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This page last changed on Jun 24, 2009 by [linda](#).

This is the home page for the Summer Interns space.

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

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Comments

Hi All,

This week has seen quite a few kinks ironed out in terms of my OMF piece, which I'm hoping to have designed this weekend and have a color swatch to show Nancy by Monday. I'm also working on the piece for the aquarium and it's been great to discuss ideas and storyboard stuff with Alena. The OMZ piece is on hold while I wait for the Midwater team to get back from their trip on the Flyer.

It's been really interesting and useful to answer questions about the process of illustrating posed to me by non-illustrators. It's really made me think about the way I work and what I do in a different way. Really looking forward to scuba class. Just have to make time to read the book!

Have a great weekend everyone!

p.s I have lost "the brick" (my cell phone) It looks pretty ancient and is large and silver. If anyone happens upon it would you let me know?

Thanks!

Posted by [lvollset](#) at Jul 30, 2009.

It was really great to meet Marcia. I appreciated the time she took to sit and chat with us; she's super cool.

After running around in circles this week and avoiding a near disaster (data loss) I've finally got a Java Virtual Machine up and running on my little ARM computer. SIAM is also up and running, albeit slowly, smoothly so far. Still need to talk with Tom and finalize what I need to do for the rest of my time here.

Next week will be lots of documentation, finishing the Ysi driver, and hopefully starting on my paper / presentation. That and the Point Lobos cruise next Wednesday!

Posted by [dbonnie](#) at Jul 30, 2009.

I thought that using the YUV color space would be better than using RGB, because in the YUV luminance and chrominance are already separated. Feature extraction would be done in more meaningful images. But it turned out that RGB images can give better results. Why????

I am almost done with the presentation and wrote a little bit of the report.

It was cool to learn some secrets of Marcia's success: "I always think I am in the best possible job", "I am accepting this job because it's not possible to perform worse than my predecessor" (strong modesty, but it makes sense). Interesting opinion about some past intern who finished his project in the first 3 days: "He didn't learn as much as his colleagues because he didn't experiment the trial and error phase". I had a similar "problem": I got very good results in my first attempt (not in 3 days but in the first weeks), but I don't understand exactly why it worked. Now I am trying to explain the results.

Have a nice long weekend everybody!!

Posted by [marco](#) at Jul 30, 2009.

This week I learned how to run a PAGE gel to analyze proteins. This was to see if I was even getting any protein from my protein preps, which I was. However, there is apparently no protein with the tyrosine in the chromophore. So, we ordered primers that would amplify just the tyrosine chromophore and I did PCR with those. After analyzing the gel, it turns out that the tyrosine chromophore FP is indeed present in the cDNA I'm using, which is exciting! Now I just need to figure out how to selectively amplify the tyrosine version, not the cysteine version. I tried a few different combinations of primers for PCR, but I don't think I amplified the tyr FP. I also learned a new cloning technique. I cloned part of the FP

gene (from the start of the tyr chromophore to the stop codon; the 3' end sequence of this FP gene is not certain yet) into a vector which was then transformed into competent cells, which I can use for sequencing next week. Hopefully the sequence will illuminate the 3' end of the tyr FP. This would allow us to make more specific primers to select for that end as opposed to the 3' end of the cys FP. Its all getting a little confusing, but I'm doing my best to figure this little mystery out! I also really enjoyed the meeting with Marcia this week. I agree with Marco; I think Marcia's comment about always thinking she has the

best job possible is a good way to look at life 😊 hope everyone has a wonderful weekend!

Posted by [mschorn](#) at Jul 30, 2009.

I also enjoyed Marcia's comments. I appreciate the fact that she took the time to meet with us.

I volunteered to help the Young Women in Science group on Tuesday. The Monterey bay aquarium sponsors the camp and they do a good job. The young women are 10-12 years old and some students speak spanish so everything that is said is translated into to both spanish and english. Throughout the data we worked on projects that were both educational and fun. As we made observations, the students recorded everything in thier lab books and learned to graph and analyze the data. I enjoyed the students enthusiasim. Sailing on the bay is always fun too. I think I will volunteer next year.

I found out this week that I will not be able to work on the ESP project. I am a bit disappointed but not surprised since we only have a few more weeks left and everyone is busy with project proposals till next week and then the ESP project manager goes on vacation. The good news is that my mentor says that I may be able to work on the ESP project after the intership is over. I am taking a genetics class in the fall so working with the ESP group as I am taking that class could be good timing.

I have been talking with many people with experience with oxygen sensors and getting input on calibration methods,data post processing, accuracy, biofouling prevention and instrument handling issues. It is extremely helpful to get input from people with years of experience in this area. I am also finding that the people I talk to are interested in what I have found out so far.

I am planning on doing another response time oxygen sensor test. Last time I did a test in the bay with the Ventana on Pt Lobos. This time I am going to do a more controlled experiment in the lab. I have been getting input from different people at MBARI, ACT(alliance for costal technologies) and O2 instrument manufacturers on how to do a good response time test. I hope to complete the test the week after next.

Next week I am going to go out on the Point Lobos with John Ryan. I am very excited because John knows a lot about remote sensing. He gave me a book on the subject a few weeks ago which I have been reading. I have lots of questions for him on the subject. Spending time with him will give me an opportunity to follow up and ask him questions. He has also asked me to help him get ready the day before so it should be a good opportunity to learn from him. I also found out that Mary Silver will be on the boat with us! I am very excited about that because several people have told me I must meet her someday and next week I will !

I am also looking foreward to the tour at the monterey aquarium on Tuesday. Have a good weekend.

COOL... Taryn should meet Mary as well. Mary knows HABs..... 😊

Posted by [kparker](#) at Jul 30, 2009.

My plans for this week were big, unfortunately I could not get even a quarter of it done. My mentor had asked for a memory upgrade for the Laptop I was using as it was necessary for the visualizations softwares I was using. But since my computer could not be upgraded the IS gave me a new Mac on loan. That meant copying all my files and making necessary SW installations on the new Mac. To make matters worse, as I was trying to give a higher security clearance to an Applet I was writing, I made a mistake and modified system file security privileges. Because of this my OS was not running properly and I had to take it to the IS help desk and get it fixed. The work I did this week is pretty much on Wednesday afternoon and today. I managed to embed an applet in a browser that interacts with Google Earth's plug in. I also developed a dummy mini server application to simulate and stream the AUV's position. With these components my visualiser works well. My plan to get a low level understanding of TREX and put a component in there that would publish its internal status has become my high priority activity for next week.

I don't want to conclude my status update without appretiating Marcia for taking time to talk to us. I have found her talk to be very inspiring and motivating.

Posted by [alhayat](#) at Jul 31, 2009.

This week didn't quite go as planned but it worked out anyway. I was hoping to get my new prototypes in this week and begin testing, that didn't happen. The wheels shipped on Thursday so they should be here next week. There was an issue with one of my orifices though so I probably wouldn't have gotten to the new wheels this week even if they had arrived on time. I have been working more on my paper this week, writing the discussion and introduction. Unfortunately there are some issues that will most likely still be unresolved by the time I finish my paper for the 20th. At least that gives me more things to talk about in the discussion. These issues can and will be resolved just not before the paper deadline. Hopefully I will be able to submit a revised paper when these problems are solved.

As usual there was also quite a bit of orifice testing last week. What was unusual though was that some of my data seemed to be backwards. My sapphire/ruby orifices were supposed to be the "best of the best", they should have given me the best results over all the other orifices, they didn't! I ran the several more times to see if I had missed something or set the test up incorrectly, it appears that I had not, the results were the same. Now, these sapphire/ruby orifices *should* be the best, why they are giving me bad data I couldn't say for sure but I have some theories that I will explore next week.

The coming week is shaping up to be quite a busy one. I would like to get my orifices in line (make them do what they are supposed to do) and get testing started for the new pelton protos. I also need work in some time for the paper/presentation.

Posted by [rmarin4](#) at Jul 31, 2009.

This week I've just been doing some DNA extractions on the MFB and matching them on the bench with Qiagen kit extractions. I've run multiple qPCRs of all the extractions and will hopefully be able to estimate the concentration of bacteria in them. Yesterday I set the MFB up to run 10 PCR's over the weekend and I really really really really really really hope they work so I don't have to go Office Space on the ESP...figuratively. As of yet, my paper is non-existent, but I'm hoping to change that this coming week. My presentation has been started, but has a LONG way to go. I specialize in procrastination though, so I'm not too worried about it. Besides all the project mumbo jumbo, I'm really enjoying myself! Everyone working in the labs are HILARIOUS...I don't know how we get any work done. As excited as I am to go

home, I'll miss everyone I've met...almost everyone 😊

Posted by [mfrazier](#) at Jul 31, 2009.

Well, this is a bit late because the last two days have had me busy in two worlds - I run my own intern program at the aquarium and I've been over there interviewing teens for the positions and working with team mates on my project. We've finally come up with a script to give Todd so he has something to work with when bringing together our introduction video for the Discovery Lab Ocean Acidification class. I've completed my staff training outline and sent it off to the manager overseeing the lesson creation, she's adjusted it as needed, and I've spent some time gathering images & information to use for the powerpoint I am creating for that... I am trying not to feel overwhelmed by the fact that I have to write a paper, put together a powerpoint for seminar, speak, build the staff training days & put together program packets AND make sure this lesson is accurately representing the topic of OA. Thank goodness for MBARI - it's great to have scientists at your finger tips! I get to meet with Dr. Peltzer next week to talk chemistry and to ask for his feedback. THREE WEEKS??? That's it?! Have a great weekend friends!

Posted by [adooner](#) at Jul 31, 2009.

This week I generated an outline and site map of what teachers would like to see on a HAB page. It's nice to have a little direction and something to refer back to, especially if you're scrambling for time like me! The feedback has been really helpful...so now I'm researching the historical background of HABs in Monterey, writing a brief, easy-to-read introduction on what causes HABs and what organizations are doing to prevent/ mitigate the effects of it. I'm also working with Raphe on coming up with a couple of case studies students and teachers can walk through --that way it gives them a chance to deal with the data and see what researchers go through to identify a bloom. Furthermore, I'm getting real-time SST and chlorophyll data to have up on the site, so things are definitely getting exciting. It's so bizarre that we only have 2 more weeks to work on this and then another week to write our reports and give our presentations! This upcoming week will be spent trying to get some of this stuff up on the web and hopefully having the teachers evaluate it. I'm also really looking forward to the aquarium visit since I haven't been and going on the Lobos this Wednesday!

Karen, that's a great suggestion! I would love to meet with Mary at some point in time.

Posted by [taryn](#) at Aug 02, 2009.

This week I organized the best framegrabs of the eggcases to put into my presentation. I learned how to use more equipment in the videolab so that my video clips would work well with the projector in the Pacific Forum. I also did a lot of networking this week to gain anymore information about the eggcases. Even though I had some good specific questions to ask, there was not much anybody could tell me; however, I did get some good information I could possibly put into my paper.

Most of my time now will be making a good presentation and writing my paper. Even though there is little information about my topic, I still hope to spark interest in those who attend the symposium with some cool video clips and interesting observations I've noted about the Tomopterid eggcases.

Posted by [ksimmons](#) at Aug 03, 2009.

Looked for changes with distance from shore and season on Line 67. This may be meaningful.

Road trip down south to deliver two MBARIans to a research vessel (NOAA ship McArthur).

Next week, find some defensible way to get rid of bad data points; this should make things a bit clearer.

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Posted by [jcraig](#) at Aug 03, 2009.

Last week I made serious progress on the autonomous control systems of the boat. Waypoint control has been written, though I've now found out it's a little overkill. I could've used a simpler, faster algorithm that should get the job done if the waypoint is within 500 miles (not a problem because I'd just rerun the algorithm if it got close to this). There're also a few bugs with it, but if I can figure it out I'll stick with my version unless I need to change because the dsPIC can't handle it.

I've also started developing code to use the ECAN on the dsPIC. The motor driver board doesn't seem to work when controlled serially by the dsPIC and we planned on using CAN to talk to it anyways, so we're going to develop the software needed for that now. Hopefully it won't take beyond today or tomorrow and we can start testing it with the hardware.

I also need to put up the mast and see how far it leans and affects the listing angle of the boat. It seems to not stick straight out the back but it's leaning to port.

This week I'm heading out on the Point Lobos, so that'll take up all of my Thursday, though I can hop back on it Friday. I'll be trying hard to finish ECAN early this week and then figure out how we can get battery charging working in the boat, so we don't need to take the hatch off to charge it onshore.

Posted by [bmairs](#) at Aug 03, 2009.

Last week I started looking through ocean needs documents for the west coast to start outlining my needs document. I am now flushing out my outline, filling in more information as I meet with more SF Bay managers/researchers/users. I had a meeting in Berkeley with the Invasive Spartina Project Director (Spartina is an invasive cordgrass that is invading SF Bay - it's also a problem in Oregon, Washington, BC, and Alaska). I also had phone interviews with the Director of the California Department of Boating and Waterways and a Fisheries Biologist who works in NOAA's Habitat Conservation Division in SF Bay.

I am collaborating with a fantastic programmer from NOAA, Lynn DeWitt, to create the real-time salinity map of SF Bay. Last week she sent out a mock up of the product, which incorporated both of our ideas, and it's looking great.

Posted by [mkelso](#) at Aug 03, 2009.

This past week has been chaos to say the least (which is why my update is so late!). In order to grow up the plasmid I've been working with, that closely resembles my mystery sequence, I had to transform it into E. coli and generate colonies. The first problem was that there were way too many colonies on my plate, so I had to just hope for the best and pick colonies anyway. Then, when I tried to visualize the

plasmid after extracting it from the replicated E. coli cells, it ran really oddly on the gel, so I don't even know what kind of product I have. I still have not successfully isolated the plasmids yet. This weekend (yes, I was here ALOT over the weekend) I tested the QPCR primers I designed with Eunsoo Kim. This was way more complicated than I originally planned, but at 6pm last night (Sunday) I finally got some promising results. One primer set looks like it just might work, so I may be running a QPCR this week on some environmental samples. The rest of my week will be dedicated to trying to grow up my plasmid some more and work on my paper, which I've been trying to do (unsuccessfully) for about 5 weeks now.

Posted by [jvassar](#) at Aug 03, 2009.

My plan for the week was changed from working on security issues of ESB to working on XSLT transformations to make it work for SensorML. After doing a little research on the web, I realized that there are different tools available that can implement these transformations, and/or perform XML mapping. I got the evaluation versions of each of these and started testing. These tools are quite amazing!! For example, using Stylus studio instead of mapping every keyword on one XML to the other one, I can graphically map the keywords using lines that join them. Moreover I can define the meaning for each connection by choosing from the list of possible functions that it can do.

Finally I was able to get the basic version of the code transformation working, but there is a lot that can be done. For example, if the user name in the input XML document is "Kevin Gomes" and in the output xml it has to be written as "Kevin" for the first name and "Gomes" for the last name, then I have to use some kind of split function to perform this. I got the code, but somehow the xsl:import function is not working properly. Today I tried this on stylus and it looks happy with the code, but still not sure why it was not working with oxygen and servicemix-saxon

TO DO: There are lots of things for this week. I am going to meet Kevin tomorrow to talk more about editing the actual SIAM code to make it work with the ESB. Need to start writing my paper ASAP. SCUBA (book + video + exams).

Good luck to me 😊

Posted by [durga](#) at Aug 03, 2009.

10-August-2009

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

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Comments

The end of the program approaches... I am feeling it as I imagine everyone else is at this point. This week was filled to say the least. My new pelton wheels arrived early in the week. I had to spend a few days modifying my testing bench to accommodate the new wheels then I got to test them. The first tests were disheartening, the numbers I were getting were under what I had been getting with the "inferior" wheels. Fortunately my sadness was short-lived. The data that I had been comparing my new wheel numbers to was from rounded inlet tests, the orifice that I was using with the new wheels was square, as soon as I switched the orifices the problem was corrected and I saw some good numbers. Now my task is to determine the optimal impact position for the water jet on the new wheels. I will finish out the week playing with the stream adjustment until I find the spot that produces the most power. Once I get the orifice placement dialed in I can collect some good data and then have some numbers to compare to the curves that I already have.

In other news the paper and presentation are coming along. I am going to try and go over the presentation some time towards the end of next week. I want to run through it several times because I have a feeling that, as it stands, I will exceed the 15 minute time limit. The paper is going to take some time to organize and "stitch" together, I have the pieces but I will need to assemble them into something that flows. Some sections also need some work and maybe a little more substance. All the paper/presentation organizational stuff is on schedule for next week.

Posted by [rmarin4](#) at Aug 07, 2009.

After an incredibly long weekend testing out the primers I designed, I was finally able to pick out a good set. By using a gradient PCR I found the best annealing temperatures for those primers and was finally able to run a QPCR on Monday afternoon (after the microwave incident). I pipetted my first 96-well plate...by hand...individually. It's surprisingly had to keep track of the little wells, but I was able to get through it. Tuesday morning I got my QPCR results. They weren't terrible, but they could definitely be improved. I had some slight water contamination and one of the dilutions wasn't actually a dilution, but nevertheless I think it was a pretty good first QPCR.

I also ran a quick PCR to make sure that the negative DNA I was using to test my primers was not degraded and still capable of amplification. It was supposed to be the simplest PCR ever, but of course something had to go wrong, and there was water contamination. At least I know that the DNA is alright, but I may have to re-run the PCR.

Wednesday was pretty much devoted to the BBQ for me. I hope you all enjoyed it, and I know I had a lot of fun doing it (even though I was here until 2am on Tuesday night). Roman, thanks for being a champ and stepping up to the grill. And to the other people who helped with prep (Katherine, Harriet, Durga, and anybody else I might have forgotten), you all were real life savers.

Today and next week I will be running another QPCR, and I will re-transform E.coli with my plasmid again to see if I can get some better results. I'll also be working on my paper. I have so many different protocols to write up that it's definitely going to take awhile. Hopefully I'll have time to write amidst all my lab work.

Posted by [jvassar](#) at Aug 07, 2009.

I spent this week finishing the report and presentation. I sent them to my mentors and they said that I'm done with the proposed project. It's hard to believe.

Now I'm starting with a new project: adjust a Java interface to call the classifier functions. This way someone with no experience at all with Matlab programming will be able to use the classifier without much effort. That is the task for next week.

Posted by [marco](#) at Aug 07, 2009.

I spent most of the week gathering, configuring and testing equipment for my O2 sensor reponse time experiment. It is a simple experiment but it has taken longer then I expected to gather and test the componets.

Next week I still need to find an A/D converter to interface to the SBE43. I am hoping that the test will be done by Wednesday. I will spend the rest of the week doing the post processing of the data. I then want to meet with 3-4 people to review the data results.

Unfortunately, I could not go out on the Pt Lobos with Mary Silver this week. I was going to go out on the Pt Lobos on Tuesday of next week to do more tests but I am behind schedule on the response time experiment so I am going to focus on that and get it done.

I enjoyed the behind the scenes tour of the aquarium. Thanks for setting that up George.

Posted by [kparker](#) at Aug 07, 2009.

This week I was exceedingly productive. With some help from Mariano in my lab, I have written a basic autonomous control system for the boat! Given a pair of GPS coordinates, my boat successfully navigates between the points, slowing to stop on top of the end point.

