

Telchemy

Actively Managing Multimedia

Solving IP Centrex Customer Premise Management Problems

Alan Clark

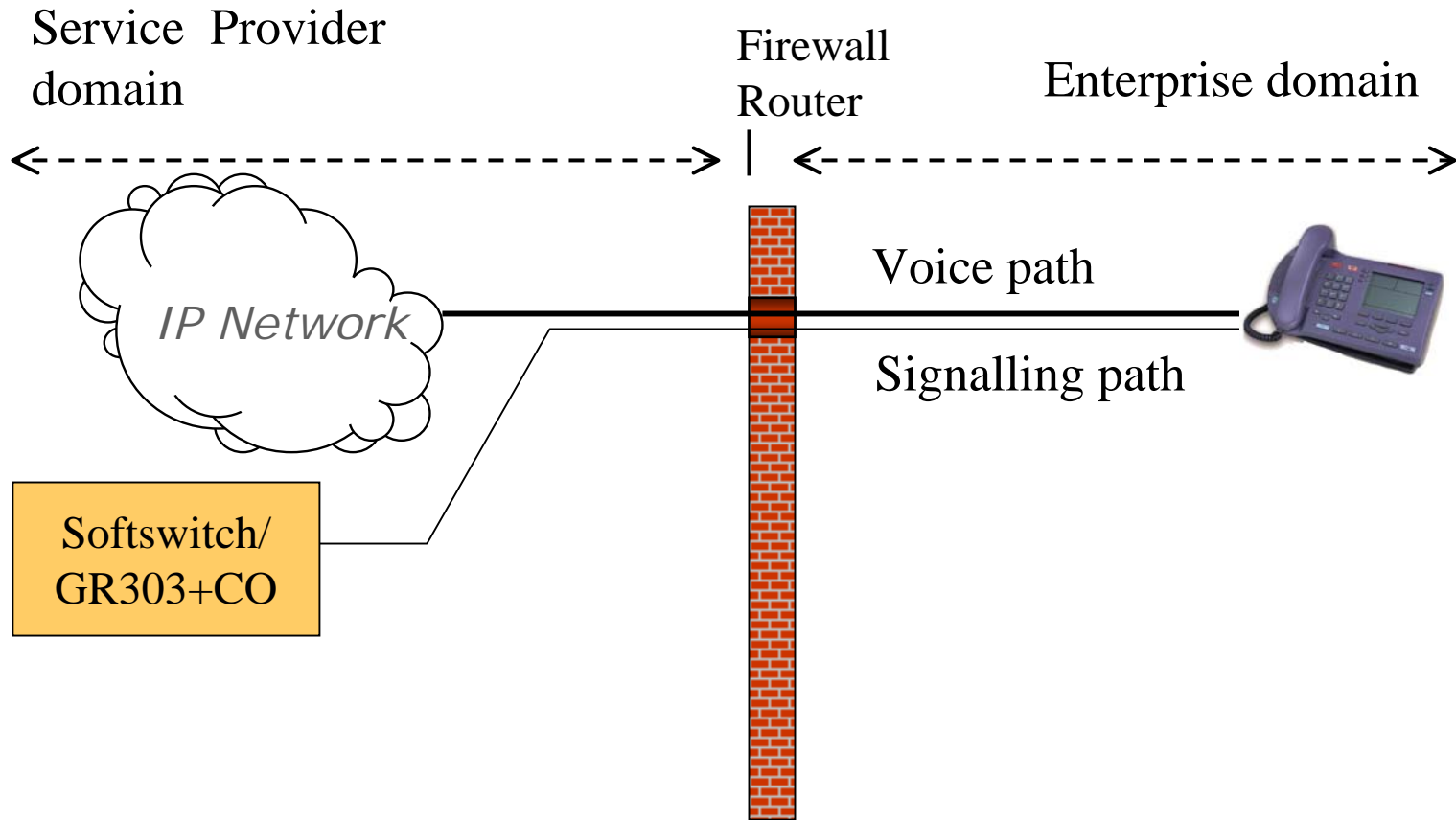
President, Telchemy Incorporated



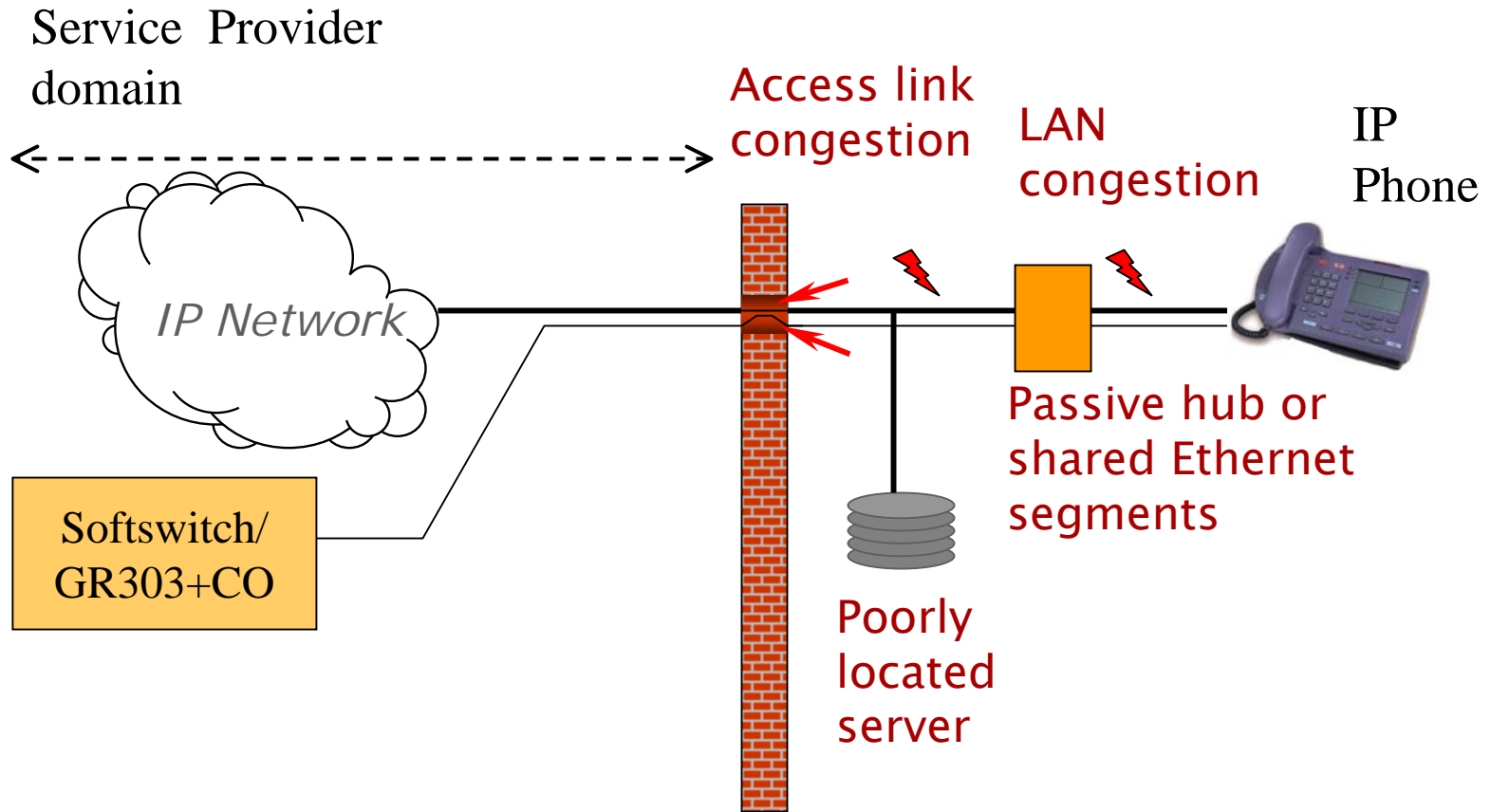
IP Centrex Management

- Customer premise management problems
- Approaches to monitoring service quality
- Integrating monitoring and management
- A solution for the customer network management issue

