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
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.

References

- Li Li Lim, David Wee Gin Lim, "Hybrid Log-MAP Algorithm for Turbo Decoding"
Performance Enhancement of MC-CDMA Systems through SBA assist log-MAP based Turbo MUD


Index Terms
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Keywords
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