
How does the Persistent Identifier work?

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Question

How does the Persistent Identifier work?

Answer

A persistent identifier (PID) is a unique identifier for a digital object such as an image or an article. PIDs enable accessing this object as long as the object exists, even if it was moved to another location. PIDs work with Rosetta and the Handle System to enable persistent identification of an object across contexts. The concept of handles is similar to the International Standard Book Number (ISBN). ISBN enables assigning a unique identifier to an edition of a book. This identifier is used internationally to obtain information about the book (such as author, publisher, and country) in a standard manner.

Like ISBN, a PID contains a unique object name, also known as a handle. Because an international unified mechanism for assigning handles to digital objects is provided, external systems can use handles to get information about the object, including its location.

However, handles on their own do not contain any reference to the current object location. Otherwise, handles could not be used when the location is changed. Instead, information about the object's location is stored separately. A handle is associated with the corresponding location using a set of services provided by the Corporation for National Research Initiatives (CNRI) and known as the Handle System.

The Handle System consists of an open protocol, a namespace, and a reference implementation of this protocol. The protocol enables a distributed computer system to store handles of digital objects and resolve these handles into information required for locating and accessing these objects. When an object is moved, only an appropriate record in the Handle System must be modified. This approach enables keeping the object name persistent while the object's location and other related information can be modified over time.

A handle is an example of a uniform resource name (URN) that serves as a persistent, location-independent resource identifier. URNs are designed to facilitate mapping other namespaces which share the properties of URNs to the URN namespace.

To enable Rosetta system users to work with PIDs, the Rosetta system provides integration with the Handle System:

1. To create a PID, the Rosetta system compares input parameters defined in creation rules with the parameters of a content object.
 2. When the Rosetta system finds a creation rule that matches the object parameters, the system creates a PID using a creation profile defined in the rule.
 3. To publish the PID to the Handle System, the Rosetta system compares input parameters defined in publishing rules with the parameters of a content object.
 4. When the Rosetta system finds a publishing rule that matches the object parameters, the system publishes the PID using a publishing profile defined in the rule.
- Administrators can define rules for creating and publishing PIDs using the Persistent Identifier Creation and Publishing Profiles page in Rosetta's web UI.

Category: Delivery
