

## **Performance Analysis of a Non-Uniform DMT Transceiver in Digital Subscriber Line**

A Non-Uniform Discrete Multitone (DMT) transceiver employing an octave spaced quadrature mirror filter (QMF) bank, can be used to overcome the problem of channel noise enhancement in the zero-forcing (ZF) equalization technique. In this letter, performance of the Non-Uniform DMT system is analyzed. A study of the crosstalk between sub-channels due to non-ideal filter banks is also presented. Crosstalk analysis is based upon the bit error rate (BER) performance versus the QMF order in a standard ADSL channel. Performance comparison of the Non-Uniform DMT transceiver and a conventional DMT system is given, and it is shown that the Non-Uniform DMT transceiver displays slight improvement over the conventional DMT system for the filters of higher order.