Interagency MOUs and Archiving

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Interagency MOUs

- Whenever there is participation in an agency's mission by scientists or instrument providers or support contractors from a country with a different space agency, there is an MOU between the two agencies.
  - E.g., there is an MOU between NASA and ESA regarding the US participation in Rosetta
- One of the goals of the MOU is often to ensure that scientists from both agencies' countries or regions can share in the analysis of the data
  - The Rosetta MOU expressly spells out how the archiving will proceed
- The section of the MOU dealing with archiving is often written without consulting with the scientist-archivists
  - Rosetta was an exception - Gerhard Schwehm and I both had input on the wording of the MOU (drafted by Gerhard, brought to me by the NASA Program Exec for approval)

What is Our Goal

- If the archivists on both sides agree on general principles, we can work with our respective agencies to ensure that the inter-agency MOUs contain the right language
- What should be the main points of the archiving language?

Key Points 1

- All data should become available to all planetary scientists under the umbrellas of the two agencies in a reasonably short time after acquisition
  - E.g., Rosetta data are supposed to become available to both European (ESA) and US (NASA) scientists within 6 months
    - As a practical matter, this means all planetary scientists in the world
    - The MOU requires archiving in PDS because the MOU predates the existence of PSA. Future agreements would presumably allow archiving in either PSA or PDS or both (the archives are almost fully compatible), although typically an instrument built with funds from one agency would usually have a primary responsibility to deliver to that agency's archive with the other agency's archive being either a required secondary or an optional secondary destination.
    - Actual availability has taken longer than 6 months but there have not yet been any encounters designed for science except for the opportunity target comets and Earth/Mars flybys

Key Points 2

- All data should meet the standards of a recognized archive
  - E.g., all Rosetta data must meet PDS standards for format and description
  - This includes standards for adequate documentation of the data and all needed ancillary information such as geometric information, whether SPICE or some other format, and calibration information including files used to calibrate the data
  - This includes a peer review for usability and to verify that a user can derive published results from the data
  - Presumably future MOUs should require using the standards of an archive adhering to the principles of the IPDA

Key Points 3

- Public Availability
  - NASA normally requires 6 months for all its missions
  - Other agencies may have different requirements but a one-year limit seems a reasonable goal, whether this is called a proprietary period or, as NASA calls it, a validation period

Possible Wording Example

- Example for NASA-ESA with NASA providing an instrument to an ESA mission
- We presume that PDS and PSA both adhere to IPDA principles
- Data from all instruments, together with all supporting documentation and any necessary ancillary information such as orbital and pointing information, will be made available to planetary scientists in ESA's and NASA's communities within six months of any planetary encounter by archiving either with PSA or with PDS or with both. The US-provided instrument(s) are required to archive with PDS but are encouraged to archive also with PSA.

- Clearly things must be different if an agency does not have an IPDA-adhering archive. Similarly, if only scientist exchanges are involved, the wording would be different.

Today's Goal

- Endorse the principles that would apply to archiving for all multi-agency missions
  1. All data must be in a publicly accessible, IPDA-adhering archive within one year of receipt by the science team (currently only PSA and PDS qualify but this is expected to change)
  2. All data must include all the ancillary documentation and all the geometric (orbit, attitude, etc.) and calibration files
  3. User-friendly formats are required
  4. Delivering to the archives of both/all agencies is encouraged, pending success in true interoperability between the archives