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CISTI: Bridging the Information Gap

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[Author Abstract] CISTI the Canada Institute for Scientific and Technical Information is a science library and a world leader in document delivery for all areas of science, technology, engineering and medicine, which was established in 1924. NRC Research Press, which is part of CISTI began in 1929 and publishes 16 international journals of research plus books and conference proceedings. This article describes in detail how anyone can benefit from using CISTI services to meet their research needs. In Japan, CISTI services are available through our trusted partner Sunmedia.

[Keywords by Author] CISTI, science technology and medical information, database, document delivery, CISTI Source

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CISTI: Bridging the Information Gap

This article is based on a presentation dated, August 29, 2006 at the Sunmedia's User's Meeting held at the Conference Center of Hotel Villa Fontaine in Tokyo Japan.

CISTI began over 80 years ago as the library of the National Research Council of Canada, Canada's leading public research and development agency; and became Canada's National Science Library in 1957. In 1974 it was renamed the Canada Institute for Scientific and Technical Information to reflect the wide scope of services it provides and the increasing role electronic information products and services hold in the scientific and technical community.

CISTI serves as a gateway to the world's scientific information, supporting research communities in the industry, public, academic and medical sectors from fundamental science to applied research. CISTI is a national science library and a world leader in document delivery for all areas of science, technology, engineering and medicine. CISTI has an active international presence, with 80% of the NRC Research Press' journal subscriptions come from outside Canada. Its document delivery service reaches all corners of the world, primarily in the USA, Asia, Australia and Europe. Last year alone, CISTI delivered over 700,000 articles in Canada and the rest of the world.

Its collection is one of the largest in North America. Nearly 500 new items from around the world are received every day! Some of this information is often found only in published papers from scientific conferences. CISTI makes a special effort to locate, purchase and catalogue conference proceedings from around the world. As a result, CISTI's collection of published scientific conference proceedings is one of the best in the world.

The CISTI collection includes:

- over 50,000 different serial titles
- over 800,000 books, conference proceedings and technical reports
- 2 million technical reports on microfiche from around the world
- journals from the world's leading scientific publishers
- information in all languages and from all countries where scientific and technical information is published
- Conference proceedings - a specialty

CISTI's headquarters in Ottawa also houses NRC Research Press, Canada's foremost scientific publisher of journals, books and conference proceedings. NRC Research Press has been publishing scholarly journals since 1929. With an ongoing focus on and investment in electronic publishing, the NRC Research Press continues to position itself as a cutting-edge provider of scientific and technical communications worldwide. Its activities include the publication of 16 international peer-reviewed research journals and a growing number of affiliated journals, in all scientific disciplines. More than 2,000 manuscripts are submitted each year, and there are no page charges to authors.

Research Press journals are all available online in full-text, and many are accessible online before print publication, so that information is available when and where it's needed. Clicking on the title of an article on the Contents Page, or from the associated abstract will direct you to the pay per view option – an economic alternative to electronic subscriptions. By using a credit card, instant access to the desired full text document is granted.

NRC Research Press is currently digitizing all its print archival material, some as far back as 1929. Six journal titles' back files are currently available in electronic format. Unlike some publishers, there are no annual maintenance fees and access is perpetual.

CISTI Products and Services

While the CISTI catalogue is on the web and free to anyone to search, clients must register for a CISTI account before ordering documents. Registering for an account is easy and free. Simply follow the link for new users on the CISTI website, and register online. <http://cisti.nrc.gc.ca>

Accounts are free and an organization may have as many as it chooses. We require registration in order to know your:

- preferred delivery method and document format,
- contact information in case questions about the order arise, and
- method of payment (e.g., monthly invoice or major credit card).

If an organization needs to set up a large number of accounts, CISTI will set up a customized order page that will have common information fields pre-filled.

After registering with CISTI (registration is free), anyone can place an order using CISTI's on-line catalogue or one of many other electronic ordering methods.

