Project abstract

Title: Open ROADM-solution in Swedish metro/regional environment

Objective

The objectives of the project are:

- Create a forum in Sweden regarding open disaggregated optical networks consisting of operators, suppliers and research institutes.
- Develop an open fiberoptic system solution with ROADMs for customers who intend to develop SDN-Controllers or buy Controllers externally.
- Develop or customize an existing SDN-Controller which will allow for configuration and monitoring of the ROADM-network.
- Develop Controller applications: A number of attractive applications in the SDN-Controller that facilitate operation and maintenance of the optical networks.

Abstract

The data volumes on the Internet continue to increase as the world is digitized and in the Government's new broadband strategy the target is that 98% of Sweden's population should have access to at least 1 Gbit/s in 2025. The roll-out of 5G in the mobile network, starting around 2020, will also contribute to increased traffic volumes. As a result, operators must continuously innovate to improve efficiency and cost optimize their networks. One part of the operators' networks that has great potential for improvement is the optical networks with cross-connection technology, i.e. ROADM based networks. This project is based on two prominent trends that have crystallized in recent years: disaggregation and SDN-automation. These trends originate from datacenters but are now about to enter into optical transport networks. This have led to that some initiatives already exist regarding open disaggregated optical networks. The project is a continuation of a feasibility study financed by Vinnova. An important conclusion from the study was that the available initiatives are poorly matched to the Swedish metro/regional market requirements. Therefore Smartoptics, in collaboration with RISE Acreo and operators (Telia and IP-Only), want to develop a fiber optic system solution with ROADMs that meets the requirements for cost optimization and flexibility in the Metro/regional market space. We also want to create a forum in Sweden regarding open disaggregated optical networks consisting of the parties involved in this project (on a volountary basis) together with additional stakeholders, such as other operators.

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