Telecom Basics Series

Introduction to Datacommunications
Introduction to Telecommunications
Introduction to Wireless
Introduction to Mobile Data & Applications
Introduction to Digital Broadcasting

2G Cellular Series

GSM Fundamentals
GSM Air Interface
GSM Signaling and Protocols Architecture
GSM Signaling and Protocols Procedures
cdmaOne Fundamentals

2.5G Cellular Series

GPRS Fundamentals
GPRS Engineering

3G Cellular Series

All-IP 3G Fundamentals
All-IP 3G Technology
CDMA2000 1XRTT Fundamentals
CDMA 2000 1xRTT EVolution
EDGE Fundamentals
HSDPA Fundamentals
UMTS R7 Fundamentals
UMTS Air Interface
UMTS End-to-end Scenarios
UMTS Signaling Framework
UMTS Signaling Procedures

4G Series

LTE Fundamentals
Introduction to Convergence

Fixed Wireless Series

802.11 Fundamentals
WiMAX Fundamentals
WLAN Fundamentals

Signaling Series

SS7 Fundamentals
SIGTRAN Fundamentals

Protocols Series

ATM Fundamentals I
ATM Fundamentals 2
Introduction to VoIP
IPv6 Fundamentals
IPv6 Advanced
SIP Fundamentals
WAP Fundamentals
MPLS Fundamentals

Satellite Series 17
ATM over Satellite 1
ATM over Satellite 2
Satellite Rating & Billing Fundamentals

Digital TV Series 18
DVB-S Fundamentals

Telecom Operations Series 19
Customer Care
Revenue Assurance
Wireless Rating & Billing Fundamentals
Wireless Rating & Billing Advanced
Setting Tariffs for IP Services
Introduction to Project Management
Telecom Fraud
Exam prep apps

PMPTests
Networker

Management series (eBooks)

Bullying & Harassment
Career Detective
Coaching Kit
Emotional Intelligence
HR Kit
Impactful Presentations
Interview Wise
Marketing Skills
Meetings Kit
Performance Management
Project Management
Safety Matters
Sales Kit
Stress Kit
Time Matters Kit
<table>
<thead>
<tr>
<th>Introduction to Data-communications</th>
<th>Introduction to Tele-communications</th>
<th>Introduction to Wireless</th>
<th>Introduction to Mobile Data and Applications</th>
<th>Introduction to Digital Broadcasting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Audience:</strong> Sales/management personnel, technical staff from other disciplines, 3rd level engineering and computing students, engineering staff, field and maintenance engineers</td>
<td><strong>Target Audience:</strong> Sales/management personnel, technical staff from other disciplines, 3rd level engineering and computing students, engineering staff, field and maintenance engineers</td>
<td><strong>Target Audience:</strong> Sales/management personnel, customer care, technical staff from other disciplines, 3rd level engineering and computing students, engineering staff, field and maintenance engineers</td>
<td><strong>Target Audience:</strong> Sales/management personnel, technical staff from other disciplines, 3rd level engineering and computing students and recent computer science &amp; engineering graduates</td>
<td><strong>Target Audience:</strong> Sales/management personnel, technical staff from other disciplines, 3rd level engineering and computing students and recent computer science &amp; engineering graduates</td>
</tr>
<tr>
<td><strong>Key Content:</strong></td>
<td><strong>Key Content:</strong></td>
<td><strong>Key Content:</strong></td>
<td><strong>Key Content:</strong></td>
<td><strong>Key Content:</strong></td>
</tr>
<tr>
<td>• Introduction</td>
<td>• Introduction</td>
<td>• Introduction</td>
<td>• Introduction</td>
<td>• Introduction</td>
</tr>
<tr>
<td>• Basic concepts</td>
<td>• Basic concepts</td>
<td>• Basic concepts</td>
<td>• Basic concepts</td>
<td>• Basic concepts</td>
</tr>
<tr>
<td>• Protocol stacks</td>
<td>• PCM &amp; voice coding</td>
<td>• Modulation</td>
<td>• Protocol stacks</td>
<td>• Protocol stacks</td>
</tr>
<tr>
<td>• LAN/WAN</td>
<td>• Multiplexing</td>
<td>• Multiple access</td>
<td>• LAN/WAN</td>
<td>• LAN/WAN</td>
</tr>
<tr>
<td>• TCP/IPv4</td>
<td>• Transmission</td>
<td>• Cellular GSM, CDMA</td>
<td>• TCP/IPv4</td>
<td>• TCP/IPv4</td>
</tr>
<tr>
<td>• IPv6</td>
<td>• Switching</td>
<td>• Fading</td>
<td>• IPv6</td>
<td>• IPv6</td>
</tr>
<tr>
<td>• Datalink</td>
<td>• Traffic engineering</td>
<td>• Countermeasures</td>
<td>• Datalink</td>
<td>• Datalink</td>
</tr>
<tr>
<td>• ATM</td>
<td>• Signaling</td>
<td>• Fixed Wireless</td>
<td>• ATM, MPLS</td>
<td>• ATM, MPLS</td>
</tr>
<tr>
<td>• MPLS</td>
<td>• Billing</td>
<td>• Frequency planning</td>
<td>• Mobile Regulatory/Business</td>
<td>• Mobile Regulatory/Business</td>
</tr>
<tr>
<td>• Mobile Regulatory/Business</td>
<td>• Cellular</td>
<td>• Antennae</td>
<td>• Real-time</td>
<td>• Real-time</td>
</tr>
<tr>
<td>• Real-time</td>
<td>• Packet-based</td>
<td>• Duplex/Simplex</td>
<td>• Convergence</td>
<td>• Convergence</td>
</tr>
<tr>
<td>• Convergence</td>
<td>• Broadband</td>
<td>• Power budgets</td>
<td>• Frame relay</td>
<td>• Frame relay</td>
</tr>
<tr>
<td>• Frame relay</td>
<td>• VoIP</td>
<td>• Cell planning</td>
<td>• DSL</td>
<td>• DSL</td>
</tr>
<tr>
<td>• DSL</td>
<td>• Cable</td>
<td>• Signal loss</td>
<td>• Bandwidth</td>
<td>• Bandwidth</td>
</tr>
<tr>
<td>• Bandwidth</td>
<td>• Regulatory</td>
<td>• Satellite</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Telecom Basics Series**

