

From a collective catalogue (ACNP) to the Network Inter-Library Document Exchange (NILDE): a way to share resources and to improve user services

Michela Cecconi, Andrea Marchitelli, and Silvia Sarti, Consortium for the Italian Antarctic Programme, Rome, Italy. <<http://www.pnra.it>>

Abstract. *This paper is about two important Italian web-resources for document delivery: ACNP, the collective serials Italian catalogue, and NILDE, a document transmission network based on Internet technologies and standardized operations.*

Our library is part of ACNP since 2002, which has allowed us to better exploit our resources and to meet successfully our users' requests. Results have been progressively improving from the end of 2003, when we joined the NILDE project. Participation in this network has supported the working flow of our activities in the entire document delivery process – from the request to the delivery of a document – considerably elevating the Document Delivery Service (DDS) management performance.

To show you how we can obtain such operative results, we will describe both the structure of the collective serials Italian catalogue (ACNP) and the architecture of the e-mail/web gateway server used for NILDE.

ACNP, developed by Italian National Research Council (CNR) and by the University of Bologna, has a Web OPAC where users can retrieve serials from the Italian libraries participating to the project – presently rated to be 2510. Even though ACNP assures by itself an efficient exchange of documents, NILDE permits further costs reduction, time shortening and simplification of the documents transmission procedure.

NILDE is a web-based Document Delivery Service that has been developed by the Research Area of Bologna Central Library, in order to experiment the use and to suggest a model of DDS promoting inter-library mutual exchange and cooperation procedure. The high performance of the Network is possible especially because NILDE is accessible through ACNP, allowing the librarian to check which libraries participate to the Network among those that have the document he needs. Once checked the datum, the librarian can find out which library offers the best conditions and finalize his request accordingly, simply clicking on the link to NILDE.

Keywords. *ACNP, document delivery, NILDE, OPAC.*

Document Delivery Service (DDS) plays an important role in research and university libraries. The main Internet resources for Document Delivery (DD) in Italy are ACNP, the national collective catalogue of periodicals, and the OPAC of the Sistema Bibliotecario Nazionale (SBN), the collective monographic material Italian catalogue.

ACNP

ACNP is the biggest Italian specialized collective catalogue. It contains 129.209 journal's records, 709.237 recorded collections located in 2.471 libraries; 1.119 of those libraries are already updating their data on line and 224 of them are going to do it, in the meanwhile the request of courses to prepare librarians to update is continuous.

ACNP catalogue's records come from international register of serials edited by the ISSN center (an UNESCO Agency located in Paris) that assigns an international code of identification.

Cataloguing process is strictly embedded with the registration one, so serials that don't have ISSN yet will be enclosed in the register while are being catalogued.

During the years, ACNP improved its first purpose as catalogue with several services that make participating library an always more cooperative network.

ACNP plays its main role, the location of documents, as a result of two forms of search (simple and advanced).

Data about serials are explained in tables like this one:

*Antarctic science (Print)

RM515 Biblioteca del Programma Nazionale di Ricerche in Antartide

① 🏠 ✉ S. Maria di Galeria , tel: +39 0630486498, fax: +39 0630484893 ➡

Posseduto: 1989- Ultimi fascicoli

Lacune: 1991;

Note: LAC. 3(1991), fasc. 3

Ultima revisione catalogo 2005

RM524 Biblioteca dell'Istituto Nazionale di Geofisica e Vulcanologia Antonino Lo Surdo

① 🏠 ✉ Roma , tel: 0651860470;0651860436, fax: 0651860435 ➡

Posseduto: 1989-

Collocazione: riv 66

Ultima revisione catalogo 2003

Link "Latest issues" (in Italian "Ultimi fascicoli") opens the list of the latest issues received by the library and the indication of their availability.

Periodico/Rivista: [*Antarctic science \(Print\)](#)

ISSN: 0954-1020

Codice CNR: PT00083705

Periodicità: Trimestrale

Stato Ricevimento	Volume	Fascicolo	Data/Descrizione Fascicolo	Anno
Atteso	18	2	01.06.2006	2006
Ricevuto	18	1	March 2006 . Indici	2006
Ricevuto	17	4	December 2005 . Indici	2005
Ricevuto	17	3	September 2005 . Indici	2005
Ricevuto	17	2	June 2005 . Indici	2005
Ricevuto	17	1	March 2005 . Indici	2005
Ricevuto	16	4	December 2004 . The role of the Southern Ocean in global processes: an earth system science approach . Indici	2004
Ricevuto	16	3	September 2004 . Indici	2004
Ricevuto	16	2	June 2004 . Indici	2004
Ricevuto	16	1	01.03.2004 . Indici	2004
Ricevuto	15	4	01.12.2003	2003
Ricevuto	15	3	01.09.2003	2003
Ricevuto	15	2	01.06.2003	2003
Ricevuto	15	1	01.03.2003	2003
Tutti i fascicoli				

In the sample web page reproduced here PNRA library explains some information about single issues: titles of monographic issues, available links to TOC on publisher site, so that users can instantly and transparently enter the index of periodical by the catalogue.

