

IFLA '97 Copenhagen
IFLA '97 Copenhagen
63rd IFLA General Conference August 31-September 5, 1997

Section 109. Serial publications.
Theme: "European Initiatives in Serials Management"

The European project CASA (promoting Co-operative Action on Serials and Articles)

by Jacopo Di Cocco, Peter Burnhill, Alessandra Citti and Vincenzo Verniti

CASA began in January 1997 as a three year project funded under the 'Telematics for Libraries' group of projects in the EU Fourth Framework. CASA, initially proposed as the Co-operative Archive of Serials and Articles, aims to develop mechanisms, services and systems to support a virtual library of information on serials and articles. CASA aims to assist the work of professional users (in libraries, bibliographic agencies, publishing houses, union catalogues consortia and national ISSN Centres) as well as the end users of articles.

Origins of the project

End users, and the professional staff that assist them, can find the search for serial articles difficult, time consuming and frustrating, since this often involves searching within a variety of different union lists and catalogues, each requiring different access arrangements and each having different search commands. Technically and organisationally, there is little prospect of merging all catalogues into one physical union catalogue, if only because of the variety

of standard (sic) procedures that have been applied for bibliographic description of serials and for serial holding statements. This realization led to consideration of the potential latent in the ISSN World Serials Register, the internationally recognised authority file for serials, for use in an alternative approach. World wide web as an arena for interaction and trade was also confirmation of a trend towards the electronic and telematic basis of the information economy, with the desire on the part of the end user to integrate the search of online indexes and abstracts for interesting articles, with the location of the serials containing the article (whether print or electronic) and the process of request and delivery/access of the article itself. Could the system of uniform resource names and locators (URNs and URLs) then being implemented for use in the WWW be linked to the ISSN Register in such a way as to provide users with locational information on the variety of (holding) catalogues and union lists maintained across Europe, and beyond?

The project

This reasoning led to international discussion, led by CIB at the University of Bologna, with the ISSN International Centre, various national ISSN Centres and national bibliographic agencies and with a selection of organisations known to be supporting union lists of serials. The result was a proposal to European Commission for funding through the EU Fourth Framework to design and build CASA,

now conceived as a system of inter-connecting servers which could offer gateway access, via the Internet, to information about the main services for serials and articles. The proposal was successful and the project is now underway, with the report specifying the user requirements and the executive plan for CASA in preparation for circulation in September 1997.

The CASA Consortium includes organisations concerned with most of the activities throughout the life of a serial. In addition to the ISSN International Centre,
lagina p

IFLA '97 Copenhagen

here are three national ISSN Centres (ISSN-IT; ISSN-NO; ISSN-GR), a national deposit library, three organisations supporting union catalogues (SBN, national library system for monographs & serials; ACNP, Italian union catalogue for serials; EDINA for the SALSER virtual union catalogue for serials in Scotland), university libraries (Florence, Ferrara, Torino and Bologna), a publisher (Il Mulino) and a software house (Ariadne srl). Our aim has been to understand the underlying structure of the emerging information economy, especially for serial articles, and, thereby, to see in context the needs (plans, requirements and constraints) of the several parties to that information economy, such as those represented by the various organisations within the CASA project.

Services for both professional users and end users

As is argued later, an agreed system of identification is recognised as crucial for cost-effective support of serials and article transactions. Thus, the ISSN Register is seen as providing the information foundation for CASA, that is for co-operative action on serials and articles. The ISSN Register, as the internationally-accepted serials authority file, is judged to be the appropriate

basis for any international co-operative action on serials and articles, especially assigned an ISSN, and new and important serials are being published each year. Through the application of telematic methods, the CASA project will contribute to an improvement in the speed in the well-established ISSN network procedures: of request, assignment, validation & release. Thus CASA will help ensure greater access to a regularly updated and authoritative serials register.