Editions: Online hosted, SCORM
### GSM Fundamentals

Comprehensive overview of the Global System for Mobile Communications (GSM), which is the most widely used second-generation (2G) system in the world.

**Versions:** International, US

- Identify the principal objectives in the implementation of GSM
- Identify the services and network structure of GSM
- List the components of the GSM Reference Model
- Describe the MS, BSC, BTS, MSC, HLR, VLR, EIR, AuC and OSS
- Define GSM's registration, location updating, paging, and security processes
- Outline the main stages in a PSTN to MS call (including MS roaming)

### GSM Air Interface

Comprehensive overview of the use of physical and transport channels on the Air Interface.

- Identify the challenges presented by GSM's transmission environment
- Identify the solutions devised for GSM's transmission challenges
- Outline the main stages of GSM's transmission processes
- Describe the physical and transport channels on the GSM Air Interface
- Identify GSM's security management system

### GSM Signaling and Protocols Architecture

Comprehensive overview of the role of signaling in GSM, and considers in detail the GSM sub-system entities and signaling protocol architecture.

- Define the role of signaling in GSM
- Identify the protocols used in GSM signaling
- Describe the GSM interfaces
- Describe the GSM subsystem entities
- Describe the GSM's protocol architecture

### GSM Signaling and Protocols Procedures

Practical application of signaling systems and protocols. This module describes signaling, synchronization, location update, handover, security procedures, and call scenarios.

- Describe GSM's location update procedure, from initiation to conclusion
- Identify the purpose of GSM's security procedures
- Describe the role of signaling in GSM's security procedures
- Describe the placing of an MS-to-PSTN call from a GSM PLMN
- Describe the placing of a PSTN-to-MS call
- Describe the placing of an MS-to-MS within a GSM PLMN
- Describe GSM's Intra-MSC handover and Inter-MSC handover processes

### cdmaOne Fundamentals

Comprehensive overview of cdmaOne standards and IS-95 in particular. The Code Division Multiple Access (CDMA) technique, which is used in cdmaOne cellular systems, is also described.

- Define Code Division Multiple Access (CDMA)
- Outline the origins of the cdmaOne cdmaOne™ standards family
- Outline a number of spread spectrum techniques
- Describe the main benefits of CDMA and its performance
- Understand the cdmaOne™ IS-95 standard
- Outline briefly how voice coding and power control is defined
- Describe the forward and reverse channels
- Outline the access procedure and handoff in a CDMA system
## GPRS Fundamentals

Comprehensive overview of GPRS, and the motivation behind GPRS, modifications of standard GSM systems required by GPRS, and future implications of GPRS.

### Versions:
- International, US

- list the processes used for circuit-switched data within GSM
- list the advantages of moving to a packetswitched standard
- identify the key components of a GPRS network
- explain the process of attaching a user to a GPRS network
- explain the process of sending a data packet across the GPRS network

## GPRS Engineering

Comprehensive overview of call handling and the air interface of a GPRS network.

