



Journal Supply Chain Efficiency Improvement Pilot - Mid-year Status Report

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Introduction

The Journal Supply Chain Efficiency Improvement Pilot (JSCEI Pilot), an industry wide pilot project, was designed to discover whether the creation of a standard, commonly used identifier for institutions worldwide, will be beneficial to all parties involved in the journal supply chain. JSCEI Pilot is managed by the British Library, Swets, HighWire, HighWire affiliated publishers, and Ringgold (Appendix A). It was begun on 20 January 2006 and is being applied to the UK subset of subscribers of the JSCEI Pilot participants. Exploring the various advantages and implications of use of such an identifier, the project sees the parties involved working closely together throughout 2006. As qualified representatives of all stages in the supply chain, the parties involved in this Pilot project share the belief that integration and standardization are of paramount importance to the optimal operation of the journal supply chain support process. For more information see the Pilot's website: <http://www.journalsupplychain.com>.

As an important first achievement of the Pilot, we have mapped the existing supply chain, which is as complex as expected. This Mid-year Status Report shows that existing institutional identification numbers do not meet the needs of the JSCEI Pilot. At this time, the general view of the JSCEI Pilot participants is that improvements in the electronic supply chain for journals are a necessity and that the need for such improvements is immediate. This will be further investigated in the second part of the Pilot between HighWire, HighWire affiliated publishers and Swets.

Swets and publishers were keen to explore the benefit of an institutional identifier in the order/renewal process. Due to mismatch in current levels of granularity for print delivery, publishers are not likely to use the institutional identifier as a primary match point for print, but as a secondary check.

In the short term, an identifier used in common throughout the supply chain would be likely to provide benefits, particularly for publisher marketing. While all parties in the supply chain will benefit, suppliers are likely to experience the most direct benefits.

Given continued positive results, JSCEI Pilot should be extended into 2007. To that end, one of the chief needs identified by JSCEI Pilot is publicizing the issues of complexity and lack of communication in order to start dialogs with appropriate organizations.

Original goals: progress to date

The Pilot set out to achieve:

(1) Establish the characteristics and context needed for the identifier, and the support mechanisms needed to work in a wide variety of situations within the supply chain, and the extent to which existing legacy institutional component identifiers can be used as aliases

As an important first achievement of the Pilot, we have mapped the existing supply chain, which is as complex as expected (Appendix B). The existing identifiers in the supply chain tend to be specific to the bilateral relationships that exist between buyers and sellers; thus they do solve many of the problems addressed by JSCEI Pilot. While it is clear that these identifiers do work at different levels of granularity and for different, specific purposes in each link in the supply chain, they fail to achieve the goal of meeting the needs addressed by the Pilot.

To be successful, the identifier needs to be capable of:

- being applied at any level of the organization,
- providing linking information to relate it properly to other identifiers,
- providing metadata that allows it to be matched to existing subscriber information,
- providing metadata that identifies physical and electronic delivery requirements, and
- being accessed and changed online by those most cognizant of the changes.

(2) Create a standard for metadata for the identifier and for any related institutional component with an established legacy identifier and examine the relationship with other managed identifiers such as the ISIL

(3) Identify the context and placing of the identifier within existing EDI standards and work flows

The ICEDIS standard for exchange of data between agent and publishers was examined, as was ONIX for Serials, and a new identifier can be included to this exchange. The problem, however, is with the lack of identification of transactions as New, Renewal, or Transfer, so that all transactions are identified as such and included in the automatic process.

(4) Identify the context and placing of the identifier in supply-chain databases of institutions

It appears that in most cases, a common identifier can be incorporated into the database(s) of the supply chain. In all cases, however, the identifier would be in addition to the identifiers currently used and would not replace these existing identifiers.

(5) Identify the context and placing of the identifier in authentication and authorization systems

This stage of the project has not yet been reached.

