

Preview

A rate adaptation algorithm uses the signal-to-noise ratio (SNR) or the FEC decoder input bit-error ratio (BER) estimated by a receiver to determine the FEC code rate and constellation size that maximizes the information bit rate while yielding a target FEC decoder output BER and a. A rate adaptation algorithm uses the signal-to-noise ratio (SNR) or the FEC decoder input bit-error ratio (BER) estimated by a receiver to determine the FEC code rate and constellation size that maximizes the information bit rate while yielding a target FEC decoder output BER and a. Abstract--We propose a rate-adaptive optical transmission scheme using variable-rate forward error correction (FEC) codes and variable-size constellations at a fixed symbol rate, quantifying how achievable bit rates vary with distance. The FEC scheme uses serially concatenated. how AIRs can be used to predict key metrics of digital communication systems. At the end of the section, we highlight the underlying assumption of such a s. 957 specifies the characteristics of optical systems operating at 1 300 nm and suitable for transmitting the bit rates of the synchronous digital. This PhD thesis addresses the design and application of forward error correction (FEC) in high speed optical communications at the speed of 100 Gb/s and beyond. With the ever growing internet traffic, FEC has been considered as a strong and cost-effective way to improve the quality of transmission. Abstract--We analyze the achievable information rates (AIRs) for coded modulation schemes with QAM constellations with both bit-wise and symbol-wise decoders, corresponding to the case where a binary code is used in combination with a higher-order modulation using the bit-interleaved coded.

Abstract--We propose a rate-adaptive optical transmission scheme using variable-rate forward error correction (FEC) codes and

In fiber-optic communications, wavelength-division multiplexing (WDM) is a technology which multiplexes a number of optical carrier

We study rate-adaptive joint coding and modulation, often called coded modulation (CM), addressing non-dispersion

Line Code and Block Codes for Optical Fiber Systems Roopali Garg¹ ¹Department of IT, UIET, Panjab University, Chandigarh, India

were the standard performance metrics in the optical communications community. Recently, however, this paradigm has been

Abstract This PhD thesis addresses the design and application of forward error correction (FEC) in high speed

optical

The second phase of fibre-optic communication systems, based on InGaAsP semiconductor lasers and detectors operating near 1

Chromatic dispersion: the rate of pulse spreading, which can limit a fibre's information-carrying capacity An optical fibre consists of a

In order to maintain a high-accurate demodulation with high-fidelity transmission performance, we propose a feasible

The scheme uses serially concatenated Reed-Solomon codes and an inner repetition code to vary the code rate,

Optical fibre underpins the global communications infrastructure and has experienced an astonishing evolution over

Variable-rate transmission using variable-rate codes with fixed constellations was proposed in , and was extended to variable-size

Abstract Rate-adaptive optical transmission techniques adjust information bit rate based on transmission distance and other factors

EC code rate and constellation size that maximizes the information bit rate while satisfying a target decoded BER and an SNR

Abstract: In this paper we review achievable information rates (AIRs) for coded modulation. Using simple examples, AIRs are shown

Rate-adaptive optical transceivers can play an important role in exploiting the available resources in dynamic optical networks, in

Web: <https://www.morwarreconst.co.za>

