

Basilisk – A Modular Spacecraft Simulation and Analysis Tool



Scott Piggott

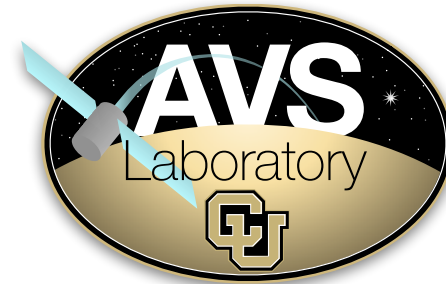
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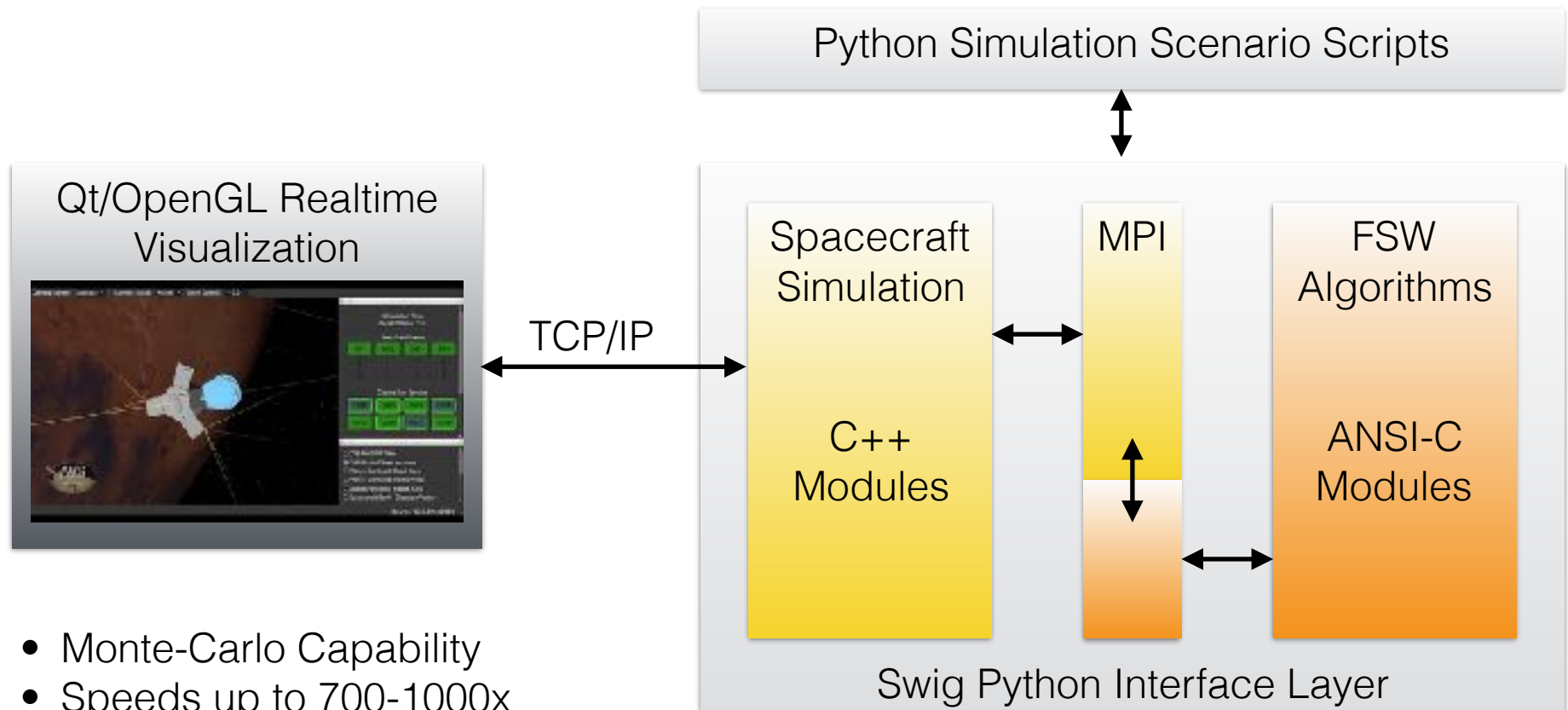
Laboratory for Atmospheric and Space Physics
University of Colorado **Boulder**



