SELVA Meeting 5/27/2014

Attendees: Jerzy Nogiec, Lidija Kokoska, Sergey Kotelnikov, Fred Lewis, Andrzej Makulski, Roger Nehring, Fred Nobrega, Kelley Trombly-Freytag, Dana Walbridge

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- Project Status
  - Our critical path is having the motors functional (X,X1), FPGA modified and validated, the PID tuned, then motor synchronization working.
  - We can work concurrently on the tension calibration system (starting with calibrating the load cells), with motors as the highest priority. Andrzej and Roger will work out scheduling the machine on a day to day basis.
- Meeting Topics
  - Jerzy, Fred Nobrega, Ruben, Mike Tartaglia, and Andrzej had a progress meeting last week. Fred needs a proof of concept test as soon as possible, to check the issue with cable reverse bending. There was a directive a couple of years ago said we couldn't reverse wind, but we have different cables and magnet design now.
    - We need to have system capable of performing this specific test as soon as possible.
    - We will be operating the system for this test with Fred and his technicians assisting us and guiding the cable, therefore no ORC needed. This means all safety features do not need to be ready for this initial test
    - Fred Nobrega will provide a description of the test, including all phases of the test.
    - Basically, we will need all the motions operational
    - Fred agrees that we will implement all safety features before formal turnover of the system.
  - Information and procedures to handle the machine are needed:
    - Fred Nobrega, Rick, Jim and Jerzy will meet to discuss:
      - The alignment of the machine and setting the bridge on the tracks
      - The preparations for the alignment and testing of the mandrel
  - Traffic tower lights debugging.
  - Preparation and readiness for the work on the safety system improvements (redundancy, failsafe) this weekend:
    - Need to build a panel and it is preferable to have it done before the weekend work. It will be started immediately and should be done by the weekend, given all parts are available.
- Safety
  - Jerzy has gloves for the rope, one pair. If you need a different size, order them from stockroom
  - Everybody will read and sign the Hazard Analysis.

- Problems
  - A replacement angular encoder has been put in place and a similar item acquired.
  - There are a couple of I/O channels whose purpose is yet to be determined.

- Action Items

Fred Nobrega

	Supply a system requirements document		5/27/14

Fred Lewis

	Repair existing damaged encoder	Investigation has found a chip, plan to order it soon	5/20/14
	Install safety system improvements this weekend if panel is complete		5/27/2014
	Finish debugging traffic light		5/27/2014
	Ensure we have replacement encoders for future use	There is a problem with finding one encoder type, a search is continuing. We may purchase a universal one found by Andrzej.	5/27/2014

Lidija

	Implement mechanical setup for tension testing	In process, please find the delivery date	Continue 5/6/2014
	Create fixture for tension calibration fixed load, needed this week		5/27/2014

Andrzej

	Set up a DC motor for tuning tension PID	Postponed, pending solution for mechanical setup for tension	4/22/2014
	Test X and X1 motors; produce test results note. Sergey will assist	In progress; having some problems under investigation (angular encoder)	5/20/2014

Jerzy

	Changed: will meet with Fred Nobrega, Jim Rife and Rick Smith to talk about the mandrel and lowering the bridge	Formerly “setup meeting with Andrzej, Roger and Sergey to create a list of possible tasks connected with mechanical alignment of the machine”	Altered 5/6/2014

Roger

	Execute and document tension control test plan	Documentation is complete, execution suspended on mechanical work	Suspended 4/22/2014
	Review Dana's translation of Reel Up/Down Test Plan into Test Plan template	Review not done (in template)	To be done 5/6/2014
	Calibrate tension system; get fixture from Lidija; work with A re time with machine		

Sergey

	Create note on naming conventions on I/O channels	Clarified, not done.	Incomplete 4/29/2014
	Meet with Andrzej and Jerzy decide on synchronizing motor motion inside FPGA	Will discuss it while working together at IB3.	5/20/2014

Dana

	After wiring has been okayed and trenches are covered, then inspect the area for small objects and have them removed		Suspended – waiting for wiring OK
	Investigate sensor tubing	Metric sizes don't work either. Dana will order different sizes and see what works best.	Continue 5/6/2014
	Hazard analysis for general SELVA testing	Andrzej had a few minor changes. Dana will have Jim Rife review the current document, as he was the former SELVA operator. Ensure everyone on the team reads and signs the document, as well as Fred Nobrega, Jim Rife, and Rick Smith) Then, hang the document by the machine.	Continue
	Create proposal on which and how many; Order the sensors	Investigate pressure sensitive edges and bumpers. Get the information from Andrzej	5/27/2014

Kelley

	Get spreadsheet of results of testing of tension and reel subsystems	Put in SELVA wiki	5/20/2014

- Completed Action Items

	Fred Lewis	Obtaining or adapting encoders	Ordered, probably will receive today, but it needs adaptation here.	5/27/2014
	Lidija	Order the winch and rope	Complete.	5/27/2014
	Andrzej	Verify all electrical wiring for tension test as operational	Complete	5/27/2014
	Andrzej	Investigate proximity sensors for bridge	All based on motion detection, so not reliable; Found pressure/high impact sensors. Investigation now complete, Dana taking over	5/27/2014
	Roger	Alter software for additional signals for tension and Reel; concentrate on Reel U/D	Complete	5/27/2014
	Roger	Reel U/D test program	Complete	5/27/2014
	Roger	Find flexible coupling for encoder	Complete	5/27/2014