VoIP calls, measures *time varying* and *transient* impairments and provides a *perceptual quality score* with diagnostic data

Same technology can be embedded into IP Phones/ Gateways and into probes and analyzers
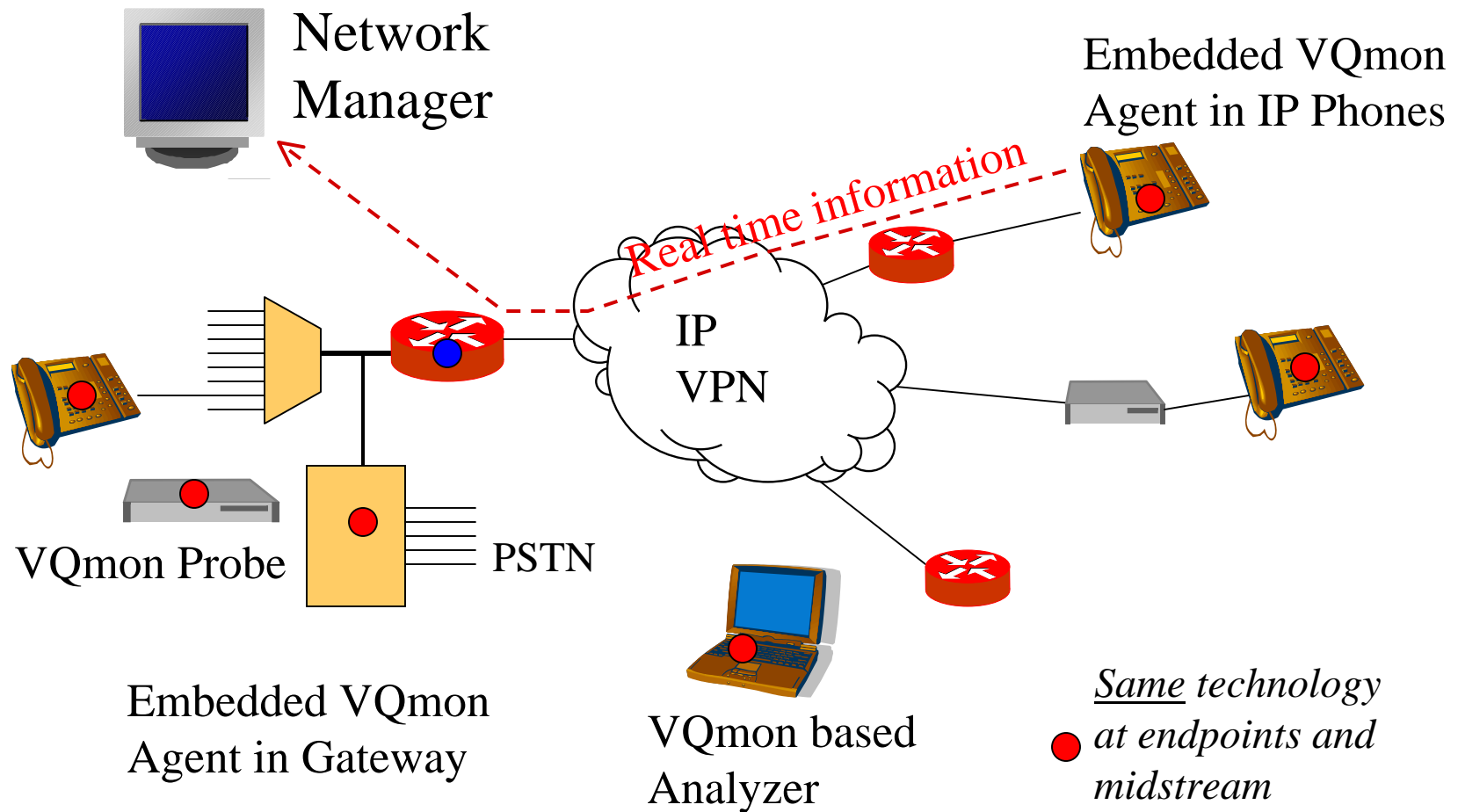
How accurate?

