system. In order to provide long distance service to the network users, it will be linked to the Automatic Long Distance Center (CALD) and, for local calls, to the Public Telephone Switched Network (RTPC). The first phase will link Mexico City with Monterrey and Guadalajara and will begin operating soon. In 1990, the northern part of the country will be serviced through Chihuahua, Ciudad Juárez, Nuevo Laredo, Matamoros and Reynosa. By 1993, it is expected to encompass 22 cities. Between 1989 and 1993, the $450 million overlay network is expected to be fully installed. The first users of the network include Bancomer, Banamex, Banca Cremi, Bolsa Mexicana de Valores, The Secretariat of State (Gobernación), General Motors, Ford and Camino Real hotels.

The overlay network will eventually lead to ISDN. TELMEX is developing the Red Digital de Servicios Integrados (Integrated Services Digital Network ISDN) in conjunction with Ericsson. This will enable the user to transmit voice, data and text with only one line. ISDN will include carrier services for packet and circuit switching; teleservices, including telephone and data transmission with a capacity of 64 kbits, voice transmission, videotext, telex text transmission and high speed facsimile; telex and fax combinations on one terminal; telemetering, videoconferences, etc. ISDN will permit handling of these services with one network in order for users to access all services. In its first phase, this project will be developed with a selected group of firms and utilize the existing fiber optic network. This trial phase will begin at the end of 1989, but ISDN will not be commercially available until 1992.

4. MEXICO'S TELECOMMUNICATIONS INFRASTRUCTURE

The infrastructure supporting the National Telecommunications Network is comprised of the following networks:

- Federal Microwave Network
- Network of Stations for Spatial Communications
- Marine Radio-communication Network
- National Radio-monitoring and Measuring Network
- TELMEX Microwave Network

Cable and carrying circuits: In 1989, Mexico had 88,600 kms of carrying cable, 171 centers of carrying currents and 8027 installed telegraph channels. The fiber optic network now consists of 240 kms of cables. Fiber optics are a major area of expansion, and probably will increasingly be employed for telecommunications services, instead of the satellite system.

There are 17 **ionospheric radio stations**, through which 16,200 radio-telegraphic messages and 42,800 radiotelephonic messages were transmitted in 1989.

The Federal Microwave Network consists of 16,400 kms of simple length and 105,400 kms-R.F.channel of developed length, 110 terminal stations and 235 repeating stations. The microwave network provides channels between centers and national and international locations. The total network consists of two branches, one run by SCT and one by TELMEX. The latter covers 70% of the total telephone network. The present systems use RF semiconductor technology, however, the network will be modernized through installation of digital linkages.

In 1985, Mexico established the **Morelos Satellite System** (MSS), which has greatly expanded the telecommunications sector, enabling the provision of countrywide commercial and educational TV and radio broadcasting, an increase in data and voice