- GPRS channel types (including their mapping onto GSM channels), the multi-frame structure, and the channel coding process
- sending data from a mobile station to a GPRS server
- identify advantages of GPRS
- key elements of the GPRS network
- map GPRS network onto GSM network
- distinguish between various GPRS channel types
- map GPRS channels onto GSM channels
- define GPRS multiframe structure
- identify the process of sending data from a mobile client to a GPRS server
<table>
<thead>
<tr>
<th>All-IP 3G Fundamentals</th>
<th>All-IP 3G Technology</th>
<th>CDMA2000 1xRTT Fundamentals</th>
<th>CDMA 2000 1xRTT EVolution</th>
<th>EDGE Fundamentals</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-IP and convergence is set in context by this overviews of 3G and Internet systems and their evolution.</td>
<td>Technical overview of All-IP 3G systems. It emphasizes the IP Multimedia Subsystem (IMS)-the main enabler of convergence</td>
<td>Comprehensive overview of 1xRTT technology. The context within different generations and technologies is outlined. The systems, operations, channels and network are described, and compared with earlier cdmaOne cdmaOne.</td>
<td>Comprehensive overview of the evolution of CDMA2000 1xRTT standard. The two main systems, 1xEV-DO (Data Only (or Optimized)) and 1xEV-DV (Data &amp; Voice) are discussed.</td>
<td>Comprehensive overview of the rationale, technology, context and evolution of Enhanced Data Rates for Global Evolution (EDGE).</td>
</tr>
</tbody>
</table>

**Versions:** International, US

- Explain the rationale and the limitations of IP in 3G
- Outline the business case for All-IP 3G
- Appreciate the application of some advanced services
- Understand the context and technologies of both IP and 3G
- Identify the features and challenges involved in All-IP 3G
- Describe the evolution of standards towards All-IP 3G
- Define All-IP-3G technology
- Understand the role of the IP Multimedia Subsystem
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions
- Define All-IP-3G technology
- Understand the role of the IP Multimedia Subsystem
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions
- Understand the CDMA2000 1xRTT historical and technical context
- Outline some new features relative to cdmaOne cdmaOneTM
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions
- Understand the CDMA2000 1xRTT historical and technical context
- Outline some new features relative to cdmaOne cdmaOneTM
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions
- Understand the CDMA2000 1xRTT historical and technical context
- Outline some new features relative to cdmaOne cdmaOneTM
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions
- Understand the CDMA2000 1xRTT historical and technical context
- Outline some new features relative to cdmaOne cdmaOneTM
- Identify the main IMS features
- Explain the operation of the architecture elements
- Describe the functions of the main reference points
- Outline the procedures, protocols and supporting functions

- Understand the historical and technical context of CDMA2000 1xEV
- Outline some new features relative to cdmaOne cdmaOneTM
- Identify the key technical features of 1xEV-DO and 1xEV-DV
- Describe the network components and operation
- Describe the channel structures
- Explain some issues in data transport
- Understand the radio aspects
- Describe the channel structures
- Explain the access and mobility techniques
- Describe the channel structures
- Understand the operation of the different protocol layers
- Outline the rationale and history of EDGE
- Understand its context within 2G and 3G
- Explain the overall EDGE concept
- Understand specific technical features
- Describe the standards
- Outline cell planning implications
- Identify some technology evolution paths
### HSDPA Fundamentals
- High-Speed Downlink Packet Access (HSDPA) is a performance upgrade to the UMTS/WCDMA downlink air interface, for packet access. This module provides a comprehensive overview of HSDPA background and technology.

### UMTS R7 Fundamentals
- High-level introduction to Release 7 of UMTS. This module deals with international development and standardization.

### UMTS Air Interface
- Examines the technical detail of the air interface used on UMTS, known as WCDMA.

### UMTS End-to-end Scenarios
- This module focuses on UMTS signaling in various call scenarios including mobile-originated and mobile-terminated circuit-switched calls, and mobile-originated and mobile terminated packet service requests.

### UMTS Signaling Framework
- Considers signaling and protocol specifications for UMTS prepared by the 3GPP Standardization fora.

