

Project Cornerstone Journal

2010 Spring Journal #9

NOTE: These journals are not official documents. They are a casual blog of the activities for the field trial. I try to keep them accurate, but they are a personal view of the effort. They are really intended to keep people aware of our progress and do not represent the official log.

29 March 2010

A calmer morning dawned in the camp, but the three occupants of our tent were not at their finest. We were all tired and had headaches. It was time to figure this stove out or throw it out. After much discussion, we found out that there are two small fuel flow adjust valves. Three-eighths of a turn back on both has resulted in a much better behaved stove.



The AUV tent lit from inside as the sun rises.



Val, Derek, and I deploy the Freewave radio links at each modem. The radios and batteries are inside modified coolers for warmth.

After coffee and Tylenol we pulled it together and deployed the remaining three modems. The complete Short-Range Localization (SRL) modem field is now in place. We also deployed three of the Freewave network radio links in extra insulated coolers on three of the modems. We will deploy the remaining three as soon as possible.

While Val, Derek, and I have been working on the modem fields, much other progress has been made in the camp.

The ISE team finished the assembly of the AUV during the day and in the afternoon it was raised by the gantries, which were completed by the DRDC Setup Team, and lowered into the ice hole. The first tests were obviously just to be sure no water was finding its way inside of the vehicle. Then ballast weights were added to fine tune the AUV trim. After this was completed, the vehicle was put into the water again for a 24-hour soak test.



The AUV about to be deployed. From the lower-left clockwise are Derek Clark, Rod Penner, John MacMillan, Tristan Crees, and Sean Spears.



Tristan Crees temporarily applying ballast weights to the tail of the AUV.

While the AUV is submerged Derek has begun testing some of the communications and acoustic navigation components. The initial test results are pretty good. Acoustic communication under the ice is less difficult than in a busy harbour. Derek and Alex Forrest, who is working with ISE, discovered that the Acoustic Homing and Localization System (AHLS) – we call it ‘Alice’ – have been swapped in the two vehicles. This means that the AHLS in the vehicle currently at the ice camp is not properly configured. The AHLS will have to be reconfigured when the AUV is recovered.

The weather today has consisted of very mixed conditions. At times it was beautiful, while at other times much less so. It appears that Resolute has been *much less so* all day long. There have been no planes out to the camp today. Storm conditions are expected again tonight.

The Canadian Hydrographic Services (CHS) guys are running the camp. They are working VERY hard. It is a big camp and it takes a lot of work to keep it operational. The snow plow is running

almost all the time just to keep behind the snow drifts. Tim Janzen, the Camp Manager, lives beside his radio. Gianni, Knut, Rudy, Joe, Dave, Aaron, and Michael are everywhere! They are putting up tents, fueling stoves, clearing paths, servicing generators, loading and unloading planes, and basically keeping us alive. They seem to be in good spirits, but they are tired. It has been a lot of work and with the drifting snow building up all the time it is a never ending job.



Dave Synnott passing cables under a tent flap.



Joe Manning and Gianni Di Franco installing the heater in a new tent.

That's all for now!
Garry J. Heard

Corrections from Previous Journals

- No corrections yet.