

Space Details

Key:	INTERN10
Name:	Summer Interns 2010
Description:	The Confluence Space for the summer interns for 2010
Creator (Creation Date):	kgomes (Apr 30, 2009)
Last Modifier (Mod. Date):	kgomes (May 27, 2010)

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Home

This page last changed on May 27, 2010 by [linda](#).

This is the home page for the Summer Interns space.

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Comments

Effective Shackle for ROV Manipulator Operations:

Protecting the integrity of cabled seafloor observatories is essential to continued oceanographic operations. My aim this summer is to produce a tethering device that can be set and unset by ROV's manipulator arm using Solidworks 3-d software. In the fabrication of this "Shackle" I will be communicating with my mentor Larry Bird, the ROV pilots and mechanical engineers to develop constraints and requirements to further refine the device into a viable ROV friendly shackle for deep sea use.

Posted by [aschnittger](#) at Jun 16, 2010.

This week:

Prototype finished! The Western Flyer is headed out manana, and I finished just in time to show the ROV pilots my shackle before they shove off for a few weeks. My mentor Larry Bird helped me out big time since this week was a short one with getting my shackle design milled/assembled. I was stoked with the feedback that the pilots gave me on my design, and I will be submitting my drawings to the machine shop soon for the next fabricating phase.

Next week:

Get the Finished product started in the shop, so can start doing some load testing in a couple of weeks. I would also like to start my presentation/paper to get a good start on the final weeks of my internship.

Going well/ not well:

Only six weeks left for the internship! Where did the time go?

Posted by [aschnittger](#) at Jul 08, 2010.

08-July-2010

This page last changed on May 27, 2010 by [linda](#).

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Comments

This Week:

1. I have finished watching all the dive 886 videos and am now retuning to specific parts to look at sedimentation of certain sample sites and compare these observations plus those of contacts with the geochemistry to pick out individual lava flows. So far I have identified 4 potential flows alongside the 1996 one using predominantly the rock sample geochemistry as it is the most reliable.
2. I have mapped in all of the preliminary eruption boundaries for the 1996 flow and am beginning to map the possible boundaries of older flows.
3. For the areas of flow I have mapped I have pinpointed the eruptive vents

Next Week:

1. More reading and add what I have already read to my literature review
2. Continue with identifying and mapping in boundaries for the older flows in the area
3. Begin to look at the distribution of eruptive events in relation to the dyke point focusing problem
4. Find other examples

Going Well:

Everything is going well at the moment.

Not Going Well:

Nothing

Posted by [iyeo](#) at Jul 08, 2010.

This Week

Currently I've switched focus from how to disseminate the EITS footage to how to present it to teachers at the EARTH workshop next week. Danelle and I met to talk about objectives for EARTH and the limitations of Voicethread. Erika Raymond (post-doc) and Greg Bwye (Erika's intern) met with us to talk about the footage from the 2009 deployment on MARS. They both have also agreed to provide the voices/expertise/doodling for a Voicethread mock-up for EARTH. The hope is that uploading EITS footage to Voicethread will provide a collaborative tool for classes all over the country/world to discuss what they are seeing and to motivate them to further study (and conserve) the ocean.

Also attended Ari Daniel Shapiro's seminar on Spinning Science Stories. His thoughts were right on target as we try to get the EITS (and data from ocean observatories in general) out to classrooms and the public. Great seminar!

Next week

Danelle and I will present the footage to the group of teachers and gather lots of feedback about its usability and how well it meets the objectives. Hopefully the feedback will lead to minor revisions and not a whole new platform.

Going well and not so well

Time, I suppose could be an issue. I hope to have some more clips to bring up to EARTH so that teachers can use their creativity and energy to spread the word.

Thanks to

Danelle, George, Erika, Greg, Ari and all the INTERNationals

Posted by [klodes](#) at Jul 08, 2010.

This Week:

1. I have read the documentation for domain name service (multicast DNS) and service discovery to be able to implement this for instruments. With this information I made the plan to use the parameters from Puck data-sheet and so to register the mDNS with this data. With this all the instruments will be unique identified into a local network and so they can be called using a real name and not an IP address.
2. I have prepared a demo for IP Puck for tomorrow with Headley Kent and Edgington Duane.

Next Week:

1. Continue to get more information to make the implementation of ZeroConfig protocol.
2. Programming the multicast DNS and DNS service discovery for the Luminary micro-controller.

Going Well:

Everything is going well.

Posted by [dtoma](#) at Jul 08, 2010.

This Week:

Proceeding to sequencing from last week. Isolated the plasmids (small circular DNA) with the eukaryotic marker inserted. Preping the sequencing plate soon and will sequence whenever the machine is available.

Culture check: continued qPCR to identify the culture composition from one sample in the culture collection. Results are in and waiting to be analyzed.

Next Week:

Prepare sequencing of 16s DNA of the two isolates I have. Procedure similar to 18s I did last week. This will give more information on what the culture composition is with respect to which bacteria are in the culture besides the algae and identify more specifically the algae species.

Well/Not well:

Going very well after an AWESOME long weekend!

Posted by [hyu](#) at Jul 08, 2010.

Short Week 4:

The welding for the PT Assembly is finished and the Rangefinder block is well on the way to being done (probably Friday). Some minor design changes had to be made but everything worked out fine. I'm waiting on parts for another project to arrive; they should be in next week. I will be leaving next week to go out to sea on a 9 day voyage.

I was able to get what I needed to finish this week done and get back on schedule. When I return on the 21st I will be in a good spot to begin the next phase of the project.

Posted by [rmarin](#) at Jul 08, 2010.

This week:

- Mainly I've been assisting in the preparation for the first leg of the Western Flyer So.Cal cruise leaving tomorrow
- This has involved unloading and setting up lab equipment and making sure the instruments we'll be using are working correctly on the ROV (laser Raman, CTD, etc.)

Next week:

- My cruise begins tomorrow and sampling sites which involve sampling at the Santa Barbara Basin and Santa Monica mounds, among others

Well/not going well:

- Things for the cruise seems to be in order but my project of determining the relative molar Raman cross sections ran into some problems that will hopefully be fixed after the cruise

Posted by [mluna](#) at Jul 08, 2010.

This Week:

- I submitted my schematics to my mentor and am waiting to hear back about them

Next Week:

- Fix any problems with my schematics that my mentor finds
- Design footprints for unusual package types

Going Well/Not Well:

- Everything seems to be going well. The down time that I get waiting for approval on my schematics has given me some time to write up a bit about my project for the intern blog

Posted by [smatteson](#) at Jul 08, 2010.

This week:

Prototype finished! The Western Flyer is headed out manana, and I finished just in time to show the ROV pilots my shackle before they shove off for for a few weeks. My mentor Larry Bird helped me out big time since this week was a short one with getting my shackle desgin milled/assembled. I was stoked with the feed back that the pilots gave me on my design, and I will be submitting my drawings to the machine shop soon for the next fabricating phase.

Next week:

Get the Finished product started in the shop, so can start doing some load testing in a couple of weeks. I would also like to start my presentation/paper to get a good start on the final weeks of my internship.

Going well/ not well:

Only six weeks left for the internship! Where did the time go?

Posted by [aschnittger](#) at Jul 08, 2010.

This week

- Fixed a few synchronization issues in the code.
- Completed the most basic version of visualization and tested it.
- Discussed with mentor what additional features to add to the project.

Next week

- Integrate the visualization code with DSS.
- Add more features to the code, like zoom in, zoom out, left shift, right shift, tool tip for tokens etc.

Going Well/Not Going well
Everything is Good.

Posted by [skumar](#) at Jul 08, 2010.

This Week

Met with David Caress to discuss updating the mapping AUV section of the MBARI website. I have modified the D. Allan B. vehicle specifications and uploaded the most recent maps that the mapping AUV has taken. I am working on a soundslide plus slideshow for the AUVs, which will show the different kinds of AUVs with captions to describe them. There is a small possibility that I might be able to do a podcast and combine that audio media with the AUV slideshow.

Next Week

Will be editing all of the new material that I have uploaded so far and I will be meeting with some more AUV team members.

Going Well/Not Going Well

The challenge is to be able to get recent information on autonomous underwater vehicles and CANON now. I cannot wait until week eight to receive new information since that information needs to be thoroughly edited and reviewed by scientists. Everything is going fairly smoothly.

Posted by [cmatthews](#) at Jul 08, 2010.

This week:

- I introduced the previously implemented heuristic function to the algorithm.
- I have found and fixed a few bugs.
- I am adding code features for debugging and checking the properties of the cost and heuristic functions I have defined

Next week:

- I will fine tune the cost and heuristic functions to speed up the searching process
- I will try with another approach to solve the same problem

Going well / Not going well

- The internship is being a very interesting experience. However, almost 4 weeks out of 10 are gone. This is really short.

Posted by [bgarau](#) at Jul 08, 2010.

This week: I showed my mentor, Sergey, my Powerpoint describing how the GOTM works and how the biological model responds to the various physical inputs (heat flux, shortwave radiation, wind, etc.). Today I met with my lab back at MLML and I discussed the model with Larry Breaker who is pretty familiar with General Circulation Models (GCM). He helped me gain a better understanding of how the model works and offered a lot of guidance as to what I can do in the next few weeks to thoroughly understand how much the physical inputs contribute to turbulence. I have been reading about the model from books on marine turbulence as well as articles that describe how the turbulence closure models work and how the ODE (ordinary differential equations) solvers are applied to the biogeochemical models. Lots of very complex stuff! I have also using Matlab to collect data from the M1 mooring (meteorological observations, temperature and salinity profiles) and getting it in the right format to import into GOTM.

Next week: I will put together a report or refine my presentation to show the various scenarios where I have added/removed different physical inputs. The goal of this will be to better understand which forcings are producing the greatest amount of vertical mixing. Wind is likely the most important factor, but it will be interesting to see the importance of heat flux and pressure gradients. Once I have plotted these different scenarios, I will then examine how much that input is contributing to turbulent kinetic energy and dissipation, nutrient flux, and phytoplankton growth. This will help me connect the GOTM with the original goals of the internship: to improve quantification of vertical mixing, and subsequently refine estimates of primary productivity.

Going well/not going well:

Things have been getting better as I learn more about this model and how I can use it to understand vertical mixing. I'm excited to see some of my results for next week. I really enjoyed Ari Shapiro's seminar this week!

Posted by [kморrice](#) at Jul 08, 2010.

This week

Currently working on last week's 'to do' list

1. Webpage design and layout (colour, pictures and text)
2. Webpage security

With help from a fellow MBARI employee, we were able to successfully develop a secure login page that restricts unauthorized individuals from entering information in my web based form.

Next week

I will put together a facts page

Read and sift through the literature

I will further improve the design and layout of the website

The not so well

Haven't made much progress during the past 2 weeks.

Having trouble getting back into it

Posted by [mrussell](#) at Jul 08, 2010.

This week

- Got to see Brian's fast-paced output of some Java coding for the site.
- I didn't do much because I wasn't here yesterday and on Wednesday I was only able to change the search and search results pages a little bit.

Next week

- Really should be the week everything should be coming together, from design to Java, and then hopefully we'll only need to change what asked to change

The not so well

- I didn't get much work done this week, but I'm going to make up for it next week!

Posted by [hhashim](#) at Jul 09, 2010.

This week:

My images were loaded onto VARS so I have started annotating. There have been a few issues trying to improve the brightness of the images for greater detail and I have recently come across a problem with the timecodes. But I'm really enjoying these little daily challenges and compiling a method development for the image annotation process.

Next week:

Annotating takes some time and I have around 340 images to go through - I'll probably be at this for the next few weeks. Although both Linda and Alana have other small jobs for me if I need an afternoon away from the computer screen so hopefully I'll get to try my hand at some other projects as well. I might make a start at the introduction and methods sections of my report, the time is flying by!

Going well/ not going well:

I still have no complaints. I'm really enjoying my project work and I love the other opportunities that are arranged for us here - meeting board members, seminar speakers etc really adds to the experience!

Posted by [rhunter](#) at Jul 09, 2010.

THIS WEEK I had to re-run my GrpCnifH and TrichonifH negatives on the MBF2 because of a type-O error put in last Wednesday (my fault, and Thursday was on the Point Lobos). I created GrpC- and TrichonifH templates using the primers I designed and was able to run a PCR experiment (not on the MFB) on environmental seawater samples from Santa Cruz. Unfortunately our agarose gel standard was old and we could not determine if the primers properly amplified our idiA gene. We switched to positive synechococcus controls (cultured synechococcus) but unfortunately the NanoDrop indicated that our DNA extraction experiment did not have a high enough concentration of DNA from the cultured synechococcus (probably due to the age of the culture).

NEXT WEEK will be dedicated to re-doing this 'primer-testing' procedure. Hopefully we can find a positive control for idiA and my primer design will successfully amplify the proper DNA!

NOT SO WELL- DNA amplification, MFB2 negatives, primer testing- much hope for next week!

Posted by [sthomas](#) at Jul 09, 2010.

This week : It was a short week and both mentors were out on holiday. I worked on the stepper motor that would be used in the SES. The programming aspects as well as the mechanical operation of the motor need to be solved by the time Paul McGill returns from his trip to Texas.

Next Week : Work will continue on the stepper motor.

Not so well : I have had to visit the doctor twice so far. This is a huge inconvenience due to the loss of health and the loss of work hours.

Posted by [jvirrey](#) at Jul 19, 2010.

15-July-2010

This page last changed on May 27, 2010 by [linda](#).

Comments

THIS WEEK my mentor and I set up a side-by-side PCR experiment for our environmental samples and samples spiked with *synechococcus*. The PCR product was run through gel electrophoresis to test for DNA amplification. Fortunately we did see amplification in some of our samples, which indicates that our *idiA* primer worked and we don't have to redesign primers for targeting this gene expression. We have now moved onto the next step- cloning!

NEXT WEEK we will hopefully be able to work with our colonies. We will also return to using the MFB2 block for testing our GrpC and Tricho templates.

All is well!!

Posted by [sthomas](#) at Jul 15, 2010.

This Week:

1. Identified and mapped in flow boundaries for 5 lava flows plus two shield volcanoes on the North Gorda Ridge
2. Calculated their volumes using two methods the first assuming a flat base and the second a tilted base and compared the results
3. Mapped in all the faults and fissures in the area
4. Mapped both fault associated talus and 'erupted' talus and calculated the volumes of both.
5. Looked at the percentage of an eruption which is accounted for by talus and found that between 11 and 25% of an eruptions volume may be composed of this talus like material
6. Calculated statistics for the area, including cones per km², and looked at the distribution and densities of cone patterns
7. Spent an afternoon learning about MB system and how raw AUV data is processed (Dave Caress)
8. Continued reading on dyke propagation and dyke width
9. Identified Coaxial, Hawaii and several other areas as potential comparisons

Next Week:

1. Continue research on dyke width controls/convection and formulate hypotheses which might explain deep point focusing of dykes recognised from preliminary work
2. Investigate hypotheses and (hopefully) reach some kind of conclusion as to processes controlling this pattern
3. Map one of the comparison sites and calculate volumes of eruptions and large shield like edifices, compare volumes (and faulting and fissuring patterns to North Gorda)
4. Write report introduction and possibly methodology

Going/Not Going Well:

Everything is going well at the moment. I'm feeling a little pushed for time as I'm off on a cruise on August 5th and back the Friday before symposium so need to be pretty much finished by time I leave - eek!

Posted by [iyee](#) at Jul 15, 2010.

This week

Still annotating the Rover images. It takes some time but I think I'm really starting to get my eye in for noticing things and it's great ID practice. Will hopefully have finished all of them by the end of this week!

Next week

I plan to go through some of the images and discuss any questions with Linda. I'll then spend a few days making sure everything is annotated correctly and to the lowest taxonomic level possible with her help. After this the analysis starts! Just what the next steps are will be decided at the project meeting next

week. We'll also be putting the Rover into the test tank at some point to take some calibrated images so we can calculate the area of the images - I'm looking forward to a day's practical work.

Everything is still going great!

Posted by [rhunter](#) at Jul 15, 2010.

This Week:

1. Two mystery algae isolates

One of the isolates was sent out for sequencing (eukaryal marker). The bacterial (16s) gene was also cloned same as the 18s eukaryal marker this week for sequencing. Currently working on plasmid prep and will carry out sequencing next week.

Because the other isolate did not amplify at normal PCR conditions, I tried gradient PCR at different temperature to see if anything show up. Result: no. Then, I tested for inhibition in the DNA extract by dilution + PCR. At 1:10 dilution, the DNA finally amplified which means there is indeed inhibitors in the extract. Will try eukaryal (18s) + bacterial (16s) marker gene sequencing on this isolate again.

2. Culture collection check

One of the cultures in the culture collection was suspected to have contamination. qPCR was performed and results indicate there is indeed contamination of coastal *Ostreococcus* in the supposedly pure *Bathycoccus* culture. Currently working on a short report to Alex and will do 18s sequencing as well on this culture to see where the contamination is from.

3. More mystery isolates

Everything planned for the summer project is almost done. Therefore, decided to look at 7 more of isolates from the same cruise last year. Protocols will be very similar to the previous two isolates. The cultures were transferred this week.

Next Week:

1. Two mystery algae isolates

Analyze the sequencing results from the first run. Also continue the sequencing (16s for one and 18s +16s for the other isolate).

2. Culture collection check

Sequence the culture (18s) and report to Alex.

3. More mystery isolates

DNA extraction + cloning.

Well/Not Well:

Everything is going well but the amount of work more than tripled this week for me (still very exciting though!).

