

FY10 Transition Plan

For CCDD Applied Research Center (ARC) on Precipitation

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DATA SET #1: IR Histogram Data from Geostationary Satellites and Precipitation Estimates from the histograms for the GPCP

- A- Statement of transition goal
Due to the manual operation nature, this processing cannot be converted into automatic procedures. We will continue the processing at NOAA Climate Prediction Center.
- B- Progress toward transition to date
N/A
- C- Location of data set production, identification of production team (including partners).
The data set is being generated at NOAA Climate Prediction Center (CPC). The production team includes Yelena Yarosh (contractor), Pingping Xie (CPC employee) and John Janowiak (University of Maryland, adviser).
- D- Software / hardware issues
N/A
- E- Timeline
N/A

DATA SET #2: Global Full-Resolution IR Data from Geostationary Satellites

A- Statement of transition goal

We have completed the transition of this processing to the CPC/NCO Compute Farm (CF), an IT infrastructure composed of a network of servers and workstations that is operated 7/24 by NCEP Central Operation (NCO). However, due to the nature of processing massive IR data with unstable inputs availability and quality, manual intervention is required to ensure smooth productions of the global full-resolution IR data. The product is widely used by precipitation community for the generation of GPCP-related analyses and other high-resolution precipitation products.

B- Progress toward transition to date

Transition is complete but the system needs manual intervention.

C- Location of data set production, identification of production team (including partners).

The data set is being generated at NOAA Climate Prediction Center (CPC). The production team includes Yelena Yarosh (contractor), Pingping Xie (CPC employee) and John Janowiak (University of Maryland, adviser).

D- Software / hardware issues

The programs to process the IR have been developed in earlier years as part of the project. Installation of the McIDAS system on the CPC Compute Farm (CF) is the primary software issue that is finally solved around September 2008 by NCEP IT personnel. A reasonable amount of resources is required to archive the IR data even after the migration of the system to the Compute Farm.

E- Timeline

Transition to operation is done;
Operation, with manual monitoring and intervention, is being carried out on a real-time basis at CPC

DATA SET #3: CMAP global Precipitation Analyses

- A- Statement of transition goal
Our goal here is to migrate the real-time processing system for the pentad CMAP to the Compute Farm. We will also move the processing system for the standard version pentad CMAP to a CPC server. Both the real-time and standard versions of the pentad CMAP are used as inputs to define the official GPCP pentad analyses.
- B- Progress toward transition to date
The migration of the real-time processing system for the pentad CMAP is 100% complete.

The migration of the standard version pentad CMAP processing system is restricted by the ongoing adjustment of the IT systems inside CPC (partially in association with the scheduled move of our offices to a new building). The migration will be done in two months after a CPC server is assigned for us to use. This processing system will be running manually due to the nature of the input data sets and the QC process of the data production.
- C- Location of data set production, identification of production team (including partners)
The data set is being generated at NOAA Climate Prediction Center (CPC). The production team includes Yelena Yarosh (contractor) and Pingping Xie (CPC employee).
- D- Software / hardware issues
Software has been developed in the early stage of this project.
A reasonable amount of resources is required to archive the input data sets and the final products.
- E- Timeline
Aug. –Sep. 2010: migration of the standard version pentad CMAP processing system to a CPC server (pending availability of a CPC server). This is delayed due to the delay in relocation of CPC to the new building.

DATA SET #4: GPCP Pentad Global Precipitation Analyses

- A- Statement of transition goal
Our goal here is to migrate the real-time pentad GPCP processing to the CPC Compute Farm for automatic operation and to move the standard version pentad GPCP processing system onto a CPC server.
- B- Progress toward transition to date
The migration to the real-time pentad GPCP system has finished about 90% as of April 2010, pending permission from CPC IT to install new systems on the new CPC Compute Farm. This delay is also related to the delay of the relocation of CPC to the new building. The migration of the standard version pentad GPCP processing system to a CPC server will start after the successful completion of the real-time system. This processing system will be running manually due to the nature of the input data sets and the QC process of the data production.
- C- Location of data set production, identification of production team (including partners).
The data set is being generated at NOAA Climate Prediction Center (CPC). The production team includes Yelena Yarosh (contractor) and Pingping Xie (CPC employee).
- 3) Software / hardware issues
Software has been developed in the early stage of this project.
A reasonable amount of resources is required to archive the input data sets and the final products.
- 4) Timeline
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| Aug - Sep. 2010 (?): | migration of the real-time pentad GPCP processing system to CPC Compute Farm pending the availability of the new GPCP monthly data set |
| Aug. -Sep. 2010 (?): | migration of the standard version pentad GPCP processing system to a CPC server pending the availability of the server and the new GPCP monthly data set |

DATA SET #5: CMORPH Global Precipitation Analyses

- A. Statement of transition goal
Our goal here is to set the CMORPH system running on the NOAA Climate Prediction Center (CPC) Compute Farm (CF)
- B. Progress toward transition to date
The migration is complete as of April 2010.
However, due to the nature of massive data processing, the daily operation requires daily manual intervention to deal with problems in the input data, IT infrastructure, and daily data archive.
- C. Location of data set production, identification of production team (including partners)
The data set is produced at NOAA/CPC. The team includes Robert Joyce (contractor), Yelena Yarosh (contractor), Pingping Xie (CPC employee), and John Janowiak (University of Maryland, ESSIC).
- D. Software / hardware issues
The migration was delayed by the installation of the McIDAS on the Compute Farm which was finally succeeded in September 2008.
- E. Timeline
Transition is done.
Needs daily manual interventions to ensure the smooth production of the popular data set.
- F. Other transition issues / details
Even after all the above described systems are migrated to the Compute Farm which is an improved operational environment maintained by NCEP Central Operation, we still need to perform a lot of routine maintenance to ensure the continuous productions of the products and to perform applied research to refine the products.