

“Indoor Object Localization/Positioning”

Project Topic in OS Kommunikationssysteme WS 2019/20

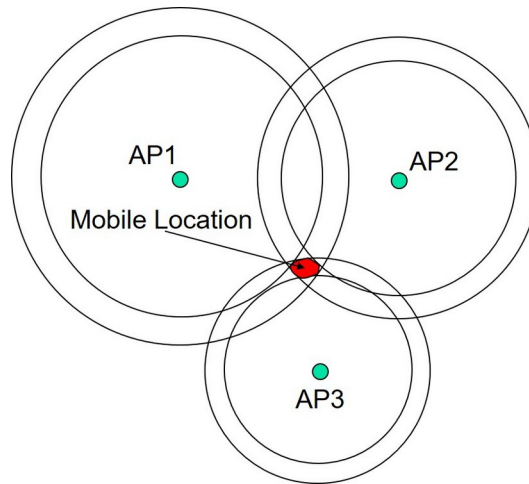


Image Source: <https://perfloc.nist.gov/what-is-indoor-localization.php>

Summary: Precise localization of objects in industry environments is still a subject of research and ongoing development. For 3GPP Rel. 17, one group is working to enhance the accuracy up to cm-precision. In the context of human-robot-coworking (cobots), precision is important. Next to 5G, LoRa and ultra-wide-band are two more promising technologies to encounter the problem.

Components to learn: localization/positioning technologies, work with academic paper, insight into industry challenges and current development

Requirements: Basic knowledge about (mobile) communication networks

Steps of the project to go through:

- sum up different technologies for localization/positioning in current research
- identify and compare key parameters (e.g. accuracy)
- evaluate a suitable technology regarding a given use case

Keywords: 5G, 3GPP, 5G Campus, Cobots, Localization, Positioning, LoRa, UWB

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