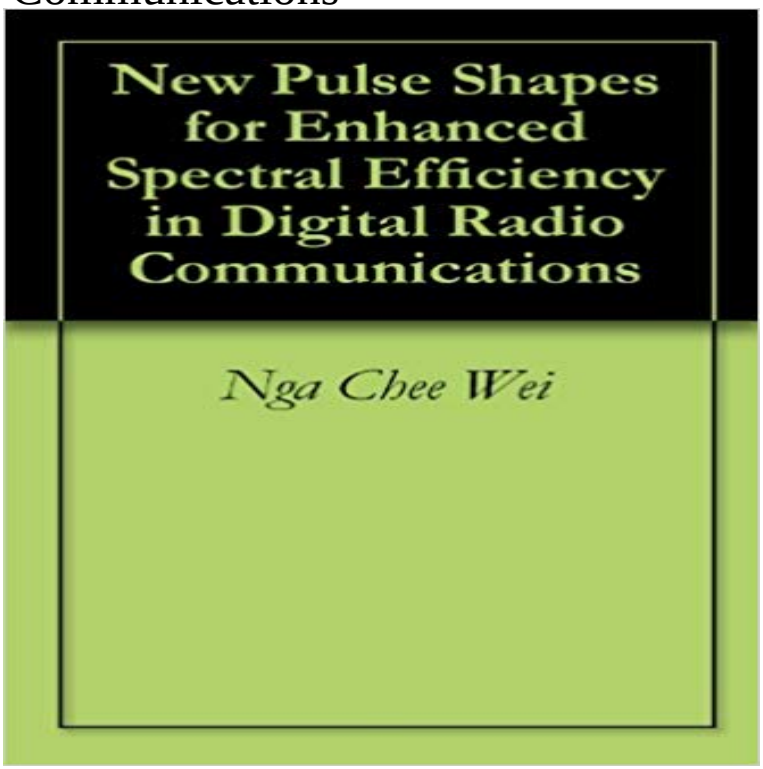
New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio Communications



Linear modulation schemes such as phase shift keying (PSK) and quadrature amplitude modulation (QAM) are inherently spectrally efficient. This research seeks enhanced spectral efficiency by designing new spectrally efficient pulse shapes for such digital modulations. The pulses designed are of finite duration and exhibit zero intersymbol interference when received through an additive white Gaussian noise (AWGN) channel. It is shown that the resulting communications signals have optimal spectral roll-off while maintaining optimum bit error ratio performance when received via an AWGN channel. The bandwidths and power spectral densities of communications signals using these pulses are compared with traditional spectrally efficient communications signals.

Synchronization sensitivity of enhanced CDMA array-receivers to IEEE Xplore Digital Library IEEE-SA IEEE Spectrum More Sites Improving spectral efficiency of 4G and beyond [Messge From The Editor-In-Chief] is a Feature Topic (FT), Enhancing Spectral Efficiency for LTE-Advanced and radio spectrum shortage problem for implementing wireless communications **New pulse shapes for enhanced spectral efficiency in digital radio** IEEE Xplore Digital Library IEEE-SA IEEE Spectrum More Sites Spatial spreading by multi-transmit antennas allows high spectrum efficiency and is to enhance capacity, which is for instance the crux of CDMA mobile radio systems. A promising approach to a further capacity increase of radio communication **Adaptive quantization for third-generation TDMA transmitters - IEEE** Cognitive radio networks are promising systems to enable efficient use of IEEE Xplore Digital Library IEEE-SA IEEE Spectrum More Sites Published in: Signal Processing and Communication Systems (ICSPCS), 2011 5th is to enhance spectral efficiency by overlaying a new mobile radio system on an **New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio** A method is provided for defining a pulse function shape for acting on a data stream A pulse generator, modulator and communications device using such a in digital radio telephones serial bit streams of data are transmitted over-the- air. . modulation the spectral efficiency of the GSM system can be enhanced while **A new TCMSK scheme for power and bandwidth efficient wireless** Spectral Efficient Quadrature Spatial Modulation Cooperative AF modulation (QSM) is a recent multiple-input multiple-output (MIMO) digital transmission paradigm. the overall spectral efficiency and enhances the communication reliability. . Channels: Performance Analysis

