

AMS SOC to Regional Centers Data Transfer Status

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Data Transfer

from SOC to Regional Centers

We must provide a system that:

- **Transfers data** (raw, reconstructed, calibration, MetaData) **from SOC to Regional Center(s)**
- **Is reliable**
- **Is performant**
- **Provides book-keeping**
- **Provides file-catalog**

Further Requirements for Data Transfer

- AMS will start taking data in 2008, and will continue for at least 3 years:
- Thus Data Transfer System must:
 - Be adoptable by different Regional Centers in different parts of the world, with changing infrastructures
 - Be as flexible as possible
 - Be able to cope with INTERNET-2
 - Be able to adapt to new emerging technologies (if necessary)

DataTransfer System layout

- Uses state-of-the-art efficient transfer protocol.
- Uses **DataBases** at both Sending and Receiving sides to enable
 - **DT book-keeping**
 - **Consistency check mechanisms between datasets**

DataTransfer System layout

- System is based on “Milano MC DT System”
- This system is already in use to transfer MC data from remote Sites to AMS at CERN.
- Successfully transferred **2.8 TB** of MC Data to AMS at CERN from:
 - CNAF/INFN Bologna,
 - Annecy/Lyon,
 - Milano
 - Montpellier

SOC to Regional Center Test Results

- System is in production since Feb05 sending data from AMS at CERN to CNAF.
 - CNAF is the Italian RC Prototype with Computing, Storage , MC production and data distribution facilities.
 - Network connectivity and general facilities similar to other RC
- System transferred successfully **0.4 TB** of 2005A MC Data from AMS@CERN to CNAF.

Achieved Throughput: **48 Mbit/sec**

- **INTERNET-2 tested successfully** (compatibility check only)
- **Full data set consistency**

Conclusions

- **Data Transfer AMS@CERN -> CNAF is in production**
- **System satisfies throughput and consistency requirements, as designed by Ground Support Data Handling Group**
- **System will be improved in next months.**
- **Full 2005A MC production will be transferred to CNAF.**
- **System ready to be adopted by other Regional Centers**