CHAOS -- Standards Column

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Recommended Citation
Caplan, Priscilla (2003) "CHAOS -- Standards Column," Against the Grain: Vol. 15: Iss. 6, Article 34.
DOI: https://doi.org/10.7771/2380-176X.4225

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Stretching ONIX for Serials: The Joint Working Party on the Exchange of Serials Subscription Information

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Column Editor’s Note: This month Priscilla Caplan, a member of the NISO Standards Development Committee and co-chair of the NISO/EDlEUR Joint Working Party, reports on the standards-in-the-making to improve how we share serials information. As Priscilla demonstrates there are important savings and efficiencies to be gained if, as a community, we are able to introduce standards into the workflow. This is an excellent example of the kind of collaborative activity that NISO supports. To learn more about NISO’s other standards activities and programs visit the NISO Website at: www.niso.org

Looking ahead: the next Standards Column in ATG will focus on the revision of the ISSN standard, so stay tuned to this column for more standards news! – PH

In the movie Willy Wonka and the Chocolate Factory, little Mike TeeVee is sent overhead “in a million pieces” like a television image. When Mike is reassembled on the other end, he’s only a few inches tall, because as everyone knows when you transmit something by television, it’s always smaller on the other end!

Serials subscription and holdings information always makes me think of little Mike TeeVee. I envision lots of little bits of information flying in all directions. But, when I manage to grab some and pull it down, it never is quite complete.

That’s also the picture the National Information Standards Organization (NISO) had in mind in early 2002 when it commissioned Ed Jones to do a study on the exchange of serials subscription data. There was a sense that a lot of serials data was being exchanged in a lot of formats between a lot of partners for a lot of purposes. There was also speculation that a common format for exchanging this information might save the community as a whole both time and trouble. But it was necessary First to know exactly which parties were involved and what their needs were in order to determine if a standard format would be useful or even feasible.

Defining the Problem

Ed Jones’s study was partially funded by the Digital Library Federation and released in September 2002 as a NISO white paper, “The Exchange of Serials Subscription Information” (http://www.niso.org/standards/resources/SerialsWP.html). Jones’s paper focused on information pertaining to what e-journals a library licensed or subscribed to, individually or in aggregations. Ed found that among the parties exchanging such data were libraries, e-journal aggregation services, publication hosting services, publishers, subscription agents, library systems vendors, and publication access management services or PAMS, a term Ed coined to refer to services like TDNet and Serials Solutions. Data was communicated in order to verify subscription access, to create A-Z title lists, to link to libraries’ catalog holdings, to control online display options (e.g., to suppress document delivery options for titles held by a library), and to populate link resolution servers, among other things. Jones’s study also confirmed that there were nearly as many transmission formats in use, as there were transmissions.

The study noted that most of the bits of information being circulated already existed as data elements in ONIX for Serials. ONIX for Serials is the younger sibling of ONIX for Books, developed by EDlEUR. At the time of the study three specifications were published in draft form: the serial title record, the serial item record, and the subscription package record. Unlike ONIX for Books, which was developed primarily for communications from publisher to retailer, ONIX for Serials was intended from the start to be useful to libraries as recipients of information about serial issues and articles. Ed recommended ONIX for Serials be evaluated for use in some of the transactions he described.

NISO/EDlEUR JWP Formed

NISO and EDlEUR immediately established the Joint Working Party on the Exchange of Serials Subscription Information, fondly known as the JWP. Co-chaired by Richard Gedye of the Oxford University Press and myself, the JWP was charged with recommending changes to ONIX for Serials to enable its use in this context, and to demonstrate the utility (or lack thereof) of the format by piloting its use.

Having worked in the standards arena for nearly ten years, I can testify that normally you have to bribe, threaten or trick people into joining standards committees. With the JWP, it was more a case of beating people away with broomsticks. The group has 35 official members, the majority of whom participate actively, and a number of unofficial participants as well. Membership is divided fairly evenly between the US and the UK, and represents libraries, library systems vendors, publishers, PAMS, subscription agents, and online content providers. EDlEUR has provided the invaluable services of its ONIX consultants, while NISO has provided communications and staff support.

The JWP was initially charged to complete its work within a year, which would have it self-destruct before you read this issue of ATG. However, the pilots are just now getting off the ground, and the group will probably remain active through the spring of 2004.

Serials Formats Defined

By late-2003 the JWP had defined two ONIX for Serials formats (XML schema): Serial Products and Subscriptions format (SPS) and the Serial Online Holdings format (SOH). These two formats support six different types of transactions (transmission of data from one party to another).

First, some working definitions. A product is an entity representing one or more electronic and/or print resources to which a library may subscribe. Or, more simply, anything sold with a price. So, for example, if a publisher sells separately the print version of a journal, the electronic version of a journal, and a bundled print-and-electronic package, these are three products. WorldCat is a product, as is Academic Search Premier. A work is an entity representing the intellectual content of a publication. The Journal of Philosophical Logic is a work with two versions, one electronic and one print. A version, or title-version, is a specific published format of a work, such as the electronic version.