(6) Identify the context and placing of the identifier in standard usage reports for publishers and consumers

This stage of the project has not yet been reached. This will present the opportunity to develop cases for transfer of information between subscribers and agents, and between agents and publishers using ICEDIS messages. The transfer of the bibliographic information and commercial data need not be physical but conducted in the form of “scripts”, testing the validity of incorporating an Identifier.

(7) Examine the interaction with other identifiers such as the ISIL

MARC Organization Codes (which may become the basis for ISIL codes for the US) have metadata associated with them that allow institutions to have multiple MARC codes assigned and these multiple codes to be related to each other. At the same time, the Library of Congress does not appear appropriate as the center for JSCEI Pilot identifiers. To date, the MARC Organization Codes have been assigned primarily to meet LC’s internal needs and, once assigned, the associated metadata is rarely updated to reflect institutional changes. The majority are for academic libraries and do not include the wide diversity of institutions who subscribe to publications of the JSCEI Pilot partners.

(8) Explore possibilities for creation of an user interface for customers to interrogate and update institutional information

This stage of the project has not yet been reached. In the next stage, Ringgold will make its institutional database generally available on the Web for limited look-up purposes. Also, several publishers now have subscription access to the database.

(9) Explore governance for an organization to take the use of the identifier forward in a neutral way

This stage of the project has not yet been reached.

Main Issues arising from participants

Libraries

In general, libraries support the concept of the Pilot, seeing that standards are always important in the print world and even more so in the electronic environment. The identifier as envisaged by the project is, however, perceived by libraries as not having a direct benefit for them due to the complex hierarchies within regarding electronic access. It is clear that any system which enhances and facilitates communication between the myriad stakeholders in the complex journal supply chain is welcome but to gain real benefit it will also need to meet the complex nature of electronic access within institutions where content is only available to certain departments or faculties and not institution-wide. Information flow relating to claims, new subscriptions, cancellations and other data will be faster but it should not be underestimated the volume of addresses which might ultimately belong to one organization. Budgets too are allocated in very different ways and rarely just one central point, so buying and access units vary enormously. When considering the consortial activities of libraries, identifiers will most certainly enable the accurate identification of consortia partners -

- an important consideration given that libraries typically belong to a number of different consortia and that the membership of consortia changes over time.

The general view of the JSCEI Pilot participants is that improvements in the electronic supply chain for journals are a necessity and that the need for such improvements is immediate.

Agents

Swets participates in the Pilot to specifically investigate how institutional identifiers may affect the agent's workflow and streamline the agent's interaction with customers, publishers and content hosting and delivery platforms. This interaction relates to subscription administration-specific elements of the supply chain, as well as access registration and activation.

Granularity of the institutional identification is a critical issue, particularly for agents and those responsible for the delivery of journal content. Here we mean the ability of an identifier to be established and maintained for discrete physical or virtual addresses and other forms of identification as one might see in a print delivery scenario where the bill-to and ship-to information are different. The implication is that an identifier must be capable of linkage to show all forms of relationship that exist in one-to-many and many-to-one deliveries. Granularity, therefore, must meet a series of unique requirements (e.g., for matching orders, title transfers, providing access) as they would differ per the various objectives of an institutional identifier at increasing levels, such as:

- License level – the level currently used in the Ringgold database
- Access level (virtual address)
- Shipping address (also, payment address, “claiming” address, etc.)

As tentative proof for the point that an institutional bill-to address can have multiple ship-to addresses, we have the example that in comparing the Ringgold UK database to the Swets UK database, for Ringgold's 1,675 license level organizations there were 10,813 shipping addresses for Swets.

Swets and publishers were keen to explore the benefit of an institutional identifier in the order/renewal process. Due to mismatch in current levels of granularity, publishers will not use the institutional identifier as a primary match point for fulfilment of print journals. In this application it became apparent to us that the institutional identifier currently offered by Ringgold would not help with subscription-specific elements of the supply chain as it is established at the institution level only and bears no relation to a shipping address for a publication.

E-access registration could very well be a valuable application, but this is yet to be investigated. Swets and HighWire, with the HighWire affiliated publishers in the Pilot, will make this the main focus of the second part of the Pilot.

