**[Programmable Communication Group](https://sites.google.com/a/temple.edu/programmable-communication-group/)**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Friday, September 6, 2013 | | |
| Advisor | Dr. Silage | | |
| Members | Cedric Destin | Brandon Keith | Brian Thibodeau |

Headline: Dr. Silage would like to see the latest progress of Simulink model of KD2BD modem.

Topics to discuss

* Provide status
  + System-level Simulink model of KD2BD modem (no noise/ no Doppler shift/ no amplitude fading)
  + Brian’s working on AGC
  + Cedric’s working on integrating Modulator at top-level Simulink
  + Brandon’s looking USB-UART support for LX9 Microboard and working on AFC
  + Brian tried to order LX9 Microboard, but it appears to be on back-order and won’t be shipping for 3-4 weeks
* Cedric wants to talk about whether MS Project is needed for SD
* Which software TNCs are available for our project?
* How can you model Doppler shift using digital loopback? Audio loopback makes more sense according to Brandon.
* Does Silage have extra PMod ADC/DAC (AD1/DA2)? If no, we need to order.

Dr. Silage feedback

* Contesting SSB in KD2BD modulator
* MS Project is deprecated for SD. WebEX teleconferencing tool is its replacement.
* To circumvent Avnet back-order of Lx9 Microboard, Silage is offering possibility to test using LX45 FPGA on Atlys board.
* Possibly implement frequency modulation (linear shift) using DDS compiler to replicate Doppler shift in FPGA hardware.
* Silage would like to see our latest progress with the system-level Simulink simulation of the KD2BD modem on the website.

Topics to discuss in next SD meeting

|  |  |
| --- | --- |
| **Engineer** | **Status** |
| Brian Thibodeau | * Still researching AGC and figuring out how it would be implemented in Simulink * Preparing short Power Point of Carrier extraction circuit for next meeting with Silage.   + Will include both temporal and frequency domain analysis of John’s Design. Any Discrepancies will be noted in the presentation * Going to see if there is a Calender widget for the website. If there is, then I will add all of our DUE dates from SDI syllabus onto the website calendar. |
| Cedric Destin | * Integrating the Simulink Model of the modem   + Analyze the modulated data (Is it SSB if yes why?) * Analyzing the modem in the temporal and frequency domain |
| Brandon Keith | * Working on AFC in Simulink model for KD2BD modem. Thinking about how we would implement Doppler shift in FPGA for digital loopback * Put USB-to-UART code on Github for future reference. |