BUSINESS COMMUNICATIONS AND MOBILE SERVICES

IBERCOM. Throughout 1993, there were 124,867 applications for Ibercom lines, 8.8% fewer than the previous year, reflecting the influence of the economic recession on Spanish business activities. At year-end there were 572,460 lines in service, almost 18.9% more than in December 1992. There was a 23.3% rise in new Ibercom Access Networks, all served by the existing supply capacity, which increased by only 1.5%.

In order to keep up with trends in this important market, we continued to design new services and commercial products. The Ibercom-Owner service was launched, aimed at the medium to top business market sector. Marketing of this service differs from the Ibercom service in that it consists of the purchase of the PABX and all the terminals and in the contracting of a series of facilities, such as; Digital Access to the Front-end Centre, numbering integrated in the Basic Telephone Network, standard maintenance (except for terminals), etc. The Ibercom Service has also been incorporated into the Integrated Services Digital Network (ISDN), under the modality Ibercom-ISDN.

Now available to clients are configurations of the MD 110 equipment known as "Closed Packet". These include the sale of switching equipment, internal power, integrated distributor and a limited number of digital phones. These packets range from 48 to 208 lines and offer attractive cost savings.
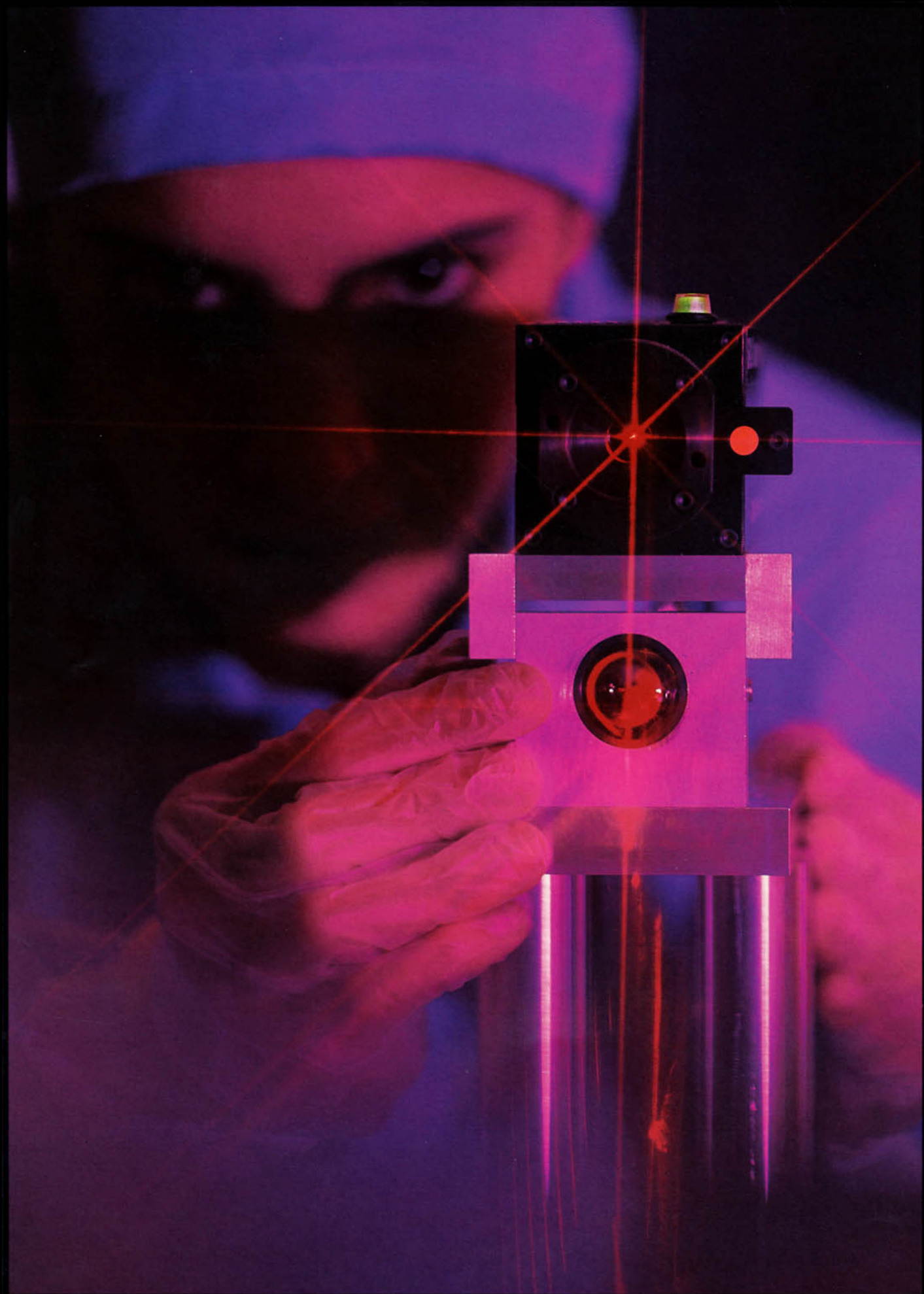
IBERPAC. The Iberpac packet swiching data transmission network continued to grow during 1993. There were 60 new centres and a 13% increase in network capacity for all types of user connections. All the extensions were carried out on the Iberpac X.25 network, which carries internationally standardized protocols. During the year, direct access connections went up by 5.8%. At the same time , international access was extended from the Iberpac network to 182 public networks in 8 countries.

