

Project: Setting up the Network Management Interface

Organisation	TU Eindhoven
Deliverable	Agent, simulation

Based on the supply of SURFnet new photonic layer, we will study the data plane (including, transponders, nodes) in terms of available resources such as configurability, data rates, support of monitoring – pre-FEC BER, Q factor etc. Based on the quality of information supplied by SURFnet equipment, we will study how to develop an agent with YANG based APIs to setup remote interfaces, program transmission characteristics and switch connections.

We will embark on the task of studying and evaluating YANG models as the new recommended model to describe the network devices.

- Extracting the information from the Northbound interfaces of the network management system (NMS) e.g. topology, link performance parameters, available resources etc.
 - Identify which specific YANG data models exist and how they can be used for the ECI equipment.
 - Design an agent that offers an API that allows for the configuration of the optical equipment based on the chosen YANG data models.
 - Using instances of the chosen YANG models, construct simulation files for simulator OMNET or the open source Ns2, or Net2Plan.