PDS Engineering Node

Roles and Responsibilities

Management Council Discussion

April 5, 2005

EN Roles and Responsibilities

Purpose

- The purpose of this discussion is to reach agreement among the Management Council on the roles and responsibilities of the new PDS Engineering Node.

Procedure

- The following list of roles and responsibilities was generated from a survey of the nodes, based on a strawman list proposed by the Geosciences Node.
- We'll discuss each item in turn, and edit the list in real time to capture the group's consensus.
- If consensus on an item cannot be reached in this meeting, the item will be tabled for later action, as determined by the MC Chair.
- The resulting list will be delivered to the MC Chair as the Management Council's recommendations for the EN charter.

EN Roles and Responsibilities

- **Explore new technologies and provide technology advice and specific recommendations to the DNs. (Example technologies to explore: archive media, hardware and software systems, disk data storage, new approaches to electronic data distribution, software for remote backups and mirroring.)**

  o **Track how other organizations have dealt with critical archiving, cataloging, and storage issues that are similar to those in planetary science.**

  o **Evaluate emerging technology, e.g. COTS (commercial off the shelf) and open-source software.**

  o **Provide training and workshops to the nodes on new and developing technologies.**

PDS Geosciences Node

EN Roles and Responsibilities

- **Coordinate the development of tools as directed and prioritized by the Management Council.**

    o **Tools should include software to help end-to-end archive development; e.g. validation, product design and generation.**

    o **Tools need to be complete, cross-platform, robust, up-to-date, and easy enough for data providers to use, with user's guides and internal documentation. They should focus on commonly-used objects.**

    o **The EN should assist in generating any required software engineering documents.**

    o **The EN should maintain an open source software repository of node tools.**

    o **The EN should maintain bug tracking services.**

    o **The EN should establish an electronic procedure for delivery to NSSDC and ensure the procedure keeps up with evolving technology. The EN should provide engineering assistance in delivering and restoring archives from NSSDC as needed.**

EN Roles and Responsibilities

- **Coordinate the definition, development, implementation, and maintenance of the architecture of PDS.**

   Architecture is defined as: "The manner in which a system (infrastructure, hardware and software) is designed. Architecture usually describes how the system is constructed, how the components fit together, and the protocols and interfaces used to integrate these components. It also defines the functions and description of data formats and procedures used for communication between nodes and workstations." (www.networkcables.com/a.htm)

EN Roles and Responsibilities

- **Maintain the PDS Standards, the Data Dictionary and supporting documentation (e.g. the Proposer Archiving Guide and the Archive Preparation Guide).**

    o **The EN should be aware of cross-node experience and provide advice to the DNs on current standards (historical use of keywords and data objects, interpretation and application of standards).**

    o **The EN should assist the nodes in evaluating proposed data formats.**

EN Roles and Responsibilities

- **The EN is responsible for ensuring that the integrated PDS online system is operational.**
  - o **EN should monitor the status of the online system, which includes connectivity to the DN systems.**
  - o **System operations includes a portal to PDS system-wide services.**
  - o **The EN should coordinate changes to the system, including system builds, at the direction of the MC.**
  - o **The EN should maintain a master catalog function for all PDS data holdings.**
  - o **The EN should maintain a notification service function.**

EN Roles and Responsibilities

- **Provide an up-to-date, well-organized EN web site to facilitate PDS technical operations, including but not limited to the following items.**

  - o **Current versions of documents**
  - o **Standards Queue – status of SCRs, meeting minutes, etc.**
  - o **Minutes and presentations from past technical meetings**
  - o **Requirements, development priorities**
  - o **EN Schedules**
  - o **Email lists for EN functions**
  - o **Software availability and bug tracking**

EN Roles and Responsibilities

- **Provide end-to-end archive engineering support as determined by MC.**
  - o **The DNs alone should be the interface to missions and instrument teams. The DNs should ask for support from EN as needed.**

  - o **The EN should review archive plans and SISs. The EN should not be required to sign SISs.**

  - o **The EN should participate in peer reviews.**

  - o **The EN should provide quality assurance, including validation, as directed by MC.**

- **Other duties as assigned by MC.**