



AFRICAN ADVANCED LEVEL TELECOMMUNICATIONS INSTITUTE (AFRALTI)

TRAINING WORKSHOP OUTLINE

Title:	Telecommunications Network Interconnection, Cost Analysis and Modelling Including Regulations, Pricing and Licensing
Date:	24th April - 5th May 2017
Duration:	10 Days
Location:	Nairobi, Kenya
Tuition Fee:	AFRALTI Member States USD1,800; Non-Member States USD2,160

COURSE OVERVIEW

Until the late 1980s, governments around the world owned and operated telecommunications networks and services on monopoly basis. During this period there was no interconnection of the telecommunications networks and competition in the telecommunications sector in the world due to the monopoly era. Costs were not big issues because the telecommunications network development was driven by governments and politics.

In the early 1990s, the government around the world reformed the telecommunications sector by liberalizing the telecommunications markets and opening them up to competition. The competition brought new entrants especially mobile communications network operators, and they required to interconnect with the incumbents' telecommunications networks in order to allow seamless communications between subscribers connected to the new entrants and incumbents' telecommunications networks. The new entrants would like to know the costs for accessing the incumbents' telecommunications networks before they interconnect them. Knowing the costs for accessing the incumbents' telecommunications networks (interconnection costs) become a big problem in the liberalized and competitive telecommunications markets unless effective licensing

and pricing regulations are enforced properly. Therefore, this course presents conceptual framework for the analysis and modelling of the telecommunications network interconnection costs including regulations, pricing and licensing. The analysis of the interconnection costs forms basis for setting up the cost based interconnection prices, which promote effective competition and economic efficiency of the country. In licensing, the course presents amongst others the following: types of licenses, Converged Licensing Framework (CLF), licensing conditions and renewal of licenses. The Regulations related to the cost based interconnection pricing and licensing are also presented in the course.

Target Audience

Telecommunications regulators, operators and government policy makers.

Pre-requisite/s

- Basic knowledge of in telecommunications network engineering, operations and regulations; and
- Basic knowledge in economic, finance and laws.

Pain Points

In the early 1990s, reform of the telecommunications sector took place around the world, without taking into considerations proper analysis and modelling of the interconnection costs, regulations, pricing and licensing regimes as a result the interconnection prices were set far above the costs in most of developing countries. High interconnection prices brought up endless interconnection price disputes in most of the developing countries including Africa. Unless regulators and governments understand well the analysis and modelling of the interconnection costs, then most of the developing countries will continue to face high interconnection prices and subsequent interconnection disputes. Appropriate licensing regimes, pricing and regulations are mostly needed in the liberalized and competitive telecommunications markets in order to promote effective competition and economic efficiency of the country.

Value Proposition

At the end of the course, participants will have deep knowledge of the conceptual framework for the analysis and modelling of the telecommunications network interconnection costs including regulations, pricing and licensing. .

Workshop Objectives

- Understand well conceptual framework for the analysis and modelling of the interconnection costs;
- Get knowledge of setting up the cost based interconnection prices; and
- Get knowledge of developing regulations, prices and licences for telecommunications networks and services.

Workshop methodology

The workshop includes presentations by the facilitator, country presentations, group discussion and interactive sessions.

Workshop Contents

- 1 Definition of interconnection of telecommunications networks
- 2 Types of interconnection models
- 3 Interconnection Agreements/Regulations
- 4 Fixed Telecommunications network interconnection cost models
 - Network design to be modelled;
 - Different network elements /components to be modelled; and
 - different types of services/calls to be modelled
- 5 Mobile Communications interconnection cost models
 - Network design to be modelled;
 - Different network elements /components to be modelled; and
 - Different types of services/calls to be modelled
- 6 Characterisation of the Carried Traffic Throughput Demand by the Conveyance Networks
 - Calculations of the Current Traffic Throughput Demand in Calls and Minutes by the Conveyance networks; and
 - Calculations of the Expected Traffic Throughput Demand in Calls and Minutes in a Year by the Conveyance Networks.
- 7 Dimensioning of the Expected Traffic Throughput Demand in Calls and Minutes in a Year by the Conveyance Networks into Capacity of Busy Hour Call Attempts (BHCA) and Busy Hour Erlangs (BHE) respectively:
 - Principles of network dimensioning;
 - Understanding background of the Erlangs;
 - Examples of Erlang calculations;
 - Calculations of the BHCA;

- Calculations of the BHE; and
 - Calculations of the Proportion of the Busiest Hour Traffic (PBH) in the year: a Case Study taken from the United Kingdom (U.K).
- 8 Analysis of cost methodologies and modelling approaches
 - 9 Estimation of network related Capital Expenditure (CAPEX)
 - 10 Determination of Weighted Average Cost of Capital (WACC)
 - 11 Analysis of Depreciation Methods
 - 12 Application of Economic Depreciation Algorithms
 - 13 Estimation of network related Operating Expenditure (OPEX)
 - 14 Estimation of Total Annual Costs
 - 15 Interconnection Service Costing and Mark Ups
 - Calculation of Route Factors;
 - Calculation of the Interconnection Service Costs;
 - Estimation of Mark Ups; and
 - Estimation of the Marked Up Interconnection Service Costs.
 - 16 Licensing conditions; Licensing Framework; Types of Licences and Renewal of Licences
 - 17 Price Determinations
 - Using Rate of Return Regulation (RORR) tools;
 - Using Price Cap Regulation (PCR) tools; and
 - Based on costs.
 - 18 Regulations related to Interconnection, Pricing and Licensing.

For more information, please contact us on
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