If user is connected to the network of the search center, he can enter directly the full text he is interested in.

The document delivery service is considerably developed too, thanks to the visibility of library possessions coming from the sharing to a national catalogue.

ACNP is strongly linked to NILDE, a document delivery network, and it's also related to the lending form of National Service of libraries SBN.

The links to the web forms can be directly activated through the screening of single periodical's ownership. They allow users to forward their requests in a simple way, after the research of catalogues and identification of a library that owns the searched documents. Heading and library's data, in fact, are automatically drawn in the web form.

ACNP catalogue also affords the libraries to insert the electronical periodicals on the web.

PNRA has promptly chosen to use this possibility, inserting in the same database both data referring to paper ownership and electronic data. Search for users is really simple: starting from periodical title, they can see both information about libraries owing paper version and libraries owing digital one. Moreover if the user links up by a computer of an organization that takes out a subscription to that periodical, he can directly gain access to the editor website where he can read the full text. Otherwise he can know information for the access, contact of the responsible for that access, or the library which can provide the document delivery with its conditions.

In addition, the electronic periodical record contains the link to editorial website, generally to the homepage of the heading or, in any case, to a free page where the user can search for information or enjoy the articles he is interested in, after an individual subscription. There is, moreover, the link to the equivalent paper version that anyway allows to activate the traditional document delivery procedure.

Actually the catalogue consents catalogation of open electronical periodicals by a free entry: it's interesting for librarians' use.

This allows to access to a lot of resources that are generally not selected or not indicated in the catalogue, and we wish it will support more and more open access editorial policy.

Andrea Marchitelli

NILDE

The wider visibility of the libraries patrimony, realized with the diffusion of the collective catalogues and, in particular for serials, thanks to a continuous increase in the number of the libraries participating in ACNP, has favoured the document exchange between Italian libraries. The increase in the transactions of Document Delivery (DD) has led to a reorganization of the service. The libraries had budget questions (owing to the reproduction and to the forwarding of documents) and had many problems of statistical survey, so that the librarians employed in the DD Service had to resort to a “craftmade” database, created according to the single library’s requirements. In such a case the data entry was an additional and manual operation, rich in problems of incoherence and lack of standardization.

The Network Inter-Library Document Exchange – that I’m going to call with its acronym NILDE – has been developed in 1999 within the framework of the CNR Project BiblioMIME.

The project is based on the idea of exploiting the new Internet technologies in order to reduce management costs and to achieve short turnaround times in satisfying Document Delivery requests from final users and libraries. In fact the Network utilization improves on the one hand the operations’ workflow, reducing the time required for effecting them, and on the other hand it improves the satisfaction of users’ needs in regard to promptness and to quality of the received document.

NILDE is an operational software integrated in a data processing system, the BiblioMIME Server, which works as a gateway between e-mail and the Web. It allows librarians to continue using e-mail service to send large documents,

while resolving problems that users may encounter when downloading large size files with e-mail agents¹.

The Network permits the participating libraries to deliver, receive and execute DD requests, with the immediate vantage of transactions' standardization and of gathering statistics. The quality and modality of transactions are automatically surveyed, without any operation of manual data entry in a separate database. This reduces the working time and the need for paper archiving. At the same time the data for measuring DD performance of various libraries, or of a same library during the years, become comparable, because they are provided according to a uniform system of indicators.

The possibility of seeing at every time and without any further operation the transactions balance between various libraries offers new chance of development for inter-library mutual exchange and cooperation. For instance the library operator is required to utilize these balances when he has to send a new request, aiming at a uniform distribution of the orders among the libraries – since he has at his disposal the data of how many requests have been sent and to which libraries. Moreover if there are many library operators employed in the Document Delivery Service, it's necessary to have this kind of statistics up-to-date in real time.

In addition, by NILDE it is possible to record any delivery modality as ordinary mail or fax, but the software also manages a direct and "safe" electronic transmission of documents via Internet (for instance via NILDE, Ariel or Axis), with a great reduction of costs and turnaround times. Forwarding the document with the NILDE delivery modality allows to optimize its transmission process: the document is temporarily saved in a NILDE web-server disk file and it's made

¹ The library operator sends the document as an attachment to the destination address; on fly the server NILDE extracts and saves the attachments in a web-server disk file and creates a new e-mail message that includes an URL pointing to the saved document. The receiver can download these large objects by means of a user-friendly browser.

accessible, via http, only for the receiving library during a limited period of 15 days, after which the file is destroyed.