---

<table>
<thead>
<tr>
<th>HSDPA Fundamentals</th>
<th>UMTS R7 Fundamentals</th>
<th>UMTS Air Interface</th>
<th>UMTS End-to-end Scenarios</th>
<th>UMTS Signaling Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>• define HSDPA</td>
<td>• identify services and applications offered by 3G UMTS systems</td>
<td>• describe WCDMA frequency allocation</td>
<td>• Mobile Originated Circuit-Switched Call</td>
<td></td>
</tr>
<tr>
<td>• understand the existing UMTS air interface</td>
<td>• understand the existing UMTS air interface</td>
<td>• identify the protocol layers of the radio interface</td>
<td>• Mobile Originated Packet Service Request</td>
<td></td>
</tr>
<tr>
<td>• interface</td>
<td>• outline the standardization process for 3G UMTS to Release 7</td>
<td>• identify the different transport channels used in WCDMA</td>
<td>• Mobile Terminated Circuit-Switched Call</td>
<td></td>
</tr>
<tr>
<td>• explain the HSDPA features and operation</td>
<td>• list the 3G UMTS frequency spectrum allocation</td>
<td>• list WCDMA's uplink and downlink physical channels</td>
<td>• Network Originated Packet Service Request</td>
<td></td>
</tr>
<tr>
<td>• describe the function of the different channels</td>
<td>• describe the key features of the UMTS / WCDMA / HSDPA air interface</td>
<td>• outline the modulation and spreading used in WCDMA</td>
<td>• Intra-UTRAN Handover</td>
<td></td>
</tr>
<tr>
<td>• understand HSUPA</td>
<td>• outline the system architecture for 3G UMTS / All-IP 3G IMS networks</td>
<td>• identify WCDMA's transport channel coding and multiplexing schemes</td>
<td>• UMTS to GSM Roaming</td>
<td></td>
</tr>
<tr>
<td>• outline some later enhanced features</td>
<td>• describe the evolutionary scenarios for deploying 3G UMTS systems</td>
<td>• describe how handover is performed in WCDMA</td>
<td>• GSM to UMTS Roaming</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• identify the performance enhancement features used for the WCDMA</td>
<td>• UMTS SMS Protocol Architecture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• UMTS SMS Message Flows</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• UMTS Location Reporting</td>
<td></td>
</tr>
</tbody>
</table>

---

*contd.*
UMTS Signaling Procedures

Considers practical application of the signaling systems and protocols described in UMTS Signaling Framework.

- Synchronization processes in UTRAN and protocol stack
- UMTS signaling
- Network and Terminal States
- UMTS Attach Procedure
- Serving RNS Relocation Procedure
- Combined Cell/URA Update & Serving RNS Relocation Procedure
- Routing Area Update Procedure
- UMTS Detach Procedure
- UMTS Security – MS Identification
- UMTS Security Authentication and Ciphering
- UMTS Paging Procedure

Editions: Online hosted, SCORM
### LTE Fundamentals

Long term evolution (LTE) builds upon UMTS Release 7. LTE is Release 8 based on UMTS/HSPA standards.

- Understand the need for faster networks as an evolutionary track for existing GSM-type, and WiMAX-type networks
- Understand new radio access technologies
- Discuss backwards compatibility and context of legacy networks
- Understand security and implementation issues
- Describe LTE's protocol architectures
- Describe the evolution of standards towards All-IP 3G

### Introduction to Convergence

All-IP and convergence is set in context by this overviews of 3G and Internet systems and their evolution.

- Explain the rationale and the limitations of IP in 3G
- Outline the business case for All-IP 3G
- Appreciate the application of some advanced services
- Understand the context and technologies of both IP and 3G
- Identify the features and challenges involved in All-IP 3G
- Describe the evolution of standards towards All-IP 3G
## 802.11 Fundamentals

Comprehensive introduction to the 802.11 Wireless LAN standard.

- Introduction to Wireless LANs
- 802.11 Overview
- MAC Layer
- MAC Frame Structure
- Physical Layer Overview
- Base Standard Physical Layers
- Rate Extension PHY Standards
- Roaming and TCP/IP in 802.11
- Software and Hardware Implementation Issues
- Security and Other Developments
- QoS & Regulatory Standards
- Post-2005 Work • 802.11n

## WiMAX Fundamentals

The module defines WiMAX and positions it within the overall telecom sector. It identifies key market applications, implications and benefits.

- Define WiMAX and its role
- Position WiMAX standards within the overall telecom sector
- Identify key applications, implications and benefits
- Outline the different IEEE 802.16 specifications
- Describe the main technical features
- Understand the operation of the protocol layers
- Compare WiMAX with similar standards and discuss the relationships

## WLAN Fundamentals

Provides a comprehensive overview of Wireless LAN systems and standards, mainly 802.11 and HiperLAN/2.

- Introduction to Wireless LANs
- Public Access WLAN Market
- Wireless Networks
- Components and Systems
- 802.11 Standard
- 802.11 MAC and PHY Layers
- HiperLAN2
- WLAN / 3G Interworking
- WLAN Security and Deployment
- Sky-based Applications and Technology Trends

### Versions:

- International English, Thai Audio

### Editions:

- Online hosted, SCORM
SS7 Fundamentals

Covers SS7 signaling which is a vital part of modern wireline and wireless telephone networks. Next-generation networks and services will depend upon its operation in the packet world and its evolution.

- Introduction
- Overview of SS7
- SS7 Protocol stack
- Message Transfer Part (MTP)
- Telephone User Part (TUP)
- ISDN User Part (ISUP)
- Broadband ISDN User Part (BISUP)
- Signaling Connection Control Part (SCCP)
- Transaction Capabilities Control Part (TCAP)
- Mobile Application Part (MAP) and GSM
- IP SIGTRAN

SIGTRAN Fundamentals

Covers the SIGTRAN suite of signaling protocols that use Internet Protocol (IP) links to connect SS7 and ISDN signaling nodes.

