MobileIN.com

Outline for VoIP Quality of Experience (QoE) Class

FULL OUTLINE

What is expected of VoIP?
- What Management "knows"
- What Telephony Users "know"

Three Keys to VoIP Success

QoE and QoS
- Definitions and Comparisons

Factors Impacting Voice QoE
- Human Factors
  - Expectations
  - Age/Gender of Speaker/Listener
  - Speaker/Listener Familiarity
  - Native Language Issues
- Voice Encoding / Compression
  - Voice Algorithm
  - Voice Compression
  - Silence Suppression
  - Echo Cancellation
  - Tandem Hops/Multiple Encoding
- Network Issues
  - Delay
  - Delay Variation
  - Packet Loss
  - Network Availability
- Service/Feature Support
  - Voice Band Data (Modems/FAX)
  - DTMF
  - Calling Features
  - Billing / Call Accounting
  - Wireless vs Wireline

Voice Quality Measurement
- MOS/CMOS
- R-Factor
- PESQ
- PSQM/PSQM+
- PAMS
- SQS
- Auditory Memory Model

VoIP Network Design and Tuning
- Voice Codec Choices
  - G.711 (PCM), G.726 (ADPCM), G729/G729A (CS-ACELP), G723.1 (MP-MLQ), G723.1 (ACELP), AcelpNet (RealAudio)
- Packet Size / Samples per Packet
- Packet Frequency
- Delay vs Loss vs Bandwidth
- Single Packet Loss vs Bursty Packet Loss
- Bandwidth Utilization/Optimization
- Jitter Buffer Tuning

Assuring QoS for VoIP
- Prioritization
- Bandwidth Reservation
- Route Optimization
- Hybrids

VoIP Test and Interoperability Plan

Testing Solutions
- Standard Compliance
- VoIP readiness assessment
- VoIP monitoring and troubleshooting
- SLA Compliance

Vendor QoE Examples and Rankings
- Alcatel, Avaya, Cisco, and Nortel

Guidelines to Assure VoIP QoE Success

Conclusion

"Very informative and just the right level of detail. Ray [Sanders] is awesome!"
- VoIP Marketing Manager
COVAD

PROGRAM "AT A GLANCE"

Program Type: Class
Available to Public: Y
Available for Single Client: Y
Program Length: 1 day
Program Times: 9:00 am - 4:30 pm
Lunch Provided: Y
Audience: Engineers, technicians, planners and support personnel involved in VoIP design,.
Prerequisites: Understanding of IP network eng and basic knowledge of telephony or VoIP.
Difficulty Rating: 4 out of 5 (!!!!.).

PRINCIPAL PROGRAM DEVELOPER

James P. Cavanagh

James P. Cavanagh has worked closely with the top five telecom technologies of our time very early in their life cycles. He has been intimately involved with the engineering, sales support, marketing, design, installation and training for ATM, Frame Relay, IP, optical networking and xDSL since their early commercialization. Mr. Cavanagh has also been closely involved in network security, disaster recovery planning and infrastructure security since the early 1980s. Jim is able to combine his experience with creativity and a long, varied career to develop exceptionally effective solutions for his consulting clients as well as having a rich background for his teaching and writing. Jim is a former member of the ATM forum.

To request a class, contact us at VoIP@MobileIN.com
www.MobileIN.com