CISTI is committed to adopting the standards and linking technologies to ensure seamless access to **CISTI's Document Delivery** service. Outbound and OpenURL links to CISTI can now be activated from most online information services, link resolvers and library systems to send orders (e.g. article citations or search results) directly to CISTI's Document Delivery Service. CISTI has worked closely with information vendors to ensure these links are properly configured and tested. Linking allows registered CISTI clients to integrate CISTI's Document Delivery Service into their databases, resources and information environments. CISTI offers more than 20 ordering methods to submit document delivery requests, which include the following platform types:

- CISTI Catalogue -- Innovative Interfaces Z39.50
- ISO ILL Protocol
- Linking: Direct/Outbound ordering links (18+):
- Open URL link resolvers
- Integrated library systems and ILL management systems (e.g., Relais)
- Database vendors
- Formatted e-mail and Internet batch
- Web Forms
- CISTI Source
- OCLC (CAI)
- DOCLINE / Loansome Doc (ONCCIS)
- Other: fax, mail, unformatted e-mail (non-electronic)

Users of the CISTI Catalogue may search the CISTI and the Canadian Agriculture Library (CAL) and other partner collections. As recently as October 2005, CISTI's Catalogue added more than 10,000 scientific, technical and medical journals and reports from the holdings of four Far East libraries, to its collection.

CISTI's Far East Partners are:

- SUNMEDIA Co. in Japan
- Institute of Scientific and Technical Information of China (ISTIC),

cycle after an order has been submitted. CISTI also sends notification to the intermediary when a delivery notification is sent to the end-user.

All non-electronic requests are delivered by courier services. Pick-ups at CISTI occur 7 times per day

In its *2006 Product Satisfaction Scorecard*, Outsell reports that NRC-CISTI tops the list of five information providers. It scored highest in three of five categories: Overall Satisfaction, Would Recommend and Fair Pricing. While NRC-CISTI was slightly edged out of first place in the Depth/Breadth of Coverage and Ease of Doing Business, its ratings in all five categories were higher this year than last – showing its serious commitment to reaching the highest levels of client service and satisfaction.

Contributing to client satisfaction are client support professionals and electronic tools such as Order Tracker. CISTI's Help Desk provides customer support for all clients Monday to Friday from 8:30 a.m. to 4:30 p.m. (ET). Staff either answers client questions or concerns, or connects clients to an expert with in-depth knowledge for help with complex questions or situations.

Order Tracker is an electronic tool that allows CISTI clients to view the status of their document orders in full or summary form. It can be set to work on individual accounts, or one account can be set up to track usage of accounts within a large organization such as a university. Searches can be limited to a specific timeframe, order status, order number, journal name and article title. Recent orders may also be cancelled from Order Tracker, but only if the order has not yet been filled. Search results can be displayed in full or in summary form.

Many CISTI clients take advantage of **CISTI Source**, an integrated current awareness and document ordering service. It provides access to more than 20 million articles in 20,000 different journals in 33 languages (75% English), from 58 countries! Many article records contain direct links to the full-text online version on the publisher's site, accessible to those with subscriptions to the journals. CISTI Source is integrated into CISTI's Document Delivery service. You can select records throughout your session in order to create a bibliography that you can print or send to someone to assist them in selecting their documents or to submit Document Delivery requests. Time is saved in submitting document delivery request for both staff ordering documents for their researchers or by the end-users themselves. Further staff time is saved as CISTI Source calculates the variable copyright charges automatically as well as integrating document delivery request information into their own ILL (Interlibrary Loan) management system.

CISTI Source has been successful for organizations that are seeking to integrate Content & End-user unmediated document ordering through a single portal while incorporating their organizations branding. CISTI Source ensures that all the content is available in one pot. To enable the organization to maximize its investment in its own collections whether print or electronic journal subscriptions, Local Holdings block in CISTI Source directs the end-user to their own library collections by including their call number and preventing the submission of CISTI Document Delivery requests for

material already owned. CISTI Source also acts as gateway linking article citations identified and selected by the user to the full-text in their repertoire of electronic subscriptions.

CISTI Source allows customized Journal Contents Alerts and Article Alerts services, which keep subscribers aware of new developments in research in their fields of interest. Ideal for larger groups and organizations, Alerts Unlimited provides an unlimited number of Journal Contents Alerts and Article Alerts. An Alerts Unlimited subscription allows end users of the service to set up their own customized alerts, with no redistribution required, at a flat rate per year rate.

Online Journals

Access to online journals for document delivery services has improved the quality of graphs and images as well as the ability to deliver colour from an original PDF as compared to a scanned from paper document. By immediate access to PDF documents, for 24/7 ordering and delivery, the turnaround time is even faster than before. System customization can also enable automated routines to delivery these articles. Libraries can provide this "Single Access Point" to Scholarly, peer-reviewed articles from multiple publishers, which is more efficient than identifying and accessing many publishers' websites.

