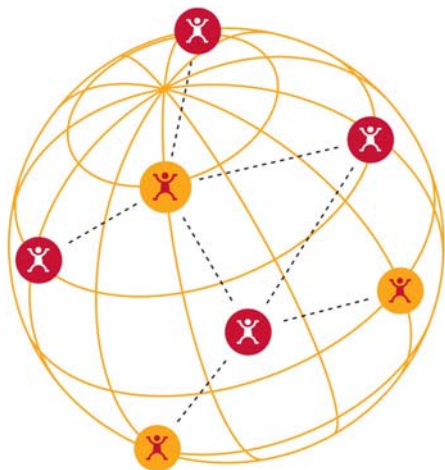


TRAINING PROGRAM OUTLINE



VOIP PRIMER

DESCRIPTION

A 2-day Training Program to provide participants with the fundamental knowledge required to understand how real-time traffic, namely voice, is carried over a data network. This Training Program explores the challenges involved in accomplishing this task, as well as the architecture considerations and protocols that help make it happen.

OBJECTIVES

- To describe the fundamental concepts of telephony and data networking
- To identify the compelling reasons to integrate voice and data, as well as the new applications that this integration presents
- To provide an assessment of the challenges faced when introducing voice, or any other real-time traffic, into a data network
- To explain how voice, or other real-time traffic, is carried over a data network
- To define the different protocols used to signal VoIP calls and when to use each one
- To list the important elements that must not be overlooked when planning a VoIP implementation
- To present methods to put together a business case for a particular setting

TOPICS

- Telephony fundamentals, data networking fundamentals and the appeal of integration
 - Telephony fundamentals
 - Data networking fundamentals
 - What is the appeal of integration? What novelty does it provide?
- Challenges of carrying voice over a network built to carry data
 - What are the challenges?
 - Internetworking
 - Maintaining voice quality: techniques for dealing with echo, delay and, something new, delay variation (jitter)
 - Privacy
- Voice transport over a data network
 - Real-time Transport Protocol (RTP) and Real-time Transport Control Protocol (RTCP)
 - Secure RTP (SRTP)
 - ZRTP
- Voice call signalling within a data network, between a data network and the Public Switched Telephone Network (PSTN), and from the PSTN to the PSTN through a data network
 - H.323
 - Session Initiation Protocol (SIP) and Session Initiation Protocol with encapsulated ISUP (SIP-I)
 - Media Gateway Control Protocol (MGCP)/Media gateway control (Megaco)
- Implementation considerations: Is VoIP always the way to go?
 - Assessing your particular setting: Where are you now in terms of voice and data networks?
 - Where are you looking to get to? What needs to be put in place?
 - Important elements to not overlook
 - Building the business case for your particular setting

TARGET AUDIENCE

Telecommunications managers and personnel looking to gain an understanding of, or needing a refresher on, VoIP architecture and protocols.

METHODOLOGY

Our training programs combine expert presentations, workshops, case studies, hands-on activities and discussions on real-life situations faced by participants. Complete training material is provided to all participants for future reference and follow-up action plans.

LOCATION

Our Training Programs are held at regular intervals in selected cities around the world. Upon request, our expert trainers can lead Training Programs at the location of your choice. If interested, please contact us at neotelis.training@neotelis.com.

EXPERTISE

Neotelis provides consulting and training services to organizations worldwide. Its team of experts has trained thousands of individuals in technical, managerial and executive roles, who are working for operators, regulators, policy-makers, governments and private sector corporations in over 100 countries around the world.

The i³ Forum brings together the communications expertise of more than 37 telecommunications providers, representing a combined retail base of over 1.5 billion customers across more than 100 countries. The goal of the i³ Forum is to develop



collaborative recommendations for an industry-wide transition of voice and related services to Internet Protocol (IP). The forum's unified effort to expedite global IP-based voice implementation support widespread access to innovative and high quality IP-based services and applications.

