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Time Capsule to Mars: Systems Engineering and Launch Operations

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Time Capsule to Mars: Systems Engineering and Launch Operations

Cassidy Chan, Juliette Bido, Isaac Spence, Justin Anderson, Robert Curtin, Brianna Tillman
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Background:

Time Capsule to Mars (TC2M) is a national level project based on 3 fundamental pillars, Education, Technology, and Cultural. We aim to be the first private mission to Mars and the first student led mission.

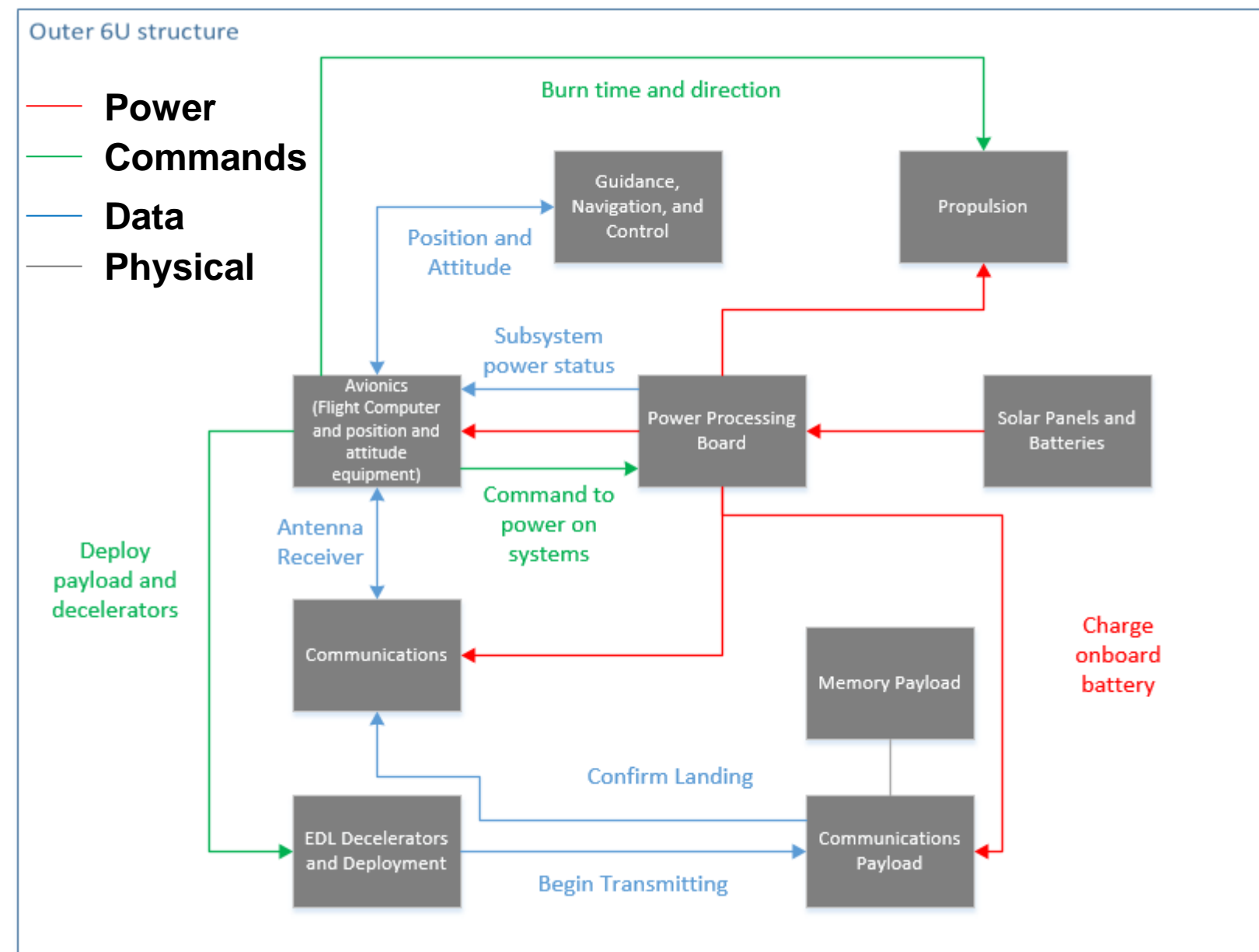
Problem Statement:

To perform the systems engineering tasks and the Assembly, Test, and Launch Operations required to send the TC2M cubesats into space. To coordinate and manage the systems requirements, interfaces, and overall design models that are being designed at partner universities.