Posted by [hyu](#) at Jul 15, 2010.

This week

Finalized my stress calculation and concluded that my shackle will be burly. I finished up my mechanical drawing on Tuesday afternoon and ran them past the machine shop Supervisor Ray on Wednesday to double check if there would be any problems in the fabrication of my design. Ray gave me the go ahead to proceed with submitting my plans and ordering material. Material should arrive some time next week.

Next week

I will be eagerly awaiting my 1 1/2 & 1 inch stainless steel plate, but in the meantime I will be working on my presentation/final report.

All is well and right on schedule.

Posted by [aschnittger](#) at Jul 15, 2010.

THIS WEEK

I am still in the development part of the Zeroconf protocol which will take some more days.

After the presentation and the demo from last Friday with my mentor, Kent Headley, and Duane Edgington, I start to implement an automatic system using PUCK, Zeroconf and SensorML to demonstrate the functionality and automatic setup for a system with different instruments and services available into a local network.

NEXT WEEK

Continue programing the Zeroconf protocol for Luminary micro and Java API for Service Discovery.

All is going well

Posted by [dtoma](#) at Jul 15, 2010.

This Week:

- I updated the package types and part numbers for the components on my schematics
- I replaced vertical connectors with right angle connectors which are necessary for the chassis system
- I updated the bipolar current source because my original design wouldn't prototype
- I reviewed all of my schematics once more and had a few parts ordered to prototype
- I finished sketching PCB footprints for unique package types

Next Week:

- I will start the layout process by making the footprints and mapping the initial placement

Going Well/Not Going Well

- Everything is peachy and covered in corn nut powder

Posted by [smatteson](#) at Jul 15, 2010.

THIS WEEK

- I kept on working on the path planner.
- I finally could complete all the chain of tools needed for it (discretizing the domain, analyzing its properties...)
- The results obtained by the path planner so far are acceptable, but I think they can be improved.
- Since the tool chain is built, I have started to improve the initial step, where the domain is discretized, by another approach, more closely related to the domain properties. I hope this improvement will be propagated to the obtained results.

NEXT WEEK

- I will keep on improving each tool of the whole chain.
- I will probably revisit the cost and heuristic functions.
- I will start another approach to the problem, based on a different technique (Genetic Algorithms).

Everything is going well. Since I want to tackle the problem with another technique than the one used so far, I will have little time to get deeper in the current one. I need to decide whether to test two techniques or improve one of them as much as possible. Will see with my mentor next week.

Posted by [bgarau](#) at Jul 15, 2010.

This week

This week is the EARTH workshop cosponsored by MBARI and CMOP in Oregon. Thirty plus teachers from around the country have gathered to learn about real time data and to incorporate it into lesson plans that are available on the EARTH website ([\[www.mbari.org/earth\]](http://www.mbari.org/earth)) . I presented using Eye in the Sea near real time footage using the on-line collaboration tool Voicethread (www.voicethread.com). Although

many teachers have expressed interest in using EITS footage, no groups picked this topic to expand into a lesson plan for this workshop (a few teachers and Dr. Antonio Babbista have expressed great interest in using voicethread).

On the good note, I've learned quite a bit both formally (presentations by scientists and experts) and informally (socializing with the group). I also still feel that EITS offers a great visual, raw data entry into using real time data

Posted by [klodes](#) at Jul 15, 2010.

Posting for Melissa...

This Week (at sea):

- We have managed to make it to three sites since our departure on July 9th: Station M, Santa Barbara Basin, and Santa Monica
- At station M we recovered Ken Smith's 'elevator' at a depth of 4000m, this dive was also used to make sure the Doc Ricketts was performing well and to ensure there were no problems with the tether
- In the Santa Barbara basin, the Brewer team performed experiments on squid using a D-sampler (detritus sampler) to determine their 'respiration index' by manipulating O2 levels, CO2 levels and thus pH
- There was also an exploratory dive of an asphalt volcano that Peter Brewer suspected to possibly contain methane and sulfide rich sediments. About 15 Raman Spectra were taken of this site and 1 push core. However, weather patterns required the vehicle be recovered immediately
- Inclement winds and currents required we change sites, twice. Santa Cruz basin was next on schedule, but it was too rough to launch the ROV so we moved onto Santa Monica
- We launched the ROV Wednesday morning near the Santa Monica mounds but once reaching a depth of 830m, the vehicle underwent a dead recovery due to leaking hydraulic fluid
- We hope to continue Raman in situ analyses of porewaters around the Santa Monica mounds and taking push cores to compare recovered data vs in situ data. A vibracore system will also be employed to create a profile of porewater (pw) samples.
- the vibracore will be analyzed both in the lab and in situ using the Raman pw sampler.

Next week:

- We will port in LA on July 19th and unload our equipment
- We are scheduled to drive back up to Moss Landing on July 21st
- We hope, if there is time, to return to the Santa Cruz basin site

Going well/not going well:

We are still ahead of schedule but we are hoping to have things run more smoothly with the ROV and hope that the weather remains favorable for future dives

Posted by [mage](#) at Jul 15, 2010.

This Week

- Finished adding all the necessary features to the visualization like zoom in, zoom out, left shift, right shift, tool tip for tokens etc.
- Started integrating the code with the DSS(Decision Support System)

Next Week

- Continue integrating with DSS.
- Explore addition data that can be added to the Plan Visualization.

Going Well/Not Going Well

- Social Security Number process not completed. Four weeks period expired this Tuesday.

Posted by [skumar](#) at Jul 15, 2010.

This week:

-Went on the Research Vessel *Zephyr* to observe and take images of the benthic imaging autonomous underwater vehicle. I also discussed the benthic imaging auv with various scientists and technicians, including Brett Hobson, who invited me to the cruise. Thanks.

-I launched a decision support system slideshow using pictures from David Fierstein that details the user interface involved for controlling the autonomous underwater vehicle as well as determining its location.

-I managed to access scientific illustrations on algal blooms, red tides, and ocean acidification created by David Fierstein and uploaded them onto my CANON web project.

-I also edited all of the Controlled Agile Novel Observation Network pages.

-I created new web pages, including one on data and information management for the decision support system.

Next week:

-Fully edit the autonomous underwater vehicle pages by Tuesday.

-Create a new slide show for autonomous underwater vehicles, listing the various slides.

Going well/not going well:

-Everything is going fairly smoothly, improving communication with the CANON team as well as the autonomous underwater vehicle principal investigators.

Posted by [cmatthews](#) at Jul 15, 2010.

This week:

I finalized all of my scenarios in GOTM and I have been bringing them into the first stages of my report. I have put together 17 different scenarios with varying physical inputs and have standardized my plots so that they are easily comparable. I am specifically looking at the components of the biological model, temperature (to get an idea of mixed layer depth), dissipation rate of turbulent kinetic energy, and buoyancy frequency squared. I will most likely weed out some of these scenarios to a more manageable amount. I have been trying to get the vertical eddy diffusivity from the dissipation rate of TKE and buoyancy frequency, but my numbers have been off, so I've been playing around with those data sets. I have also been looking at AUV data and averaging the nutrient profiles to come up with one vertical profile. As another type of method of estimating the vertical flux of nitrate, I have come up with an eddy diffusivity as a function of depth as well as a time-varying eddy diffusivity. This will help with my understanding of vertical mixing on nitrate concentration and episodic mixing due to internal waves and other types of episodic mixing.

Next week: I will analyze the different outputs of my model (nutrients, phytoplankton, dissipation rate, buoyancy frequency) and integrate them over depth so that I have a mean value over a time series. I will compare these time series with one another so that I can make some statements about how the physical inputs differ in their results. I hope to be able to use the eddy diffusivity and the second derivative of nitrate concentration to look at the change in nitrate flux over time. I will also begin shifting focuses from the model to educating my group about methods of measuring turbulence.

Going well/not going well:

I have enjoyed working with GOTM...but I'm ready to be done with it! Every time I try to do a run through with a scenario it quits the first time I try to do a run through--so it has taken up more time than it should.

Posted by [kморrice](#) at Jul 15, 2010.

This week

Improved the design and user friendliness of the Acid Ocean Website

Through trial and error, I've started to learn and decipher css web code. This is a lengthy and frustrating process. However, with a basic understanding of this code, I will be able to improve the general layout and design of each page.

Next week

Continue with the above tasks

The Good and the Great

No major interruptions and breaks

Posted by [mrussell](#) at Jul 15, 2010.

This week

I did a lot of design editing and found that my CSS is conflicting somewhere on a few parts. I guess it serves me right for making it so long it's hard to keep track (_)

We decided to use MBARI's external page's header rotating images, which I will be implementing fully next week. This way we have more leeway with the look of the site as long as that piece is actually connected to the main page.

Moved around navigation and changed colors, etc. Most of all almost everything is functioning good.

Next week

I will be under Nancy Jacobsen-Stout's supervision for the next 2 week because Brian will be out until the 30th and then he'll have to leave again I believe on the 8-17th? I think. So I will be working on adding more content to VARS in order to also present Deep-Sea Guide with some data inputted.

The Good and the Great

Different when making websites for others, I've always had this problem when doing them for others: It's hard to figure out what everyone wants so when you're left alone typing away you may realize the next day that that is not how they wanted it. Haven't had anything THAT bad yet, but I'm always ready for it!

Posted by [hhashim](#) at Jul 16, 2010.

I am currently out to sea assisting Tim Pennington with CTD operations. We have returned to the bay and will be following drifters until Wed. the 21st. Overall the cruise has been succesfull, no real problems to report. There was some good fishing on the way back in to the bay, two beautiful albacore are now smoking. The weather has been nice and the ship (McArthur II) is much larger than the Flyer so the ride is smooth. Looking forward to dry land and getting back to the rangefinder testing.

Posted by [rmarin](#) at Jul 18, 2010.

This week : This has been the most productive and entertaining week at MBARI as far as work goes. I met with Larry Bird to go over some mechanical aspects of the motor. If anyone hasn't met Larry, i highly recommend that you talk with him before leaving. The motor to the SES is now connected and operational. I have also put together a presentation for the development team of my project. Hopefully this will be highly useful for the project.

Next Week : Up in the air. Paul McGill will instruct me on further steps.

Not so well : Another trip to the doctor.

Posted by [jvirrey](#) at Jul 19, 2010.

17-June-2010

This page last changed on May 27, 2010 by [linda](#).

To add your update, add a comment. Things to put in your update: What you did this week, what you think you are going to do next week, what is going well or isn't going well and, for this first update, what you would like to get from your 10 weeks here at MBARI.

Comments

This week: I checked/edited/created schematics for the environmental sensor board for FOCE.

Next week: I will likely continue checking/editing/creating schematics for the environmental sensor board for FOCE.

What is/isn't going well: Much of the work I am doing is within the areas I learned in Undergrad but some is beyond what I have experience in, making the learning curve apparent but manageable.

What I want from the internship: I didn't get many opportunities to apply what I learned in school during school so I want practical engineering experience. I would also like to develop skills that I didn't learn in school to advance my knowledge of engineering.

Posted by [smatteson](#) at Jun 16, 2010.

This week: 1. I make/edit the work plan and time table for TCP/IP PUCK project;

2. I install all the tools necessary for the project (the compiler for the Luminary micro, repository for the project)

3. Start to develop the C code for TCP/IP PUCK protocol.

Next week: 1. Finish the implementation of the PUCK commands;

2. Debug and test the code and functionality of PUCK commands.

What is/isn't going well: All it was set-up really quickly, and for the moments I do not have complains.

What I want from the internship: I like to get experience in marine instrumentation and advance my knowledge in interoperability and "plug and play" for sensors and systems. I also want to get in contact with scientist and engineers from MBARI for future exchange of information, learn more of the marine investigations that are done in MBARI both technological and scientific. And very important create good contact and relation with interns and coordinators from 2010 MBARI internship.

Posted by [dtoma](#) at Jun 16, 2010.

This week: 1. Discussed ideas about online Deep Sea Guide with mentor, Brian.

2. Made list of likes/ don't likes of similar databases ([Encyclopedia of Life](#))

3. Drew out ideas on Paper

4. Installed Adobe Creative Suite 3 Web Premium, yay!

Next week: 1. Complete 1st draft mock-up and show Video Annotation lab getting advice.

2. Create a 2nd draft after advice, and think of color ideas for site

What is/isn't going well: Not knowing what exactly is desired information, but should know this by next week hopefully, so this week is me just using my judgment.

What I want from the internship: I want to actually have the Deep Sea Guide up somehow by the end of this 10 week period. I know it's shooting high, since 2 other interns didn't finish it last time either. But any person who's done Web work will tell you how horrible it feels not finish the work they started. I'd like this to really help my web designing skills and maybe some web developing skills as well as learn some great science during the 10-week period between my web work!

Posted by [hhashim](#) at Jun 16, 2010.

This week:

1. Prepared for the trip out on Point Lobos for Thursdays cruise. This entailed assembling the laser Raman probe, and becoming familiar with the other equipment that will be used on the cruise to Santa Barbara (vibracore, glass push cores, and also the Raman probe and spectra)
2. The cruise tomorrow will test the equipment to make sure the hardware is working correctly for the Santa Barbara cruise
3. Emptied small cylinders using a vacuum pump to then make gas mixtures of varying amounts of CO₂ and a set amount of N₂. These will be analyzed next week by the Raman Spectrometer.

Next week:

1. Work with the in-lab Raman Spectrometer running samples to familiarize myself with the calibration and spectral analysis that I will use in my summer project
2. Also work with calibrating the Raman probe since I will be using the data gathered from this spectrometer as well

What is/isn't going well: Everything seems to be going smoothly. Just trying to familiar myself with the technology employed and the jargon.

What I want from the internship: In my undergrad, I didn't get any practical experience in the field of chemistry I'm interested in. I hope to learn a lot in these next 10 weeks and see some real applications of the marine side of chemistry.

Posted by [mluna](#) at Jun 16, 2010.

This week I found two different ways to get to my desk, realized that Macs aren't terrible (even if it did take me 13 minutes to figure out how to send an email... thank you Google), and realized you can drive a 12 passenger van without rolling it over.

Much more importantly however, I reviewed the goals of the EITS dissemination project, outlined what would be some possible outcomes and have been researching sites that perform similar functions (allowing video to be annotated and shared without encouraging inappropriate comments). I met with Danelle Cline and Erika Raymond today to touch base and discuss the pros and cons.

Next week, I will continue to research to find programs that provide the service we want as well as try to come up with a mock student product that could be presented at the July EARTH teacher workshop in Oregon.

There will be/have already been the normal glitches that are a part of any project... times when I lose my concrete sense of direction in what I want to accomplish (not in a navigating mbari sense), times when I am not sure how to proceed and times when the learning curve is like the Monterey Canyon, but these are normal. All the other interns have been wonderful about sharing their areas of expertise (as well as everyone at mbari) which smoothes the rough spots

I hope that by the end of the internship, we have developed a lesson or project that will hook not only the next generation of ocean scientists but also will excite teachers (even those who have been in the classroom in the days before technology). I also want to continue meeting interesting people and soak in as much of the research atmosphere as possible. I hope to learn more skills, continue to experience natural world of California as possible and build contacts.

Posted by [klodes](#) at Jun 16, 2010.

THIS WEEK started with preparations for the ESP instrument "Moe" deployment in Monterey Bay at station M0. An ESP instrument is designed for *in situ* data collection and can remain in the field for approx. 3-4 weeks at a time. On Tuesday, Moe was deployed and Neo was brought back to MBARI. Our lab has several individual instruments and my mentor, Julie Robidart from UCSC, has been showing me the different capabilities endowed to ESP. In addition, she has been teaching me relevant micro-biology I will need for this summer. Tomorrow we will begin to identify iron primers which will play an important role in this summer's project.

NEXT WEEK will begin with the continuation of primer identification and mini-lectures on the specific mechanics of ESP.

WHAT IS/ISN'T GOING WELL: Everything has been going great! I could not ask for a better mentor, project, or lab to be a part of. I enjoy the challenge of exploring new instrumentation and a new field of oceanography I have not had the chance to explore prior to MBARI.

WHAT I WANT: I am hoping this summer will provide me with an idea for a research focus in graduate school. I have been affiliated with C-MORE since 2008 and this is the first time I have had the chance to dive into the research branch specific to the center's mission. I hope after this summer I can remain on that side of C-MORE, since I ultimately would like to do oceanographic research. I also want to establish life-long connections with fellow colleague and a new passion for ocean sciences.

Posted by [sthomas](#) at Jun 16, 2010.

This week: mainly focused on paperwork, settling down and reading background information on the project. I have got a 10-week plan from my mentor Seb and it looks very interesting. He also showed me the lab and the two cultures which will become two of my favour bugs in the near future. Today I am planning to go to the sea before I dive in all the wet lab work.

Next week: I will start characterizing the unknown algae in lab using microscopy.

What is/isn't going well: everything is going well for the first week (except getting lost in the countryside at night)!

What I want from the internship: learn to work with marine environmental samples and develop a good understanding of ocean ecosystem in general.

Posted by [hyu](#) at Jun 17, 2010.

Week 1. Wow, it is taking a lot of time to get adjusted. The programming language that I am working with is so different than what I have worked with before. This week I have been working on a program to check the syntax of directories that we will be using for the main project that I have been assigned to. Today I will sit in on a review meeting to check the progress of the Sedimentation Event Sensor , and hopefully get some insight as to the overall scope of what is expected of me.