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Software Architecture (Analysis)

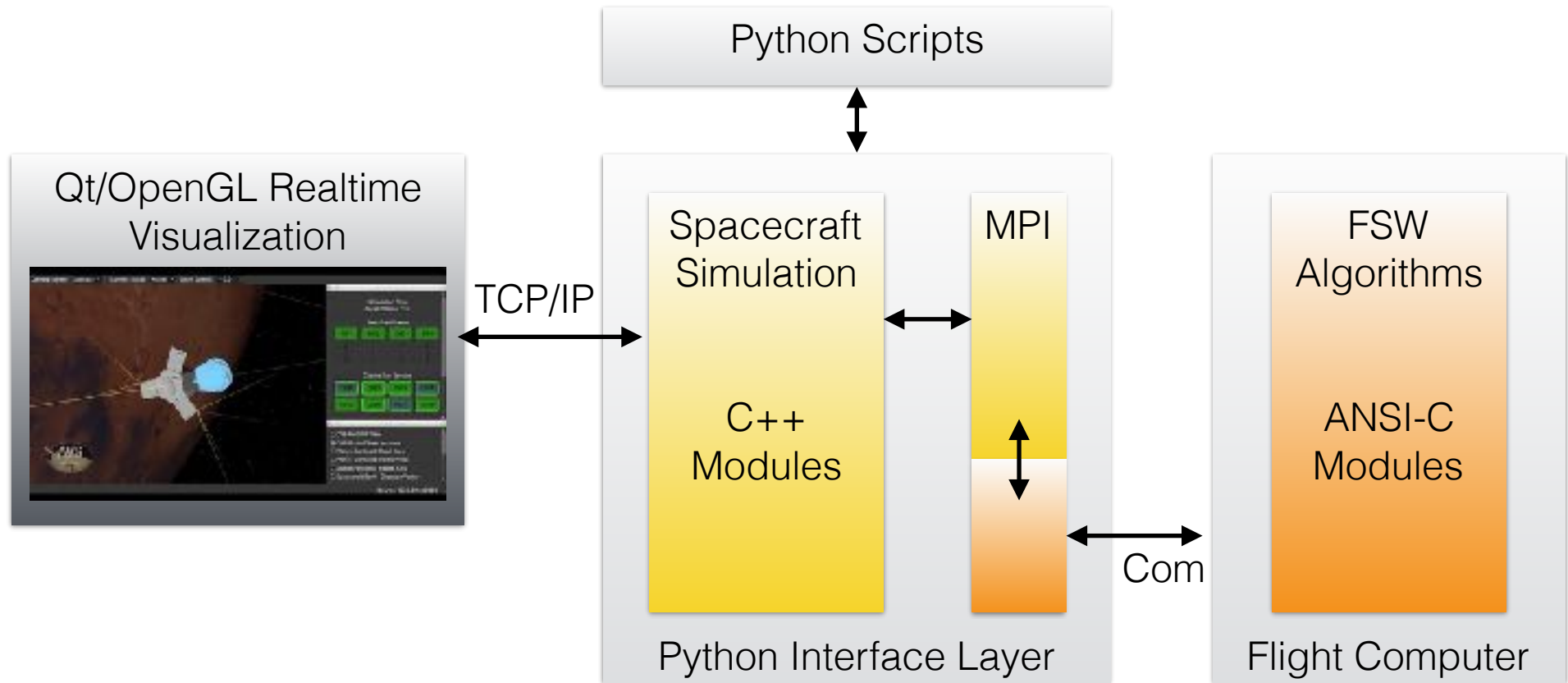


- Monte-Carlo Capability
- Speeds up to 700-1000x
- Software Realtime Mode
- ISC Open Source License



