EDA Application in the Telefonica Network

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There exist different mechanisms implemented by telecom operators in order to achieve and maintain grade of service requirements in the network, in any kind of situation, but especially in case of traffic overloads or failures in a network. Among these mechanisms, dynamic routing strategies and network management systems are usually considered. The benefits each mechanism produces separately have been extensively analyzed in different papers. Nevertheless such benefits are not so evident if we consider the coexistence of both mechanisms.

In this talk we discuss the main results of different studies carried out by Telefonica I+D in order to assess the marginal contribution of the introduction of a dynamic routing algorithm (EDA), in the Spanish long distance network, taking into account the existence of a network management system (SGT).

The dynamic routing algorithm EDA (Encaminamiento Dinámico Adaptativo) is a distributed real-time state-dependent routing algorithm that also incorporates a dynamic reservation algorithm. This routing strategy is planned to be introduced by Telefonica in 1998, once the double-homing structure of the transit network is completed, and switch providers perform the suitable changes in their software releases. On the other hand, the network management system SGT (Sistema de Gestión de Tráfico), is already in operation for the Spanish national and international networks since the beginning of 1996.