Our Team:



Proposed Design:



Systems Engineering:

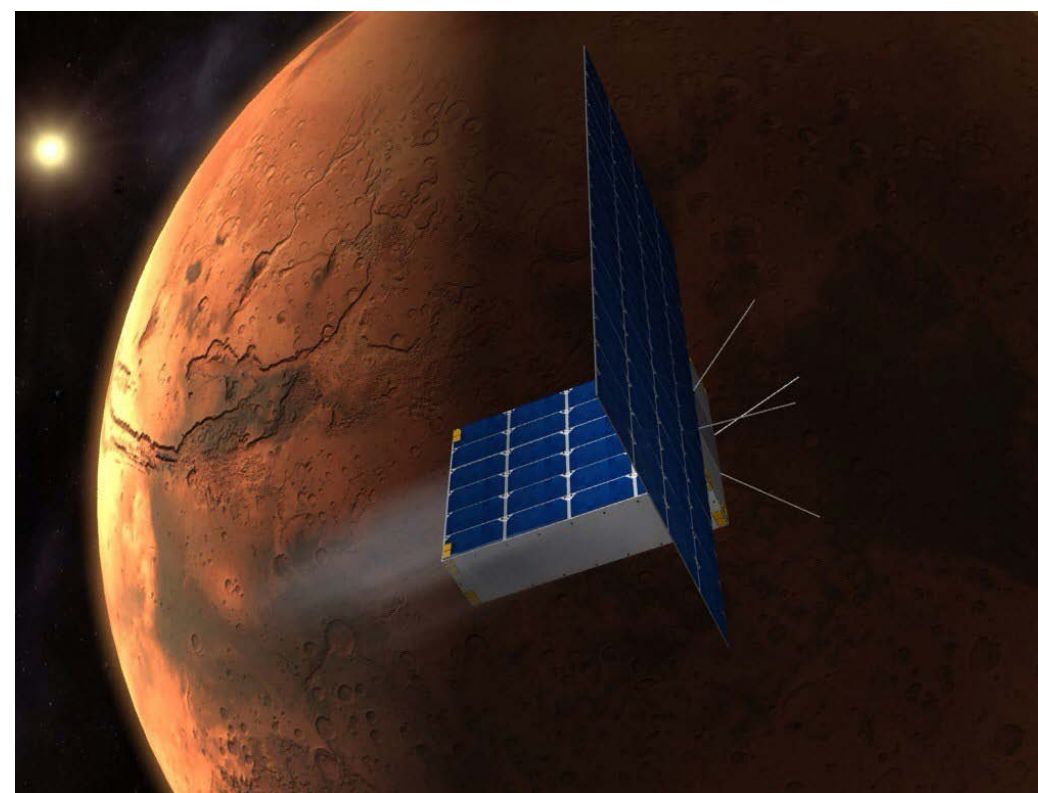
The FIT team worked on identifying all the systems requirements for all the participating universities. The FIT team worked with each of the partner universities to design the interfaces and the integration between each of the subsystems.

Launch Operations:

The FIT team began to start the launch operations process by working with CU Boulder on the ground station, the communications, and the beginning identification of the integration steps as a secondary payload.

Future Work:

The TC2M team is currently aiming for a launch in the 2017-2018 timeframe. We are working diligently towards our launch goals. We are still identifying and modifying the interfacing and refining our models to create the best and cheapest possible spacecraft to accomplish our objectives. We are going to launch our crowdfunding campaign within the year and begin the funding of our lower level technical work.



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