Implementation and Performance Evaluation of 256-QAM in Vienna System Level Simulator

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***Abstract*— System level simulation (SLS) is a good method for evaluating the performance of wireless networks. By using a single computer and simplifying the level of link level details it provides a good measure of the performance for large-scale complex wireless systems. Vienna downlink SLS is one of the most popular tools used for the performance evaluation and analysis of 4G LTE/LTE-A wireless networks. In this work we implement 256-QAM module for Vienna SLS and complement all the required parts of the simulator to support this functionality. We also show how much performance gain can be obtained when using 256-QAM in various simulation settings. It is verified that the network performance does not increase much in dense network deployments.**

***(Pt9)Keyword*—**256-QAM, Vienna SLS, LLS, LTE

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