

## ICT Sector in Pakistan

by Sikandar Naqi, Executive Director, Instaphone

Pakistan's telecommunications systems, despite real progress in the last five years, do not meet the country's needs. Teledensity in urban areas is only 5.8 per cent and is less than one percent in rural areas. Cellular usage is growing; there are over 2.8 million subscribers. The Internet is available in 1400 towns. With strong government stimulation, the private sector has installed over 120,000 pay phones and public call offices and has deployed fibre optic cable TV and Internet in the larger cities.



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Located in South Asia, Pakistan is one of the major regional economies and among the 10 most populous countries in the world with a population base of 146 million. The country is nearly four times the size of the United Kingdom and has India, Afghanistan, Iran and China as its neighbours. The economy of Pakistan is primarily driven by agriculture, which accounts for the largest share of GDP, contributing about 25 per cent to the economy.

Pakistan is one of the world's largest producers of raw cotton, which serves as the input to drive the textile industry – the mainstay of industrial activity in Pakistan. Pakistan's per capita income per annum is about US\$492.

The government is committed to revitalising the economy and to demonstrating its commitment to business friendliness through internationally acknowledged fiscal policies, good governance and transparency in managing government affairs.

Pakistan has made steady progress in expanding telecommunication networks and services in recent years. Key features of the present telecommunication infrastructure in Pakistan are:

PTCL. It is the incumbent service provider of fixed line telecommunications. Established as a public limited company in 1996, PTCL is 88 per cent

owned by the government of Pakistan. It has shown impressive growth in the past five years and manages a well-developed domestic telecommunication infrastructure of 4.85 million access lines (June 2003), nationwide fibre-optic backbone and international communication through sub-marine cable (SMW3) and satellite links.

PTCL has installed more than 1.5 million new telephone lines since June 1997. As a result, teledensity (defined as the number of operational telephone lines as a percentage of population), at about 2.7 per cent, has increased by six per cent per year. The telecommunication network is almost entirely digital. As a result of Pakistan's tariff rebalancing programme, initiated by the government in 1997, the prices of long-distance and international calls have been

significantly reduced in recent years.

The National Telecommunication Corporation was formed in 1996 in order to meet the telecommunication requirements of the government and its defence forces. It has nationwide presence, with a network of 72,000 customer access lines and a nationwide fibre-optic backbone infrastructure.

The government created the SCO (Special Communication Organisation) in 1976 and gave it the task of installing and maintaining telecommunication facilities in the entire Azad Jammu and Kashmir and Northern Areas. The SCO operates a network of 60,000 lines in its territory.

Cellular usage is growing strongly after the introduction of a Calling Party Pays

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("CPP") regime in the year 2000. Currently, four operators (2 GSM, 1 D-AMPS, 1 AMPS) provide service to over 2.8 million cellular subscribers all over the country. The number of subscribers has more than tripled in the past two years. The government has already issued a GSM licence to an existing AMPS Operator. It is committed to issuing two more cellular licences, both to meet the increased demand and to boost the overall teledensity in Pakistan.

More than 70 active Internet service providers offer Internet access. The Internet is now accessible in more than 1400 cities and towns. Low Internet access charges have encouraged Internet usage and acceptance by the Pakistani public. Internet services can be had for the unit cost of a local call – independent of the distance to the service provider – in most parts of the country. Low-priced data communication services are available to companies in the information and communications technology sector in order to encourage these companies to establish themselves and grow in Pakistan.

Private sector operators have played a very important role in developing the value-added services market in Pakistan's ICT Sector. Their key achievement is installation of over 120,000 pay phones and public call offices. In addition, they operate a number of value-added services, premium rate calling systems and the like.

Several private sector service providers have deployed fibre-optic infrastructures in the larger cities to provide cable TV and Internet services. In addition, PTCL has entered into O&M contracts with private sector partners to offer services such as Wireless Local Loop (WLL) pay phones, DSL-based Internet access, pre-paid calling cards and International voice termination using VoIP technology. Companies in the Information Technology business can set up satellite-based direct international connectivity for call centres and/or IT services under franchise agreement with PTCL.

Efforts to develop a fully competitive market in the telecom sector were initiated in the early 90s. The Pakistan Telecommunication (Re-organisation) Act was promulgated in 1996. The Pakistan Telecommunication Authority

(PTA) – the industry regulator, was established to regulate the telecom industry. The PTA is a fully functional organisation and has played a key role in developing the private sector's role in telecommunication services.

