An in-depth & easy-to-understand briefing of the language and issues comprising telecommunications and the Internet - including basic principles, infrastructure, services, applications, regulation, next generation networks and emerging business models.

Presented by the internationally acclaimed seminar leader and telecommunications industry expert:

Lillian Goleniewski
President
LIDO Organization Inc., USA

TELECOMMUNICATIONS ESSENTIALS® FOR NON-TECHNICAL PROFESSIONALS

Seminar Extended by popular demand for in-depth coverage

Singapore 19-21 June 2002
Hong Kong 25-27 June 2002
Shanghai, China 1-3 July 2002

Key highlights of the 2002 seminar include:

Day 1 & 2

Essentials of Telecommunications, Data Networking & Internet

Day One: Communications Fundamentals
- Understanding the Telecommunications Revolution
- Technology Basics
- Networking & Switching Modes
- Transmission Media
- Public Switched Telephone Network

Day Two: Data Networking & the Internet
- Data Communications Basics
- Local Area Networking
- Wide Area Networking
- Internet Infrastructure

Day 3

Essentials of Next Generation Networks
Builds on Telecommunications Fundamentals!
Also ideal for previous students seeking an update on the latest developments
- Next-Gen Network Services
- Optical Networking
- Broadband Access Alternatives
- Wireless Communications
- Next Generation Network

Who should attend:
- Telecom & IT Business Development Managers
- Banking & Investment Directors
- Lawyers specialising in Telecoms & Internet
- Telecom Sales, Marketing & PR Professionals
- Accountants & Financial Controllers
- Government Officers responsible for Telecoms & Internet
- Internet & E-Business Analysts & Consultants
- Corporate Directors responsible for Telecoms & Internet
- Telecom Investors & Venture Capitalists
- IT, MIS & Telecoms Professionals
- Internet Business Planners & Strategists
- Service Provider, Content & Entertainment Industry Executives
- Human Resources and Training Managers
- IT & T Professors and Instructors

Organized by:

Official Publications:

www.iir.com.hk
One of the biggest challenges facing professionals in the information technologies 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 telecommunications transmission and networking. The focus is on developing an understanding of the forces driving the revolutionary change in infrastructures worldwide, on 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.

1.1 UNDERSTANDING THE TELECOMMUNICATIONS REVOLUTION

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

1.2 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
- Analog vs. Digital Transmission
- Multiplexing
  - FDM, TDM, Statistical Mux, Inverse Mux,
  - Wavelength Division Mux
- Standards Organizations

'Seminar presented a wide range of elements in telecommunication, from the basic to the critical. I was able to follow the presentation even with limited technical background.' Jack Ong, Commercial Services Section Manager, Hewlett Packard, Singapore

1.3 NETWORKING & SWITCHING MODES

- Establishing Connections
- Networking Modes
  - Connection-oriented vs connectionless
- Switching Modes
  - Circuit-switched vs packet switched
- What is Circuit Switching?
  - Definitions, Generations, Characteristics, Trends

1.4 TRANSMISSION SYSTEMS: CHARACTERISTICS & APPLICATIONS

- Transmission Media Definitions & Measurements
- Twisted-Pair Copper Cable
  - Characteristics, Applications, Advantages, Disadvantages
- Coaxial Cable
  - Characteristics, Applications, Advantages, Disadvantages
- Microwave
  - Characteristics, Applications, Advantages, Disadvantages
- Satellite
  - Characteristics, Applications, Advantages, Disadvantages
- Fiber Optics
  - Characteristics, Applications, Advantages, Disadvantages

'This course provided very comprehensive information for the non-technical professional and good insights on the telecom industry.' Ray Yim, Manager, Ernst & Young, Hong Kong

