

InDxLogic, Inc



Overview of InDxLogic

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Certified Partner
Centricity® Physician Office

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Overview of InDxLogic

This chapter introduces you to InDxLogic Products and Services and explains their uses. It includes basic descriptions, background information, use of the features and services, links to additional information and links to workflows that use the features and services.

Statement of the Problem

Indexing:

The process of identifying indicia that defines a document such as the patient a document belongs to, the contents of the document, the date of service, the responsible provider, and associated observations

Medical practices that use electronic medical record systems find it useful and efficient to include paper and electronic documents that are derived from a variety of external sources, in their EMR for centralized reviewing and storage. The integration of external documents into the EMR results in many advantages over alternative methods of storing documents. These advantages include centralizing document information, making the documents readily available to the EMR user, and enabling the EMR user to review documents in the context of other pertinent clinical information.

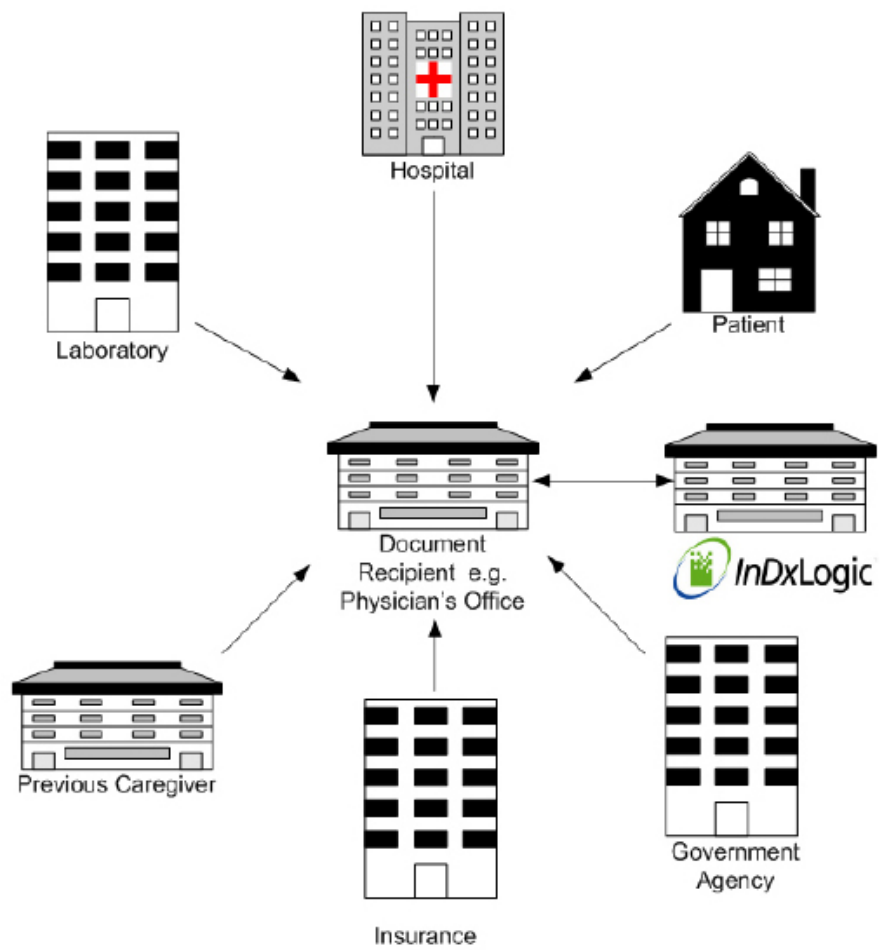
Document sources for an average medical practice are diverse. They may include laboratory reports, radiology reports, consultant letters, facsimile reports, internal reports generated from radiology providers, etc. See **Figure 1**.

Note. Documents may come into a medical organization in a number of different ways. For example, documents may be mailed in, brought in, faxed in, or created before, after or during a patients visit.

Documents may include paper documents, virtual documents or other information laden files such as transcription or HL-7 lab results.

InDxLogic manages all documents regardless of the source.

Figure 1 Document Sources: High Level Overview



Document Issues in the EMR Environment

Prior to InDxLogic, integration of these external documents required that each document must be “indexed” so that the document may be “attached” to the correct medical record. This problem is best described as follows:

- Indexing is a manual process...it is **staff dependant**.
- It has been estimated that the time it takes an experiences indexer to index a document using currently available software is as long as **40 seconds per document**.
- Average indexing costs are **\$0.21per document**.
- Indexing software can range from **\$5,000 – 10,000 per provider**.
- Indexing is **seldom “real time”**.
- Prior to InDxLogic, so called “Automated” Indexing **required document preparation** such as bar codes or separator sheets.