- Motivation and Context
- The SIGTRAN Concept
- SCTP Introduction
- SCTP Behavior
- M2PA (MTP2 Peer-to-peer Adaptation Layer)
- M2UA (MTP2 User Adaptation Layer)
- M3UA (MTP3 User Adaptation Layer)
- SUA (SCCP User Adaptation Layer)
- Other User Adaptation Layers
- Implementing SIGTRAN
- Applications of SIGTRAN
ATM Fundamentals I

Considers Asynchronous Transfer Mode (ATM) network, the switching mechanisms used by the network, and ATM cells.

- define Asynchronous Transfer Mode (ATM)
- outline the history and origins of ATM
- describe ATM network services
- distinguish between virtual channels and virtual paths
- describe the different network nodes and their interfaces
- outline the components of an ATM cell
- describe the Cell Relay process
- outline the Protocol Reference Model

ATM Fundamentals II

Considers Asynchronous Transfer Mode (ATM) network, the switching mechanisms used by the network, and ATM cells.

- ATM Transport Network
- ATM Adaptation Layer (AAL)
- ATM Service Classifications
- AAL Protocols
- ATM Layer
- ATM Physical Layer
- ATM Physical Layer: Examples
- ATM Signaling
- ATM UNI Signaling
- Signaling ATM Adaptation Layer
- ATM Quality of Service
- ATM Traffic Management
- ATM and Error Handling
- ATM Network Management
- Summary & Conclusions

Introduction to VoIP

Comprehensive overview of the Voice over Internet Protocol (VoIP).

- general convergence of voice and data networks, features and challenges.
- architectures, devices and protocols,
- security issues and solutions.
- Introduction and Overview
- Network Convergence
- VoIP Features and Challenges
- QoS Protocols
- H.323
- Gateways
- Gateway Protocols
- Session Initiation Protocol
- Case Examples and Security

IPv6 Fundamentals

Comprehensive overview of IPv6, the latest level of the Internet Protocol Protocol. The module considers the development of IPv6 as a consequence of the shortcomings of IPv4

Versions: International English, Thai Audio

- The End of the Road for IPv4
- History of IPv6
- Key Features of IPv6
- Structure of IPv6 PDU
- IPv6 Header
- IPv6 Addressing Overview
- Unicast Addresses – I • Unicast Addresses II • Multicast Addresses • Anycast Addresses
- Summary

IPv6 Advanced

Following on from IPv6 Fundamentals, IPv6 Advanced considers IPv6 in detail including optional header extensions, security issues, traffic types and flow.

Versions: International English, Thai Audio

- Introduction
- Hop-by-hop Options header
- Routing header
- Fragment Header
- Destination Options Header
- Security Issues
- Authentication Headers
- Encapsulated Security Payload
- Neighbor Discovery
- Address Auto-configuration
- Transition Mechanisms
- Summary
<table>
<thead>
<tr>
<th>SIP Fundamentals</th>
<th>WAP Fundamentals</th>
<th>MPLS Fundamentals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a comprehensive overview of Session Initiation Protocol (SIP), its applications, and related systems.</td>
<td>High-level introduction to Wireless Application Protocol (WAP), in particular the standards and regulations that provide a framework for application development on wireless networks.</td>
<td>Multiprotocol Label Switching (MPLS) was conceived as a solution to two key problems with Internet Protocol - clear need for faster packet forwarding, and competing demands for priority and quality.</td>
</tr>
</tbody>
</table>

### Version:
- International English, German

### SIP Fundamentals:
- Introduction and Overview
- VoIP and SIP
- SIP Background and Principles
- Architecture
- Message Format
- Structure and Processes
- Session-Invitation Scenario
- Session-Proper Scenario
- Inter-working with PSTN ISUP
- IP-3G IMS Application

### WAP Fundamentals:
- Define ‘WAP’
- Outline the history and origins of WAP
- Identify the standards involved in WAP
- Describe the WAP Programming Model, including the WAE and WTA
- Outline the components of the WAP stack
- Identify the different WAP bearers
- List a variety of WAP applications, products, and development toolkits

