



Kolloquium zur Masterarbeit

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Instructor Operator Services for Real-Time Flight Simulators

To operate the flight simulators, whether to train pilot or research purposes, the trainer or instructor of the flight simulator uses an important piece of software application called Instructor Operator Station. Instructor Operator Stations are generally tightly coupled with rest of the simulation system and their users have limited to no means for customization, enhancement and extensions. Exposing functionality as services is the key to flexibility. Such a system evolves through the addition of new services. And individual service can publish its components and data communication capabilities as interfaces. Service-Oriented Architecture that ensures service reuse-ability, improved integration capabilities, scalability and better development cycle, can play an important role to draw a solid line that decouples Instructor Operator Station from the simulation system.

For flight simulators, we need a Service-Oriented Architecture that is integrated to real-time simulation. In this thesis we focused on providing Instructor Operator features as Services for flight simulator. This covers a wide range of features starting from simulation control to UI components as Instructor Operator Service. This is achieved firstly, by adding RESTful web service ability in real-time flight framework, in our case it is 2Simulate, which is a simulation tool developed and used by DLR in their flight simulators. Then, by developing UI components as service for Instructor Operator Station that can monitor, interact and control simulation system state using simulation system services provided by the first step. These UI components as service are developed and deployed inside containers as they provide good isolation with low overhead and fast start-up time enabling image-based deployment process, which offers the freedom of “develop once, deploy everywhere.”

Freitag, 07. Dezember 2018, 13:15 Uhr,
Lebendiger Lernort, IfI (D3), Julius-Albert-Str. 4.