1.5 PUBLIC SWITCHED TELEPHONE NETWORK

- PSTN Infrastructure
  - Network access, access services, transport services, service providers
- Switching Hierarchy
  - Local (Class 5), tandem/junction, toll/transit (Class 4), international exchanges
- Transport Infrastructure
  - PDH Infrastructure, T/E/J-Carrier levels, digital loop carriers, digital cross-connects, SDH/SONET signal hierarchy, add/drop multiplexers, ring architectures
- Signaling System #7
  - SS7 Architecture, SSP, SCP, STP, SS7
- Intelligent Network (IN)
  - Characteristics, VPNS, AINs, enhanced services

For Hong Kong & Singapore event, fax your registration form to +852 2219-0112
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 summarized, providing a high level overview of enterprise infrastructures today. WAN (wide area networking) 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, discussing the nature of TCP/IP, as well as the organization of the Internet. Service provider categories are defined, including NSPs, ISPs, ASPs, CDNs, ESPs, and MSPs. Internet interconnection points are explored, including NAPs, peering agreements and Overnets. Completion of Day Two will lead to a comprehensive understanding of modern data networking.

Building on the foundation laid in Day One and Day Two, Day Three addresses broadband technologies and next generation networks, including the evolution of broadband capabilities in the PSTN, Internet, Cable TV and Wireless infrastructures, and delivered with a focus on the applications scenario driving the requirement for new classes of networks as well as technologies for enabling interactive service platforms. 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, and service class and quality of service definitions. VPNs, VoIP and emerging streaming applications are explored, providing a glimpse into the dramatically shifting nature of business processes, customer relations and revenue generation. Advances in optical networking, including applications for the metro environment, as well as the new Optical Transport Network hierarchy are reviewed. Existing and emerging broadband access alternatives are explored covering the full range of twisted-pair, coaxial, fiber and wireless solutions.

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 form factors. 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.
3.1 NEXT-GENERATION NETWORKS

- **Driving Forces**
  Communications trends in traffic, bandwidth and applications
- **Broadband Infrastructure**
  Emerging networks, converging public infrastructures
- **Broadband service requirements**
- **Next-Generation-Network characteristics**
- **IP and ATM**
  IP characteristics, IP routers, IP switching
  ATM characteristics and applications
  Terabit per second switch routers
- **Broadband Architecture**
  Broadband access tier, intelligent edge, high-speed core
- **The Intelligent Edge**
  Protocol and data service integration
- **Next-Generation Telephony**
  Programmable networks, media gateways
  Softswitches, Evolving signaling standards
- **Quality of Service**
  Definitions and categories, ATM, Int Serv (RSVP), DiffServ (TOS), MPLS

'Helped clarify my basic knowledge.' John Garabadian, VP, Asia Pacific, Marconi, Hong Kong

3.2 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

'Simple explanation of technology and good references (websites and books) to follow up on.' Malcolm Richards, Director, Nortel Networks, Singapore

3.3 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 Muxes 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**
  GMPLS
- **Managing Optical Networks**

3.4 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**

3.5 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

Fax your registration form to +86 10 6430 1099

FOR NON-TECHNICAL PROFESSIONALS

'Simple explanation of technology and good references (websites and books) to follow up on.' Malcolm Richards, Director, Nortel Networks, Singapore
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, January 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. LIDO 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 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), and 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 Institute for International Research (IIR)**

The Institute for International Research is an independent, privately owned company with an international network of offices and events in the over 30 countries. We deliver the latest information in the form of conferences, courses, seminars, exhibitions and publications. The information can be strategic, technical or financial - whatever our market demands.

Every year thousands of industry executives attend IIR’s Telecommunications, Internet and Mobile Communications conferences and seminars worldwide. IIR’s events consistently attract the support of prestigious industry associations, interest groups, user groups, leading regulatory and standards bodies.

---

About Your Internationally Acclaimed Seminar Leader:

Ms. Lili Goleniewski’s vision as President and Founder of The LIDO Organization, Inc. is to increase the quality and quantity of telecommunications knowledge workers.

"Previously I couldn't wire a three-pin plug. After this course I can wire up whole ATM Networks! Seriously, the speaker was extremely engaging and was very effective at communicating the complex concept involved in this field."