### MPLS Fundamentals:
- Introduction and Background
- Labels and label switching
- Signaling and traffic control
- Traffic engineering
- MPLS and wireless
- MPLS security
- Benefits of MPLS
- Case study #1: VPN
- Case study #2: VoIP
- Case study #3: Traffic engineering
<table>
<thead>
<tr>
<th>Satellite Series</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATM over Satellite 1</strong></td>
<td><strong>ATM over Satellite 2</strong></td>
<td><strong>Satellite Rating &amp; Billing Fundamentals</strong></td>
</tr>
<tr>
<td>Comprehensive overview of the use of ATM for satellite. The course includes components of a satellite communications system, the different standards organizations, and key issues include error rates and propagation delay.</td>
<td>Further detail on the ATM over satellite systems introduced in ATM over Satellite Module 1. In particular, the module examines satellite access and Quality of Service issues, multiplexing in onboard processing satellite systems, error coding schemes, and antenna systems.</td>
<td>Comprehensive overview of rating and billing procedures for satellite telecommunications service providers.</td>
</tr>
<tr>
<td></td>
<td>• Motivation for ATM over Satellite</td>
<td>• Introduction to Satellite Billing</td>
</tr>
<tr>
<td></td>
<td>• Working Bodies • Error Correction • Propagation • Outages</td>
<td>• Wireless Telecommunications</td>
</tr>
<tr>
<td></td>
<td>• Architecture of ATM Satellite Systems</td>
<td>• MSS Components and Infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Onboard Processing Satellite</td>
<td>• Satellite Network Structure</td>
</tr>
<tr>
<td></td>
<td>• Summary &amp; Conclusions</td>
<td>• Satellite Numbering Plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• RoamingMSS Event Detail Records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Billing Periods and Cycles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Charge Types, Pricing, and Prepaid Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rating of Events</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bill Processing Steps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Billing Media</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interconnect Accounting</td>
</tr>
</tbody>
</table>
DVB-S Fundamentals

Concentrates on the satellite aspects of digital broadcasting. Identify the major components of satellite broadcasting.

- Appreciate the role of the DVB Project
- Understand the technical issues involved
- Describe the MPEG coding techniques
- Understand the operation of geostationary satellites
- Appreciate some link engineering issues
- Understand various transmission issues involved
- Describe the operation of satellite TV reception
- Understand the DVB-S standard
- Understand DVB Service Information
- Describe other relevant DVB systems and standards
## Telecom Operations Series

### Customer Care
- Comprehensive overview of customer care principles and procedures relevant to the telecommunications industry.

### Revenue Assurance
- Comprehensive overview of revenue assurance principles and procedures relevant to the telecommunications industry.

### Wireless Rating & Billing Fundamentals
- Comprehensive overview of rating and billing procedures for wireless telecommunications service providers.

### Wireless Rating & Billing Advanced
- Extends consideration of rating/billing business processes.

### Setting Tariffs for IP Services
- Examines tariffing ('rating') for IP services, and for new telephony services delivered over an IP framework.

### Additional Topics
- **Customer Care**: Introduction to Telecommunications Customer Care, Introduction to Customer Relationship Management, Customer-Telco Contact Cycle, Managing Service Prospects, Account Set-up, Selling Services, Service Provisioning, Account Hierarchies, Credit Management, Invoicing, Payment Types, Payment Processing, Payment Review, Delinquent Accounts.


- **Setting Tariffs for IP Services**: Impact of IP Services on the telecommunications industry, North American model for IP tariffing, European model for IP tariffing, Asian model for IP tariffing, Usage based IP tariffing defined, Variations on Usage based IP tariffing, Issues with Usage based IP tariffing, Flat rate IP tariffing defined, Flat rate tariffing for VoIP Networks, xDSL tariffing, Marketing packaged tariffs, Packaged IP tariffs for Residential, Customers.
**Introduction to Project Management**

Basic introduction to project disciplines and project management. Especially helpful for people coming to projects for the first time.

- Concept of a project
- Introduction to project lifecycle
- The importance of planning
- Estimating
- How to develop project schedules and allocate resources
- Dealing with outsourced activities
- Key project issues
- Personnel issues
- Process issues
- Product & technology issues
- Project controls and communications
- Introduction to formal methodologies including Waterfall, PRINCE/2, SDLC, RUP, RAD

**Telecom Fraud**

Introduction to telecom fraud management for personnel in customer care, revenue assurance and network management.

- Introduction to Telecommunications Fraud Management
- History of Telecommunications Fraud
- Fraud Types
- Subscriber Fraud
- Premium Rate Service (PRS) Fraud
- Reseller Fraud and Call Selling Operation
- Fixed Network Fraud
- Mobile Network Fraud
- Roaming Fraud and International Revenue Share Fraud
- Technical Fraud Cloning, Clipping, SIM Boxing
- Value Added Services Fraud
- Bypass, Interconnect and GSM Gateway Fraud
- Fraud Detection and Prevention
- Fraud Management Tools and Techniques
<table>
<thead>
<tr>
<th>PMPTests</th>
<th>Networker</th>
</tr>
</thead>
<tbody>
<tr>
<td>550 questions and answers aimed at PMI’s PMBOK. This app enables exam prep on-the-move, at any time. The app presents random selections of 20 questions (and randomizes the 4 distractors). No ongoing internet access is required following initial download and purchase.</td>
<td></td>
</tr>
<tr>
<td>300 questions and answers aimed at CompTIA Network+ exam prep. This app enables exam prep on-the-move, at any time. The app presents random selections of 20 questions (and randomizes the 4 distractors). No ongoing internet access is required following initial download and purchase.</td>
<td></td>
</tr>
<tr>
<td>• Covers all areas of PMBOK</td>
<td></td>
</tr>
<tr>
<td>• <a href="http://appshopper.com/business/pmp-tests">http://appshopper.com/business/pmp-tests</a></td>
<td></td>
</tr>
<tr>
<td>• Presents exam-type questions in a multiple choice format</td>
<td></td>
</tr>
<tr>
<td>• per.com/education/networker</td>
<td></td>
</tr>
</tbody>
</table>
Managers are charged with responsibility of achieving goals.

