**TAKE NOTES WHILE WE WORK so that we can have stuff for our report**

Bty progress – John & E

Got bty working on E’s machine & made several new bty files

Made new bty files with multiple rays and looked at .arr interpretation

E is making a script to draw bty files

Keep making various bty files & saving data to compare to what the hardware team has

Look at the impulse responses and compare them to what you expect

Expected impulse response: a big echo from the back wall and other bounces from bottom and surface coming in later – initial pulse, then a pause, an echo from how far away the wall is, then some impulses dying off

Maybe more rays bouncing off the bottom & top than going straight

1 transmitter 1 receiver, quite near each other

Figure out alpha angles – make the server omnidirectional – like on the ellipse.bty

Figure out the amount of rays needed –

Run with fewer rays & compare to run with increased rays – stop when the two pictures are the same

Very close stuff harder to model?

How does Bellhop decide how many rays to use?

Scale down – 8 ft deep 100 ft range

**E - Subfolder of bty files in github**

Get a lot of bty files and change little things (like depth) or wall shapes & compare responses

Sonar reconstruction –

Could help Vaishakhi with that

Synthetic aperture sonar

3D –

Must get 3D map (because the ocean, is in fact, 3D)

One of the XPRISE requirements

How to start on this?

1. DIY & struggle
2. Use bellhop3D – multiple 2D bellhop slices

Report –

Due week after Spring Break

Concept: how for someone else to do what we’ve done – what the next team gets to read

Content:

Background

What we’ve done so far

What we have left to do

! Important to get references right - hyperlinks

Must be to real, valid documents

Can reuse a little for final report

Audio file progress –

Need to bother Henry about this

Begging for money –

Vaishakhi and someone else are doing this – might want a video?

New milestones from Professor Brooke –

Some fun notes

Dolphins

Fish census for controlling fisheries