OSID Specification Request: 13
Track: Interface
Status: Proposed

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Managing Genus

Status

This document is a request for a specification change for review.

Summary

This document its part of the v4 authoring framework. The scope of this document is the management and use of the genus type.

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1. Current Specification

OsidObjects may be labeled with a genus Type for out-of-band classification of OsidObjects. The current specification defines means to query OsidObjects by genus Type in the typical lookup and query OsidSessions.

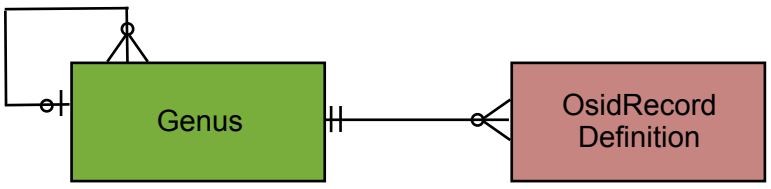
2. Problems

1. The genus is a logical place to manage constraints on a kind of OsidObject which may include:
    1. genus-specific Metadata
    2. a restricted set of OsidRecords
2. The lookup sessions typically define lookup methods across major dimensions of an OsidObject. The genus lookup often needs to be combined with one or more of these dimensions, not in lieu of. Very few OSIDs include the Genus on every query and those that do are more verbose than necessary with the proposed changes in this document.
3. The Genus can be a useful means of selecting among different types of OsidObjects. However, there is not currently any means to determine what the menu of genus Types is.
4. The Type as a non-OsidObject does not permit its use in various services such as cataloging, hierarchy, etc. nor is it possible for it to have its own OsidRecords to manage additional information not envisioned in the specification.

3. Proposed Changes

3.1. Genus OSID

Genus is an OsidObject which may have a parent Genus.



3.2. GenusOsidSession

The purpose of the GenusOsidSession is to insert a set of methods between the OsidSession and any applicable OsidSession operating on an OsidObject. These methods perform a cross-cutting view of a single Genus, a single Genus including derived Genuses, or none at all.

The genus methods are to be added as views on top of the existing methods rather than special one-off parameters along with the list of Genuses available.

The GenusOsidSession also provides access to the available Genuses from this context. It is not expected to provide full Genus support including hierarchical views which are available via an orchestrated Genus OSID.

This new interface applies to:

- all OsidSessions performing lookups of OsidObjects
- all OsidSessions performing an OsidQuery of OsidObjects
- all OsidSessions performing a subscription to a notification

3.3. Deprecations

The patterned methods:

- getXXXByGenusType
- getXXXByParentGenusType

would be redundant as the genus view would apply to every method defined in the session. The specific genus queries in the lookup sessions, and the query in the OsidObjectQuery would no longer be necessary.

4. Impacts

4.1. Specification

The changes outlined in section 3 involve the addition of the GenusOsidSession interface into the abstract framework and a modification to the implements clause of all applicable derived OsidSessions.

4.2. OSID Consumers

This change impacts any OSID Consumer using the existing genus Type.

4.3. OSID Providers

OSID Providers are expected to convert usages of the genus Type to a Genus Id in all implementations. This is a significant change and should only be considered for a major revision.

5. Interoperability Considerations

Interoperability improves in two ways:

1. The ability to test which Genuses are available in the context of a specific OSID Consumer which also avoids the hard-coding of genus identifiers.

2. The global ability to slice any set of OsidObjects by Genus. As the Genus is one of the ways in which the core specification can be extended, OSID Consumers have greater choice in processing only those OsidObjects applicable to it.

5. The ability to visibly group the various out of band agreements and look at them from the Genus perspective.

6. Proceed Interfaces

6.1. osid.GenusOsidSession

Interface	**osid.GenusOsidSession**		
Implements	osid.OsidSession		
Description	This interface is used to add genus support to an OsidSession.		
Method	**getAvailableGenusIds**		
Description	Gets the selectable Genus Ids for this OsidSession.		
Return	osid.id.IdList		the available Genus Ids for this session
Compliance	mandatory		This method must be implemented.
Method	**getAvailableGenuses**		
Description	Gets the selectable Genuses for this OsidSession.		
Return	osid.genus.GenusList		the available Genuses for this session
Compliance	mandatory		This method must be implemented.
Method	**getCurrentGenusId**		
Description	Gets the current Genus Id for this session.		
Return	osid.id.Id		the current Genus Id
Compliance	mandatory		This method must be implemented.
Method	**getCurrentGenus**		
Description	Gets the current Genus for this session.		
Return	osid.genus.Genus		the current Genus
Compliance	mandatory		This method must be implemented.
Method	**setCurrentGenus**		
Description	Sets the current Genus.		
Parameters	osid.id.Id	genusId	a Genus Id
Errors	NULL_ARGUMENT		genusId is null
	UNSUPPORTED		genusId is not selectable in getAvailableGenusIds()
Compliance	mandatory		This method must be implemented.
Method	**useGenusView**		
Description	OsidObjects are scoped to getCurrentGenus() only.		
Compliance	mandatory		This method must be implemented.
Method	**useDerivedGenusView**		
Description	OsidObjects are scoped to getCurrentGenus() and any descendant of getCurrentGenus().		
Compliance	mandatory		This method must be implemented.
Method	**useNoGenusView**		
Description	OsidObjects are not scoped to a Genus.		
Compliance	mandatory		This method must be implemented.

7. Statement