The SPS supports at least four different transactions:

a) an unordered list of products available from the sender, showing works and title-versions in each product;

b) a priced list of products available from the sender, showing works and title-versions in each product;

c) a list of products with prices for one

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particular subscriber, including current prices and prices last paid; 
d) an unpriced list of products to which a library currently subscribes, through 
an agent or from the publisher.

Transactions (a) and (b) could be used by a publisher to send to a library its catalog and 
price catalog respectively. They both answer the questions, what works and versions of 
works does this publisher publish, and in which products are they available?

Transaction (c), the subscriber’s priced product list, would also be sent from the publish-
er to a library. It identifies which products the publisher has on record as being supplied 
to the library either directly or through an agent, and what title-versions are included 
in those products. It could be used by a library to compare a publisher’s price list to 
what the library is actually paying, or to ensure that the library is not paying more for a 
bundled package than it would for individual subscriptions. It could also be used by a 
library to ascertain which of the print publications it receives have electronic versions, in 
order to expand the number of electronic resources it provides.

Transaction (d) could be sent by a library to a publisher, and would identify which products 
the library believes it subscribes to from that publisher. Along with transaction (c), it 
could be used to reconcile the library’s order file and catalog with the publisher’s records.

The SOH is designed for use by a PAMS or subscription agent to send information to 
a library. It supports two transactions, one allowing the library to create an A-Z list of 
ejournal titles with links, and one allowing the library to populate its link resolution 
server. The SOH contains a construct for “online serials,” the named host through 
which e-journals are available, and a “holdings record” which identifies for each title-
version what holdings are included.

Testing Phase Begins

The ONIX formats are a bit more complicated than the ad hoc, local formats being 
used to communicate similar data now, many of which are just spreadsheets, HTML, 
or comma-delimited files. Since the benefits the SPS and SOH offer depends upon their widespread 
adoption, they won’t materialize if the formats are too difficult to produce or process.
Therefore, it is essential to prove the transactions are workable in the real world.

JWP participants are testing the SPS and SOH transactions now. In one pilot, Serials 
Solutions has produced an SOH transaction that the Library of Congress used to create 
an A-Z list. Other pilots involve one or more publishers creating SPS transactions for 
libraries, and at least one PAMS producing an SOH transaction for importation to a link 
resolution system.

One problem in the pilot period is that libraries have no automated way of processing 
the ONIX for Serials transactions. Even if providers can produce them, library systems cannot import 
them. The good news is that several library systems vendors have been participating in the JWP, 
and one of them, Innovative Interfaces, is involved in the piloting of the SOH.
The ILS vendors recognize that standardization of these transactions is in their 
best interest also, and if libraries spread the word and insist on support from their 
vendors, it seems reasonable to expect that this support will be developed.

Identifier Issues

This work has exposed some of the limitations in our current system of seri-
als identifiers. Ideally, serial titles (works), title versions, online services, libraries and publishers 
would have unique identifiers making it easy to collocate information, to link between different applications, 
and to implement update and replace functionality. In practice, there are problems with each of these.

For example, the ISSN should function as a title version identifier, because 
of the rule that print and electronic versions should receive different ISSSNs. However, not 
all serials have ISSSNs, not all publishers assign multiple ISSSNs, and not all systems can 
store and display multiple ISSSNs correctly. Therefore, many serial records have missing or incorrect ISSSNs.

At the same time, there is no serial work identifier that can bring together all versions 
of a title. There are some possible solutions on the horizon: using the new International 
Standard Text Code (ISTC), which is currently not being assigned to serials; using the 
print ISSN; or using a DOI that publishers can assign at the work level. Additional work 
is needed to determine if any one of these options is realistic.

The best solution to both problems, in my view, might be to revise the ISSN system to 
reform it as a base number plus suffix. The base number would be assigned to all 
versions of a title, functioning as a work identifier, while the suffix could identify the 
title version uniquely. While this change is not likely to happen, it is within the realm of 
the possible, as the ISSN standard is currently being revised by ISO.

While the pilots are in process, an Identifiers Subgroup of the JWP is looking at these 
and other identifier issues.

Benefits Galore!

Using the SPS and SOH has real benefits. PAMS, publishers, libraries, and other players 
would no longer have to program for the dozens of unique transaction formats now in use. Standardization would make it far easier for library systems vendors to develop modules to import data for use in link resolution, e-resource management, and public access functions. The flexibility of the formats also allows the possibility of developing new, richer services that don’t exist today. The fact 
that the SPS and SOH are consistent with other ONIX for Serials formats and share the 
same data dictionary will make it easier for adopters to also process other ONIX for Ser-
ials transactions, such as notification of the publication of new issues and articles, and 
tables of contents.

JWP members will be hitting the road to publicize and promote the new formats and 
their advantages. If you would like to hear more about ONIX for Serials, please let me 
know by sending an email to <pcaplan@ufl.edu>. For more information, see the 
unofficial JWP Website at http://www.fcla.edu/~pcaplan/jwp. 📚