

WaitLess Bus Tracking System DK-2 Group status email: Due 2009 February 11

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Current Status

- Programming Arduino micro-processor to communicate with the Wi-Fi serial module. We are trying to get the Wi-Fi module to communicate over RS-232 with PC. The Wi-Fi module is currently connecting to the wireless router in Matt's apartment and can be pinged.
- Selecting possible custom case manufactures.
- PCB design is almost complete. Daniel is looking into having Bob House of ECE to manufacture the board for us.
- Considering buying a different Wi-Fi module that takes more power but has a much better way of accessing the XML feed from NextBus.

Task Status: Actions on last week's Action Items

1. Daniel is going to finish making the PCB layout so it can be sent out as soon as possible. Will continue searching for a company to make the weather-proof case.
 - ✓ He almost finished the PCB layout and just needs to check with Bob House to see what he can and can't do.
2. Matt will work with Chris to solder pins to the Wi-Fi module. And will help figure out how to have the Arduino communicate with it over UART.
 - ✓ Soldered wires to the Wi-Fi modules because small pins not available. Developed code to initially setup the Wi-Fi module, it is connected to his home router successfully and can be pinged from a computer on the router. He has been in touch with a guy at Roving Networks that is helping resolve issues with communicating with the device.
3. Josh will look into decal makers. This is needed for the map of the bus routes which will be made on a vinyl sticker to be placed on the front of the case.
 - ✓ Still looking into vinyl sticker and case manufactures.

4. Chris will look into soldering pins to the Wi-Fi module. He will look in the datasheet to figure out what commands are needed to set it up initially.

✓ He and Daniel decided to look into another Wi-Fi module that may work better because of the initial issues with communication to the current Wi-Fly module.

Planned Tasks: Action Items for the upcoming week

- Daniel is going to talk to Bob House about manufacturing our custom PCB.
- Matt will continue trying to reliably communicate with the Wi-Fi module. Will try to solder I2C LED Driver to DIP package so initial programming can be made to talk to it.
- Josh will select a case and a vinyl sticker manufacture.
- Chris will look into ordering a different Wi-Fi module so that we can start programming it instead, because it might be easier.
- All of us plan to meet Tuesdays and Thursdays, at 4:30 to work on the project.

Problems

Communication with the Wi-Fi module has been unreliable. The same commands sent from the Arduino micro-processor to the module produce different results every time it runs. Currently, we are trying to reconfigure the code to make the expected results more reliable.

Because of initial problems with communicating with the module, a new Wi-Fi module called the Nano WiReach by ConnectOne is being considered. The device is much more capable, but consumes more power. We are willing to take the hit in power to have an easier more capable Wi-Fi module.