Benefits of a Consistent Algorithm Change Approach to the NESDIS Enterprise Ground Systems

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The newly established NOAA/NESDIS Office of System Architecture and Advanced Planning (OSAAP) develops and maintains program Systems Engineering policy to enable successful execution by the Programs. This year, OSAAP has applied the lessons learned from the successful algorithm change process of the S-NPP program to establish an efficient process for updating GOES-R algorithms and configuration tables in the operational baseline. Through use on both the polar and geo programs, a solution applicable to the entire NESDIS enterprise can be established which will streamline how the various NESDIS organizations work together to institute changes into the operational ground systems.

A Lean Six Sigma workshop was held in January of 2013 to improve the S-NPP algorithm change process. Having launched in 2011, the S-NPP change process had a year of on-orbit experience prior to the workshop and had been used for the implementation of changes found necessary during the calibration/validation activities. The study included representatives from the JPSS and GOES-R programs, as well as the OSPO and STAR groups supporting the programs. The results were used to improve the existing JPSS process, and have been applied to the GOES-R process. As a result, STAR, who provides algorithms and calibration/validation support to both programs, and OSPO will use similar tools, working groups, and boards with both programs. This standardization will simplify the interaction for the personnel supporting both programs. For example, the algorithm change package deliveries from STAR to the programs will adhere to the same criteria, allowing STAR to interface identically with both programs. The process is structured to ensure all changes are tracked to resolution. This includes the changes necessary to improve products to meet existing requirements, as well as the incorporation of new requirements as technology advances.

This presentation will describe the common algorithm change process, how it will be applied to GOES-R, and the benefits of an enterprise approach to all programs.