I also shipped off the motor board to be repaired. It'll get there Monday, so hopefully they can repair it and turn it around quickly.

I have planned out the rest of the things needed for basic autonomy for the boat. I need to verify that these will work and go ahead and order them.

I've been continuing developing a CAN-bus driver for the microcontroller we're using. It should be finished early next week and then when the driver board comes back, we should be able to finish testing it. I did find out that it would cost us a pretty penny just to upgrade our hardware to use a CAN bus. This is unfortunate, but given how useful and robust it is, it needs to be done.

Next week I have a Point Lobos trip that eats away my Monday and no Friday. Gotta finish boat integration next week as the software should now be set for remote control! I have to write a driver for the GPS, but then everything should be set for waypoint autonomy.

Posted by [bmairs](#) at Aug 07, 2009.

This week was awesome. I did major development. First, I got to install and run TREX with the simulator on my computer. I got to run different missions and observed the generated log files. Next I started modifying one of the reactors to publish the status of the vehicle via a socket. With this my html page, which I developed last week, with an embedded Java applet was able to read the streaming data and show the status on Google Earth's plug-in. Step by step I included publication of active vehicle behaviors and showed a visual representation of it. Thus far I am really happy by how it is working.

Next week I will start writing my report and preparing my presentations. Also I will be working on the possibility of depicting the plan generated by TREX (The autonomous agent or the controlling SW).

Posted by [alhayat](#) at Aug 07, 2009.

This week started rather distracted and I feel I've lost some important time. As my project starts to wrap up there are still a few pending items which I did manage to address though. I worked closely with Todd Walsh, putting together the introduction slide show/video for the OA Discovery Lab class - we are about 1/4 of the way to completion. Stitching together images and video so they flow well and make sense is more challenging than I anticipated, especially when the images have been pulled from different sources! I can't wait to see Laura's graphics placed into the whole thing! I spent a couple of hours with Ed Peltzer asking those nagging chemistry questions that just hadn't been clarified by any reading I had done - he's also been given the program description and materials for review. I also took a nice chunk of time to work on my paper. Next week, I work with Todd again and hopefully get the "okay" from Ed so we (my colleague, Rachael and I) can finally get the entire program description and training materials put together so they can be handed to Monterey Bay Aquarium school program staff during our training week of Aug. 31st - Sept 4.

Posted by [adooner](#) at Aug 08, 2009.

I can't believe the summer has gone by so quickly...

This week was alright. Has some good talks with my mentor and the folks over at NOAA and hashed out what the outcome of my project provides for them.

In the midst of getting the ARM processor and instrumentation ready for a demo, more work has surfaced and hopefully I can get this all out of the way on Monday.

Still need to do the paper, but working on the presentation.

Good boat trip on Wednesday.

Posted by [dbonnie](#) at Aug 09, 2009.

Things have finally started to work this week! Hooray 😊 I knew that attaching Lucky the frog to the MFB would work. We were able to put new reagents on the MFB and run PCRs that actually amplified...imagine that. With the PCRs going well, I was able to go through the whole process from extraction to amplification on the ESP for the first time this weekend. Each extraction and series of PCRs takes 12 hours, so I'm glad I was able to get things going.

I've been working on organizing my paper and presentation as well. I'm going to go over my paper with a few people in my lab this week and will hopefully get a draft written soon. I'm more concerned about my presentation at this moment in time since I can revise the paper post-program. I'll be working on it a lot this week. (yay)

Posted by [mfrazier](#) at Aug 09, 2009.

work with this tyrosine chromophore has become more convoluted and confusing than ever! I thought using these primers would work, but it appears that PCR with the tyr chromophore primers and the old cysteine primers creates a chimeric protein with the tyrosine chromophore, but the ending of the cysteine gene. Upon further review of the 454 contigs (done before i got here), it seems that the tyrosine protein has a different ending, so we made primers specific to that ending. there may even be a different beginning (3'end), so we ordered primers for that as well. once they finally arrived on friday, i did PCR and got two products, which is really strange. This weekend I worked on transforming the PCR ligation into cloning cells for sequencing. Unfortunately, when i arrived on saturday i found lawns on my plates, and then noticed that I used plates without ampicillin (booooo), so after another transformation, i come in to find only 6 colonies for sequencing... i'm not sure if the transformation worked because so few colonies grew. i may have to go back and start again from PCR, but the problem there is that i dont have any more cDNA! so i'll have to wait for megan to make some more... but hopefully these 6 colonies will have the full tyrosine gene once i sequence them! I think i'll have to try a good luck charm like monika did... any ideas?

Posted by [mschorn](#) at Aug 09, 2009.

This week was a continuation of writing the content for the website, so that I can get it running this coming week. I still have to get it approved by Raphe and Heather, my mentor.

I can't believe this program is going to end in two weeks! Definitely a little nervous for the paper and presentation. I have a feeling I'm going to be working on trying to get this webpage up until the very last minute...and get teacher feedback so that I can make some last minute adjustments before it goes up on the big screen.

Since this coming week is so short, I'm worried about getting enough time with the technicians to put up all the links, images, and whatnot but we'll see.

Posted by [taryn](#) at Aug 09, 2009.

Hey everyone!!

This week I have been working on my paper and trying to gather as much information as I can. I have also made a few connections with fellow researchers which has taught me a lot about networking. I really enjoyed the tour of the aquarium!! That was the highlight of my week of course and I learned so much there as well.
and so that's it. =)

Posted by [ksimmons](#) at Aug 09, 2009.

Hi All,

This week has been a week battling with OMF design ideas, which have now finally been resolved. I think these two illustrations I'm doing for MBARI have turned out to be the most challenging projects I've ever tackled as an illustrator! I don't think much will worry me after this in terms of complex projects 😊

It's amazing how long designs take to come together when you're trying to include so many elements and processes. I'm now running behind schedule, so this week will be pretty manic as two pieces need to be completed by the end of the week (won't have time at the weekend as that's filled with scuba class). Next week is presentation time....wish me luck with powerpoint!

Good luck everyone!

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Posted by [lvollset](#) at Aug 10, 2009.

In a meeting with my mentor, we tried to visualize how the actual integration works with ESB. It looks like there is a lot more work to do. Especially with the routing.

When talking about integration at the organization level, static routing is not very efficient. I tried to figure out if dynamic routing is provided by the Service Mix. Eventhough EIP and Camel can be used to achive the routing for OMF, but both of them are static routing algorithms.

This week is my presentation week. I started with my presentation. Will start with my paper today.

Posted by [durga](#) at Aug 10, 2009.

I have created an outline for my final CeNCOOS Needs Statement for SF Bay. I'm still scheduling meetings and adding information, since there are still many more groups to talk to.

I met with Linda this week to talk a little more about our presentations and figure out how to tell the story of my summer and project.

There is good progress creating the salinity map of SF Bay. I have instigated some discussion among the higher-ups to get SF National Estuarine Research Reserves data into our database, and useable in real-time!

This coming week I'm meeting in Oakland with a woman from the Coastal Conservancy on Monday, and working on writing my needs document and starting my powerpoint presentation.

I'm so looking forward to Devin and Durga's presentations!

Posted by [mkelso](#) at Aug 10, 2009.

Began putting plots into Powerpoint and now feel much better about my project. Its good to get oranized and try to define what has actually been acomplished this summer.

On the other hand I tried a multiple linear regression of the data and got very poor results.

Chavez has left town for the rest of the summer, so I'm down to one advisor.

Posted by [jcraig](#) at Aug 10, 2009.

17-August-2009

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

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Comments

Wow! The last update...

This week I did a demo presentation to my mentors. I spent too much time (22 minutes) on that, because I have difficulties on picking the correct words and also because I have too many slides and they are too fancy (lots of appear and disappear effects).

I sent the classifier results to Marc'Aurelio Ranzato, the guy who built the original version. He was happy to see that we've made some progress and improvements to that.

I started to work on other layers. There is a Java interface that runs on top of the classifier. We use the Matlab compiler to create a shared library and then the GUI calls the functions on the library. We have to make sure that all layers properly communicate with each other in order to create a package easy to use for scientists at MBARI and at partner groups.

Next week I will continue to work on the Java GUI.

Posted by [marco](#) at Aug 13, 2009.

The last update indeed! The summer past very quickly.

Most of the work I did this week was organizing all the unorganized scripts I was writing now and then into one generalized application. Then I rapped the Google Earth based dynamic visualizer in a near html page. I found a bug just a while ago which I am going to fix today or on the coming days. I also started working on my report, and if all goes as my plan, I will finish it before my presentation. Next week, I will be working on my report and presentation.

Title : "Dynamic AUV Mission and Data Visualization with Google Earth"

I had such a wonderful summer.

Posted by [alhayat](#) at Aug 13, 2009.

The summer has gone by quickly. Working at MBARI has been a wonderful learnnig experience.

This week I put together all the componets for testing O2 sensor response time. I made the measurements at room temperature and in a cold room where the temperature was 4 C. It was really cold in the cold room. I should have brought a warmer coat. I have started to analyze the data.

I enjoyed Devin and Durga's presentations. I am looking forward to seeing everyone elses presentation next week.

Next week I will be busy summarizing the data, finishing the presentation and the paper.

Thank you George for all that you did this summer to support the intern program. The program exceeded my expectations.

Posted by [kparker](#) at Aug 13, 2009.

Sniff... it's the last week?! Wow, that zoomed by pretty quick! This was a great week which began with a trip on the Point Lobos to collect urchins and brachiopods - it was my first time out and it was pretty amazing! No sea sickness, just pure adventure!! I was determined to soak in every second and I did - even got to help with the collection! Tuesday was the Monterey County geology tour with Gary Greene; I will never look at a cracked side walk the same way again! Wednesday morning, a few interns, George and I spent time with a Camp Sea Lab summer camp filled with girls - what a bright group of young women with great questions! I've been working with Todd Walsh trying to finish up the introduction video

to the lesson I've been helping to create, so far so good. It won't be done by the end of the internship but it's well under way. I am hoping to get more hours with Todd today. I visited the aquarium's exhibits department who are helping us by creating some fun props for the lesson - they're looking great! I spent yesterday photographing the props and a mock set up of what the classroom will look like when we teach "Carbonated Seas". Next week will be all about finishing up my paper, presentation and completing the preparation for the two days of training I will be giving my department.

Title: "Carbonated Seas": Communicating the Science of Ocean Acidification to a High School Audience at the Monterey Bay Aquarium

Posted by [adooner](#) at Aug 14, 2009.

The final days of the program are upon us. I have managed to find a good stopping place for my project which is lucky for me because there aren't many good spots to stop. Today I'll be getting the last portion of data I need leaving next week free for my paper and presentation. I also budgeted a little time for anything unforeseen that may be a problem next week. This weekend and next week will be spent cleaning up my paper and refining my presentation. I'm going to have to put in some serious practice time for the presentation too.

The geology tour on Tuesday was excellent. I had no idea that the area we live in as crazy as the fault map makes it look. I feel like a volcano could erupt in Hollister at any minute. I really did learn a lot more than I expected to though and the fact that we had the chance to see what Gary was talking about while he was giving the tour was wonderful, it really was cool.

Devin and Durga's presentations were great and I really appreciated the fact that they stepped up and showed us how to bust it out even on a short schedule.

This has been a great summer, I couldn't have asked for more. I learned so much in ten weeks it was crazy. I got the chance to do things that I've never done in all my years living here. I want to thank everyone here at MBARI, my mentors Andrew Hamilton and Larry Bird and especially George and Linda for making it all happen.

Posted by [rmarin4](#) at Aug 14, 2009.

As it stands, the title for my paper/talk: "Wave Energy For Vertical Profiling"

Posted by [rmarin4](#) at Aug 14, 2009.

Things are moving really fast now. I'm working hard to squeeze in a few more meetings, and get everything integrated for my paper and presentation. This weekend and next week will be all about getting the paper and presentation done.

I've met so many people doing interesting work in SF Bay this summer, which is very valuable to me, as this is my home turf and my area of interest.

Now it's time to distill out some big picture take home points from all of the information I've gathered over the summer, and package up all the information and beginnings of projects into a tidy packet that I can hand off to my mentors so they can carry it forward.

I have really enjoyed my work this summer. The program is fantastic. Thank you all and Linda and George.

Title is likely going to change...but for now: "CeNCOOS in SF Bay: beginning partnerships, pinpointing data needs, hunting down data"

Posted by [mkelso](#) at Aug 14, 2009.

wow, saturday already. amazing how fast 9 weeks can go. Don't forget about the BBQ on Sunday at

Connors - and if you can, also add your update/title if you haven't already. One more week to go 😊

and if you're bored and want something to do tonight - my boys are in Oliver at the outdoor forest theater starting at 730 pm. seats are \$12 for students and seating opens at 6 pm, you can bring food and drink.

Posted by [mage](#) at Aug 15, 2009.

Working title: "An Autonomous Surface Vessel: The Missing Piece of MBARI's Robotic Fleet".

Last week was very good. I received the new motor driver board I'll be using in the boat and have been working hard on the software so that I'll be able to use it this week. I've finished the software portion such that I can write what I need for remote control to work, though it will need a little more work before it's integrated nicely with the rest of the software I've written.

I talked to some people around MBARI about how best to set up on-shore charging for the boat. I think I have a setup that should work. It's time to order it and get it all installed.

This week will be all about working continuously on the paper/presentation in line with getting remote control for the boat working. I think all of that is possible by Thursday, so here we go!

Also, congrats to Durga and Devin for being done and it was fun working with you this summer!

Posted by [bmairs](#) at Aug 16, 2009.

THEE TITLE: Real-Time Water Quality Monitoring

This week I've just been trying to fill the holes in my data. I was able to run PCRs with standardized concentrations of bacterial DNA. This is great because now I can compare that data to the data I got from my environmental samples to estimate the concentration of bacteria in them! YAY 😊 (I know you're all secretly excited too...on the inside (That's what she said)).

It's kind of depressing to think that I only have four more days of work at MBARI. I think I might be the only person in the history of time to be bummed about going to Hawai'i...I'm sure it'll pass 😊 MBARIans, you will be missed.

Posted by [mfrazier](#) at Aug 16, 2009.

Last update, wow. Still can't believe how fast the summer has gone.

Nice to have finished the presentation and I'm done with the 1st draft of my paper...still needs a bit more work. Just wishing I had more time here to stay and further my project.

My last day is tomorrow so if I don't see you good luck with your presentations and it was great meeting you all.

Posted by [dbonnie](#) at Aug 16, 2009.

Le title: Expressing a Novel Fluorescent Protein from a Mid-water Siphonophore

So, the last update, eh? i wish i had better news, but unfortunately, no glowing bacteria. i thought this was going to be the week, but alas, science foils my plans! I finally got an adequate amount of colonies that supposedly had my insert in them (they were white in the x-gal screening). I even did a digest and there was a band the size of my insert. so, i started on an epic sequencing binge: i grew 48 overnight cultures, digested all 48, and then sequenced all 48 (sequences pending... i should have them tomorrow). i also ligated my insert into 6 competent cell batches, plated them out. For some reason i got a lawn--the plates have carbenicillin in them, so perhaps the concentraion was just too high... so I'm not quite sure what this means, but i'm hoping my sequences tomorrow will illuminate something about this tyrosine chromophore!

guys, its been so much fun! seems shorter than i thought it would be (thats what she said), but i'll always treasure these past ten weeks 😊 i've learned a lot from everyone and i couldnt have asked for a more diverse, fun, engaging group to spend my summer with!

Posted by [mschorn](#) at Aug 16, 2009.

Gosh, can't believe it's already the last week! There's still so much to do and tweak. I've completed most of the content for the website, but I still feel like there's a ton of information I didn't even touch

upon. Hopefully this will be enough to provide the basic framework for an educational HAB page. I'm working with Tom tomorrow to get all of it up, but I still have to get everything approved by Raphe and the other researchers...and not to mention the teachers! I should have something decent by Thursday, but I know I'll definitely be working on it during the weekend. Also have to work on the presentation and paper! I'm not too sure how I'm going to present this, but I have to have something solid by tomorrow. This week is going to be crazy! Hmm, and title? Well, how about "CeNCOOS's Educational Harmful Algal Bloom Webpage: Making Real-time Data Accessible and Understandable to Intermediate Students" Might change it later...

Posted by [taryn](#) at Aug 17, 2009.

This past week (and weekend) was spent running a bunch of different QPCRs to try to get a good standard curve out of my plasmid dilutions. Unfortunately, it's been really hard to get good results. I've struggled with bad dilutions and tons of water contamination. My goal was to run a QPCR using environmental samples. That way, we could tell in what locations and depths my mystery bug appears. However, all my lab work has left be absolutely no time to work on my paper and presentation, so I'm really going to have to struggle to get stuff in. I still don't have a title for my presentation, but hopefully I can crank that out soon enough.

Posted by [jvassar](#) at Aug 17, 2009.

SCUBA finished this weekend, it was pretty epic (that's what she said.) I also met a cool navy diver there, he goes deep (also what she said.)

Posted by [rmarin4](#) at Aug 17, 2009.

I have been engulfed by the world of phylogenies for the past two weeks-- which has been a nice breather from lab work. I have a nice rough draft of my 18S prasinophyte tree, which I hope to show at the presentations. Aside from that, I have been preparing stuff that I will be working on during the semester and planning out the lab work that I will be doing in January. All seems to be going fairly well.

I can't believe that the summer is already over!

Posted by [harriet](#) at Aug 17, 2009.

The good news is that Jellywatch is up and functional! We have picture uploading capabilities and a good moderation scheme to sniff out bad jelly sightings.

The bad news is that it doesn't work in internet explorer. In IE 7 and IE 6, the main content box of jellywatch.org just doesn't show up. like, at all. This week I will be pulling my hair out trying to figure out why.

Posted by [kelliott](#) at Aug 17, 2009.

Recently I have been finishing up my paper and editing it as well. My presentation is coming along and I got some pretty cool video clips..or at least they are cool to me! Learning about reproduction in the deep sea has been fun and interesting. I have learned so much about papers and pelagic polychaetes, its amazing that my head has not exploded yet. I am thankful for this opportunity to work with some amazing and interesting people during this internship.

The geology tour was awesome; however, I do feel sorry for those people who living on the fault line and their houses are slowly being ripped apart! So sad.The mission was beautiful and the Mexican comida estaba muy bueno!! Sorry if that was incorrect Spanish Alena!

SCUBA was the best!! Glad I had the opportunity and too advantage of it. I saw so many cool things and I was even more excited the deeper we dived (thats what he said lol). Hopefully I can scuba more on the east side, preferably in warm waters.

It almost feels like we just started having fun and before you know it, your done(thats what she said)!!! Good Times...good times

Posted by [ksimmons](#) at Aug 17, 2009.

It feels like everything I've done this summer has been done in the past week. Lots of PCAs and now step wise multiple linear regressions (finally a matlab processes that takes more than twenty minutes). Tim has been helping me define goals for the talk, some of which are showing that there is no correlation (read: many analysis are not working out).

I woke up this morning at 4:30, unable to sleep any more. I've entered exam mode and it will be nonstop from here on.

Posted by [jcraig](#) at Aug 17, 2009.

13-July-2009

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

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Comments

This week I finally finished watching thousands upon millions of videos about Tomopteridae eggcases and larvaceans that can be easily mistaken for the eggcases. The next process is choosing which videos produced the best framegrabs to transform into a presentation and constructing graphs using SIGMA plot to show distribution in the water column. In addition to video footage and graphs, I have been researching papers and articles about polychaete worms and their reproductive mechanisms since so little is known about Tomopteridae worms.

