PRESENTED BY
LILLIAN GOLENIEWSKI

“Lili Goleniewski is a gifted communicator and educator”
Peter Leonard, Managing Partner, Gilbert & Tobin Lawyers

LIDO

TELECOMMUNICATIONS ESSENTIALS®

For Non-Engineers

A Comprehensive 3 day Seminar

A totally unmissable opportunity to learn from the most dynamic Guru in the Telecoms Industry
Let Lili put you on the fast track

“Very good course. The best telecoms course I have attended to date”
Nick Martin – Telewest Comms

“A very good overview of a very large technical area. A quick way to get up to date on the latest trends in the telecommunications field”
Heinz Hohbach – Siemens Telecommunications

“Very good course. It gives technical basics in conjunction with a business perspective which is rare for most telecoms courses”
Tamara Pastuszynska – Polska Telefonica

DATES:
21 – 23 May 2002
Kingsway Hall Hotel, London

DAY 1:
Communications Fundamentals

DAY 2:
Data Networking and the Internet

DAY 3:
Next Generation Broadband Networks

FREE copy of Lili’s Telecommunications Essentials book to all course attendees!

T: +44 (0)20 7915 5055  F: +44 (0)20 7915 5056  E: training@iir-conferences.com
FREE to all course attendees!!

Telecommunications Essentials

The Complete Global Source for Communications Fundamentals, Data Networking and the Internet, and Next-Generation Networks

By Lillian Goleniewski

“Here is a book that de-mystifies a technical world. The book will be a permanent fixture on my ‘go to find an answer’ reference list.”
Kiron Chatterjee, CEO, Koshen Holdings and former CEO of Asia Online

“Whether you are new to Telecom or have years of experience, this well organized and detailed reference will help you learn what you need to know or remember what you have forgotten.”
David West, Executive Vice President, Equinox Information System

Because knowledge work today involves constant learning, LIDO provides learning resources that will enable you to access the appropriate information at the moment you need it, long after you attend the course. This includes the recently published Telecommunications Essentials textbook, providing you with additional depth about the topics covered at a high-level in the class.

Leading telecommunications trainer and consultant Lillian Goleniewski combines clear explanations of fundamental principles with in-depth, up-to-the minute coverage of networking and the Internet - both wired and wireless. More than competitive guides, Telecommunications Essentials combines the global breadth and technical depth readers need to truly master telecommunications. And it’s FREE for all attendees at Lili’s course on 21st May!

“I recommend Lili’s book to anyone seeking an informative, enjoyable ride through today’s telecommunications landscape.”
Steve Riley, Microsoft Telecommunications Consulting

“In Telecommunications Essentials, Goleniewski guides us through the ever-changing world of telecommunications with much sense and a great deal of style.”
Chris Barclay, Director, Strategy & Planning, Retail, Telstra

Why you should attend...

- Get a complete grounding in all of the key Telecommunications technologies, applications and business opportunities in just 3 days.
- Come away with over 1,000 pages of encyclopaedic documentation, including a comprehensive glossary.
- Demystify the language of Telecoms – learn to recognise and understand the acronyms, buzzwords and key terminology.
- Cut months – if not years – off your learning curve.
- Understand the big picture, and put together the telecom puzzle
- Enjoy learning about the immensity and potential of telecommunications

“One of the best quality courses I have ever been lucky enough to attend”
Virginia Kaye – Director – Netsol One

Who should attend...

If you are new to the communications and information industry or simply desire an understandable, yet comprehensive overview of telecommunications, then this seminar is for you. This three-day programme is designed to provide you with a thorough foundation for understanding telecommunications principles, technologies and business models. The course will teach you how to continue your learning – by showing you what resources to use on the web in order to access further information, when you need it.

This programme is ideal for:
- Sales and Marketing Professionals
- Product Managers and Directors
- Project Managers and Directors
- Financial Analysts & Investors in emerging Telecoms and Internet concerns
- New management within the Telecoms and Internet operators/manufacturers
- Professionals working for Telecoms regulatory, legal bodies and associations
- Financial Professionals in the Telecoms industry

…and anyone who is seeking a complete understanding of Telecommunications terms, definitions, and current and emerging technologies.

www.iirtraining.co.uk/lido
DAY 1
Communications Fundamentals

One of the biggest challenges facing professionals in the information technology and telecommunications (IT&T) sector is conquering the dense, seemingly endless, yet absolutely essential language of telecommunications.

