

Forschungspraxis

Implementing a simulation tool for high-speed optical communication systems

The work is about implementing a simulation platform with MATLAB for the evaluation of the physical layer specifications for passive optical networks (PON). For that, the transmitter and receiver components are studied and modeled. The distortion effects of the transmission path, including chromatic dispersion, fiber nonlinearities and receiver noise are taken into consideration in order to assess the feasibility of PON requirements with high data rates. In addition to that, the performance of multiple modulation schemes including NRZ, PAM-4 and eventually Electrical Duo-Binary should also be investigated and compared.

Advisors

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