Week 2. Continue to become familiar with RUBY. My assignment is to program the behaviors of the Sedimentation event Sensor. Hopefully by next week I will be able to dive into the code and make contributions to the progress of this project/

What is/isn't going well. Wow I am so impressed by everything that I have experienced. My fellow interns seem to be really great people and I am looking forward to building relationships with them. The staff is friendly and my mentor is patient, whew! I feel really under-qualified but i guess that is to be expected when doing something new. But overall things are great.... Except the part where i get lost every day while driving... I ended up in Salinas last night trying to take a "short-cut"

What I want from this internship. I want to witness engineers in action. After being fed classroom material for so long, I want to see what it is that I have been preparing for. I also want to become very knowledgable in the new programming language that I am working with.

Posted by [jvirrey](#) at Jun 17, 2010.

This week:

- I successfully managed to apply for a social security number and opened a bank account (not very exciting but consumed all of Tuesday!);
- Organised the autumn 2009 Rover images into a separate directory and began to spreadsheet all the corresponding data;
- Had an introduction into VARS annotation of videos and images;
- Started a blog to tell the world about the intern program.

Next week:

- Taking a group of high school kids out kayaking on Monday and hopefully installing some of my passion for marine biology;
- Going out on the Lobos on Tuesday;
- Learning more about the different software I will be comparing for image analysis and starting to familiarise myself with the fauna in the area;
- Will hopefully roll the blog out to people in the area, schools and institutes back home;
- Most likely reading a lot of papers, drinking a stupid amount of coffee and hopefully getting lost less frequently than the past few days.

What is/ isn't going well:

- I'm itching to get properly stuck into my project next week, but everything here is wonderful and I couldn't be happier.

What I hope to get from the internship:

- I want to make the most out of the dataset I have for my project, time is a constraint but I don't want to leave knowing the job isn't finished;
- Learn more about the technical side to marine biology, understanding the instruments that collect the data is not something university courses tend to focus on;
- The chance to go to sea again;
- Learn as much about the different projects going on at MBARI as possible, get to know the area and the people who live here.

Posted by [rhunter](#) at Jun 17, 2010.

THIS WEEK: We had the orientation day on monday, and went for a social security number and bank account on tuesday, so no much time was left to work on the project these 2 days. Thanks to Tomas Hoover I was able to setup my working environment in MATLAB (license issues). I have been also trying to get some reference papers about the topic of my project. I hope today we can meet Lory and learn more about how to get documentation. Meanwhile, I got some papers from sources I already knew.

NEXT WEEK: I will meet my mentor (he was out this week) and we will probably discuss about the details of the project and draw a work plan for the next weeks. I will keep on reviewing related papers, and compiling a small tutorial about the techniques to be used.

WHAT IS/IS NOT GOING WELL: The MBARI staff has been very helpful in setting up everything we might need, and we all appreciate that. Anyway, getting used to a new workplace is not easy, since at the beginning you are unsure of doing what you are supposed to. Fortunately, the MBARI web-based system is helping quite a lot in finding information on that.

WHAT I WANT: I want to learn as much as possible about the interdisciplinarity at MBARI. It is exciting for me, as an engineer, to contribute to a project about algal blooms and see how the different pieces start to fit together.

Posted by [bgarau](#) at Jun 17, 2010.

This Week. Spent the first two days collecting and organizing all available information on the Autonomous Underwater Vehicles (AUV). I have started to expand the CANON section and as well as the AUV section of the websites on CS3 dreamweaver, but they will not show up on the actual website until the latter stages of the internship. I have also collected images and videos that are relevant to my dual project of updating and improving the AUV and CANON website sections.

Next week: I expect to coordinate with the respective science/engineering teams to gather the necessary information from the CANON initiative, as well as collect more information regarding Long-Range AUVs (LRAUVs), the Tethys vehicle, MBARI's AUV Gulper system, the benthic imaging AUV, as well as the role of artificial intelligence in LRAUVs. On Wednesday, I will go on the R/V Zephyr to observe and take photographs/videos of the Dorado class AUV and hopefully the Gulper sample.

What is/isn't going well. There is a great atmosphere here at MBARI, the staff is very helpful and friendly. It is very nice working and interacting with other interns who are also starting out on their projects. Everything is going fairly smoothly for now.

What I want from this internship. I wish to further develop my web-developing skills, specifically when working with Dreamweaver. I also wish to be able to effectively coordinate with staff in a multidisciplinary environment.

Posted by [cmatthews](#) at Jun 17, 2010.

Week ending 17th June 2010

This week:

Most of Tuesday was taken up applying for a social security number and opening my bank account. As the Flyer is out of action at the moment the data I was going to be working on hasn't been collected yet. As such I am now going to be working on data sets from different areas (North Gorda Ridge and CoAxial). Therefore one of my main task this week has been reviewing the literature. Currently my project plan isn't fully defined so I've discussed a number of ideas with Dave and need to have a sit down and think about what I'm actually going to do over the weekend. On Wednesday Jenny gave me an overview of the datasets (where they are, what data we have, etc) and set me up with a laptop to do the data processing. She also gave me a brief overview of what programs I will be using to do data renavigation and what I'll actually be doing (she also gave me a bike - HERO).

Next Week:

Next week I'm hoping to fully define my research plan with Dave and get stuck into the data renavigation. This is something I've never done before so will probably take me at least the whole week but I'm looking forward to learning how to do it. I'm also hoping to consolidate my vast quantities of reading into something more usable like a short literature review.

What is/isn't going well:

Currently everything seems to be going pretty well. I'm looking forward to learning a new skill with the data processing and once I've put together a proper research plan I'll be set from week 3 onwards as well.

What I hope to get from the internship:

One of my main reasons for coming was the opportunity to work with other people. For the past two years I've been working with the same research group so this was a great way to see how research is done elsewhere. I'm also very excited about having the opportunity to define my own research project (obviously with Dave). There are lots of unanswered questions in the area and I hope I can solve some of them. I'm hoping to produce a complete study that ties in well with my PhD work in the UK and which will hopefully form a chapter of my thesis. If I can get a paper from this experience that will be a bonus too!

I'm also looking forward to some of the other opportunities offered by MBARI. I'm really excited to go to sea on a different ship with a different ROV and see how things are done. I'm also looking forward to the outreach opportunities. Geology is often considered a 'boring' subject by kids and I'm hoping to get the opportunity to show a few of them at least that this isn't the case.

Posted by [iyee](#) at Jun 17, 2010.

What has happened this week?

Filled out and submitted more paperwork

Met a lot of great, very dedicated people

Would like to thank:

1. George and Linda for an exceptional job in coordinating and running the summer internship program
2. Other interns
3. The Barry Lab.
4. MBARI staff

Admired the serenity of this location (Probably spent too much time looking out the window)

Background reading

- Revisited basic biochemistry in attempts to reinforce and understand some of the methodologies and concepts I will use later on.

Difficulties

Adjusting to the time difference and the long week day working hours

Recovering from the flight

End of this week/ next week

Looking forward to meeting my supervisor/ mentor

Will learn more about my project

- From here, I will be able to develop short and long term goals

From this internship, I would like to:

1. Expand on my current field of knowledge by exploring slightly different areas of research
2. Further develop skills in unfamiliar and uncomfortable areas.
3. Work on and develop a professional network.
 - Meet as many people as I can

Posted by [mrussell](#) at Jun 17, 2010.

This week:

I have been doing a literature review of articles relevant to my project. These articles describe methods of tracking nitrate and oxygen to gain a better understanding of plankton productivity through the use of autonomous underwater vehicles. I am also reading articles about vertical nitrate fluxes due to turbulent mixing in an upwelling system. I have been familiarizing myself with a 1d model from Josh Plant that is a modified version of the PWP model. The Price-Weller-Pink (PWP) vertical mixing model describes the surface mixed layer depth, heat fluxes, wind, and precipitation. It models temperature and salinity based on these forcing parameters.

Next week:

Once I have a thorough understanding of the PWP model, I hope to get started on a similar 1d turbulence model to study episodic mixing events in Monterey Bay. I also plan to begin analyzing AUV data sets so I can start doing some basic calculations of vertical fluxes of nutrients. I look forward to meeting my primary mentor to discuss these things with him (he wasn't here this week).

What is/isn't going well:

Everything is going well so far. I am becoming increasingly familiar with the subject and I am excited to start analyzing data.

What I hope to get from the internship:

I am really excited about working with AUVs and developing my programming and data analysis skills. Currently my masters thesis is focused on bottom boundary layer dynamics and mixing in the Monterey Canyon. I look forward to delving into additional research about this environment and learning more about turbulence and vertical mixing as I think it will help me gain a better understanding of the system as a whole. I am amazed by all of the interesting research being conducted at MBARI, and I look forward to being a part of this community.

Posted by [kmorrice](#) at Jun 17, 2010.

Update: June 17, 2010

As the first week comes to an end it looks like everyone has successfully taken care of most of the busy work. Everything is up and running (or at least will be by Monday) now the real work can begin. As far as my project is concerned there is more than enough work to fill the remaining nine weeks. I will be running tests for the power buoy project and designing /fabricating parts for temperature sensing inside a pneumatic spring.

This week:

The week was spent getting a set of specific tasks together for me to complete over the length of the program. There was also some time spent gathering the tools, parts and materials that I will require so I will be able to complete the fabricating without having to wait. I have parts and materials on order due in next week. I was able to put some time in designing the test equipment that I will be using here.

Next week:

I will be formalizing the pressure test design and coordinating with the other project engineers to come up with a final drawing (hopefully) by the middle of next week. The parts I will need to build the test rig will be coming in next week as well. With any luck I should be able to construct the test apparatus by the end of next week and begin testing as soon as the following Monday.

Overall the first week has been a success. It is wonderful to be back doing what I love and working with great people. The new interns are a solid group and I am looking forward to getting to know more about all of you. Interaction between the interns outside of work is something that I am really going to work on this year. Everyone has something unique to bring to the table and I'll do my best to get some good quality networking in the line-up.

Posted by [rmarin](#) at Jun 17, 2010.

This Week

Monday: Orientation

Tuesday: Social security, Bank Account and Introduction to CANON

Wednesday: Setup the system to work on. Got introduced to the potential tools needed for the project.

Next week

*Converge on the best tool to be used for the project and get started with it.

*Take a group of high school kids out kayaking on Monday

What is/isn't going well

Everything seems to be going well. I am having a great time.

What I hope to get from the internship

*Learn more about the EUROPA planning system.

*Get a good idea about the ocean sciences.

*Know what The United States and the work culture here is like!

*Have loads of new experiences.

*Get a nice bunch of friends 😊

Posted by [skumar](#) at Jun 17, 2010.

What has happened this week?

Met a lot of people that work behind the scenes

Would like to thank:

1. George and Linda for an exceptional job in coordinating and running the summer internship program
2. Larry Bird
3. Shop crew
4. ROV pilots

5. Mechanical engineers

Difficulties

Adjusting to waking up early and the long week day working hours

End of this week/ next week

Working on my prototype Shackle

Testing possibly next week

From this internship, I would like to:

1. Work more on the Solidworks program
2. Get solidworks running on my computer.
3. Meet more people from different divisions

Posted by [aschnittger](#) at Jun 17, 2010.

24-June-2010

This page last changed on May 27, 2010 by [linda](#).

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Comments

This Week:

1. This week I have assisted in (mostly watched) the data processing and now have a (beautiful) well located bathymetry map for the North Gorda area to work on.
2. I have begun working on the video from the dives in the 1996 eruption area pinning in the boundaries of the eruption.
3. I have completed a literature review on the North Gorda area.
4. The project objective is now pretty much defined- I'm going to look at dyke propagation for the North Gorda and other historic eruptions, examining how fissure eruptions can be discontinuous despite being fed by a continuous source.
5. Gave a short presentation to my research group on my previous research to show them what I've worked on as part of my PhD

Next Week:

I'll be continuing to review video data for the chosen eruptions, looking for evidence of eruption flow directions and flow boundaries to pin in fissure locations. I'll also be reading up on previous dyke propagation studies and adding to my literature review.

Going well/Not going well:

Everything is going pretty well. I'm glad to have the outline of a project in place. I have had a few problems with the spatial analyst tools in ArcGIS not functioning properly. I tried emailing somebody at MBARI (who I was told was bit of a GIS guru) but I haven't heard back so if anybody can help/knows somebody who can it would be much appreciated!

Posted by [iyeo](#) at Jun 24, 2010.

THIS WEEK the ESP lab was challenged by the beloved instrument Moe, which was deployed last week.

A displaced puck is preventing the instrument from collecting any samples and can only be properly realigned manually (this was discovered after countless command efforts). The instrument is being retrieved today and the next ESP will be deployed in mid-July. While we will have a gap in our time-series, the discontinuous data will still provide invaluable information.

I have been continuing my work with gene sequencing and the MFB2 device. I have run nifH templates through the PCR at various concentrations and will determine a standard curve to compare to future environmental samples.

And lastly, I finally met Chris Scholin! He is the President and Chief Executive Officer here at MBARI and head of the ESP lab. I am very honored to intern in his lab.

GOING WELL Everything has been going great! I am looking forward to next week!

Posted by [stomas](#) at Jun 24, 2010.

This week after countless emails and on-line searches, I found the on-line program that seems to be a great tool for disseminating the EITS video data- Voicethread (www.voicethread.com). It will enable clips of video to be packaged for students (and the general public) to view and share their comments and even drawings

Linda was a tremendous help in getting the video watermarked and packaged for uploading. Danelle has been invaluable with her expertise and advice. We met with Erika Raymond and her intern Gregor Bwye. He will be reviewing the video from the last deployment and sharing "exciting" clips (of course, they are all exciting). I would also like to thank Mark Chaffey and the crew of the RV Point Lobos for letting me tag along on their cruise last Friday. And finally, thanks to the Aquarium's WATCH program and the students at Pajaro Valley High School for letting us kayak with them on Monday.

I've coerced some young folks to trial the first run through with the videos. I have a phone call meeting with one of the co-founders tomorrow to try and see how this will all work in a public forum and work out some glitches.

I wanted to have the EITS video portion completed by tomorrow so that I could work on the supplementary materials, however, this might stretch into a few more days.

All in all it has been a good week.

Posted by [klodes](#) at Jun 24, 2010.

This week:

I started to work in lab. First, I transferred my two isolates into new media so they can grow happily. Also, I checked for my media for any contamination. Then, I did some fluorescence microscopy and saw the isolates are both a mixture of photosynthetic eukaryotes and heterotrophic bacteria.

Next week:

I will start doing genetic test on these two isolates by first harvesting their DNA. Also, I will prepare some antibiotic plates to grow my E. coli clones the following week.

Well/not well:

All well.

Posted by [hyu](#) at Jun 24, 2010.

This Week:

This week I have worked on the PUCK implementation for the TCP protocol and I finish the first draft of the C code. I implement the TCP/IP PUCK protocol as a generic code that can be used with any micro-controller which implements the lwIP stack for Ethernet communication (is an open source code micro-controllers), and FatFs file system (open source code for file system implementation on micro-controllers and is Windows compatible FAT file system). I implement the PUCK memory on a SD card using this file system and so it can be easy read and write on Windows PC.

I also start to program the java host tools for the TCP PUCK protocol based on the last version for serial communication. And with this software I can debug and verify the functionality of the protocol.

And until tomorrow I will also write my web page 😊

Next Week:

I will be continuing to finish the java application and testing the puck protocol that I created for Luminary micro. Also I will start working to implement the ZeroConfig on lwIP for service discovery and multicastDNS.

Posted by [dtoma](#) at Jun 24, 2010.

This week

During the past week, I have developed an in-depth understanding about my project.

I am currently working with Jim Barry (supervisor), to develop a database using Google Earth to display the locations of current and previous ocean acidification work. This website will also provide a web-based entry system allowing researchers to manually enter information that is of concern. The goal of the project is to provide a brief overview of ocean acidification research. This will be of value to those that would like to liaise with other professional organizations and to those that would like to find out more about ocean acidification.

What have I done?

Have spoken to and receive help from various individuals.

A special thank you to Nancy, Tara and Mike

Developed a basic database

Started to learn the basics of web design

Challenges

Since I have a poor background in database construction and web design, this will be a difficult task

Next week

Will start my web design component

Finish developing the database

Posted by [mrussell](#) at Jun 24, 2010.

This week

I went aboard the R/V Zephyr to observe/take images and videos of the Gulper AUV just three miles off the coast of MBARI.

I have been busy updating the CANON website including information on field work, an April workshop presentation, and individual team member contributions to the CANON initiative.

I have been busying updating the AUV website including information on LARAUV, artificial intelligence/autonomy/T-REX, and the Upper Water Column Vehicle/Gulper AUV vehicle. I am also coordinating with Francisco Chavez of the CANON initiative along with Kanna Rajan of the AUV project team.

Next Week

I will start to develop in detail sections for the AGU poster, a high res image of the T-REX block diagram, and information on the decision support system for the AUV website. I hope to have a better and more in depth comprehensive review of the various case studies for the CANON workshop.

Going well/not going well

Creating and editing content on Dreamweaver has been going fairly well. The real challenge will be to coordinate with the various MBARI staff into getting their content onto the web, while being scientifically thorough and accessible to the public.

Posted by [cmatthews](#) at Jun 24, 2010.

This week

I had a day on the Point Lobos with the midwater ROV team. It was great getting to watch the trip from the surface to 1000 m, and I got to drive the ROV! Also, thanks to Linda's drug cocktail I didn't feel sea sick at all, although we were lucky with the weather.

I have been learning more about VARS and am making a collection of VARS images of all the fauna I am likely to see in the MARS area. I've also started writing a literature review so currently wading through a sea of journal articles.