During Day One, telecommunications fundamentals are presented in layman’s terms, laying the foundation for understanding the basic principles of transmission and networking. The focus is on developing an understanding of the forces driving the revolutionary change in infrastructures worldwide, providing clear explanations of communications fundamentals, the differences between circuit and packet switching, the nature of transmission media, and the architecture of the Public Switched Telephone Network (PSTN) infrastructure.

Day One will result in an appreciation and understanding of the fundamental principles of telecommunications and the supporting infrastructures.

UNDERSTANDING THE TELECOMMUNICATIONS REVOLUTION

- What is Information?
- The Knowledge Age
- Information Systems Trends
- Application Trends
- Changing Network Infrastructure
- Convergence – What & Why

“Extensive content”
Andrea Masnata – PWC

TECHNOLOGY BASICS

- Introduction
- Transmission Fundamentals
  - Circuits, Channels, Lines, Trunks, Virtual Circuits
  - 2-Wire vs 4-Wire Circuits
  - Switched, Leased Line and Dedicated Networks
- Bandwidth & the Electromagnetic Spectrum
  - Principles and properties
  - Telecommunications spectrum
- Bandwidth definitions
- Analogue vs. Digital Transmission
- Multiplexing
  - FDM, TDM, Statistical Mux, Inverse Mux
  - Wavelength Division Mux
- Standards, Organisations

“Technical issues in a language I can understand”
Louise Odell, Radiocommunications Agency

DAY 2
Data Networking

Day Two begins with an explanation of data communications fundamentals — establishing a framework for understanding data networking and its applications. Data network alternatives for the local and wide area are explained, demystifying protocols and architectures and their relationship to the OSI reference model. LANs (Local Area Networks) and LAN internetworking are summarised, providing a high level overview of enterprise infrastructures today. WAN (Wide Area Network) alternatives are reviewed, providing descriptions of their applications, associated network elements, and general tradeoffs.

Day Two also provides an examination of the Internet and IP infrastructures, the services supported and planned, the challenges it faces, and how it is likely to evolve in the future. VPNs, VoIP and emerging streaming applications are explored, providing a glimpse into the dramatically shifting nature of business processes, customer relations and revenue generation.

DATA COMMUNICATIONS BASICS

- Data Communications
  - Definitions, Architectures, Traffic Types
- DTE/Transmission Channel/DCE
- Modems & Modulation
- Data Transmission & Measurement
- Transmission Codes
- Transmission Modes
- Error Control
- Protocols & Protocol Stacks
- OSI Reference Model

LOCAL AREA NETWORKING

- LAN Basics
  - LAN Standards (Ethernet, Token Ring, FDDI)
  - Network Topologies (tree, bus, ring, star)
  - Access Techniques (token passing, CSMA/CD)
- LAN Interconnection and internetworking
  - LAN Switching, VLANs, Bridges, Routers
  - High Speed Routing & IP Switching
**WIDE AREA NETWORKING**

- Wide Area Network (WAN)
  - Definitions, traditional and contemporary WAN categories
- Leased Lines
- Circuit-Switched Alternatives
  - Switched Digital Access, N-ISDN
- Packet Switched Alternatives
  - X.25, Frame Relay, ATM

**INTERNET INFRASTRUCTURE**

- Internet Infrastructure
  - Clients and servers, networks, components
- TCP/IP, Internet addressing, IPv6, domain name system
- Point of Presence (POP) infrastructure
- Internet Organization
  - Research backbones, NSPs, ISPs
- CDNs, ASPs, eBPs, MSPs, OSPs, VISP
- NAPs, peering agreements, private NAPs, overnet

**NEXT-GENERATION NETWORK SERVICES**

- Traditional services and emerging applications
  - Email, FTP, Telnet, WWW
- VPNs (virtual private networks)
  - Definitions and categories
- VPN applications
- VPN security
- Voice over IP
  - Definitions and trends
  - VoIP applications, IP Telephony
  - Network elements, media gateways, softswitches
  - Call control signaling standards: H.323, SIP
  - Intelligent Networks and VoIP
  - IP-based PBXs
- Multimedia on the Internet
  - Streaming media definitions
  - Streaming media applications
  - Streaming media technology

“Excellent delivery from the presenter”
Kevin Barrins – ODTR

**DAY 3**

**Next Generation Broadband Networks**

Building on the foundation laid in Day One and Day Two, Day Three addresses broadband technologies and next generation networks, including the convergence of telecommunications with related industries — including computing, consumer electronics, entertainment, publishing, and power utilities. The evolution of broadband capabilities in the PSTN, Internet, Cable TV and Wireless infrastructures are discussed, with a focus on the applications scenarios driving the requirement for new classes of networks as well as technologies for enabling interactive service platforms.