Hopefully next week I'll do the DNA analysis test and also KAYAKING so my update will be more exciting.

Webpage is up...that is exciting tho.

Posted by [ksimmons](#) at Jul 10, 2009.

I have 3 classes of animals: R, L and other. Other is any kind of event that cannot be placed in R or L: other animals, marine snow etc. We are trying to distinguish among these 3 classes. The new algorithm, using color, gave better results than the original version, which uses only grayscale information. However, we still have weird results: lot of R's are being considered as other. I am trying to figure out why this is happening. It has been difficult because I have a bunch of numbers in 8-D space and they don't have any physical significance. I'll probably spend next week debugging these errors, analyzing images and testing new parameters for the algorithms.

Posted by [marco](#) at Jul 10, 2009.

Hi everyone,

So this week has been a bit of a dud work-wise! T-shirt design plus BBQ kept me pretty occupied. But the BBQ was fun (though I was definitely in recovery mode yesterday 😊)

Hopefully I'll manage to meet my deadline for this week in the 1 day I've managed to dedicate to my actual illustrations! Hoping to get 3 rough compositional sketches ready on the OMF to send to Kevin and Nancy. I must say this OMF piece is proving pretty hard to get going on. It's conceptually tricky and it's hard to see how I can improve on what they've got already in any meaningful way. Hey ho, hopefully working on the compositions will help me figure out which way to take things. It'll be nice to do some fun field-sketching this weekend though as a bit of a break from all the brain/design work!

Managed to update my webpage, and Nancy (my mentor) has been wonderful, helping me to get to grips with dreamweaver. She's editing my personal website for me so that hopefully I can see how she does web design and come away with a working online gallery etc.

Don't forget to order your t-shirt if you haven't already!

Cheers

Laura

Posted by [lvollset](#) at Jul 10, 2009.

As I mentioned in my last week status update, my plan for this week was to communicate with Keith Grochow and start integrating some stuff with Google Earth. I emailed Keith a couple of emails on Monday but I got the response just today, so my plan with COVE is gonna be taking most of my time next week. On Tuesday I wrote a couple of scripts to generate a surface plot of temperature data collected on July 1st AUV run. I got disappointed because the interpolated data in Matlab became very sparse in Google Earth (because of the actual physical separation) and showed many "bars" here and there. I

tried to interpolate the data to cover all the spaces but the size of the 'kml' file was too big that it crashed Google Earth many times. I changed my strategy and showed the data on a line trajectory and now it looks cool. Yesterday I had lunch with my Mentor and all members of the Autonomy team. We discussed their next year plan and they enlightened me where my final work for the summer should be headed. It is gonna be tough to achieve that but I will do my best. More or less this is what I did last week...and oh ya did my part with cleaning in Wednesday's BBQ.

Next week, I will be working on the COVE using the approaches Keith suggested today. Also I will start working on extending the script that I have to include other sensor data and vehicle status.

Posted by [alhayat](#) at Jul 10, 2009.

Project update July 10, 2009, Roman Marin IV

This week was a very busy one. My shipment of sapphire orifices arrived Thursday, a little late but at least they got here. Most of my time this week was spent in the ME lab working on parts for the new orifices. The sapphire orifices are very small and as such are a little more difficult to work with than my steel orifices (but not too much thankfully.) In addition to working in the lab I have also been working with Solidworks, drawing up parts and creating assemblies. Now I have some really nice drawings to go with my physical models. I also got some tips on how to put text up on my external web page (thank you Bryant.) I will hopefully be able to add more stuff to my page soon.

Overall, I would say this was another successful week. I am a little behind on my machining which will delay my sapphire testing a bit but not too much. My other main problem this week was with the website, it was hard (for me.) Next week should be another busy one, I hope to catch up my machining and add some more content to my webpage. I should also be able to get some more tests in towards the end of next week. I'm looking forward to Monday's trip to the slough and also catching up on some sleep this weekend.

Posted by [rmarin4](#) at Jul 10, 2009.

At the beginning of this week I heard back from a few marine managers I contacted last week. I've scheduled 3 meetings to propose potential CeNCOOS data products for their projects. Now I'm thinking about how to prepare for those meetings, and make them productive despite my newness to the CeNCOOS system! Wednesday was largely shot for work b/c of the bbq, but it was really fun to hang out in the sun with all of you! Good work everyone! But, I did get some reading done on the West Coast Governor's Agreement on protecting our oceans (Washington, Cali and Oregon governors unite!) and some of what I learned from their Action Plan came up on Thursday at the SF Harbor Safety meeting that I attended in Richmond (the pertinent info was about new regulations for low sulfur fuel in near-shore shipping). After the Harbor Safety meeting I got to have lunch with a woman from NOAA NERR (National Estuarine Research Reserves) and talk about NERR's ocean obs needs in the SF Bay. Thursday evening, my mentor (Heather Kerker) and I met with two men from Exploratorium Outdoor Exhibits program, and they showed us around their exhibits at Fort Mason. It was so awesome. They do beautiful, insightful work. CeNCOOS is going to help provide real-time ocean obs data for their new exhibits at Piers 15 and 17. I hope that I can help get that collaboration started this summer, however, the timeframe for the project might not line up well with my time at MBARI.

Next week I want to start to solidify what my project will be. I want to make sure I have a completed product by the end of the summer. All of the projects I've been working on are collaborations and my progress depends some on the needs and response times of other agencies. So I think I need to plan carefully to make sure I can get something done in time!

Posted by [mkelso](#) at Jul 10, 2009.

How could I forget the BBQ? I couldn't, it was the best. Thanks to everyone who made it happen. I cannot even begin to express how much I appreciate being given the opportunity to BBQ all day, so fun.

Posted by [rmarin4](#) at Jul 10, 2009.

The BBQ was awesome.

The rest of the week consisted of configuring the PC-104 Arm processor with Debian Linux. After compiling the MOOS code (SIAM) and transferring it to the board I found an error with the current

Java Virtual Machine (JVM) installed. I'm hoping to rectify that error today but if not it leads to a very important question that the MOOS team has been discussing; does the Linux kernel need to be upgraded?

If the kernel does indeed need upgrading this solves the problem of finding another compatible JVM, as Sun Microsystems provides an ARM based JVM with a much higher compliance than what is currently on MOOS hardware. It's exciting for me because what I discover has a high possibility of changing the development path for MOOS software and hardware, which gives my work more of an impact that originally thought.

Also, GLERL (NOAA) has finally sent me a Ysi-6600 - a CTD with far more sensing parameters than the Ysi-600 currently connected to my system. I'm happy with my Ysi driver code so far and hope to add more robust control methods soon. The driver is usable now; just far from complete.

Next week will consist of more development on the PC-104 board. I've never compiled a kernel from source before so this should be a learning experience. I'll also [hopefully] edit my webpage...

On a side note, I met someone in the AUV lab who went to my alma mater (Hope College, MI). It's a small private liberal arts school so I was definitely geeked to meet another EE/CS guy, especially after finding similar ties with people and local microbreweries. Go Dutchmen!

Posted by [dbonnie](#) at Jul 10, 2009.

What a great week! It was productive both socially (BBQ) and "professionally". After three weeks of being distracted from my project by the NMEA conference and the EARTH workshop, I am finally settling into a nice pace. Tuesday, was awesome and scary all at the same time - I was asked to speak for half an hour each to two student groups in the Pacific Forum. I warned Todd not to laugh at anything I said since I really didn't feel like I had enough authority to speak about MBARI. It went great though and of course, working with kids is what I do, so I felt right at home! Yesterday was spent at the Monterey Bay Aquarium discussing the high school lesson our team is creating on the topic of ocean acidification. There have been some areas that have needed clarification - we sat down and chatted with our resident chemist who discussed the carbonate buffering system with us and put us through a test of sorts. This project is a bit of a challenge - just how does one even begin to talk about ocean acidification in a 45 minute time period that has a 1/2 hour live animal component, and must cover California high school science standards!! We have run into a snag with a video piece we are hoping to have by September. We had asked Sea Studios for permission to use clips from "One Degree Factor" but alas, they are not their own clips. We are thrilled that Laura Volsett, illustrator extraordinaire has agreed to make clips for us - phew!! I contacted Todd in AV who has agreed to work with me to find video and photos of scientists at work for this class and finally, I have gotten in touch with Dr. Jim Barry who has also agreed to chat with me next week to go over the lesson description we have created and to give us some advice on what to place on a table we've named "Future Oceans"? No...microbes won't do! Great week! Have a fabulous weekend folks, it was fun working with such a stellar group of BBQers!

Posted by [adooner](#) at Jul 10, 2009.

Completed AUV 2010 engineering project report . Worked on Oxygen sensor evaluations this week. Got cables and software together on Monday. Went out on Pt Lobos on Tuesday. 3 oxygen sensors on Ventana ROV. Took water samples at multiple depths and processed with reagents. Watched Benthic Rover deployment to MARS. Very exciting. Nice day on the bay. Processed data the rest of the week.

More Oxygen Sensor data processing next week. Also need to complete winkler titrations on water samples taken. Did not get to meet with my mentor this week. Hope to meet with him on Wed of next week.

Posted by [kparker](#) at Jul 10, 2009.

I'm just going to echo everyone and say that the BBQ was great! All my CeNCOOS co-workers absolutely loved it. So cheers to everyone for organizing, cooking, and to the random dude who finally locked the upstairs fridge!

This week got a little busier. I finally finished writing emails to all my contacts; however, no one has really written me back yet --except for one middle school teacher all the way out in North Carolina. It would be great to get in touch with some educators here in California, especially since I'm trying to create an educational HAB website specifically for the central/ northern region.

Steve (my mentor) is trying to get a hold of his daughter's middle school teacher, but that's still proving to be difficult. I guess it is summertime so it's challenging to reach people, especially teachers. If any of you know middle school teachers in the area that wouldn't mind emailing or chatting with me on the phone real briefly, please let me know! I need to get a better idea of what type of HAB information middle school teachers would find most appealing and beneficial to their students. It also would be good to get a general sense of what level/ language should be used to present the material.

Anyway, the rest of the week was spent investigating real-time data websites (specifically those that showed chlorophyll a concentrations and SST). CeNCOOS's web-tech guy, Fred, showed me this awesome graph on ERDDAP today, and he is currently helping me to develop a graph that superimposes chlorophyll a concentrations onto SST images. So, that will be great because it's real-time data and a sweet tool educators can use in their classrooms. The ultimate goal of this project is to provide all this HAB information on one site and make it accessible AND understandable to both the general public and students.

So the project is finally shaping up and I'm glad to at least have a focus. My current limiting reagent is the teachers' responses, but hopefully they'll get back to me next week. So I'll work on filtering through more websites, interpreting/ translating scientific jargon, and hunting down some enthusiastic educators.

Oh, and I'm super excited for Monday's kayaking trip. YEAH!

Posted by [taryn](#) at Jul 10, 2009.

This week I was very productive. I worked hard on integrating the remote control hardware into the control software I was already building. As of right now the throttle control should work remotely for the boat. I'm finishing the software for the rudder, though I'm running into a couple of problems there, but it should be sorted before the kayak trip!

I've been talking with John Ryan and the harbormaster in finding a place to test the boat. For the initial test, now that the Western Flier is gone, its dock should be enough area for us to keep the boat on a leash and remotely drive it around. We're planning on a Tuesday test. This should be enough time for me to finish the software and that means my adviser from UCSC can come and watch.

I got some more parts besides the remote control: I spent a while making some connectors and picked up a motor driver board for the ballast motor. This means that we should be able to remotely control all the boat's actuators with this remote control without ordering more hardware.

I've also started recording all observations about the boat state as I'm working at it online in a wiki to keep track of things. Many things aren't documented and when I figure them out it needs to be written down somewhere so that's never a problem again.

I've also been trying to get my desktop computer here running all the software I need for it to work. It's a slow process as everything I want to do doesn't seem to work, which is definitely a theme with me...

I also spent ~3 hours in the sun grilling on Wednesday, which seemed to be an amazing success (even though the BBQ chicken took a little longer). Unfortunately, though, I'm pretty burned from that day as I didn't realize I was in the sun the whole time until the very end!

Next week I'm planning to have the boat under remote control and perform our first live test. I would like to integrate the motor driver board into the system also and add the ballast motor to be under my control. So after next week we should be starting on the autonomous part of the project!

I also need to do some more mapping of the systems on the boat and some of the finer details: how much current do the PV panels produce and at what voltage? Is there a solar charge controller onboard? Do the PV panels work? What is the max current we can push the propeller at? What is the motor used for driving the rudder? What's the gear ratio for the rudder? How does the bilge pump work?

Posted by [bmairs](#) at Jul 10, 2009.

This week I've mostly been troubleshooting PCRs on the MFB. I've had to replace some reagents and am running a few PCRs over the weekend to see if it all worked. I've also run a few PCRs with our primer sets (primers that allow us to replicate DNA of certain bacteria) to see if they cross-react with bacteria that are readily found in the environment. The results showed a lot of cross-reactions with one primer set, so we might have to make new primers or use other published ones if we want to use them as indicators of water contamination in the field.

Next week I'll be able to run DNA extraction and PCRs with environmental samples if the MFB works over the weekend. Yay!

Posted by [mfrazier](#) at Jul 10, 2009.

This week was like testing my patience. I had been waiting to work with my mentor on my project, and by the time he came to my office, my computer was crashed. One of the suspected reasons for the crash was virus. Mr. Bill, from IS department, took my hard drive for virus scan. If the virus scan results true, I had to be prepared to lose all my data and setup(which took me 2 days to install). By the end of the day he came up with one good news that the s/w he was using didn't detect any virus. Thereby, the next suspect was the hardware, so they replaced my processor. The next obvious idea was to recover the data from the hard drive of previous processor. Here comes the worst part, the drive didn't respond. So finally

I had to reinstall all my s/w; however, since I already did this work before it took me only one day 😊 .

Finally, I got chance to work with Kevin on Thursday. He went through the project structure, which took 3hrs and asked me to work through the simple object messaging using NMR(Normalized Message Router). Even though the concept looked simple when demonstrated, it is taking time to embed my code to the existing project. Sometimes my brain crashes with all the unsynchronized threads running inside.

Barbeque was awesome!! Thanks for each and every one in the team for active participation.

Note: Many computers are very old. From my experience, I suggest all the interns to save their files in their respective Temp boxes (check for your temp box in Mycomputer).

Posted by [durga](#) at Jul 10, 2009.

I'd have to say that this past week was pretty busy and slightly stressful. My main task was to re-run the PCR of my environmental samples using my "mystery bug" primers. I really had to get it just right since the environmental samples that I'm working with are extremely precious. After running several unpromising gels, my mentor and I decided that, because there were so many bands in my gels, I needed to excise the bands and run a gel purification. The DNA extraction protocol was pretty tedious, and I didn't even get any product from two of my samples. Not good. Luckily, one sample did work out rather nicely so the PCR product has been ligated for transformation into E. coli cells to create a clone library.

On a positive note, I got the chance to sit down and talk more with my mentor about my project. I'm really enjoying working with her since she's incredibly smart and really cool. Although some of the phylogeny and ecology stuff may go a little over my head, I'm proud of myself for understanding the majority of the genetics-related stuff that we talk about. (I knew I wasn't much of an ecology person coming into this program, but c'est la vie and I'll have to get over it.)

I really enjoyed helping with all the preparations for the BBQ. I especially liked telling the check out guy at Costco that we were buying 60 pounds of chicken just because I was really hungry. I'm sorry I couldn't help out more the day-of, but an intern's gotta do what an intern's gotta do.

This coming week, I think I'm most excited for kayaking. Even though I have no upper body strength whatsoever, it will be a great chance to take a break and hang out with everyone, as well as do a little exploring. For work, I found a couple more articles that I want to make my way through to help me write a better introduction to my paper. I will continue to use programs such as BioEdit and ClustalW to align sequences on the computer to design primers for a quantitative-PCR that I will be running in the near future.

Posted by [jvassar](#) at Jul 13, 2009.

For two days this week I was set to another project. My lab group's proposal for next year needed some supporting evidence so I was set to try to show which, if any, of the historical CTD stations were redundant (to stop visiting them and reduce costs). We had a lab group meeting, and my advisor was not convinced by my arguments. Oh well.

Obtained six hour upwelling data for the past few decades and incorporated them into my data set.

Began principal component analysis (haven't really done this before) of the nutrients in the data set and think I have come to some useful simplifications. I'll be meeting with advisor #1 next week to discuss progress.

Posted by [jcraig](#) at Jul 13, 2009.

This week I experienced what its like to truly be a scientist--four weeks of lab work down the drain! The vector I've been using doesnt seem to be adequately taking up my gene. The colonies that I suspected were glowing were probably not. When I did a protein purification, the elute didn't glow at all, although it seemed as if the sample that was originally applied to the column did glow. This made me think that the protein wasn't properly sticking to the beads, however, after doing a negative control protien prep, I saw that the applied sample was glowing just as much as my protein sample, leading me to conclude that the fluroescence was due to cell debris that remained in the sample. SO after many failed attempts to express and purify the fluorescent protein, and much brainstorming with my labmates, I decided to use another vector system completely, which means starting from square one. But hey, thats what science is all about!

Posted by [mschorn](#) at Jul 15, 2009.

This week started with a day of acting as "fly on the wall" in a meeting of Monterey Bay Aquarium managers and MBARI staff who went over next year's proposals - as always, my exposure to such meetings is a great way for me to learn the ins and outs of the relationship between the two institutions. There are great ideas for next year! Our ever important intern meeting took place on Slough waters in kayaks - who doesn't enjoy that!? We had some encounters with sea nettles which were just gorgeous in the water and of course, plenty of marine mammals. I am trucking along, making progress in the creation of the aquarium's new high school lab called "Carbonated Seas: an Investigation of Ocean Acidification". I met with Dr. Jim Barry and handed him our program "packet" in the hopes that he will offer some valuable feedback - next week I meet with him for a longer period of time to get the scoop on ocean acidification research at MBARI (I hope I can find mini tapes for my recorder!). My program script is almost complete - I found that it took me longer than I planned because there are a few areas of this topic that I am unsure of, so of course, I had research papers and text books strewn across George's desk (he was out!) which I had to stop and refer to. I had a very exciting meeting with Todd Walsh who will work with me to create a movie for the introduction of the lab! What an incredible resource he is! I am spending Thursday and Friday at the aquarium with a fellow educator who is also working on the ocean acidification lab. It's always good to see my colleagues and of course my animals!

Posted by [adooner](#) at Jul 20, 2009.

20-July-2009

This page last changed on Jul 16, 2009 by [mage](#).