Advantages of the InDxLogic Remote Indexing Solution

InDxLogic Remote Indexing Services have many advantages over traditional document indexing services.

- **InDxLogic can receive virtual documents**
InDxLogic is designed to manage your fax reports and electronic reports resulting in seamless integration with Centricity EMR.
- **InDxLogic is affordable** InDxLogic services cost you less than expensive software systems that require manual indexing by reducing your start up costs to a nominal licensing fee and a per document indexing

fee that is less than you can pay your staff. On average, per document costs are 40% less.

- **InDxLogic services are always available.** Manual indexing is time consuming, costly and staff dependant.

- **InDxLogic services are rapid** Why wait for your manual indexer to complete the task of importing your document when InDxLogic servers can do it for you in an instant.

Remote Indexing:

The process of identifying indicia contained within a document using a remote web based software application

- **InDxLogic Indexing requires little or no document preparation.** Most "automated indexing" systems on the market require preprocessing such as manual placement of bar codes or separator sheets. InDxLogic can index any clear text of any font which means that you set up your workflow(s) and forget about it. Your documents are next seen in your EMR. *InDxLogic is truly automated.*

- **InDxLogic services identify your document content for rapid review in the EMR** InDxLogic services utilize Dynamic Document Processing™ to populate the properties line for the imported document so that your providers know immediately what the document is about.

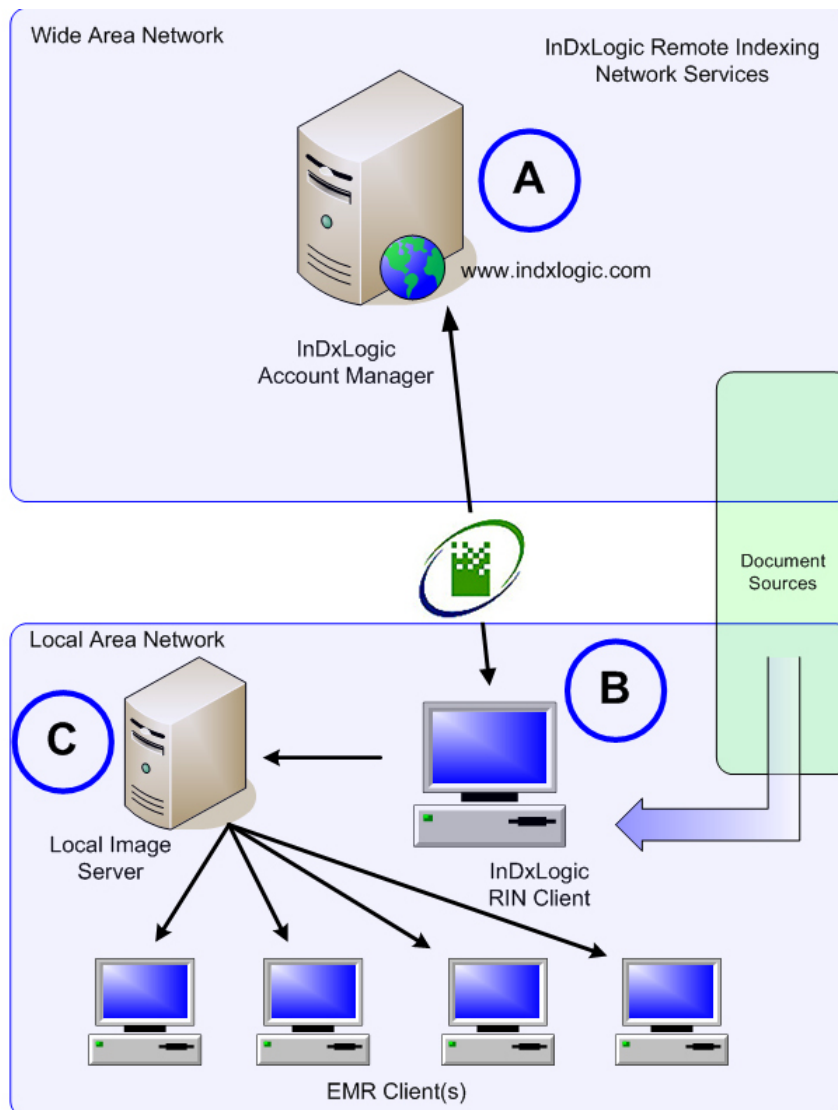
- **InDxLogic ArchiveLogic services provide an offsite record set for all your imported documents.** InDxLogic users enrolled in ArchiveLogic services have an offsite repository of all their imported documents that are searchable by key word. ArchiveLogic services are available to any authenticated user from any web portal.

