

João Carlos Silva, Nuno Souto, Francisco Cercas, Américo Correia, António Rodrigues, Mário M. Silva "Turbo TCH Codes for application in CS-CDMA Schemes", SEACORN Workshop on Simulation of Enhanced UMTS Access and Core Networks, March 23, 2004, Cambridge, UK;

Abstract: In this paper the performance of turbo TCH codes is analyzed in a (Code Spreading) CS-CDMA scheme, for spread spectrum applications in a multiuser and fast fading channel environment, with and without multipath. Several rates are considered, bearing in mind different types of services. In order to get an estimate of performance gains over an existing (Direct Sequence) DS-CDMA system, UMTS coding results are used for comparison against punctured turbo TCH codes, in order to compare equal coding rates. A simulator with the main code structure for both schemes was built, alongside the channel model and Rake receiver, in order to correctly compare both coding schemes. Specific test conditions are defined, and the overall codes of both schemes are compared.