- Can you believe it? Start of WEEK SIX (6)****
I'll attach the template for the paper and we'll talk about the final presentation and paper this week. don't forget your posting for last week. the Point Lobos is due back at the dock late next week - I'll find out about the schedule and get back to you about going out to sea! Also, I'll be out in the field from Friday (24) to the 31st (friday). I can be reached on email, but text only please - no attachments. I'll be at wf3@mbari.org
george

Comments

Looking at the images with misclassification results, there is no obvious reason to explain the errors. Each image (60 x 60 pixels x 3 channels = bunch of numbers) is transformed in a feature vector with 8 numbers. When plotting these features for each class of animal, we found out that only 3 of them are enough to distinguish among our current classes. This is true for both grayscale and true color images. So we reduced our feature dimensionality to 3 and got nearly the same results. On the classification process, first we train the algorithms with known images, and then test with a different set of images. To increase the size of the test set and still have enough images for training, we'll randomly select a part of the whole data set for test and do the training step using the other part. This will be done a lot of times and then we'll have a better statistical study of the classifier. I'm sorry for writing so many technical stuffs but, as the project makes progress, it's difficult not to do that. Apart from the project, going kayaking was very cool, and I'm looking forward for Salinas rodeo this weekend.

Posted by [marco](#) at Jul 16, 2009.

This week I got a nice break from lab work. I worked on some reading about real-time PCR and even more articles for my paper. I also compiled a bunch of 16S sequences and ran an alignment using ClustalW after struggling with the software for awhile. The data from this will be extremely helpful when I'm trying to design primers for my qPCR that are specific to my mystery bug. I was out sick yesterday, but still was able to get in a bit of reading. Next week, I will finally be sending out my ligation mixture for sequencing. Also, I will be transforming and E. coli cells with my plasmid. I hope to also get my qPCR primers ordered.

Posted by [jvassar](#) at Jul 16, 2009.

This week I have been organizing all the CTD data in an excell sheet from the videos of the eggcases. I am mainly working on constructing good, understandable graphs even though excell does not do exactly produce the type of graphs I want. Hopefully excell will cooperate soon. Also, I am getting prepared to run DNA and PCR test on some tomopterid samples. The idea is to match the larval samples with some adult samples in hopes of having the same species of tomopterids since there are several species known. Anybody who would like to give advice about PCR's please please let me know =)

Also, I really enjoyed the kayak trip and seeing all the beautiful scenery. It is a shame to have a power plant so close to a reserve and all the natural inhabitants (cute sea lions and sea otters), but overall it was a wonderful break from the ordinary intern meetings.

Posted by [ksimmons](#) at Jul 16, 2009.

This week I've begun my stint of meetings with potential SF Bay partners. Thursday (today) I'm meeting with USGS folks in Santa Cruz and with the Dredge Manager at the BCDC (Bay Conservation and Development Commission) in SF to talk about current profile data around Angel Island. Monday/Tues/Weds this week I spent preparing for these meetings and reading background info on West Coast Ocean Data Needs Assessments. I'm working to push forward some of my potential projects -- meeting with folks, sending them data to look at, brainstorming products. Hopefully a good project will come out of it.

On Sunday I'm going up to Tiburon (in Marin County, just north of SF) to work on some instruments that we're deploying around Angel Island (in SF Bay). I'll be there Monday and Tuesday. And get to meet with the NERR (National Estuarine Research Reserve) Research Coordinator, to discuss data needs/sharing.

So, I won't be there for Monday's meeting! (I just realized that...) But, I think this Tiburon meeting had the potential to be very valuable for my project. See you all Wednesday!

Hey Megan - this is George - sorry to have missed ya on Monday. I have a present for you from MBARI...

Posted by [mkelso](#) at Jul 16, 2009.

This week I switched gears and focused on COVE. I managed to get a grasp of the "undocumented" python scripts written by Keith Grochow (the man who developed COVE). I tweaked the scripts so that I can show the temperature data from July's front following AUV mission in a geospatial context. After having to go through the trouble of transforming the data in a 'netcdf' format I was able to show a surface like data on COVE. Only one problem, COVE kind of freezes. For some reason I haven't figured out COVE doesn't respond at almost all...I have emailed the situation to Keith and I am waiting for his response.

On the other hand, I also did some serious Matlab scripting to generate the required files for Google Earth and I managed to show a surface like temperature profile in it. I also wrote a script to show the different behaviors performed by the AUV at different stages during a mission visually.

Next week what I will be doing is packaging all the things that I have written so far in a neat and easy to use interface and see what I can do with COVE. Once I finish all this, I will start looking deeper into TREX to come up with a way of interfacing this.

Posted by [alhayat](#) at Jul 16, 2009.

Extremely frustrating week.

First, sat down and mapped out the rest of the Ysi instrument driver for SIAM. The 6600 driver will definitely need some work but I think I can extend most of my previously written classes. This part of the project should be short and sweet when I can find the time to sit down and code.

However, the majority of my time has been debugging the PC-104 board. After a meeting with my mentor and his associates it was decided that the kernel upgrade (2.6.21) was much more beneficial than trying to fix JamVM. The plus side is being able to use the Sun Microsystem embedded JVM. Cross-compiling the kernel was challenging but doable. The hard part now is to have the kernel recognize my root file system and correctly operate. This, of course, is not the case. As this is hardware specific I've poured through the PC-104 manufacturer's woefully limited documentation and have had support over the phone. Definitely not a fan of their treatment so far and still waiting for an e-mail about my latest problem...

I'm between a rock and a hard place right now.

Edit: I just got it! BOUYA!!

Posted by [dbonnie](#) at Jul 16, 2009.

This week I've just been trying to optimize the PCR reactions on my machine. I think we've figured everything out, so next week I might be able to do some DNA extraction using the ESP and run PCRs of those environmental samples. Today I filtered a bunch of seawater samples from Santa Cruz and got to look at all the little critters under a microscope (very cool). Todd hooked me up with this awesome set-up so I was able to take pictures and videos of the cute little guys. It was pretty sweet.

Posted by [mfrazier](#) at Jul 16, 2009.

This week had its ups and downs. It turned out that I wasted about 2k sequencing my primers (and a good chunk of my vector)-- so I had to do a gel purification of my PCR for sequencing. After doing the gel purification etc. I ligated my DNA... however, when I ran a PCR of my gel-purified product, I still had excess bands. Some of us think that this is a just an artifact of PCRing a PCR product (from gel purification), but just to be sure that we have the correct insert we are going to run the ligated product through bioanalyzer.

On an upside, however, ARB is up and running. Totally exciting, as I was fairly certain for a while that it was never going to run on any computer that I touched. But, Adam and Chris Preston came to my rescue-- and now it is running beautifully. I have already uploaded and manually aligned a whole bunch of my sequences.

Next week Eunsoo is coming to give a lecture, and Alex has scheduled some time for me to work with her, as we are working on the same project.

Posted by [harriet](#) at Jul 16, 2009.

This week was pretty good and very busy. I finished a lot of the machining I had to do for my project and I was even able to run some tests with the new parts later in the week. I was glad to get the paper outline just so I could start mapping it out. there is still a lot of work left for me to finish but I think it can be done.

I have also finished some of my pelton prototypes, hopefully I will be able to send them out next week so they can be tested ASAP. I think there should be a pretty noticeable improvement in efficiency with the new wheel compared to my current setup. The initial ruby orifice tests also seemed promising. I was able to get more power out of the wheel using the ruby orifice instead of the standard steel orifice. Further tests I hope will validate these initial results.

Next week I will be working on my paper, running more orifice and wheel tests and doing some more reading. I'm going to try and look more at the math that deals with the specific problems I've discovered in my tests. There will most likely be some thing unforeseen that comes up with modeling, so I have budgeted a little extra time for that.

Posted by [rmarin4](#) at Jul 16, 2009.

This week, I got most of the "mark new sightings" page on Jellywatch up and running! I wrote (and by "wrote" I mostly mean "copy/pasted from google map api documentation and altered as necessary") a new thing in javascript that allows a user to search a map by typing in an address. The address is sent to google for parsing and then google sends back a lat/lng coordinate for the address. The user can then drag the marker around so that he/she can pinpoint exactly where the jellies were sighted.

My goal was to finish up the "mark new sightings" page for this week, and I've *almost* finished it, but I hit a little snag along the way. We want users to be able to upload images onto jellywatch, but that requires the GD library, a library for php that allows for image manipulation and thumbnail creation. Because I do not have root access on the webserver where we are hosting jellywatch, I asked IS to install the GD library, thinking that would fix things. Unfortunately it did not-- I now need IS to re-configure our PHP installation such that PHP sees that the GD library is installed. I'm sure this sounds like a bunch of gobbledegook--it was gobbledegook to me just two weeks ago!

Also two weeks ago I didn't know javascript but with the help of the google maps API's well-written example code I've been able to figure stuff out reasonably well.

Posted by [kelliott](#) at Jul 17, 2009.

This week I started thinking about the general layout, design, and content of CeNCOOS's HAB web page.

I've been researching a lot of different educational sites such as NASA's Giovanni and trying to get a basic idea of how to present the information because I'm not an educator and I've never put together a web page before. In addition, I contacted a few high school and middle school teachers to get their initial feedback on the material and sites I've been looking at. I also got input from a couple of HAB researchers and am hoping to use some of their data sets for the site. My goal for this project is to provide improved access to all the HAB info out there so that teachers can easily develop interesting and integrated lesson plans as well as give students a chance to come up with some innovative science fair projects and reports.

Next week will be a continuation of emailing teachers, getting their feedback, mapping out the web page, meeting with Raphe (one of the top HAB researchers) and working with the computer guys to test this all out. It's still been difficult to get a hold of people, but as my mentors already pointed out, I have a lot of material to work with so I'm not too worried. I have more than enough to chew on for now!

Posted by [taryn](#) at Jul 19, 2009.

This week was a fresh start for the diphyes fluorescent protein expression, with a new vector and competent cell system. Meghan was also making new first strand DNA to use, as opposed to the old double strand DNA I had been using. The fresh 1st strand wasn't ready until Tuesday, however, so I spent Monday kayaking (thanks!) and aligning my sequences from the week before. There were at least six contigs (pair of forward and reverse sequences) containing my gene of interest, however, the protein purifications did not result in a fluorescent protein, meaning the E. coli were not expressing my fluorescent protein. This could mean that the sequence was effectively trasformed into the vector and taken up, but the cells didn't fold it correctly so as to express it. Anyways, this week was spent working with the new vector system and *chemically* competent cells a new technique I'd never learned! Meghan

is a really great teacher, very patient and understanding. After lowering the annealing temperature for the new primers, the PCR finally worked! That was purified, digested, ligated, and transformed into the chemically competent cells (two different kinds) and i got colonies. i just induced them on friday, so I dont know if they're glowing yet. I grew up cells for protein preps and sequencing at the end of the week and have the pelleted cells to work with on Monday. Looking forward to seeing these cells glow! Also, camping this weeking was really fun and relaxing 😊

Posted by [mschorn](#) at Jul 19, 2009.

Principal component analysis rejected by advisor. Keep it simple. Time to decide if this aspect of the data is worth pursuing. Its coming up on sink or swim time. I'm not entirely at ease.

I disagree with a lab group member about one analysis method. I think it is not rigorous enough. People have worked their entire carriers on a data set which I have looked at for five weeks. I hope I am wrong, but understand that I cannot use a method that I disagree with. Talking with advisor about this on Monday.

I've shoved all the data into a 4-D space because its fun and convenient to work with and I haven't yet found any excuse to use any higher dimension (although I dreamed of one last night).

Posted by [jcraig](#) at Jul 20, 2009.

The Best Week:

Successfully completed my first task of passing messages from one endpoint to another through Enterprise service bus. Eventually I was assigned the very next task, which is transforming messages in ESB. Since XML is the standard message format, it is quite obvious that there is need for transformers in the ESB to convert any message format to XML and XML to application specific format. Moreover, I feel terrible thinking of how much time is left, and I think this is the best time to start working on the paper.

Posted by [durga](#) at Jul 20, 2009.

I'm finished testing the software I wrote to remote control the boat in simulation. I spent this week converting it over to use the boat's sensors instead of my development board's. Also worked on integration: I needed a bunch of connectors made and some soldering done before I could attempt. For some reason RS232 control of the boat isn't working and that's my main problem right now. I have also had a hard time finding pins on the development board that aren't already used by peripherals that I can use for inputs or outputs to the stepper driver board.

I also learned this week to not schedule a boat launch until you're really sure you can do it. I scheduled and scrubbed the launch 3 separate times which means communicating to 5 different people a change in schedule. Not very fun...

This week I plan to finish integration of the remote control with the boat. I need to dry run it and THEN I'll actually schedule a launch time. I have a couple of problems I'm running into that I listed above but I'm confident I can get them done this week.

Posted by [bmairs](#) at Jul 20, 2009.

Hi everyone!

Totally forgot about my update on Thursday, so here it is.

It's scary that it's already week 6....I have to get something finished soon! I hit a snag with my OMZ project, but hopefully that's been sorted out. This week will help decide whether a big revision of my initial idea for the piece needs to happen. As time is short I hope it doesn't! Am looking forward to this week, but definitely feeling the pressure of a lot to do and not much time left. Hopefully this week I should have....

The T-shirt design completed and all the ordering/cash stuff that goes along with it finished.

I'd also like to have a revised version of my OMZ piece done to see how the new data works with it.

I want to complete the second panel of the illustration series I'm doing for Alena/the aquarium

I want to get the composition finalised for my OMF project (this will depend on whether I receive the reference materials in time, so I'm crossing my fingers on that one.

Finally I need to get started on my end of internship paper. Aiming for a page done this week.

Bye for now

Laura

Posted by [lvollset](#) at Jul 20, 2009.

I continued to work on the oxygen sensor project. Read a lot about oxygen sensors, how they work and the best practices for using them. Completed the winkler titration on the water samples we collected during the test cast. Chased down a few blips in the data. Graphed the data which revealed some interesting and unexpected bumps and lags. Met with someone with experience in evaluation of oxygen sensors (Jason Smith of ACT/MLML). Started powerpoint presentation.

Next week, Will complete data summary and graphs for another set of sensors which was evaluated in June. Will chase down some calibration information and review my results with others. May complete first draft of presentation.

Really enjoyed Kayaking and sailing this week. Also met with my Mentor for the first time and he gave me good input on how to choose a thesis project. Enjoyed this weeks seminar by Lars Tomanek which gave me some ideas for a thesis project.

Looking forward to scuba diving.

Posted by [kparker](#) at Jul 20, 2009.

This week started with a day of acting as "fly on the wall" in a meeting of Monterey Bay Aquarium managers and MBARI staff who went over next year's proposals - as always, my exposure to such meetings is a great way for me to learn the ins and outs of the relationship between the two institutions.

There are great ideas for next year! Our ever important intern meeting took place on Slough waters in kayaks - who doesn't enjoy that!? We had some encounters with sea nettles which were just gorgeous in the water and of course, plenty of marine mammals. I am trucking along, making progress in the creation of the aquarium's new high school lab called "Carbonated Seas: an Investigation of Ocean Acidification". I met with Dr. Jim Barry and handed him our program "packet" in the hopes that he will offer some valuable feedback - next week I meet with him for a longer period of time to get the scoop on ocean acidification research at MBARI (I hope I can find mini tapes for my recorder!). My program script is almost complete - I found that it took me longer than I planned because there are a few areas of this topic that I am unsure of, so of course, I had research papers and text books strewn across George's desk (he was out!) which I had to stop and refer to. I had a very exciting meeting with Todd Walsh who will work with me to create a movie for the introduction of the lab! What an incredible resource he is!

I am spending Thursday and Friday at the aquarium with a fellow educator who is also working on the ocean acidification lab. It's always good to see my colleagues and of course my animals!

Posted by [adooner](#) at Jul 21, 2009.

22-June-2009

This page last changed on Jun 17, 2009 by [mage](#).

Find the summer intern page and post your update by adding a comment.
What I'd like you to put in your update is the following:

What I did this week
What I think I'm going to do next week
What is going well or isn't going well
And
What you would like to get from your 10 weeks here at MBARI.

Thanks...
George

not sure what is going on with the dates, but this is update #1

Comments

Kayelyn update 1:

- a) This week I have been reading many articles about various midwater species. Learning how to use VARS Query and VARS annotation to see pictures of midwater animals. I also have been to the aquarium which was fun and I saw a larvecean sample which I have never seen before.
- b) Next week I could possibly be starting on a project...not real sure what my specific project will be yet
- c) Everything is going well, the staff and the food is great. Can not complain at the moment =)
- d) From this 10 weeks I would like to widen my perspective and knowledge about marine science. Also learn about different career options. Possibly advance personal skills in writing a paper ,presentations, and networking.

Posted by [ksimmons](#) at Jun 17, 2009.

What I did this week,

settled into my cubicle and learned how to work the coffee pot!

I have met with Nancy (my mentor) several times who has been incredibly encouraging and helpful. I've begun research/prep work for an illustration for Bruce Robison and his team on the topic of midwater ecology and oxygen minimum zones. I've also done a little research for my second piece, an illustration on the subject of SENSORS. This has mainly involved attempting to get to grips with the basic concepts of each research topic

next week: more work on the second piece and the rounding up of useful scrap materials and stock images for visual references.

going well....coffee pot mastery

not going well....navigation....

What I'd like to get out of my 10 weeks:

I would like to build up a good methodology for working with illustration clients. I want to learn how best to communicate my ideas/problems and process effectively and in a way that helps both me and the person I'm working for, to make the process as smooth as possible and so that the best result can be reached within the time-frame. Also I want to learn how to draw cool deep-sea stuff.....

Posted by [lvollset](#) at Jun 17, 2009.

THIS WEEK

On a personal level, I'm incredibly proud of myself for figuring out where my desk and the lab are after taking only a mere 47398724 wrong turns. I'm practically a human GPS machine with my excellent navigation skills.

On Monday I had a chance to sit down with my mentor (Alex Worden) and talk about her research interests and potential project ideas. I've been given around 120 pages incredibly complicated reading (I know that doesn't sound like much, but it really is hard!). I've started to make a dent in those articles and will continue to wade through the readings next week.

I was surprised how much work I was able to do in the lab Tuesday and yesterday. I tested primers for my mystery sequence (which is described a little more in my 10 weeks section) using both PCR and gel electrophoresis techniques. The results were just as I had hoped, so I'm excited to get back in the lab sometime soon.

NEXT WEEK

My mentor left on Tuesday for a conference, so I'm not entirely sure what I will be doing next week. Personally, I'm rather impressed that I was able to scare her away from me in one day. I will probably continue to work on those readings and maybe pick up a few more. I'm sure I'll be working on them for awhile, but 4 pages per hour is a good pace, right?

GOING WELL

I'm really proud of the amount of work I was able to get done yesterday in lab. I ran my PCR reaction and three different gels, all of which are very time consuming processes. I'm getting super excited to my project and having fun meeting all the cool people I'll be working with.

NOT SO GREAT

I feel particularly bad that I missed the seminar yesterday (sorry George!). It seemed like a really interesting topic and I was excited to go, but I was so preoccupied with my lab work that I didn't get a chance to see the reminder email. But I hope it was fun for everyone who went! Other than that, I've been having a great time getting settled in. MBARI is such a cool place, so I have absolutely no complaints. The weather, however, could be a little nicer...

IN MY 10 WEEKS AT MBARI

From what I can tell now, the main focus of my project will be to determine the unknown phylogenetic origin of a 16S plastid DNA sequence from a creature appropriately named the "mystery bug." In general, I'll be learning how to work in a research environment that serves as an intersection for scientists, engineers, programmers, artists, and more. I hope to really get to know my research topic from several different approaches by combining everything I learn in lab work, computer programs, and the readings. I'd also really like to be able to take back the lab techniques and concepts I learn here to my biology classes at Smith and any research I may do later on.