- **InDxLogic safeguards your documents.** InDxLogic utilizes 128 bit encryption technology to safely and securely manage your documents. Your documents never leave your network.

Definitions:

Document	Any format of a viewed article of information.
Scanned Document	Any image of a paper/photo that is produced by scanning using any TWAIN/ISIS compliant scanner.
Faxed Document	Any image of a paper/photo/report that is produced by faxing using any facsimile device.
Printed Document	Any representation of any format of a viewed article of information.
Paper Document	A viewed article of information that is printed to paper.
Virtual Document	A viewed article of information that is printed to a file for viewing.
PDF Document	A viewed article of information that is printed to Adobe PDF™ format for viewing.
Document Indexing	The process of assigning identifiers to a document that enables importing of the document into a relational database. Typically document indexing is comprised of identifying FIRSTNAME, LASTNAME , MIDDLENAME, Date of Birth (DOB), Date of Service (DOS), and other unique identifiers such as Social Security Number or Account ID. Additionally, documents are indexed by Document type and by Content.
Automated Document Indexing	The automated indexing process that requires very little (or no) document preparation prior to scanning. Many vendors will use the phrase “automated document indexing” but these vendors require document preparation such as placing bar codes or separator sheets. InDxLogic requires minimal document preparation, no bar codes and no separator sheets.
Manual Document Indexing	Requires viewing the document, reading the document to identify indexing elements and manually entering those elements into predefined fields in specialized software that creates an indexed message.
Remote Indexing Network™	The Remote Indexing Network™ is an extension of your practice network that allows you to automate document indexing with minimal or no preprocessing.

The InDxLogic Remote Indexing document management system is comprised of the following components:



A **InDxLogic Account Manager**—the InDxLogic Account manager is the secure web based portal for InDxLogic users to:

- Index Documents
- Manage Provider lists
- Manage Patient lists
- Manage Exclusion lists
- Manage Document configuration
- Manage User privileges
- Manage Accounting

- View Document batch/indexing
- Access ArchiveLogic

B **InDxLogic Remote Indexing Network (RIN) Client**– the InDxLogic (RIN) client is used to:

- Receive image files from reporting systems, fax servers, transcription services and scanning workflows.
- Transmit and receive compressed encrypted files for remote indexing.
- Retrieve and file image and HL-7 files on your local network for viewing within Centricity EMR.

C **InDxLogic Image Server** – the InDxLogic Image Server is a local network server that is used to store and retrieve all documents that are viewed using Centricity EMR.

InDxLogic and Security

128 bit encryption

All of your documents are protected by ultra secure 128 bit encryption. This is the same security that financial institutions use to protect their information.

To help keep patient records secure and private, each InDxLogic application user in your clinic is assigned a unique user ID and password.

When you sign in to the InDxLogic web portal, your user ID is associated with each activity that you perform while logged in.]

Each user is assigned privileges that limit or enable authorized users rights within the InDxLogic Remote Indexing Account. For example, some clinics may want an authorized user to be able to set up EMR account information but not alter or view account financial information.

Understanding the Cost Elements of Document Management

Document management encompasses a complex flow of processes that includes scanning and attaching of the scanned document to the patient's electronic medical record. In general, document management in a medical group includes three operations, namely, document preparation, scanning, and manual indexing.

Document Preparation

Document preparation is an important first step in assuring a well-functioning production

Key manual tasks include utilizing labels in existing workflows, inspecting and separating documents into like categories such as single sided, single page, double sided, multiple page documents.

Document workflows that utilize Centricity EMR Letters and Handout features for documents to be scanned such as consent forms create workflows with automated match rates approaching 100%.

Scanning

Scanning refers to the actual transformation of paper documents into digital images. Alternatively, existing image files can be imported into the system. Document capture products such as Adobe Acrobat Capture™ enable the operator to easily develop workflows to manage document preparation after manually sorting the documents.

Workflows that entirely bypass scanning such as configured PDF printer ports create workflows with automated match rates approaching 100%.

Indexing and Data Validation

Attaching is a commonly used term to describe the importation of an indexed document into an electronic medical record to create an association between a scanned document and a Patient. This process generally involves at least three steps: selecting the document, completing document information fields such as:

- document type
- date of service
- Patient ID

- First name
- Last name
- DOB
- Account number
- Document attributes
 - Sensitivity
 - Associated Provider
 - Signature Status

Completing the document information is often referred to as *indexing*.

In most organization, data is extracted from images automatically manually by a keyboard operator. In some medical practices, automated document processing is utilized but this process is typically labor intensive and involves the placement of separator sheets, specific field criteria or barcode identification schema.

