Modern Communication Methods in IoT

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Topics to explore in future joint Horizon 2020 projects

• Multiple antennas: Beamforming, Space-Time Coding
• Distributed source coding
• Iterative decoding
• Convex optimization
• Full duplex, Multihop
• Optical transmission (VLC)
• Secure communication, Biometrics, NFC
• Sensor systems
Topics to explore in future joint Horizon 2020 projects

• Distributed storage
• Smart Grid
• Powerline Comm.
• Control & Communication
• Game theoretic approaches
• Indoor localization using VLC
• Car-To-Car Communication
Scientific and technological excellence: Integral Approach
Current research topics

• Physical layer security

• Two-Way and Multi-hop Comm.

• Low-latency Comm.

• Multi-mode beamforming for MIMO systems

• Algorithms for interference management

• Implementation in: Software-Defined Radio (USRP), Raspberry Pi, Arduino
Know-how in/results from (European) RTD projects

- Several DFG (German Research Foundation) projects
- Projects with Industry (also with the BMBF framework)