

Mário Marques da Silva, Rui Dinis, Paulo Montezuma, "Iterative FDE Receivers for UWB Systems with Strong Interference Levels", 2012 Military Communications Conference (MILCOM 2012), Orlando, USA, 29OCT-01NOV 2012.

Abstract: Since UWB (Ultra Wideband) signals usually share the spectrum with other transmissions, they tend to be subject to strong interference levels. The proposed iterative receiver combined with SC-FDE (Single-Carrier with Frequency-Domain Equalization) block transmission technique is an effective mechanism to mitigate such impairment of UWB signals. In order to further improve the performance through the exploitation of diversity, the proposed receiver implements an ARQ (Automatic Repeat ReQuest) error control technique. The combined technique results in a system able to face strong interference levels as well as deep fadings, even for fixed channels conditions.