I'm having a great time meeting you all and can't wait to see what happens over the course of this summer! AND we get tomorrow off...how could this get any better?
P.S. Sorry this is so long and potentially boring

Posted by [jvassar](#) at Jun 18, 2009.

This week:

Brought down the boat and built a lift harness for it. Scheduled tank time for next week. Started debugging the boat as it's not fully operating right now. Also sampled much of the cuisine on the island.

Next week:

Run the boat in the test tank checking for leaks and seaworthiness. Start to address any issues that should be fixed before the boat can be tested out in the ocean. Continue to develop new software control system in parallel.

What I'd like to accomplish:

Learn more about how oceanographic research is done at a company like MBARI and attend some seminars to learn about the latest research. Learn more about debugging complex electrical/mechanical/software marine systems and common modes of failure. Take advantage of the specific knowledge available in the staff here and pick their brains for further improvements to my project as well as life after grad school.

Posted by [bmairs](#) at Jun 18, 2009.

What I did this week

- I went on a research cruise with my group. I was too sleepy from the anti-nausea meds to do anything useful, but the trip was fun!
- I met with my mentor and talked about some things that need to be done to the website that I'm working on. I'm working on <http://www.jellywatch.org>, a website that allows users to put in where they have seen jellyfish sightings along the beach. The website was started by an intern last year; this year I hope to improve upon the website.
- Got a notebook and started writing down all of the improvement ideas I have for the site.

What I think I'm going to do next week

- Get more comfortable working with Drupal, the content management system we're using for the site.
- Start working on my improvement ideas, one at a time.

Going well

- I got a flatscreen monitor (yay!). I thought I was going to have to work with a CRT the whole summer. My eyes are thankful.
- I think I have a lot of useful user interface ideas for the site.
- I'm working with a great group

Not going so well

- Waking up early >_<

What I'd like to do with my 10 weeks at MBARI

- Learn a whole whole lot about good practices in web development, PHP, MySQL, etc.
- Meet people
- See more of California

Posted by [kelliott](#) at Jun 18, 2009.

This week I met A LOT of people who work on the environmental sample processors (ESP), from engineers to scientists. The ESP is a machine that is placed in the ocean to test water quality; MBARI has 6 ESPs. I've mostly been working with Julie Robidart, a post-doctorial student who is currently working on optimizing the ESP called Moe to look for certain bacteria in the water. We've run a few polymerase chain reactions (PCR), a process by which DNA is replicated, with known concentrations of DNA to come up with standard curves to which unknown samples can be compared. The idea behind this is that if we know that a certain concentration of bacterial DNA yields so much replicated DNA after the PCR, we can estimate the initial concentration of DNA in any water sample by comparing the amount of replicated DNA to the standard curve. I will mostly be working on the ESP affectionately referred to as Gordon. We've plumbed Gordon with all the necessary reagents for PCR and will likely work on optimizing PCR reactions next week. I've got no shortage of papers to read, so I'll likely be doing some reading next week as well.

The ESPs are run with commands that you type on the computer using a program called Terminal. When I first looked at the scripts that run the machines I thought it would be very difficult to learn, but I'm getting the hang of it. So far the work we've been doing on Gordon has also gone smoothly. The one thing that didn't go exactly as planned was the DNA extraction conducted by Gordon. It yielded about 1/3 of the amount of DNA that we were able to extract using a Qiagen extraction kit. Ideally, we'd like to increase that number to about 1/2, but it's by no means a huge setback. Overall, things have been going very well!

During my 10 weeks here, I'd like to learn as many laboratory techniques as possible. Since I'll be communicating with Gordon using the computer, I'm also hoping to improve my typing skills. Hopefully by the end of the summer I won't have to glance at the keyboard as often as I currently do. Most importantly, I hope to get an idea of the type of research I would (or wouldn't) like to do in graduate school. I think another important skill I need to improve on is explaining technical processes to the layman...which, as you can see from paragraph 1, I'm not so good at.

Posted by [mfrazier](#) at Jun 18, 2009.

What I did this week:

-Met my mentor, Steve Ramp, and the other folks in the group.

- Got administrative powers on my computer and settled into my office
- Explored every nook and cranny of the CeNCOOS website to familiarize myself with the components of the observing system and the products we've got
- Made a list of top priority organizations in the SF bay that might want some CeNCOOS data
- Researched a grant opportunity through the SF Estuary Partnership
- Registered for a conference for next week Th and Fri in Pacifica (just south of SF, on the coast)

What I'm doing next week:

- Beginning research into the potential partners in SF bay
- Attend DOEST reception and meet some board members!
- Perhaps attend some of the teacher workshop on Weds, because it's focused on Ocean Observing, which is what my group does!
- Th and Fri, go to conference on "Recent Advances in Coastal Analyses and Management Affecting California" hosted by the California Shore and Beach Preservation Association. Hopefully meet some of the people I'll be talking with this summer

Going well:

- I'm starting to get a sense of what CeNCOOS does, and what the near-term goals are for the group
- Really enjoying my group, and they have a great attitude about having and utilizing an intern
- Found the tea cabinet in building G, and am enjoying it immensely! And, I think I'm the only one who drinks tea in the building...

Not going so well:

- Been looking at the computer screen a little too much. And, said computer screen is a deep one, and reacts with the fluorescent lights to flicker a little. It's not so good. The IT guy made it better by changing the flash frequency of the screen, but it could still use some improvement.

What I want to get out of the summer:

- Meet a lot of people who do marine work in the Monterey and SF bay areas
- Help CeNCOOS put together a needs statement from marine users and managers in the SF bay, to guide CeNCOOS's growth there.
- Learn whether I like this role in marine conservation (talking to and forming partnerships with organizations)

Posted by [mkelso](#) at Jun 18, 2009.

THIS WEEK:

This week I had the chance to meet one of my mentors (Danelle Cline), a very nice and helpful person. The project I'll work in is a bit different from what we were planning to do before. So I have read some papers in order to understand the whole system and what is the part I will touch in. MBARI already has a individual visual classifier which works on grayscale images. My role will be add color information to that. Today I finally got Matlab installed... ufa!!!

NEXT WEEK:

I have the Matlab code and books and papers which describes the mathematical stuffs of each part of the code. I'll probably spend next week studying and testing the code.

GOING WELL:

I think that I am going well with my readings.

NOT GOING WELL:

Unfortunately I'm having some problems with the spoken English. It's my first time in the US, so it has been a bit difficult to understand what people say.

WHAT I WOULD LIKE TO GET FROM MY 10 WEEKS:

- A better understanding of the ocean sciences
- Make friends
- Improve the classifier
- Take lots of pictures of California

Posted by [marco](#) at Jun 18, 2009.

After settling in this week consisted of building and running Software Infrastructure and Applications for MOOS (SIAM) on Fedora RedHat. This was time consuming as I am used to the Linux distribution Debian and was impeded by minor nuances. However, the build is running and my familiarity with RedHat is growing.

Next week NOAA's Great Lakes Environmental Research Lab (GLERL) should be shipping two items; a YSI ctd and an ARM based PC-104 stack. The ctd will be used to implement SIAM services so that the device and its data output can be incorporated into a node easily. Also, the PC-104 stack is a GLERL upgrade for their monitoring buoys and we hope to integrate SIAM onto this stack to standardize remote observation between entities.

Other project goals consist of developing other instrumentation services for NOAA, extending SIAM for NOAA's offshore power needs, utilizing Data Turbine Java libraries for SIAM real time data access, and to setup a lab testbed to incorporate these new methods.

Here at MBARI I hope to not only see software development but its realization on hardware here in the lab and out in the field. I would also like to learn about the thought and planning process for new projects. My interests also lie with ROVs, tentatively AUV development, and mooring deployments.

Hopefully I can also show something for my work here in ten weeks.

Posted by [dbonnie](#) at Jun 18, 2009.

I am very honored to be a part of MBARI(I know it is only for 10 weeks 😞However, I have 400 hrs[formally] to explore 😊

This week activities:

I have been reading some papers and books related to MOOS system, MOOS SIAM(software Infrastructure and Application for MOOS) and SENSORS project. Reading all these papers, I have this feeling that I am going to do a real real-time programming here.

I was able to connect to the machine prey where an instance of our ESB is running. Thanks for Bob and Karen for helping me with this. Right now, I am looking at the documentation for Apache ServiceMix that I will be working here at MBARI, which is very unfamiliar right now.

Next week activities:

I will get familiarized working with Apache ServiceMix. I will work on connecting the ESB to the new middleware system, the UCSD's ROADNet.

By the end of my internship, I would like to see my self being expert in the ESB technology and many new technologies.

Things I like:

My office, The ocean, Ventana and UAV's(looks cool from outside but a real bomb from inside), and friends.

Dislikes:

The climate(I can't play in the ocean 😞), and the lazy sea lions

Posted by [durga](#) at Jun 18, 2009.

Emmm...what did I do this week?

I met my mentors and people I would be working with in person and on a conference call. Angel Olaya (who is directing me currently) gave me an overview of how to get started with T-REX (the onboard autonomy system for the AUVs). He helped me install the software on my computer but still we haven't succeeded. I read three of the papers published on T-REX and other technical documentations provided to me. I started analyzing the log file generated and checked the code written to plot the trajectory of the AUV on google earth. The code has a bug and I have been trying to figure that out....still haven't. Installed all the necessary softwares that I will be needing on Mac (my first time to use a Mac and having trouble getting around..)

Next week

My actual Mentor will arrive and we will discuss on optimizing things so that I can get the best from my stay. Hopefully I will have T-REX up and running on my system at least with the Pseudo Simulator. I plan to fix the bug and plot the actual trajectory on google earth. Once T-REX is correctly installed, run multiple missions with the simulator to have an in depth understanding of how it works. Read a couple of more papers on T-REX and on Automated Planning.

So far except for not being able to install T-REX on my system everything is going well. I like the help and attention I am getting from my mentors.

What I would like to get from my 10 weeks stay:

- Be experienced with onboard autonomy of AUVs well enough to help me with my Masters thesis and upcoming challenges in this line
- To know more about ocean science and oceanography
- Be able to communicate and disseminate my works effectively.
- Learn about a new Culture as this is my first time in the US

Posted by [alhayat](#) at Jun 18, 2009.

This Week

- Met with Brett Hobson to define a short term project: Putting together a matrix of AUV instruments to support the Biodiversity and Perturbation Experiment Initiatives
- Learned about the long range AUV architecture from the AUV team
- Created a preliminary instrument matrix of instruments, function, wet weight, demension and power consumption
- Used the van pool and rode my bike home to Sand City

Next Week

- meet with scientists working on the initiatives to get their inputs on which instruments they need on the AUVs to support their missions.
- Complete the matrix

Going well

- Learning about really cool instruments from interesting and helpful people
- Getting to know people in the intern program

Area for improvement

- need to define longer term project

What I want to get out of intern program

- To be productive
- To learn about biological oceanography goals, methods and instrumentation at MBARI
- Develop skills
- Develop relationships with MBARI scientists and engineers
- Potentially identify a topic for my masters thesis and maybe even get started on it!

Posted by [kparker](#) at Jun 18, 2009.

Project update June 18, 2009, Roman Marin IV

This week was mainly a setup and familiarization week. I, met with Andrew Hamilton (my mentor) and reviewed the project material and the project proposals. It looks like my main task is to optimize a small scale hydroelectric setup (pelton wheel) to generate power for instrumentation onboard a vertical profiler. I was also made aware of the project goals, budget and general specifications. I was able to procure a workspace in the ME lab which will allow me to complete the testing for my project without having to set up the testing equipment more than once. I recalibrated the instruments that needed calibration and set up a system to run my first set of tests. I designed a test system so that very little will have to be changed between each separate test. Next week I plan to begin formal testing. I will hopefully be able to complete the first part of my flow rate testing for my set of orifices. I will also be modifying orifices in an attempt to determine the most efficient design. The next few weeks will be spent testing various orifice designs and materials (brass and sapphire, possibly stainless steel.) in an attempt to maximize efficiency.

So far the project is going well and I feel confident that I can make some significant progress during my ten weeks here at MBARI. The project is fairly large and is made up of several "mini-projects" so I will have to work steadily. That being said, it will be difficult to make things like seminars a priority. Still though, I don't see myself having a problem making it to the seminars and other non-project

related events in the future. After all, those things are just as important to me as my project, the intern experience wouldn't be complete without them. Everyone I have come in contact with has been very helpful; they have made my first week here great. I appreciate all the help I have received this week and my hope for the next nine weeks is that I will be able to complete my project successfully and give back to this wonderful group of people.

Posted by [rmarin4](#) at Jun 18, 2009.

First week - done! It's been great getting to know the land, the amazing and brilliant people who work here and my new computer, which I wanted to throw out the window for a bit but, all has settled down and we are now quite bonded. The first couple of days were adventurous and, from what I hear, quite typical of an intern's experience (I think someone's making that up!) - I got my mentor lost in Salinas after he phoned me to look up directions. Not only did I do a comical interpretation of the mapquest map BUT I sent him to the wrong address... he *is* back however, along with the three interns who were with him (thanks to Alta!). I enjoyed speaking with Janet Cushing about Fish Habitat conservation. My project is finally getting off the ground. My outline is done, my wishlist for video & print pieces is complete and I have a list of staff here at MBARI who, I hope, will be available to give me the information I need for both the Ocean Acidification lesson the Aquarium's Ed Programs team is creating and for the training module I will be creating for their staff on the topic. I just added a new person to that list after seeing Steve Haddock present today - that was so interesting!

Next week, I will be assisting George in preparation for the EARTH teacher workshop which starts on Wednesday. In the days leading to it I hope to read, read, read all about ocean observatories, which is the focus of the workshop.

My biggest challenge so far has been to set a routine of sorts that keeps me on track - there is so much to do and so many wonderful opportunities that present themselves, that I find it is easy to get side-tracked from my project. I imagine that this is typical of the first week and that things will settle down somewhat.

This internship is a very unique and incredible opportunity for me as an employee of the Monterey Bay Aquarium, the Institute's sister. I hope to soak in as much as I can about this wonderful place and take back educational materials and information that can be used to further the mission of the the Monterey Bay Aquarium to inspire conservation of the world ocean!

Posted by [adooner](#) at Jun 18, 2009.

This week I learned some Microsoft Access, some visual basic, and a bit about the network and database I'll be using this summer. My advisor proposed four projects, two of which I rejected and then proposed one more of my own. I've started one project, comparing bottle measure chlorophyll to fluorescence, and trying to define the reasons for the varying ratio (light/ nutrient availability, distance from shore, season etc.). I've got 20 years worth of data so there are a lot of numbers to push around (~50,000 bottle samples and 2.3 million CTD data points) Yippie! I'm also trying to keep good records of what I'm doing, to keep myself in order and whoever else continues the project after me.

Next week I'll hopefully shove something into Matlab. Also going out to sea next Tuesday.

MBARI is awesome. Housing is very Twilight Zone. Horribly acute suburbia. Whoever designed it must have had a severe trauma in their past and has now given up entirely on humanity. Only in America.

In the coming weeks I'd like to solve most of the major problems facing the ocean today. In the process I'd like to become more efficient in my code writing, learn about lots of new oceanographic methods and find out about interesting future work opportunities. I'd also like to see some more sea otters and go to the farmers market.

Posted by [jcraig](#) at Jun 18, 2009.

This week:

I was at the CIFAR (Canadian Institute for Advanced Research) Integrated Microbial Diversity Conference in Asilomar. Aside from the food it was wonderful! The talks were very well done, and the research was interesting. So, I accomplished relatively little in terms of the work that I did on my project this week.

On Monday I finally located the plasmids that we have been looking for quite sometime, which meant that I could test out the primer that we have for biliphytes. It appears to have worked, which is a relief.

On Wednesday during our break at the conference-- Rachel (from UCSC) tried to help me out with ARB, a sequencing and phylogentic software, but, alas, I don't think that I downloaded it correctly. Chris Preston also said that she had similar problems... which is comforting, so I hope that I can figure that out. Then, on Saturday, I worked on my literature review for my thesis which Alex wants to read on July 3rd.

Next week:

I am going to be working with Heather and Julie doing some environmental PCR-- hoping to ultimately send my plasmids off to get sequenced soon. I also need to start on qPCR design for the biliphyte sequences and OLI11305 (a prasinophyte).

Going well:

I found my plasmids! Which was going to be a hindrance to my project....

Not ideal:

ARB is a huge headache... but I hope that it will work out!

Posted by [harriet](#) at Jun 22, 2009.

This week:

Tuesday- Research Cruise on the Point Lobos! This was a really great cruise into the Monterey Bay Harbor, it was wonderful getting to know my lab on the boat. I sat in the control room for a little watching how the pilot flies the Ventata (we were at mid-level about 500m) to capture specimens. We were looking for various jellies, and collected quite a few, including tomoptrus and ctenophores, using both the robotic arms and the suction device. Overall, I'm really glad I got the opportunity to go out on the boat early on, because I got to see how the specimens I'll be working on are collected. Often when working in a molecular lab, you get disconnected from the field work because you spend most of your time working on the micro level with chemicals and whatnot, but I was really happy to see the field work that does go on!

Wednesday- Meghan gave a presentation of her work at our lab meeting, where I learned about her project and just the general concepts of luciferin/luciferase. Her presentation really put into perspective the type of lab work I'll be doing this summer, and I'm excited! Later that day I sat down with Meghan to talk about my project and we ordered some primers for me to use next week. Finally, I watched Meghan dissect a live ctenophore (in the dark) and observed the bioluminescence it emits. The tissue was frozen for me to work on the next day.

Thursday- Today I tried an assay of Calcium sensitive photoproteins from one of the ctenophores we collected on Tuesday and dissected on Wednesday. I made buffers and homogenized part of the frozen tissue in the dark, then I used an integrating sphere (that Steve made--cool!) to carry out my assay. I injected CaCl₂ and expected to see excitement, but after multiple attempts and after consulting Steve, he said that it could have used up all its glow and so the Calcium wasn't doing anything.

Next week:

Next week, I'll be officially starting my project of isolating and characterizing the gene responsible for a fluorescent protein from Diphyes (a siphonophore). This will involve amplifying DNA Meghan has isolated, making a plasmid with the FP in it, putting that into a vector and then the vector into bacteria. If the bacteria glow, then the FP has been successfully expressed and I will move on to purification of the protein and ultimately characterization.

So far everything has gone just fine. Ultimately, there are many things I hope to get from my summer here at MBARI. I haven't been in marine research for 4 years, and I really want to get back in the field. Strangely, I am using many of the same techniques I used in my undergrad research, but on jellies instead of plants. So, I'd like to hone my molecular bio skills and learn new ones unique to marine science. I would love to do some scientific diving to collect samples, but Steve isn't sure if that's on the agenda for this summer. I also thrive in a laid back, friendly lab setting, so I hope to make some lasting friendships not only with the interns, but with my lab as well. I'm super excited and ready to take on the summer!

Posted by [mschorn](#) at Jun 23, 2009.

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

Comments

The majority of my week has been spent running PCRs and gels. Since I ran a PCR on some environmental samples on Tuesday and got some pretty ambiguous results, I've spent most of my week trying to coax the best results out of my samples. The best part is it's possible that my results are actually supposed to be that weird, so I might have run 3 gels and 2 PCRs too many. But practice makes perfect, and I am having a lot of fun getting to know the people in my lab and the lab itself. I have also been working on those readings I mentioned last week, and they're actually starting to make sense! I had the pleasure of meeting Marcia McNutt yesterday, and she might be my new favorite superhero.

