

TELECOMMUNICATION SELECTED PROJECTS

1.0 General

The main objective of the telecommunication chapter is to report on how the underlying technology should be evolved and be used to help the Operator (actually the Ministry of Telecommunication acting as the sole owner of the Lebanese network) remain competitive in the face of the increased competition and deregulation. With the introduction of the new technology, Operator will take full benefit from the new and advanced network both to offer sophisticated new services that will increase operator's revenue and to reduce investment and operating costs.

A strategy for evolving smoothly from the existing to the new network structure is also detailed in order to protect the investment done on the existing network while taking the full merit of the new generation IP-based packet transport network for voice and data.

Going beyond the technological issues, deregulations of the telecommunication sector (Telecom Act 431) was also considered as part of the liberalization and privatization economy that would lead to a higher level of qualification, better service provisioning, operating cost reduction, competition between different carriers and operators...

The following paragraphs detail the different projects proposed as part of the next 5-year development plan for the telecom sector considered with high priority but due to evaluated constraints, different uncertainty levels were applied and assumed.

2.0 Switching Network Evolution to Next Generation Network

Going towards a new *Next Generation Network* (NGN) implies an infrastructure oriented towards packet technology that integrates a multitude of telecommunication services: voices, data, video, etc. from fixed access points: xDSL or fiber optic network. In an NGN infrastructure, the voice calls are controlled by a digital server, called a "softswitch". This processor controls all command functions. A new NGN would allow to change the network hierarchy and the overall design philosophy of the Lebanese network, which is currently made up of 51 main switches connecting 263 remote switches so that:

- The 51 local switches would not be main switches anymore but will be remote switches to the transit level switches.
- The 8 transit switches would be replaced by softswitches thereby having the double function of transit and local switches
- reduction in Opex and Capex
- Rapid integration of new services

3.0 Packet-based Transmission Network

As one of the main goals of NGN introduction is to move to a unique, packet-based infrastructure, voice transport will have to smoothly migrate to packet (mainly IP) network to offload the voice from their TDM Network. This step toward packet trunking network migration will guarantee and protect the TDM investments as it will provide the Operator a full continued access to the existing TDM network elements, while providing the Operator a full trunking-over-packet solution. This requires a complete upgrading of the transmission SDH network that enables the expansion of the transmission bandwidth as well as the required evolution to the NG-SDH (New Generation SDH).

4.0 Provision of new Billing system

With the completion of the network upgrade to the new generation network, a new evolving and multi-service billing platform should be provided and installed to bill for any added value services offered to the fixed network. The differentiated services that would be offered to the residential or to corporate users, should be properly dynamically billed according to different user profiles. (Different value added services are ``actually installed but not put in service awaiting an adequate billing platform).

5.0 Internet Connectivity

Two separate projects are included under such broadband and internet services:

- xDSL access network to end users: this will enable hi-speed internet connection for the residential and for business customers using the existing copper network and converged with the voice traffic
- increase the internet connectivity to the external global internet network after expected growth of the internet traffic with the introduction of the DSL services.