The Frequency Allocation Board (FAB) is an independent organisation entrusted with the responsibility of allocating and assigning frequency spectrum to government, telecom system and service providers, broadcasting operators and private users of wireless systems. It operates within the provisions of Telecom Act of 1996 and

tance PCO (public calling offices), wireless (TDMA) systems and the like.

PCOs are the most commonly used communication facility in the rural areas, as teledensity level is very low in these areas. People in certain places are using wireline and wireless (mobile) PCOs to satisfy the communication needs of these areas. In some places, people use these PCOs as mini exchanges and have strung cables all about to provide the surrounding population with communication facilities and connections.

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the guidelines and recommendations laid down by International Telecom Union (ITU).

Although the developments in the ICT Sector have been marvellous during the past few years, much of the development has been confined to urban centres. The ICT sector is still largely underdeveloped in most of the country's rural areas.

The teledensity in rural regions is only 0.8 per cent, compared to the teledensity in urban areas of 5.8 per cent and a country average of 2.6 per cent is far from acceptable by any standard of comparison.

One needs to look at the broader picture of the ICT sector to understand the current situation in the rural areas of Pakistan. In rural areas, telecommunication facilities are limited. Services are provided, for the most part, through the use of small digital exchanges, manual exchanges long-dis-

In October 1999, Internet connectivity arrived in the remote, rural, mountainous region of Northern Pakistan. There are now over 115 subscribers to the Gilgit Internet service, despite the fact that ordinary telephone service in the region remains both unreliable and expensive. This endeavour was achieved through the combined efforts of the International Centre for Integrated Mountain Research (ICIMOD), Nepal and the Commission on Science and Technology for Sustainable Development in the South (COMSATS), Pakistan. The Gilgit Internet Service remains the only initiative in Pakistan providing connectivity to rural areas of the country.

Presently, both the government and the ICT sector are moving ahead with their plans to expand the availability of telecommunications-based services. Deregulation of the Pakistan Telecommunication Corporation Ltd is creating many investment opportunities, especially in the areas of local loop



Exhibiting ICT development

and international long distance etc. Local Loop – wired or wireless ‘last mile’ access – will definitely result in improved rural communication networks and services. The government has also promised to issue two new mobile cellular licences. The government is expected to require that a specified percentage of the network be set up in rural areas.

New projects are being launched to expand the scope of the country’s data communication networks and ensure accessibility in all parts of the country. The hardware has been planned to provide service for 300,000 more

users. Private investment is encouraged. Pakistan’s data communication backbone network is being strengthened to ensure fast, reliable data delivery throughout the country.

The Pakistan Telecommunication Corporation Ltd (PTCL) has much hard work ahead as it strives to build up the teledensity figures for basic services throughout the country. Special attention must be given to deploying WLL, CMTS and other technologies in order to bring services to and increase the teledensity of, the rural areas of the country. The expansion of rural telecommunications by all

available means has been the highest priority of the government. All of the machinery of the public sector has been actively engaged in devising future strategies and a roadmap to address this immensely important, but complicated, issue.

The cornerstone of Pakistan’s new telecommunications policy is to achieve sustainable development in the telecommunications sector through a market-based philosophy. In this way, it is hoped, a self-propelling mechanism is created that will be able to even address the difficult and long been neglected, area of rural communications.

The government was determined to liberalise, deregulate and create an enabling environment to facilitate investment and growth in telecommunication and IT. Deregulation is expected to open new corridors of investment in various segments of the telecommunication industry. The government has also been pro-actively engaged in creating an investor-friendly environment. A liberal policy framework will definitely facilitate the flow of investment and technology and cater to the increasing demand for telecommunication services in Pakistan.

Considering Pakistan’s strategic geographical situation in the Asia-Pacific region, it is apparent that the country is well positioned to serve as a telecommunication hub for the South and Central Asian regions. The government is aiming to capitalise on this geo-strategic advantage by facilitating investment not only through deregulation, but, as well, by way of a host of other measures.

Pakistan can offer attractive benefits to investors. It is hoped that the synergy created by the public-private partnership will not only allow Pakistan to succeed in bridging the domestic and regional digital divide, but also create profitable business and employment opportunities in its IT and telecom sectors. □