She is the president and CEO of MBARI (aka VERY successful), yet she's still incredibly friendly and amazingly fashionable...I'm sufficiently jealous. If you haven't met her I'd definitely recommend it.

My mentor still has not returned (I possibly scared her out of the country this time), but we've been communicating through emails, and it's been really helpful. I'm excited to show her all the work I've done since she left.

I assume that next week I will be continuing with my reading and possibly getting a head start on the introduction for my paper. Maybe I'll get another email from my mentor telling me the weekly agenda. (It's so great, and it makes me feel like one of Charlie's Angels...or I guess Alex's!)

Hope everyone had a great week, and enjoy the weekend. Hopefully the weather will be a little nicer.

Posted by [jvassar](#) at Jun 26, 2009.

My Second week@MBARI,

After meeting my mentor Kevin Gomes, I came to know that my project is changed from connecting the ROADNet(middle ware frame work) and ESB, to testing the features provided by the ESB. Even though there are many flavors of ESB available in market, the popular open source ones are MULE, and Service mix. The one I am working is the Apache service mix. There is this beautiful book "OPEN SOURCE ESBs IN ACTION", the best resource to work with my project. However, I still have to do a lot of reading(get used to the technology) and practise (exercises given in the book) before I can actually do any of the testings to the ESBs.

Next week:

Get to know more about the ESB

Hoping to start the actual testing.

Best thing about this week is the Board of directors meeting I attended. All experienced people with different areas of interest sitting together sketching the future of a challenging company like MBARI. Its amazing!

Now I know the answer to the puzzling question in my mind. What am I going to be after 40 years? 😊

Posted by [durga](#) at Jun 26, 2009.

This week I started working with the MBARI visual event classifier. It takes a grayscale image as input, creates a feature vector which describes that image and then compares this feature vector against feature vectors from known classes (Rathbunaster, Leukothele etc) in a database. I've made some modifications to the code and now it takes a true color image as input and then generates the feature vector based on that. Then I ran both classifiers (grayscale and color based) on a small set of images. They gave different outputs but the results are not conclusive, we have to test them on a larger set. This is the plan for next week. Reading more about the "boxes" of the classifier is also on the plans. This week I had the chance to go to the sea, in Point Lobos. It was very interesting to see how they deploy Ventana, control it remotely, control Ventana manipulator etc. The bad side is that I got terribly seasick. I should

have taken some medicine 🤢. I am getting more comfortable with spoken English (still not so good).

Posted by [marco](#) at Jun 26, 2009.

I've been making a new layout for the website (Jellywatch) this week. My mentor and I came up with a pretty snazzy banner for the site, now all I have to do is change the site's style sheets such that the new

design is implemented. I also need to come up with a nice color theme; right now we have a purple-ish theme with some seafoam green.

Over the course of next week (probably more like "next few weeks") I'll be improving the "Mark New Sightings" page where users can put in a new jellyfish sighting into our database. Right now it doesn't record the date of sighting. Also, right now the only way to put in the location of the jellyfish sighting is to either enter the latitude/longitude (who would know that?!) or to zoom into a google map and add a marker on the sighting location. We want to also let users be able to enter in a marker based on a text location (like "marina state beach"). I'll also be implementing a picture-upload feature, so users can link a picture to a jellyfish sighting. If we can get it working, it would be really cool to have users upload their cell phone pictures to the site.

We met with the web design people at the Monterey Bay Aquarium, they want to link to Jellywatch from their site. Cool!

Posted by [kelliott](#) at Jun 26, 2009.

This week I have, more or less, accomplished what I was set out to do. With the help of Fredric, I have successfully installed TREX on my system and it is up and running. I corrected the coordinate transformation error on the script written to visualize the trajectory of the AUV in Google Earth and now it is right where it should be. I have also modified the script to show different actions taken by the AUV (get GPS fix, Fire a gulper..) with different place-marker icons. I met with my actual mentor and along with the autonomy group, planned what my main project would be during my stay. I went out on a sea cruise on R/V Point Lobos and saw ROV Ventana in action. Did my best to stay in the control room and follow up the things that were being done...too bad...couldn't do that for more than a couple of hours 😊.

I have already started reading about COVE: A Visual Environment for Ocean Observatories, which I might be using to visualize trajectory and state of the AUV. More or less my task next week would be to do an in-depth study of COVE and decide whether to use it or not. I am planning to go on the sea on R/V Zephyr on July 1st for an AUV mission.

Posted by [alhayat](#) at Jun 26, 2009.

This week has been very full! I got to participate in the teacher workshop (EARTH) on Wednesday, which focused on ocean observing. Then, Thursday and Friday I have been at a workshop in Pacifica focused on recent advances in coastal monitoring and management. I've met so many people working in coastal management in California, including people from the Coastal Commission, the Army Corps of Engineers, consulting firms, local governments, the Bay Conservation and Development Commission, SCCOOS, the Southern California counterpart to CeNCOOS (my group), USGS...and on and on. It's a crash course in who's who and getting a feel for the culture of the different agencies and what their roles are. I'm still at the conference now, just taking a moment to fill out my update!

Next week: follow up with some of the contacts I made here at the workshop.

I really enjoyed meeting the board members and hearing about how they ended up where they are. And, it's been awesome to be at this conference, too, and meet so many movers and shakers.

Posted by [mkelso](#) at Jun 26, 2009.

Because of the success of my PCR run with my primers and plasmids, I went ahead and ran PCR with my primers against a series of environmental samples taken on two cruises (CN107 in July 07 and CN207 in October 07). Surprisingly-- the PCR appeared to work really well-- my gel showed only one band at the right size for 18S. So, we went ahead and TOPO cloned the PCR products and prepped them for shipment off to SeqWright, where a clone library will be created and the clones sequenced. Much of my week has been spent on the phone with SeqWright and in consultation with various lab members trying to figure out what primer should be used for sequencing. The sales reps from SeqWright recommended using a primer specific to the sequences that we have in our library-- however the sequences we used to amplify the samples hit a part of the vector. So-- I ended up deciding that I would go ahead and use M13 (a common primer specific to the vector) for the sequencing. Funnily many people I spoke with said that they had better results with using reverse primers, so I went with the superstition and chose M13R. It will be very useful to have one entire library which is particular to my bug (the Biliphyte)... and I think it will help my project out a bunch.

Aside from this-- ARB is still not functioning, which is frustrating. I think that I am going to try to download it on the Mac associated with the lab. Most of the people, who I know that use ARB run it on Macs-- so I might be able to get more guidance if I switch to that operating system.

I also finished up all the reading that I have been trying to complete-- meaning that I can really focus on writing up my literature review now!

Posted by [harriet](#) at Jun 26, 2009.

This week I worked on transforming and expressing a fluorescent protein from a siphonophore (Diphyes). I used first strand cDNA as well as double strand DNA that Meghan (the grad student I'm working with) had previously sequenced. I used PCR to amplify all the cDNA she had accumulated of the ten combinations (5 sets of cDNA and 2 sets of primers) only three worked. So, I digested those three and purified them. Then, I ligated the gene into a vector and transformed them into bacteria cells. After plating them, I only got a few colonies, which was strange; we think the competent cells are bad by now. Also, the colonies did not glow so much at first. So, I had to do a few things to figure out what was wrong: I did another transformation using more of my ligation, and I plated these cells on both charcoal and regular LB plates to see if the concentration of charcoal in the plates was toxic. This morning I had some growth, but still very few colonies and the colonies grew on the non-charcoal plates just as well as the charcoal plates, so its not toxic to the cells. Next, I'm going to transform into a different type of competent cell that I just made yesterday (making competent cells is a whole day ordeal, but I'm really glad I learned this new technique), and I also have to test that the competent cells I made yesterday are actually competent! I also think that a few of my colonies are glowing, but I need the expertise of some of the other lab members to tell me if I'm right or just seeing things.

So, I have quite a bit on my plate: testing the competent cells, using the new competent cells for a transformation, expressing the protein and getting my colonies to glow, and sequencing some of the colonies to see if my insert is even in there. I think I'm close to getting these colonies to glow, and I'm pretty excited about it!

p.s. I have no idea why some of my first paragraph is crossed out, I couldn't change it...

Posted by [mschorn](#) at Jun 26, 2009.

Second week:

Project: with my luck, the Pt. Lobos arrived on Monday with the F.O.C.E. flume just when I could get out and photograph it being put on the dock. The flume has been brought back due to some water being detected within the electronics and also needs some structural repair. Lucky for me, this misfortune has allowed me to be able to take a very close look at the equipment and learn more about it. Ed Peltzer was kind enough to give me "tour" of the flume and I was also able to take very close photos of the individual components! I must remember to take a voice recorder with me so I can go back and write down what I was told! I now have to go back to the notes I took, head over to the webpage and jot down an accurate interpretation of FOCE that I can use for my project!

Tuesday was great! What a unique experience it was meeting board members and eating great food at the reception. I was able to talk with Julie Packard, the CEO of the Monterey Bay Aquarium, about the internship program. She was happy to know that one of her own is an intern this summer. 😊 This was also when I was finally able to meet Ed Peltzer and Peter Brewer, both of the High CO₂/Low pH team.

I've spent the rest of the week in the E.A.R.T.H. workshop. Wow! There have been great speakers like Heather Kerkering and Matt Binder who spoke about Ocean Observing Systems, Raphael Kudela whose focus was Harmful Algal Blooms, John Horne on DEIMOS and acoustics in the oceans, Edith Widder on bioluminescence and Erika Raymond taught us about the Eye In the Sea - Phew! All of these presentations were accompanied by ideas for how to use the information in the classroom. While participating in the workshop, I've been in contact with my team mates at the aquarium, giving them ideas for our own teacher workshops.

Next week, I will be off site at the NMEA conference, helping with the running of it. I only get one day at MBARI!

It's been a very busy and stimulating week and thanks to my mentor, I have learned tonnes!

Posted by [adooner](#) at Jun 26, 2009.

This week I met with several scientists to get input from them on AUV projects they need engineering to work on next year. I met with Steve Haddock, Ken Smith, Charlie Paull, Bob Vrijenhoek, Zbigniew Kolber, Julio Harvey and Chris Scholin. It was very interesting to hear about the projects they are working on and to check out their labs. They all have very diverse requirements for the AUV. I evaluated several different

optical imaging systems and wrote up a brief summary. I continued to summarize all the instrumentation requests in a matrix. Met with an Engineer to get information on Dissolved oxygen probes.

Next week I will meet with a few more scientists and complete the AUV project proposal summary. I will get started on an oxygen probe evaluation.

Attending the board meeting presentations was very interesting and helpful. I also enjoyed meeting some of the board members.

Posted by [kparker](#) at Jun 26, 2009.

Well it's my first week on the job and I'm still adjusting to the time zone. To be honest, my biggest challenge this week is staying awake! (Right now I'm using lunch breaks to catch up on some zzzZZZ's).

That said, I'm in the process of delineating the details for my internship. It looks like I'll be working on a project with HABs (harmful algal blooms). This entire week was spent looking at relevant websites, familiarizing myself with current HAB issues, and attending presentations to glean more background info.

I actually did some research on this topic last summer in Hawaii with NOAA (National Oceanic and Atmospheric Administration), so the concept is familiar --even though I'm working on a much larger scale with CeNCOOS (Central and Northern California Ocean Observing System).

Next week I'll finalize what angle I'm going to pursue. I have several options ranging from public outreach to economic analysis. It's great that my internship is so flexible and that CeNCOOS hasn't done much work with HABs yet, so I have lots and lots of options.

The only thing I have to complain about is that I'm still sleep deprived, but as the week goes on, things are getting better. I'm also a little overwhelmed with all the material I have to tackle, but this project will shape up in no time!

If anything, I'm just really excited to be participating in this program because it's my first "official" internship. It's great that I can not only contribute to someone else's research, but also develop my own intellectual skills as an undergrad and someone who is interested in environmental/ conservation issues.

Ultimately, I would like to expand upon my knowledge from last summer, meet pioneering experts from the field, and hopefully discover that lifelong passion I've been searching for.

Anyway, thank you so much for this opportunity and I really look forward to getting to know all of you!

P.S. George, maybe I can meet with you after Monday's meeting to take my picture? Sorry I've been hiding from you all week.

Posted by [taryn](#) at Jun 26, 2009.

Hi everyone,

hope you're all settling in well.

Cannot believe it's the end of week 2 already!

Thus far things are progressing well here in the illustration cubicle 😊 I've completed a set of roughs for Bruce Robison, Rob Sherlock, and the midwater ecology group. The piece will probably be fairly data heavy. It will illustrate the oxygen minimum zone and its expansion in Monterey Canyon. It's been fascinating to see just how much data scientists have to get to grips with here. Huge amounts of information, it's just incredible. Anyway, we're battling ideas back and forth on the back of my initial designs, so things should firm up sometime late next week and then I'll get started on the color study.

I'm also working on a piece to do with technical geekery and computing. I met with Kevin Gnomes who very patiently described MBARI's Observatory Middleware Framework, and explained what kind of illustration would be most useful to him. This one I expect to be difficult, especially in the initial stages, simply because I don't understand the subject at all well, despite Kevin's (very good) explanation. There are a lot of overlapping systems, that appear to have some kind of ethereal presence in lots of different places. So I'm expecting next week to be a tough one as I'd like to try to at least get to grips with the subject some more before I attempt to put pen to paper properly and think of a way to visualize all those ones and zeros.

For those of you who don't know, I had a vomit-inducing trip on the Lobos and have therefore decided not to pursue a career in the navy, I'm sure they're devastated....

Otherwise things are fine here. I loved meeting Marcia and the board members and it's been great to settle in and start to get my teeth into stuff.

See you all soon!

P.S Hi Taryn, welcome! Good luck catching up on your sleep. I'm sure the weekend will help.

P.P.S Marco, I know how you feel, the Lobos broke me too 😊 and your english is great, really great, so don't worry!

Posted by [lvollset](#) at Jun 26, 2009.

This week has been very interesting. My mentor Tom sat down with me on Wednesday to go over control flow of SIAM and its protocols. They have been developing on this for quite some time so their code libraries are extensive; sometimes it's overwhelming as to what I should exactly implement or even use.

Right now I'm trying to write a service for a menu driven instrument. This is a huge pain as the control architecture seems to write extraneous bytes through the outputStream, thus losing its place in the menus. Currently I'm using a serial port analyzer on a separate laptop (which just crashed and Tom has the password - I can't find him) and it is extremely helpful.

Also, I have mainly done command line programming but Tom feels that an IDE may be a better way as it can provide useful debugging features. However, after wasting most of my morning solely on the setup I gave up and am now 'manually' debugging.

Next week the Great Lakes Environmental Research Lab (NOAA) will be sending the PC-104 arm processor (they promised it will be here Monday) and that will be a nice break from this instrument service. I'm confident I can get SIAM up and running fairly quickly and can extend the power control to a stackable relay board.

Posted by [dbonnie](#) at Jun 26, 2009.

Over the course of this week I tested the internal systems of the boat and found that everything that would need to work is working fine, so the propeller spins and the rudder turns. The control system that was on board had power disconnected and when I attempted to connect it the magic smoke came out...so I think we'll just leave it as we're going to replace it anyways.

One of my advisors for MBARI, Kanna Rajan came back and my advisor from UCSC came down yesterday to meet with me regarding my progress. Both got a chance to see the boat and we're all on the same page. A near-term plan development plan was drafted up and diagrammed for reference. As part of that plan I made a list of the parts we will need to buy for the boat this summer as well as prices for all of them. As long as the solar panels work (which would give us 1.3kW of power and save us \$4000) we're only looking at \$500 in parts.

We discussed how to implement some of the systems we hadn't been sure about (recharging the batteries from land and a solar charging/monitoring system) and now have a clear path for a little while.

Right now I'm starting on the software part and this will continue through next week. I've been busy today just trying to setup the development environment and get started on that. I'm working on both a proportional heading controller and a remote controller for the boat. The first step on this is to get remote control of the boat working and we plan to do that with our dsPIC board and a standard RC transmitter and receiver. The plan is to be done with remote control of the boat by the end of next week so we can go out and drive it around the harbor.

I will also be meeting with my primary advisor, John Ryan, as well as Kanna to talk about everything on Monday.

Posted by [bmairs](#) at Jun 26, 2009.

After continued wrestling with Access by way of Matlab via Excel and many such format changes, I'm finally satisfied that the data has transferred properly. I've made some funny plots to try to guide me where to go next in the search for meaning (for this is the primary occupation of life).

Met my other advisor on Monday of this week (Francisco Chavez) and he suggested another possibility dealing with Nitrogen isotopes and their meaning for the project I'm working on now.

I went to sea on Tuesday with my research group. No ROV but many insights into the sources of my data (CTD, bottle samples etc.). I collected bottle samples, dropped the secchi disk (vague measure of water clarity), and helped out with the general operation of the data collection. Ate lots of food and had a fine time looking out over the water and thinking about the usual things.

Trying to come to peace with the fact that all places once were wild, bureaucracies do not make enlightened decisions, and that poorly placed suburbs are like pug dogs; not themselves deserving of blame.

Posted by [jcraig](#) at Jun 26, 2009.

This week I ran PCRs on the MFB (microfluidics block...the part of the ESP that sets up and performs DNA extraction and PCR). I'm currently testing the efficacy of the MFB in amplifying two types of bacterial DNA that will be used to test water quality in the field...at some point. I've been able to amplify all the samples I ran this week, so next week I'll be loading all the reagents onto the machine. I'll also be running quantitative PCRs to see how much DNA is amplified from known starting concentrations.

I've started working on my final presentation. I know it seems early, but I realized that it's going to take a lot of graphics and animation to keep people from dozing off or just losing their minds during my talk (not that it's not interesting...just complicated). Hopefully it will be perfected by August.

I'm really excited for going out on the boat on Monday! And the four-day weekend! Next week is going to be awesome.

Posted by [mfrazier](#) at Jun 26, 2009.

The beginning of this week was spent number crunching. I had some good data but it needed to be processed before I could really use it. My main goal with regard to the data processing this week was to figure out which design is going to be most applicable to my project. Once I figured that out I was able to draw up a sort of "road map" for the project. I re-examined the existing project specifications and I was able to come up with a few more parameters that are critical to the success of my project. Having a clear idea of what I need to do is crucial to the success of this project. I had to prioritize; With only ten weeks to spend on this assignment I feel it is important to make meaningful headway on as much as I can rather than spend time on all aspects of the project and not really accomplish anything. With that in mind, my first task will be to get at least forty percent efficiency from the pelton wheel. In a perfect world with a perfectly designed pelton wheel efficiencies of up to ninety (+/- 5%) percent can be achieved so I know I should be able to reach my target.

The second half of the week I spent testing the brass orifices I have on hand. I have narrowed the orifice diameter down to what will most likely be the final size, 0.06in. Now I can begin the process of maximizing efficiency for the 0.06in orifice. I will test different pelton wheel diameters and make numerous other adjustments in an effort to generate the most power I can within the bounds of the project. The testing process is very messy so I have mainly been working outside. No major snags as of yet, things seem to be running smoothly and I'm happy to keep it like that.

