A STUDY CONCERNING THE PERFORMANCE OF THE ASYMMETRIC TURBO CODE

BY

ELENA COJOCARIU, ALEXANDRU-GEORGIAN LAZĂR
and LUCIAN TRIFINA

Abstract. A study concerning turbo codes with non-identical component convo-lutional codes is presented, meaning that they are different from the point of view of the generator polynomial, but also of the memory. All the considered cases were simulated in the C++ environment. The analysis was realized by means of three methods, namely: by calculating the first three terms of the distance spectrum for each asymmetric turbo code, by calculating the weight of each parity sequence of the asymmetric turbo code and by simulating the BER/FER curves. The asymmetric turbo codes result in similar or slightly improved performance in the low SNR domain, compared to the symmetric turbo codes.

Key words: Turbo codes; primitive/nonprimitive polynomial; BER/FER performan-ces.