These advanced applications include high-speed data transfer, Internet and e-commerce applications, interactive visual communications, multimedia information systems, and mobility. Broadband networking discussions include the emerging three-tiered broadband architecture (access, edge and core), the role of IP and ATM at the edge and in the core, the nature of the intelligent edge and the multiservice network, service class and quality of service definitions, advances in optical networking, and broadband access alternatives. The fundamental conflict between mobility and broadband communications is being addressed on many fronts, and exciting new technologies and implementation techniques are making anytime/anywhere computing and communicating a reality in many different and convenient forms.

We will also look at emerging fixed wireless alternatives for voice, data, and multimedia, and what may be the most important driver of wireless of all — wireless access to the Internet.

**OPTICAL NETWORKING**

- Fiber Backbones and Optical Networks
  - Optical Networking Drivers, Optical Networking Revolution
- Optical Elements
  - Erbium Doped Fiber Amplifiers (EDFAs)
  - Wavelength Division Multiplexing (WDM/DWDM)
  - Optical Add Drop Multiplexers and Optical Cross-connects
- Managed Wavelength Services
- Optical Switches
  - End-to-end optical networking, optical switching fabrics
  - MEMs, LCD, Fluidics, thermal-optical, tunable lasers
- Optical Components
  - IP over Optical Standards
  - GMLS
- Managing Optical Networks

**BROADBAND ACCESS ALTERNATIVES**

- The xDSLs
  - HDSL, IDSL, SDLS, MSDLS, RADSL, ADSL, VDSL
- Hybrid Fiber Coax (HFC)
  - Cable TV networks, HFC architectures
  - Cable modems and set-tops, cable telephony, VoIP over cable
- Fiber
  - Fiber to the Curb (FTTC), Fiber to the Home (FTTH)
  - Passive Optical Networks (PONs)
- Wireless Broadband Access Alternatives
  - DBS, MMDS, LMDS/MVDS, Free Space Optics
- Powerline Telecommunications (PLT)
- Ethernet in access network

**WIRELESS COMMUNICATIONS**

- Radio Concepts & Definitions
- Multiple Access Techniques
  - FDMA, TDMA, CDMA
- Cellular Radio
  - Generations, principles, infrastructure
  - Digital cellular standards; GSM, CDMA, UWC
  - Wireless data services
  - 2.5G: GPRS, HSCSD, EDGE
- Third Generation (3G) Mobile Systems
  - IMT2000, 3G Objectives, Applications
  - 3G standards: WCDMA (UMTS), cdma2000, TD-SCDMA, UWC-136, DECT
  - 3G deployment issues
- 4G and 5G
  - Orthogonal Frequency Division Multiplexing (OFDM), Ultra-WideBand (UWB)
- Mobile Trends
  - Applications, location-based services, m-commerce
  - WAP i-mode
- Wireless Local Loop
  - Applications, technology alternatives
- Wireless Local Area Networks
  - 802.11 standards, Bluetooth, HomeRF

T: +44 (0)20 7915 5055  F: +44 (0)20 7915 5056  E: training@iir-conferences.com
Lillian Goleniewski is Founder and President of the LIDO Organization, Inc., the leading provider of education, information, and advisory services in the area of telecommunications technologies, services and networks.

Ms. Goleniewski lectures extensively on various telecommunications technology and management topics throughout the world. She is the author and creator of LIDO Telecommunications Essentials® seminars and e-Learning, www.telecomessentials.com. The series have been conducted on an international basis since 1984, and are currently offered in Asia, Australia, Europe, the Middle East, New Zealand, North America and South America. Over 25,000 people worldwide have attended LIDO’s Telecommunications Essentials® seminar series. Ms. Goleniewski is also the author of Telecommunications Essentials: The Complete Global Source on Communications Fundamentals, Data Networking and the Internet and Next-Generation Networks. (Published by Addison Wesley, copyright 2002, ISBN: 0201760320).

Ms. Goleniewski continues to be active in the design, development and program participation of several major industry conferences, serving as advisor since 1991. She is an Industry Advisory Board member of the Key3Media Comdex Forums & Conferences., IDG’s ComNet Washington DC and Ej Krause Expocomm conferences worldwide.

