Research Vessel Technical Enhancement Committee (RVTEC) Meeting
Oregon State University
LaSells Stewart Center
Corvallis, OR
November 7, 2014
Meeting Minutes

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Monday, November 17, 2014

Meeting Called to Order - David Fisichella, RVTEC Chair, called the 2014 RVTEC Meeting to order at 0830. He thanked David O'Gorman for all of his efforts coordinating and hosting this meeting.

The meeting agenda is included as ***Appendix I***. Meeting participants introduced themselves. The full INMARTECH 2014 participant list is included as ***Appendix II***.

Agency Reports:

National Science Foundation (NSF) – Jim Holik provided the NSF report. His slides are included as ***Appendix III***.

NSF (and all the Federal Government) is currently operating under a Continuing Resolution, which runs through December 11, 2014. Under the resolution, they are allowed to spend up to 20% of 2014 levels.

Office of Naval Research (ONR) – Tim Schnoor provided the ONR report. They are dealing with budget issues similar to NSF. The Navy operates six UNOLS ships. Melville and Knorr are ending service for UNOLS in 2014. Melville already completed operations and Knorr will have its last cruise in December 2014. The Navy is building two new vessels that will be delivered sometime in 2015. The new vessels will have a lot of new technologies.

UNOLS Report - Chris Measures, UNOLS Chair, provided the UNOLS report. Details of UNOLS activities and highlights are included in his slides (**Appendix IV**). UNOLS continues their early career activities with Chief Scientist Training Cruises. Since 2011, cruises have taken place on *Wecoma, New Horizon, Endeavor, Atlantic Explorer*, *Blue Heron,* and *Point Sur*. Chris thanked the marine technicians for their support on the Chief Scientist training cruises.

RVOC and Safety Committee Report –Bill Fanning provided the report. His slides are included as *Appendix V*. The slides include details on topics of special interest to RVTEC:
- Deployment of Electrically Energized Equipment
- Wire maintenance policy
- Updates to Research Vessel Safety Standards (RVSS)

AICC and SCOAR – Steve Hartz provided the report. USCG Icebreaker *Polar Sea* is tied up at the dock. *Polar Star* has a schedule of about 130 days.

The SCOAR meeting was held in June at Scripps Institution of Oceanography (SIO). Many agencies were represented at the meeting. The SCOAR group has drafted a chapter for the R/V Safety Standards to address operations of unmanned aircraft from research ships. There was a tour of SIO unmanned aircraft facility. SCOAR will have a poster session at the 2014 AGU meeting in San Francisco.

Ship Design/Construction Updates:

R/V *Sikuliaq* – Steve Hartz provided the report. His slides are included as *Appendix VI.* Steve thanked the community for all of their feedback and suggestions during construction of the ship. The first science cruise begins today. Steve reviewed the ship's capabilities and specifications along with the schedule (see slides). There are plans to replace the ship's A-Frame. During the trial period, they lost the CTD system over the side. Images of the vessel are included in the slides.

Regional Class Research Vessel (RCRV) Update – Jim Holik provided an updated on the RCRV project. Jim's slides are included as *Appendix VII*. Oregon State University (OSU)

was selected as the Lead Institution for the RCRV acquisition project in January 2013. Details of the project plan and timeline are included in the slides. Clare Reimers, OSU's Project PI, will have a presentation about the ship's design during the INMARTECH symposium. Jim showed the UNOLS vessel service life chart. The chart shows the end of service dates for the current fleet as well as the estimated start dates for new vessels.

Fleet Broadband (FBB) Update – Al Suchy (WHOI) provided the Fleet Broadband Update. His slides are included as *Appendix VIII*.

The FBB Program was established 1 January 2010. The Program extends through Oct 2016 for up to 75 users. The rate has reduced from $0.93/MB to $0.70/MB. The total pool size is established at just over 200 GB/Month.

The unused balance will carry-forward month to month within an annual period. If the user pool exceeds the allowance, the use rate continues at $0.70/MB.

The FTP site, ftp.whoi.edu, contains user usage data with Password protection.

