

May1733

Remote Wafer Testing

IBM, Geiger

Antonio Montoya, Team Leader

Braden Rosengren: Hardware Lead

Chris Little: Key Concept Holder

Christian Hurst: Web Master

Ben Wiggins: Communications Lead

○ **Weekly Summary (Short summary about what you did this week)**

After this past week, our group has grown tired of waiting for IBM and made the decision to officially drop them from our project this upcoming Wednesday. Because of we were waiting for IBM to give us the complete hardware requirements for our project, the hardware sub team has spent most of the week researching necessary components for a board to suit usage cases that we have developed for our project outside of IBM's usage.

Due to this shift, we are currently redefining this semester as a proof of concept of a more general remote test system. This general system is currently aimed at two usage cases: using the remote tester as a presentation tool for use in EE 230 classes or for industry presentations to show the characteristics and behavior of IC's such as op-amps. The other is to use it in tandem with the wafer prober on the third floor of Coover to run tests on circuits with programmable digital testing hardware using I²C. The plan is to currently develop the board for the first usage case and then create the one for the second usage case once we have confirmed the wafer probers functionality.

- **Past week accomplishments (please describe as what was done, by whom, when)**
 - Antonio Montoya: Met with Geiger to discuss the project and talked with our IBM contact to find out that IBM has made no progress on a legal resolution. Edited project plan. Looked up parts from TI to use as a DUT to test our proof of concept
 - Christian Hurst: Worked on Raspberry Pi webserver interface. Got Hello world working and basic file IO. Began planning out GUI layout. Met with Geiger to discuss project. Reviewed and submitted project plan
 - Ben Wiggins: Worked on Raspberry Pi webserver interface. Got Hello world working and basic file IO. Began planning out GUI layout. Met with Geiger to discuss project. Helped to edit project plan. Contacted Neihart to open up communications with previous users of the Wafer tester
 - Chris Little: Relearn Multisim in order to use for board design 3Hrs
 - Braden Rosengren: Researched footprints for the Pi to use on the breakout board. Made the decision to use Multisim and Ultiboard to design the breakout board.
- **Pending issues (if applicable)**
 - With dropping IBM from our project, we have some early concerns about reverse scope creep. As of now, Geiger feels that we should drop the breakout board from our project if the wafer prober proves to be unusable to us, which would result in a great reduction in the usage cases of our project and for group work due to the lack in hardware.
 - An additional issue that comes up with officially dropping IBM deals with funding. Geiger told us that Senior Design groups can sometimes receive as much as \$600 to assist in funding senior design projects.
What is the process to gain access to our portion of these funds?

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Antonio	Researched TI chips edited project plan	6	28
Christian	Created basic webserver and file IO	8	26
Ben	Assisted in creating webserver and opened communication with Neihart	7	25
Chris	Relearned how to design boards in Multisim	3	17
Braden	Researched Software and Footprints for hardware development	3	15

- **Plan for coming week (please describe as what, who, when)**

Braden: Work with Antonio to decide on functionality and to design a breakout board. Try to come up with additional usage cases.

Ben: Receive contact info of previous user of the wafer prober from Neihart. Learn how to use Python. Assist with developing GPIB implementation and test runner

Chris: Continue research into what DUT to use.

Christian: Work on GPIB implementation and test runner. Begin designing the UI/UX web interface.

Antonio: Work with Braden to decide on functionality and to design a breakout board. Try to come up with additional usage cases.