Ms. Goleniewski’s diverse industry participation includes serving as a judge for the Global Information Infrastructure Awards (GII Awards) from 1995-1999, as well as being a Founding Member for the Standard for Internet Commerce. The LIDO Organization is a member of and contributor to ANCARA, the Advanced Networked Cities and Regions Association. Ms. Goleniewski has served as a member of the MIN (Michigan Information Network) technical committee, as well as an instructor with the San Francisco State University College of Extended Learning. She is a member of TEN (www.techempower.net), the Technology Empowerment Network (TEN), a global initiative by the Technology Pioneers, a World Economic Forum Community, as well as a reviewer for the CommerceNet/State of California Next Generation Internet grant program. She is also a member of the IEEE and the IEEE Computer Society.

Prior to forming the LIDO Organization, Ms. Goleniewski held the position of Telecommunications Operations Manager at the Electric Power Research Institute (EPRI), the research and development arm of the U.S. utility industry. Before joining EPRI, Ms. Goleniewski was Vice-President of Operations of a San Francisco-based telecommunications consulting firm.

Ms. Goleniewski graduated Phi Beta Kappa and Summa Cum Laude from Wayne State University in Detroit, Michigan. She holds a B.A. in Psychology and has completed numerous post-graduate studies in information technologies as well as psychology. Ms. Goleniewski was the recipient of a NSF Award to conduct research in the area of human perception and information processing.

Ms. Goleniewski is fluent in Polish and has conversational skills in both Russian and French.

About the LIDO Organization:

The LIDO Organization is internationally recognized for providing expert educational programs and building telecommunications knowledge. Since its inception in 1984, LIDO’s focus has been on the development and delivery of high-quality education and effective knowledge transfer. Recognizing that learning is life-long, LIDO’s educational programs are web-powered via LIDO Telecom WebCentral®, www.telecomwebcentral.com, a globally recognized telecom knowledge portal offering over 6,000 resources to help enforce and build telecom knowledge.
Enclosed is our cheque for £ in favour of IIR Training. VAT No is 396 9858 60.

Easy Ways to Register

LIDO TELECOMMUNICATIONS ESSENTIALS

If you should cancel fourteen days or

Registrations will be between 8:45am and
Please debit my credit card with £ (inc.VAT)

Personal data is gathered in accordance with the

If you are receiving multiple mailings or you

It may be necessary for reasons beyond

An invoice will automatically be sent out to you by post upon receipt of your booking.

Your full contact details (Name, Job title, Company, Address, Tel & Fax) and Course Name & Date to:

Please remember to quote your VIP code (see mailing label).

Visit our website at www.iirtraining.co.uk/lido to complete your booking form online. Please remember to quote your VIP code (see mailing label).

Your completed form to:

Please fax a copy of your booking form to the Customer Services Manager at: IIR Training, 29 Bressenden Place, London, SW1E 5DR

Delegates are responsible for the arrangement and payment of their own travel and accommodation. IIR Training has arranged a special room rate at a number of hotels. If you wish to book please call Venue Search on +44 (0) 20 8546 6166 stating that you are an IIR Training delegate.

Seminar Timing: Registrations will be between 8:45am and 9:15am. The seminar will start at 9:15am unless you are notified otherwise. Lunch and refreshments are included in the seminar fee. The comprehensive seminar materials are also included in the fee.

Cancellations & Transfers: If you should cancel fourteen days or more before the event then you will receive a refund less a 10% service charge. Regrettably no refund can be made for cancellations or transfers received less than fourteen days before the event, although a substitute may be named at any time before the programme begins.

Tailormade Onsite Training: Tailormade Solutions that meet the unique requirements of your business. Adapt an existing course for a small team to run on-site or develop a complete range of programmes to meet your business objectives. IIR Training works in partnership with you to create programmes based upon your needs. For more information ring Harvey Stockbridge on +44 (0) 20 7915 5690.

Incorrect Mailings: If you are receiving multiple mailings or you would like us to change any details or remove your name from our database, please contact our Database Department on +44 (0) 20 7915 5679. Amendments can take up to 6 weeks so please accept our apologies for any inconvenience caused in the meantime.

Data Protection: Personal data is gathered in accordance with the Data Protection Act 1998. Your details may be passed to other companies who wish to communicate with you offers related to your business activities. If you do not wish to receive these offers, please write to the Database Manager at the above address.

Programme Changes: It may be necessary for reasons beyond the control of IIR Training to change the venue and date.