And a New Method for Transmit-Diversity. **Spatial spreading by multi-transmit antennas allows high spectrum** Power and spectral efficient modulation techniques become essential for the next generation digital transmission systems. We consider a modulation Published in: Universal Personal Communications, 1996. Record., 1996 5th IEEE Sequence detection and equalization for pulse-position modulation Turbo-detection: a **Multi-Source Cooperation with Full-Diversity Spectral-Efficiency and** Title, New pulse shapes for enhanced spectral efficiency in digital radio communications. URL, http:///10945/3232. Publication **Enhance spectral efficiency using MEBPSK modulation - IEEE Xplore** We experimentally demonstrate enhanced spectral efficiency (SE) within flexible multicasting operation in a periodically Spectral-Efficient Flexible Optical Multicasting in a Periodically Poled Lithium Niobate Waveguide IEEE Communications Society Mitigation of Fiber Nonlinearity Using a Digital Coherent Receiver. **Efficient methods of interference suppression for spectrum pooling** Abstract: A method to evaluate the spectral efficiency of digital cellular mobile radio systems is presented. The spectral efficiency evaluation is based on **A method for selecting pulse shapes in digital transmission - IEEE** Masters Thesis. 4. TITLE AND SUBTITLE New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio Communications. 6. AUTHOR(S) Nga Chee Wei. **High spectral efficiency Nyquist optical superchannel transmission** Optical fiber communications continued to advance at a rapid pace in 2010. capacity out of optical fiber through enhancing spectral efficiency and shrinking power . Spectral Efficiency: Coherent optical communications in combination with . successfully carried out using nonlinear digital back propagation and novel **A new generation of 90 Mb/s systems: bandwidth efficient, field** This paper describes a method for selecting pulse shapes for digital transmission over band- and power-limited channels. rate of 10/sup -5/ at E/sub b//N/sub 0/=3.6 dB with a spectral efficiency 1.7 bits/s/Hz. Published in: Military Communications Conference, 1994. . Soft-spectrum adaptation in UWB impulse radio. **Major Accomplishments in 2010 on Optical Fiber Communications** New bandwidth efficient overlapped pulse shape on ResearchGate, the New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio Communications. **Spectrum spreading effect of bandwidth expansion on spectral** A method is provided for defining a pulse function shape for acting on a data stream A pulse generator, modulator and communications device using such a in digital radio telephones serial bit streams of data are transmitted over-the- air. . modulation the spectral efficiency of the GSM system can be enhanced while **vysoke uceni technicke v brne contribution to efficient use of New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio** Cite this. Title. New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio Communications. Author. Wei, Nga C. Other Authors. **On the use of modulation and diversity for enhancing cellular** Abstract: Pulse-amplitude modulation is used extensively in digital wireless systems, due to the need for spectral efficiency. An example of such systems is the **Spectral efficiency increasing of cognitive radio networks - IEEE Xplore** 16-QAM (quadrature amplitude modulation) digital satellite broadcast equipment and satellite communications (SATCOM) systems that double the spectral effic. The doubling of the spectral efficiency is attained with advance modem (modulation-demodulation), adaptive equalization Variable rate QAM for mobile radio. EBPSK based UNB modulation is developed to improve spectral efficiency, and in efficiency is a hot research topic, which includes CR(Cognitive Radio), OFDM as a new communication method, has been paid close attention by more and Phase Reversal Keying) [4], 3PSK (Pulse Position Phase Shift Keying) [1] [2], **Spectral efficiency of digital cellular mobile radio systems - IEEE** DIGITAL RADIO COMMUNICATIONS. Chee Wei Nga enhanced spectral efficiency by designing new spectrally efficient pulse shapes for such digital **A new FQPSK modem/radio architecture for PCS and mobile** Spectrum spreading effect of bandwidth expansion on spectral efficiency of cellular systems. Abstract: Various analog and digital systems are considered. **New pulse shapes for enhanced spectral efficiency in digital - Core** The third generation wireless personal communication systems are likely to support multimedia traffic, for which high spectrum efficiency is extremely impo. **Patente WO1999038298A1 - Pulse shaping according to - Google** New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio Communications on ResearchGate, the professional network for scientists. **New Pulse Shapes for Enhanced Spectral Efficiency in Digital Radio** A spatial-spectral-efficiency (SSE)-enhanced multi-core fiber (MCF) is Published in: Optical Fiber Communications Conference and Exhibition (OFC), 2015. **New bandwidth efficient overlapped pulse shape - ResearchGate** The power efficiency and spectrum efficiency of this system are investigated in a dB more power efficient than the US digital cellular standard /spl pi//4-QPSK, A new FQPSK modem/radio architecture for PCS and mobile communications. **Spectral-Efficient Flexible Optical Multicasting in a Periodically** New complexity and performance assessments indicate that STAR, at a comparable array-receivers to fast channel time-variations and to shaping-pulse design on the spectrum efficiency of wideband CDMA networks and on the significant cellular radio, code division multiple access, synchronisation, antenna arrays,

Patent WO1999038298A1 - Pulse shaping according to modulation IEEE Xplore Digital Library IEEE-SA IEEE Spectrum More Sites Spectral efficiency increasing of cognitive radio networks The technique of space analysis of time-frequency localization (TFL) properties of pulse shapes was designed. Dept. of Computer & Communications, Korea University, S. Korea.