But before document suppliers can fully incorporate all the benefits of providing online journals, there are still some challenges that need to be overcome. Currently online journals are limited to journal articles and not all content such as conference proceedings papers, monograph chapters or technical reports. In terms of seeking publishers' permissions, the content owner, these electronic rights take extensive negotiation to obtain, as they are not the same rights as for paper subscriptions. Systems functionality must also be negotiated to meet end-users expectations for consistency by resolving the current situation where publishers insist that articles available from a document supplier must be encrypted whereas the publisher offers "unwrapped" content from their own website. Finally, further systems development is needed to ensure that "digital rights management" functionality protects the content holder content as well as does not overburden the end-users ability to enable his/her own systems to access this content.

CISTI's solution for incorporating **online journals** is **Pay Per Article**, which is a quick and easy article, purchase service. It's completely anonymous and doesn't require any pre-registration or user name and password to order a document, which can be viewed and printed one time only. Only online credit card payment is accepted. Users can search CISTI's articles database, select articles of interest and add them to a shopping cart for check-out and purchase.

Documents delivered from CISTI's electronic journal collection will be available for viewing and printing immediately, while documents from CISTI's paper journal collection must first be scanned. In this case, clients receive an e-mail message within 24 hours stating that their article is ready to be viewed and printed.

Copyright at CISTI

Documents supplied by CISTI's Document Delivery service are copyright-cleared. As a publisher, online service vendor, and document provider, CISTI is concerned about and respects copyright in all aspects of the information life cycle. CISTI supports intellectual property rights, and maintains a copyright system that ensures accurate and up-to-date application of appropriate national laws and international conventions. Agreements are in place to ensure that the rights of authors and publishers are recognized whenever CISTI provides a document from its collection or from other sources. Depending on the service and the client's location, a copyright fee may be charged in addition to the supply fee. Copies from CISTI's Direct service and Custom services are covered by copyright agreements with Access Copyright and COPIBEC, with Access Copyright with the US Copyright Clearance Center, and directly with publishers. Copyright fees collected by CISTI are considered a "pass-through" as the entire amount collected is forwarded to the appropriate party identified in our copyright agreements, thus eliminating any additional administrative burden for the client.

Other new services made possible through partnerships are direct ordering of technical standards and electronic book loans.

CISTI's web site now links to the **CISTI Online Standards Store**. This partnership between CISTI and TechStreet, a division of Thomson Scientific, allows CISTI users to enter, search and buy standards directly from TechStreet.

Since standards are the basic building blocks of most products and services, this new service strengthens CISTI's reputation as a world-class supplier of STM publications.



eBook Loans
Powered by CISTI and MyiLibrary

eBook Loans will soon be offered jointly by CISTI and MyiLibrary. It will reduce costs and provide immediate access to loaned material. It will also eliminate packing and shipping costs as well as the risk of book loss.

In response to the changing needs and demands of its clients, CISTI is demonstrating leadership through a number of exciting partnerships, infrastructure and research initiatives that will keep our products and services relevant to the scientific community for many years to come.

Partnerships

CISTI's success is due in large part to its commitment to forging and strengthening partnerships that expand its information content, improve its infrastructure and inspire new service offerings to researchers around the world. Its content strategy, coupled with its partnership agreements with publishers and other libraries in Canada, the Far East and Europe, result in an impressive and accessible STM collection. A partnership with the Government of Canada's Depository Services Program provides Open Access to 15 of the 16 Research Press online journals free of charge to Canadians. Partnerships with the Health InterNetwork Access to Research Initiative (HINARI)

and Access to Global Online Research in Agriculture (AGORA) provide online access to its 16 journals to local, not-for-profit institutions in developing countries.

Infrastructure

CISTI is proposing the establishment of a National information and infrastructure network to provide electronic access to full-text digital content to Canadians, regardless of geographic location or affiliation. This *Canada scientific infostructure (Csi)* extends our national science library mandate into the digital environment. It offers a trusted digital repository, a secure and reliable technology infrastructure and innovative tools to search, organize and analyze the information. It is sustained through new and renewed strategic partnerships and collaborations with stakeholders in the library and information community. International clients can benefit through CISTI's new Pay-Per-Article service

Research

The 65 staff of CISTI's Technology and Research directorate focus on advancing knowledge and promoting the adoption of new practices, developing new text mining technology that will better exploit CISTI's vast resources, promoting discovery in scientific literature through user visualization of information and information flows and integrating intelligence tools to CISTI services.

