On the remodulation of DPSK passive optical networks

Overview

We propose a scheme for mitigating Rayleigh backscattering noise and demodulating differential phase-shift keying (DPSK) signals in wavelength-division-multiplexed passive optical networks (WDM-PONs) with injection-locked Fabry-Perot laser diodes (FP-LDs). Despite the RMD, in each optical network unit the. Remodulation scheme is an ultimate solution for these problems of WDM PONs as the downstream signal itself is remodulated with upstream data which saves the need for a laser source at the ONU side. In this thesis I propose and experimentally demonstrate a novel wavelength remodulation scheme for. An optical PON network comprises a central office which generates N DPSK modulated optical signals, where N is an integer greater than 1, an optical coupling which connects the N signals to at least one optical fibre, a passive distribution node located remotely from the central office which has at. Abstract: We implement a cost efficient 10. 5Gb/s OOK upstream transmission.

Article Content

(PDF) Wavelength remodulation scheme using DPSK ...

We propose a novel wavelength-division-multiplexed passive optical network (WDM-PON) architecture with enhanced tolerance toward chromatic dispersion where a DPSK-modulated

Comparison of DPSK and QAM modulation schemes in Passive optical network

Abstract This paper depicts the design of passive optical network (PON) using advance modulation schemes delivering efficient solution to users.

(PDF) Wavelength re-generation and re-modulation

Abstract We demonstrate, by partial experiment and simulation, a re-modulation scheme of the lightwave carrier imbedded in a downstream optical signals under

Wavelength Remodulation Using DPSK Down-and-Upstream With

We propose and demonstrate a novel wavelength remodulation scheme using differential phase-shift keying (DPSK) modulation format in both downstream and upstream signals for ldquocolorlessrdquo

An AWG based colorless WDM-PON with RZ-DPSK modulated

We proposed an arrayed waveguide granting (AWG) based 10 Gbps full duplex wavelength division multiplexing passive optical network (WDM-PON) utilizing a return-to-zero

Analysis of BPSK and DPSK modulation in optical access networks

When you have to choose what type of modulation is selected for an optical system, you must also decide the type of receptor to use and the cost benefit of its use. This paper presents the evaluation

WDM PON using 10-Gb/s DPSK downstream and re-modulated 10

Simulation results indicate that error-free operation can be achieved in a 20-km transmission, and the receiver sensitivity of return-to-zero differential phase-shift keying (RZ-DPSK)

A novel duplex WDM-PON with DPSK modulated downstream and re

We experimentally demonstrate and analyze a 10 Gbit/s full duplex wavelength division multiplexing passive optical network (WDM-PON) system.

DESIGN OF BIDIRECTIONAL PASSIVE OPTICAL NETWORK

But, in near future, advanced modulations such as DQPSK and DPSK are needed due to their high spectral efficiency and has power to combat with dispersions effects. Moreover, wavelength reuse is

A New Remodulation Scheme for WDM-PONs With Enhanced

In this letter, we propose a novel remodulation scheme using downstream DPSK, with a reduced modulation depth (RMD), and upstream OOK to enhance the tolerance to CD for upstream signal

Cost Efficient Directly Modulated DPSK Downstream Transmitter and ...

To generate a DPSK optical signal either a phase modulator or a Mach-Zehnder modulator is commonly employed, however this inherently adds an additional component to the OLT transmitter.

An optical network unit for WDM access networks with downstream DPSK ...

We investigate the use of optical differential phase-shift keying (DPSK) as the downstream modulation format in a low-cost upstream data remodulation scheme for a wavelength

12 IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 20, NO. 1

Wavelength Remodulation Using DPSK Down-and-Upstream With High Extinction Ratio for 10-Gb/s DWDM-Passive Optical Networks C. W. Chow, Member, IEEE

Non-reciprocal optical phase modulation for integrated NRZ/DPSK

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Simultaneous DPSK demodulation and wavelength conversion

We propose a scheme for mitigating Rayleigh backscattering noise and demodulating differential phase-shift keying (DPSK) signals in wavelength-division-multiplexed passive optical...

Wavelength Remodulation Using DPSK Down-and

Wavelength Remodulation Using DPSK Down-and-Upstream With High Extinction Ratio for 10-Gb/s DWDM-Passive Optical Networks February

WO2008145464A1

H04B10/677 — Optical arrangements in the receiver for all-optical demodulation of the input optical signal for differentially modulated signal, e.g. DPSK signals

A Novel Remodulation Scheme for WDM PONs Using DPSK for Both

In this thesis I propose and experimentally demonstrate a novel wavelength remodulation scheme for WDM PONs that employs Differential Phase Shift Keying (DPSK) for downstream and Return to Zero

Advanced Modulation Formats for 400 Gbps Optical

Moreover, to meet the transmission requirements and signal sensing and recognition needs in future optical networks, this study employs the

Wavelength re-generation and re-modulation using optical phase lock ...

Request PDF | Wavelength re-generation and re-modulation using optical phase lock loop techniques for 100-Gb/s DQPSK up-stream transmission in DWDM passive optical networks | We

Using 10 Gb/s remodulation DPSK signal in self-restored

In this investigation, we propose and experimentally demonstrate the remodulation technique using DPSK format in both downlink and uplink traffics with high extinction ratio (ER) in

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