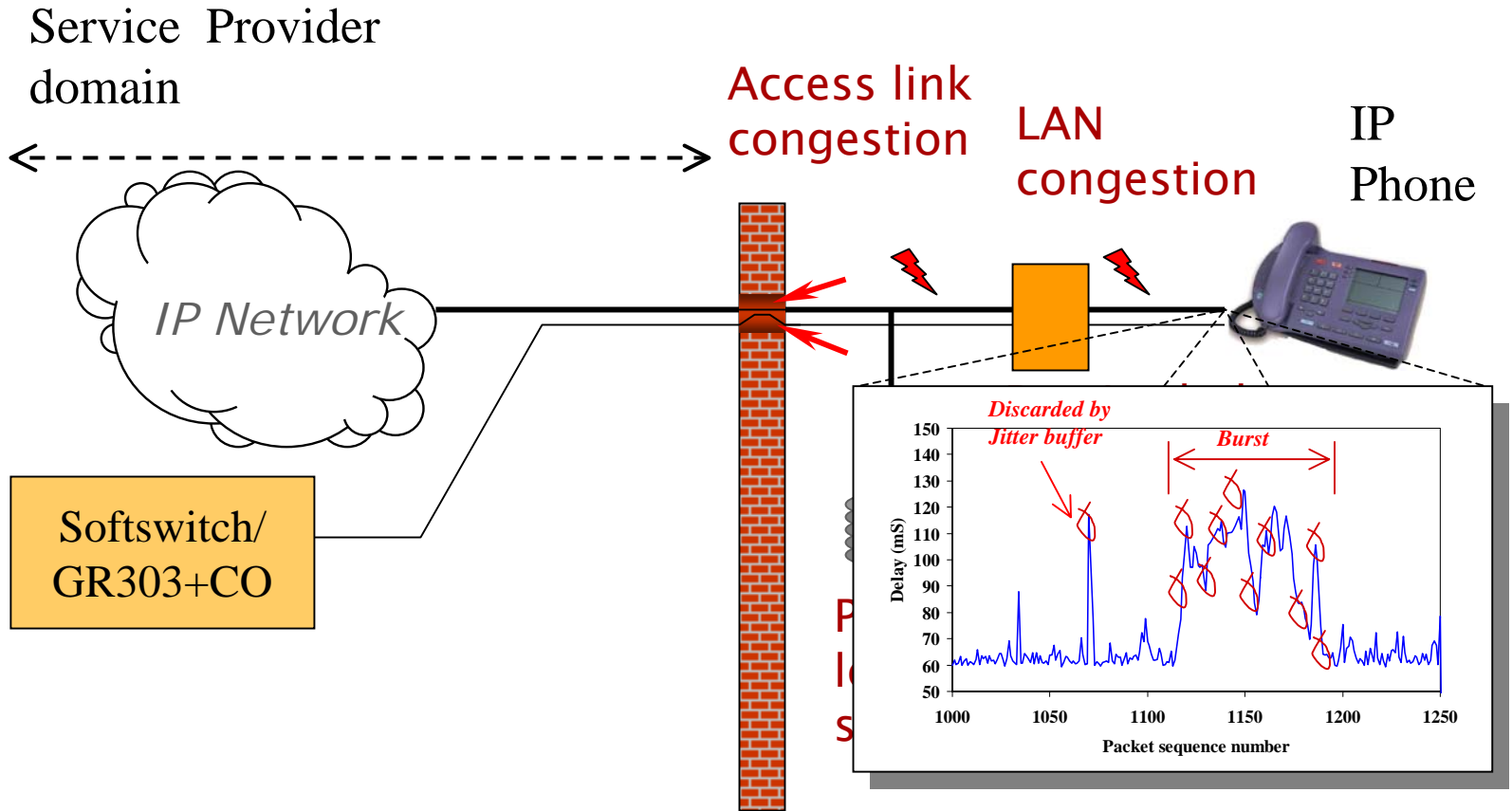
IP Centrex - Scenario



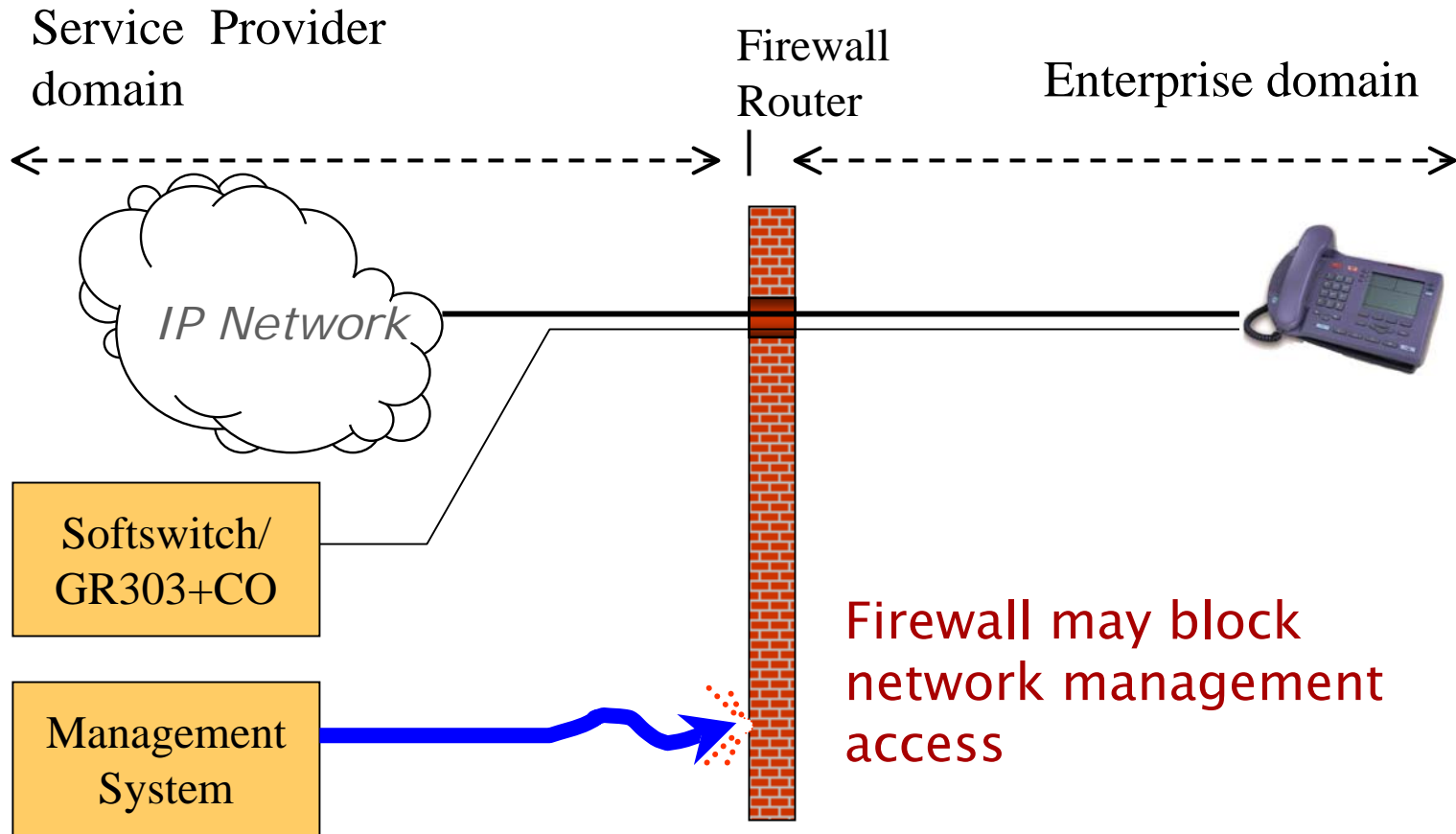
Customer LAN Issues



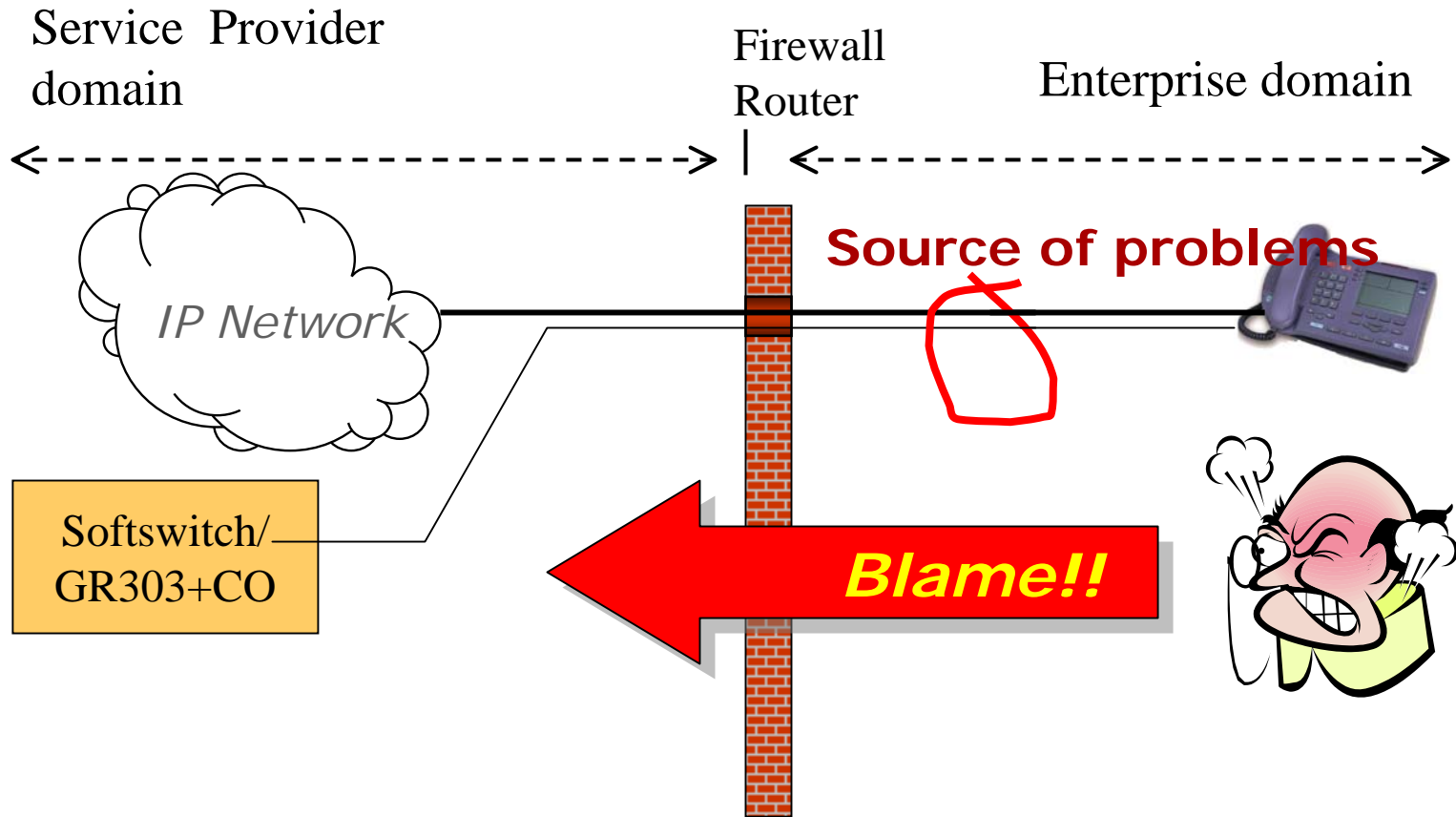
Customer LAN Issues



Lack of Management Access



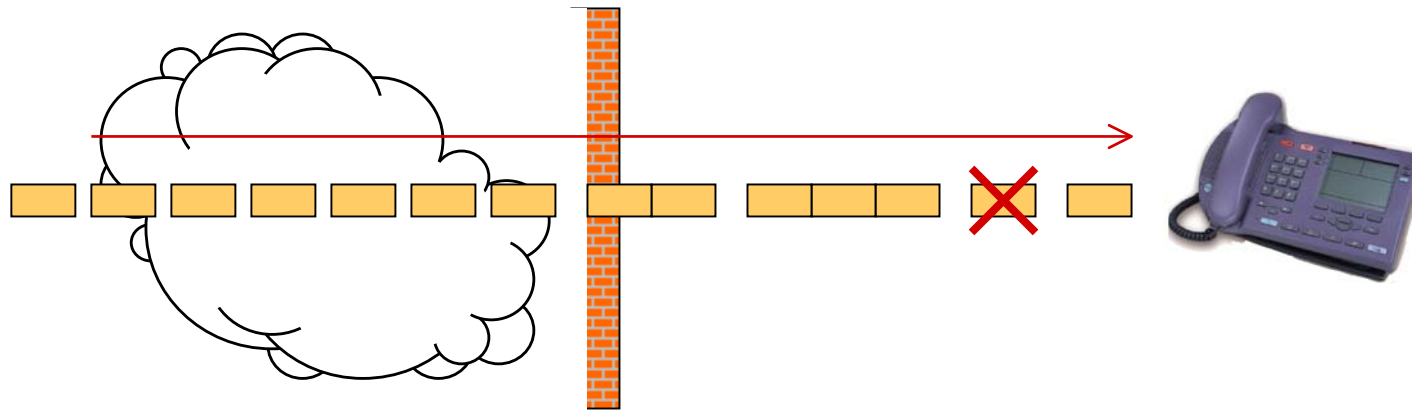
Guilty until proven innocent?



So what's the solution?

- Rapid identification of problems
 - Detect problems at the customer end of the VoIP path
- Get information on customer net problems through the Firewall
- Be proactive in informing customers that they have service-quality-affecting problems

IP Phone's viewpoint?