I also had the chance to go kayaking with MBA as part of their summer teen program. It was a great day with lots of sea otters, sea lions, harbour seals and pelicans.

The intern's blog is now up and running!

Next week

Hopefully my images will be loaded onto VARS on Monday, then the serious annotation work starts!

Going well/ not going well

Everything is still going great. It makes such a great difference to have the chance to meet high school kids, aquarium staff and other staff members at MBARI whilst working on the internship project.

Posted by [rhunter](#) at Jun 24, 2010.

This week:

- Began to prepare for the pressurized gas samples that are to be analyzed with the laser Raman system however there was a leak in the pressure cell so the cell had to be shipped out and repaired, delaying this project
- Instead I began to prepare background buffer solutions of pH ~4, 6, 7, 9 that will be used as a reference when saturated with H₂S
- A new set of these samples will be saturated with H₂S (g) and their spectra observed at the varying pH
- Peak ratios will be determined to visualize the cross sections of the H₂S, HS⁻, S₂⁻ species
- This lab data will be taken on the cruise and used for the marine pore water analysis

Next week:

- Hopefully have a repaired pressure cell to be able to run gas mixture samples through the Raman spectrometer (mixtures: CO₂/N₂, CH₄/N₂)

Going well/not going well

Everything is going really well. Aside from the set back with the pressure cell, things are beginning to come together nicely for the cruise in July.

Posted by [mluna](#) at Jun 24, 2010.

This Week:

- Completed schematics for a 3-Axis Magnetic Sensor
- Completed schematics for a Inverting DC to DC Switching Regulator
- Completed schematics for the Daughter Board Select Logic

Next Week:

- Schematics for the FOCE Environmental Sensor Board should be completed early in the week
- Layout process for the PCB will begin

Going well/not going well:

- Everything is going very well aside from some strange incidents with prototyping

Posted by [smatteson](#) at Jun 24, 2010.

This Week:

- Decided to use GWT for the project.
- Identified the component needed to be learnt.
- Went through a few tutorials to learn about GWT and RPC.
- Got TREX running on the system.
- Went through the previous work done on Visualization using Swing.

Next Week:

- Get the basic skeleton ready.

Going Well/Not Going well.

- Things are pretty good.

Posted by [skumar](#) at Jun 24, 2010.

This Week:

- Had a meeting with the VARS team to figure out exactly what they wanted on the Deep Sea Guide, and where on the page they wanted it.

- Came back to my desk and coded and coded.
- Talk to Nancy Barr about external design guidelines and how to input the Deep Sea Guide into the the external website.
- Got the website done in HTML5 and CSS3, and got so enraptured in the beauty of the new CSS attributes like rounded borders and columned text that I forgot how crappy Internet Explorer is in regards to compatibility. ARRHHH.
- By tomorrow I will probably change everything back to CSS 2 so at least some IE browsers can see some stuff. Rounded borders I'm keeping just for Mozilla, Safari, and Chrome users.

Next week:

- Finish Image and Video Gallery page/CSS
- I want to have everything cleared by the VARS team and my mentor Brian, and then any changes needed will be implemented
- I would love to start using the Wicket framework with Brian right after this and begin the real work!

Going Well/Not Going Well:

- I hate IE.
- I love CSS3.
- Drawback--> I don't know JAVA and for this I will be wasting Brian's time in trying to follow everything he says. I am going to read tutorials etc at home.

***Note: I realize most of us don't even know the jargon in each of our updates. I'm personally sorry about that in my update as well >.<

Posted by [hhashim](#) at Jun 24, 2010.

THIS WEEK: I met my mentor, and we started putting ideas on the table about the project. I have started to review some more literature and, most of all, develop some pieces of software I will surely need. I have been also checking a piece of software my mentor provided to me, since I have to use it as part of my project.

NEXT WEEK: I will try to give a small presentation about my previous research to a small group, and I will compile a tutorial about the technique I am planning to use in my project, to give them an idea on how it works. I will surely continue developing pieces of software as I need them.

WHAT IS/IS NOT GOING WELL: My mentor has been very helpful and interested in what I was doing, and I appreciate that. He is very open to any ideas I might pose and we are both trying to define a good goal for the project. Everything is going well, except I am advancing slower than I would like to (no one said this project was an easy one).

Posted by [bgarau](#) at Jun 24, 2010.

The current week was spent finishing the designs for a pressure test assembly. Today was a ship day for me. I went with Larry Bird to observe the deployment and operation of several instruments he has helped design. The mission was, for the most part, a success, some problems did show up and can now be remedied. The Materials/parts for one of my test assemblies arrived this afternoon which means I will be able to begin machining tomorrow. There have been no real setbacks yet, with the exception of the lag time on parts. Next week I will finish the pressure test assembly and begin trials. I will be going back and forth between the pressure test trials and a thermocouple design starting next week. All in all things are running smoothly and I'm reaching my goals on time.

Posted by [rmarin](#) at Jun 24, 2010.

This week:

I met with a few of the ROV pilots to show them my design for the shackle. I got the thumbs up from the operators to go ahead to the next phase of work which will be to run the tensile and yield strength equations of a few different materials that will be used for the MARS link application.

Next week:

I will build a prototype for some preliminary trials out of 50 series aluminum that can be milled and formed easily. This will make the 50 series aluminum perfect material for a prototype model.

Well/not well:

I got to go out on the Lobos Thursday to see the ROV Ventana in action and see the MARS platform. This was excellent for me to actually see where my shackle will link up with MARS and the operations of the Ventana in real time. Awesome!

Posted by [aschnittger](#) at Jun 25, 2010.

Isobel: If you were trying to contact Brian- he is on vacation. Jenny is great at GIS too, but is away right now, yes? Talk to me today, I may be able to help.

Everyone: Be patient with yourselves. Learning means, well, learning. If you already knew how to do stuff, you wouldn't be learning!

Posted by [linda](#) at Jun 25, 2010.

This week: I spent the beginning of this week outlining how I was going to construct my 1d turbulence/ NPZD model. I wanted to base my model on the PWP model, but I was having trouble locating all of the required data. I began to explore other options, and in my search I found that the GOTM (General Ocean Turbulence Model) has test case scenarios where you can integrate a NPZD model. I decided that using this model would be most effective. I have since been learning about how this model works. I have also compiled some data from the M1 mooring to use in the model. I am now working on developing my own scenario for the Monterey Bay.

Next week: Although the biogeochemical model has default values for nutrient, phytoplankton, and zooplankton concentrations as well as plankton metabolism, I want to bring in values that have been observed in Monterey Bay. In addition, I need to learn about the various options that are built into the model. The model has many different options for the turbulence model used, so I will go through the literature to find which options are the most appropriate. In addition, I want to learn more about the internal wave models. Eventually I want to be able to use this model to look at the effects of more episodic mixing events in the bay on turbulence and nutrient/plankton dynamics.

Going well/not going well: At the beginning of the week I was feeling a bit overwhelmed about constructing this model and finding all of the appropriate data. I'm really happy to have found GOTM because it allows the user so much flexibility.

Posted by [kmorrice](#) at Jun 25, 2010.

This week: I have continued my work on converting the program from the Benthic Rover to facilitate the Sedimentation Event Sensor. I also had the chance to work with Alana Sherman. One of her current projects involves testing an acoustic modem to see if it is able to transmit through one meter of sediment and still produce a quality data transfer. Very fun tests. One new, semi-fun, semi-ughh thing - The Point Lobos. Mixed reviews on that trip.

Next Week : I will be working with Rich Henthorn, Alana Sherman, and Paul McGill. The first few days of the week involve working with a stepper motor that will be used in the Sedimentation Event Sensor. More etsting with Alana Sherman is possible. And of course, further progress with the SES program.

Well/Not Well: Everything seems fine. The trip with the Lobos killed my dreams of being on Discovery channels "Deadliest Catch". The water was calm and i still didn't feel well.

Posted by [jvirrey](#) at Jun 28, 2010.

01-July-2010

This page last changed on May 27, 2010 by [linda](#).

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Comments

This week

I finish the java tools for Ethernet PUCK and make tests with it.

I found a couple of bugs and I fix them.

Tuesday I have been to some project presentations and I learn more things on technological and scientific projects that are running in MBARI.

I also start working on ZeroConfig implementation.

Thursday I will be on LOBOS

Next week

Continue the work on ZeroConfig protocol!

Going well/ not going well

Everything is still going great.

Posted by [dtoma](#) at Jun 30, 2010.

THIS WEEK I learned how to clean different 'PigTails' on the MFB2, make the appropriate Primer Probes (PP) and Master Mixes (MM) for the GrpC and Tricho nifH gene templates, and do DNA extractions. I also continued running GrpAnifH templates on the MFB2. I am going out on the Lobos tomorrow (Thursday) for an ROV deployment.

NEXT WEEK I will continue my analysis of the GrpAnifH templates in Excel and start testing the idiA primers I designed last week.

GOING GREAT!

Posted by [stomas](#) at Jun 30, 2010.

This week

-By Friday last week I got all screenshot mock-ups out to VARS team.

-Mentors were very busy preparing for DOEST, but I spent Monday fixing small errors and adding a sidebar to the Image Gallery page in order to open room for MARS and EARTH gallery integration.

-Tuesday= DOEST and first met Nancy Jacobsen Stout for the first time, matching the voice to the lovely face =]

-Today was amazing. Brian added a few pieces of code into his JAVA and voilla! The pages became active, lol. Now we're going to start the ball REALLY rolling.

-Tomorrow is Point Lobos.

Next week

Use those 3 days to finalize a working output of Deep Sea Guide, from then on it'll be about testing, changing, and adding!

Going well/ not going well

All is awesome, time is flying! I want to be very helpful this summer and maybe go beyond just helping the internal release of Deep Sea Guide, maybe really expanding it!

Posted by [hhashim](#) at Jun 30, 2010.

This week

- Wrote code for the server to communicate between TREX and Client Browser.
- Debugged the code and resolved all visible networking and configuration issues.
- Got the basic first cut of the Visualization Running.

Next week

- Improve the Visualization, by implementing more logic to handle additional cases, and adding more features.

Going Well/Not Going well

- Everything is Great!

Posted by [skumar](#) at Jun 30, 2010.

This week

I kept on working on the path planner tool.

I found a couple of bugs in my code and I fixed them.

Tuesday I attended to several presentations to the board of directors.

I had the chance to talk with some board members, who were amazingly kind with the interns.

Thursday I will be on Point Lobos research vessel to deploy the benthic rover

Next week

I will continue working on the path planner, adopting maybe another approach.

Going well/ not going well

Everything is going well so far

Posted by [bgarau](#) at Jun 30, 2010.

This week I have:

developed an online working database which is now linked with Google Earth.

developed a basic template and rough website map.

embedded Google Maps within a webpage.

The rest of this week and next

1. Will experience the rock and roll of the Lobos
2. Obtain constructive feedback from my mentor
3. Improve the appearance and visual appeal of my website
4. Make the website more user friendly

The BAD

I still haven't acclimated to the Monterey weather despite the rather chilly laboratory conditions.

The GOOD

My project is coming along quite quickly.

No other complaints

Posted by [mrussell](#) at Jun 30, 2010.

This Week: I have continued working with the GOTM (General Ocean Turbulence Model), and I have been looking at how the various physical forcings affect the biogeochemical model. I have also been putting together a Powerpoint presentation to present to my mentors as well as my advisor at MLML. I met with Josh Plant and he helped me with some data collection programs in Matlab so that I can use NCEP data in my model. I attended the DOEST and enjoyed the presentations. Tomorrow I am going out on the Lobos, and I'm excited for that.

Next Week: I want to conclude my work with the GOTM and move on to answer some more specific questions based on what I've learned from the model. I want to be able to describe how vertical mixing and turbulence are affecting primary productivity.

Going well/not going well: Things are going well and I'm happy with the progress I've made. I still feel like there is a lot to be accomplished and the weeks are flying by.

Posted by [kmorrice](#) at Jun 30, 2010.

This Week:

1. I have read a number of papers on dyke propagation and rock fracture dynamics
2. I have spent quite a lot of time in the video lab watching videos from dive 886
3. I have mapped in most of the eruption boundaries for the 1996 flow
4. For the areas of flow I have mapped I have pinpointed the eruptive vents
5. I have added the geochemistry of all the samples to the Arc Project and distinguished those which have 1996 chemistry from the others
6. I have identified the samples with 1996 chemistry which lie outwith the lava boundaries and begun to analyse their chemistry to see whether they could be a different flow or the same one and therefore whether the boundary needs to be shifted
7. I met with Bill Chadwick and discussed the project. He was the first person to attempt to map the 1996 flow so this section of the project builds on his work. He has offered to help us get hold of some camera tows and submersible footage from the same area. This will be useful in areas where we have gaps in data but the navigation is not as accurate as that of the more recent studies so it is less reliable

Next Week:

1. More reading and add what I have already read to my literature review
2. Finish dive 886 video and finish mapping in preliminary flow boundaries
3. Compare these boundaries to the geochemistry
4. For outlying samples analyse the geochemistry and revisit the video to check for other flow boundaries, adjust 1996 flow boundaries where necessary
5. Begin to look at the distribution of eruptive events in relation to the dyke point focusing problem
6. Find other examples

Going Well:

Everything is going well at the moment. It's great to be finally working properly on my project and Dave's been really helpful. The data is fantastic too which makes my job easier...

Not Going Well:

Nothing

Posted by [iyee](#) at Jul 01, 2010.

This week

- After GIS mapping the Smooth Ridge site I will be working on, Linda and I used VARS to pull a list of all the species I will be likely to see in the Rover images, then I used VARS again to hunt for good, close up images of each species. This will help me get my eye in for the fauna in the area and hopefully make image annotating more efficient. These images will also be added to the research team's google page about the area.
- Before the images could be uploaded to VARS the TIFF and B16 files had to be converted to JPEGs, this is taking a little longer for the B16s but the TIFFs all went up successfully so the annotation began.

- I'm currently working my way through the images, documenting everything I can see in them. For the first week Linda and I will be going back through what I've done to make sure I'm picking out everything and identifying correctly.
- The blog continues to go well!

Next week

- Continuing to work through the Rover images, we have around 350 to annotate then I can start comparing annotation methods and linking what I've seen with environmental conditions in the area.

Going well/ not going well

- I'm excited the annotation has begun and I can start doing some serious project work. I'm being well supported by my mentors and still have no complaints!

Posted by [rhunter](#) at Jul 01, 2010.

This week

- After saturating the buffer samples with H₂S gas before the weekend, their pHs were measured on Monday only to discover that the buffers were actually titrated down to a slightly acidic pH
- The experiment had to be repeated on Monday by adding base to the buffers to get the desired pH and then analyzed by the laser Raman system
- Their spectra was annotated (deconvolution of peaks, integrated peak area, baseline correction, etc)
- After the experiment was run for the third time, and after some confusing calculations Ed and I finally set up a spreadsheet to determine the ionic strength, pK, and relative molar Raman cross sections of the HS⁻/H₂S species
- Two different buffers were giving different values so today the experiment will be repeated with one buffer to come up with the desired values

Next week

- Next week is only a three day week, so I will spend most of my time preparing for my cruise on July 9th-21st, making sure that I obtain the necessary data needed for the Raman analysis of the pore waters off of southern California

Going well/not going well

- Ran into issues with the experiment, but it seems we're getting where we need to be for the cruise next week

Posted by [mluna](#) at Jul 01, 2010.

Happy Canda Day to all

Even though I have committed to using Voicethread (VT) as a tool for dissemination, I still feel like email conversations were a constant during the week. I put together four mock-up VTs to illustrate the EITS footage and also the VT tool. I also put together a "How To" for using it, based on questions all the "volunteers" have had as they trialed the mock-ups. This morning we participated in a teleconference with the cofounders of VT in hopes of understanding where their technology is headed and how it best be used to benefit MBARI and ORCA (Ocean Research & Conservation Association).

Allowing the interns to participate in DOEST on Tuesday was a great way to experience the collaboration between scientists and engineers outside of our own study areas. Being able to interact with the board also brought home all the talent (science, engineering, support) that works together to make mbari innovative and successful.

Next week I will finalize the mock-ups, work on how best to present this technology and data to the participants of the EARTH workshop the following week and figure the best method for getting feedback from all parties (teachers and "EITS") to move forward with disseminating the footage to a larger audience and if there is time, work on a "How to" for making your own VT. It would also be interesting to pursue how this technology enhances the National Science standards both in science and technology (that might have to wait until after Oregon).

Thanks continue to go out to:

Danelle for her guidance (and home grown avocados and plums),

George and Linda for, well, everything (I know that's a cop out)

Erika, Duane and Greg for their input and ideas

Van Pool 3 for providing am and pm entertainment (it was too quiet with most of you on the boat this morning)

And, again, MBARI for allowing us to participate in DOEST and this intern program (esp' Conner who went out of her way to introduce us to board members) Everything seems to be going well (perhaps the calm before the storm). The only downside is that both the EITS footage and VT are engaging and it is difficult to stay focused on one application (many educational tangents).

Posted by [klodes](#) at Jul 01, 2010.

This week

Continue to identify the two isolates.

- Cultures were transferred to new medium to keep the algae cells happy
- DNA was harvested for both
- PCR was performed on the universal marker for eukaryotes, 18s, to try to amplify the genes.
 - One of the cultures did not amplify at expected temperature of 55C, but did at a lower temp 45C. This means the eukaryotes in there is either too little because they get outcompeted by bacteria OR this may represent a new group that the amplification does not work so well.
 - The other isolate did not show any amplification at both temperatures. This means the isolate is most likely all bacteria.
- Try to clone the gene for sequencing next week as an identification tool for the ??? eukayote.
- Another fluorescence microscopy was done on these cultures at the same time as the DNA harvest.

