Magnet Final Design Review Notes

Notes on Magnet IOC Design Review for Fast Feedback, Nov 6, 2009

Attendees: Patrick Krejcik, Tom Himmel, Kukhee Kim, Qing Yang, Stephanie Allison, Kristi Luchini, Diane Fairley, Debbie Rogind (presenter)

- To Requirements (slide 4,5) and Actuator Requirements doc, add:
- Fast correctors must settle to within 90% of its desired setpoint within 5ms.
- Add COMPUTE flag to FCOM data (COMPUTE mode only valid with FCOM configuration)
- (For Alarming) Place larger tolerances around the BDES to BACT within tolerance comparison when in feedback (or defeat the alarming, like now)

For PAU Data Push/Pull function design, in general:

- Try to push constants provided in PVs via pointers where possible such that functions can read data efficiently at 120Hz. (This is a "would be nice".) Current design reads once when Feedback is turned on, such that changes are only picked up by toggling the state of Feedback.

- Provide a wrapper around calls to drivers for flexibility. Check on reentrancy of driver API. Missing on Slide 16, When turn feedback On, SNL sets BFBCK with current BCTRL value

Modify Slide 27, Remove BDES FLNK. Process BDES when a FUNC of trim or perturb is detected. Enhance Slide 27 with note that BOFFSET_1 is always assumed to be zero, thus updating BDES with BCTRL is valid.

(AI) on Debbie to update design slides and Actuator Requirements documentation on Sharepoint with appropriate items from above.

Thanks to everyone in attendance and for your comments!

-Debbie

BTW - Question for Kristi, are the electronics harmed for any magnet if the DAC is set at 120Hz by accident? This is in context to a "what if" scenerio of connecting a 60Hz capable magnet to a PAU/1 MUX and setting the pattern for 120Hz.