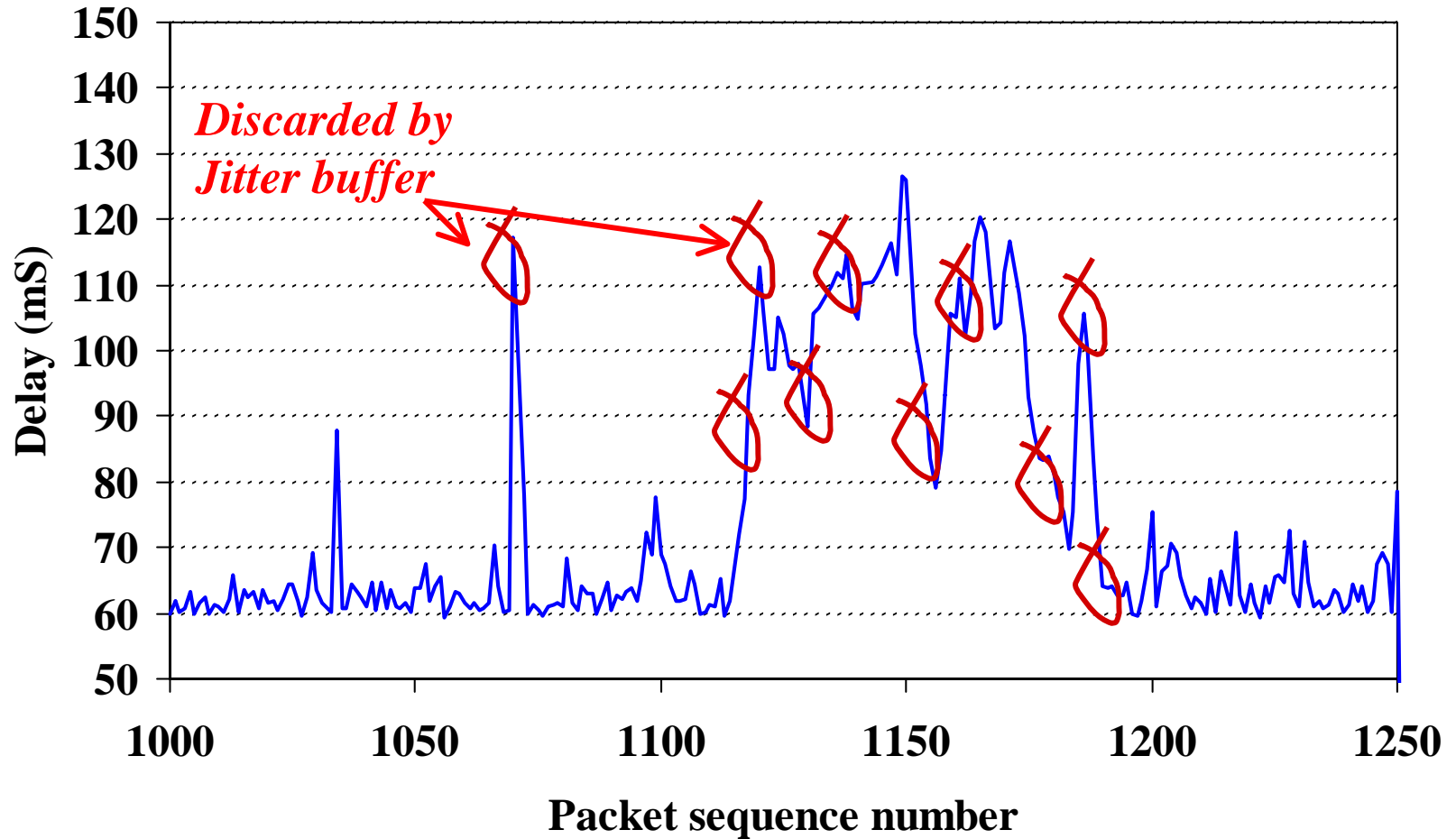
Impairments from:

Service provider
IP network

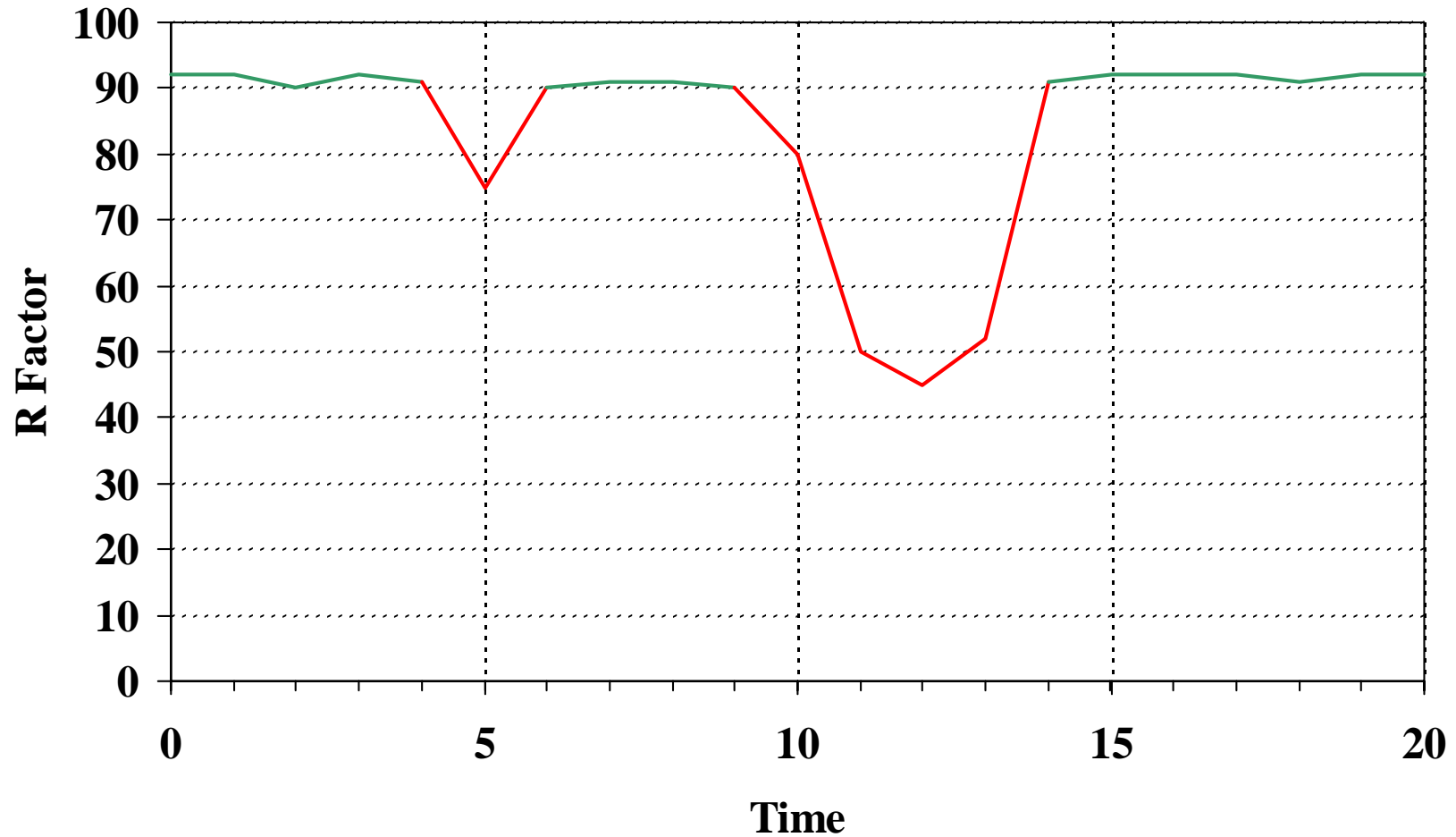
Access
Link

LAN

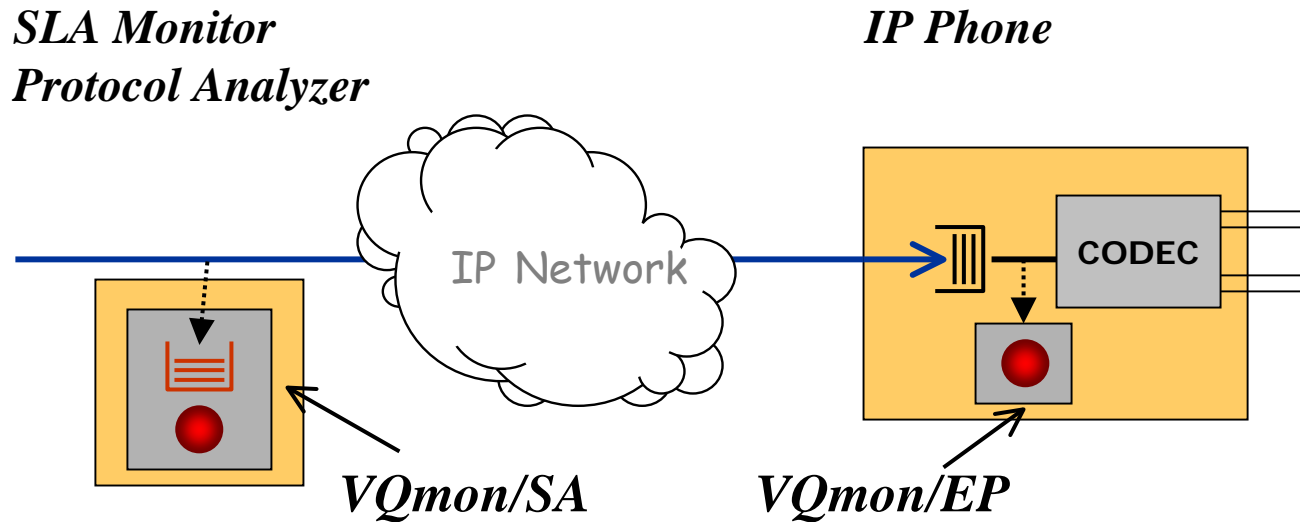
IP Phone's viewpoint?



Result - time varying quality

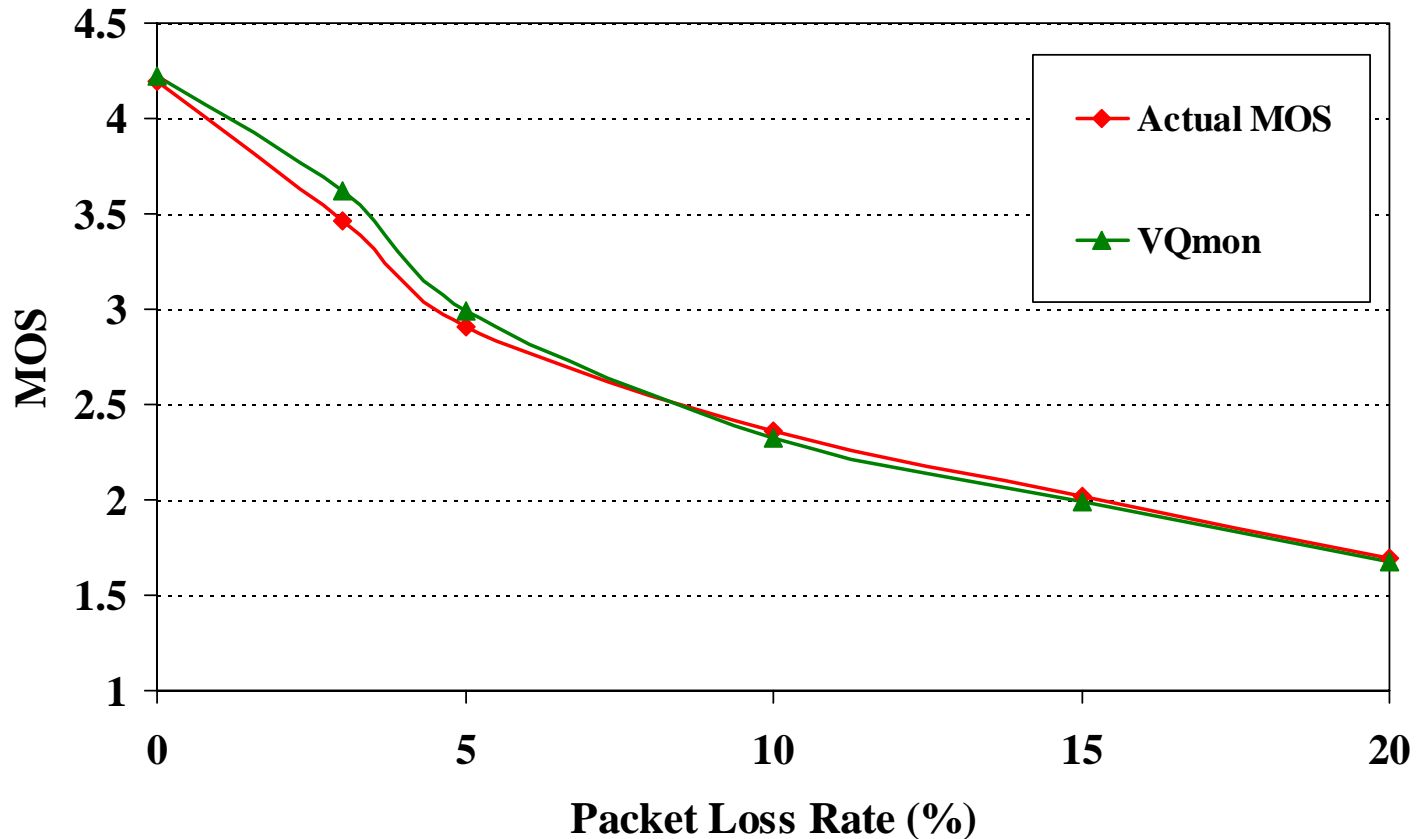


Embedded call quality monitoring



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

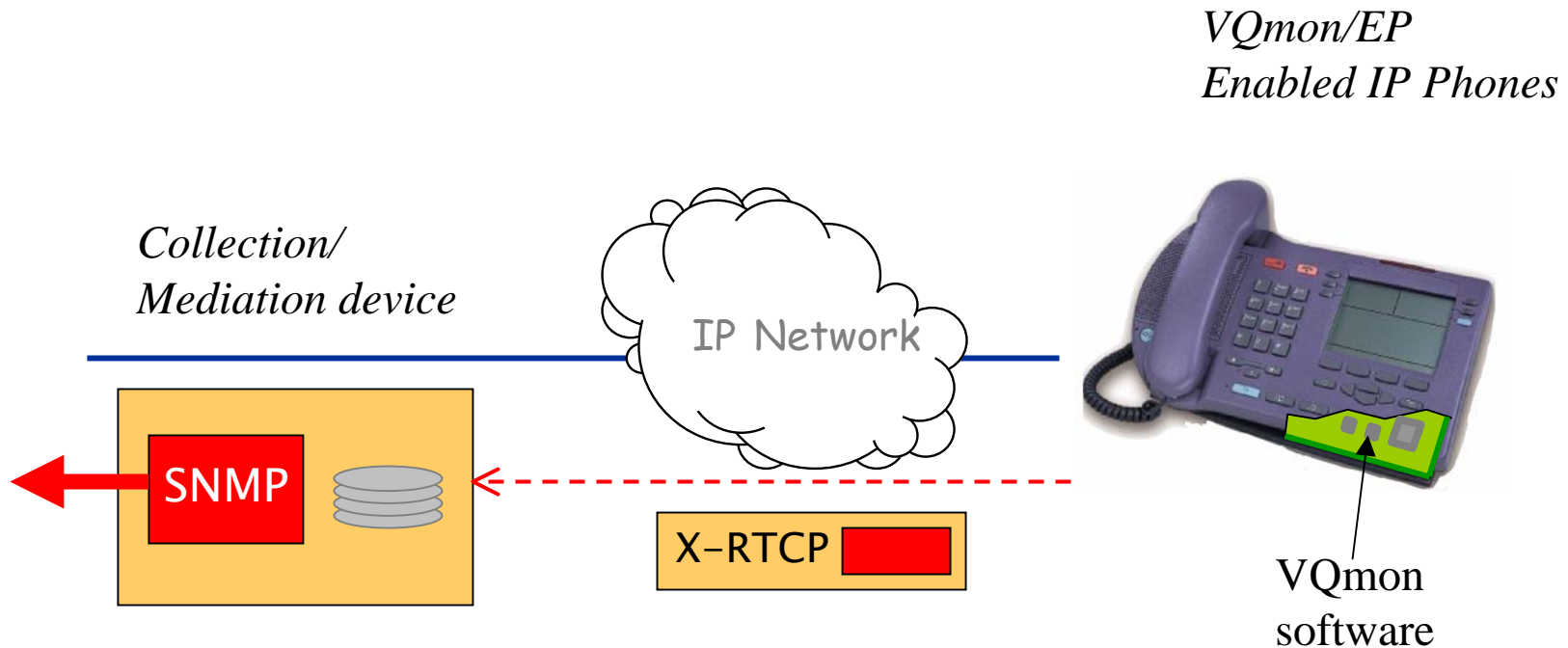
How accurate?



