weekly memorandum

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| to: | James Pettit |
| from: | Tommy arrington |
| subject: | My progress on the portable launch relay system |
| date: | [Click to Select Date] |
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**LAST WEEK**

Last week I focused on selecting a long-range wired communication method for the Portable Launch Relay System. After viewing the schematics of last year’s system and having a tour of the permanent system at the NAL from Evan Marcotte, I researched wired communication methods on the criteria of cost, data rate, ability to integrate multiple systems, and most importantly its ability to operate over at least 1500 ft. No standard communication protocol (Ethernet, USB, Serial, BNC) has anywhere near this range, so I narrowed my choices down to [two classic 56k modems](http://www.jagshouse.com/modem.html) (6000+ ft.) or the [LinkGain Ethernet Extender Over VDSL](http://www.blackbox.com/Store/Detail.aspx/LinkGain-Ethernet-Extender-over-VDSL/LB300A-R3) (6336 ft.). I will continue to try to find a better solution, because the modems would have a low data rate and possibly complicate connecting a camera through the data system, and the pair of network repeaters would cost upwards of $650, before the cost of cables.

**THIS WEEK**

This week I will finalize my selection of a communication system and begin examining if I can find a better operating product than the current relay board, as Gabe Aguilar commented that its software was glitchy. I will also work with Propulsion to determine what data will need to be recorded to fill the oxidizer tank and monitor the engine during flight, and begin modifying the Portable Relay System to be compatible with this. Finally, I’ll look into cameras and systems to integrate a camera feed to a separate (Ethernet) network.