

IDIS Resource Definition

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1. SCOPE OF THE DOCUMENT

Scope of this document is the definition, classification and handling of resources in the framework of the Europlanet-RI / IDIS Service Activity and the general policy that must be followed towards any kind of resources. The document also describes the association of an incoming resource with one of the Nodes, which then will become responsible for its management. The community in the scope of this document is the international community of planetary scientists.

There is an on-going effort by the IDIS team to define standards and to provide an architecture which will enable planetary scientists to share data and services in the framework of what is commonly called now a Virtual Observatory (VO). Data Resources must be described with more details, in order to become searchable and accessible on-line, using a standard data access protocol. These details will be described in an extra document after they are defined by the related JRA4-IDIS activities.

2. DEFINITION OF RESOURCE

A **resource** in the context of this document is any kind of information, tool or data that can be reached through IDIS websites. The resources will be categorized according to the following scheme:

2.1 Contact information

These resources contain information necessary to get in contact with persons, institutes, laboratories or other facilities. Such information includes the related field of research they are engaged in or the services that might be offered to the community.

At least the following information about the resource has to be provided to be referenced in IDIS:

Name, address / phone / e-mail and possibly related Web-site

Field of (planetary science-related) research including related keywords like targets, missions, area of research

In case of laboratories or facilities: a short description of the facility's possibilities in support of planetary science research

2.2 Documents

Documents may be referenced directly by IDIS if they provide essential information for planetary research or the preparation of related projects or missions, and if this information is difficult to locate via standard bibliographic services.

Minimum information about the resource to be referenced in IDIS:

- Resource name
- URL
- Short description of the document
- Name and contact address / phone / e-mail and possibly related Web-site of the person responsible for the document's contents
- List of keywords from the IDIS-maintained keyword list telling to which field of planetary sciences, targets or missions the document is related

2.3 Tools

These resources are services to the community to be used in the context of planetary sciences. These services might be software packages to be downloaded and installed by users or independent web-accessible services.

Minimum information about the resource to be referenced in IDIS:

- Resource name
- Resource description
- Name and contact address / phone / e-mail and possibly related Web-site of a responsible person for the tool
- Access URL of on-line documentation to use the tool
- Information about possible costs or other restrictions associated with using the tool
- List of keywords from the IDIS-maintained keyword list telling to which field of planetary sciences, targets or missions the tool is related
- In case of software: access URL of the package with installation description including the platforms for which the installation was successfully tested (source code is not required).
- In case of services: access URL of the service.

2.4 Data

Data resources describe individual data products or data product sets. Data products can be images, observational values or catalogs. Included in the Data resource category are the resources used to describe individual files (data products)

Data might have been generated by ground- or space- based observations, laboratory measurements, modelling or simulations or might be made available with a reasonably short delay on request like on-demand simulations. Infrastructure resources like data repositories are also in this category.

2.4.1 *Data compatible with the IDIS Virtual Observatory access standards*

IDIS in its final form of implementation will expect data resources in a format consistent with usage in a VO context. The aim of the VO is to connect data resources and services so as to make them available and interoperable through a standard web interface. This requires standard description of the data, existence of a data access layer (see below), and declaration in a so-called registry system. IDIS is developing such a registry system in coordination with the International Planetary Data Alliance (IPDA).

Information describing the resource in the registry will be collected and formatted using a tool which will be provided by IDIS. This description will be defined in agreement with the IPDA. At minimum, it should include general resource descriptors contained in the so-called Dublin core (see <http://dublincore.org/documents/dces/>)

Additionally to the data and the information mentioned above, the resource provider has to make available an on-line service which makes the resource accessible through a standard data protocol accepting data search enquiries and returning answers according to the contents of the available data sets (“data access layer” to the data archive). Several standard protocols may be used in IDIS for this information exchange, including the Planetary Data Access Protocol (PDAP) as defined by the IPDA, with possible extensions.

For details of PDAP see the web page http://planetarydata.org/projects/data-access/documents/pdap-versions/IPDA_PDAP_v0.4_25_Jun_2009.pdf/view

Details of the information collection tool and the implemented data access protocols will be given in a separate document.

2.4.2 *Data not yet compatible with VO access standards supported by IDIS*

Data resources which will not be accessible via data access protocols supported by IDIS will only be referenced in IDIS, resulting in limited visibility and a limited usefulness.

Minimum information about the data resource to be referenced in IDIS:

- Name
- Access URL
- Description

- Name and contact address / phone / e-mail and possibly related Web-site of the person responsible for the resource
- List of keywords from the IDIS-maintained keyword list telling to which field of planetary sciences, targets or missions the data are related.

In case of isolated data products, the data providers are encouraged to submit their products for inclusion into a larger data repository accessible through IDIS, such as data centers associated with major research institutes.

3. POLICY TOWARDS THE INCOMING RESOURCES

IDIS will provide tools to declare new data resources in the IDIS/IPDA registry system. These tools will allow checking that the resource can be integrated into the planetary VO.

In other cases, a potential resource provider should contact the scientific staff of the IDIS node most likely thematically related to the offered resource. Alternatively he/she might be contacted by a member of a node staff directly. If the association of the resource with one of the nodes is not self-evident or if the resource might be related to the thematic fields of several nodes, one of the nodes will be appointed as associated node by mutual agreement of the IDIS team.

The associated node will have the responsibility of deciding if the proposed resource

- can be accepted as it is
- requires some work from the proposer in order to be acceptable (e.g., an appropriate documentation is missing)

Acceptance or preliminary refusal of resources is only related to the form in which they are offered and maintained, not to their contents, as long as they are related to the science themes of IDIS. The experts co-operating with the IDIS nodes do not have the possibility or mandate to uphold a referee process on the quality of these resources.

The associated node will provide the contact point to the resource provider for any question, possible update or withdrawal information.

The responsibility for the accessibility and quality of the resource remains with the resource provider.

4. INCLUSION OF RESOURCES INTO IDIS

In general, data or other resources are not physically stored at the facilities of one of the IDIS nodes but are expected to be maintained in archiving facilities related to the resource provider.

Once a resource is accepted it will be referenced in IDIS by either representatives of the associated node or by a representative of the resource provider using an on-line tool available for registered IDIS users. Currently these resources will be added to the IDIS inventory, using the Resource Submission Form, which is accessible via the “Resources” menu entry of the Europlanet-RI IDIS page <http://www.europlanet-ri.eu/idis> after login.

Additionally related information and direct links might be added to the web-site of the associated node. On the discretion of this node’s staff other nodes might be informed about the possibility to add similar information or a web-site link also to their node.

VO-compatible data: Once the necessary tools are implemented in IDIS, its data registry is updated with the new information.

5. REMOVAL OF RESOURCES FROM IDIS

On request of the resource provider or the science advisors of the associated node, a resource may be removed from the IDIS system.