

# SatNAG

Satellite Network Advisory Group

2017 RVTEC Report



SatNAG

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Satellite Network Advisory Group



# SatNAG Milestones for 2017

1. We formed
2. We have a website
3. We responded to an NSF RFI
4. We did a Vessel Survey
5. We are writing an Internet Policy
6. We are exploring Cyberoam metrics
7. We are interested in Fx observations
8. We have drafted a backup Internet requirement recommendation for NSF



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# Milestones: Formation

- SatNAG formed in November 2016 and has spent the past year assessing practical goals that will unify Internet experience for UNOLS vessels.
- In the summer of 2016, members of the National Science Foundation (NSF) and the University National Oceanographic Laboratory System (UNOLS) identified the need to have a more consistently managed Internet experience across vessels in the fleet. Commensurate toward these objectives the Satellite Network Advisory Group (SatNAG) has been charged with assessment, definition of project scope, and development of common tools, resources, and solutions for the fleet.
- We aim to steward the objective, effective and efficient use of ship to shore network resources and optimize positive customer experiences for the UNOLS fleet.



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<https://satnag.unols.org>

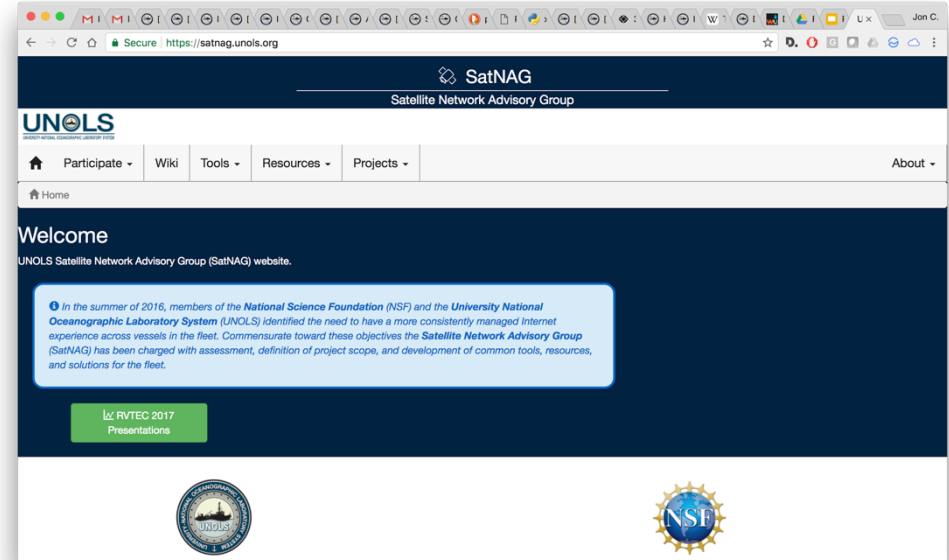
# Milestones: Website

- **Wiki**

- How-to articles in progress...
  - Cyberoam setup
  - Disabling auto updates
  - General Network issues.
- Contributions are welcome!

- **Bandwidth calculator**

- Available to explore at [satnag.unols.org/quotacalc](https://satnag.unols.org/quotacalc)
- Quota numbers are not random
- Quota math is always messy, but we need a starting point



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# Milestones: Request For Information (RFI) response

- SatNAG response to NSF CI 2030 was submitted, with recommendations to NSF for future Internet. (<https://www.nsf.gov/cise/oac/ci2030/pdf/RFI-Feldman-215.pdf> and [www.unols.org/sites/default/files/201704rvoap16.pdf](http://www.unols.org/sites/default/files/201704rvoap16.pdf))
- All responses can be viewed at <https://www.nsf.gov/cise/oac/ci2030/>
- Scripps Marine Operations Committee members voiced their support of our response in their response: “Seagoing scientists at Scripps overwhelmingly support the SatNAG position.” ([https://www.nsf.gov/cise/oac/ci2030/pdf/RFI-Appelgate-256\\_with\\_Attachment.pdf](https://www.nsf.gov/cise/oac/ci2030/pdf/RFI-Appelgate-256_with_Attachment.pdf))



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# Milestones: Vessel Survey

- We conducted a Vessel Survey regarding Internet use and network setups to identify common ground amongst operators.
- Thank you for your contributions! This was very helpful in helping SatNAG understand problems that are unique to many operators, or unique to some.
- Generally, the majority of ship problems and/or concerns about INternet setups trend toward similar. This is good news! It means that we stand a chance of working together to make our NSF large facility (the UNOLS fleet) operate in a manner that reduces technician workload and provides a more consistent UNOLS customer experience.



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# Milestones: Internet Policy

- We have been asked to come up with an Internet policy for UNOLS
- We had a breakout session to discuss the specifics of this yesterday. Discussion was good.
- We're very interested in working as a committee and with operators toward a functional solution for UNOLS.
- SatNAG committee members are committed to testing the solution on themselves before recommending it to others.



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# Milestones: Cyberoam evaluation

- Use of the “Application Filter” in Cyberoam provides a notable percentage in traffic savings.
- Cyberoam reporting and exploration, in particular, during POR North Hemi mega-expansion
  - We are starting to see trends in user roles.
  - At present, somewhere between 300-900MB/person/day is more than sufficient for quotas, on average
  - We need to understand the Cyberoam’s reporting of uncategorized (aka “N/A”) reporting. This could be related to Application Filters (above).



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# Milestones: Fleet Express observations

- As Fx enters mature production, we are interested in characterizing its behavior and collecting metrics about system performance.
- At present, we are asking users of the Fx system for their feedback.
- Please email [satnag-fx@unols.org](mailto:satnag-fx@unols.org) with your Fx troubleshooting.



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# Milestones: Secondary Internet requirements

- NSF requested recommendations on what is required of secondary Internet system. Key points include:
- The systems must rely on distinct infrastructure from the primary
- The backup system must provide a reasonable amount of throughput to serve as primary for a cruise (2-6Mbps)
- We must be able to easily gain situational awareness of the state of the system.
- We must be able to collect meaningful metrics from the system.



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# Thank You

Your pals,

The SatNAG



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