Iberpac also serves as back-up for a variety of data communications services, such as the X-28 and X-32 services and the Electronic Transfer of Funds and Ibertex.

As regards the X-28 service (DATEX 28), during 1993, Network User Identification (NUI) was further developed, with procedures enabling users to change their access codes and use the service via the 047 and 048 accesses from anywhere in Spain. This gave rise to an increase of 25% in the number of NUIs used.

The X-32 service (DATEX 32) was launched in 1993. In its first year of existence it has proved to be a viable option for connections which are too disperse or infrequent to require dedicated access.

The Iberpac-UNO service continued to expand. This service aims to meet the virtual private data network requirements of our corporate clients. At the end of 1993, there were 17,414 direct access connections in service distributed among 28 clients.

Thanks to the developments described above, Telefónica maintained its leading position in packet switching data transmission. The Iberpac network is the second largest in the world in terms of number of connections and the first in terms of penetration. This excellent position is clearly shown in the number of connections installed at 31.12.93.

RSAN	2,142
X-25	56,732
UNO Network	17,414

LEASED CIRCUITS. There was a slight fall-off in the upward trend in demand for leased circuits over the year, due, to some extent, to the current economic climate. However, it is worth noting that, although, in absolute terms, the number of circuits fell, current network global information capacity grew significantly, as a result of the replacement of analog circuits by digital ones.

During 1993, the Ibermic Network extension plan proceeded, with increases both in coverage and provision to the different centres. There were notable improvements in all the parameters referring to installation and repair times. The global quality index of the circuits was also enhanced, in compliance with international regulations (ETSI).

Nine new videoconferencing rooms came into operation. Service was established with Hong Kong, Singapore, Brazil and Chile, bringing the total number of countries to 24.

The leased circuits currently on offer have also evolved in line with EEC regulations, covering the stages programmed in the ONP Directive. In this respect, service provision was increased by the incorporation of several types of circuits (2Mbit/s Structured Circuits, 2 and 4 wire Special Quality Analog Circuits) and by the definition of new interfaces.

Steps were also taken to increase new services provision outside the ONP regulating framework, with, for example, the Teleaction Service. In 1993 this service was piloted, with highly satisfactory results, in Madrid and Granada, with the participation of alarm centres and clients from various sectors (banks, jewellers, etc.).

On the international front, 309 circuits of all types were installed, bringing the total number of circuits in service to 1,157. As regards One-stop Shopping, 3 new agreements were reached with operators in Finland, Nicaragua and Switzerland.

To sum up, the number of circuits in service at the end of 1993 was as follows:

Telegraphic and telex	17,506
Analog	23,032
Digital up to 64 Kbps.	32,705
Digital 64 Kbps	1,365
Digital 2 Mpbs and over	209

IBERTEX. Despite the economic climate, Ibertex consolidated its position as the service which brings data tansmission to the public at large. There was upgrading in quality and in the provision of accessible services (750 Service Centres).

The number of calls made reached 11.5 million, with a total of 1.6 million usage hours. At year-end, it was estimated that existing terminals numbered 485,000, making Telefónica Europe's second operator in terms of extension of this service.

SATELLITE COMMUNICATIONS. At the start of 1993 marketing commenced via HISPASAT of the space capacity of the 1A satellite and satellite 1B was also successfully launched. These events caused high expectations in the use of satellite communications among Spain's business community.

The most significant activity in this field of operations was as follows:
- Service operations continued of the CLH network (formerly CAMPSA), to reach 150 stations in 1993, while the Network was transferred to HISPASAT.
- New networks entered into service for the "El Pais" newspaper, AENA and SAICA (pilot phase).
- VSAT networks were contracted for ST Hilo and CGS Mensatel, with a total of 225 initial remote stations.
- Satellite services were provided to a wide range of customers, with applications in areas such as protection of the environment, management and control of mobile fleets, repair of land circuits and distribution of information for various media sources.