Publishers

Certainly publishers are already using an institutional identifier internally with major marketing and customer communication benefits. The main areas where the proposed identifier could add value to the communication between the publisher and customer should be in areas such as:

- accurate COUNTER usage reports
- institutional renewals being unrecognized as such and therefore appearing as new subscriptions
- easier ability to track institutional end-users of consolidated subscriptions (especially those where the agent does not deliver orders via ICEDIS structured FTP with Type 2 addresses incorporated in the complete record)

Hosting Platforms

As a central hub of electronic content and authentication data in the supply chain, there would be significant operational efficiency gained by definitively identifying licensing units across all publishers hosted on HighWire. In addition, it would be possible to provide additional tools and reports to publishers and institutional administrators using HighWire.

An assumption that HighWire is making is that there would be a master database with the institutional identifier as the key. This database will be hosted and maintained in a central, neutral location with oversight from a governance organization to be named. Portions of the database appropriate to each type of participant (agent, publisher, hosting platform, etc) will be made available to those parties and not to other parties. For example, hosting platforms would not need to see certain types of licensing data entered by agents or publishers, but they would need to see IP address data.

Other hosting aggregators should realize equivalent benefits of scale.

Business Models

The business model for maintaining an identifier system will have to be sustainable with revenue from multiple sources. The following business models have been identified for further evaluation as to their meeting the needs of the journal supply chain:

- **Cooperative Model:** The IDF and CrossRef are examples of publishers getting together to create an organization which works on a cooperative basis, with some initial subsidy from the larger players. Ongoing revenue is received from the publishers in proportion to their usage. COUNTER is another cooperative example, but with multiple interests rather than a single interest.
- **National Model:** The NISO paper on digital identifiers points out that the majority of the business models for identifiers and standards are “hidden” within large organizations, for example the MARC Organization Code within the Library of Congress. The ISSN is highly subsidized, although it does have a commercial element. SAN is maintained by Bowker, with various levels of access fees.

- Commercial Model: In some cases it is possible to make a business out of the identifier, such as for the ISBN and SAN, or the D-U-N-S number, but in these cases there is a clear trade and commercial reason for the identifier being required.

A sensible business model would have those that receive the most economic benefit from a respective service providing a respective level of funding to support costs. It is clear that publishers are the primary beneficiaries of the institutional identifier, with clear benefits, thereby suggesting they should bear the proportionate cost. Ultimately the subscriber pays anyway; economies are reflected in reduced cost to the subscriber in a competitive market.

Other participants would see service improvements, but not the same clear benefits. It would therefore be reasonable to ask the publishers to bear the major cost of the establishment of such an identifier, and to a certain extent they have already done so by subscribing selectively to Ringgold's existing auditing and database services.

The various and relevant business revenue streams might be reflected as follows:

- Free service: limited search only, with number of searches per day restricted, possibility of searchers to edit or input information using a "response form" designed for such purposes
- Basic subscription: unlimited search access to the database
- Database license for hosting services: download of standard selected metadata
- Database license for publishers: access for download of selected metadata, and automatic receipt of alerts for changes

Next Steps

The Pilot so far has focused on the library>agent>publisher piece of the print supply chain and going forward the participants will move to a more detailed study of the library, agent, hosting platform, publisher electronic paradigms.

The work has also been mainly theoretical, and future effort will focus on more specifics:

- modeling transactions between participants
- setting up use "case scenarios" for handling 2007 subscriptions, especially those with a change in status
- setting up external discussions groups to contribute to the Pilot

Appendix A - JSCEI Pilot Management

British Library: Ruth Jones, Emma Cass
HighWire Press: John Sack, Kristen Fisher Ratan
Oxford University Press: Richard Gedye, Richard O'Beirne
Ringgold: Helen Henderson (Chair Strategic WG),
Don Chvatal
Swets: Yvonne Campfens (Chair Communications WG),
Ramon Schrama (Chair Technical WG)

Appendix B - Supply Chain Schema



