SUSHI IMPLEMENTATION: THE CLIENT AND SERVER EXPERIENCES

DEDICATED TO STANDARDS

EXTENDING AND PROMOTING THE USE OF OPENURL

ESTABLISHING SUGGESTED PRACTICES REGARDING SINGLE SIGN-ON
An earlier ad hoc specification of OpenURL (referred to as version 0.1) was focused on the “appropriate copy” problem for scholarly journal literature. The goal of the ANSI/NISO standard (referred to as version 1.0) was to develop a framework that would allow OpenURL to be extended to a wider base of applications, including ones that no one had yet envisioned. To ensure this extensibility, an OpenURL Registry was established where new Community Profiles, Metadata Formats, Namespaces, Character Encodings, Transports, ContextObject formats, Serializations, and Constraint Languages could be registered and given unique identifiers so they may be referenced unambiguously. Today, the OpenURL standard is one of the most heavily used NISO standards and OpenURL linking has become commonplace in electronic information delivery. New applications, such as OpenURL ContextObject in SPAN (COinS) and others described in this article, continue to be developed using the OpenURL framework.

The OpenURL Maintenance Agency

The standard also specified the responsibilities of a Maintenance Agency to provide ongoing maintenance of the OpenURL Registry to guarantee stability and to promote and manage the extension of the OpenURL standard. In 2006, NISO appointed OCLC to be the OpenURL Maintenance Agency. Working with the OpenURL Advisory Committee, the Maintenance Agency created a submittal process for the evaluation and approval of new OpenURL framework registry entries.
The submittal process has three gates:

1. The submittal is reviewed by the Maintenance Agency for technical correctness.
2. The submittal is reviewed by the standing Z39.88 review panel of OpenURL experts and community members selected by the creator of the submittal.
3. Finally, the submittal goes to a public review and trial period. The trial period allows software developers to try out the new registry entries and submit feedback before the entries are approved.

The Request Transfer Message (RTM) – OpenURL Extended

The first implementation of the Request Transfer Message (RTM) OpenURL Community Profile was introduced in OCLC’s WorldCat Navigator service in 2009. Navigator is a consortial borrowing system that allows patrons who are members of a library in a consortium to discover and borrow items from other libraries in the consortium. The RTM is used in Navigator to transmit information about the wanted resource and the details of the request, such as “dated needed by” from the discovery system to the Navigator Request Engine. The addition of the RTM Community Profile to the OpenURL registry is a prime example of how the Z39.88 (OpenURL) standard can be extended to support new communities.

The Maintenance Agency approved the RTM Community Profile and associated metadata formats in 2009. The RTM submittal was authored by Janifer Gatenby of OCLC. The work evolved from an initiative of the ISO ILL Implementers’ Group (IPIG) who developed an XML message called the Request Submission Message designed for passing a request to an ISO 10161 ILL-compliant system from a discovery site. The RTM extends this concept to allow for the transmittal of highly descriptive request messages from discovery systems and item descriptions to any networked delivery system that supplies physical or digital resources.

The RTM OpenURL Community Profile specifies serializing its payload in XML through HTTP POST messages. This allows for transporting multiple context objects in a single OpenURL message and multiple metadata formats for entities such as the wanted resource (referent) in a single context object. The Maintenance Agency worked with the authors to recommend the use of the existing San Antonio Profile 2 (SAP2)—one of two profiles specified in the standard—referent metadata formats (book, journal, dissertation, etc.). During the public review, changes were made to the RTM as Navigator was developed.

Identifiers like LCCNs, ISBN, and OCLC numbers are important clues for identifying various types of entities in OpenURL.

Converting these legacy identifiers to URLs is a way to ensure their uniqueness and improve their interoperability on the Web. When OpenURL 1.0 was created, however, the general assumption at the time was that HTTP URLs could only be used to identify web documents and services. To work around this, the “info” URI scheme [RFC 4452] and registry was developed for identifying resources that aren’t “located” on the Web.

Since then, web standards such as the W3C’s semantic web have been improved to justify the use of HTTP URIs for “real-world objects like people and cars, and even abstract ideas and non-existing things like a mythical unicorn.” As a result, the info URI committee closed their registry to further registrations in 2010. This change does not affect existing uses of info URLs, but it may have consequences for new OpenURL registration submittals. Submitters who are tempted to coin a new info namespace can apply for a PURL domain instead. For example, http://purl.org/example/12345 could be used in place of info:example/12345. Ideally, the PURL would resolve to a metadata document that contained the information cached in the OpenURL descriptors.

Info URI Registry Closed To New Entries
The Canonical Citation

In 2008, Eric Rebillard, Professor of Classics and History at Cornell and General Editor of *L’Année philologique* (an abstracting and indexing service specializing in scholarship about classical literature), was awarded a planning grant from The Andrew W. Mellon Foundation to explore with Cornell University Library the possibilities and challenges of using OpenURL to provide linking between citations of classical literature and available online resources in the classics.

An initial submittal included a proposal for adding an info URI work identifier, the recommended top level URI scheme for identifiers in the OpenURL framework. In 2010, the info URI registry was closed to new registrations in favor of HTTP URIs (see sidebar). After working with the Maintenance Agency, the submittal author—David Ruddy, Director, Scholarly Communications Services, at the Cornell University Library—resubmitted the Canonical Citation KEV metadata format using an HTTP URI as the work identifier within the metadata format. The Canonical Citation submittal is currently being reviewed by the Z39.88 Review Panel.

Promoting the OpenURL

In 2010, the Z39.88 Review Panel began using NISO’s collaborative workspace on the NISO website with folders for submittals and documents, the ability to post comments, and a listserv for members of the review panel. Previously the listserves of the Advisory Committee and Review Panel were managed by OCLC. The NISO Discovery to Delivery Topic Committee, which includes the OpenURL standard in its oversight portfolio, and the Z39.88 Advisory Committee have access to the Review Panel’s documents.

The Maintenance Agency encourages community involvement to promote the use of the OpenURL. The OpenURL listserv continues to be the public discussion forum for the community at large.

Additional activities underway by the Maintenance Agency are implementation guidelines, experimental registry entries, and best practices. For example, there is a need for RTM implementation guidelines. These documents will be published as they are agreed upon, informally, by members of the community. Your input is always welcome and can be sent to: openurlagency@oclc.org.

PHIL NORMAN <norman@oclc.org> is Director of End User and Delivery Services Development, OCLC, and a member of the NISO Z39.88 Standard Committee. JEFF YOUNG <jyoung@oclc.org> is Software Architect, Office of Research, OCLC.

The Maintenance Agency encourages community involvement to promote the use of the OpenURL. The OpenURL listserv continues to be the public discussion forum for the community at large.