InDxLogic is an entirely new paradigm in document indexing.

Attaching and Release

Release is the final stage of the document management process, and consists of handing off batches of inprocess images and data to the Electronic Medical Record (EMR) system. Typically, this is when the document images are written to a network drive or other long-term storage, and the associated data is merged with the document database of the EMR system. In addition, the release of a document might trigger a workflow process such as to initiate the review and signing of filed documents, etc.

Analyzing Document Management Costs

The most straightforward way of determining the costs of production document management is to examine both the initial capital costs and the ongoing labor costs of each step in the capture process:

- **Capital equipment** is the most visible aspect of the cost of document management. Capital costs include high-speed scanners costing anywhere from \$1,000 to \$3500, with an associated PC, software licensing and maintenance fees.

- **Direct labor** consists of the people who prepare the physical documents for capture, scan the documents, check for quality, perform manual keying and data validation, and integrate the resulting information into the EMR.

Table 2. The table below summarizes the capital and labor costs involved in each of the steps of production capture.

Document Management Operation	Capital Cost	Labor Cost	Comments
Document Preparation	Low	High	Purely clerical task. Thermal print label printer yields the best results
Scanning	High	High	Capital costs include the scanner, labels printers, document management software and PCs. Labor costs include scanner operators to operate the scanners.
Indexing and Data Validation	High	Very High	Very high labor costs, estimated to be a minimum of \$0.21-\$0.27 per document.
Release	Low	None	Usually unattended

Until recently, document management software is by far the most expensive capital cost, costing upwards of \$10,000 per license per provider, not including annual maintenance fees. The capital costs of additional equipment and of the other operations are generally quite low. Of capital costs, the biggest culprit is the document management software and this is the area that InDxLogic has targeted aggressively for cost reduction.

InDxLogic Licensing costs are significantly less than any other product on the market today and are \$995.00 per year for the license and annual support. InDxLogic licensing is per Remote Indexing Network (RIN) application which is the ftp tool that manages the document images for automated indexing.

Labor costs normally dwarf the initial capital expenditures of a document management system. The biggest culprit is the ongoing cost of the operators at the scan and indexing stations, and this is the area that should also be targeted most aggressively for cost reduction.

Table 2. Porterville Women's Medical Associates. Data below is the cumulative experience representing the time to "index" a scanned document after scanning is complete. Time to "scan" is not represented in this table.

Date Range	02/2004 to 07/2005
Attachments per minute¹	1.33
Clerical costs per hour²	\$14.00
Cost per document³	\$0.17

¹ document $n = 25863$; minutes $n = 19485$

² Clerical costs are estimated to include all benefits such as workman's compensation insurance, paid time off, insurance, etc. with a base salary of approximately \$11.00 per hour.

³ Assumes 100% document indexing efficiency.

Consider: the following:

- A clerical worker who is paid \$14 per hour costs .38¢ per second.
- In our experience it takes 45 seconds per attachment at a cost of \$0.17 per document
- At 100 documents per day, this amounts to \$17.00 per day assuming 100% efficiency.
- At 5 days a week, 52 weeks per year, this amounts to \$4,446 per year assuming 100% efficiency of indexing

100% efficiency in the indexing task assumes that when the primary task is indexing that there is no "non indexing time". One could assume that the efficiency of indexing with staff is probably closer to 75% which increases the per document cost to \$0.21

- At 75% indexing efficiency the costs are \$5525 per year.
- At 100 documents per day, this amounts to \$21.00 per day.
- With InDxlogic services the same 100 documents costs \$12.00 per day, a 43% savings.
- At 5 days a week, 52 weeks per year, this amounts to \$2,405 per year savings and is 100% efficient.

The advantage of automated indexing is that you are now able to reduce the staff costs of indexing by reduce the indexing FTE while simultaneously increasing the efficiency of indexing to 100%. With InDxLogic, you only pay your "indexer" when your "indexer" is actually indexing. The other issue is that indexing is incredibly tedious and boring for your staff.

Evaluate Your Own Practices Costs

A good way to evaluate the benefits of InDxLogic automated indexing is to evaluate your costs for indexing. Have your indexers track the number of documents indexed per time period. Allocate their costs and arrive at a per document cost. Adjust for efficiency. Consider the HR costs of managing your employees. If you can index for less than our per document fee; show us your numbers and we will reduce our per document fee accordingly. I think you will be surprised at the "true" cost of document management that you are paying for today.

InDxLogic saves you money.

For more information regarding InDxLogic Pricing and services, please contact sales@indxlogic.com

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