



# Just-in-case linking vs. Just-in-time-linking -- the Library Without Walls experience

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## Abstract

The Library Without Walls (LWW) project began integrating full text links into citation databases early 1997. A local SICI database was developed to link between locally available full-text and citations in local databases. These could be termed just-in-case links as they are a predetermined set of URLs which link to specific full-text materials. Linking to full-text journals at external sites was the next step. A methodology was used to anticipate the URL for citations which could link to external full-text. As more types of electronic material became available, the presentation of different types of links became possible. A new approach to allow for a broad array of linking types (between citations and full-text, between varying databases and local holdings, from one database to another, etc.), and to allow for more customized linking based on the needs of the incoming user, is now being developed. This poster will cover how LWW has created a hybrid of just-in-case links with just-in-time links (links based on type and location of materials and on user needs); the origin of just-in-time links (Special Effects by Herbert Van de Sompel - University of Ghent); how the system works at Los Alamos; and how LWW customers have reacted to the hybrid system.

## Just-in-case links

Presenting users with full-text links from within A&I databases was a relatively new concept in 1997. At

that time the LWW project housed both the beginnings of an extensive full-text journal collection and several A&I databases on local servers. A solution was developed to link between the databases and the journals which involved building an intermediary database which held item identifiers and associated URLs to the full text. The item identifier chosen was the Serial Item and Contribution Identifier (SICI). For the A&I records, SICIs are created and added to the individual records as they are loaded into the local version of the database. On the full-text journal side, SICIs are created from SGML included with the journal sets, and are loaded along with associated locations on the server (the URLs) into the intermediary SICI database. The SICI database is checked against during the presentation phase of search retrieval and if the SICI is matched a link is presented to user along with the bibliographic metadata. The SICI database is a set of predefined URLs; if no SICI is found to match a given record, no link is presented.

## Anticipated links

As publishers began to make substantial collections of full-text articles available on their own servers and websites, it became possible to consider linking out to those external sites to retrieve the full-text. This involves a basic process of figuring out the URL structure to the full-text article at the remote site, and is only available for sites which employ a basic system for allowing a persistent URL syntax. Once the syntax is determined, a local table is built which matches the ISSN for the journal to the corresponding URL syntax. In this case, during search retrieval the table is searched for matching article ISSN's, and if found, a URL was constructed based on a combination of the predetermined syntax and specific article information coming from the A&I record metadata (volume, issue, page, etc.). This approach allows for

a broader set of citations to present full-text links, but has the downside of occasionally presenting links to articles which are not available on the publisher's server (i.e. a citation with a matching ISSN might exist to an article not yet available electronically via a website).

### Just-in-time links

One of the desires expressed strongly by customers of LWW products is the ability to link to more and different kinds of sources -- links back to the local catalogs and databases of customers outside of LANL is one example. Based on work done in the University of Ghent Special Effects project, LWW is exploring using dynamic links which are only presented upon the request of the user (just-in-time). This solution provides a collection of anticipated conceptual links that the LWW wants to make available to its customers. The links provided would have a much larger scope than just the current model of linking from A&I databases to full-text journals; links could be provided between databases both internal and external to LANL, to external catalogs, or to cited full-text from within bibliographic record, to name a few. The content of the link collection is assembled based on the feasibility to actually create the link at some further stage in the process (i.e. existence of a link-to-service) and via anticipation of customer's expectations. Each of the links is introduced in order to provide a certain service that is thought to be valuable for users of the system, and customers at external sites can have customized sets of link choices presented to them based on their local needs. An important feature of this system is user choice -- the links are not presented until the user chooses to see them (via a button provided for this purpose on the records in the search results list). Thus, linking "on-the-fly" can be accomplished, but can dramatically reduce delay times by only going through the required overhead when necessary. Of

course, as with the previous system of anticipated links, this method may also produce links to items which in reality do not exist on external servers.

### LWW hybrid of just-in-case and just-in-time

Currently, LWW customers are accustomed to being presented with links to full-text immediately when results are displayed -- no extra clicks are involved. And because the SICI database system means that many links *always* deliver full-text on command (as opposed to being anticipated links which actually may not deliver), developing a hybrid approach between just-in-case and just-in-time seemed the best way to meet both current and future customer needs. The hybrid solution will allow for a larger array of dynamic links to be displayed upon demand, but will allow for local items with known links (such as full-text in local collections or local holdings) to be displayed immediately without further action from the user. A single database will be set up, using elements supporting both approaches. This database will be queried as part of the search request. The set of potential links will be selected for the user to request if desired, but if local full-text and/or holdings are available, those links will be displayed immediately along with the bibliographic record.

### References

1. Van de Sompel, Herbert, and Hochstenbach, Patrick. Reference Linking in a Hybrid Library Environment. D-Lib Magazine, 5, 4, pt. 1-2 (April 1999).  
[http://www.dlib.org/dlib/april99/van\\_de\\_sompel/04van\\_de\\_sompel-pt1.html](http://www.dlib.org/dlib/april99/van_de_sompel/04van_de_sompel-pt1.html)