Culture collection check

- Two strains in the culture collection may have contamination. We want these to be composed of only 1 strain/species of eukaryotes.
- DNA was harvested for two strains.
- One culture's composition will be checked using quantitative PCR. This is a very sensitive and accurate method to identify the percent composition of targeted groups.
- The other culture's 18s was amplified and cloned. Waiting for sequencing.

Next week

- Sequence the clones I got this week for genetic identification.
- qPCR on one of the culture collections.

Going well/ not going well

- All very well. The experiments are ramping up and getting more and more exciting!

Posted by [hyu](#) at Jul 01, 2010.

This Week:

- Ordered and received parts for prototyping a bipolar current source and magnetic sensor set/reset
- Prototyped the bipolar current source successfully and attempted to characterize its output
- Revised schematics with new set/reset circuit
- Fixed all DRC errors in schematics
- Sketched footprints for circuit components
- Began locating order numbers and locations for electronic components

Next Week:

- Review schematics with Chad and adjust any changes suggested/recommended
- Locate order numbers and locations for all electronic components
- Begin drawing footprints for surface mount package types

Going well/not well

- Everything seems to be going well except I cannot find some of the equipment that would have been helpful for my prototyping

Posted by [smatteson](#) at Jul 01, 2010.

This week:

There was some extra machining that I had to complete this week before the pressure test Assembly could be put together. The flanges for the assembly are finished and need to be welded to the body of the pressure chamber.

Next week:

My goal is to finish the welding for the PT assembly and get the center block for the rangefinder made up. I would like to start familiarizing myself with the rangefinder output. Depending on how much I can get finished during the short week I may be able to pressurize the assembly by Friday.

Things are moving along, maybe a bit slower than I had planned but I'm still in the clear. The shop has been busy and so the fabrication is just taking a little more time. Everyone is getting what they need when they need it so there are no problems.

Posted by [rmarin](#) at Jul 01, 2010.

This Week

Developed a working slideshow for the AUV section of the website.

Put up flash video clips for the CANON website.

Used photoshop to fix the distorted images on the website as well as to reduce their size so that web pages took less time to load.

Developed a section that relates to CANON's fieldwork.

Got several powerpoint presentations from the DOEST to work with for the website.

Developed a section on the T-REX system and automated intelligence for the AUV.

Next Week

Thoroughly edit all of the scientific content that I have written so far to make sure that it is within MBARI web guidelines.

Going Well/Not Going Well-

Everything is going fairly well at the moment and I am progressing at a sufficient pace.

Need to improve the communication between me and the respective AUV and CANON teams.

Posted by [cmatthews](#) at Jul 03, 2010.

This week:

My first design was to machine my prototype part out of a solid piece of aluminum 6061 and then use the break to put the necessary bend angle on them, however, I ran into a problem with the shape of my clip making the bend difficult. The solution was to add another piece that will be welded on rather than putting a bend on the part.

Next week:

Ordered springs on July first that should arrive next week. I will be able to assemble my mars tether clip and submit to the ROV pilots for iteration. Then it will be back to the drawing board to make adjustments for the final product.

All is well on the western front!

Posted by [aschnittger](#) at Jul 07, 2010.

This week : I was able to work with a couple of electrical engineers (Alana SHerman and Paul McGill). The have me helping with the testing of an acoustic modem as well as testing a stepper motor to see if it is capable to be used on the SES. Although they have wroked with this motor in the past, they have thrown it in my lap and asked me to "reverse engineer" it., meaning figure out its fundtions and potential without any paperwork. Very fun.

Next week: It will be a very short week so hopefully i will be able to progress in the testing of the motor.

Everything is well. Looking forward to the 4th

Posted by [jvirrey](#) at Jul 12, 2010.

22-July-2010

This page last changed on May 27, 2010 by [linda](#).

Comments

This week

I've finished annotating my images! As Linda is still unwell, I'm now putting together a list of questions and directing her towards certain images that she can look at from home. I've also been preparing for the analyses that will begin as soon as I'm at that point. I'll be looking at how the abundance of the 5-10 dominant species has changed over time and relating it to environmental data. Lots of searching through the methods sections of published papers. I'm also writing up my introduction and methods sections for the final report.

Next week

If Linda is back on Monday, one session with the images should finalise any further issues and ensure we are 100 % happy with the annotations. Getting stuck into statistics and write up is then the final stage!

Going well/ not going well

Although my mentor doesn't believe me, I haven't gone crazy from 3 weeks annotating and I've really enjoyed it. I'm looking forward to learning more statistical methods and having a little more free time to follow Alana around and help her with the technical side of the job.

Posted by [rhunter](#) at Jul 22, 2010.

This Week

Still working on the Acid Ocean Website

Starting a new experiment:

Investigating how well *Allocentrotus fragilis* (fragile red urchin) controls its internal pH when exposed to future changes in ocean pH.

Learning the following procedures:

- CO2 bubbling and associated calculations to alter pH in treatments

- Spectrophotometric methods for measuring pH. (Samples taken from the Coelom and water)

- The protocol to prepare, store and analyze DIC (Dissolved Inorganic Carbon) samples

Physiological analysis -size, wet wt, dry wt and ash wt

Altering and tweaking the above protocols

Next Week

Will start 1, 4, and 7 day trials of 4 treatments (8.1, 7.8, 7.3, 6.8) and five replicates.

Continue working on website

The Good

The barbie was superb

- Have received many complements

All is well

Posted by [mrussell](#) at Jul 22, 2010.

This week has been frustrating! After last week's break through of finally getting my DNA to amplify, I was looking forward to cloning my samples this week. However, I have come in everyday this week only to find my plates without an adequate amount of cultures if any at all. I have even carried out a

PCR purification protocol prior to cloning in an attempt to eliminate contamination or inhibition, as well as quantified decent concentrations of DNA via nanoDrop. Yet my cultures fail to make an appearance on the nice home plate I have provided. On the bright side, I've really got the PCR protocol down and the MFB has been producing some nice results for the Tricho_nifH templates.

Next week *I will have cultures. Then I can move onto DNA extractions and sequencing. My mentor wants to take me up to UCSC to carry out the DNA extraction so I can meet the Zehr lab (which was planned for today), so I'm really hoping my cultures grow soon!*

The not so good -Cloning -In-vitro customer support

The better -plenty of room for improvement

The good - MFB data -Developing expertise for running PCR experiments on my samples

The great -my mentor who is also frustrated but determined to get cultures!!!

Posted by [sthomas](#) at Jul 22, 2010.

This week

Spent most of this week working on my powerpoint presentation/write-up. This part is not nearly as interesting as learning the ins and outs of designing and building, but its nessary. I did manage to get some help from one of the Mechanical Engineers, Gene Massion, to run a finite element analysis(solidworks program) on my clip/shackle. We checked stress on my part from a variety different of loads and materials. Overall my design preformed well with the material that I intended my design to be made of, and not so well with others. The tests were very educational and I have some good ideas on how to beef up my design for greater load capacities.

Next week

Should have my material for a production part in hand some time in the next few days, then next week the machine shop can begin fabing out my pieces. As for me I will continue working on my presentation/report.

Going well/ not going well

I'am really happy the way the BBQ turned out. The feedback that I have been getting from many is that we did a good job and I thought the food was great.

Posted by [aschnittger](#) at Jul 22, 2010.

This Week:

- I have begun the layout process after a long and unexpected delay
- I have updated my schematics for the 50th time with more parts
- I have completed all additional footprints necessary for my layout

Next Week:

- I will be continuing layout with hopes of finishing it by the end of the week
- I have a design review scheduled for the 28th to go over my design with four other EE/ET's that work here at MBARI

Going Well/Not Going Well:

Everything is going well except for the continual minor changes in my design and tedious software thats has more bugs than a New York sewer

Posted by [smatteson](#) at Jul 22, 2010.

Happy Birthday George!

This week

I spent the first part of the week going over the feedback from last week's EARTH workshop. The gist of it is that Eye in the Sea is best when it is live. Since my project is to disseminate Eye in the Sea footage, I am now working on putting together a wiki that contains all the lesson plans (finished and rough) on

the EARTH website, as well as resources and discussions for the lessons. I'd like to have a rough draft finished by tomorrow and send it out to past EARTH participants for comments and further construction. The talk by Dr. Mark Abbott was good (hit home the benefits of working at MBARI), the bbq was fun (how often can you food shop for 150 people?) and meeting with the high school group on Tuesday was enriching (they were enthusiastic and I can't wait to use some *Ostedax* clips in my classes this fall).

Next week

I'd like to integrate any feedback from the wiki and also look into possible grants to get EITS re-deployed on MARS (and with the ability to capture video clips for later). Danelle mentioned that a color camera might be in the works for MARS which might be counterproductive to EITS (bright lights for color camera).

Good and bad

I'd say things are going well, however, time is running short.

Posted by [klodes](#) at Jul 22, 2010.

This Week:

1. Two algae isolates

Prepared the samples for sequencing, and the bacterial/mitochondrial marker (16s) is getting sequenced right now.

2. 7 new isolates

DNA was harvested this week. The cultures were looked under fluorescence/live microscopy.

Next Week:

1. Two algae isolates

Analyze the sequences once they are back.

2. 7 new isolates

Try to sequence the eukaryotic maker (18s) gene of these isolates. Do the whole PCR, cloning, plasmid prep, sequencing run.

Well/Not well,

Ran into a few unexpected problems in the experiments caused a delay in my schedule, but the project is still on track!

Posted by [hyu](#) at Jul 22, 2010.

This Week

- Completed the basic integration with DSS.
- Added a new features to show different predicates in different colors to the visualization.
- Started working on the visualization of "future plans" of a reactor in TREX.

Next Week

- Continue the work in visualization of future plans of a reactor.
- Start visualization of constraints in the "future plans".

Going Well/Not Going Well

Social Security Number process not yet completed. Almost Six weeks!!!

Posted by [skumar](#) at Jul 22, 2010.

This week

- Our last dive on the Western Flyer with the Doc Ricketts was completed on Monday (short dive, only 6 hours) during which Dr Brewer's postdoc, Andreas Hofmann, was in charge. We did a transect

of profiles using the Raman porewater probe at the NE Santa Monica mound through clam beds. We were using the in situ Raman spectrometer to analyze the concentration gradients of sulfide, sulfate, and methane.

- We finished the dive with a gas sample using the in situ Raman probe. We collected venting gas from the NE mound in a push core, formed hydrate, and brought it up to around 550, where the hydrate began to dissociate and a gas spectrum was taken--refer to the picture: http://www.mbari.org/expeditions/Southern10/Leg1/L1_images/hydrate2.jpg
- Wednesday I returned to work and have been going through some of the data obtained on the cruise.

Next week

- The lab experiments will be performed again under constant temperature due to variability in previous results
- Data taken from the cruise will be sorted and process so that in the coming weeks I can determine the pH of marine porewater

Going well/not going well

- Time is running out!

Posted by [mluna](#) at Jul 22, 2010.

This Week

- Edited the entire CANON website
- Created new sections for the mapping autonomous underwater vehicle website
- Met with Jennifer Paudan to discuss the changes I made on the mapping auv website
- Made sure to copyright most of the MBARI images and use references
- Developed new slideshows for AUVs, DSS, and CANON
- Met with John Ryan to edit the fieldwork section of the CANON website
- Used new tools such as adobe illustrator

Next Week

- Will send out email to entire CANON team asking what changes they would like to be made on the website
- Will work on fully editing the Autonomous Underwater Vehicle Website.

Going well/not going well

- Keep up the communication with various MBARI staff
- Be aware of current developments regarding the websites

Posted by [cmatthews](#) at Jul 22, 2010.

This Week:

- I finished the Zeroconf protocol
- I create the java API for automatic recognition of Ethernet PUCK instruments and I integrated with the PUCK tools
- I prepare a new demo for Monday for Carlos Rueda and my mentors.

Next Week:

- Monday demo
- Start to write a java API for parsing SensorML data from PUCK payload and use this API to publish the instrument data with Data Turbine.
- Start to write the final report.

Well/Not well,

All well

Posted by [dtoma](#) at Jul 22, 2010.

This was a very short week for me. I got off the McArthur II Wednesday afternoon in time for the BBQ, very nice. I managed to pressurize my test chamber and discovered that one of the parts had developed a crack. I will spend the beginning of next week fixing that. All else is good.

Posted by [rmarin](#) at Jul 23, 2010.

This Week:

1. I continued to research dyke width controls/convection and am beginning to formulate hypotheses as to how dykes could potentially point focus at depth
2. I have mapped a ridge segment at CoAxial (from video, geochemistry and bathymetry) and identified at least 12 different lava flows. I have calculated the volumes for these flows and Dave has given me some dates for them so I can start putting them in order
3. These dates have also allowed me to look at how fissure density could be used as a proxy for age but as I keep moving my lava flow boundaries I haven't put together the final version yet
4. I wrote my report methodology

Next Week:

1. Write report methodology and results
2. Map in flows for a third section at North Cleft
3. Investigate point focussing hypotheses
4. Attempt to calculate depth the NGorda dyke would need to be to not fissure the surface to put constraints on point fissuring processes in this area

Going well/not well:

Everything's going well but wish I had more time before the cruise!

Posted by [iyeo](#) at Jul 23, 2010.

This Week:

- Met up with some of the VARS team and got some advice, which was VERY helpful. I made the tweaks and major edits I needed DONE. Today and Monday I will be getting more advice on what I have so far, so I can make the final touch-ups on what is there.
- Today I will be meeting up with Lonny and Susan maybe or perhaps on Monday. In the meantime I will be working a little on the Deep-Sea Guide but mostly on starting my report!

Next Week:

- This will be a very important week. I will be trying designing mock-ups on a Tree Browsing section and Image Search. With ideas from the VARS team, I will have what I need to do this.
- Once I have these done I will ask Nancy Jacobsen-Stout on how to add information to the temporary database to fill up a species concept page. This way I will have a page or two to show all the features of the Deep-Sea Guide to show all of you!
- I want things to be done and ready for Brian to do all the major Java edits once he comes back the week following the next one. That way the final weeks will all be about reports and final additions, etc.

Going well/not well:

- Everything is going super well after meeting up with the team! It really helped me because this is made for them (and others later) and so it's hard for me to fully improvise everything design-wise.

Posted by [hhashim](#) at Jul 23, 2010.

This week:

I compared the results of my scenarios to see how the different inputs contribute differently. I have calculated the surface mixed layer for the different scenarios which has been really interesting. The no flux case does not have a surface mixed layer. Plotting the results this way has really helped me understand how the wind and heat are contributing to mixing at the surface. I have calculated eddy diffusivities from my scenarios, and I'm trying to get a better idea of how to interpret the results. I'm used to working with numbers related to the abyssal ocean--so in the surface I'm unsure of how high

they might be. From my model, I'm making some statements about how the vertical eddy diffusivity varies with time so that the AUV group can take this into consideration. I have been reading articles about how AUVs collect turbulence measurements and also about horizontal diffusivity.

Next week: I will analyze AUV data and track vertical and horizontal gradients in nutrients. I will then take some of my estimates from my model as well as estimates from research done on the continental shelf to track nitrate flux over time and space. I will also track nutrient concentrations along isopycnals. I will continue to learn about how the AUV collects turbulence measurements.

Going well/not going well:

I am happy to be done with GOTM. Earlier in the week when I was tweaking the time step of my model, it started running into problems I was unable to save it as I normally do and I was unable to generate reports which are an easy way to just visually look at the model results without running the model. So I'm very happy to be done with it!

Posted by [kmorrice](#) at Jul 23, 2010.

This week

I kept on working on the second technique for solving the path planning problem. I prepared a short presentation of the ongoing work and the preliminary results to show to the seminar speaker Mark Abbott. He was very kind and showed interest for the idea of the internship project as well as for the preliminary results. We planned with my mentor to work also on the first technique, since it was very close to give good results too.

Next week

This week I have to work on the first technique to see if we can get good results with it. Then, I will tweak a little bit the second technique we used to see if we can improve results also. And finally, I will try to add currents to the model so the path planner takes them into account when computing routes.

Everything is going well, slowly but well.

Posted by [bgarau](#) at Jul 26, 2010.

This Week

I was able to meet with Paul McGill after his lengthy vacation. He introduced me to another engineer, but this time mechanical, Francois Cazenave. Francois is working on the power buoy and needed assistance on the motor that he will use for one component of the project. I was able to work along side him for a few days this week and had a blast. It turns out he is an ex-intern turned employee! Hearing his story was great. After finishing up with Francois, I was able to work on the SES again. This time I was able to hammer down the exact positions of the assigned locations for each device that will be attached.

Next Week

Work continues on the SES. I will need to get the pin out of the hall effects switch and include it as the home switch for my stepper motor. Unfortunately, no one can give me any info on the switch in question. Little by little the SES is being completed and soon we will be able to write the program to control the device.

Everything is going well

Posted by [jvirrey](#) at Jul 27, 2010.

29-July-2010

This page last changed on May 27, 2010 by [linda](#).

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Comments

This week

I finished annotating all my Rover images. Linda and I had a few sessions going through everything I had done, checking the species' IDs and any queries I had marked. She was also able to tell me that the strange purple blob taking up most of the bottom of my last image was an Opisthoteuthidae or Dumbo Octopus - quite unusual to see sitting on the sediment!

