


Preparing for a new satellite!


Where do we start?

**many, many, many aspects..
with a focus on..**


- Geostationary satellite: Imager sensor
- Draw from and build on previous experiences - both "your" satellite and other satellites
- Keep the user in mind -
– forecaster and other trainers



Intern



Skilled



Expert

Slide 1: Preparing for a new satellite! Where do we start?

Well you know, we're not the first people to ask this question and this is not the first satellite that the US has launched... In fact, GOES-R will be the 17th GOES satellite to be launched.

Slide 2: There are many, many, many aspects so the focus will be on the geostationary satellite GOES-R and in particular the Imager sensor

Part of where we will start reflects that the audience I work with is other researchers and forecasters. The other part reflects questions I had when I was first introduced to GOES-R and questions that I hear other people asking.

Whether we fully realize it or not, we are continually building on previous learning and experiences.

Throughout the week, I hope to engage a bit of everyone's satellite experiences.

I do want to focus on particular users – the forecasters and trainers that train them

During the US last major change...


- GOES-7 to GOES-8 (launch 1994)
- The US went from using
– 2 channels for cloud imagery to 5 channels



- Imagery was flowing, but not all of it was getting in to offices and there was very little training.

Follow-up

- NOAA held conferences and meetings to present information and get user input.
- GOES-R is a **HUGE** program



A collaborative mission

<http://www.goes-r.gov/>

Slide 3: This is a far reaching topic, and to try and put more of this in to perspective, a satellite is an ENORMOUS investment. During the US's last major change going from GOES-7 to GOES 8 in the mid-90's, we went from using 2-channels for cloud imagery to 5 channels. The imagery was flowing from the satellite, but not all of it was making it in to the forecast office.

I'll reiterate, it's a HUGE investment and in order to convince our congress to continue to fund it, NOAA has to make sure that we're prepared to use it when it is available.

Slide 4: ...And they have been gathering input from users on what they would like to see.

The GOES-R program is HUGE. If you want more background about the program, I encourage you to check out the link listed here or google GOES-R.

Follow-up

- As part of the GOES-R effort, the **Proving Ground (PG)** was established to promote the flow of information between **research and operations**.



<http://www.goes-r.gov/users/proving-ground.html>

Follow-up side note...

As an international community, we interact through WMO!

- Preparing for a new satellite **IS** a global issue!



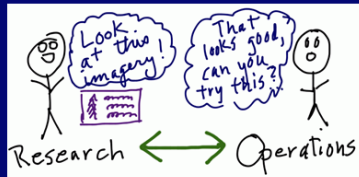
<https://www.wmo-sat.info/satellite-user-readiness/>

Slide 5: One aspect of the GOES-R program is the Proving Ground which was established to promote the flow of information between research and operations. One part of the PG was designating satellite liaisons that were put in national and regional centers to encourage this R2O exchange. The link at the bottom which is found off the main GOES-R web page has many examples of interaction.

Slide 6: On a side note, as an international community, we interact through WMO. Preparing for a new satellite is a global issue and I'm happy to advertise here this link to the SATURN portal. You all know that we often muddle through new experiences and at some point realize that we need to have more structure and write guidance so that everyone else doesn't have to reinvent the wheel. Do check out this link if you have the time and keep it as a bookmark to come back to for reference.

PG Successes

- Some offices are excited and readily participate in the PG.



- Improved interactions between research and operations

Successes

- The image/product has to be relevant and fit a need.



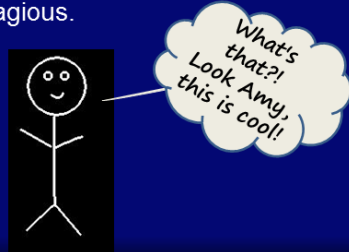
Slide 7: Getting back to the Proving ground successes. Some forecast offices and centers were excited to participate in PG activities and were happy to give feedback as well as suggestions on what to do differently.

It helped to improve the interactions between research and operations.

Slide 8: But with budget cuts in recent years resulting in fewer staff in offices that had to cover more shifts, which further resulted in reduced time for training and looking at new products, they came back and said, the product has to be relevant and fit a need.

Successes

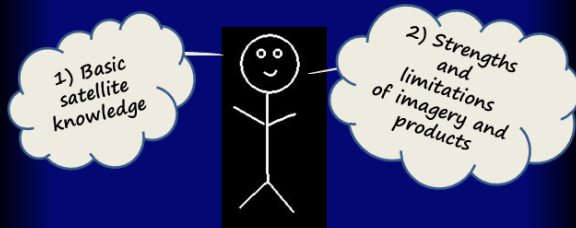
- Some offices have "sparks" in them. The "spark" is interested in everything new and is contagious.



Slide 9: Another thing that was noted was that in some offices there were individuals that were "sparks". They tend to be curious and interested in anything new. They tend to share their information with their colleagues. He might have had an overnight shift and is briefing the forecaster for the next shift and will say – you know how we have problems with this area and fog? Well last night I used that new product and it worked well and then go on to explain the details...

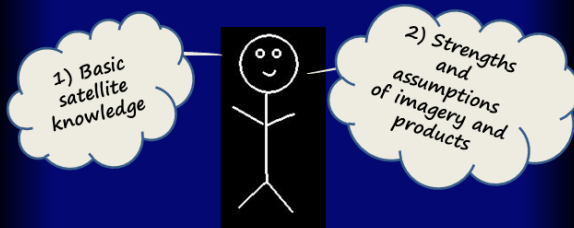
What is important?

- Back to "user interests/needs that keep showing up":



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Slide 10: What is important?

Back to the "user interests and needs that keep showing up". Over the years, we keep hearing that we need a good foundation in satellite basics. It makes sense, we see that in many areas, not just satellites.

What will help promote satellite basics? Knowing the strengths and limitations of imagery and products. Oops, I really don't want to use limitations there, let's substitute the word assumptions because that's really what we mean.

Slide 11: It's being aware of the assumptions that went into imaging or creating the product that might lead to limitations in use.

Advanced Baseline Imager (ABI)

Increased image resolution

- radiometric
- temporal frequency
- spectral
- spatial

I'm curious - In your work, what is the most important aspect to you?

Please answer the 2 survey questions!

Slide 12: Back to the new imager on GOES-R which is called the ABI. It will have increased image resolution in the following characteristics radiometric, temporal frequency, spectral coverage, and spatial footprint.

I'm curious – In your work, what is the most important aspect to you?

As an introduction to this session, I have a brief survey to answer this question as well as find out where are we all from and what geostationary satellites we currently use?

Please answer the 2 survey questions and you are welcome to add comments as to why you rate these characteristics as important. Thanks for your attention! And I look forward to hearing you online!