



## **P10: Telefonica Investigación y Desarrollo - TID (Spain)**

### **Description of expertise & activities**

Telefónica Investigación y Desarrollo (I+D) is the innovation company of the Telefónica Group. Owned 100% by Telefónica, this subsidiary was formed in 1988, with the aim of strengthening the Group's competitiveness through technological innovation. Telefónica I + D employs over 1000 persons, of whom 93% hold a University degree. Telefónica's innovation process, which is largely based on the activities of Telefónica I+D, is based on four fundamental lines of work: infrastructures, development of new services, deployment of the so-called "personal digital environment" and, a series of common elements which play the role of for the rest of activities. These four lines contribute to the internal evolution necessary to face the future challenges of the changing Telecom and IT panorama.

All the activities in Telefónica I + D are carried out conforming to an in house Project Development and Management Methodology, which has been awarded an ISO 9001 Certification since 1994, updated to the new ISO 9001:2000 in 2001. Telefónica I + D is and has been involved in a number European projects: RACE I, RACE II, ESPRIT II, ESPRIT III, TEN-IBS, TEN-ISDN, CTS, COST, EURESCOM, BRITE, ACTS, IST, Ten-Telecom, e-Ten, e-Content, EUREKA (ITEA, MEDEA & CELTIC). The Telefonica Group participates in the principal standardisation fora for fixed, mobile and wireless communications, convergence, etc. (ITU, GSMA, MEF, OMA, MPF, IEEE, IETF, IPv6Forum, W3C, TISPAN, OSLI, ...).

More information about Telefónica Investigación y Desarrollo (TID) can be obtained from [http://www.tid.es/html\\_eng/](http://www.tid.es/html_eng/).

### **Tasks within BONE**

WP11	Perform techno-economic analysis of the different alternatives on Network Technologies. Provide guidelines for the network operators towards cost-efficient all-optical networks.
WP14	Evaluation of the interaction between the upper layers of the protocol's tower (like TCP or UDP) and the new optical network layers
WP22	Study multilayer Traffic Engineering mechanisms for Delay Constrained Transport Services.

### **Key personnel**

**Juan Pedro Fernández-Palacios Giménez** was graduated with a degree of Telecommunications Engineer from Polytechnic University of Valencia where he carried out his final project working on the simulation of wavelength converters. In September of 2000 he joined Telefónica I+D where he has been working on the analysis and evaluation of optical technologies either in access or backbone networks, likewise he has participated in Europeans projects such as Eurescom P1014 TWIN and ISTs projects DAVID, NOBEL and e-Photon/ONe as well as other internal projects related to the development of optical networks in Telefonica Group. Currently he is Project Manager in the Division of Network Planning and Techno-Economic Evaluation of Telefonica I+D.

**Ángel Ferreira** was graduated in Physics (1981, Complutense University, Madrid) and has been teaching since then at different universities (UPM, UC3M, UAM) and working at a few high technology companies like IBM (1985-86), AT&T (1989-91) and Telefonica I+D (1991 till present days). He has Cooperated in several European research projects about Microelectronics, Optoelectronics and network design and NGN development. Currently he is coordinating techno-economic activities within NOBEL project, supported by the EU.

**Oscar González de Dios** was graduated with a Master Degree in Telecommunications Engineering (2000, University of Valladolid). In 2000 he joined Telefonica I+D, where he worked for 4 years in the development of telephony applications and software testing. In 2005 he joined the Technology Strategy department, where he has been participating in R&D European projects such as NOBEL, and e-Photon/ONe+. In addition to his work in Telefonica, since 2003 he has been working towards his PhD about performance of OBS networks.