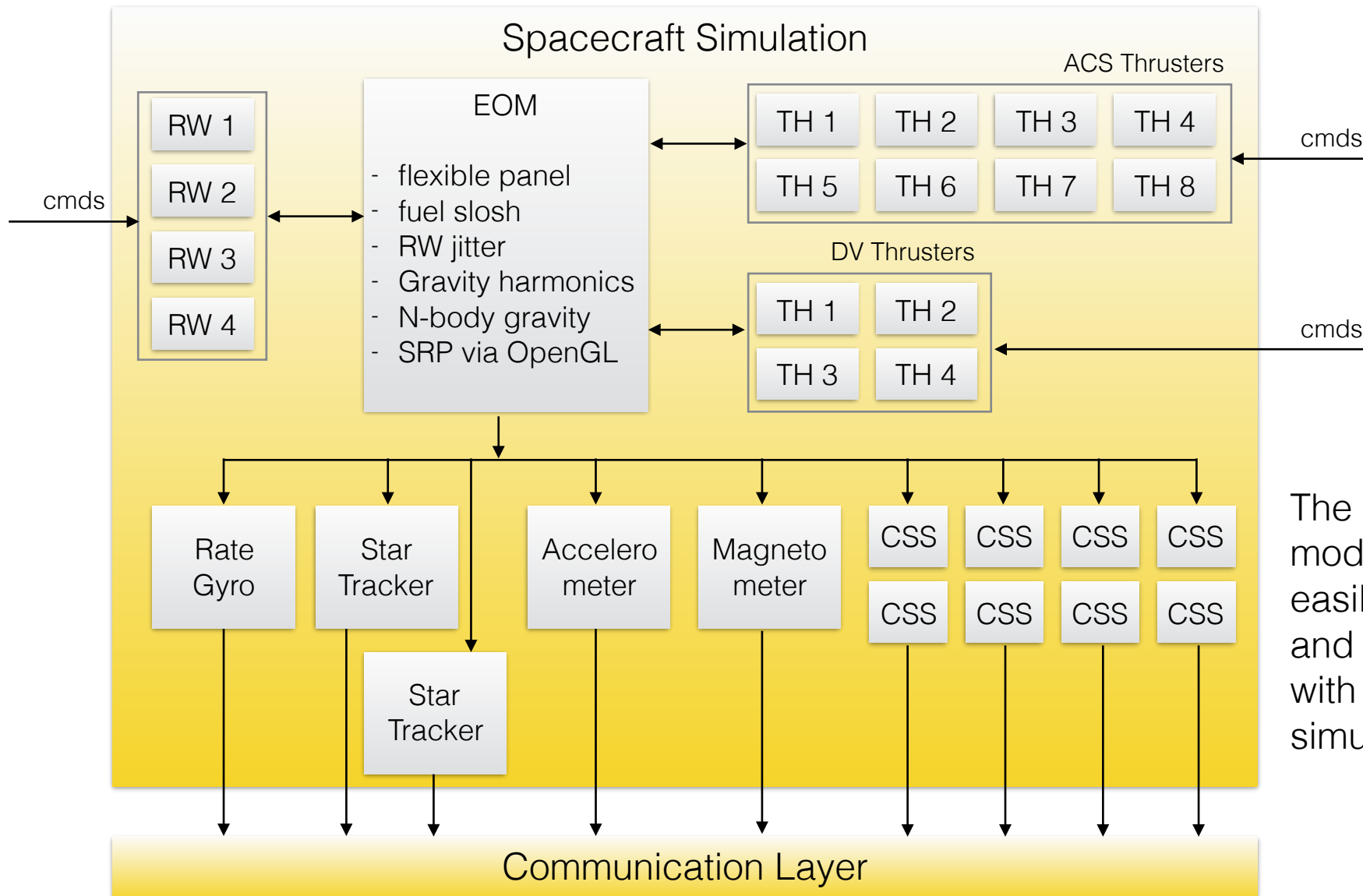


Software Architecture (Flatsat)