Gordon Milner, Associate Solicitor, Clifford Chance, Hong Kong

"Good topic, good speaker, very good understanding of current issues."

Kieran Calder, Director, Indosuez W. I. Carr Securities, Thailand

"Simple and easy to understand."

Jayne Ho, Manager, Deutsche Telekom, Singapore

"Good coverage of content. Knowledgeable and skilled tutor."

Edward Tse, Executive Vice President, Cable & Wireless HKT

**FREE** to all course attendees!!

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 June & July!

To register, Tel: +852 2219-0111 Fax: +852 2219-0112 Email: customersvc@iir.com.hk

www.iir.com.hk
REGISTER IN 3 EASY STEPS

Your Details (Please use BLOCK LETTERS)

(Mr/Ms/Dr) Family Name:

First Name:

Job Title:

Company:

Address:

City:

Postcode:

State:

Country:

Telephone (  ) Facsimile (  )

Email Address:

Approving Manager’s Name:

Position:

HR/Training Mgr’s Name:

(Please photocopy for additional delegates)

BC/H/S 383

A B C D E F G H

I would like to attend (Please □ tick)

Singapore

Hong Kong

Shanghai

Simultaneous Interpretation

provided for Shanghai Seminar

All 3-day Seminar

Day 1 & Day 2

Day 3 only

(19-21 June 2002)

(25-26 June 2002)

(27 June 2002)

All 3-day Seminar

Day 1 & Day 2

Day 3 only

(1-2 July 2002)

(27 June 2002)

(3 July 2002)

All 3-day Seminar

Day 1 & Day 2

Day 3 only

(1-2 July 2002)

(27 June 2002)

(3 July 2002)

FEE:

Registration includes full lunch, refreshments, attendance at all sessions, conference documentation. 

Admittance will only be permitted upon receipt of full payment.

GROUP DISCOUNTS: Please contact IIR Customer Service for details. Delegates are entitled to ONE discount per person registration ONLY. In the event that more than one discount is applicable, delegates will receive the discount with the highest value.

VISA: Please ensure your visa requirements are organised prior to travelling.

Payment (Please indicate delegate name & seminar code BC/H/S 383)

(a) Bank Transfer □

Bank transfer should be made to

Account Name: IIR Limited

Account Number: 004-002-4-814808

Payment In HK$ Account Number: 004-111-214698-001

Bank Address Hongkong and Shanghai Banking Corporation Ltd, 1 Queen’s Road Central, Hong Kong.

Please indicate delegate name and seminar code BC/H/S 383

(b) Cheque or Bank Draft □

Please make your crossed cheque or bank draft payable to IIR Ltd in US$ or HK$ only. If you want to pay in HK$, please contact IIR customer service for standard exchange rate. Please mail your cheque or bank draft and registration form (including mailing label) to Customer Service, IIR Ltd, 20/F, Siu On Centre, 188 Lockhart Rd, Wanchai, Hong Kong.

(c) Credit Card □

Card Type: VISA

Card Number

Cardholders Name

Expiry Date

Signature

Date

Do not remove this label

Are our records Correct?

To change your details, please complete the form below and return it along with mailing label to the address above

☐ The address on the label is incorrect, please amend as follows:

☐ Please send a brochure to:

☐ Please add me to your mailing list

☐ Please remove my name from your mailing list

(Mr/Ms/Dr) Family Name:

First Name:

Job Title:

Company:

Address:

City:

Postcode:

State:

Country:

Telephone (  ) Facsimile (  )

Email

Number of Employees

Nature of company’s Business:

☐ Telecom Operator ☐ ISP / ASP ☐ Financial ☐ Telecom Manufacturer

☐ Consultant /Advisor ☐ Government ☐ Logistics

☐ others

Area of Interest:

HOTEL INFORMATION

Seminar Hotel will be confirmed 2 weeks prior to the event.

Please check with IIR Customer Service on +852-2219-0111 for the latest information.

Visit our website at www.iir.com.hk

© IIR Hong Kong 2002