

Test Bed White Paper

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Gaps-

Proposed Algorithm Program/SATB benefits:

- It would allow research to focus on problems such as severe weather, soil moisture, ocean color without the artificial partitioning into acquisition program-related projects.
- It would allow researchers to address remote sensing issues according to the physics involved and the skill sets required to solve problems associated with IR, microwave, visible channel, scatterometer etc disciplines.
- It would allow emphasis for the first time on cross-sensor and cross-platform algorithm development which would maximize the utility of NOAA's satellite constellation for weather and climate.
- It would allow algorithms to be developed or transitioned whose origins were outside of the normal POES/GOES mindset. Examples would be METOP and MSG development transitions
- It could exploit tools such as radiative transfer models, and innovative data processing technologies such as DPEAS more effectively.
- Unlike other contractor funded methods for algorithm, validation, and calibration efforts the SATB would improve corporate memory on critical elements of satellite operational technology. Algorithm developers and experts in calibration would not cease employment when a specific satellite programs effort was completed. This would not only improve the efficiency of satellite acquisition but it would also vastly improve the future stewardship of the data.
- The SATB would interface well with NESDIS algorithm and satellite product "stewardship" activities as recommended to NOAA by several advisory panels and groups.
- It could develop long-term relationships with other NOAA virtual laboratory activities such as the Joint Center for Satellite Data Assimilation
- Allow research to be proposed/conducted that would cross cut the geo/polar platform issues not relevant to the phenomena being addressed.

- Improve both research and operational efficiencies where remote sensing can be explored with the proper mix of polar and geostationary sensors without acquisition program surf arguments and prerogatives muddying the water.
- It would allow sustained research in areas that are now terminated as part of satellite programmatic.
- It would expedite the use of cross-sensor/satellite methods in the calibration and validation of specific satellite systems.
- It would allow new applied research to be started up under the continuing umbrella of the AP/SATB thus avoiding the delays in algorithm exploitation and development associated with the 7-year PPBES process.
- Resources for algorithm development would be consolidated across NOAA programs providing a greater level of program sustenance

Communication Plan

Contributors:

- SAPO needs to be an integral part
- WFOs and NAWIPS (NCEP)- SSD at the NWS regions
- CIs and STAR
- Walter Wolf AIT representative- possible source provides collaborative tools
- STAR/ASAR Program Alternative- Key component to allow CIs to contribute
- End-to end to end- developer to user with feedback to developer
- No middleman between developer and end user
- OSDPD when transitioned to

Who Needs to Approve:

- Mary Kicza
- OSD- Jim Silva, Jim Yoe- liaison
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Who Stops:

- Budget
- OSDPD 24x7 ops requirements, not having resources to transition the products
- NWS and CoastWatch participation

Funding:

- New money- \$2M for 2 yr with a project spanning across CIs, 1-2 products \$300K/CI-2 yrs to prototype/demo
- AWIPS programmer paid by NDE
- AWIPS test bed development workstation
- NOAA employees salary covered

- STAR Common libraries

Success:

- Communicate, communicate, communicate multiple methods
- Annual Progress reporting with developers and end users, sponsors