ADL/MX Build Status and Algorithm Integration

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Overview

- JPSS and S-NPP SDR algorithms and VIIRS Imagery algorithms are currently processed in IDPS
- Algorithm Development Library (ADL) is the Test System, mimics IDPS and released as MX Builds with version names MX1.0, MX2.0 etc.; Current Version is MX 3.0
- JPSS ASSISTT Uses MX Build Versions for Algorithm Integration, Testing, Change Request Package Creation and Submission

Background

- IDPS was used to Process All the Algorithms
- The Version was BLK1 and Released as MX Builds (MX7.2, MX8.5 etc.)
- Current Version is BLK2 and BLK2 Builds are Released as MX Builds from January 2017. Before MX Builds they were released as PSAT versions (PSAT 22, PSAT 26 etc.)
- BLK 2 ADL MX 1.0 - Released on 1/10/2017 in Raytheon CM
- BLK 2 ADL MX1.0 (with 2 patches) - Released on 4/11/2017 in Raytheon CM
- BLK 2 ADL MX 2.0 – Released on 5/30/2017 in Raytheon CM
- BLK 2 ADL MX 3.0 – Released on 6/2/2017 in Raytheon CM

BLK2 Builds

- In BLK2 the Inputs and Outputs are managed by Data Management System (DMS)
- After ADL executables are built, DMS should be created
- ADL Tools exist to manage inputs and outputs
  - RemoveFromDms.plx
  - ExportFromDms.plx
  - RetrieveFromDms.plx
  - InsertIntoDms.plx
  - ImportIntoDms.plx
  - extractSaveset
  - DataCollector.exe

ASSISTT Configuration Management (CM)

- ASSISTT Keeps All MX Builds in its own CM system (Git)
- ASSISTT has compiled all the Libraries needed to build ADL
- ASSISTT has developed Scripts to run ADL
- People with access to STAR Collaborative Environment can use ASSISTT Libraries to build ADL and test new algorithms.

Algorithm Building and Testing Steps

- **Step 1:** Get ADL Version from Raytheon CM system
- **Step 2:** Put these versions in STAR ASSISTT CM system
- **Step 3:** Find out the special days for specific testing
- **Step 4:** Organize all the needed input files for this date
- **Step 5:** Build the particular version of ADL
- Step 6: Run the Executables to generate Product Data

Note: Use the ADL Version that mimics the Version in Operations

Integration and Change Request Package

- Scientists develop code changes and Look-Up-Table changes to improve the algorithms
- ASSISTT tests these changes in ADL MX Build that is compatible to operational version of the algorithm
- Communicates with Science Team and DPE to confirm results and test package
- ASSISTT Submits the Algorithm Package

Algorithms

- OMPS SDR – NP and NM
  - *Weekly DARK Table Testing*
  - *Biweekly OSOL and WAVELENGTH tables for OMPS NP*
  - *JCT5 Table delivery*
  - *Others such as Bias Correction etc.*
- CrIS SDR
  - *PCT tables that needed xml file changes*
  - *Spike Correction*
  - Control generation frequency of CrIS-<FS>-SDR-ENGPKT-BACKUP-AUX
- ATMS SDR
  - *Updated PCT*
- VIIRS SDR
  - *Monthly DNB LUT Moon Update*
  - *J01 Prelaunch Table Update*
  - *Incorrect M6 Reflectance Values Update*
- VIIRS Imagery SDR

Summary

- Current MX Build is MX3.0
- ASSISTT uses MX3.0 for Testing and Submitting Change Request Package
- Creates README file and Testing Guideline Document
- Communicates with Science Team and DPES
- Attends Meetings (DRAT, TIM, Reviews and Science Team Meetings)
- Uses the MX Build that is Active in Operations

Questions?