I also completed a literature review of previous methodologies and taught myself about line transect theory. This will help me to understand the statistics I will be using to analyse my data. I installed the computer program DISTANCE and have begun to work through the user's manual, ready to make a start on my data once it has been exported from VARS.

Next week

The first step is to use DISTANCE to calculate the densities and abundance of the most dominant species in the area. I can then compare these with the MARS CTD data and other environmental parameters.

Going well/ not going well

I'm glad I have the chance to learn about statistical techniques and computer programs I've never used before. I am beginning to get a little worried about the amount I have to learn with such a small time period left, although I suppose that is quite normal at this stage in the internship!

Posted by [rhunter](#) at Jul 29, 2010.

This Week:

1. Finished Report Introduction and Methodology
2. Mapped in flows for North Cleft
3. Calculated Volumes for all North Cleft and CoAxial flows
4. Failed to calculate depth the NGorda dyke would need to be to not fissure the surface but have emailed a few people so will hopefully get some help with this
5. Formulated several dike point focusing hypotheses:
 - Convection within the dike causes an irregular surface topography which means that as the dike propagates the crack forming is wider above these convection cells and hence penetrates further upwards through the crust and is thus more likely to intersect the surface
 - That convection within the dike allows cooler and hotter areas to form hence lavas may solidify non-uniformly along the length of the crack meaning that the dyke is split into a number of dike 'fingers' which reach the surface
 - The magma body feeding the dike could also undergo similar processes which mean that as a dike is first initiated it is non-uniform width along its length

6. Begun to look at validity of these hypotheses. Already the third one seems unlikely as very thin dikes are rarely observed suggesting that most of the dyke must (initially at least) have been over 0.5m in diameter.

Next Week:

1. Write results and some of discussion section for report
2. Continue to look at hypotheses and maybe formulate others (looking for geochemical differences etc)
3. Look at differences between volumes/geochemistry etc for pillowed mounds and shield volcanoes, could shields be an extreme form of a point focused fissure? If so why does this happen with larger volume eruptions?
4. Load Western Flyer for cruise
5. Go on Cruise (to Taney Seamounts)

Going well/not well:

NO TIME!

Posted by [iyee](#) at Jul 29, 2010.

This week

I finished the EITS wiki (<http://eits.pbworks.com/>). The hope is that this will act as a discussion board for lessons tried from the EARTH lessons (www.mbari.org/earth) as well as examples of student work and lesson adaptations. I invited past EARTH educators to the site and will also link it to the EARTH Facebook page. The more participants the better so I encourage anyone with access to educators to spread the word (K-community college). I also am working on two Voicethreads. One allows all the players in the latest EITS deployment to share their reason for being involved and what they hope to learn. The other will compare the EITS camera with a similar deep sea device from Dr. Justin Marshall's lab at the University of Queensland.

I enjoyed speaking with the group of girl scouts along with Izzy, Sara, Hana and Roman. Dijanna Figueroa's talk was interesting especially compared to the modified talk she gave the girl scouts later in the day. There is always something to learn from how people adapt their talks for different audiences.

Danelle and I met to go over "best practices" of Voicethread. At the Wed morning meeting, Erika shared possible plans for a redeployment of EITS in late 2011 (possible grant funding).

Next week

Believe it or not I will need to start/finalize my paper and presentation for August 10 (I much preferred when it was nine weeks to the end as opposed to nine days).

Good/Bad/Thanks

I ran into a bit of snag this week with uploading video to Voicethread. Although earlier VT have been compatible with .mov files, the latest watermarked clips from EITS were not (they were too distorted to use). Susan Von Thon worked and succeeded in fixing the problem. THANKS! Also Linda has been adding to the MARS observatory photo gallery to reflect what is seen in these clips. She is also compiling short video clips of the organisms in color to go along with the black and white footage. George has passed along many links and ideas to incorporate into EITS dissemination. Danelle has provided lots of feedback and unique questions on the project. Thanks to Larry Bird for giving a great tour to my husband and kids. Thanks also to Patrick Whaling (not only for some interesting stories) but also for trying to get hold of a Tanner crab this fall/winter to use in class. Thank you all.

Posted by [klodes](#) at Jul 29, 2010.

This Week:

- I finished the Layout process of my circuit board
- I held a design review for my schematics a little later in my design process than I likely should have but all is well and i shouldn't need to make any changes
- I calculated my PCB's power requirements to be about 0.7 Watts without the use of the microcontroller
- I began work on my paper

Next Week:

- Create prototypes for all circuits that I have parts for so I can take pictures of O-Scope graphs for my paper
- Continue checking suggestions made at my design review
- Submit my board layout to a fab house
- Order parts for my board

Going Well/Not Going Well:

- Everything is good. Knowing about needing images of my prototypes would have been useful before i took them apart but no use crying over it.

Posted by [smatteson](#) at Jul 29, 2010.

This Week:

I finished the Java API for the automatic discovery and data publishing
Tuesday I made the last demo and I will prepare a video for the OGC community and instrument manufacturers with the same demo.
I also work on the final paper.

Next Week:

Continue writing the final report.
I will refine some components of the project.

Going Well/Not Going Well:

Everything is good. I will need to see how I can make the video recording of the demo and maybe Linda can help me with this.

Posted by [dtoma](#) at Jul 29, 2010.

This Week

- Finished the visualization of future projection of a plan.
- Finished the visualization of constraints in a plan.

Next Week

- Study the use of Hidden Markov Model (HMM) to help enable the AUV to adapt its behavior based on feature detection.
- Look into TREX in more detail.

Going Well/Not Going Well

Social Security Number still hanging



Posted by [skumar](#) at Jul 29, 2010.

Well, I just wrote out my update but confluence logged me out and lost all of it so its going to be short this week...

THIS WEEK I had colonies and created a cloning library. I went to UCSC to meet the Zehr lab and carry out a DNA extraction. While waiting for the sequences to be sent back to me from Berkley, I have been on puck patrol and switching out coils on the MFB2.

NEXT WEEK I will be analyzing my sequences on a phylogenetic tree and testing different assays for my idiA gene. I will also join my mentor for a Moore Foundation conference to learn what fellow scientists are currently working on and what upcoming projects will be.

ALL is well

Posted by [sthomas](#) at Jul 29, 2010.

This Week

- Thorough editing of both AUV and CANON websites (editing slideshows, finding higher resolution images, wrapping text around images properly)
- Used apple Quicktime 7 pro to edit an over five minute video into an approximately one minute video. Used Adobe media encoder to convert .mov video clip into an optimized flash video (.flv) that I could put on the website. Thanks to Lonny Lundsten for the training.
- Added web pages related to the AUV in Gulf of Mexico mission, Lau Basin, and ALTEX.
- Started writing the abstract for the final project paper.
- Used track changes feature this week in microsoft word to coordinate with John Ryan and Nancy Barr
- Wrote an entry for the 2010 Summer Internship blog.

Next Week

- Will send out an email containing the first draft of the AUV website.
- Will continue editing both sites.
- Hopefully will have an opportunity to put together a slideshow of images the imaging auv has taken of the seafloor.

Going Well/Not Going Well:

Going pretty well.

Posted by [cmatthews](#) at Jul 29, 2010.

This week

- I spent some time setting up more experiments to be run with the laser Raman spectrometer.
- I'm working on preparing high and low pH seawater samples saturated with H₂S and observing the respective HS⁻ and H₂S species in their Raman spectra.
- I'm working under temperature controlled conditions and will be precipitating HS⁻ out of the solution to determine the concentration both through conventional wet chemistry methods and Raman quantitative analysis.
- My mentors and I are hoping to use these two extreme end points to be able to determine the cross section of where these species exist to determine the pH of pore water that was collected on my cruise.

Next week

- perfecting my technique--I need to make up a 10% seawater solution possibly because adding base to seawater results in too many precipitates that interfere with the results
- meeting with Bill Ussler to discuss my project

Going well/not going well

- everything's looking pretty good as of now--I hope next week will be the same

Posted by [mluna](#) at Jul 29, 2010.

This week:

I have calculated vertical and horizontal derivatives for nitrate using AUV data. I have also interpolated the nitrate data so that it is along isopycnal surfaces. This allows for a better estimate of the horizontal gradients because it tracks lateral mixing along isopycnals. Instead of using a depth-coordinate system, it uses a density-coordinate system. I have continued reading about methods of measuring turbulence. Previously I applied my time-varying eddy diffusivities to an averaged nitrate profile, and now I'm working on ways to apply this to a nitrate profile over the Monterey Bay. While I hope to use the entire data set that spans 40 km and 100 m depth, I think it may be more meaningful to stick with the averages.

Next week:

I will finish up the initial stages of my powerpoint presentation to show to my mentor and start writing up the final report. I want to thoroughly describe vertical, horizontal, and along-isopycnal nitrate flux, and the dynamic range over which mixing and turbulence change.

Going well/not going well:

Not enough time left!

Posted by [kmorrice](#) at Jul 29, 2010.

This week

- Created an Image Search Results page with CSS-coded hover image + captions
- Created secondary images gallery on main concepts page
- Got intern shirt orders ready

Next week

- Order t-shirts

- get all java coded up through Brian who's coming back Monday!
- make any last corrections
- then if i have time I will add content for mock-up pages to show all of you!

Going well/not going well

- it all depends on how much gets done next week since Brian has to leave again the week after!

Posted by [hhashim](#) at Jul 29, 2010.

There was some troubleshooting for the rangefinder that needed to be done and that took up some time in the shop. The modifications for the mounting block were finished at the end of the week. Connecting up all the sensors and instruments filled up the rest of the week. next week everything will be running, hopefully as it should. Also next week the thermocouple machining will begin. The part will be a bit tricky so it could take up a big part of the coming week. other than that everything is going well with the project and things are starting to come together into something recognizable.

Posted by [rmarin](#) at Jul 30, 2010.

This week:

Made a ton of head way on my presentation/write-up. The material arrived on Wednesday for my clip, and the machine shop begun milling the block down for the bale. One interesting note: the machine shop is experimenting with a new high speed carbide pocket end mill. This new technology has not been used here at MBARI so it was interesting to see the machinists experimenting with different feed rates and end mill rpms to dial-in the new cutting tools ability.

Next week:

I will continue with my presentation/write-up. Keep tabs on the clips progress. Plus, depending on the progress of my presentation/write-up if all goes well I will try and design a locking mechanism for my clip just as an added safety feature to ensure that there will not be an accidental release of the clip.

Everything is going great!

Posted by [aschnittger](#) at Aug 02, 2010.

This week:

I have been working on a new version of my first technique (A* algorithm) to solve the path planning problem. As the whole planning takes too much time to be computed, we have decided to make it in steps. So, instead of planning the best path for the next ten days, we will plan the best path for the next day ten times (which might look similar but it is not). Unfortunately, the pieces of software written so far do not adapt very well to that, so I have started rewriting the code to adapt it to the new situation.

Next week:

I will keep on adapting the code to the new situation and make some tests once it is finished. Hope to start writing the report too.

The time is getting shortened somehow.

Posted by [bgarau](#) at Aug 02, 2010.

This week:

Made a lot of progress!

Two initial isolates:

Got all the 18s (eukaryotic marker gene) and 16s (bacterial/mitochondrial marker gene) sequences back.

Culture collection:

From the qPCR I did previously, there was for sure large amounts of contamination of *Ostreococcus* in a pure *Bathycoccus* culture. I took this a step further and performed this week sequencing on this culture.

The goal is to identify where the contamination came from by the sequences, because we only have two strains of *Ostreococcus* in the lab.

7 more algae isolates:

Performed the whole culturing/cloning protocol to identify these cultures via 18s gene sequencing. Took most of the time because now every step along the whole protocol I have over 100-150 samples to deal with (to reach at least 10x coverage for each isolate). Gets really tedious after a while... HOWEVER, the sequences came back on Friday and hopefully I don't have to do this again.

Next week:

Now lots of sequences to analyze from above!

Well/Not well:

Tough week but I managed to get through it...

Posted by [hyu](#) at Aug 02, 2010.

This week:

- Became familiar with the following techniques

Preparation and analyzing samples using the spectrophotometer

Successfully tested the internal pH of a sea urchin

Preparation of DIC samples

Experimental design

- Web design:

Formed an excel database based on the data provided by the members of EPOCA, SOLAS and IMBER.

Not going so well:

- Need to revise the software used to create the database
- Sea urchins respired more than I expected. This was enough to significantly drop the pH below two treatment levels.

Thus there is a need to construct a manifold that enables the environment to be continuously flushed with treatment water

Next week:

- Start the main experiment
- Start writing the final paper
- Continue with the website

Posted by [mrussell](#) at Aug 02, 2010.

05-August-2010

This page last changed on May 27, 2010 by [linda](#).

Comments

This week

Unfortunately, after a lot of work learning the DISTANCE program, we have decided not to use this software. Oh well, these things happen, maybe knowing about line transect theory will come in useful at some point in my future career! We are going to use PRIMER for the statistics instead so I've now started reading the manuals for the software and Linda is going to give me an introduction tomorrow. I've also been learning about similarity indexes so I understand the theory behind the tests we will be running.

My data from iVARS has been exported so I've been wading through massive excel spreadsheets a lot this week - rearranging and sorting the data, fixing problems, adding CTD data from the MARS site and producing graphs of the abundance of the most dominant taxa for each transect. I've also started pulling out some good images to use for my presentation.

Next week

I am hoping to get all my analyses finished in a week. This will include getting my head around PRIMER! We hope to construct multidimensional scaling (MDS) plots from Bray-Curtis similarity indexes and link these with the environmental data from the MARS CTD probe. If this is all finished, leaving me a week for final write up, I'll be very happy!

Going well/ not going well

I really enjoy doing stats so I'm quite happy learning these new methods and I'm really looking forward to having a go at PRIMER tomorrow, it's a program I've read about in a lot of papers but have never used. It's very satisfying to be finally pulling some results and graphs out of the project and I'm excited to see what they come out like! Although it's being to dawn on me that I'll actually be going home soon which isn't such good news!

Posted by [rhunter](#) at Aug 05, 2010.

This week I faced the fact that the sequences derived from my clone library were not what we were hoping for. In an effort to trouble shoot I have been trying different combinations of the 5 primers I designed for PCR. My gels are showing non-specific amplification and so I will need to perform a gel extraction to isolate my targeted *idiA* gene. On a lighter note, I spent Tuesday at UCSC with my mentor to attend a site visit for representatives from the Moore Foundation and MEGAMAR. It was nice to learn about different projects currently being funded and I got to chat with more graduate students, post-doc's, and other people associated in this field.

Next week is the last full week! I am really hoping to successfully clone my *idiA* gene because although 'bad' data is still data, it is much more satisfying to leave a project having achieved what I set out to do.

Going well/ not going well Things aren't exactly on the schedule I prefer, but I still have faith in this project!

Posted by [stthomas](#) at Aug 05, 2010.

This week

- I spent this week taking spectra of H₂S saturated 0.5M NaCl and nanopure water solutions at an acidic and basic pH
- I had to figure out how long to saturate the solutions to get a desired pH of about 4 (took about 4 minutes) and how many drops of 10M NaOH to add to raise the pH to a desired basic value of 10 (22 syringe drops)
- Today I will run these samples once more to make sure everything is correct. Because later today and tomorrow I will be sealing the septum vials and adding base through a syringe
- The total sulfide of each solution will remain constant and ZnS will be precipitated out of solution using ZnCl₂, dried and weighed to determine the concentration of total sulfide. I'll then do some

math to figure out the concentration ratio of $[HS^-]/[H_2S]$ at a given pH and thus hopefully be able to determine the pH of pore water from the molar Raman cross section

Next week

- sifting through data, calculations, and organizing my presentation and paper
- this is the last full week so I hope to have all the data collected by early next week so that I can just work on processing and putting last minute things together

Going well/not going well

- Time is running out and I'm hoping the experiments go well...

Posted by [mluna](#) at Aug 05, 2010.

This week

I've spent most of this week trying to organize the pieces for a last VoiceThread (one that allows all the people involved with this project to explain what they have done). I also am putting together a generic science introductory VoiceThread using clips from EITS. I've recruited teachers from Oregon, California, North Carolina, Missouri (me) to add a discussion element for our students. My presentation is next Tuesday so I have started working on the final paper and then will put it together for a presentation. I also continue to add resources to the wiki and am encouraging teachers who have used EITS lessons to upload their materials.

Next week

My final week. Presentation on Tuesday and tying up lots of loose ends.

Going well/not so well/thanks

I've enjoyed riding in two different van pools and my time with a friend's family. My family left yesterday so that would be in the not so well category. Time is becoming scarce. Linda is fast becoming my idol with all the clips she's put together as supplementary information. Thanks also to Van Pool #5 and #2 for the pickups and drop offs. Danelle, as always, has provided lots of valuable insights. Thanks also to Erika and Gregor. And, of course, George is beyond value. Thanks to you all!

Posted by [klodes](#) at Aug 05, 2010.

This week

This weeks been a lot of fun watching the processes in the development of my clip*. * The machine shop has put a lot of time into my clip this week, and it will probably be done by the end of the week. I have continued fine tuning my presentation/paper which are for the most part complete.

Next week

Finishing up my paper/presentation is my priority. The development of a locking mechanism for my clip will be my final project for my clip next week.

Going well/not so well

All is good! I am looking foward to seeing the final proof of my clip this coming week.

Posted by [aschnittger](#) at Aug 05, 2010.

This Week:

This week i decided to write my update more like the science kids. I began the week by discovering that I had routed my PCB with the wrong connector and as such I spent Tuesday morning reworking my layout. However, I am not completely finished with circuit design and layout and as of 2pm today, my board was submitted for fabrication. My mentor also ordered the parts for my board on Monday and both the board and parts are expected to arrive by next Tuesday.

