

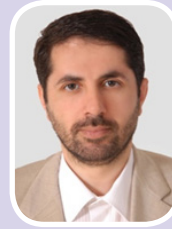
Second Laureate Applied Research

Project Title: Design and Production of Optical Transmission Systems STM

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Abstract:

Optical transmission systems play an important role in expansion of data communication networks. Synchronous Digital Hierarchy (SDH) technology is the primary technology used to expand optical networks. SDH systems operating from STM1- to STM4- and higher speeds have enabled rapid expansion of optical transport networks. Most SDH optical systems used in our country are supplied by foreign vendors. Our country can achieve a lot of benefits from local design and production capability for SDH optical transmission systems. Providing better services, increasing the stability and reliability of the network and creation of long lasting high value jobs for local talent is among those benefits.

In this project, a system has been developed that can be used to create carrier level SDH networks at STM1- and STM4- rates and it can provide E1 and Ethernet services to various types of customers. It has used advanced technological concepts such as SDH mapping, Virtual Concatenation, GFP, LCAS and Layer 2 Switching to provide the desired services. The system has been used in operational networks and has passed its tests based on international standards. It has received official approval from Iran Communication Regulatory Agency.

