ICS Software Prototype Plan

# Overview

ICS Software Prototyping – 12 calendar weeks allocated

Project Setup, build setup etc. (3 days)

Learn Controller’s API (2 weeks) – this may be optimistic, since each stage is unique.

Prototype an HCD and Assembly (1 week)

Develop overall design (1 week)

All Galil/motion related HCDs (2 weeks)

CCD HCD (1 week)

Deformable Mirror HCD (1 week)

Imaging Assembly (1 week)

Stage Assembly (1 week) – this may be optimistic if the requirements for each stage are different.

# Phase I

Question: should we start a new JIRA project for these tasks?

## Identify Controller Board and Accessories

Contact Galil ([michaelc@galil.com](mailto:michaelc@galil.com))

Identify all motors

Answer questions

## Electronics/Bench Context Diagram

Create a preliminary diagram and update with correct information

## Software Architecture Diagram

Create a preliminary diagram and update with information as needed.

Input to questions for Jason.

## APS ICS Stimulus API Document – *Completed for Assemblies*

For each assembly in the architecture, identify the commands are needed and what events are needed. Create the APS ICS Stimulus API Document detailing this information in ICD format.

## Project Setup

* Using the CSW vertical slice project as a guide, create a code/build environment that can build the vertical slice using CSW jar libraries.
* Set up a github project that can store all the documents and the source code

## Prototype Requirements Document

Start a document that will be populated with requirements on an ongoing basis.

## Prototype Design Document

Start a document that will be populated with design on an ongoing basis.

## Engineering UI requirements

Write a first draft of requirements for the Engineering UI. Add this to the requirements document.

## Engineering UI mockup

Write a section to the design document that contains mockups of the Engineering UI.

## Assembly Class Diagram

Develop an Assembly class diagram and add to the design document.

## Assembly Actor Message Passing Diagram

Develop an Actor Message Passing Diagram and add to the design document.

## Assembly Prototype

Prototype a single assembly: Stimulus-DM Stage Assembly.

Now is synergy with ICS Prototype and UI eval (1 wk), Push technology prototyping (1.5 wks), Javascript training (2.0 wks)