Posted by [rmarin4](#) at Jun 29, 2009.

Week 2

I finally have narrowed down a topic on Tomopteridae (polychaete worm) eggcases. Mostly my work time is spent in the video lab using VARS Annotation on beta and HD video tapes. I am looking for possible footage of the eggcases that sometimes happen to fly across the screen and then try to get the best frame grabs. The more I watched videos, the easier the eggcases were to differentiate from other objects on the screen.

In the upcoming weeks I hope to gain more information about these polychaete worms regarding to their reproduction cycle and seasonal changes. Next week I could possibly be doing DNA analysis which should be oodles of fun because I have never done that before. Looking forward to learning more and completing my project.

Posted by [ksimmons](#) at Jun 30, 2009.

This week, although short, was quite productive. I did a lot of sequencing, and took quite a while to analyze my data, but it turns out that only one sequence was complete, with both the beginning and

ending sequences for my protein. I simultaneously learned how to purify a protein from a bacterial culture--this process was quite time sensitive and required actions after 5-8 hours and then 16-20 hours, which meant I had to come in at 9pm to lab. Unfortunately, I added 1/1000th dilution except 1/100th dilution of arabinose, which was not enough to induce my cultures. SO I had to repeat this whole procedure on Wednesday and Thursday (yes coming into work on my day off). I'll find out today whether or not it worked! If it did, then I'm on my way to characterizing this elusive fluorescent protein 😊

Posted by [mschorn](#) at Jul 06, 2009.

06-July-2009

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

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Comments

This week I sent out my first emails to marine managers in SF Bay proposing uses of CeNCOOS data. I am wondering how many to send out (and what percentage will write back). I am following up with contacts I made at the California Shore and Beach Preservation Association workshop last week. I'm hoping to meet today with my mentors to go over the ideas I've brainstormed for the different user/manager groups.

This morning we got to check out the Western Flier, which was really cool, especially seeing the Doc Ricketts and the pilot room.

Next week I hope to hear back from some managers, schedule some meetings, and start honingin on an organization to create a product for. I am also going up to Oakland next Thursday to attend a Harbor Safety meeting, and after that gets out I'm meeting with someone from the exploratorium to look at their future outdoor exhibit site at piers 15 and 17 in SF. I may help design the ocean observing component of the exhibit as part of my summer work. I'm excited to learn more about that project!

Things I really enjoyed this week:

- seeing the Western Flier
- getting out my first contact emails

Posted by [mkelso](#) at Jul 01, 2009.

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This week went fairly well (as short as it was).

I got ARB to work! Which is amazing... I have been struggling with it for about 3 weeks. It is probably the most ornery program ever designed... but it is working now. I was able to create a few databases and align some sequences (though it isn't optimal yet). I have my biliphytes pretty well set up-- and the parsinophytes are the next to get set up.

I shipped off my DNA samples to SeqWright on Monday (at least I thought I did...), unfortunately there was a mix up in the mail room and they didn't get shipped until yesterday. Hopefully the DNA will still be viable. If not, I suppose I will redo the ligation (etc.) which is slightly problematic as the sample are pretty precious, and I am not sure how much DNA has been extracted for the different sites.

Aside from that-- I have been working on my literature review-- which I am supposed to be done with by tomorrow.

Next week I am going to be working in the lab with Alex-- possibly working on some flow sort samples to try to figure out where biliphytes are located on the read out. As it stands right now, no representative biliphytes have been cultured-- so no one is sure if they are autotropic or heterotrophic. We stained some of the samples with lysotracker green-- so if they are heterotrophic (and have acid food vacuoles) they will show up at 531nm. If they aren't heterotrophs then we hope to see them on either the chlorophyll (692nm) or in the orange range (575nm). They were thought (originally) to have orange fluorescence because of some observations made with FISH-- but now it is thought that they might have just eaten a phycoerythrin possessing phytoplankton. FISH protocol unfortunately causes the chlorophyll to be knocked out... so that was never observed. Needless to say-- these results should be interesting.

Regardless-- I am looking forward to the fourth!

Posted by [harriet](#) at Jul 01, 2009.

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Even though it was a short work week I feel it was very productive. Today I finished the base framework of my instrument driver and, with the help of my mentor, integrated the output stream into data turbine [<http://www.dataturbine.org/>]. However, there are a few issues that need to be addressed with the data structure as well as more robust control methods, but what I have now works well for a prototype. Oh and lots of documentation...

The R/V Western Flyer tour was great. Goosebumps when I saw 'the Doc'. Definitely want to sit down and talk shop with the ROV guys.

Hopefully today I can get the PC-104 ARM board booted up and running. I received it yesterday and haven't had a chance to play with it yet. The next steps are to install Debian Linux on the board and then SIAM as well. We'll see how that goes.

Posted by [dbonnie](#) at Jul 01, 2009.

It's nice to be alive and well, but I still feel like I'm floundering around since I don't have an exact emphasis for my project yet. For the past few days, I've been aimlessly researching websites and public outreach organizations that might be interested in HAB (harmful algal bloom) data. One of my goals this summer is to develop and update CeNCOOS's HAB webpage, but I'm finding real-time data (on HABs in particular) is not very common...and most of the information is obsolete.

However, this morning was fairly productive. I met with Steve Ramp (one of my mentors/ director of CeNCOOS) and we started contacting some people who might know a little bit more about obtaining real-time data for HABs (e.g. Chris Scholin) and also brainstorming ideas on how to get a hold of some teachers. Another goal for the summer is to expand CeNCOOS's educational outreach and HAB program for younger students (i.e. middle schoolers). So Steve has a couple of people in mind, but I'm also looking to meet some teachers MBARI might be affiliated with. That said, I will be coming into work tomorrow (thank you, Michelle!) to attend the MBARI tours and hopefully meet the 70+ teachers who will be attending.

Next week will be a continuation of these endeavors. It looks like I'll be contacting more people and searching for more relevant/ up-to-date information to post up on CeNCOOS's website. Aside from work, I am so stoked for the intern BBQ, Laura's t-shirt design!!, and maybe attending some of those open Ocean Studies Board meetings. Hopefully my other mentor (Heather Kerkerling) will be around, so I can bounce some ideas off of her.

But things are going swell and I'm really enjoying MBARI's atmosphere!

Posted by [taryn](#) at Jul 01, 2009.

Hi everyone,

This week has been pretty hectic and progress slowed to a crawl for a while there! This week has been mostly attempting to understand OMF and generally getting my head around the second main piece I'm doing, which is much harder to visualise than the midwater ecology illustration. Got some encouraging feedback on that first one, so I'm pretty happy with that and have left it on the shelf for a bit while I tackle the complicated second piece, which I hope to have some understanding on by next week (fingers crossed.)

As well as that, this week's been BBQ prep and getting on with the intern t-shirt design. The one thing I've not had time to do is my webpage. Sorry about that Linda and George! So that's something I must get done by end of day Monday next week.

Have a great 4th of July everyone, enjoy the long weekend!

Laura

Posted by [lvollset](#) at Jul 01, 2009.

My3rd week@MBARI:

Monday I was on the R/V Point Lobos. It was a quite amazing experience except that I was sick half of the time. Tuesday I was supposed to sit with my mentor to understand the flow of the code with in the ncsa project. Unfortunatley my mentor was sick, and I didn't get chance to meet him until that evening. However, he gave me a quick demo and files from the repository. Today, I went through some of those files, and got hardcopies of few others hoping to finish them this weekend. Nextweek I will work on the code, and I will start working with the ESB

Posted by [durga](#) at Jul 01, 2009.

Continued to talk with people about AUV instrumentation proposals. Spoke with Jules Jaffe from Scripps, John Ryan, Bruce Robison and Kim Reisenbichler. Jules is an imaging expert and a lively character.

He is working on an ultrasound imager which may be suitable for AUVs. He is also working on a laser line scanner which may be suitable for a larger AUV. Bruce would like an AUV to be able to identify an interesting biota and follow it. He talked about an interesting small animal that can build a large 1 m mucus filter. No one has ever seen the filter being built. He would like an AUV lock on to it and watch the process.

Went to an interesting presentation by Julio Harvey (genetics group). He probed the AUV water samples taken from Monterey Bay for invertebrate larvae and copepods. It was interesting to see that there were no rock attaching shallow water larvae like mussels in the deep water.

Worked on an evaluation of Dissolved oxygen sensors. Spun my wheels for a while with the usual software hiccups. Went to the castroville warehouse to look for cables. Lots of interesting stuff piled high there.

Next week I will be going out on the Point Lobos to test oxygen sensors and will complete the AUV proposal summary. Will meet with my mentor for the first time.

Pros for the week: Enjoyed the tour of the Western Flyer. Learned a lot about acoustical and optical imaging.

Posted by [kparker](#) at Jul 01, 2009.

On Monday, I was a bit confused about how to test the classification algorithms on the large image data set. So I sent an e-mail with some questions to my mentors. For my surprise, they promptly arranged a meeting and prepared a complete presentation (datashow, white board...). I was given the task of labeling about 7000 images according to their contents (fish1, fish2 ...). Spent a long time doing this. This is necessary to compare what the computer says to what a human says about each image. Then I wrote some code to make the test results more readable (make a spreadsheet). Matlab didn't get a holiday. It's now working for me, running the algorithms. Let's see what it finds out next Monday. I wrote a very short description of my project in my webpage, I'll improve it next week. The Western Flyer tour was very cool, specially the Doc presentation.

Posted by [marco](#) at Jul 02, 2009.

This was an especially short week for me. On Monday I was out to sea collecting sea urchins. The trip was really interesting even if it was a little shorter than the normal day trips. Our early return worked out well though as we were able to make it back for the cookie break, YES! It was good to get out on the Lobos for an ROV deployment and see how much work goes into getting the Ventana into the water. Back on land I had some success with the pelton project. I have been working on improving the design of the pelton wheel itself in an effort to squeeze every last bit of power out of my setup. My new modifications gave me a little bit more power but not quite as much as I needed, so I will have to try some more modifications. Larry Bird has been a huge help, assisting me with all the machining associated with this project. Next week will bring continued testing. My sapphire orifices are due in next Monday or Tuesday so I expect to be busy mounting them and testing them against my stainless orifices. Overall things are still going well but it's clear that I have a lot to do in the coming weeks as I'm sure everyone else does.

Posted by [rmarin4](#) at Jul 02, 2009.

This week was spent developing the software for the control system for the boat as well as determining what hardware we will need for the boat. We've developed a nice list of hardware that's needed and even started to order some of it. The software is nearing completion for allowing remote control of the boat.

Next week we need to talk to the harbor master about where we could test-drive the boat. It shouldn't need very deep water, but he'll be the person who can help us find a suitable test site. I also hope to finish up with the remote control code Monday or Tuesday so that we can get it out in the harbor driving out to get a sense of how fast it can go and how quickly it can turn along with a general feel for the boat. I will also be starting the basic waypoint guidance system for the boat so that given GPS coordinates the boat will motor over there and rest on top of that point. Depending on how our harbor test goes, I hope to make some good progress through that. We will also finish ordering the parts we need so that they'll be on hand when we need to make use of them.

Posted by [bmairs](#) at Jul 04, 2009.

This week I finally had an opportunity to go out on the Point Lobos which was collecting sea urchins. I was very excited to be out in the ocean and see sea otters, seals, and other animals. I love animals. It

was also interesting to see how all the equipment is used in the control room as well as seeing how the crew works together.

As far as my project, I am still in the process of scanning videos for the polychaete eggcases. It is sometimes tiring, but I am also learning a lot about the uses of each tool sled in the Ventana and the various species found in the deep ocean. So far my experience is still going well and I'm very glad everyone is so nice and helpful in this work setting.

Posted by [ksimmons](#) at Jul 04, 2009.

This week was spent finalizing the layout of the Jellywatch site and then editing the page's style sheet so that the concept we came up with in Illustrator can be implemented on the site. One thing I was having issues with was trying to get the footer to "stick" to the bottom of the page, but after a few google queries and lots of trial-and-error, I finally got the sticky footer to stick to the bottom of the page. At some point we need to add modifications to the stylesheet so that Internet Explorer 6 can read the page.

For next week, I will start on the less-fun but more pertinent task of re-writing the "Mark New Sightings" page. This is the page that allows users to mark a location where they saw a jellyfish.

Posted by [kelliott](#) at Jul 05, 2009.

Last week I was able to go on the Point Lobos for an urchin collection trip. The "week" went by so fast that I completely forgot about updating everyone on the status of things. 😊 With the remaining two days I was able to finish preparation of MFB3 for PCR, and set it up to run three PCRs over the weekend. I'm going to look at the results in a minute, but you'll have to wait til my next update to find out the rest of the story...I know you'll be on the edge of your seat all week.

Posted by [mfrazier](#) at Jul 06, 2009.

Analysis at last! At one point this week I had both of my advisors and another lab group member huddled around my screen discussing a problem. Yippee!

I looked at PAR (photosynthetically active radiation) from two different sensor types and found them to be curiously related (bimodal). So I went back to the CTD data, found downcast data (every meter), and found the same problem with these. In the end, I chose the cosine meter over the 4pi meter as the data were more self consistent over time.

Went to San Francisco to reconsider this country's revolutionary, war time, and beat past in the context of a non-american (Marco).

Posted by [jcraig](#) at Jul 06, 2009.

This week was a very short one especially since I went out on the sea on Wednesday on R/V Zephyr for a "Front Following" AUV mission and spent almost the whole day on the ocean. I must say Zephyr is better than Point Lobos, reason...I didn't get sick... So basically I did most of this week's work on Monday and Tuesday. As per my plan what I did is, did some investigations regarding COVE and started working on Google Earth in parallel. I met and talked with Mike Godin and Mike McCann on how to use Google Earth in smart and robust way to perform my task. They gave me very good and insightful ideas and guides. I would like to express my warm appreciation for the help and support they have shown and given me. I also discussed some issues that I had, with the task I am doing, with my mentor Kanna Rajan and Fredric Py.

Next week I am going to start communicating with Keith Grochow, one of the important people who developed COVE, and start inergrating Google Earth plugin and coding the visualizer I am planning to develop.

Posted by [alhayat](#) at Jul 06, 2009.

During this (very short) week, I focused primarily on reading a bunch of papers that will give me useful background information for my topic. On Tuesday I headed over to the MLML library, which was very relaxing and a great place to focus. I also heard back from my mentor, and I finally know what to do with my PCRs! Wednesday, I woke up in the wee hours of the morning and headed out to sea on the Lobos.

The trip was focused on software programming, which was completely over my head, but it was great to see the Ventana in action. I really enjoyed seeing all of the otters and sea lions on the way out to sea, and I even got to see some really pretty jellyfish.

This coming week, my mentor finally returns! I'm really excited to be able to work side-by-side with her. (No more long distance relationship!) I plan to run one more PCR on some environmental samples using my specific 16S primers. Then hopefully I will be able to run a gel purification and ligation reaction so I can get my sample sent off to be sequenced. Because my results were so bizarre last week, I might need to work a little on modifying the primers in some way to make them more specific. I also hope to get a jump start on the introduction to my final paper. Hope everyone had a great 4th of July!

Posted by [jvassar](#) at Jul 08, 2009.

27-July-2009

This page last changed on Jul 19, 2009 by [mage](#).

- I'm off at sea this week, but I'll check in this weekend when I return to see how things are going. Please post things that are troubling you... things that aren't working out... things you have questions about.... an explanation for how 7 weeks can go by so quickly!

Comments

Monday and Tuesday this week I spent at the Romberg Tiburon Center in Tiburon, up in Marin. It's a beautiful research station affiliated with SF State University. If anyone's interested in a PhD in ecology or eelgrass restoration, there's a wonderful woman there who does cool work named Kathy Boyer. It was a productive visit, I had 4 interviews. I spent Wednesday responding to a request from the Exploratorium outdoor exhibit group for a real-time salinity map of the bay. A map like that would be useful for many of the managers I've been talking to, so I think that is going to be one component of my final project. Thursday I had a phone interview with the Manager for the SF Subtidal Habitat Goals Project, which went well.

This afternoon I'm meeting today with my mentors to present what I've learned so far from my meetings, and discuss my final project ideas.

The summer is going so fast! The work that I'm doing could take much much longer than a summer, so I think it will be useful for me to try to set boundaries on what I want to accomplish, so that I can get a final product produced by the end of 10 weeks.

Posted by [mkelso](#) at Jul 24, 2009.

This week was super busy for me, and I definitely put in way more hours than I would have liked, but right now it all seems to be worth the hard work (such a satisfying feeling). Thanks to everyone who helped with George's birthday extravaganza.

I've been working alot on aligning my 16S mystery bug sequences and comparing those sequences to other potentially similar organisms. Looking at these alignments will help me to design qPCR primers, which I'm hoping to send in to be made today. Eunsoo Kim, the seminar speaker from Wednesday, is helping me do this. I also gave a presentation on my project yesterday at a lab meeting. It was kind of stressful to prepare, especially with all the other stuff going on, but I think it will really come in handy when it's time to do the final presentation. I'm really enjoying working with Eunsoo, and I can't believe that she's using my data! I also had dinner with my advisor and some people in my lab last night and had alot of fun. I don't want this summer to end!

Posted by [jvassar](#) at Jul 24, 2009.

So this week has been an interesting one. Hit a snag with the illustration that I initially thought was going to be the easiest! Hey ho, have revised my ideas and sent them of to Bruce and Rob for feedback, so fingers crossed it all works out in the end. I've revised my schedule so that I have a week dedicated to each project I'm doing. That should help me maintain my focus as the 'level of hectic' increases later on. My OMF illustration is still in the planning stages which is frustrating, but I should get that sorted out today/early next week. The idea is that my design for each piece is complete by the time I come to the week I've dedicated to it. That way those weeks can be spent on final rendering not preparatory research.

Thanks so much for all the hard work for George's birthday Julie. It was lots of fun!

Excited about learning to scuba. Let's hope I don't suddenly discover that I'm terrified of being underwater! 😊

Posted by [lvollset](#) at Jul 24, 2009.

To increase the size of the test set and still have enough images for training, we randomly selected 10% of the events for test and 90% for the training step. We did it a lot of times. Depending on the events that are placed on each step, results get better or worse, but on average more than 90% of the events were correctly classified. And this is true for all the classes. Using the old algorithm (only grayscale

information), one of the classes had only 63% of correct classification. Danelle, one of my mentors, asked me to start writing the report. Writing the report will also help me understand better some parts of the algorithm that I've modified 😊

Posted by [marco](#) at Jul 24, 2009.

I can't believe today is the end of the 6th week. Time really flies by when you are enjoying things! This week has been very fruitful. Keith Grochow got back to me regarding the problem I had with COVE. He said and I quote " I have the crash fixed in the newest build, but there's still something pretty wrong with the vertical section" so I had a discussion with my mentor and decided that even though COVE is a very promising and useful tool it is better to leave it for now as it seems to be unstable. With this, Google Earth got my full concentration. I packaged all the MATLAB scripts that I have written so far for Google Earth into a neat GUI based application and moved onto programming the GE plugin in a javascript based html. My goal for this would be to interface the html with TREX and show what is happening inside TREX and the geospatial context of the AUV when run under simulation. I have completed a small version of this application that shows the geospatial context of the AUV in GE just using the generated log files. Next week I will start working on TREX side, diving deep into it trying to get a low level understanding of how it works. Then I will try to figure out how to put a component in there that would publish its internal status in the manner I can interface with the javascript page.

