INTRODUCTION

The transition from an analog network to a digital network is a common problem for all Administrations. The key word is "integration" not only in equipments and networks, but also in methods. The transition strategy depends on multiple factors but one of the most important constraints is the large investment related with the existing network. One expects to have analog exchanges in operation during the next 20 years. Taking these factors into account, the Portuguese Administration decided to develop a project, called "OSCAR", for the traffic measurement, maintenance and management of the telephone network. The main aim is that the project must be common, as far as possible, to the present analog network and to the future digital network.

Another aspect is that the development and installation of auxiliary equipments, using new technologies, contribute to the progressive training of personnel both in hardware and software techniques. This paper describes the main features of "OSCAR" project.

OSCAR NETWORK

The OSCAR network is a data network with four levels: one level for control, processing and storing the information (level 1); two levels for the utilization of the information (levels 2, 3); one level for collecting the data (level 4). At the bottom of the network level 4, one finds the TO3's (Terminal OSCAR 3rd hierarchy) which are located at the analog exchanges. The most important TO3 is the so called MTGC, a traffic measurement equipment with a capacity from 256 to 8000 points. Beside the measurement of the traffic, the MTGC is able to collect information from other TO3's and send it to the different levels of the network.

At the top, level 1, there are minicomputers (Centres OSCAR) where the information is processed and stored. The Centres OSCAR (C0) will be connected to the Portuguese packet switching network, TELEPAC. The interconnection between the different levels of the network is supported by data links of 1200 bit/s (4 wire). The levels 2 and 3 are coincident with the traffic engineering and maintenance operational centres, which can control the information related to the exchanges, routes and local networks under its supervision. These levels are known as TO1 and TO2, terminals of 1st and 2nd hierarchy. The first C0 cut over during 1984 at Picosas, the most important switching center of the trunk network.