

# Emerging Markets and Technology: IP & Mobile Broadband

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Suva, Fiji Islands



COMMONWEALTH  
TELECOMMUNICATIONS  
ORGANISATION

## Overview

This course is designed to introduce the participant to the two key dimensions of networks: IP transmission and mobile broadband. It therefore covers topics dealing with both fixed and mobile networks, giving participants the opportunity to appreciate the interplay between these two platforms, as well as their market opportunities.

Organised under



For more information  
about this course, or to  
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## OBJECTIVES

To be delivered over five days in Suva, Fiji, the course aims to:

- Explain the evolution of communication and network technologies;
- Describe in detail next-generation networks and their components;
- Provide a detailed understanding of 3G and Voice over IP;
- Examine services possible next-generation networks;
- Explore emerging markets for next-generation networks and their potential; and
- Present and discuss mobile broadband technologies.

## TARGET AUDIENCE

Telecoms professionals with an interest in NGN and mobile broadband and their commercial applications.

## EXPECTED OUTCOMES

On completion of this course, the successful participant will be able to:

- Explain the evolution of communication technologies;
- Understand the linkages between communication technologies and markets;
- Demonstrate a clear knowledge of NGN networks;
- Advise on services to be delivered over NGN networks;
- Analyse the markets for NGN networks; and
- Describe mobile broadband technologies and services.

## OUTLINE

### Evolution of Communication Technologies

- Evolution of core network technologies
- Improvements and changes in access-side technologies
- Changes in transport technologies: the transition to IP networks

### Importance of Communication Technologies and Markets

- Social and family needs – personal communications
- Business needs – commerce
- Educational/medical/government – support services

### Basic Building Blocks of Communication Technologies

- Core, transport and access networks
- Types of networks: Fixed (or wire-line) and mobile (or wireless) networks
- Circuit-switched and packet-switched networks

### IP Networking

- Overview of IP networks
- Transport over TDMA, SDH, FR, ATM, IP, MPLS, and Ethernet
- IP MPLS
- Migration from IPv4 to IPv6

### Next-generation Networks

- Core networks
  - Circuit-switched
  - Next-generation networks
  - IP multimedia subsystem
- Transport
  - TDMA/SDH
  - FR/ATM
  - IP MPLS
- Access
  - Fixed networks – copper vs. fiber (FTTH)
  - Mobile networks
- CDMA
- GSM – 2G, 3G, and 4G (LTE)
- WiMAX

### Mobile Broadband

- CDMA 2001 X
- WCDMA and LTE
- WiMAX
- Techno-commercial implications

### Overview of Services that Can Be Rendered on NGN Networks

- Generally integrated services within the network
- IN/SMS/MMS/IM/LBS/ADPS/Video streaming/Mobile TV
- Third-party services and applications

### Markets for NGN Services

- Assessing the market needs
- Guidelines for the selection of optimum technologies
- Techno-commercial implications
- Vendor support and future growth roadmap

### Pricing for NGN Services

- Understanding cost factors
- Defining market segments
- Pricing strategies
- Wholesale vs. retail pricing
- Developing pricing plans

## FACULTY

### Arun, Michael

Arun Michael, a citizen of India, currently works at BSNL, India's main fixed operator as Additional General Manager for the company's Intelligent Network division in Kolkata. He has a wide practical experience in the commissioning of transmission systems, including SDH and DWDM, as well as the deployment of deployment of Wi-Fi and WiMAX solutions. For over 18 years prior to this, he held various network management positions within the company's GSM Network Planning and Operations. He is a 2001 recipient of the operator's Vishist Sanchar Seva Padak award, a distinction given annually to its top performers. Besides network technologies, Mr Michael spent a number of years in the marketing of GSM products. Mr Arun Michael holds a Bachelor of Engineering in Electronics and Telecommunication, and an MBA in Finance.