Organizations operate by breaking these goals down into specific tasks and responsibilities for individuals and teams.

It is not sufficient for a manager to focus on task/responsibility achievement alone, as if in a vacuum of technicality. All managers and team leaders must take account of the basic fact that such tasks and responsibilities are achieved through people.

Best Practice People Management is all the more required in today’s complex organizations where higher levels of performance are repeatedly demanded and change is the only constant. It is critical that managers acquire the skills to manage the people in their teams as effectively as possible.

### HR Kit

Managers are charged with responsibility of achieving goals.

Organizations operate by breaking these goals down into specific tasks and responsibilities for individuals and teams.

It is not sufficient for a manager to focus on task/responsibility achievement alone, as if in a vacuum of technicality. All managers and team leaders must take account of the basic fact that such tasks and responsibilities are achieved through people.

### Sales Kit

This book is written for salespeople who have the hunger to be successful. It is written from the perspective of what salespeople need to actually do in order to be successful in selling. It is not about devising a sales strategy; it is about the face-to-face execution of the chosen selling strategy.

This book concentrates on developing winning sales behaviors.

The book starts with a chapter on the life-blood of every business - new business. The next six chapters focus entirely on the face-to-face personal selling skills of:

- **Listening**
- **Questioning**
- **Qualifying**
- **Influencing**
- **Objection handling**
- **Closing**

These are supplemented with:

- Four specific winning sales habits
- Leading the sales team
- The author’s selling rules
- leading the Sales Team.

Whatever you do in sales, sell to win!

### Time Matters Kit

How often do you have the kind of day where you work hard but go home with the feeling that you have achieved little? Do you have enough thinking time? Are you too busy to keep up with developments in your profession or sector? Does everything at work seem urgent? Are you enjoying your job as much as you would like?

Despite legislation which protects us and technology designed to help us become more effective, employees nowadays spend longer at work, feel more overwhelmed by the amount of work they have to do and have become more stressed.

As organizations struggle to remain competitive, employees must find ways to manage their own personal effectiveness; getting a good job done while taking care of their health and wellbeing.

### Stress Kit

For workers around the globe, stress on the job can be a challenge. There is already a certain level of stress in our lives outside of work and then we encounter even more stress arising from the pressures we face on the job.

In times of a poor economy, these stress levels tend to rise even higher. As layoffs and cutbacks impact our employment, salary, or benefits, all of us will experience additional stress.

The increase in stress and how well we manage it can be the difference between succeeding or failing at our jobs.

### Coaching Kit

At first thought, you may not be able to identify the difference between coaching and mentoring, partly because they do have some things in common.

They are both means of helping an individual to grow and develop and they both involve interpersonal relationships.

Both of them can vary in the level of formality, the length of duration, and the desired goals and outcomes.

In fact, some coaches may play a mentoring role as well, though mentors will not be coaches unless they have a more formal role in relation to the employee.
In this book, we define Emotional Intelligence (EQ), how it complements IQ and why it is a critical leadership skill set for achieving success in today's challenging environment. We also learn that, with practice, it can be learned and developed!

Why is it that two people with the same level of IQ can go on to achieve very different levels of success in life? We now know that IQ alone is not enough and that there exists a set of non-cognitive competencies that determine people's ability to achieve success. This other kind of 'smart' is referred to as Emotional Intelligence, referred to as EQ.

"EQ is about being 'smart' with your emotions... it's about tuning in to yourself and others and then using this valuable information to better manage yourself and your relationships with others."

A well written, current Safety Policy is the foundation of any SMS and unless you know what is in your organization's safety policy, you will not be in the best position to help in its successful implementation. As a manager, the Safety Policy is your 'bible' for managing safety. It is your role to ensure that the people reporting to you have read and fully understood the policy content.