Subjective data from COMSAT

G.711 PLC

Extended RTCP

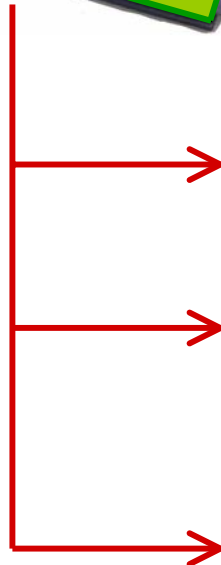
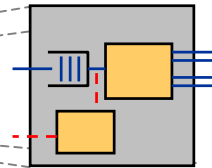


The new RTCP Reporting Extensions draft provides an ideal way to get metrics from an IP phone, through a Firewall and to a management system

Implementation in IP Phone



VQmon/EP software embedded
into phone control uP/DSP



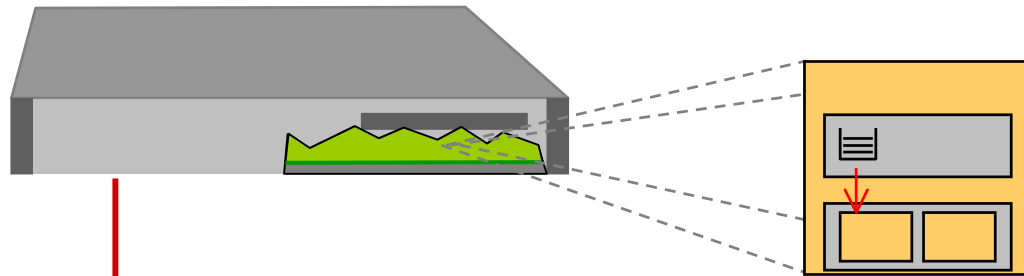
Call quality metrics in end-of-call
message (e.g. H.323 DRQ)

Call quality metrics in Extended RTCP
message (X-RTCP) during call and/or at
end-of-call

Other formats - XML, SNMP...?