Future Directions

There is a growing demand for competitive intelligence and competitive technical intelligence: market information, business opportunities, investment/funding sources, technology watch, technology trends, and technology analysis. Since SMEs are very important to Canada's economic development, their need for such **specialized information services** has produced many initiatives in the private and public sector, which offer appropriate solutions. CISTI has partnered with NRC's Industrial Research Assistance Program to provide competitive technical intelligence services to SMEs across the country.

Other future CISTI activities may include

- Partnering and collaborating to create a STM information network
- Developing the technical infrastructure to support this network
- Developing business models for an open access Research Press
- Creating new business models for the electronic world
- Developing tools and services to enhance desktop access to STM information
- Providing access to publicly funded research data and information
- Earning international recognition as a trusted digital repository to assure permanent access to STM information

Conclusion

CISTI has identified access, innovation, partnering and specialized information products and systems as key factors to continued success. It is the strategic combination of some, and the timely application of others that will ensure that we remain a trusted and significant contributor

to the global S&T information system. CISTI services are available in Japan through our trusted partner Sunmedia, who have been active CISTI users for more than a decade.
<http://www.sunmedia.co.jp/>

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Technical Terms (for describing different electronic ordering methods)

CISTI offers more than 20 electronic ordering methods to submit document delivery requests. Electronic ordering is the most efficient and least expensive method for ordering from CISTI. Some of these types include:

CISTI Catalogue -- Innovative Interfaces Z39.50

CISTI's Web OPAC (Online Public Access Catalogue) platform is from Innovative Interfaces, Inc. (III). **Z39.50** is a client server protocol for searching and retrieving information from remote computer databases. It is covered by ANSI / NISO standard Z39.50 American National Standards Institute or ANSI National Information Standards Organization (NISO), and International Organization for Standardization (ISO) standard 23950. The standard's maintenance agency is the Library of Congress. Z39.50 is widely used in library environments and is often incorporated into integrated library systems and personal Bibliographic Reference software. Interlibrary catalogue searches for interlibrary loan requests are often implemented with Z39.50 queries.

The CISTI Catalogue allows you to search the collection and easily order documents. CISTI's collection of more than 50,000 serial titles and more than 600,000 books, reports and conference proceedings in science, technology, engineering and medicine is one of the largest of its kind in the world. The CISTI Catalogue can be searched at any time on the Web at cat.cisti.nrc.gc.ca. You can choose to use the Z39.50 protocol to search the Catalogue. See details at [Z39.50 Access to CISTI Catalogue](#).

ISO ILL Protocol

Definition: from <http://www.lac-bac.gc.ca/iso/ill/standard.htm> As Open Systems Interconnection standards, the suite of Interlibrary Loan (ILL) application standards has been designed to allow, with a minimum of technical agreements

outside the standards, the interconnection of computer systems from different manufacturers, under different management, of different levels of complexity, and of different ages. In addition, the protocol provides support for the control and management of ILL transactions for both lending and borrowing activities.

Further details regarding CISTI's implementation of the ILL Protocol for submitting document delivery requests can be found at: <http://www.lac-bac.gc.ca/wbin/illcntct/survsee/r=013>

Linking: Direct/Outbound ordering links (18+):

Outbound and OpenURL links to CISTI have been activated from most online information services, link resolvers and library systems to send orders (e.g. article citations or search results) directly to CISTI's Document Delivery Service. CISTI has worked closely with information vendors to ensure these links are properly configured and tested.

Linking allows registered CISTI clients to integrate CISTI's Document Delivery Service into their databases, resources and information environments.

Links to CISTI are usually set-up or activated from an information service's administrator module or interface. Typically the vendor's administrator documentation or contact their customer support service for help on activating links to CISTI. http://cisti-icist.nrc-cnrc.gc.ca/docdel/linking_e.html

Some examples of Direct Ordering Links to CISTI are available from:

Information Resource	Vendor
EBSCOHost	EBSCO
ProQuest	ProQuest Information and Learning
Dialog@Site (intranet version)	Dialog Thomson
OVID	OVID Technologies Inc.
Internet Database Service	Cambridge Scientific Abstracts (CSA)
CAB Direct	CABI Publishing
MathSciNet*	American Mathematical Society (AMS)
Silverplatter	OVID Technologies Inc.
SwetsWise	Swets Blackwell
SciFinder and STN	Chemical Abstracts Service (CAS)
FirstSearch	OCLC
TDNet Journal Manager	TDNet

Open URL link resolvers

Definition from NISO (National Information Standards Organization) http://www.niso.org/committees/committee_ax.html: The OpenURL standard is a syntax to create web-transportable packages of metadata and/or identifiers about an information object. Such packages are at the core of context-sensitive or open link technology. OpenURL links to CISTI are activated from most online information services, using link resolvers to send orders (e.g. article citations or search results) directly to CISTI. CISTI has worked closely with information vendors to ensure these links are properly configured and tested.

