Combining Compass and a real-time OS (Master Thesis/ Practical)

Compass is a software framework/middleware which is run on all our satellites and many of their MCUs. It offers several APIs to support inter-system communication such as Commands, Scripting and a generic data service (GDS). For future missions, we also require real-time capability and would like to investigate possibilities to combine Compass and a real-time Operating System (RTOS). Several thesis topics are thinkable, which become available in the next year.

Possible Topics
- Solve one or more specific issues related to thread-based real-time execution of modules by designing and implementing an updated architecture for these
- Detailed Analysis and Testing of compatibility between existing software modules and a RTOS based design
- Designing and Implementation of FDIR features targeted for RTOS

Required Previous Knowledge
Embedded C Programming and Debugging, Real-Time systems

Language
German or English

Contact via Mail or Video Chat
Anna Aumann: anna.aumann@telematik-zentrum.de
Eric Jäger: eric.jaeger@telematik-zentrum.de