Abstract

Multiuser detection (MUD) using turbo coding is a powerful technique for enhancing the performance of the multi carrier code division multiple access (MC-CDMA) systems. The multiple access interference (MAI) is one of the factors that affect the bit error rate (BER) of the MC-CDMA systems severely. Among the different MUD algorithms maximum a posteriori (MAP) criterion based multi user detector greatly improves the system performance and
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mitigates the effects of MAI. However its complexity increases exponentially with the increase in number of users and constellation size. In this paper a low complexity iterative soft sensitive bits algorithm (SBA) aided Logarithmic-MAP (Log-MAP) based turbo MUD is proposed to reduce the complexity and to improve the BER performance of the MC-CDMA systems

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Index Terms

Computer Science                  Hpc Applications

Keywords

Log-map  Mai  Mc-cdma  Mud  Turbo Codes  Soft Sensitive Bits Algorithm (sba).