Also yesterday my mentor Kanna Rajan left for India and won't be back before I finish my internship. But he has made sure that I have the right people to help me if I stumble into something on top of the regular conference call I am gonna be having with him.

Posted by [alhayat](#) at Jul 24, 2009.

Trucking away with the Ocean Acidification Discovery Lab creation - I finally got in a "story board" to Laura for the creation of molecules in motion in the ocean. I met with Jim Barry and talked for two hours about what we've done so far. His input as a researcher in this area has been very valuable. The challenge of teaching the topic is that it's emerging and there is still so much that is unknown. We want to make sure that what we are planning on teaching the students is valid and that it is a realistic portrayal of what the concerns are, what the results are so far and what actions they can take as citizens of this planet to help in the slow down of carbon dioxide emissions. All this in 45 minutes! We're still going through images to use for our introduction video... I am hoping we will avoid using too many of the typical "Al Gore" images of factories and exhaust fumes which I think people have seen enough of and which don't really have much impact any more. If we do use them, the trick is to make them relevant to a high schooler - my next move is to photograph my own teens as they leave phone chargers in,

computers on, TV on, etc...should have no problem finding those opportunities 😊. I've finished my staff training outline and started the Power Point I will be using for it. This weekend I break out the C-MORE OA kit and put it to test so I can use it for the staff training days - nothing like the smell of active yeast! Headed to the aquarium this Friday for some aquarium catch up and work with staff involved in this project.

Have a great weekend! 😊

Posted by [adooner](#) at Jul 24, 2009.

This week I've just been trying to pinpoint the reason why my I'm not getting much amplification with the PCR unit on my ESP. The first thing that came to mind was that there was no lucky mascot, so I fixed that by zip-tying a tiny frog to the MFB. His name is Lucky. It worked, but it was short-lived...one PCR reaction long to be exact. I haven't lost all faith in him yet though...Lucky the frog WILL come through in the end. Meanwhile, I'll be running a series of reactions to systematically find out what the deal is.

I was also able to extract DNA from a filter through which I filtered 1 liter of Santa Cruz's finest boardwalk water (thanks to Roman...Wise Roman, not Young Roman). I'm going to test the filter for bacteria today. Hopefully all that sea lion poop will finally be put to good use.

Posted by [mfrazier](#) at Jul 24, 2009.

This week for me has been interesting and exciting. I started out with maybe a total of 15 frozen tomopterid eggs and larvae. I chose 8 samples first to try and amplify DNA using PCR. The first and

the second gel for that did not turn out so well. None of my samples worked on the spectrometry so we did a spec DNA to see if anything is there to work with and there was none. Plan B into action, I chose 5 more different tomopterid samples. This time we checked with the spec DNA first before actually doing the whole PCR and two samples looked promising. The end result was only that one sample worked and it is currently being sequenced. Most of my samples I could match to live video footage which is also cool.

Learning lab work is a little tricky ,but its still great to have an opportunity to learn. Plus my lab mentor is fun so we have fun! 😊

Posted by [ksimmons](#) at Jul 24, 2009.

Really happy with the Ysi driver. Only needs a few more modifications and it's all done.

The arm processor is another story. I can finally boot the kernel and my linux choice. Currently I'm trying to run the 'official' sun embedded java interpreter. Not much luck so far, but confident I can get it running soon.

Next week will be building SIAM for the arm board, RXTX libs, and more Ysi coding.

Posted by [dbonnie](#) at Jul 24, 2009.

Processed the oxygen sensor test data, read more papers on oxygen sensor test methods and met with people who have experience with oxygen sensors and test measurements. I have been able to get some valuable data from our tests but most importantly I have been learning how to improve the test techniques. Worked on my oxygen sensor evaluation presentation. Met with the Mate people with some other interns. I enjoyed talking with Joel, Michelle and Kathryn about thier projects.

Next week I will continue to meet with oxygen sensor experts, finish my first draft to review with my mentors and perhaps start on the ESP project.

Hope to continue my conversation with Michelle about her rain forest biology experience. Also looking forward to seeing what Joel discovers in the chl a database. Meeting with Young women in science on Tuesday.

Starting to feel like the end of the internship is coming too soon. I am really enjoying the internship experience and I am learning a lot.

Posted by [kparker](#) at Jul 24, 2009.

So I have gotten remote control of the boat's rudder working. I also managed to break the circuit board that drives the propeller by frying a couple of passive elements on there. I'm hopeful we can repair it, but I have a similar board that I can use to develop while we figure out a replacement. It only provides 1/3 of the power the board I broke had, but that's not an issue for development as long as it can turn the motor.

I have also found a couple of bugs with some software in my development toolchain and I'm working with the developer to resolve these issues and improve the software as a whole.

Next week I'm going to resolve the motor driver board issue and finish integration with the propeller with the replacement board I have. I'm hopeful I can fix the last rudder issue on Monday and start initial work on the waypoint guidance. Tuesday I'll go up to campus to work with my lab group to determine what can be done with the propeller driver board and fix or replace it.

Posted by [bmairs](#) at Jul 25, 2009.

This week flew by! This Monday I started working through qPCR primer/probe design-- unfortunately the biliphytes are SUPER diverse-- which made the design process pretty difficult. Also-- the majority of the biliphyte sequences that have been created are about 700 bp long and contain two areas of high variability. Thanks to some more ARB lessons from Chris Preston, and a good switch to SYBR green from Taqman-- the primers were designed. I ended up creating a few different options to try to figure out what is best; it ended up being impossible to hit all the biliphytes with one primer set.

I will be doing some qPCR runs just to figure out what is working etc. etc. Next week I am growing up my plasmids to get ready to make a good standard curve for qPCR.

Beyond the realm of the lab: I ran the wharf to wharf race today... tons of fun! Super crowded though...

Posted by [harriet](#) at Jul 26, 2009.

I finally sent out my teacher surveys and started getting some valuable feedback for my HAB page. The EARTH teachers have been somewhat more responsive than some of the other people I was trying to get a hold of, so it's been great hearing some of their input. I also met with some of the tech guys to talk more about the design and content of the webpage as well as Raphe who is the expert on HABs. Raphe does a lot of the data collecting for the Santa Cruz Wharf, so hopefully we'll be able to use some of his real-time updates and link that with satellite images of chlorophyll concentrations and SST. Jason was also another researcher I started corresponding with this week. He's in charge of all the data in Monterey Bay, so it's been helpful hearing his input too.

This next week I'm going to be writing a brief report on the history of HABs in Monterey and the different types of red tides that have been identified in this area. This will be the introductory content that'll be up on the webpage, along with a few helpful links to phytoplankton identification guides. I also have to research a couple of case studies the teachers can work through with their students and maybe a few tutorials on how to read/ make graphs with the data. It's going to be a busy busy week!

Posted by [taryn](#) at Jul 26, 2009.

This week I was in contact with a company that handles the 3D printing for my project trying to get some new pelton wheels in for testing. Hopefully the new wheels will be in next week.

The orifice testing continues, I was able to collect more data this week that supported the theory that higher flow rates could be achieved (over steel orifices) by using sapphire orifice inserts to create a water jet. It is my hope that by combining the sapphire orifices with the newly designed pelton wheels I will be able to achieve a substantial increase in the efficiency of the system. I calculated the ideal flow rates for the orifice diameters I am using so I have something to aim for and to compare my data with. At this point though, the data I have collected is not as close enough to the ideal data curves as I would like so hopefully the new wheel will give me the boost I need.

As the program begins to wind down I am stepping back, in an effort to outline the part of this wave energy project that I will be talking about and writing my paper on. This is the most difficult task in front of me right now. Because this is a fairly broad project I have decided to focus mainly on orifice optimization and pelton wheel design/optimization (to a point.) There is plenty to do still, next week I would like to test the new wheel (if it arrives) and collect more data so that I can compare it to my calculated data.

Posted by [rmarin4](#) at Jul 27, 2009.

Great week working with Francisco. He doesn't answer questions with answers. Instead, he reframes the original question making my problem no longer relevant and giving me the freedom/ responsibility (AP) to choose the best method. Its awesome.

I put some biological variables into Matlab from the data base. Now I can look at Carbon/ volume of many different species and groups of species for the study area and possibly correlate these with larger processes.

Also, I'm now looking at line 67, from Moss Landing out around 150 km into the Bay, for some distance from shore revaluations.

Posted by [jcraig](#) at Jul 27, 2009.

I got the transformation on ESB working. Since all this time I was working on static configuration, Kevin decided to switch to the JBI configuration which is the most appropriate way to do future work on service mix. After a little digging in the book and testing the ESB, I got NMR working. By the end of the weekend I was stuck with the transformation because the code looks fine but somehow the transformation didn't work.

Today morning Kevin emailed with his latest updates on the build.xml for service assembly and he got it working. Excellent!! This week I will work on security, both authentication and authorization issues on ESB.

I am very excited about SCUBA... hurrayyyy... I will be in the ocean very soon

Posted by [durga](#) at Jul 27, 2009.

The goal for last week was to implement a checkbox system where you can select which jellies you want to see on the map; for example, if I only wanted to see moon jellies, I would click the "moon jelly" box and then only the moon jellies would show up on the map of all jelly sightings. I'm also working on porting the makers over to a system called Marker Manager, which handles google maps that have >10,000 markers on them (we hope to have that many sightings in the future!).

Last week what I DID get accomplished was I figured out how to easily change the icon associated with each species, such that it can be edited in the database rather than hand-edited in the HTML somewhere.

Picture-uploading functionality coming soon!

Posted by [kelliott](#) at Jul 27, 2009.

This past week was spent troubleshooting my problems from last week--I used a new protocol for protein purification, but there was not fluorescent protein to be extracted from my cells. I did another digest of the PCR product, ligation into the pQE vector, and transformed that into chemically competent cells. Again, these didn't fluoresce when I plated them. SO, it was time to find out whether or not these clones had the vector with my insert in them. I digested all old mini-preps from the pBAD vector to cut out my insert. I then ran these on a gel, which at first didnt work, but on friday I saw that there were indeed inserts in the mini prep samples, but still not being expressed! I also picked 32 new colonies with the pQE vectors for mini-prep. I sequenced those and analyzed the sequences. While doing this I learned that this FP has two varieties: one with a tyrosine in the chromophore and one with a cystine in the chromophore. No FPs without the tyrosine have ever been known to fluoresce. So it seems that when I do PCR only the cystine variation is being amplified and transformed. So next step is to find out how to amplify the tyrosine variation rather than the cystine one..

Posted by [mschorn](#) at Jul 27, 2009.

Activities

This page last changed on Jul 05, 2009 by [mage](#).

Use this page to post information about after-hours activities

- June 16th/17th - Films in the Forest (<http://www.foresttheaterguild.org/>) - Tuesday/Weds nites (until July 22)
- July 10th A FUN NIGHT AT THE MOVIES (Show time is dusk or about 8:30) THE PINK PANTHER STRIKES AGAIN with PETER SELLERS, Forest Guild Theater in Carmel
- July 23rd - 26th - Pacific Grove's Feast of Lanterns <http://www.pacificgrove.org/dirpages/calendar08.htm>)
- July 26th - Moss Landing Antique Street Fair (http://www.monterey-bay.net/ml/special_events/street_fair.html)
- August 1-2. Monterey Scottish Games and Celtic Festival - <http://www.montereyscotgames.com/>
- August 6-9th - Steinbeck Festival (www.steinbeck.org)
- August 12-16th - Monterey County Fair (<http://www.montereycountyfair.com/fair/index.php>)

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.**

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Comments

June 15

A FUN NIGHT AT THE MOVIES on July 10th

(Show time is dusk or about

8:30)

THE PINK PANTHER STRIKES AGAIN

with PETER SELLERS

Save the date! On July 10th, the Pt. Lobos Association invites MBA and MBARI volunteers and staff to special showing of The Pink Panther Strikes Again at the Forest Guild Theater in Carmel. The Point Lobos Association hopes that you bring your family, friends, and neighbors for a fun community evening at only \$7.00 per ticket. This is not a fundraiser but is a way to make the community more aware of the Pt. Lobos Association.

The Theater in the Forest is an informal open air theater with bench seats set in the woods of Carmel off of Mt. View and Junipero Avenues near Ocean Avenue. Theater goers should dress warmly (some even bring blankets). You are welcome to bring stadium seats, snacks, appetizers, and your beverage of choice. So come early (7:30 is fine) to socialize and enjoy your food and drink prior to the show. - you can bring dinner too - but it's cold and the seats are wooden planks so plan accordingly

Posted by [mage](#) at Jun 15, 2009.

June 18 - I've added the agenda for the DOEST next Tuesday - see attachments.

Posted by [mage](#) at Jun 18, 2009.

Opportunities to Go to Sea

This page last changed on Jul 23, 2009 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).

- August 5th - Bob Vrijenhoek - Devin Bonnie, Taryn Takahashi
- August 6th - Bryant and Karen going out with John Ryan
- August 10th - Jim Barry/Patrick Whaling - Alena Dooner, Harriet Alexander, Joel Craig

Schedule

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

- **Monday Project Updates (Post your update by Friday at noon)**
- **Monday Morning Meetings (9:00-12:00)**
- Monday Cookie Break 3:00 or Rec Comm meeting
- Wednesday BBQ lunches at MBARI (alternating Wednesdays)
- Friday - brown bag presentations
- MBARI closed June 19; July 2,3; July 17; July 31; Aug. 14.
- George out of office: June 24-28; July 7-10; July 24-31; Aug 8-12
- June 23-24 - MBARI Board meeting/Day of Science, Engineering, and Technology
- July 2nd and 3rd - MBARI holidays
- July 7th COSMOS High Schools seniors - **need volunteers**
- July 7th CampSeaLAB- 10-11 year olds - **need volunteers**
- July 8th - **Interns host BBQ**
- July 8th - Moss Landing Marine Laboratories, Leatherback Sea Turtle Migration seminar 7:00 p.m.
- July 9th - Bike to Work Day
- July 9-10th - National Ocean Science Board [see the agenda](#)
- July 23rd - MATE Robotics Institute - **need volunteers**
- July 28-31 - Young Women in Science (MBA) tmoneypenny@mbayaq.org need volunteers *see specific activities @ bottom of page
- **August 4th - Monterey Bay Aquarium Behind the Scenes Tour (instead of Monday meeting)**
- August 7th - NOAA Oceans for Life International HS - **need volunteers**
- August 12th - CampSeaLAB - need volunteers
- **August 20th - MBARI Intern Symposium at MBARI**

Wednesday Seminars and Project Updates at MBARI (<http://www.mbari.org/seminars/>) **Interns should attend these**

- June 17th - Janet Cushing Seminar
- June 18th - Project Update: Zooplankton Biodiversity and Bio-Optics in the Deep Sea, Steve Haddock
- July 8th - Scott McCreary Seminar
- July 15th - Lars Tomanek Seminar
- July 22nd - Eunsoo Kim Seminar
- July 27th - Project Update - Uranium-series disequilibria ages of young basalt flows, Axial Seamount, Brian Dreyer
- July 29th - Chris Cogan Seminar
- August 5th - Allen Andrews Seminar
- August 10th - Project Update - ESP, Chris Scholin

Monterey Bay Aquarium Young Women in Science Ocean Guardians Camp

- July 28th - 0900-1330: sail the bay and explore the wharf
- July 30th - 0900-1300: Tour waste management facility
- July 31st - 1000-1330: Boogie Boarding in Carmel

OSB Agenda

This page last changed on Jun 24, 2009 by [linda](#).

BOARD AGENDA

July 9-10, 2009

Meeting of the

OCEAN STUDIES BOARD

Monterey Bay Aquarium Research Institute

Moss Landing, California

Meeting Highlights:

Special Sessions:

- § **Fisheries Subcommittee meeting**
- § GoogleOcean
- § **Climate Effects on Marine Ecosystems**
- § **Market Based Approaches to Sustainable Seafood**

Thursday, July 9, 2009

CLOSED SESSION —

8:15 a.m. **Welcome---**Marcia McNutt, *OSB Chair*

8:30 a.m. **Working Breakfast**

9:00 a.m. **Review of action items from last meeting**

9:30 a.m. **OSB web portal**

10:00 a.m. **OSB's public web sites**

10*:30 a.m.* **Plans for the fall meeting**

11:00 a.m. **Discussion of Studies in Development**

11:30 a.m. *Break*

12:00 p.m. **Working Lunch**

OPEN SESSION—

1:00 p.m. **Welcome---**Keith Criddle, *Chair, Fisheries Subcommittee*

1:10 p.m. **Update on Ongoing NRC Fisheries Studies**

- Best Practices for Shellfish Mariculture and the Effects of Commercial Activities in Drake's Estero, Pt. Reyes National Seashore, California (funded by National Park Service)---*Susan Roberts, study director*
- Development of an Integrated Science Strategy for Ocean Acidification Monitoring, Research, and Impacts Assessment---*Susan Park, study director*
- Review of Sea Turtle Population Assessment Methods—*Susan Park, study director*
- Certification of Sustainable Products and Services—*Jodi Bostrom, associate program officer*

1:30 p.m. **Emerging Issues for NMFS**—*Steve Murawski, Director of Scientific Programs and Chief Science Advisor, NMFS Office of Science and Technology*

2:15 p.m. **Proposed study: Improving Models in Ecosystem-Based Fisheries Management---**Keith Criddle, *Chair, Fisheries Subcommittee*

3:00 p.m. Break

3:15 p.m. News from the Southwest Fisheries Science Center Fisheries Ecology Division---Churchill Grimes, Director

3:45 p.m. TNC Central Coast Groundfish Project - Collaborative Science Efforts---Mary Gleason, The Nature Conservancy, and Liz Clarke, NMFS

4:30 p.m. Open forum

- Other studies in development
- Other emerging issues

5:00 p.m. Adjourn

Friday, July 10, 2009

OPEN SESSION—

8:00 a.m. Opening Remarks---Marcia McNutt, OSB Chair

8:05 a.m. Breakfast

9:00 a.m. Panel on Climate Effects on Marine Ecosystems---Don Boesch, Panel Moderator, Jim Barry (MBARI), Raphael Kudela (UC Santa Cruz), and Alec McCall (NMFS)

10:30 a.m. Break

11:00 a.m. How MBARI uses Google Ocean---Speaker TBA

Noon Working Lunch

1:00 p.m. Featured Lunch Talk GoogleOcean*: What will it be in the future?*---Speaker TBA

2:00 p.m. Panel on Market Based Approaches to Sustainable Seafood---Andy Rosenberg, Panel Moderator, Tobias Aguirre (FishWise), Kai Lee (Packard Foundation), other speakers TBA

3:30 p.m. Adjourn Open Session

CLOSED SESSION —

4:00 p.m. Review of Current and Planned OSB Activities

- Report from the Fisheries Subcommittee
- Other activities (see below)

5:00 p.m. Action Items

6:00 p.m. Meeting Adjourn

7:00 p.m. Optional Dinner

This Week

This page last changed on Aug 13, 2009 by [linda](#).

Sunday, August 16th BBQ at Connor's house- 5:00 p.m.

Monday, August 17th, Intern Meeting 9:00 a.m.

Thursday, August 20th - MBARI Intern Symposium!