Subjective data from COMSAT
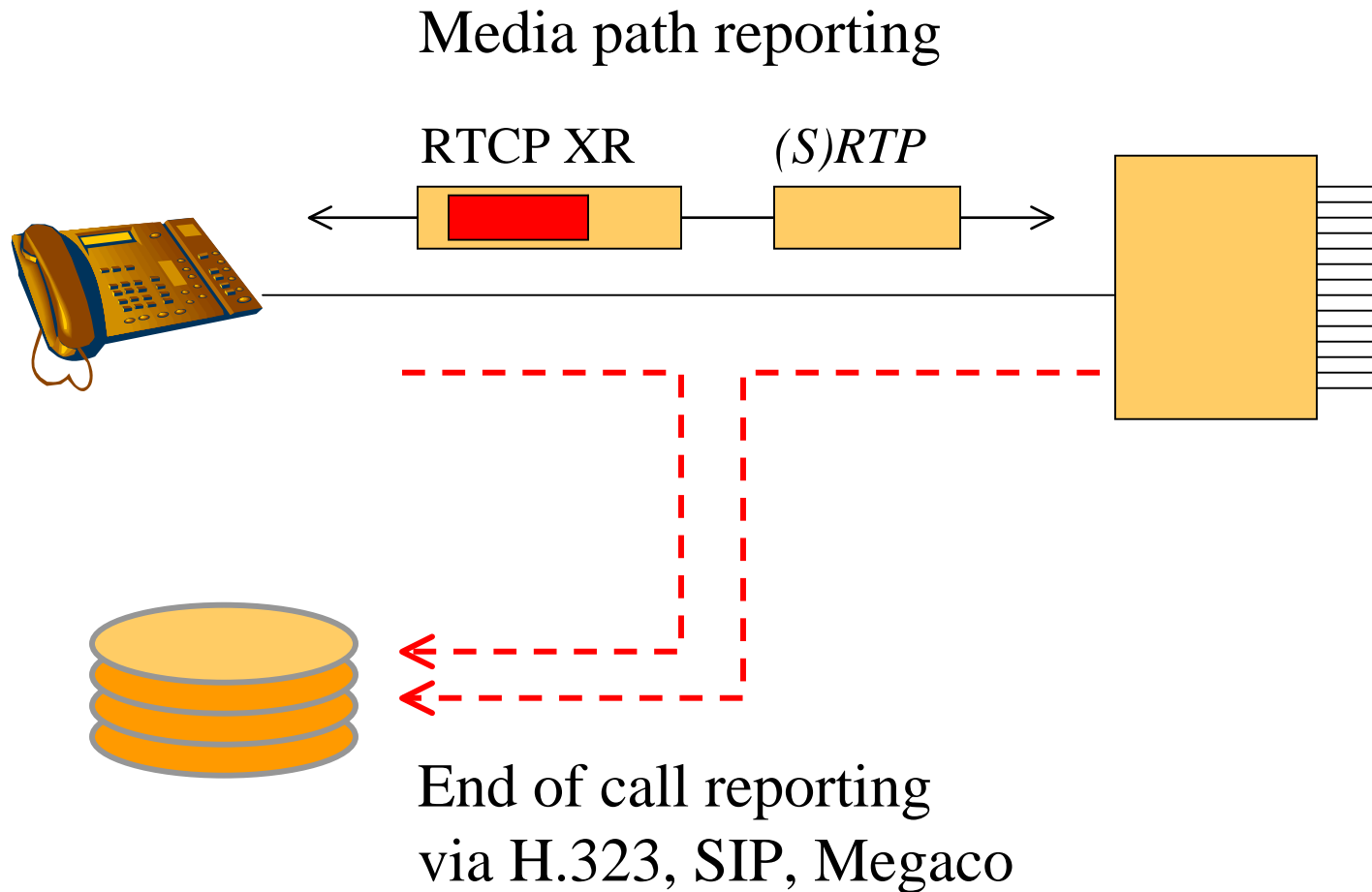
G.711 PLC

Ideal solution

Network
Manager

Embedded VQmon
Agent in IP Phones

Real time information

IP
VPN

VQmon Probe

PSTN

Embedded VQmon
Agent in Gateway

VQmon based
Analyzer

Same technology
*at endpoints and
midstream*

Integrating call quality reporting

Media path reporting

RTCP XR   (S)RTP

End of call reporting
via H.323, SIP, Megaco

Summary

- Crucial to measure and incorporate time varying impairments
- Need to support both
  - Embedded monitoring, integrated with media path and signaling protocols
  - Midstream monitoring using probes and analyzers
- Need a widely supported, multi-vendor solution

About Telchemy

- **Focus**
  - Founded in August 99, first product launched in April '01
- **Focus**
  - Providing essential management infrastructure for IP based Voice and Video services
- **Technology**
  - Two "Best of breed" products deployed since mid-2001
- **Market leadership**
  - Companies developing or marketing products supporting VQmon include:-
    - Acterna, Artiza, Brix Networks, Brooktrout, Delta Information Systems, Empirix, Finisar, Fluke, Inet Technologies, ipNetFusion, Nortel Networks, Spirent, Texas Instruments, Trinity Convergence, Visual Networks