

A Modified Non-Uniform DMT Transceiver for the Digital

Subscriber Line

A Non-Uniform Discrete-Multitone (DMT) transceiver can help mitigate the channel-noise enhancement, attributed to zero-forcing equalization (ZFE) technique, by splitting the channel frequency response into octave spaced subbands. This paper presents a novel quantitative analysis of the channel-noise enhancement in different subbands of the Non-Uniform DMT system. In order to improve the bit error rate (BER) performance, a modified Non-Uniform DMT transceiver is proposed. The BER performance of the modified Non-Uniform DMT system is compared with that of the Non-Uniform DMT and conventional DMT systems in a Digital Subscriber Line (DSL).