

ARDMS BRIEFING NOTE

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This is a brief account of the original vision of the ARDMS (ASIN Resource Discovery and Management System). The ARDMS was intended to solve some particular problems and to knit together some of the existing initiatives undertaken by CAUL\CBUA in furtherance of ASIN\RISA in line with the vision of ASIN\RISA that is found on the CAUL\CBUA web site.¹ As we move forward, we need to understand that initial vision in order to measure accomplishments and test against an evolving technological environment.

In essaying this topic, three readerships need to be kept in mind. Those who were there should recognize the history; those newly joining the group should find it understandable; and those coming to the whole issue from outside the discourse of librarians should take away both a more complete sense of the project in its entirety and, inevitably, more jargon.

It has long been recognized that the process of discovering appropriate resources in libraries needed attention. This statement separates two kinds of queries and concentrates on one, the other being adequately addressed historically. The trivial question is, "Does the collection include this item?"² While the variations in citation style, problems of incomplete information, the seeming inability to copy accurately, and even vagaries of handwriting styles have complicated this process in our messy reality, there have been only two frontal attacks on it in the last century and a half: the card catalogue which replaced the book catalogue and the OPAC (Online Public Access Catalogue) which replaced the card catalogue. In many libraries there was a third point of access designed to answer the same question when "this item" was a journal article: an alphabetical list of titles indicating, in various degrees, the extent of the holdings of that title.

The second query, however, has proved less amenable of solution. It is, "Does the collection include items of interest to me?" There is no need to rehearse the mechanisms present in the card catalogue or enhanced in the OPAC that deal with this query, but it is necessary to state that this question remains the focus of much attention while the first question does not. It is also important to note that the common dichotomy between books that are listed in one place and journals listed in another becomes a major factor in this discussion because "items of interest" in the context of journals are predominantly articles, not journal titles. Viewed in this way, the enormity of the problem becomes apparent. A single year's publishing of a journal may well include over a hundred articles, each of potential interest and none more than hinted at by the title of the journal itself. A brief calculation suggests that a modest academic journal collection of 5,000 titles (each held for 10 years) could contain upwards of 6,000,000 such items.³ In contrast, the book collection of such a library might well contain a tenth of that number.

¹ While both Council and the Network have official French versions of their names, I will henceforth use the English initialisms.

² The evolving definition of "the collection" will be discussed below.

³ $12 \times 10 \times 5,000 \times 10$. For comparison, Dal, Memorial and UNB probably boast 35,000 titles, not 5,000 and an average of 10 years holdings probably understates the matter by a factor of at least two and perhaps as high as four on average. The smaller the collection, the longer the average run is likely to be.

In the last 150 years, the mechanisms for answering the second question in the context of journal articles have been two: annual indexes to specific journals published as part of the annual subscription to that journal (occasionally cumulated over longer periods), and third party efforts to provide indexing to groups of journals independently of the efforts of the journals themselves. These third party efforts began after the Great War, but proliferated in the period of academic expansion following the Second World War. This latter period saw the rise of indexing and abstracting (I&A) services as indexing alone proved inadequate to the task, principally in the scientific and technical disciplines.

This same period of academic expansion saw increasing numbers of academics engaged in research and attempting to publish. This fueled the creation of large numbers of specialized journals as the number of papers submitted to editors annually in sub- or sub-sub- disciplines provided rationales for separate new journal titles to facilitate communication in that academic microcosms. Of course, with the increase in specialization in the journal field has come an increase in the specialization in the I&A field. In 1967 Memorial subscribed for the first time to Chemical Abstracts. Prior to that subscription, it subscribed to the half-dozen classic indexes published by H. W. Wilson Co., principal among them being the Reader's Guide to Periodical Literature. In the late 1990s Memorial adopted a plan to subscribe to at least one electronic index in each of the major fields represented by the institution's 30-odd academic units. The current number of these is between 60 and 70.

It is no wonder that our imaginations have continued to be engaged as we attempt to present to our users a coherent view of "items of interest" in this environment. The worst, however, was yet to come.

With the advent of the World Wide Web (WWW) in 1992, users of the internet (Canadian academic libraries shifted to the internet for interlibrary loan communications in 1985) were presented with a system of linking documents⁴ that led to two major complicating developments. The first was the immediate expansion of stable content addressable on the network. Given the client software ('browsers') documents could be located on servers throughout the world. Further, given the ease of placing documents on servers, the amount of content immediately expanded and continues to expand by orders of magnitude annually. Much of the initial content was based in the academy, having something of the cachet of published work to consumers. The proportion soon changed, but there continues to be a considerable amount of academically valid information presented on the internet via WWW. The advent of freely available material of interest to academics further complicated the question we are dealing with, as librarians strove to understand what a 'collection' meant when much material of interest was both available to their users and not purchased.

The year 1999 represents a Canadian watershed of another sort. In that year, the Canadian Association of Research Libraries (CARL) applied to the Canadian Foundation for Innovation (CFI) for a funding of a \$50M project to support the dissemination of scientific research results to the national academic research community through licensing electronic access to the electronic version of journals and A&I tools on a national basis. The application was successful and, when the license negotiations concluded, about 2,000 electronic journals and a primary A&I tool became available to 64 Canadian universities. The magnitude of this change can be hinted at in several ways. Prior to the agreement, only eight institutions were able to afford the A&I tool. Prior to this agreement, access to electronic journals was scattered, reflecting title-by-title decisions at each institution. The immediate access had a number of unintended consequences, but established a critical mass of materials in this format, transforming the expectations of the research community overnight. Overnight, it also revealed

⁴ All formats (graphic, video, audio) are subsumed under 'documents'.

some chinks in the technical services mechanisms in our libraries as we strove to integrate hundreds of new holdings into our structures that had, previously, operated at volumes an order of magnitude less.

