

June 1995. The rapid expansion has resulted in a drastic decline in pending demand and the average waiting time for telephone connection. Telephone density of 1.6 per 100 has been achieved. By June 1998, the network capacity will be increased to 4.5 million lines with telephone density of more than 3 per 100 population.

To further augment telecommunication services, the Government of Pakistan has issued licenses to three cellular telephone companies, namely Paktel, Pakcom and Mobilink. Paktel is a joint venture between Hasan Associates of Pakistan and Cable & Wireless of the United Kingdom; Pakcom is a collaboration of Pakistan's Arfeen International; Milicom International and Motorola, both from the United States, have teamed up with Saif Group and are operating under the name of Mobilink.

**b) Long Distance Network**

About 2500 km of optical fibre cable have been installed and digital radio systems are being extensively set up on subsidiary routes. A new International Gateway Exchange will provide 3700 international and 6000 national circuits. Analog NWD exchanges are being replaced with digital transit exchanges and EMD junction centres by digital tandem exchanges. Optic fibre cable and digital radio systems have been installed in the multi-exchange junction network. The international satellite circuits are also being digitized.

**c) Value-added Services**

Pursuing the principles of privatization and modernization, the Government of Pakistan has issued licenses to the private sector organizations to provide card payphone services, paging services, data network operation, voice mail service, audio-tex service, trunk radio service and electronic mail service.

**d) Rural Telecommunications**

Pakistan is still predominantly a rural community. The rural sector is not only backward economically, but access to basic necessities of life is limited. Until recently, only 2 to 3 percent of the country's total telephone lines were serving rural areas.

Time Division Multiple Access (TDMA) and Wireless Local Loop are favoured for spreading telecommunications facilities to rural areas. It is anticipated that the Government will soon be undertaking a project to install 150 000 telephone lines in the rural areas. After the completion of this project, a village with a population of as little as 1000 people will have a public call office. Pakistan is thus taking major steps to improve this situation.

**e) Manufacturing**

The privatization policy of the government in telecommunication and power sector offers incentives to local and foreign investors to manufacture fibre optic and copper cables, store and forwarded fax, computer terminal modems and other intelligent terminals.

Presently, Telephone Industries of Pakistan (TIP) and Carrier Telephone Industries (CTI) are the two public-sector organizations manufacturing telecommunication equipment.

Telephone Industries of Pakistan is a joint venture between Seimen A. G. of Germany and