

## Company Profile

The new era of telecommunication in Pakistan has brought several challenges with it, despite of the advantages it has made visible for the consumers. The most important being the challenge to keep intact the security requirements of the GoP (Government of Pakistan) and to protect the new players in this field from the conventional practices of the incumbent operators to protect their market share. To overcome these challenges GoP established National Telecommunication Corporation (NTC) in January 1996 under the Telecom Reorganization Act 1996. The main objective was to have an infrastructure independent of all other operators that can be used for the purpose of government communication and as an alternative support for the operators entering the market.

## Progress From Start To Date

The ongoing infrastructure development journey for NTC began in 1996 when it was created with few local exchanges and analog microwave. However, today NTC has developed its own infrastructure to an extent where it can be called an independent IT and telecom operator capable of meeting the challenges of the deregulated environment and meeting the objectives for which it was created.

NTC started its operations in 1996 with only 5 local exchanges all over Pakistan and an analog microwave link not capable of supporting the digital transmission. To carry out its operations, it was mainly dependent on PTC infrastructure and used its transit network, international gateways, transmission network, IN platform etc. to carry out its operations. The copper network in the access provided to NTC was not sufficient to cater for its subscriber base and meet the required quality of service parameters. NTC had no arrangements for direct interconnect with cellular operators as a result it had to pay substantial part of its revenues to PTCL for 3rd party termination. Data services being essential demand of NTC customers could not be met due to non availability of infrastructure. Billing of NTC customers was carried out through PTC initially and through Pakistan Computer Bureau. The main challenge for NTC at that time was to reduce this dependency on other operators to minimum as soon as possible to fulfill its obligations and to sustain itself in the deregulated environment in which PTC was to be privatized.

The main focus in the initial years was to develop its own basic infrastructure that included optical fiber transmission backbone, transit network, billing system and multi services data network

(MSDN) beside expansion of its switching network to un-served areas to cover as much of its subscriber base as possible. It purchased 2 fibers from PTC in the main optical fiber backbone and equipped it with 622 Mbps SDH system. It expanded its exchanges in different cities to gain access to its customers along with laying of copper cable. These exchanges were converted into transit exchanges to provision long distance services on NTC network and to have direct interconnects with cellular and other operators. The establishment of NTC MSDN was a major milestone, achieved in 2001 which enabled NTC to provide multiple data services such as dial-up, DSL, Web hosting and internet etc. to its customers. Another milestone achievement in National history is in placement of Pakistan education & Research Network (PERN) project. The project is providing 155 Mbps international connectivity to 59 universities connected all over Pakistan. The billing system was developed in first 4 years which made it possible for NTC to do its own billing.

### Future Thoughts

Being aware of the new technologies, demand for new services and converged network NTC is in the process of upgrading and expanding its network. Migration from conventional TDM network to IP based Next Generation Network has been planned and being implemented. The 622 Mbps optical fiber backbone not able to meet the requirement of bandwidth hungry applications is being upgraded to 10 Gbps DWDM based technology. To improve the efficiency ERP solution has been planned and under process of implementation. To gain access to NTC users efforts are being made for frequency allocation and as a stop gap arrangement virtual WLL connections are being provided to NTC subscribers. To provide value added service from its own platform NTC is planning its own IN platform. Very soon NTC subscribers will be hearing NTC operators for customer relations, call booking and complaints through its state-of-the-art call center. Multi services access network has been planned to be as close to the user on fiber as possible to extend multiple services from a single platform. Plan for replacing analog microwave with digital is being made so that NTC can meet the requirements in case of disasters and can provide an alternate to optical fiber backbone. The co-location facilities are being planned to facilitate new entrants in performing their operations.

NTC has traveled a long way in developing its infrastructure in lines with the technological and market trends. NTC is determined to provide an infrastructure required to meet its objectives and to support the nation and GoP in achieving its objectives