The CASA partners have been investigating how the design and operation of union catalogues could benefit from use of the ISSN Register and how they might inter-operate in providing users with information on the location of serial holdings in libraries throughout Europe. CASA participants have responsibility for and experience of a wide variety of the different forms of union catalogue, both physical and virtual to bring to bear. The key is the inclusion of ISSN information in the bibliographic summary records in library catalogues and in union lists. CASA is therefore investigating an economic mechanism by which librarians and other professional users can add the ISSN to serials records, involving software which checks data from existing catalogues against that in the ISSN Register using semi-automatic matching. This would provide a motive for

library catalogue managers to register with the CASA server. At the same time, the CASA server, which would have the ISSN Register at its core, could act as a central directory which indicated, through the use of the URN (for identification and address), the serial titles held in each registered library. Thus, the CASA project is looking at the extent to which integration or inter-operation is possible between serials catalogues. (In the first instance, holdings statements on the serial issues held would be regarded as a heterogeneous 'display' field only; there is associated work by CASA partners on

a structure database on serial volumes issued.)

The virtual union catalogue will be developed at regional as well as national levels.

Services for end users

The third focus of study in the CASA project has been on the services required by end users who wish to search for and obtain articles of interest. Thus it will study how users can move from discovering what articles are of interest, on

to find out the location of the serials containing these articles, and the terms of availability of the work sought. Typically, the serials/articles workflow can

be viewed as constituting several steps. These are set out into four main stages: discovery, location, request/order, access/delivery. They can be enhanced by recording services about serials in a directory of services including:

- location of titles (in union catalogues)

IFLA '97 Copenhagen

- databases of tables of contents and abstracts
- publishers
- providers of services of ILL and DDS.

This directory of services has been called Yellow Pages, however, now, to avoid problems of copyright on this expression, we will call them Serials Services Directory.

This is an area of study with many cross-currents. In this study, libraries are viewed as but one class of provider of services on serials, alongside publishers, indexers, secondary vendors and other providers of document delivery

services. It is well known that for the end user, the article is the intellectual work, or information object, that matters: serials are important only because they contain articles. Publishers of serials have recognised that efficient trade in these and other information fragments require a system of authoritative and unique numbering, equivalent to that of the ISSN. (There are several candidates but the one favoured in the CASA project is the serial item contribution identifier, SICI, since it includes ISSN). This has prompted discussion of the utility for the emergent information economy of one or more servers acting as 'yellow page' directories of services on serials and articles.

This raises the choice of standard for the metadata about the content and the location of these services, and the extent to which these should adhere to conventions of the bibliographic world, those of networked (digital) information objects, or those of the world of business.

Identifiers

This structure has highlighted the crucial importance of identification. For cost-effective automatic transactions in the information economy there needs to be unambiguous agreement about the information object being requested. The ISSN provides this role for serials; comparable identification is also required for articles and other contributions published within serials, especially given the need to meet increasing demand from end users. Numbering (naming) also plays an important role for the two parties in automatic transactions, the service provider and the end user, or customer.

Locators and identifiers will allow navigation between services, even if they are independent from CASA. CASA aims at being compliant with other applications using WEB or adhering to Z39.50. A schematic design of the possibilities offered

by the CASA system was presented at the 1997 UK Serials Group Meeting in Edinburgh where it was joint winner of the Poster Session (P. Burnhill & H. Larnach).

The wish to integrate functions across distributed databases is hindered by the fact that bibliographic software and standards are conceived as complete and closed systems. However, we anticipate a significant contribution from the inter-operability offered by Z39.50.

The development of electronic commerce is going to modify in depth the relationships between publishers, libraries and end users. In this way, the virtual library becomes a particular case of electronic commerce, in which the tools of automation integrate the various layers of activity. This poses special

challenges for the system of standards that have been developed within the library world, especially as the information market becomes increasingly global.

