

Dome Servo Upgrade Review

(More of a progress / review at this point)

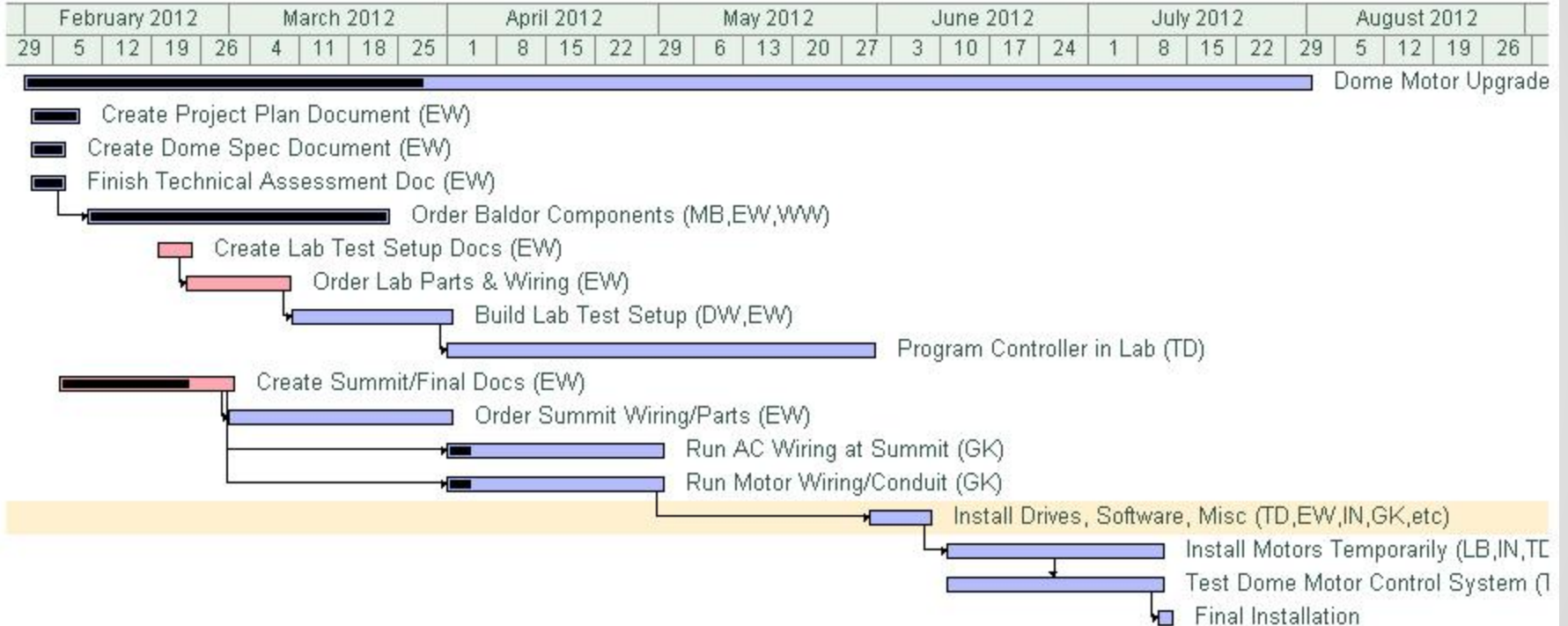
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Background

- Documentation not finished
- Mostly small details to be worked out
 - Part numbers
 - Finding in stock items
- Need to order large items like wiring for contractor work - need to order now
- Review is more of a progress report and review of system design to this point
- More complete review to follow at later date

Schedule

Gadget ▾



Major Tasks

- Order Baldor components - DONE
 - Received everything except 2 spare motors
- Finish system design - In progress
- Contractor wiring - bids out, but may need to modify
- Build lab system - NOT started
- Program controllers - NOT started

System Design

- Review google doc directly
- "Dome Servo Upgrade System Diagram"

Contractor Wiring

- Bids out, but need to modify
 - Power and feedback signals cannot be routed in same conduit for noise reasons
 - Recommended that spacing is 3"
- Wiring for motor power is 4 x 8 AWG, and 2 twisted shielded 16 AWG pair, with an overall shield
- Propose using "armored" cable to avoid having to run more conduit.
 - Aluminum "armor" - sheathing really

Lab System

- Build lab (will be summit) electrical system on 1/4" aluminum plate to fit in electrical box presently installed at IRTF
 - Should install seamlessly at summit
 - Hook up power, motors, ethernet, and Safety Board
- Simple motor lab design
 - Coupled 3 motors together via belts with some kind of variable brake load

Programming

- Programming can be done with controllers and a +24V supply
- Will take a while to get complete lab system

Questions / Comments