Some examples where CISTI's base URL has been configured in the link resolvers include:

Link Resolver Name	Vendor
SFX	Ex Libris
OVID LinkSolver	OVID Technologies Inc.
1Cate	Openly Informatics, Inc.
WebBridge	Innovative Interfaces Inc.
LinkSource	EBSCO
TOURResolver	TDNet

Integrated library systems and ILL management systems (e.g., Relais)

Another use of OpenURL linking is demonstrated by connecting both an "Integrated library system" (ILS) and an ILL Management System to simultaneously submit a request to another library, while tracking this transaction in their internal ILL tracking system.

Definitions:

- ILS is a library system used to track items owned, orders made, bills paid, and patrons who have borrowed. These ILS are divided into various modules to represent library functions such as acquisitions, cataloguing, circulation (of library materials to patrons), serials (tracking journal holdings) and OPAC, the public library interface. Typically each item owned by the library and each patron has a unique identification number to allow the tracking of activity within the database. ILS Examples include: Innovative Interfaces Millennium; Sirsi Dynix; ALEPH by ExLibris, etc
- ILL Management System is a web-based management system to track interlibrary loan transactions. These systems can increase ILL productivity and reduce paper files by automating ILL borrowing, lending and use of document delivery providers. Examples include Relais International, OCLC ILLiad, RLG's ILL Manager.

Database vendors

CISTI has worked with bibliographic database providers to facilitate the searching for bibliographic citations and the ordering of these documents by creating an interactive ordering link to CISTI in their bibliographic database. To

create the link to CISTI, the database vendor uses programming based on CISTI's blank ordering forms. When clients want to order an item, the database vendors' software will populate the CISTI order forms automatically with the bibliographic information available in their database(s) and then send these gateway CISTI order forms to CISTI. Some examples where these ordering links have been created include MathSciNet, Ovid, Silverplatter, SwetsWise, CAB Direct.

Formatted e-mail and Internet batch

CISTI has created a template that can be used by clients who wish to prepare their document delivery requests in their own local system and then send their orders to CISTI Document Delivery Service as a batch file via e-mail. CISTI has prepared specific guidelines on how to format these orders and batch file. By following this format, orders are successfully integrated into CISTI's automated systems, so that CISTI can process these orders as quickly as possible, which means a fast turnaround time for the user. Detailed instructions on how to prepare this formatted batch file can be found on the CISTI website at: http://cisti-icist.nrc-cnrc.gc.ca/docdel/internet_e.html

Web Forms

CISTI has created blank document delivery request forms which are accessible from the CISTI website, which is another method of placing requests. http://doc.cisti-icist.nrc-cnrc.gc.ca/CISTIPW/INNOPAC/DOCS/blank_order.html
There are separate forms depending on the type of publication requested: journal article, conference paper, book, book chapter, report.

CISTI Source

CISTI Source is a citation database that is integrated with CISTI's document delivery Service. The CISTI Source databases provide article-level search, order, and alerting to journals held in the CISTI collection, and more, which enables user-initiated document ordering. http://source.cisti-icist.nrc-cnrc.gc.ca/index_e.html tool

OCLC (CAI)

OCLC has a document ordering facility on their catalogue called WorldCat. Each library that participates in resource sharing on OCLC has a unique symbol. CISTI's OCLC symbol is CAI. <http://www.oclc.org/default.htm> describes OCLC as: Founded in 1967, OCLC Online Computer Library Center is a non-profit, membership, computer library service and research organization dedicated to the public purposes of furthering access to the world's information and reducing information costs. More than 57,000 libraries in 112 countries and territories around the world use OCLC services to locate, acquire, catalog, lend and preserve library materials.