There will be a Global Express Pilot Program in 2015. The test platforms for 2015 include Revelle, Sikuliaq, and Armstrong. The service plan will include a flat monthly rate for both Ka and L (FBB) bands.

OOI moorings are using FBB. The usage chart is included in Al's slides.

A WorldLink representative continued the presentation. His slides are included as **Appendix IX**.

Discussion:
- Question – is Global Express going to be less expensive than it is now. Worldlink reply – We need to look at the bigger picture. You will be able to do more remotely. There will be remote monitoring from shore for things like the engine room. This will save you in terms of the cost for the support you provide. You will be able to do more for less. The prices haven't been announced yet.
- Question - Will there be GMDSS approval? Worldlink reply – They are compliant already. INMARSAT C will continue to be there.

 Break

HiSeasNet Update – Steve Foley provided the report. His slides are included as *Appendix X* and provide details on:
- 2014 highlights
- Equipment Changes in 2014
- Current Capacity
- 2015 Plans
- Target Expanded capacity

Discussion:
- Jim Holik – What will be the cost of the expanded capacity? Steve Foley – It will offer about 4 times the data at twice the cost.

Rolling Deck to Repository (R2R) Program Update – Bob Arko provided the report. His slides are included as *Appendix XI*. Bob gave a bit of history about the R2R program and introduced the R2R team. A recent milestone was the collection of their 100th Multibeam cruise.

Battery Labeling – David O'Gorman provided the report and his slides are included as *Appendix XII*. Ship operators are asked on occasion to retrieve equipment that they don't have any information about. They have any information about the power sources of the equipment. David suggested that there should be a universal labeling system. Even if there is no power source, it should be indicated that there is no power source.

David Fisichella agreed that this is an important issue. It can be part of the R/V Safety Standards. David will talk to Bill Fanning about this.

Ocean Class Research Vessels – R/V *Neil Armstrong* & R/V *Sally Ride* – Mike Prince gave the report. His slides are included as *Appendix XIII.* The ships are named after astronauts. They were explorers. The slides include images of the two ships under construction. Mike commented that WHOI and SIO have provided very good on-site representation. These folks have been instrumental in making the program a success. They look at all of the specifications. Science operations will begin nominally 6 months after delivery.

General Discussion on Bandwidth - David Fisichella opened a discussion on bandwidth management in terms of "expectation bandwidth". On shore, no one thinks about the bandwidth they use. When science comes aboard a ship, they think that is is an extension of the shore and they are disappointed. David would like to propose a unified letter from RVTEC to the science users regarding expectations. We have been talking about improvements to bandwidth and how to expand it, but we need to discuss expectations.

There was a suggestion to have a mock-up system so that users can experience the bandwidth limitation and know what to expect.
- Jules Hummon – It seems like it would be impossible to write one letter. Mayber there should be a table/matrix of options. There are different strategies for dealing with bandwidth.
- Sarah Kaye – The USCG sends a standard letter to PIs 2 or 3 weeks before their cruise regarding bandwidth.
- David Fisichella – WHOI does this as well, but the Chief Scientist doesn't always pass on the information.
- Laura Stolp – People don't understand that they need to shut down the cloud, etc.
- David F – We need to get people to better understand the situation.

- Ted Coburn – The recent experience was with the *Palmer*. They required a ½-hour for training. In order to be qualified to use your computer you had to pass the quiz.
- *Palmer* rep – Everyone in the science party is restricted to 15MB each day. This allows them to get to their gmail account
- David O'Gorman – Training would help a lot. The sooner that you can lower expectations, the better. They have a management tool that will expose who is using the bandwidth.
- A user simulation tool would be helpful.
- Mike Prince – This is addressed during the chief scientist training cruises. It would be good to have this as a letter.
- Steve Hartz – Systems could be set up for document transfers. Too often people on the ship are sending other people on the ship large documents.

Lunch Break

MATE Update – Nandita Sakar provided the update. Her slides are included as ***Appendix XIV***. She is replacing Tami Lunsford. Tami is still with MATE as an advisor. Nandita provided an overview of the internship program. MATE has a new grant for support over the next 3 years.

