Games in Barcelona and Madrid's becoming the European Capital of Culture) which will connect Spain's major cities.

## RESEARCH AND DEVELOPMENT

Throughout 1990, the activity of our subsidiary company Telefónica I+D was directed towards responding to Telefónica's needs, and providing profitable technological openings for the Company.

Of particular note was the construction of several prototypes of the Tesys-B packet switching system. We also made progress on the development of the new IBERPAC operating system, which will allow the integrated operating of the Tesys-A and B systems.

As for the Operations and Maintenance Structure (EOC), which is a systems package for telephone network management and operations, we continued to develop new ways of reducing operating costs and improving service quality. In this respect, we started work on a new Control System for IBERCOM and a Transmission Equipment Supervision System, both of which should have the first installations in service in 1991.

Telefónica I+D also carried on its research in the field of speech technology, with one application being the Audiotex service, and in the development of the Broadband Communications Experimental Network.

## uman resources development

The aim of Telefónica's human resources strategy is to involve the employees in the company's goals, increase motivation and improve workforce qualification levels in the face of technological change. Telefónica is operating in an environment of constant technological innovation and growing liberalization, and its ability to adapt its human resources to this reality will be a decisive factor for the company's competitive performance. In response to this need, last year saw a major boost in training and development programmes for managers and staff.

By the end of the year, Telefónica had a total workforce of 75,350 employees, an increase of 5.9% over 1989. This increase was accounted for by a net growth of 719 temporary staff and 3,476 permanent staff, 818 of whom were university degree holders. These figures confirm Telefónica's position as the Spanish company with the largest workforce, and as one of the country's leading job creators. In addition, over four million hours of training were given, with training policy supported by an increase