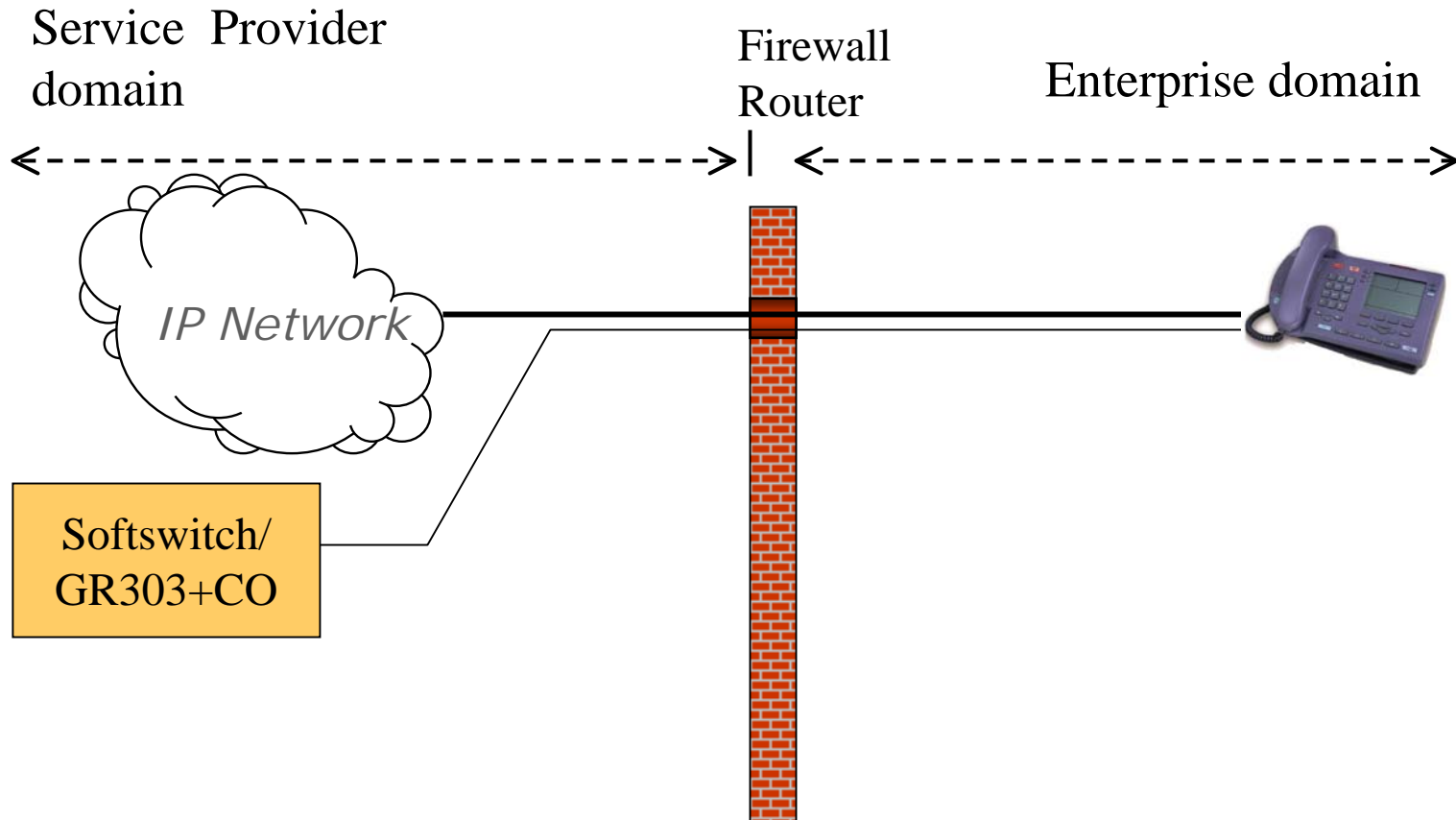
Implementation in Probe

VQmon/SA embedded into 3rd party
SLA Monitor/ Probe/ Analyzer

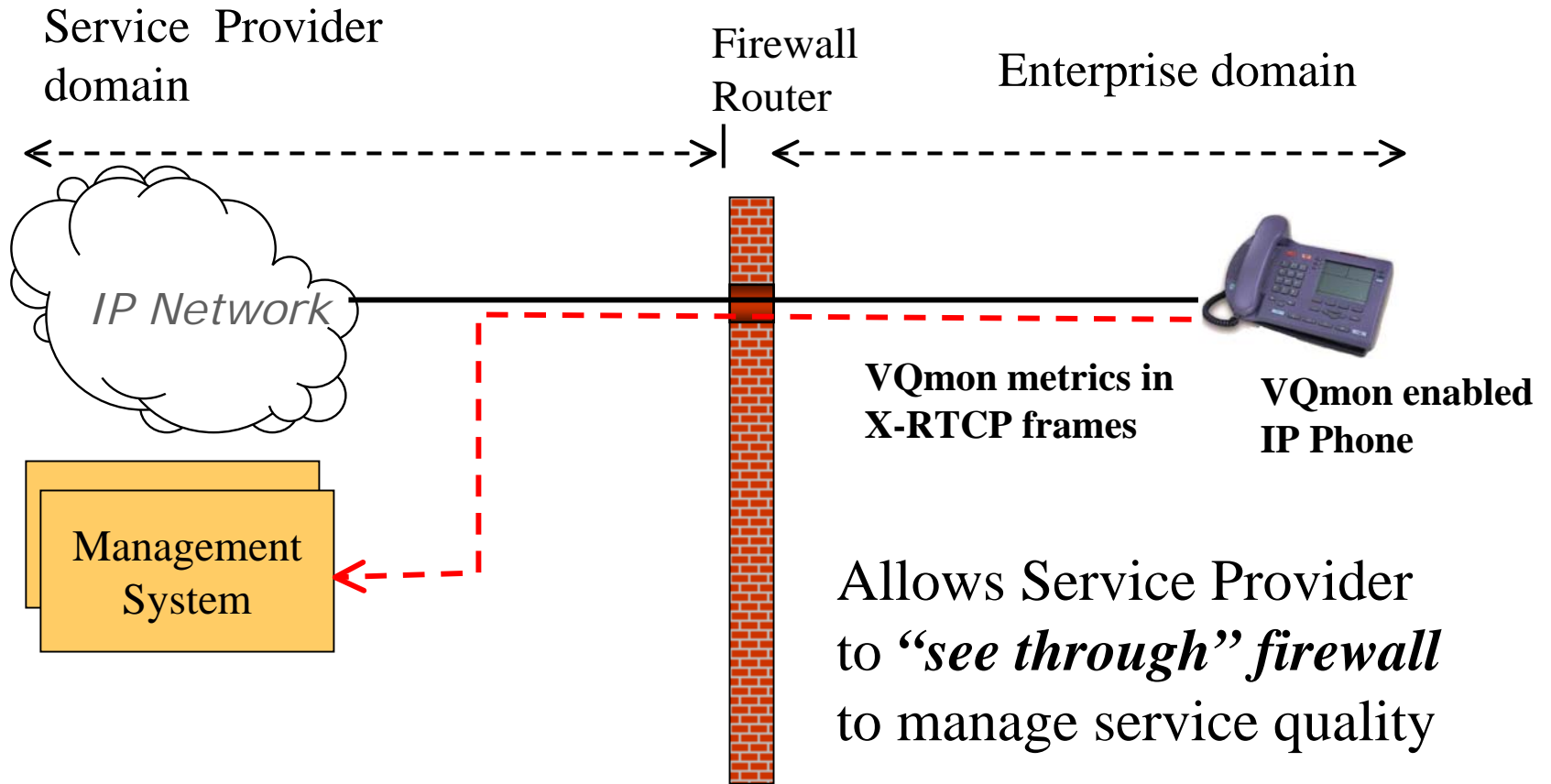


Call quality scores (MOS, R)
Degradation factors (% due to.....)
Burst loss and discard data
Out of order, duplicate.....
Jitter metrics
Trace analysis

