Abstract

In current cellular networks base stations (BSs) usually perform independent scheduling without coordinating the resource allocation among different cells. This, however, often leads to high interference levels in cellular networks operating with universal frequency reuse, such as the 3GPP UTRAN Long Term Evolution (LTE). Coordinated scheduling between different BSs may mitigate this problem by taking interference from and to nearby BSs into account in order to avoid high interference situations. For uplink in multiuser major issue to maintain throughput of the system. To solve this problem, a channel estimation method for SC-OFDM under the framework of compressive sensing (CS) is proposed in this paper. Firstly, by exploiting the signal.(SP) algorithm to utilize a very small amount of frequency domain pilots embedded in the SC-OFDM block for the exact channel estimation. Moreover, the obtained auxiliary channel information is adopted to reduce the complexity of the classical SP algorithm.


18. E-UTRA LTE Physical layer - General description, 3GPP Std. TS 35.201(V8.3.0), 2009.


**Index Terms**

Computer Science Information Sciences

**Keywords**

High Throughput, Multiuser, LTE, SC-FDMA, 3GPP, Cellular System.