In 2000 and 2001 CAUL articulated the Atlantic Scholarly Information Network (ASIN) and adopted a strategic plan. Both documents are on the CAUL\CBUA web site. The documents reveal a strong desire to move forward as a region with a focus on inter-institutional collaboration.

By 2002, all the CAUL libraries were feeling somewhat inundated, both as a result of the successful approach to CFI and also by the growing influence of academically respectable materials on the internet. It was clear that our traditional A-Z lists were not up to the task of answering the query. Further, within the group, there were disparities in staffing and available skill sets that suggested the region would move forward uncoordinatedly unless group action were taken. Group action in the past had led to the acquisition of document delivery software (Aviso and Ariel) on a regional basis and had built skill sets in the support of that software that were available throughout CAUL. Dalhousie, Memorial and UNB were working with Relais International on behalf of the group to establish the next generation of such software and we had, as a matter of policy, extended borrowing privileges at our own institutions to all members of CAUL institutions, then nationally in conjunction with other regional academic consortia.

One of the developments that complicated matters during this time was the emergence of the so-called 'full text' index that combined traditional indexing with electronic copies of journal articles. Underlying these hybrid efforts are a series of contracts with journal publishers to allow the user of an index to link directly to journal articles. Thus, a library might subscribe directly to a journal or get substantially the same content by subscribing to an index which contracts with the journal for the 'full text' of articles. This development created a situation in which a library might subscribe to an index that did not include 'full text', but led users to articles in journals that the library subscribed to either as electronic journal subscriptions or as subscriptions to other indexes that had 'full text'. Unfortunately, there was, until the link-resolver software and its associated knowledge base, no way of linking that user to the 'full text' titles and only a very antiquated way of connecting with the directly subscribed journals. The importance of this facility can be hinted at by the numbers of journal articles even modest collections contain.

This sets the scene for the initial discussions with SIRSI. How do we guide our users to items of interest to them in the expanding world that is hugely digital, increasingly outside our traditional definitions of 'our collection,' and a major challenge to traditional methods of organization?

The SIRSI product, then under development, would provide "context management" for digital resources (and non-digital) by enabling the user to discover both materials and tools for further discovery. It would enable a user to query from a discipline-based point of entry, greatly diminishing the impact of alphabetical lists. The integral parts of this vision were 1) a presentation layer that would introduce the discipline, 2) federated searching (searching multiple sources simultaneously) that would help identify rich sources of information, 3) links to the Relais document delivery piece, 4) a link-resolver, and 5) room for expansion.

The presentation layer would frame the topic, providing a graphic context into which federated searching, RSS feeds, and other forms of content could fit. It was recognized that some institutions would have access to licensed content that others did not. Therefore, authentication became an important piece with the resolver. Federated searching was seen as both identifying items of interest and as identifying sources for further searching in their 'native'

interfaces. A result that suggested that 6 items were identified in one source and 80 in another would prompt the user to review the latter source in more detail. Also, while protocols had existed for some time that would allow searching OPACs, federated searching in the new WWW environment needed to be able to search outside that protocol. Resources such as the catalogue at U. Ste. Anne (Bibliomundo), Memorial's Digital Archives Project or the United Empire Loyalist Archives at UNB are not available in ways that OPACs had previously been.⁵

As the user would be discovering items of interest that were not held in his or her local collection, it would be necessary for the system to integrate seamlessly with the Relais document delivery software in order to bring the items to the user if necessary. The link-resolver would integrate access to journal articles; essentially linking electronic indexes, articles in electronic journals and the document delivery software into a single tool for delivering content to the user.⁶ Finally, the system should be expandable to allow avenues not presently available to be explored.

Regionally, the development of subject-based points of entry would allow all member sites to use the work done at other institutions, either whole or in part, through the software supporting a consortial approach. This feature would compensate for varying levels of staff and skill sets, while building regional expertise and linking staffs at the operational level.

Because of the traditional willingness of CAUL libraries to move together on operational issues and to value shared competencies, developing this product in a consortial environment expressed CAUL values apart from the specific functionalities. While under the banner of ASIN, the ability of individual institutions to reuse the work of others and brand these subordinately was highly valued.

Initially, CAUL and SIRSI both saw this project as a way forward and CAUL struck an implementation team to make it happen. In retrospect, it seems that almost immediately, the commitment on SIRSI's part flagged. The chief architect and visionary was moved to another project and, more recently, development was essentially halted while other business opportunities were explored. From a view of the project as a partnership, the time has come (is past due) for SIRSI to take responsibility for the 'pain and suffering' it has caused and outline its plans for compensating the CAUL group for its dereliction.

Unfortunately, the environment which gave the project impetus remains, as does the CAUL vision.

⁵ This generalization includes resources not available via the standard OPAC-centered Z39.50 protocol, including those few OPACs that do not support it, and resources that become available through newer protocols.

⁶ One of the developments that complicated matters during this time was the emergence of the so-called 'full text' indexes that combined traditional indexing with electronic copies of journal articles. Underlying these hybrid efforts are a series of contracts with journal publishers to allow the user of an index to link directly to journal articles. Thus, a library may subscribe directly to a journal or get substantially the same content by subscribing to an index that contracts with the journal for the "full text" of articles. This development created a situation in which a library might subscribe to an index that did not include "full text", but led users to articles in journals that the library subscribed to either as journal subscriptions or as subscriptions to other indexes that had "full text". Unfortunately, there was, until the link-resolver software and its associated knowledge base, no way of linking that user to the "full text" titles and only a very antiquated way of connecting with the directly subscribed journals.