



SINGLE-CARRIER TRANSMISSION WITH ITERATIVE FREQUENCY-DOMAIN DECISION-FEEDBACK EQUALIZATION (TueAmOR3)

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✳ Abstract :

This paper addresses single-carrier transmission with frequency-domain equalization (SCT/FDE), which is competitive technology to orthogonal frequency-division multiplexing (OFDM). We describe a new iterative frequency-domain decision-feedback equalizer (DFE) with reduced complexity compared to previously published schemes. The simulation results using two channel models indicate that the iterative DFE converges in 3-4 iterations and significantly improves performance with respect to linear minimum mean-square error (MMSE) and zero-forcing (ZF) equalizers.