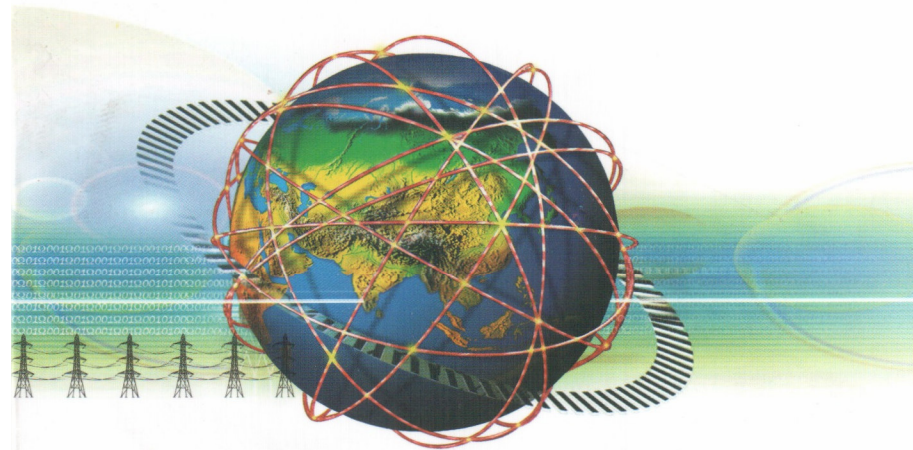




218 AGCR Enclave
Opp. Karkardoma Courts
Delhi 110092 | INDIA
Cell: +91-9811841782 | www.telecomtraining.in

TELECOM TECHNOLOGIES & APPLICATIONS

DURATION - 10 DAYS



Technology, Knowledge, Infrastructure to
Bring the World Closer... Fast!

digital.life



218 AGCR Enclave
Opp. Karkardoma Courts
Delhi 110092 | INDIA
Cell: +91-9811841782 | www.telecomtraining.in

WORKSHOP AGENDA

PART I

TELECOM - CONVERGENCE, TRENDS, TELECOM IN INDUSTRIES

PART II

UNDERSTANDING CORE TELECOM TECHNOLOGIES – WIRELINE & WIRELESS

PART III

TELECOM – Enabling Quality of Life (QoL), TELECOM CASE STUDIES, DEPLOYMENTS & UPCOMING TRENDS

digital.life

PART I – TELECOM AWARENESS

International Standard Making Bodies

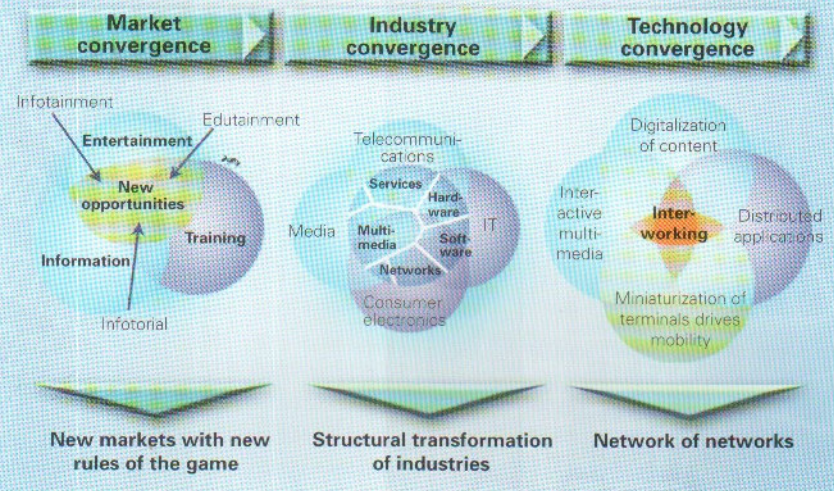
Overview of OSI MODEL

Understanding Industry Convergence

Evolution of Telecom Service Providers

Understanding Traffic Types & Quality of Services (QoS)