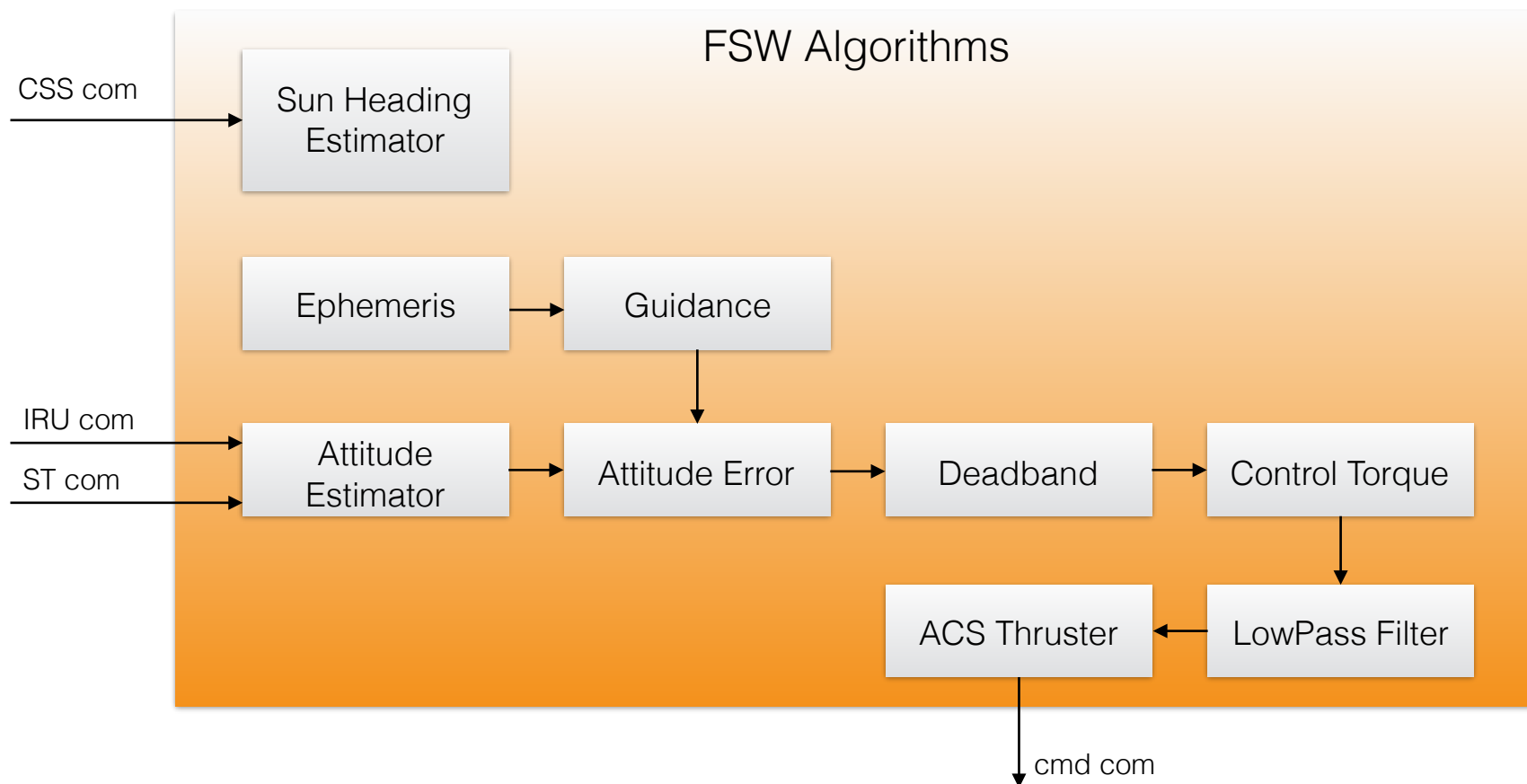
Sample Spacecraft Simulation Setup



The C++ device modules can easily be added and connected with the simulation.



Sample FSW Algorithm Setup



The ADCS algorithms are written in a modular format in C what allows the data to flow between them. This allows for the base modules to be interconnected to create complex control behaviors.