

Management of Multi-operator Interconnection through Interconnection Exchange A case study of Bangladesh

Introduction

New technologies are changing the way regulators need to manage interconnection. Thoughtful consideration of new/innovative ideas can greatly improve the efficiency in multi-operators/service atmosphere. The formation of advisory groups in international, regional and /or national levels and national regulatory authorities could expedite the process of accommodating or improving the ICX approach of interconnection in the respective markets and/or interconnection models.

One of the emerging markets of South Asia – Bangladesh has adopted the unconventional approach in its interconnection regime. Telecom regulators introduced an ICX based interconnection regime in 2007 and with that started a new era of interconnection in Bangladesh. The existing interconnection regime in Bangladesh can be a solution/ example for the multi-operator and multi-service ICT environment. Comparison of benefits before and after the changes has proved that ICX based arrangement can be beneficial to the overall interconnectivity scenario. Service providers all over the world are now emphasizing on cost optimization and simplified architecture which allows adoption of future technology/services. ICX based interconnection regime can be the solution and the potential of such model is gaining in popularity. International Telecommunications Union (ITU)'s recent publications recommends¹ the concept of an “interconnect gateway exchange” for the multi-service and multi-operator environment. The handbook suggests that countries setting up an ‘interconnect gateway exchange’ in a multi-operator environment can address the challenges of multi-operator and multi service interconnection environment more effectively and efficiently

Background

Bangladesh has had a highly unusual interconnection regime in which the mobile sector subsidized the fixed sector. These subsidies harmed overall efficiency and were likely to hold back overall access to telecommunications services in Bangladesh.

Two aspects of the prior 2008 interconnection regime in Bangladesh raised particular concerns:

- a) The limited capacity of the incumbent (former- BTTB now BTCL) for interconnection with other operators and
- b) The monopoly of international gateway - BTTB retained a monopoly on IGW services in Bangladesh as a result of the contemporary regulatory approach. BTTB has underinvested in international gateway capacity in a way that it could not meet market demand. Besides capacity expansion was not expected to enable it to meet the rapid growth in demand. The monopoly had also led to high levels of illegal bypass which has reduced the revenues attained by the Government.

ICX model in Bangladesh

In the context of having an interconnection regime which harmed overall efficiency and were likely to be holding back overall access to telecommunications services in Bangladesh the policy makers

¹<http://www.financialexpress.com/news/itu-for-interconnect-exchange-in-markets-with-multiple-players/99950/>

introduced a new era of interconnection with ILDTS² policy 2007. . This policy is governed under the Telecom Act-2001. To implement this policy BTRC has amended the Interconnection regulation-2004 in 10th February-2008. this policy stipulates building a three-tier telecommunications infrastructure for international calls. Initially the government granted three International Gateways (IGW) and two Interconnection Exchange (ICX) licenses to the private sector through auction. Introduction of ICX based interconnection model brought in change in following three frameworks-

- Regulatory
- Technical
- Financial

Regulatory framework

Along with the ILDTS Policy 2007, the following is the guiding framework of Interconnectivity in Bangladesh:

1. Bangladesh Telecommunication Act-2001 (as amended)
2. Interconnection Regulations-2004 (as amended)
3. Relevant directives (interim directives on MTR etc.) issued by the regulator (BTRC)

Technical framework

The three layers of network architecture keep the provision of International Gateway, interconnection Exchange and Internet Exchange. Services provided under these 3 layers can be translated in to following kinds of interconnection-

- a) Interconnection for Domestic telephone service
- b) Interconnection for International telephone service and
- c) Interconnection for International Data service.

Financial framework

Previously revenue share for domestic off-net calls were done as per the pre-fixed termination rate and each operator used to bill the other for the total traffic volume (minutes) as per respective CDR. For international calls no revenue sharing was in place. As per the ILDTS policy a certain revenue sharing arrangement is now in place among all stakeholders for international calls. Domestic termination rate and revenue sharing of it are also determined by NRA (BTRC). For domestic calls' a termination rate is still fixed by the BTRC. At present, they are conducting a cost study, the results of which is expected to be adopted by next year .

Advantages of the arrangement

The current ICX based interconnection arrangement offers certain advantages like simplified network architecture, creation of new revenue opportunity, enhanced capacity, redundant data connectivity, These improvements in Bangladesh interconnection regime may encourage other countries to replicate the model in multi-operator/multi-service complicated environment.

Conclusion

Convergence has led to a rise in the number of operators and, consequently to an increase in the number of interconnect links. The creation of an interconnect clearing house is expected to replace the current traditional interconnection regime and will make interconnection regimes versatile enough to accommodate multi-operators or multi-service providers within the scope of licensing or regulatory frameworks.

² ILDTS stands for International Long Distance Telecommunication Services