ABSTRACT

The transmitted signal reaches to receivers after passing through frequency selective and time-varying radio propagation channels in wideband communication systems. When the receiver accurately estimates how the channel distorts the transmitted signal, it can recover the transmitted signal. The channel estimation (CE) can be implemented by either inserting pilot tones into each OFDM symbol or inserting pilot tones into all of the subcarriers of OFDM symbols with a specific period. An approximately sparse representation can be found in the delay-Doppler domain and that, with randomly distributed pilot tones and CS-based estimation, better channel estimates can be achieved with only half the training tones compared to least squares (LS) estimation.

Keywords: OFDM, CE, LS

REFERENCES

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