Technological approach

CASA Consortium thinks that production of bibliographic information and professional/end users' access to them must take full advantage of network technologies which become more and more available and efficient. Also CASA products share this approach and thus adopt technologies and disseminating strategies which make it open and widely available. By promoting integration between libraries activities and providers offering services about articles and serials, CASA offers its contribution to the global market of serials information, due to the role that ISSN has as identifier of serials, but also as

IFLA '97 Copenhagen

a component in the identification system of issues and articles.

The CASA Consortium policy is to make the software freeware. This is for two main reasons. First, this allows use of other freeware software products. Second, the Consortium wishes its modules to be used by others, both directly, and as modules inter-operating with other applications.

The CASA project aims at developing tools and services to support a European cooperative virtual library of serials, articles and related resources. From a technical point of view the project is intended, through the strategic use of identifiers, to foster a widespread adoption of digital techniques in the process of producing, disseminating and accessing such information. This goal is being pursued through the use of common standards and protocols, the development of a reference client-server implementation and the deployment of a network of pilot servers. Common standards and protocols will ease the exchange of information among organizations involved with serials at different levels and between end-users and providers of services related to serials. A freely available reference implementation will reduce the effort required to bring local organizations into the CASA network and to develop add-on features and services, which will be able to take advantage of databases and other basic resources provided by servers in the pilot network.

Cataloguing of articles

The ISSN Register is an authority file for serials. However, although desirable, it is unlikely that such an authority file could ever exist for articles. Nevertheless, if full use is made of article-level identifiers, the same effect could be achieved through the combined use of various bibliographic and trade facilities. It is the view in CASA that the SICI code is the best identifier for articles: this contains the ISSN; it can be constructed from elements used in the bibliographic citation of articles; it is supported as Z39.56 by a growing number of information agents, including publishers who wish to recognise ownership of information fragments. In as much as serials will continue to be a means for grouping articles together, then the ISSN is sufficient as a means of locating potential providers of article services. The CASA Serials Services Directory may have a role to play in assisting the user find this through the table of contents or abstract of journal. The user would thus be able to choose which provider of services suits better his requirements, by navigating and accessing distributed resources.

CASA could be conceived as a metacatalogue, therefore we think that Dublin Core modules, which are presently used for digital products, could be used to catalogue articles in a distributed way by libraries or publishers. Actually Dublin Core is a very open tool and all necessary fields could be included. Integrated catalogues could have these services together with traditional OPACs.

To make articles cataloguing easier, reference to issue and serial containing the article could be done only by quoting the SICI code; the description of the serial will be captured from on line databases, using CASA utilities.

The plan is to develop a system which will support WWW browsers, compliance with Z39.50 (ISO 23950) and inter-operability between three types of servers: the International CASA server, the National CASA server and a Community CASA Server.

The CASA Euro-server will be based at the ISSN-IC and will host the authority copy of the ISSN Register. The National CASA server will also host, or have effective network access to, the ISSN Register and will have functionality geared towards agencies responsible for holding information about serials, such as cataloguers. The Community CASA server will be developed to assist understanding of functionality associated with the demand and supply of serial articles, and of the requirements of Serials Services Directories facilities additional to those facilities created as a result of commercial activity.

IFLA '97 Copenhagen

Beta testing will be carried out in 1998/99; a pilot phase in the production run will start during the second quarter of 1999 to evaluate both the level of productivity that cataloguers might achieve with CASA and possible changing in managing the cooperation between ISSN Centres, national bibliographic agencies, union catalogues, libraries, publishers and providers of information about serials and articles.

To summarize, the project will be articulated into four macrofunctions, which will be tested during the demonstration phase:

1. To put the ISSN Register available on line, in order to make it available for the Consortium's libraries activities,
2. To transfer semi-automatically national bibliographies and integrated catalogues into ISSN and to set up a system allowing on line proposals of new titles recording, in order to receive an ISSN as standard identifier in short times. Such a system should also allow ISSN Centres to take advantage of telematic resources to receive information about serials and to record them,
3. To navigate between OPACs, bibliographic databases and servers of providers of serials and services, using information recorded in the SSD (ISSN Yellow Pages),
4. To test distributed services which participants in the project intend to develop using the CASA products, in particular
 - derived catalogues,
 - tables of contents and abstracts recorded with Dublin Core. The description of serials will be captured from ISSN,
 - integration of articles cataloguing available c/o different sources which will be possible due to SICI,
 - searches on ISSN Register through Z39.50 target.