Other than that, I have spent the entirety of the week working on my report. Its slow. And tedious.

Next Week:

I will either be populating my PCB myself once it comes in or I will be having on of the ET's do it because they will do a better job faster. Once that is completed, I will begin testing on my analog circuits to make sure they are working. In the time between I will be finishing my report in all its glory.

Going Well/Not Going Well:

Turns out the test tank is 53V as compared to ground. I got to watch the FOCE CO2 apparatus dissolve in salt water which was exciting.

Posted by [smatteson](#) at Aug 05, 2010.

This week:

- I have done a RS232 connection on the development kit to be able to use a real instrument in the video.
- I wrote a good part of the final report.
- I tried to integrate the SID Interpreter (Sensor Interface Description) from 52°North but it is not finished yet and they have to reape the bugs. I will use for now a Java API for SensorML that I have done, but this should be replaced in the future with the interpreter from 52°North.

Next week:

- Make the final demo and edit the video.
- Finishing to write the report and the presentation.

All is going well. Time is running out and in 2 weeks we will miss this time here ...

Posted by [dtoma](#) at Aug 05, 2010.

This Week

- Read about how HMM's are used to detect a feature of interest for the AUV.
- Brushing up C++.
- Started messing around with the code of TREX a little.

Next Week

- Try to implement a reactor which can handle observations from a HMM with more than two states.
- Learn more about TREX internals and the role of HMM in detecting the feature of interest for an AUV.

Going Well/Not Going Well

Everything seems to be fine.

Posted by [skumar](#) at Aug 05, 2010.

This Week

Continued to work with Paul McGill on the mechanical process of the Sedimentation Event Sensor's carousel. The locations of each station have been set and the testing on the time vs speed vs torque has been completed. An updated power budget should soon be completed.

NOW that the mechanical aspects are complete, work on the software end can now resume. Rich Henthorn is once again my primary mentor, and we have been developing the behaviors that will guide the carousel autonomously.

Next Week

Continue developing the program to drive the SES. Also, continue working on my research paper and my presentation

Going well/ not so well

Need more time. A meeting with the SES team has determined that the project will be put on hold. Can i come back for a thanksgiving or christmas internship?

Posted by [jvirrey](#) at Aug 05, 2010.

This Week

- Emailed the first draft of the AUV website to everyone involved.
- Created five new pages for the AUV mission website.
- Edited 28 pages worth of web page material from both the CANON and AUV websites
- Written 14 pages for my intern project paper

- started on the presentation
- Fixed the mapping AUV web pages

Next Week

- Edit both sites entirely
- get feedback from scientists and work with that
- Finish the internship paper
- Finish the internship presentation

Going well/ not going well

I am on track with respect to completing both the CANON and AUV websites.

Posted by [cmatthews](#) at Aug 05, 2010.

This week:

Lots of sequences...

All the sequencing I did in the last two weeks are back, so I have been analyzing them to see what my isolates are. A couple very interesting ones that has no cultured representative.

Also, I will send Alex a short report on one of the contaminated cultures in the culture collection.

Plus, working on my lab presentation next Monday...

Next Week:

Lab presentation and final report.

Well/Not well:

All well!

Posted by [hyu](#) at Aug 05, 2010.

This week:

I have been compiling information about the various components of my project into a powerpoint, and after meeting with my mentor on Monday we discussed what to include and what not to include in the presentation. I made a rough draft of the slides I want to present. I will be going over some of the previous work that has been done on the subject. I hope to show that assigning a bulk diffusivity may be appropriate in some cases, but really there should be a time-varying diffusivity. From my model results, I have calculated diffusivity, and it's been interesting to see how this compares with some of the values reported elsewhere. Previously I had thought my data wasn't accurate and I was going to use values from other studies, but after doing some smoothing and averaging, I'm happy with the results. I can use these diffusivities with the nitrate gradients to compute nitrate fluxes. Basically I have spent much of this week putting together the information for my presentation and finalizing decisions on which figures to include.

Next week:

Finish the presentation and continue on my report. I'm concerned about the amount of information I have and fitting it into 12 minutes. My work here has existed in parts--looking at GOTM, calculating gradients in AUV nitrate measurements, and resolving temporal and spatial scales from these exercises to inform sampling strategies. I'm a little concerned about thoroughly describing each of these components and fitting in descriptions of instrumentation. It will be quite challenging.

Going well/not going well:

Things are going well!

Posted by [kmorrice](#) at Aug 05, 2010.

This week:

I have been working in parallel on both techniques to solve the path planning problem. The main tools to run those path planners are mainly done, so now it comes the time to test them with different scenarios

and conditions and fine tune whatever that doesn't give the expected results. I am using different sources of data, satellite data for fluorescence, model outputs for currents fields, ... it seems everything is starting to come together so I can see if my development is actually working.

Next week:

I should finish the details of the code, run it the different scenarios, save results. Meanwhile, I should write the report and prepare the presentation too.

Well / Not well

Running out of time, but everything is going well.

Posted by [bgarau](#) at Aug 05, 2010.

This week:

Brian is back! For now. My mentor has loads of projects to deal with, but through our meeting at the beginning of the week I was able to understand a little more Java. This allowed me to do the following stuff:

- + All secondary images coming up in mini gallery on Main Concept Page now!
- + All titles based on ConceptName have been added as well
- + Linked all the jumps on Main Concept page
- + Linked jump images on Search Results
- + Added all header and footer includes

There are a few more things I will be trying to add in the Java today. If I can't do it I will have to wait until the last week I am here to sit down with Brian and sift through it all at once. Which is fine because he's so smart! But I'm a little anxious!

Next week:

- Mock-up a whole Concept page for my presentation, with the help of VARS team!
- Start my presentation and finish it.
- Finish my report (this may not happen until the last week)
- HOPEFULLY receive T-shirts, if quick, if not, then we should receive them at the beginning of the last week.

Going well/not going well:

Pretty much going well, I just want to finish things but there are some things I cannot do without Brian so I have to be patient for the last week.

Posted by [hhashim](#) at Aug 06, 2010.

This week:

Waiting for the circulation system to be built

Revising protocols and experimental design

Next Week:

Conducting experiments

Writing report and compiling a power-point presentation

Concerns:

Webpage has been neglected, will not have time to finish both experiment and webpage

Concentrating on these task so close to the end will also give me very little time to prepare a good quality paper and presentation

Posted by [mrussell](#) at Aug 06, 2010.

Izzy's update

This week:

- 1) Finished Report with exception of two figures
- 2) Have a good hypothesis for why dykes are point focussing at depth
- 3) Looked at volumes of flows and lengths of seismic swarms to work out an approximate eruption rate and found it to be comprable to Hawaiian fissure eruptions (this is exciting!)

Next Week:

- 1) Finish final two figures
- 2) Put together presentation

Ship Update:

We completed our first dive yesterday. We'd initially been worries that we were collecting only the thick manganese crusts that cover the rocks and not the rocks themselves but when they came on deck we found that actually all but 2 of the samples had rock cores, so that was good. The second dive hasn't happened yet today because the weather is too bad. It's unclear wether it will clear up later today allowing the dive to start then or not so fingers crossed. We've sent in the first blog update I think and it even has a bit from me in it.

Izzy

Posted by [mage](#) at Aug 09, 2010.

12-August-2010

This page last changed on May 27, 2010 by [linda](#).

Comments

This week

Well, this week, I gave my final presentation (sorry about the time misunderstanding) and also have a leopard shark jaw to bring back to school. My final paper will be finished by tomorrow. I just have a bit of computer cleaning up and I am finished for this internship.

Next week

I'll be sharing what I've learned over and over and over and embracing a new school year and a new time zone (the latter I am not looking forward to).

Good/bad/thanks

I cannot believe that this experience is wrapping up. George, you said it at the beginning.... "time will pass quickly" and it did. Perhaps its good that my family left last week, missing them is tempering the sadness of leaving MBARI. A few quick thanks (straight from my paper in case no one reads it, which is a great idea)...

The **2010 INTERNationals**. Thank you for sharing your time and talents (and great senses of humor). Pessimists might say there will never be world peace, but with you all as ambassadors for the myriad of countries that we represent, I beg to differ. I can't wait to see how you all shine in your respective careers. Thank you!

George Matsumoto. Really my thanks to you should be a paper in itself. It was definitely a landmark life moment when I was admitted to the EARTH club back in 2003. You are an inspiration/mentor/mini-god to an enormous group of people (that grows daily) in every age range. You motivate people to move out of their comfort zones and embrace what the world has to offer. Your enthusiasm, kindness and compassion for others is amazing, but what I really want to know is 'do you sleep?'

Danelle Cline. Thanks for being the great guide into the foreign world of software engineering. Your kindness and time were invaluable to me during this summer (who knew that a homegrown avocado could turn a day around). You gently pushed me to think in ways that I don't normally. I'll miss you!

Duane Edgington. Despite your workload you always came through with an insight or "heads up" thought that was right on target.

Linda Kuhn. Your internship assistance was great but then you started working on videos and updating the MARS observatory photo gallery... wow! Your knowledge and technical skills are amazing. My only regret is that your health took a hit while we were here, you have a lot to share.

Erika Raymond Thank you for being the on-site, EITS guru .Your patience with my endless requests even in the midst of your many projects went above and beyond.

Gregor Bwe. Thank you for mining through the footage and finding great clips to share with the educational world and for being a great sport when it comes to recording comments time and time again.

MBARI, the people (although the building being 41 strides to the ocean isn't bad either). I know this is a cop-out and I should thank many of you individually, but I also know I'd leave someone out (the aging brain has some downfalls). All of you have made this a better than pleasurable experience. Many of my teacher friends thought I was crazy to "work" all summer (my non-teacher friends think I don't work ever), but if they had been around here for more than a day, they'd realize that this has been a top experience. One of my daily past-times was trying to find out whom I had passed in the halls each day and check you out on the Canyonhead People Page (and people think that Facebook can be a time vacuum). You all do amazing things and work together to make it happen. Thanks for sharing your time, expertise and, occasionally, your stories. I look forward to reading and hearing about future accomplishments.

Thank you!

Posted by [klodes](#) at Aug 11, 2010.

This week:

Linda and I worked on preparing my data and putting it into PRIMER. We then used this program to run a number of statistical tests. I was able to generate some interesting data about the biological community around the MARS site. I've also been producing a lot of figures and tables in excel and working on my written report and presentation.

Next week:

My goal is to have all the project work finished by Wednesday. Although I've been working on benthic ecology this summer I'll be moving onto ocean acidification in October. I would really like to have the time on Thursday and Friday to talk to more of the scientists and engineers working in this field and perhaps help out with some lab work - basically just trying to soak up as much as I can from MBARI before I have to leave!

Going well/ not going well:

I really haven't had any complaints this summer. My project has been extremely interesting and, although quite challenging at times, this is part of science and I have always felt the support of my mentors. I have really appreciated all that has been provided for me as an intern here. This not only includes my project work but all the other opportunities to meet visiting scientists, seminar speakers and even to talk with and encourage school kids who haven't made it to this stage yet. I feel I've learnt such a wide variety of things, made a lot of good contacts and some really good friends too. I'm sad to leave but excited to continue into my scientific career!

Thanks for a great summer MBARI!!!

Posted by [rhunter](#) at Aug 12, 2010.

This week:

I was unable to start the experiment proposed in last weeks blog.

The pH of the water in the seawater laboratory appeared to be very low (6.8). This is at the lower end of the sampling regime.

Started a new experiment. I am now looking at how temperature alterations at low and ambient oxygen concentrations alter the rate of respiration performed by Fragile Sea Urchin?

Still working on the webpage

I have started compiling the report and presentation

Next Week:

Attempt to analyze and understand the data obtained from the experiment

Finish writing and compiling the report and presentation

Going and not going:

During the past week, I have had little time to work on my webpage, presentation and report. This will no doubt affect the quality of the finished products.

Posted by [mrussell](#) at Aug 12, 2010.

This week has been a busy one! Luckily I had a break through with my idiA project and was able to clone and send for sequences. I am currently in the middle of analyzing my sequences and hope to generate a phylogenetic tree that can help in future optimizations of primer probe sets for the idiA gene among strains of my beloved *Synechococcus*. I regret that I don't have the time here at MBARI to work on this, but it has great potential for graduate school.

In addition to running between three labs here at MBARI and a lab at UCSC to target idiA, I have also continued to determine nifH standard curves for various template groups on the MFB2. And an $R^2 = 0.988$ means success for the Het-1 templates!!

Lastly, I am trying to create a matrix for all the primer probe sets and template groups to determine optimal concentrations of MgCl₂ for each group. A PCR is currently thermocycling as I type.

Next week I will hopefully finish running templates on the MFB2 and have standard nifH curves for all five groups. I also hope to finish the primer probe matrix, as well as my paper and presentation in time!

Gone going.. I have absolutely enjoyed my time here at MBARI (even after running several failed PCRs and gels 😊). I'm sad to be walking away from my project, experience, and the people who make this place what it is. Thanks for this opportunity, I hope to be back one day!

Posted by [sthomas](#) at Aug 12, 2010.

This Week:

This week was spent mostly on staring at my paper and presentation trying to figure out how to explain my design process without being too confusing. My PCB also came in on Wednesday and I began stuffing it which is apparently an oddity among EEs. Today, Jose Rosal took over and the process has sped up significantly. As of the time of this update, it is not complete, and a few of the parts have not arrived yet.

Next Week:

Next week I will be going out to sea on Monday so I plan on finishing my paper and presentation by then. Hopefully with some practice as well. If my parts come in in time, I will begin testing the analog components of my PCB and hopefully include some promising results in my paper.

Going Well/Not Well:

So it turns out that parts the size of dust are hard to handle and soldering irons are hot.

Posted by [smatteson](#) at Aug 12, 2010.

This week:

I dedicated mostly to writing the final report and making the video with the demo for the presentation. I also start to prepare all the artifacts of the project. I upload the instrument software and java tools in the MBARI repository. I wrote the user document for the project, how to use the code for the instrument, to write the SID in SensorML and how to use the java tools.

Next week:

I will do the presentation and hand the final report 😊!

I have had a great time here at MBARI. I am very happy that I meet all the inters, each of them very nice persons, and who knows ... maybe in the future we will have the chance to see again and maybe work together. I will miss also the environment that I found here at MBARI, I had the chance to be close to some of the staff and I meet great people. The experience accumulated in this time is very important to me, and gives me more clarity of the things that I want to do in the future... Ah... and the last thing, but the most important... you are all welcome to visit me in Barcelona, I will be glad to be your host! And also if one of you goes to Romania you can contact me 😊.

Posted by [dtoma](#) at Aug 12, 2010.

This week:

- Found out how to do some java edits
- Came to terms with what i cannot do
- Finished rough of presentation

Next week:

- Finish final report
- Do final presentation
- Maybe make an easier way for George to have annual updates done!

Thanks everyone!

Posted by [hhashim](#) at Aug 12, 2010.

This week

- This week was a very busy week. I've been running numerous experiments to finalize the procedure for calculating pore water pH
- What we finally decided to be best was saturating sodium chloride solutions with H₂S(g) and taking spectra at small pH increments between the range of 6.5-7.5, this way we can use simple relationships using the Henderson Hasselbalch equation and other ships to determine the optical ratio of HS⁻/H₂S observed in a given Raman spectrum
- Turns out, what we observed was totally unpredicted
- So today was my first day of actual data processing and formulating calculations with Ed to apply to the in situ data. No more experiments... really
- Tomorrow I will come in and run the glass sealed ampules obtained on the cruise from push cores recovered from the seafloor that were squeezed to obtain pore water. These recovered pore samples I will take spectra of all day tomorrow and calculate their pH to compare with the in situ data

Next week

- Working on my presentation and paper!
- Present and hand in paper next week!
- Clean up

Thanks to everyone! I had the best experience here at MBARI and learned so much. I'll be sad to walk away from this project and wish I could do more in the Brewer lab to really perfect this technique of calculating the pH of pore water in situ.

Posted by [mluna](#) at Aug 12, 2010.

This Week

- Started implementation of a TREX reactor, which can handle more than two state HMM.
- Started working on my presentation.
- Paid my third visit to the Social Security Office.

Next Week

- Finish implementing the reactor
- Finish the report and presentation

Going Well/Not Going Well

Thanks to MBARI, George, Linda, Kanna, Fredric, JD, Thom and all the interns for the wonderful time I had this summer. Any future visit to India, you know whom to contact 😊

Posted by [skumar](#) at Aug 12, 2010.

This Week

- Heavily edited both AUV and CANON websites
- Uploaded several new flash videos and slideshows
- Uploaded new pictures and additional web pages
- wrote my paper
- created a powerpoint presentation that will precede the website

Next Week

- Finish the report
- Finish the presentation
- Make the websites "live" (viewable to the public)

Going well/not going well

Great experience here at MBARI. Cannot believe it is almost over. Thanks to George, Linda, my mentor Nancy Barr, and all of the wonderful interns.

Posted by [cmatthews](#) at Aug 12, 2010.

This week: I have finished my presentation and just have a few minor edits to make. I have also been working on the final report. The results from some of my analysis with the gridded AUV data have shown some interesting features. There seem to be injections of nitrate near the surface. I had thought these features were actual features, but it turns out that they may be due to some type of lag where the data

from the upcast and downcast near the surface produce artificial features. So how do I figure out if these features are real? I have been comparing the non-gridded data with the gridded data and it seems that there is some type of lag. The features that show up on the gridded data set are not always present in the non-gridded set. I have since then been trying to regrid the data so that I have separate plots of the gridded upcast and gridded downcast. I met with Mike McCann who has been helpful in sending some of the m files used to process the data, but I'm getting very lost in the code. Overall--going through this and trying to figure it out has confused me even more. I got some similar code from my mentor which is more simplified, so I'm trying to use that instead...if only I was a better programmer!

