ADL/MX Build Status and Algorithm Integration

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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 ASSISTTT Uses MX Build Versions for Algorithm Integration, Testing, Change Request Package Creation and Submission.
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
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?

Thank You