Naturally the receiving library has to respect the law in force about copyright, according to the NILDE regulations.

For example it's forbidden to download a document from an e-journal and to send it directly via web – even if this kind of operation would greatly increase the working speed. The library operator, instead, has to print the online article, then he has to scan it; in the end he can send the scanned file to the requesting library via web.

Moreover the use of NILDE for scanning and sending files without the need for specialized software packages has also proved to be cost-effective, since personnel involved in the DD service need no special training, beyond learning to use a scanner and an Internet browser.

The services offered by NILDE, written in the regulation itself that is in force since 2004, are:

1. delivery and management of requested documents in a standardized way, via Internet, fax or mail;
2. forwarding requests to a specific library in a rapid and simple way;
3. management of the data file about information on the participant libraries;
4. management of the data file about document delivery transactions;
5. automatic and up-to-date gathering of statistical data on:
 - DD performance indicators “rate of success” and “turnaround times”;
 - DD performance indicators measurement and comparability per single library and per determinated period;

- analytical information about the DD service: titles of requested serials; users of the service; quantity of executed transactions per single library, month and year, document delivery modality.

After a testing period from 2001, NILDE have been achieving so much success that nowadays it is a consolidated reality: there are 508 libraries participating to the network. To take advantage of the service, they are just required to pay a contribution in money of about 250 Euro once a year. Then each library is assigned of a username and a password to access to the Network.

The NILDE technical features allow an optimal delivery via Internet of electronic documents, nonetheless the main characteristic of the server is its high usability for libraries. In fact the system releases libraries from the very technical tasks of understanding and dealing with transmission protocols such as SMTP or FTP. It permits the librarians to utilize e-mail service to send very large files, while at the same time resolving any problems that the receiver may encounter when downloading a very large attachment by e-mail (for example when the mail servers impose message size limitations, or mailboxes access protocol timeouts, and so on).

The Nilde system is developed with Open Source technology: Linux operating system, web server Apache, database management system MySQL and PHP language. Such a platform, which software versions are continually updated (and without any cost for buying new licences), guarantees reliability and durability.

Michela Cecconi

The Document Delivery Service at the Library of the Consortium for the Italian Antarctic Programme

The use of an e-mail server totally conforming to MIME (Multipurpose Internet Mail Extensions) allows to implement the functionality of a gateway between e-mail and the Web by writing a simple script. In short, the system allows the following operations:

1. The librarian receives a request (by e-mail), identifies and extracts the document from the library's archives, converts it into electronic format (by scanner), prepares the message for the requester by inserting the document as an attachment, and finally sends it.

2. On-fly the e-mail server extracts the files contained in the MIME parts of the message and, if they belong to one of the types registered for the service (.gif, .jpg, .pdf, .tiff) it saves them in a part of the disk that is accessible via web. Each extracted part is replaced with a new part of a text/html type containing the URL of the saved document. The parts of the message that do not correspond to one of the registered types remain unaltered within the message. At the end of the body of the message a new part of text/html type is added automatically, containing a brief description of the service, instructions for downloading the software for the visualization of data, and the copyright rules.

3. The resulting multipart message continues on its way on the network until arriving at its final destination.

4. The receiver opens the message, clicks on the URL and downloads the original files from the web-server.

Adopting entirely web-based technologies has changed the traditional organization of document delivery service at the Library of the Consortium for the Italian Antarctic Programme.

Our library has taken part in the experimental project just as receiving library from 2002. It has been joining the Network also as delivering library since December 2003.

The library immediately derived a great benefit from NILDE, in fact the number of exchanged documents started considerably increasing. Moreover the most part of the documents have been sent via web as electronic files, using the NILDE modality: this factor means that we have reduced the costs to send the documents, and on the other hand the user received the article certainly in a shorter time and with a higher quality.

Since our library started making use of these two web technologies (ACNP and NILDE), the Document Delivery service have completely revolutionized our way to work. The first signs of improvement arrived when we started participating to the ACNP catalogue – that is from September 2002.

But the DD service proved to be even more greatly improved when we started participating to NILDE.