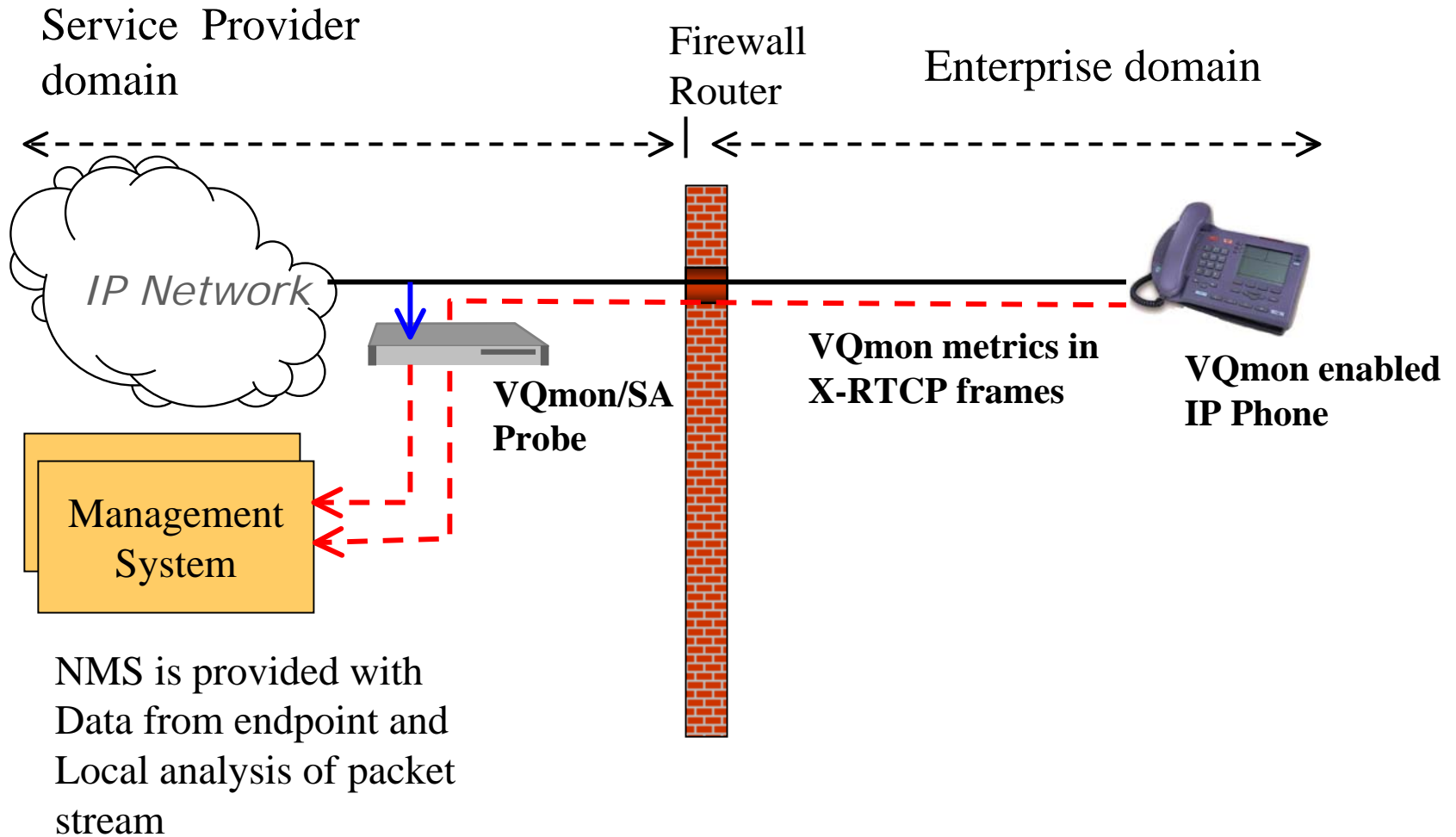
IP Centrex - Scenario



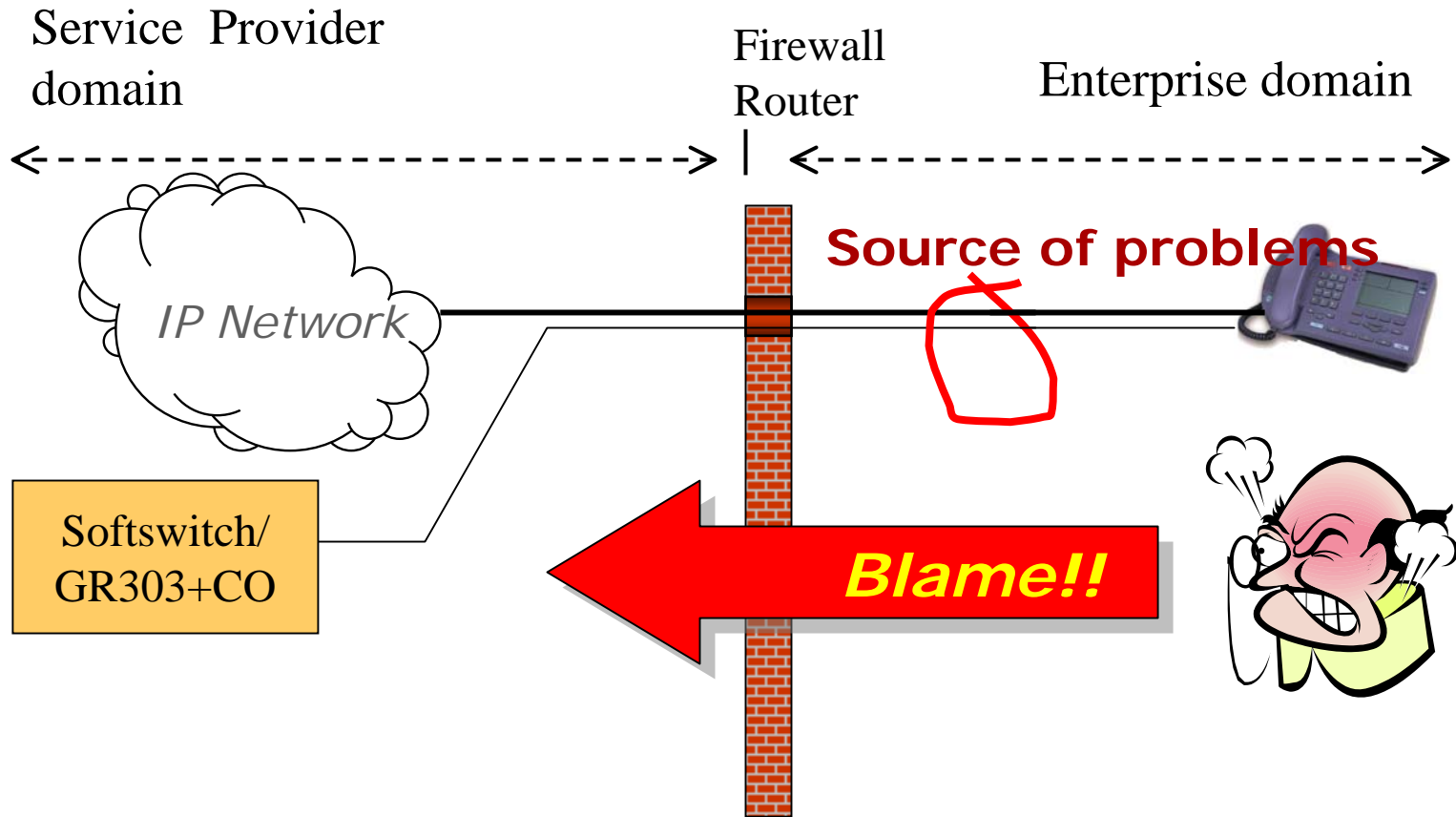
Solution to IP Centrex problem



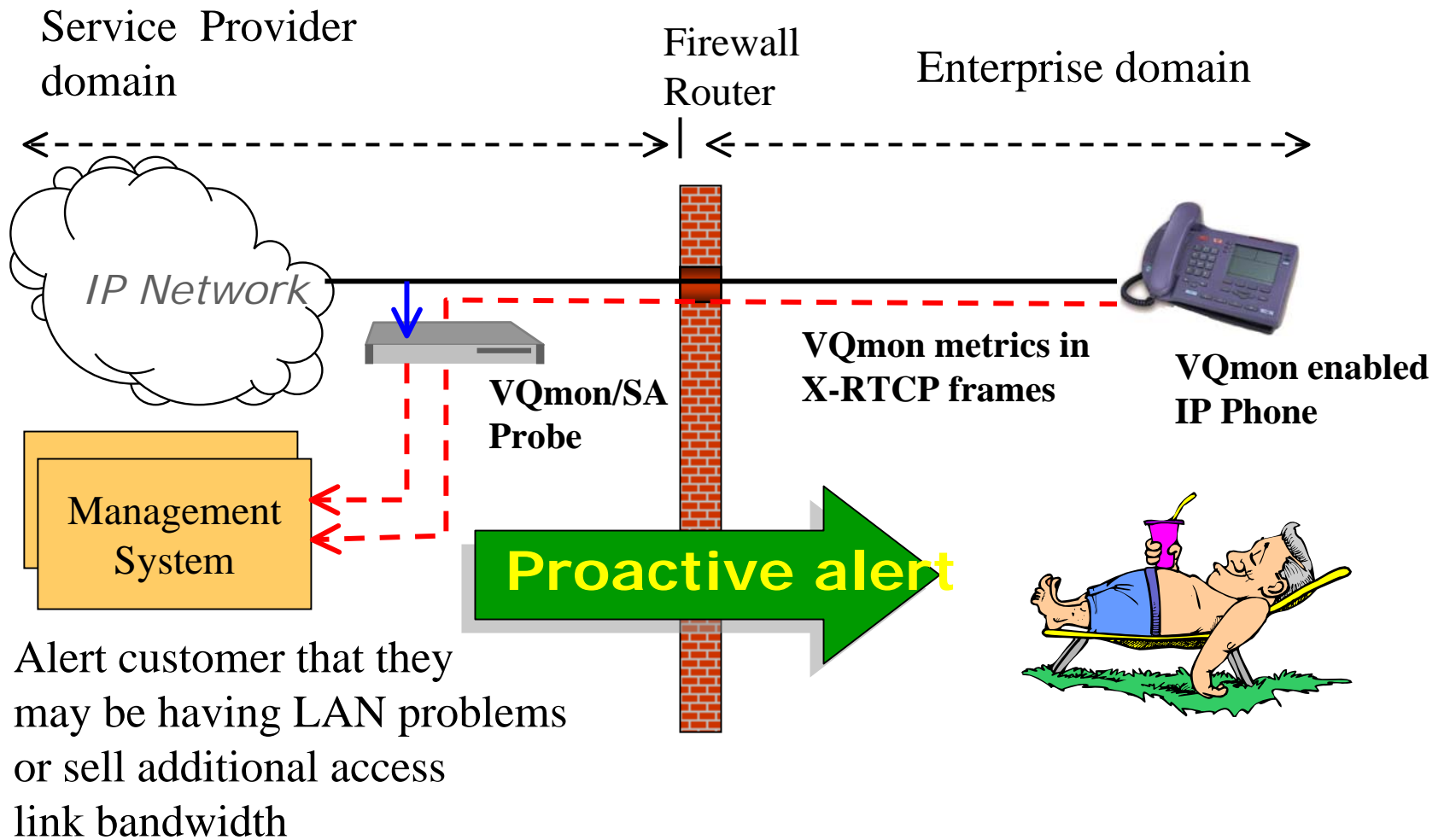
Solution to IP Centrex problem



Guilty until proven innocent?



..or marketing opportunity?



Summary

- Proactive solution to managing customer network problems
- Based on multi-vendor technology
- Same basic monitoring and diagnostic technology is available in:
 - SLA monitoring systems
 - Sniffer/analyzers used for fault isolation
 - Products used by Service Provider and Enterprise

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
- **Value Proposition**
 - Reduce direct and indirect operating costs
 - Improve/ maintain quality of Voice and Video over IP services
- **Business Model**
 - Software with high algorithm/ IPR content
 - License and OEM products to equipment manufacturers
- **Technology**
 - Two “Best of breed” products already on the market