

NOAA/NESDIS ESPDS: Enterprise Product Generation & Distribution for NESDIS

Rich Baker, Mike Brogan, George Wilkinson, Peter MacHarrie, Ron Niemann, Dan Beall, Solers, Inc.

What Is ESPDS?

- Environmental Satellite Processing and Distribution System
- Developed by the NESDIS Office of Satellite Ground Services (OSGS)
- Modernizes the Product Generation (PG), Product Distribution (PD), and Infrastructure (INF) segments of the NESDIS Environmental Satellite Processing Center (ESPC)
- Provides a single enterprise solution that meets the needs of existing (legacy), GOES-R, S-NPP/JPSS, and GCOM-W, with *scalability* to meet future environmental satellite needs (e.g., H-8, Sentinel)
- Provides environmental satellite data and services to a growing user community including NOAA Line Offices, DoD, and other U.S. and International users



ESPDS Enterprise Architecture

- ESPDS provides an enterprise Service Oriented Architecture (SOA), where multiple satellite missions leverage common infrastructure and processing services, *reducing redundancy and* costs
- Enterprise User Portal provides *user self-service* subscription and search capabilities across *all* **NESDIS** products
- Common Infrastructure Services and Enterprise Shared Storage reduce redundant, recurring costs and simplify operations, maintenance, monitoring, and security

To learn more, see the upcoming oral presentation:

J12.3 NOAA/NESDIS ESPDS: Transition of Science Algorithms into Enterprise Product Generation Operations

Thursday, 14 January 2016, 2:00PM | Room 252/254

NOAA Product Distribution & Access (PDA)



- common infrastructure platform
- Supports the enormous increase in data volumes while continuing support for legacy interfaces
- Streamlines data flow by centralizing distribution
- volumes without redesign
- Supports *tailoring* of data and products on a per-user/subscription basis
- Provides User Self-Service for access to data and products, enabling users to acquire just the data they need

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• Data agnostic collection of enterprise product distribution services within the ESPDS

• Extensible to future interfaces and missions, and scalable to accommodate future data



NOAA Product Generation (PG)



- NOAA Data Exploitation (NDE) 2.0 provides an Enterprise Product Generation (PG) framework implemented in a SOA within the ESPDS common infrastructure platform
- Facilitates research to operations for new and updated algorithms
- *cept*)
- Delivered Algorithm Package (DAP) provides a standard algorithm packaging specification for "plug-and-play" algorithm integration in Enterprise PG
- Established PG solution for S-NPP (operational since 2014), JPSS-1/2, GCOM-W1, and can be leveraged for other NOAA or non-NOAA missions

Science Algorithm Integration Process





• Data agnostic, execute algorithms for any platform/instrument ("algorithm as a service" con-