The convergence of markets, industries and technologies offers new opportunities



Overview of End to End Telecom Infrastructure

- ✓ What are CPEs
- ✓ What are Access Networks
- ✓ What are Switching Networks
- ✓ What is Signaling
- ✓ What are Backbone Infrastructure

digital.life

EXAMPLES OF TELECOM IN INDUSTRIES

- ✓ Telecom in Aviation (Communication Navigation Surveillance – Air Traffic Management – CNS ATM)
- ✓ Telecom in Healthcare (Telemedicine)
- ✓ Telecom in Governance (E-Governance, E-Government)
- ✓ Telecom in Supply Chains
- ✓ Telecom in Road Transport (Intelligent Transportation System – ITS)
- ✓ Telecom in Security
- ✓ Telecom in Public Utilities
- ✓ Telecom in Banking & Finance
- ✓ Telecom in Ports
- ✓ Telecom in Education

digital.life

PART II – CORE TELECOM TECHNOLOGIES

Internet Governance & Next Generation internet (NGi)

- IETF, ISOC, IAB, IRTF, ICANN, IANA, RIRs, NRO, ARIN, APNIC, LACNIC, AfriNIC, ASO, TLDs, ccTLD
- Internet Composition, IPv4 & IPv6
- POP Architecture, National, Regional & Retail ISPs, IXPs,

Broadband Access Networks

- DSL Technology – HDSL, SDSL, G.SHDSL, ADSL, ADSL2, ADSL2+, RADSL, VDSL, VDSL2
- Cable TV Networks, HFC Architecture, Cable Modem Standards
- FTTx – FTTN, FTTH / FTTP, PONs – APON, EPON, GPON
- Broadband Power Line Telecommunications (PLT)
- Intelligent Home Networks

CCITT SS7 Signaling

- What is Out-of-Band Signaling?
- Signaling Network Architecture
- SS7 Link Types
- Basic Call- Setup Example
- Database Query Example
- Layer of the SS7 Protocol
- What Goes Over the Signaling Link?
- Addressing in the SS7 Network

digital.life

- Signal Unit Structure
- What are the Functions of the Different Signaling Units?
- SS7 Network Architecture
- Service Switching Points
- Signaling Transfer Points
- Service Control Points

SDH TELECOMMUNICATIONS (G.707)

- Synchronization of Digital Signals
- PDH vs SDH
- SDH Frame Structure (Virtual Container)
- SDH Overhead
- SDH Network Management
- Alarms, Defects & Anomalies & Performance Monitoring
- SDH Pointers
- SDH Multiplexing Process (container, virtual container, TU, TUG, AU, AUG, STM-N)
- SDH Tributary Multiplexing
- Automatic Protection Switching (APS)

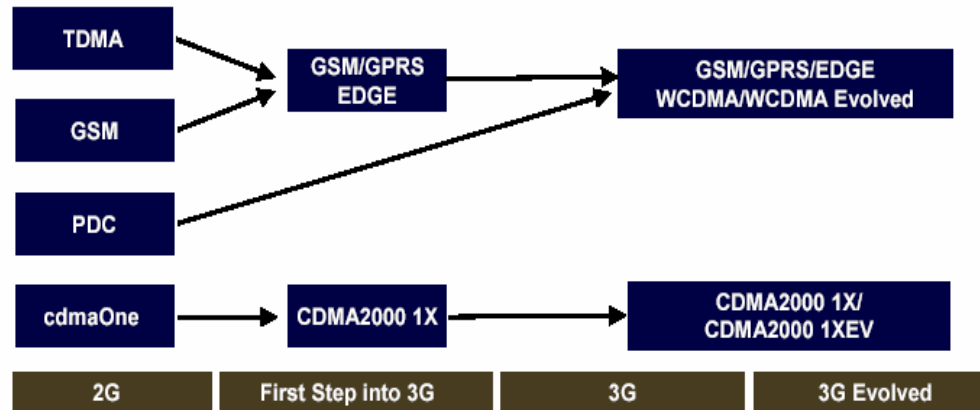
SDH Network Elements

- Terminal Multiplexer
- Regenerator
- Add / Drop Multiplexer
- Digital Cross Connects (DCS)

WDM & DWDM Optical Infrastructure

digital.life

Wireless Infrastructures



2G - Global System for Mobile Communications (GSM)

