



Emerging Communications 2009®

This course was created by selecting the top 334 pages from our 15,200 page curriculum. Our goal was to offer a single course that included the best content from our 15 course curriculum. The result was Emerging Communications 2008 and it was a great success.

Executives and technicians alike say this is the best course they've experienced. 95% of the people who attended in 2008 rated it a perfect "5" on a scale of 1 to 5.

Robert Trottman had a typical student response when he wrote *"This is top notch training! I would certainly recommend this to others. It was extremely helpful and I really enjoyed the overview of where things are and where they are going... If you can only take one course a year this is the one you need."*

Our most popular course has been updated for 2009. Every section has been redeveloped with new content and we've added new topics including Carrier Ethernet, inside wiring as a service offering, Telco Security and outside plant innovation.

Emerging Communications 2009 is derived from the following courses:

1. IMS
2. Protocol Workshop: SIP, SIP-T, Skinny, MGCP, MEGACO, H.323 and Skype.
3. Carrier and Metro Ethernet
4. MPLS
5. Video and Voice over IP Monitoring and Troubleshooting
6. IPVPN
7. IP Security
8. Introduction to wireless fundamentals
9. WiMAX
10. Advanced WiMAX and antennae placement
11. WiFi
12. Advanced WiFi
13. Optical Networking
14. QoS
15. Unified Communications, Web 2.0 and IPv6



Emerging Communications 2009®

Course Objective

To provide a practical understanding of the emerging communications architectures, strategies, technologies, applications and entities re-shaping modern communications.

Expected Outcomes

Upon successful completion of this course the participant will be able to:

- Better understand their emerging products and services and those of their competitors
- Contrast and compare different approaches and options for the most promising communications approaches.
- Replace what needs to be replaced and keep what can be salvaged of the Web1.0 world (this is where most companies operate today)
- Direct the migration to the new world of communications including training of personnel, operational optimization and business evolution

Course Outline

Day 1

Introduction: Communications in 2009

An overview of the drivers and changes that are occurring in the communications industry. Special consideration will be given to market segmentation both geographically (rural, metro, regional, national, global) and by provider (carrier and service provider.)

- Human Communications 2009
- Productivity and Business Transformation
- Risks & Rewards
- Changing Business Models

- Global Trends
- Unified Communications and Web 2.0
- Turmoil in Technology-Understanding the hot spots

Module 1: Multimedia

- Speech-to-Text
- Text-to-Speech
- Translation - Machine
- Video Conferencing
- Voice
- VoIP
- IP Telephony
- Unified Communications
- Telepresence
- Rich Media Conferencing



Emerging Communications 2009®

Module 2: Quality & Privacy

- Quality of Service (QoS)
- Quality of Experience (QoE)
- Total Customer Experience (TCE)
- Security
- Privacy Policy & Enforcement

Module 3: Communications & Connectivity

- Presence
- Preference
- Personalization
- Messaging
 - Instant Messaging
 - Short Message Service (SMS)
 - Unified Messaging
- Location Based Services
- Mobility / Extension Mobility
- Digital Signage/Digital Billboards

Module 4: From Outside plant to Inside wire

- Outside Plant in 2009
- Single Mode/Single Fiber
- PON
- WLL Advancements
- Premises Signal Distribution
- Metallic
- MOCA
- HPNA v3
- Fiber
- Wireless
- 700 MHz Update
- MIMO
- LTE
- Ethernet: Premise, Metro and Carrier

Module 5: Information Services

- Infotainment
- IPTV
- Personal Video Recorders (PVR)
- Slingbox
- Video on Demand (VoD)
- Wireless Video
- Distance Learning

Module 6: The Battles

- Web 1.0 vs Web 2.0
- IMS vs Web 2.0 and UC
- WiMAX vs. LTE

Day 2

Module 7: Architectures

- Fixed-Mobile Convergence (FMC)
- Internet Multimedia Subsystem (IMS)
- Service Oriented Architectures
- Web 2.0/3.0/4.0
- Network Neutrality

Module 8: Infrastructure

- Convergence/Consolidation
 - Transport
 - Service
 - Application
- MOCA



Emerging Communications 2009®

Module 9: Technologies

- Open Source: Asterisk, etc.
- Gateways
 - Media Gateways
 - Session Border Controllers
 - Signaling Gateways
- IPTV
- WiFi and WiMAX
- 3G/4G Cellular
- GSM → GPRS
- Satellite
- RFID
- 700 MHz Wireless
- Storage Area Networks (SAN)/Caching
- Carrier/Service Provider Ethernet

Module 10: Protocols & Languages

- IMS Protocol Suite
- CAMEL
- IPv6
- XML/VML

Module 11: Trends

- The Advertising Model
- The Subscription Model
- Mash-Ups
- Rich User Experience
- Architecture of Participation
- Blog/blogging
- Social Networking
- Leveraging Collective Intelligence
- Hackability / Remixability
- Lightweight Programming Models
- Wiki
- Virtualization
- Business Continuity / Disaster Planning

Conclusion-The beginning

- Future of Human Communications
- Future for the Communications Industry