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TECHNISCHE FAKULTÄT

Elektrotechnik-Elektronik-Informationstechnik

EEI KOLLOQUIUM

Beam-Hopping Techniques for Flexible Satellite Networks

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Seminarraum 0.111, Cauerstr. 6 (Foyer am LEB)

Diskussionsleitung: Prof. Dr.-Ing. Jörn Thielecke, LIKE

The beam-hopping transmission concept has recently received a lot of attention due to a new level of flexibility in satellite communications. It enables to accommodate dynamic traffic profiles by employing the latest satellite technology. After a brief introduction and motivation of this technique, essential demands to the waveform are discussed and found to be satisfied by DVB-S2X Super-Framing. Based on the corresponding ground equipment developments of Fraunhofer IIS and partners, beam-hopping system synchronization and control aspects have been tested over-the-air in June 2018. The presented test results show that the network synchronization scheme as well as the ground equipment synchronization worked well and the performance goals have successfully been achieved.