- GSM Network Architecture & Structure
- GSM Protocol Architecture
- GSM Air Interface
- Logical, Traffic & Network Channels
- GSM Access Network
- BTS, BSC & TRAU
- Interfaces MS - BTS - BSC
- GSM Core Network
- Core Network Entities (MSC & Registers)

digital.life

2.5 G - GPRS Network Architecture

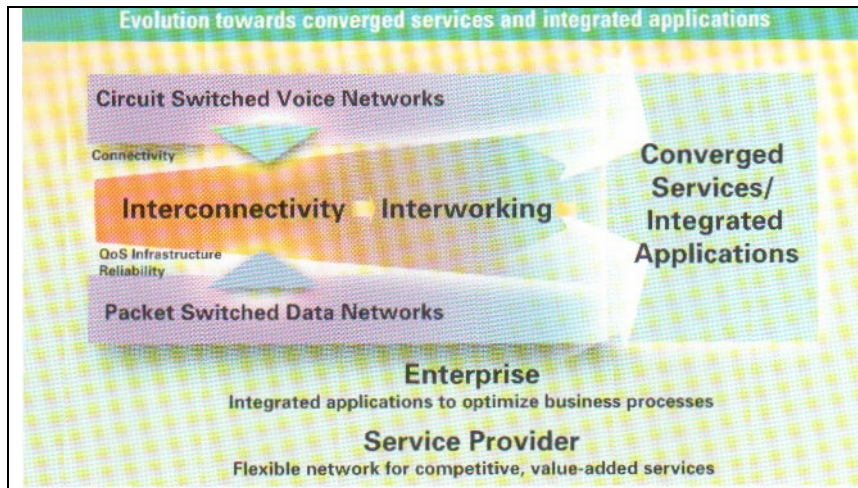
3G UMTS Network

Universal Mobile Telecommunications Service (UMTS)

- The WCDMA Air Interface
- UTRA & RNS
- The WCDMA Air Interface Protocol Architecture
- WCDMA Channel Types
- The UTRAN Architecture
- Functional Roles of the RNC
- UTRAN Interfaces & Protocols
- UMTS Call & Mobility Management (MM)

digital.life

Next Generation Networks (NGN)



Circuit Switching vs Packet Switching

Overview of Signaling Protocols

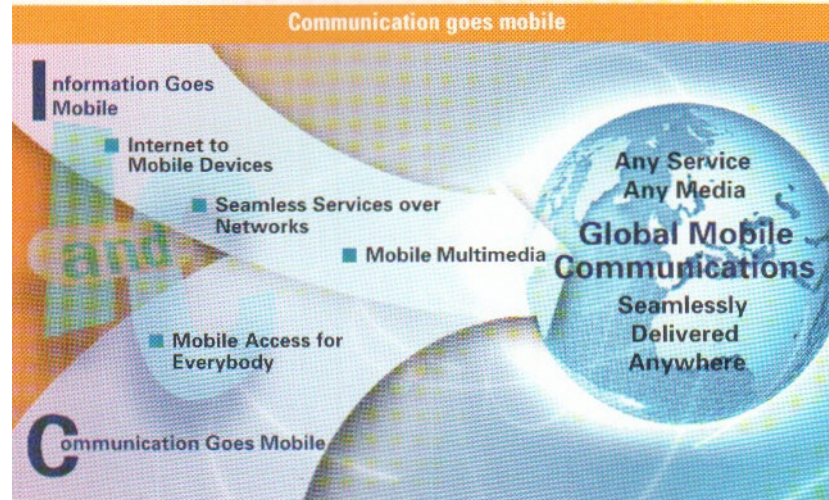
H.323 / SIP / SIGTRAN

Overview of WiMAX

- Fixed broadband wireless access
- Capabilities of WiMAX
- IEEE 802.16 standards
- WiMAX Forum and WiMAX standards
- WiMAX trials and deployments
- WiMAX mobility, 802.16e

digital.life

PART III – TELECOM CASE STUDIES & UPCOMING TRENDS



digital.life



218 AGCR Enclave
Opp. Karkardoma Courts
Delhi 110092 | INDIA
Cell: +91-9811841782 | www.telecomtraining.in

On Demand
Programmes



SANJEEV GOEL

**IT | TELECOM | MANAGEMENT TRAINER
SOCIAL MEDIA TRAINER & CONSULTANT**

Sanjeev.goel@telecomtraining.in | <http://in.linkedin.com/in/telecomtrainer>

digital.life