DOCLINE / Loansome Doc (ONCCIS)

DOCLINE is an online interlibrary loan routing and messaging system for health sciences information. DOCLINE is a product of the United States National Library of Medicine (NLM) who produces PubMed. Document Delivery requests from PubMed can be sent to CISTI via the DOCLINE system using the unique symbol on the Docline system to identify each participant. This is called a "LIBID" and CISTI's LIBID is **ONCCIS**. http://cisti-icist.nrc-cnrc.gc.ca/health/docline/about_e.html

Other: fax, mail, unformatted e-mail (non-electronic)

Finally, Non-Electronic Ordering Options means that when CISTI receives these orders, before they can be processed, a CISTI employee must key in the order specific information into CISTI's integrated Document Delivery system called IntelliDoc. The turnaround time of receiving orders submitted via one of these non-electronic ordering methods is slower due to the human intervention involved. Also the price is slightly higher. But these ordering options may be useful when the person requesting document delivery requests, does not have the time to use one of the electronic ordering methods, but would rather send lists of multiple requests, just as they have received them from their end-user. These lists can be sent to CISTI in any format in an email message or via fax or mail.

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Appendix #1 Technical Terms

Naomi KRYM

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Some examples of Direct Ordering Links to CISTI are available from:

Information Resource	Vendor
EBSCOHost	EBSCO
ProQuest	ProQuest Information and Learning
Dialog@Site (intranet version)	Dialog Thomson
OVID	OVID Technologies Inc.
Internet Database Service	Cambridge Scientific Abstracts (CSA)
CAB Direct	CABI Publishing
MathSciNet*	American Mathematical Society (AMS)
Silverplatter	OVID Technologies Inc.
SwetsWise	Swets Blackwell
SciFinder and STN	Chemical Abstracts Service (CAS)
FirstSearch	OCLC
TDNet Journal Manager	TDNet

Open URL link resolvers

Definition from NISO (National Information Standards Organization)

http://www.niso.org/committees/committee_ax.html: The OpenURL standard is a syntax to create web-transportable packages of metadata and/or identifiers about an information object. Such packages are at the core of context-sensitive or open link technology. OpenURL links to CISTI are activated from most online

information services, using link resolvers to send orders (e.g. article citations or search results) directly to CISTI. CISTI has worked closely with information vendors to ensure these links are properly configured and tested.

Some examples where CISTI's base URL has been configured in the link resolvers include:

Link Resolver Name	Vendor
<u>SFX</u>	Ex Libris
<u>OVID LinkSolver</u>	OVID Technologies Inc.
<u>1Cate</u>	Openly Informatics, Inc.
<u>WebBridge</u>	Innovative Interfaces Inc.
<u>LinkSource</u>	EBSCO
<u>TOURResolver</u>	TDNet

Integrated library systems and ILL management systems (e.g., Relais)

Another use of OpenURL linking is demonstrated by connecting both an "Integrated library system" (ILS) and an ILL Management System to simultaneously submit a request to another library, while tracking this transaction in their internal ILL tracking system.

Definitions:

- ILS is a library system used to track items owned, orders made, bills paid, and patrons who have borrowed. These ILS are divided into various modules to represent library functions such as acquisitions, cataloguing, circulation (of library materials to patrons), serials (tracking journal holdings) and OPAC, the public library interface. Typically each item owned by the library and each patron has a unique identification number to allow the tracking of activity within the database. ILS Examples include: Innovative Interfaces Millennium; Sirsi Dynix; ALEPH by ExLibris, etc
- ILL Management System is a web-based management system to track interlibrary loan transactions. These systems can increase ILL productivity and reduce paper files by automating ILL borrowing, lending and use of document delivery providers. Examples include Relais International, OCLC ILLiad, RLG's ILL Manager.

Database vendors

CISTI has worked with bibliographic database providers to facilitate the searching for bibliographic citations and the ordering of these documents by creating an interactive ordering link to CISTI in their bibliographic database. To create the link to CISTI, the database vendor uses programming based on CISTI's blank ordering forms. When clients want to order an item, the database vendors' software will populate the CISTI order forms automatically with the bibliographic information available in their database(s) and then send these gateway CISTI order forms to CISTI. Some examples where these ordering links

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CISTI's LIBID is **ONCCIS**. http://cisti-icist.nrc-cnrc.gc.ca/health/docline/about_e.html

Other: fax, mail, unformatted e-mail (non-electronic)

Finally, Non-Electronic Ordering Options means that when CISTI receives these orders, before they can be processed, a CISTI employee must key in the order specific information into CISTI's integrated Document Delivery system called IntelliDoc. The turnaround time of receiving orders submitted via one of these non-electronic ordering methods is slower due to the human intervention involved. Also the price is slightly higher. But these ordering options may be useful when the person requesting document delivery requests, does not have the time to use one of the electronic ordering methods, but would rather send lists of multiple requests, just as they have received them from their end-user. These lists can be sent to CISTI in any format in an email message or via fax or mail.

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