The Safety Policy must be:

- Specific to the organization and the nature of its activities
- Concise, clearly written, dated and made effective by the signature of the most senior accountable person
- Communicated and readily accessible to all persons at their place of work
- Reviewed for continuing suitability
- Made available to relevant external interested parties, when required

Impactful Presentations provides all the necessary direction for those who want to improve the way in which they approach and deliver presentations. The book is packed full of useful tips.

It is a very welcome addition to our developing series of Human Resource, Organization Behaviour and General Management eBooks.

Most marketing books are written for marketers. This one isn't, in the strict sense.

It does not take an academic approach to the subject. Its purpose is to provide you with an understanding that allows you to really engage with the marketing process, as it would be handled by marketers.

It takes as its starting point the assumption that the reader has responsibility in, or oversight of, the marketing and sales effort of the company. That reader might be the Chief Executive, a General Manager, a Sales Manager, or the owner of a business. Whatever category you may fall into you are likely to have recently come to the conclusion that you need a stronger awareness of the value of Marketing to a business.

This will allow you to engage much more fully in marketing planning and the impact of these plans on the organization.

This is a practical guidebook for anyone about to get involved in a significant project. The book offers real-world perspectives on common project problems, and avoids academic approaches and jargon.

It explains clearly how to plan for success, how to manage stakeholders, how to avoid unwelcome surprises and how to form a viable team. It reveals the hidden flaws that undermine so many projects, and suggests ways to avoid the surprising pitfalls in managing and leading projects.

Research shows that more than half of all significant projects end in serious disappointment, delivering little of the expected outcome, or greatly exceeding the expected time.

Roughly one-third of projects are strategic 'misfits' that should never have even been started.

However, even a basic use of project management will greatly increase the chances of success.
## Meetings Kit

Many meetings we attend are unnecessary. In this book we’ll look at when it is appropriate to hold a meeting, as well as when it is not.

We’ll also talk about the importance of clarifying your meeting’s objectives. Otherwise, why should anyone come if you don’t even know what it is you want them to meet for? We have all been to meetings that, when we left, we knew had been a waste of time. In fact, we can feel as if we spend the majority of our day in meetings. However, few meetings are run as effectively as they could be.

In this ebook, you’ll learn how to run an effective meeting by looking at several different topics:

- **Why are you holding a meeting (what’s the meeting’s objective)?**
- **Scheduling the meeting**
- **The meeting agenda**
- **Before the meeting**
- **General operations during the meeting**
- **Basic communication skills for meetings**
- **Working effectively in a meeting**
- **After the meeting**

## Career Detective

International surveys show consistently that more than one in two job-holders are in the wrong job – but choose to do nothing about it. Longer hours and increased levels of stress play an increasing part of a professional career than 10 years ago.

But there is a downside: a recent UK survey suggests that about one in six employees have seriously considered sabotaging the company they work for. So a lot of discontent in the workplace – but how did it happen and what can be done?

Most people spend more time planning their annual holiday than planning their career. When jobs are plentiful people drift to the most accessible ones; in a recession they take what they can get. What’s missing in either case is a process to match your job with your skills, your expertise, your way of working so that you can have a career and not just a job.

To do this you have to be your own career detective – ferreting out hard-to-get information, making contacts and ultimately making sense of a lot of data.

## Performance Management

The development of a high performance culture is facilitated by the existence of an integrated, simple and easy-to-operate Performance Management System (PMS).

The task of reviewing the performance of individuals within organizations is a line management function and thus should be clearly seen as a general management system – indeed as a core system for achieving the organization’s objectives.

It is the foundation of the basic architecture of management.

## Bullying & Harassment

This book captures the Values that organizations should espouse in respect of Bullying, Harassment and Sexual Harassment. In addition the book deals with many aspects of Best Practice responses to these difficult situations.

Organizations owe it to their employees to foster a culture of dignity and respect within the organization through developing and promulgating policies and practices specifically aimed at enhancing such a culture.

Every employer should recognize the right of all staff to be treated with dignity & respect at work, and many companies have a formal Dignity at Work Policy to support this value. This right ensures that all employees are free to do their work in a safe environment which is free from Harassment, Sexual Harassment & Bullying, whether carried out by a member(s) of staff, a customer, a client or a business contact of the employer.

This applies to work on the employer’s premises, assignments off those premises and to social occasions that are work-related.

## Interview Wise

This book only deals with 10 generic questions – but they cover the main areas!

You can waste considerable amounts of time trying to master prepared answers to long lists of contrived questions. This time could be better put to use researching the job and organization you are interested in.

Your objective at the interview is to help the interview panel (or Interviewer) match the job description to your ability to do the job – as proven by you during the interview.

The interview is a structured conversation with a specific purpose – and possibly your first meeting with your future boss. The interview is a complex process – containing

- elements of a trial (search for evidence and proof)
- group therapy (dealing with feelings) and
- business negotiation (buying expertise and skills).

You need to be aware of these elements, and many others in order to make the process successful.