Training Courses and Workshops

1. Summary

Intercai Mondiale (IML) has developed an extensive amount of practical reference material that is of direct relevance to professional ICT regulators. This document explains how this material could be used to deliver a formal programme of training, tailored to the specific needs of a regulator.

Intercai has substantial experience in undertaking policy, competition policy and regulatory strategy, accounting separation, interconnection pricing (FAC and LRIC), technology regulation, and other important issues that regulators have to deal with. This experience spans a number of countries, some developed, some developing in terms of the state of the telecom environment. A few of our recent and relevant engagements include:

- Advisor to the Regulator in Thailand on its regulatory policy for the liberalisation of the sector, including a licensing framework and underlying principles and tools for such a desire to materialise. Advice included matters in relation to interconnection, retail pricing, USO considerations, scarce resource pricing and enforcement provisions and tools;

- Retained advisors to Ofcom, the UK regulator, covering a variety of telecommunications issues, including numbering, voice over IP and access network technology

- Intercai advised the Ministry of Information and Communications Technology (MoICT) in Jordan in the preparation of an overarching policy statement covering the postal, telecommunications and information technology sectors;

- Following on from the preparation of Government policy for the ICT and postal sectors in Jordan, Intercai assisted the Ministry of Information and Communications Technology (MoICT) in the preparation of the national strategic plan for posts, mobile and fixed telecommunications and for the information technology sectors;

- Intercai was appointed by the Government of Bahrain to advise it on the strategy and approach it should adopt to liberalise its telecommunications market and support the preparation of the

necessary legislative instruments. After gaining an in-depth understanding of the current market we identified a range of Market Structure Options (MSOs) that offered varying degrees of liberalisation. The economic impact on the sector and the effect on the incumbent were modelled for each MSO and a formal decision analysis process, involving the client, was undertaken to select the preferred option. We then drafted a National Plan to present the approved Government policy to the market and supported the legal team in the drafting of the necessary laws and licences;

- For a period of two years, Intercai supported the Government by fulfilling the functions of the newly created Bahrain TRA on an interim basis. This included the transition from our interim position to the establishment of a permanent team. As part of this role, the Intercai team prepared consultation papers, managed the consultation process and addressed other regulatory matters such as interconnect, where we assessed, tested and requested modifications to be made to the incumbents AS, FAC and LRIC systems, before approving a Reference Interconnect Offer (RIO);

- Intercai was a member of a consortium, led by Riyadh Bank, advising the CITC on the process of issuing licences for Data and Cellular

Mobile service providers. The Consortium was responsible for recommending the number of licences to be issued, defining the format, content and valuation of the licences and managing the whole process from initial public consultation to final licence award. Our specific role was to produce the technical elements of all documentation, provide technical expertise to the Consortium, and to assist the Financial and Legal members of the Consortium as required. In addition, Intercai played the lead role in developing the scoring criteria and mechanism used in evaluating the bids received within the "beauty-contest" element of the award process.

- Intercai worked through a major systems integrator for a major bank to model the service offerings against the SLA regime and work out the probability of payment of Service Credits, thus establishing the financial exposure to the SLA regime. The model included sensitivity capabilities to enable the supplier to fine tune the system design in order to optimise the performance against the SLAs.

2. Scope of Training

The general level of training envisaged by IML is at a fairly detailed and practical level. The reason for this is that we have recently reviewed what training is currently available and found that there are primer courses that give a regulatory overview, but little of no practical training for professional regulators who need to establish a working level understanding.

Over the last year IML have delivered numerous successful workshops on Telecoms Regulation across Europe, the Middle East and Africa. These have covered a wide range of subjects, including:

1. Competition policy and sanctions;
2. Market definition and Market power;
3. Convergence and its impact;
4. Interconnection and access principles and regulation thereof;
5. Telecommunications Technology (including new developments such as WiMAX);
6. Spectrum management;
7. Economic and Competition principles of Price Regulation;
8. Next Generation Networks;
9. Service Level Agreements (SLA);
10. Costing and USO cost modelling.

Our aim in developing a training course in any of these areas would be to provide the foundations for understanding the relevant regulatory models and the instruments available to a regulator to enable regulation of the sector to ensure a fair and competitive market.

A feature of any training course would be the inclusion of illustrative exercises that enable delegates to see directly the application of the material presented. By way of example, the cost modelling course would have a case study that requires Fully Allocated, Long Run Incremental and Standalone costs to be calculated, the SLA course would include practical examples of network availability calculations.

The above list of subjects is indicative and further topics, such as Operational and Business Support Systems (OSS/BSS), management of scarce resources and codes of practice, can also be addressed.

3. Example Content

The specific content, duration and focus of any course can readily be tailored to a stated need, as Intercai have a broad base of established experience to draw on in all of the areas listed above.

To give a clearer picture of what IML could deliver, here are a few examples:

3.1 Interconnection

The interconnection of telecommunications networks is of central importance in the establishment of a competitive and efficient market. Barriers to the exchange of traffic between carriers (physical, operational or financial) have serious impact on the quality of service that can be offered to the consumer.

One of the key responsibilities of the regulator is to ensure that there is a clear set of interconnect services with associated fair settlement rates. The main obstacle to this is usually the desire of established operators to constrain competition. Often this is achieved not through disregard of the need to provide interconnect but through more subtle mechanisms: unfavourable terms, conditions and operational conditions for interconnect.