MATE coordinates two types of internship programs:
- Summer program with 12-15 interns
- 6-month interns

Details of the programs are included in the slides.

ADCP and UHDAS in the Fleet Report – Jules Hummon provided the update. Her slides are included as ***Appendix XV***. Jules reported on:
- UHDAS/ADCP status
- UHDAS Systems in 2014
- UHDAS Systems: changes in 2014
- Problems-2014 (some ongoing)
- New Challenges (2015)

If you are getting a new ADCP, please let Jules know. Let her know if there are changes in serial feeds.

Jules provided a protocol reminder:
- Always run "end cruise" before archiving.
- She will be around all week if anyone wants to talk to her.

Appendix B Update – Aaron Davis provided the update. His slides are included as ***Appendix XVI***. Appendix B was released in 2011, but was not well received. Aaron provided background on the Appendix B. He went over the problems and status of the Appendix.

David Fisichella commented that this has been one of the more challenging documents to get their heads around

Technician Pool – Jim Holik and Alice Doyle provided the report on the Technician Pool. Alice began the report and her slides are included as *Appendix XVII*. In 2014 there were approximately 3 Technicians in the Pool. There were 45 Cruises supported on 7 vessels. 39 cruisers were with technicians within the Pool

Jim Holik continued the report. His slides are included as *Appendix XVIII*. Jim read the findings of the Committee of Visitors (COV) (see slides). This group is like auditors. The COV endorses a technician pool.

Work on the Technician Pool proposal solicitation is in the works. The pool will maintain the institutional technical services bond. The solicitation should be out in 4 to 6 months.

Discussion:
- Question – Who makes up the COV? Jim Holik –They are mostly scientists.
- How many of the COV managed technical support groups? Jim Holik – None. We know that we have flat budgets and salaries are going up.
- There is general concern about the statement about technicians spending 30-35% of their time at sea.
- Question – Will the number of techs be reduced? Jim Holik – Probably not, there might even be more, but they might only be working part-time. It is all in the solicitation. The proposer has to answer a series of questions.
- Comment – There could be a problem with only needing people for 4 months a year. They might seek employment elsewhere. It could become difficult to get people when you need them.
- Comment – The percentage that techs spend at sea should not be in the equation. It should be based on the time it takes to get their job done.
- Jim Holik – they are trying to make things better under the budget that is available. If it doesn't work, they can make changes.
- Peter Ortner – You really don't want the COV to go into detail, it allows us to create solutions.
- Jim Holik – The reason that it has taken so long to get the solicitation out is because he is worried about the cost.
- Jim Postel – He has been understaffed for years.. The pool has helped. They haven't been able to take care of the shore-side tasks.
- Jim Holik – The ship operator will have the ultimate decision on who sails on their ship.
- Jim Postel – His people spend so much time at sea that when they are on-shore they don't want to sail for someone else.
- Question - Should the tech pool also start thinking about specialized services.
- Jim Holik – The plan is to start small. It doesn't say that you will have to take your staff numbers down. That might happen in the future.
- Question – Where will the tech pool funds come from?
- Comment – This doesn't answer the question of how many techs you can sail with.

- Comment – There are a lot of things that the techs do to support the ship. The ships are much more complex. The marine engineers are no longer trained for this. We need more techs on the ships.

RVTEC Google Group – Alice Doyle provided a report on the use of the RVTEC list serve and archiving technical exchanges. Her slides are included as ***Appendix XIX***. Google Groups can be explored as an option for archiving email exchanges. Some of the pros include:
- The emails go into your email boxes as usual.
- The Google groups site is much easier to search.
- The emails are archived quickly and easily.
- Contact information is obfuscated on the group site.
- We can choose who can write to the group.
- We can choose who can read the group.

RVTEC Officer Elections and Liaison Appointments – David Fisichella reported that candidates are needed for the RVTEC Chair-Elect position. So far no candidates have come forward. We will solicit candidates this week.

Adjourn RVTEC Meeting – The 2014 RVTEC meeting was adjourned at 2:30 pm.