Next week: Finalize my presentation--it's mostly done but I still need to complete a few edits. I also need to finish my report. I want to keep on reading about instrumentation involving turbulence and the different methods of determining turbulent parameters from different instruments (shear probe, thermistor, microconductivity sensors, etc.).

Going well: This has been a great experience, and I have appreciated how challenging it's been. I've learned so much in the weeks I've been here. The people here have been great and I have seen so many different perspectives as to what can be done with a background in science. I especially appreciated seminars and meeting with people who have science backgrounds and PhDs in science, but are not involved in traditional science careers. I will be sad to conclude this project. Lastly, I want to thank

Bartolome. He has been a great help, and I would be very lost (in Matlab) without him. 😊

Posted by [kmorrice](#) at Aug 12, 2010.

This Week

I made a presentation in the lab meeting and received quite a bit of inputs. This will be very helpful when I make my final presentation next week. Also, wrapped up my project by making a few more microscopy slides/pictures to show for next week.

Next Week

Make the final presentation and hand in the report!

Well/Not well

Everything going well! I am very happy to see how the project coming together at the end (as you all will see next week)!

Plus, this has been an incredible summer here at MBARI! Now we have contacts in the US, India, Spain, Romania, UK, Scotland, I will add **China** and **Canada** to this list as well! Many thanks to George, Linda, the Worden lab and of course all of the **INTERNationals!!!**

Posted by [hyu](#) at Aug 13, 2010.

This Week

- Started the presentation and report.
- Kept on running tests of the path planner I have developed to get some interesting results.

Next Week

- Finish the presentation and keep on with the report.
- Show the presentation to the mentors on Monday
- Fix the presentation and tune details on Tuesday
- Do the presentation on Wednesday
- Fix the report and tune details on Thursday
- Hand in the report on Friday
- Pack everything and go back to Spain on Saturday
- Busy week!

Going Well/Not Going Well

As usual, the end is closer than what we would like, but that is the way it goes. The summer internship has been a great experience for all of us. We learnt a lot, we put our skills to the test, and we met lots of people.

I should add a list of people after a "Thanks to". I should put my mentors, Sergey Frolov and James Bellingham, for giving me the opportunity to be here at MBARI this summer. I should also put Thomas

Hoover, Brian Kieft, Michael Godin, Robert Mcewen and all the AUV Lab for having me this summer in their lab and helping me always with a smile in everything I needed. I could not forget George Matsumoto and Linda Kuhn for running such a successful internship program. I could also add a list of people I met during this internship, like Kanna Rajan, Frederic Py, Tomas O'Reilly, Steven Ramp, John Ryan, Jon Erikson, Denis Klimov, Mike McCann, Judith Connor, Jeffrey Paduan, ... and many more. And finally, I should make a special mention to all the interns that shared with me this experience, Hana, Becks, Sandeep, Katie Lodes, Melissa, Roman, Spencer, Chris, Katie Morrice, Matt, Aaron, Sara, Dan, John, Izzy, Hang and Greg . But even if I did that, the list would be incomplete, and trying to complete it would be a never ending process. So, after saying a big "thank you very much" to all of them, I will add a thank you... yes, you, because if you are reading this is because you have participated somehow in this wonderful time during this summer, and want to know a bit about how we feel after the internship. No matter if your participation was big or small, you helped making this summer unforgettable.

Do not hesitate to contact me whenever passing by Mallorca, in Spain.

Posted by [bgarau](#) at Aug 14, 2010.

Today, two updates for the price of one. The testing for the laser rangefinder is fully complete. the rangefinder is now cleared for use inside the pneumatic spring. I began work on a second smaller project at the beginning of next week. A temperature sensing probe needs to be inside the spring while the piston is cycling. this means that we cant just stick a thermometer in there and run it. I was able to use some existing designs and modify them to get a part that would work for our application. I machined the parts and this week I will be finishing the project. All in all everything is going well, I completed my main objective and have even been able to start another project. Once again, another solid summer, Thank you Andy, George and Linda for all the help.

Posted by [rmarin](#) at Aug 16, 2010.

Last Week:

I was on the western flyer all week. We completed 6 out of 7 dives and collected more than 100 samples so all in all a success.

I have also completed my report (apart from the abstract) and nearly completed my presentation.

Next Week:

Complete and practice presentation

Complete Report

Organize data I'm taking home

Put together a plan for paper

Going well/not:

Everything's going well. The cruise was a great experience and it was great to go to see with a different set of people. My report is coming along well and we think we can write a paper on my work. The internship has been a fantastic experience, thanks to all the other interns, George, Linda, Dave and Jenny my supervisors and everybody else who's helped make it such an amazing summer.

Posted by [iyee](#) at Aug 16, 2010.

This week:

Time to dig in on actually writing the behaviors and code for the SES. I have the movements of the carousel down but am still working on the start up behaviors as well as the finer aspects of making this equipment sea-worthy. I also started in on my presentation and paper. The paper will be surprisingly easier than the presentation. I still wonder what i should present to the staff.

Next week:

Crunch time! Presentation, paper, and project! I still have so many pictures to take, ideas to organize and i really want to get my project as close to complete as possible.

Going well/not well:

Last week here. I cant believe time has past so quickly. I will truly miss this place and cherish the experience.

Posted by [jvirrey](#) at Aug 16, 2010.

Activities

This page last changed on Jun 16, 2010 by [linda](#).

Use this page to post information about after-hours activities

- June -August - Films in the Forest (<http://www.foresttheaterguild.org/index.cfm/films.htm>)
- June 17th - Center for Ocean Solutions seminar down in Monterey - "Suing the Service: litigation strategy to end the No Otter Zone"
- June 21st - kayaking with Monterey Bay Aquarium and students from Pajaro Valley High School - part of the Watsonville Area Teens Conserving Habitats (WATCH). 930-1130 followed by a short presentation by you at MBARI. Need four - so far: Rebecca, Hana
- June 25th - Tim Thomas - "The Last Whale Hunt and Other Fishy Storees"; Pacific Grove
- July 18th - Moss Landing Antique Street Fair (http://www.monterey-bay.net/ml/special_events/street_fair.html)
- July 23rd - 31st - Pacific Grove's Feast of Lanterns (<http://www.feast-of-lanterns.org>)
- August 5-8th - Steinbeck Festival (www.steinbeck.org)

Films in the Forest

This page last changed on Jun 01, 2010 by [mage](#).

Films begin at dusk, and no film is longer than 2 hours. The theater opens at 6:30pm if you care to picnic. Admission is \$6.00 for adults and children under 10 are free. Movies are subject to change without notice. Come early; a pillow is recommended for the hard bench, and dress warmly. The concession stand is open through intermission serving popcorn, desserts and beverages hot and cold. All profits benefit the Forest Theater Guild and The Michel Willey Youth Scholarship Fund. The Forest Theater is a non smoking facility, absolutely.

The 2010 Films in The Forest Program is a labor of love of Susan Willey & Megan Terry. The Guild wishes to acknowledge both Susan & Megan for their leadership, support and commitment to the success of the Forest Theater Guild. A portion of the proceeds of this program shall contribute to the Michel Willey Youth Scholarships.

Please visit the Films in the Forest website at www.filmsintheforest-carmel.org.

Tuesday, June 15

THE JAZZ SINGER sponsored by Visions Graphic Design & The Doggie Gazette

Wednesday, June 16

SLEEPER sponsored by The Beach Crowd

Thursday, June 17

CASINO ROYALE sponsored by Forest Theater Guild

Tuesday, June 22

VICKY CHRISTINA BARCELONA sponsored by Inns-by-the-Sea

Wednesday, June 23

CITY SLICKERS sponsored by Blue Adobe Mortgage

Thursday, June 24

LA CAGE AUX FOLLES sponsored by Wells Fargo Home Mortgage

Tuesday, June 29

REVENGE OF THE PINK PANTHER sponsored by Carmel Kiwanis

Wednesday, June 30

MOONSTRUCK sponsored by Kelly Productions

Tuesday, July 6

GOLDFINGER sponsored by Pine Inn

Wednesday, July 7

OCEAN'S 11 sponsored by Friends-of-Film

Thursday, July 8

MEN IN BLACK sponsored by Bank of America Home Loans

Tuesday, July 13

THE PRESENT surf documentary sponsored by Liquid Surf Shop

Wednesday, July 14

BEETLEJUICE sponsored by The Beach Crowd

Thursday, July 15

SHAPED local premiere of a documentary by Walter Georis sponsored by Carmel Valley Art Center

Tuesday, July 20

HAROLD AND MAUDE sponsored by Holly's Noir Night

Wednesday, July 21

MAMMA MIA sponsored by Keller-Williams Realty

Thursday, July 22

SHREK sponsored by Pebble Beach Company

Tuesday, July 27

HOTEL FOR DOGS sponsored by Diggidy Dog and Carmel Drug Store

Wednesday, July 28

MICHAEL JACKSON'S "THIS IS IT" sponsored by Carmel Stamp & Coin Shop

Thursday, July 29

ARTHUR sponsored by J. Lohr Winery

News

This page last changed on Apr 30, 2009 by [linda](#).

**This page can be used to post information that might be of interest to all interns.
Please begin each entry with the posting date.**

-

Opportunities to Go to Sea

This page last changed on Jun 30, 2010 by [mage](#).

If you are interested in getting out on one of the ships, you may be able to go on one of the following dates. More dates will be added, so keep an eye on this page! Let George or Linda know if you are interested (as far ahead as possible).

- June 17th - Melissa, Spencer, and Hank - need to be at dock by 0630
- June 18th - Point Lobos - Chaffey; Roman and Katie
- June 22nd - Point Lobos - Rebecca
- June 24th - Point Lobos trip: Aaron and John
- July 1st - Benthic ROV Cruise (six spots available); contact Linda or George if you are interested. Hana, Bartolome, Daniel, Sara, Katherine, Matthew

- July 1st - Zephyr - Sandeep

still need to get on the boat:

Isobel, Sandeep, Christopher

Before going out to sea (ask Linda if you have questions; there is some on her desk near the phone):
Dimenhydrinate (50 mg) - same thing as Triptone or Dramamine: 0.5 to 1 tablet before you go to bed

In the morning:

Another 0.5 to 1 tablet as soon as you get up (this needs time to work - if you wait until you are on the boat, it is way too late) along with 1 caffeine tablet.

Eat something bland like bananas, graham crackers, saltines, Ensure
NO coffee or juice (too much acid)

Four hours later (depending on how you feel - if it is very calm out there, you might be able to skip this)
Another 0.5 to 1 tablet, and 1 caffeine tablet

Eat something bland like bananas, graham crackers, saltines, Ensure
NO coffee or juice (too much acid)

Comments

Where can we find information regarding those field work days?

I would like to go to sea, but I am specially interested if there is equipment being deployed (ROV, AUV, moorings, etc.).

Is there any way of estimating when more dates will be added? July and August are still almost empty.

Posted by [bgarau](#) at Jun 20, 2010.

Hi Bartolome et al...

So the best place to see what is going on is the web calendar from the MBARI internal webpage. This is the most current and up-to-date location to find out. Each of the days should have a hyperlink to that days mission so you can see what is being planned. These precruises usually go up about a week before the cruise.

Posted by [mage](#) at Jun 20, 2010.

Schedule

This page last changed on Jun 25, 2010 by [linda](#).

- MBARI closed: June 18; July 2, 5, 6, 16, 30; Aug. 13.
- June 14th - MBARI interns arrive and start their program
- June 14th - Summer Intern Cookie Break
- June 15th - MBARI Blood Drive
- June 16th - Glenn Chen Seminar
- June 17th - Center for Ocean Solutions Policy Seminar
- June 21st - Kayaking with MBA. 9-1130
- June 21st - Intern Meeting 0830-1030 in Tank View Conference Room
- June 21st - Project update. Josi Taylor
- June 28th - Proposal Workshop 11-12 in Pacific Forum, Linda in San Francisco
- June 29-30 - Day of Science, Engineering, and Technology/ MBARI Board meeting
- July 5th and 6th - MBARI holidays
- July 7th - Ari Shapiro Seminar
- July 11-16 - George out of the office
- July 12th - Project Update. David Clague. Submarine Volcanism
- July 19th - Project Update. Gene Massion. McSTAR, Linda in Washington DC (19-21st) for Deep-sea coral workshop
- July 21st - Interns host BBQ, Mark Abbott Seminar
- July 28th - Dijanna Smotherman Seminar
- July 31st - MBARI Picnic
- August 1st - MBARI Golf Tournament
- August 2nd - Project Update. Andreas Hofmann. Anthropogenic Ocean Acidification
- August 4th - Amber Mace Seminar
- August 14th - MBARI OPEN HOUSE
- August 18th - MBARI Intern Symposium at MBARI

DOEST Agenda

This page last changed on Jun 28, 2010 by [mage](#).

looks better in the attached pdf

AGENDA

Day of Engineering, Science
and Technology

Tuesday, June 29, 2010

8:45 a.m. - 4:00 p.m.

Pacific Forum (except as noted)

Theme: Looking to the Future

Time Title Presenter(s)

8:15 - 8:45 Breakfast

8:45 - 9:00 Introduction Chris Scholin
President and CEO

MBARI Pushing the Envelope

9:00 - 9:30 Controlled, Agile and Novel Observing
Network (CANON) Francisco
Chavez

Senior Scientist

9:30 - 10:00 Vision for the technologies
of the future

Jim Bellingham

Chief Technologist

10:00 -10:30 Data from the depths around the clock
(MARS)

Craig Dawe

Technical Support Manager/

MARS Manager

10:30 - 11:00 BREAK

11:00 -11:30 The ocean in a high CO2 world,
from deep to shallow

Peter Brewer

Senior Scientist

11:30 - 12:00 How do we observe biogeochemical
cycles at the global scale in a
changing world?

Ken Johnson

Senior Scientist

12:00 - 1:00 LUNCH - Pacific Forum

Persistent Presence

1:00 - 1:30 Group 1 (Test Tank)

Long Range AUV

CANON Field tools

Moored ESP

Group 2 (Building D High Bay)

Benthic Imaging AUV

MBARI new vessel designs

Brian Kieft

Software

Engineer

Thomas

Hoover

Instrumentation

Engineer

ESP Team

Brett

Hobson

Mechanical

Engineer

Keith

Raybould

Chief Operations

Officer

1:30 - 2:00 Group1 and 2 switch

2:00 - 2:30 BREAK - Walk back to the Pacific Forum

A Look Forward

2:30 - 3:00 Extending an autonomous presence

(wave-powered buoys

and AUV docking)

Andy Hamilton

Systems Engineer

3:00 - 3:30 Ocean visualization

Dave Caress

Software Engineer

Brian Schlining

Software Engineer

Brett Hobson

Mechanical Engineer

3:30 - 4:00 Exploration and discovery: careful

plans and serendipity

Bob Vrijenhoek

Senior Scientist

4:00 - 6:00 Allhands reception in Atrium

Posters in the Pacific Forum

? Sediment traps and ROV operations under icebergs

? High-Resolution AUV Mapping Reveals

Structural Details of Submarine Inflated Lava Flows

? Topography within the axial channels of

Monterey and Soquel Canyons

? Development of a High-Resolution Shallow

Seismic Refraction Tomography System at

the Monterey Bay Aquarium Research

Institute

? Distinctive Fine-Scale Morphology of Hydrate Ridge

? Fine-Scale Morphology of Gas-Rich Sites on the Cascadia Margin Near Bullseye Vent

? Fine-Scale Morphology of West Mata Volcano

and the Northeast Lau Spreading Center, Lau

Basin from AUV Multibeam Surveys

? Connecting an Ocean-Bottom Seismometer

to a Seafloor Cabled Observatory: A

Prototype System in Monterey Bay

? Development of in situ Respirometers for Ocean Acidification Studies

? Time series analysis of six whale-fall

communities in Monterey Canyon

? Cataloguing biodiversity in the deep-sea:

tools, techniques, and challenges

? Remote Detection of Marine Microbes and

Functional Genes Using the ESP

? Brett Hobson

? Dave Clague

? Eve Lundsten

? Rich Henthorn

? Charlie Paull

? Hans Thomas

? Dave Caress

? Paul McGill

? Michael Risi, Craig Okuda,

Bob Herlien

? Kyra Schlining

? Nancy Jacobsen Stout

? ESP Team member

This Week

This page last changed on Aug 16, 2010 by [mage](#).

WEEK TEN

9 am Test Tank

I. Review, preview, and updates

- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Future: Addresses and updates
- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Pronunciations?

II. Individual updates

- ? Check confluence for updates MISSING: ROMAN, JOHN, IZZY, AARON

III. Past events

- A. August 10th - Katie Lodes (10 am)
- B. AUGUST 14TH - MBARI OPEN HOUSE

IV. Upcoming events (see MBARI calendars and/or intern calender)

- A. Moving out
- B. Inventory
- C. Departing - rides?
 - Sandeep
- D. Intern T-shirts
- E. 2 hard copies, 1 electronic copy (my tempbox), id card, key card, evaluation....
- F. INTERN SYMPOSIUM

V. Seminars coming up

- B. August 17th - John Horne (1 pm)
- ◦ George will be leaving early most of this week (rehearsals)