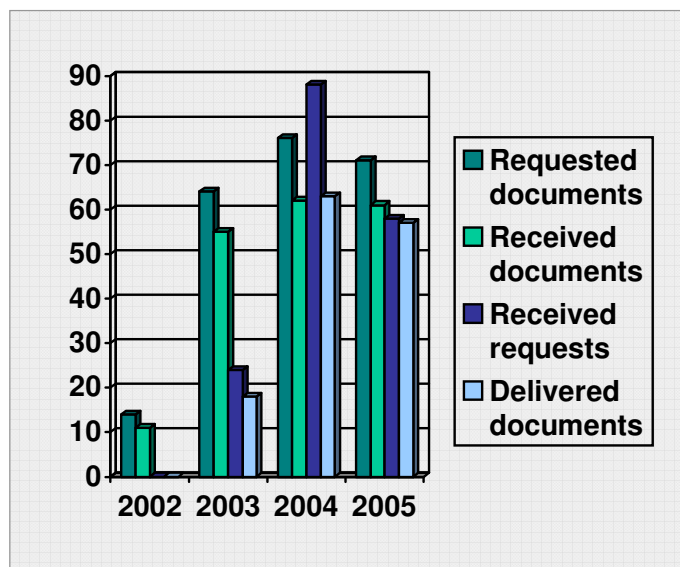


Fig 1. A graphic based on the NILDE statistics of DD transactions executed with the NILDE server from the Library of PNRA.

Nowadays this service is one of the main activities of our library – both for external users and for the PNRA researchers.

We have decided to deliver free documents, in the respect of the “principle of reciprocity” promoted by NILDE. This policy has probably made possible to overcome a high obstacle to the inter-library cooperation.

Silvia Sarti

Conclusions

In Italian libraries, this technology has certainly contributed to greatly improve the users services, and at the same time it has simplified the workflow in document delivering operations.

As Internet can incredibly go beyond physical and spacial frontiers, we think that it could be useful to consider NILDE as an example to share Polar knowledge – even if we are aware of the problems concerning with the copyright regulations. So that users could access more and more to foreign publications.

We hope this could be *a strategy for the future* to improve Polar networks!

References

About ACNP:

Metitieri, F. and Ridi, R., 2005, "Biblioteche in rete, istruzioni per l'uso", Roma-Bari, Laterza

http://www.laterza.it/bibliotecheinrete/Cap05/Cap05_14.htm

Citti, A., 2004, "Il «sistema» ACNP e i suoi utilizzi nelle biblioteche", in *Bibliotime*, Anno VII, n. 1

<http://www2.spbo.unibo.it/bibliotime/num-vii-1/citti.htm>

Citti, A., 2003, "La Gestione Amministrativa Periodici della nuova ACNP: servizi per gli utenti e funzioni per gli operatori", in *Bibliotime*, Anno VI, n. 1.

<http://www.spbo.unibo.it/bibliotime/num-vi-1/citti.htm>

Verniti, V., 2000, "Integrare servizi e cataloghi di periodici: la risposta di ACNP e del progetto CASA"

http://www.cib.unibo.it/acnp/docs/doc/Documento_evoluzione.doc

About Nilde:

Guazzerotti, M. and Zaetta, M., 2005, "Nilde 3.0: funzioni e uso in biblioteca"

<http://nilde.bo.cnr.it/manuale/manuale3.pdf>

Di Cocco, J. and Verniti, V., 2005, "ACNP: Perspectives and Future Developments of an Open Catalogue", in *Proceedings Document Delivery via Internet e cooperazione bibliotecaria. La qualità al servizio della cooperazione*, Pisa

<http://biblio-eprints.bo.cnr.it/archive/00000068/>

Mangiaracina, S.; Giannuzzi, M.; Pistoia, B. and Guazzerotti M., 2004, "Il sistema NILDE per il Document Delivery: dalla sperimentazione alla cooperazione, dal progetto al servizio", in *Biblioteche Oggi*, XXIII(1), pp. 29-39.

Guazzerotti, M., 2003, "Nilde 2.0: un sistema per la gestione elettronica del document delivery", in *Bibliotime*, Anno VI, n. 2
<http://didattica.spbo.unibo.it/bibliotime/num-vi-2/guazzero.htm>

Mangiaracina, S., 2003, "Il sistema NILDE: obiettivi, stato dell'arte, risultati della sperimentazione", in *Bibliotime*, Anno VI, n. 2
<http://didattica.spbo.unibo.it/bibliotime/num-vi-2/mangiara.htm>

Mangiaracina, S., 2002, "NILDE: a Document Delivery System supporting Document Exchange via the Internet", in *Library Hi Tech News*, 19(8), pp. 39-41
<http://eprints.rclis.org/archive/00000109/>

Mangiaracina, S.; Salamone, P.; Buzzi, M.; Gennai, F. and Abba, L., 2001, "Evaluation of an Internet Document Delivery Service", in *Proceedings Seventh International IFLA Conference on Interlending and Document Supply: Providing Access through Co-operation*, Ljubljana, Connolly, Pauline Eds., pp. 121-132
<http://eprints.rclis.org/archive/00000123/>