The main aim of this course would be to equip delegates with enough practical guidance to be able to counter any such attempts. The sample schedule for this course would be:

9-12.30 (Coffee break : 30 mins)	1.30-4.30 (Coffee break : 30 mins)
Day 1	
Introduction	**Technical and Procedural aspects**
Interconnection principles	Physical interconnect methods
Role of regulator and operators	Benchmarks for physical interconnect
Interconnect Issues	Points of Interconnect
International experience	Negotiation and Dispute resolution
	International experience
Day 2	
Reference Offers	**Interconnect pricing**
Reference Interconnect Offer – structure and content	Basis for interconnect charges
Reference Access Offer – structure and content	Procedures for calculating rates
Service Level Agreements	Issues in interconnect pricing
International experience	
Exercise RIO design	

3.2 Cost Modelling

Regulatory Accounting and Costing of telecommunication services is essential to ensure a fair environment and promote competition which will enable growth of the sector and deliver benefits to end users. Many countries have attempted to implement regulatory measures without having adequate regulatory accounting separation and well defined costing methodologies. This has led in many cases, to numerous disputes between the regulator and operators as well as between operators, especially in the context of interconnection.

This training programme would deliver in an interactive manner the necessary background to understand the principles and practice of tariff rate calculations. It covers the requirements for accounting separation and costing of telecommunication services and practical exercise sessions are planned to reinforce the knowledge.

A sample schedule for this course would be:

9.00am - 12.30pm	1.30pm - 4.30pm
Coffee break : 30 mins	Coffee break : 30 mins

Day 1

Introduction	**Wholesale Vs Retail**
Background to cost calculation	Difference - interconnection, access, retail
Cost standards	Retail price control mechanisms
Bottom up and Top down (LRIC) approaches	Price cap formulae
International experience	International experience

Day 2

Accounting separation – principles	**Accounting separation – application**
Types of separation - principal and rationale	Regulatory financial statements
Details of account separation	Price squeeze issues
Treatment of costs and revenue allocations	Predatory pricing issues
Cost of capital	
Exercise: Cost allocations	*Exercise: Abuse Tests*

Day 3

Costing – principles	**Costing approaches**
Principles, models	LRIC in detail
Models - top down, bottom-up, benchmarking	CCA in detail
FAC	
Exercise: FAC (1.5hr)	*Exercise LRIC (1.5 hrs)*

3.3   Service Level Agreements

A Service Level Agreement (SLA) is a mechanism, frequently used in the commercial telecommunications market, for setting the boundaries of acceptable performance between a consumer and a supplier. An effective provides a sound basis for two parties to work together. If it is done well, everyone knows what to expect and there are well defined incentives for putting things right when a problem occurs. In practice, the SLA often causes more harm than it does good. It is not unknown for a supplier to ignore faults on a critical service in favour of less vital tasks, simply to minimise their liability to the penalties set out in the SLA.

With increasing reliance between operators, it is important for the regulator to ensure that adequate SLAs are in place, and that the end to end levels of customer service are not compromised by poorly drafted agreements.

This one day course would give an appreciation of the key aspects of an SLA that are required to protect consumers of a competitive market.

9-12.30 (Coffee break : 30 mins)	1.30-4.30 (Coffee break : 30 mins)

Day 1

Introduction	**Technical and Procedural aspects**
Purpose of an SLA	SLA calculations – MTBF, MTTR, throughput etc
Golden rules for SLA drafting	Guarantees and Averages
Practical Issues	Sanction regimes
International experience	Review mechanisms and dispute resolution
	Exercise: availability calculations

3.4   Technology Seminars

The available technology in the ICT sector changes continually and the practical realities of new technology often fails to match expectation. With direct experience of WiMAX, Next Generation Networks and advances in mobile technology, IML are well positioned to provide distilled and relevant technology information to regulators.   By way of example, the structure of a recent seminar on Next Generation Networks is given below.

9-12.30 (Coffee break : 30 mins)	1.30-4.30 (Coffee break : 30 mins)
Day 1	
Introduction	**Regulatory Road Map**
Drivers for the Next generation Network	Key regulatory implications
Basic structure – access, core and control	Impact on Interconnection
Standards and Technology	Impact on establish cost models
International view	New regulatory concerns

The remainder of the subjects mentioned above would be structured in much the same way to the examples shown here and the balance of presentation to practical exercises can readily be adjusted to suit.

4. Organisation and Staffing

Intercai Mondiale's experience in similar assignments enables it to commit a highly qualified team of professionals with directly relevant experience. Intercai Mondiale would aim to commit at least two individuals per training course to ensure adequate depth and breadth of practical experience.

Our team members possess direct experience in accounting separation and interconnect regulatory work, costing modelling, accounting separation and regulatory reporting in both the fixed and mobile sectors. All are familiar with the regulatory environment in both Europe and the Middle East. Of particular relevance is that all our consultants are multi-skilled and are not limited to a single discipline, such as technology, but rather the application and regulatory implications, or conversely only those with economic or costing knowledge without an understanding of the networks or the technological capabilities.

It is assumed that courses would be held on-site at the regulator's offices though this is no constraint or proviso.