INTEGRATED SERVICES DIGITAL NETWORK. The pilot program, which commenced with clients in 1992, came to an end and in July 1993 the ISDN Commercial Services were launched, in accordance with European regulations.

The major business sectors in 14 Spanish provinces had access to the ISDN during 1993, with an available capacity of 8,700 Basic and 950 Primary Accesses, covering 15% of Spain's population.

On an international level, there is ISDN access with 13 countries, including the major European states, Australia, United States, Japan and Singapore. We should also mention Telefónica's participation in the Euro-ISDN, which will enable Spanish clients to connect to European information lines.

In order to promote the service and contribute to the development of the ISDN and all its possible applications, two projects were initiated in 1993: the ISDN Catalogue and the magazine ISDN Forum.

The development of the ISDN provides a multitude of applications. Telefónica is already working, in collaboration with our clients, on several of them: distance editing, high quality voice transmission, stereo music, rapid data transmission, interconnection of local computer networks, backup of dedicated lines, access to image data bases and nx64 kbit/s videoconferencing.

INTERNATIONAL BUSINESS NETWORKS. During 1993 the FNA (Financial Network Association) basic network was set up, designed to carry communications for companies in the financial sector. Piloting of the service commenced with real clients, as a prior step to launching the service on the market in 1994.

MOBILE SERVICES. In 1993 development of mobile services continued , with Automatic Mobile Telephony (TMA) maintaining a healthy growth rate. At year-end the TMA service had 257,261 customers, representing a 42.7% growth over the previous year's customer figures. During the year a total of 3,780 radio channels were installed, taking installed plant figures up to 14,885 by the year-end. As a result of these installations, coverage has been extended to 92% of the population.

As regards customer service, itemized billing is now available to all users of Telefónica's Automatic Mobile Telephony service and there is a permanent information collection and customer complaint service. It is also significant that TMA service provision is immediate as no waiting list exists.

AUTOMATIC MOBILE TELEPHONE LINES (Thousands)

Year	Lines
88	11.6
89	29.8
90	54.7
91	108.5
92	180.3
93	257.3
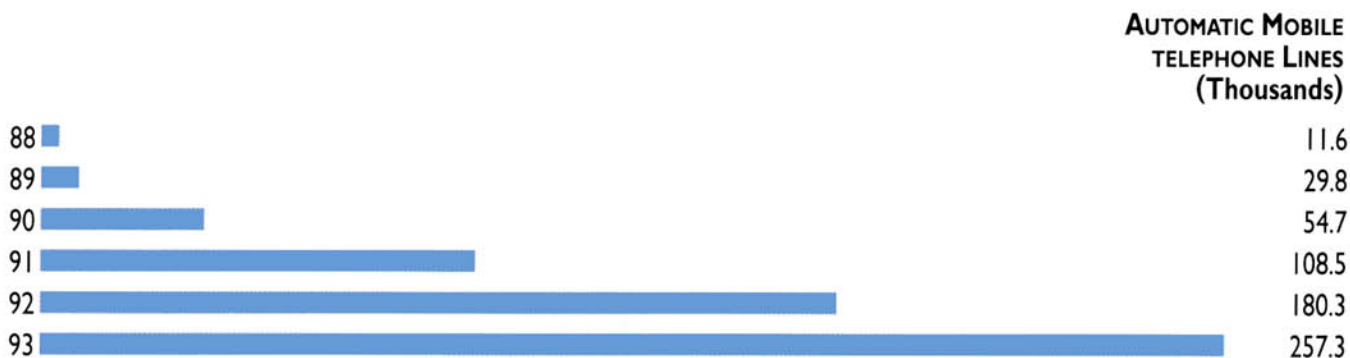
Already some areas of mobile communications are open to competition, such as the radiopaging service. Telefónica's radiopaging Mensatel service is the market leader with 49,023 clients at 1993 year-end.

Pre-marketing tests began on the TMA cellular digital service (GSM), which is already being marketed in other neighbouring European countries. Coordination work with other operators also continued for the setting up of future European mobile services, such as ERMES for radiomessaging and the Aircraft Public Communications Service, soon to be incorporated.

With regard to the maritime service, worthy of mention is the automation of the North East, Straits of Gibraltar and Canary Island Zones, with the consequent improvement in ship to shore communications.

T.M.A. -900A MOBILE SYSTEM COVERAGE

LA CORUÑA · BILBAO · BARCELONA · MADRID · VALENCIA · BALEARIC ISLANDS · SEVILLA · CANARY ISLANDS · CEUTA · MELILLA

ACCUMULATED COVERAGE DECEMBER 1993 · MARITIME COVERAGE

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