The bibliographic on line cataloguing workflow for serials and the possible changes in the cooperation which CASA will bring have been described by Ms Santiago (ISSN-IC Director) in the Deliverable 3 of the project CASA Bibliographic workflow. She has pointed out that "in the general process of describing and identifying serial publications, some partners play a role on a systematic basis, others have specific requests. The two cases will continue and none of the roles in the chain is seen as likely to disappear completely. The aim of CASA in the bibliographic field is to assure common identification, take better advantage of already created data, avoid duplication of work, and speed up procedures by improving transfers, up and downloading, orientation and availability of records and ISSN to all concerned".

Remarks and needs appeared from the 1st phase of the project

Information market is becoming more and more a global market. Such a phenomena points out the need of convergence towards unique standards. For obvious reasons, several national standards have been adopted. The fact that standard authorities are working to find solutions to this problem is seen as a particularly important effort which will help libraries to work on more standardized and open environments. CASA, as all bodies working for libraries, will take advantage from such an effort.

As indicated, during the first phase of CASA the problem of identifying objects and subjects (resources) with uniform codes has emerged. One of the reasons of the success of WEB is that it has offered uniform identifiers (URLs) . Now more sophisticated tools are under exam, such as PURLs, URNs and URIs. ISSN and ISBN must be component of such URNs. There are no analogous codes for publishers, providers of serials services, catalogues, libraries and end users. This gap should be covered. The first part of ISBN could form a part of the publishers'

IFLA '97 Copenhagen

identifier. On line identifiers must be always available (typical the service of DNS). CASA tries to do something similar with ISSN.

Identifiers have a central role in the electronic commerce, therefore any provider of services must be able to require or assign them, in order to avoid that the same object has more than one identifier. Since texts can be in different forms (electronic, printed...), each version must be identified.

Open problems

CASA will try to supply with on line cooperative cataloguing of articles, which might allow publishers to link the journal with the information about issues which have already been published. As indicated, SICI code will be enough to identify issues together with the price. Bibliographic description of articles but also indexing could be also linked to articles titles. Indexing might be extracted from disciplinary reference guides. To collect this information into unique metacatalogues requires not only unique rules, but also standards about the language and the alphabet to be used. This one of the problems which arises due to Internet, on the other hand there is no reason for repeating the same description, according to different standards.

One problem which CASA will only raise, but will not try to resolve, is the integration between hypertextual navigation and high-technology search tools on different databases, such as Z39.50 targets. The WEB environment will also be CASA environment, and will have to be open to target Z39.50.

In the environment WEB the search engines have had a particular success. We will try to investigate how CASA could make use of them, to update the Yellow Pages (or Serial Services Directory). We will also try to understand whether DNS can be used to help third parties applications to navigate between YP services. This would offer a contribution in the creation of a virtual library and offer end users an organic tool where to find services.

Finally distributed cataloguing raises the problem of copyright on information which CASA will produce. Making public the information would eliminate several problems, but costs must be covered. They could be supported by all commercial providers of information which have sold better their products due to CASA. Copyright could concentrate only on full text articles or on Document Delivery Service. The costs of such services actually could include also all costs for free services. For these reasons CASA foresee that on line cataloguing of articles could be free; only indexing or classifications could require fees. This could modify the policies of the providers of abstracts.

We hope that our Action on Serials and Articles will contribute to these evolutions. We will be grateful if you could support us with your remarks, criticisms and proposals. Thank you for your attention.