IMAGING SYSTEM VENDORS

Imaging systems are available from many major corporations, including Eastman Kodak, FileNet, Hewlett-Packard, IBM, NCR, and Wang; however, these vendors focus on workflow or transaction processing systems—the type popular in banking, financial, and government markets. Few have ever had a library or archive as a potential client. Time is likely required to educate the vendors' representatives that a scanner with a sheet feed, although faster than a flatbed or planetary scanner, is not well-suited for copying fragile and bound originals. Also, few appreciate that a link to the bibliographic database on a library or archive's bibliographic system is important.

This chapter, therefore, focuses on vendors that focus on the library and archives markets. Addresses for all the vendors mentioned, including those in the previous paragraph, are in Appendix C.

All vendors that participated in *Library Systems Newsletter's* 2000 survey of the library automation industry were contacted to ascertain what they were doing with imaging. Although almost all offer an interface from their automated library system using the 856 tag in the MARC record, a minority offer a turnkey imaging system or one or more components for scanning, enhancing, cataloging, or accessing images. The vendors that do are discussed in this chapter.

CARL Systems, Inc.

Carl Systems Inc.
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www.carl.org

CARL, a vendor of both turnkey systems and software only, developed an imaging module called Pictorial for its automated library system as the result of its work with the Boulder Public Library a decade ago—a project that involved scanning a large collection of photographs.

The company initially configured a 386-based PC running under Windows with a flatbed scanner supporting 300 dpi color scanning and storage—magnetic and optical, the latter for when storage requirements exceed 6 Gb. Compression was in the TIFF format, one image per file. The typical grayscale image required 100 to 150 Kb each; color required at least twice as much.

Bibliographic records in the CARL database can have image identification numbers added to them. Initially, pressing the F2 key on the PC's keyboard retrieved the image. Any key could be pressed to go back to the text screen. Subsequently, the 856 tag was added as a way of accessing images.

CARLweb is used to search the database with the same search options as bibliographic records for print materials, including boolean and keyword searching. Files can also be searched and images displayed via a Z39.50 client.

Almost any PC with a Super VGA monitor can be used as a display station. The initial Boulder configuration consisted of a PC with Super VGA display connected to a PC-LAN for image storage and to the CARL catalog host via a serial port. It also could be connected via Ethernet. The vendor provided scanning and display software—the former a third-party product, and the latter CARL's own—and used its regular CARL indexing and retrieval software.

Printing of images is possible on many printers.

The major change since the initial installations has been an upgrading of scanning and access hardware and software. The product has been renamed as CARL Photo Imaging.

In addition to the Boulder Public Library, the Denver Public Library, Los Angeles Public Library, and Lane Medical Library of Stanford have purchased the software.

Cuadra Associates

Cuadra Associates
213-478-0066
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www.cuadra.com

Cuadra Associates has developed a product that works with its STAR information management system for special libraries. Named Co-Star, the product is a Windows-based document and image management system. It has been designed to digitize photographs, maps, manuscripts, corporate reports, engineering drawings, and contracts in color, grayscale, or black and white. Co-Star provides support for more than 100 models of scanners. It supports image rotation, deskewing and despeckling, cropping, and registration. It also offers user-definable scanning profiles that permit the user to store sets of parameters, including page size, resolution, brightness, contrast, and document type for future use.

The images may be stored on magnetic disk, RAID, optical jukeboxes, and CD-ROM.

Web-based, text-based, and Z39.50-based user interfaces are available.

Endeavor Information Systems

Endeavor Information Systems
800-762-6300
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www.editinfosys.com

The company has an imaging product called ImageServer. It works in tandem with the Voyager integrated library management system. It supports the scanning of paper, photographs, slides, negatives, microfilm, or multimedia files in either batch or continuous scanning. OCR is also supported. Images may be stored in a review file before they are made available to users of the system. Unsatisfactory images can be rescanned.

The system stores the images and allows access to them for cataloging/indexing using the Voyager software. The link between the image and the bibliographic record is through the 856 MARC tag. Search and retrieval is done from a single Voyager interface, and all results are returned in a unified result set. In other words, ImageServer and Voyager present unified results. Links to the bibliographic records of other systems are through Voyager's Z39.50 connections.

epixtech, inc.

epixtech Inc.
800-223-5413
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www.epixtech.com

Both the Dynix and Horizon systems have provided support for electronic resource linking via the 856 tag for many years. A few customers are using the company's NetConnect product for hosting collections of images they make accessible to patrons via MARC record 856 tag links. NetConnect can be used with any vendor's automated library system.

The NetConnect product provides a Web site hosting platform, DNS services, e-mail services, and many other Web features. Although the NetConnect environment itself is Sun Solaris, epixtech has included a utility that allows images to be scanned on a Windows PC and saved directly to the NetConect Web Server.

For Dynix customers, epixtech also offers WebCheck, a product that goes through the MARC database to validate that each 856 tag still links to a valid URL.

epixtech is planning a digital object management module that will include support for imaging and other media types. The planned module will provide extensive digital security and rights management capabilities.

Although epixtech can source all the necessary components, both hardware and editing software, it recommends that these be purchased through channels other than epixtech.

Innovative Interfaces, Inc.

Innovative Interfaces, a provider of UNIX-based turnkey systems and software packages, has developed a total solution that includes capture equipment, editing software, image server, and client software. The product is not a standalone product, though; it must be used with the company's cataloging and patron access catalog modules.

Although the 856 tag is used for linking bibliographic records to images, there are two options: a local imaging link for images stored on the local server and an external link for images stored on another image server. The latter product actually includes the former. The link can be from a bibliographic record to both a thumbnail and a full image by specifying the URLs of where these images reside.

Originally, the thumbnails in the Innovative imaging module were stored as TIFF images. However, because browsers cannot display TIFF image directly, the WebOPAC needed to load a TIFF viewer Java applet to view the thumbnails. Recently the product was improved to save the thumbnail as a JPEG the browser loads directly.

Although the full images are stored as TIFF images, they can be imported in many formats. The main reason why TIFF was chosen is because it uses a lossless (no information lost) compression scheme.

Innovative Interfaces, Inc.
800-878-6600
www.iii.com

Open Text Inc.

The company, which offers software for Digital VAX, IBM, H-P, and UNIX-based platforms, introduced an imaging product in late 1991. The product is tailored to the needs of the special library market. Known as Image Series for TECHLIBplus, the product adds imaging capabilities to the automated library system by providing hypertext links between text stored in TECHLIBplus databases and images residing on Digital Equipment Corp., Xerox, FileNet, LaserData, and UNISYS image management systems.

The vendor's product literature and advertising states: "The Image Series for TECHLIBplus provides an information management solution for special libraries by providing their patrons with content-based retrieval of textual information and simultaneous access to relevant images. Potential applications include legal documents, patents, trademarks, engineering drawings, notebooks, reports, technical documentation, regulations, studies, articles, bulletins, competitive intelligence, and product and service directories."

TECHLIBplus is built on BASISplus, a document management system installed at more than 2,000 sites worldwide. The base system is comprised of BASISplus and the cataloging-maintenance and patron access catalog modules. TECHLIBplus is available on Digital VAX/VMS and IBM VM and MVS platforms, and Sun and Hewlett-Packard UNIX-based systems.

Open Text, Inc.
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www.opentext.com

Sirsi Corp.

Sirsi's imaging product is called Hyperion, and it can work in tandem with the Unicorn automated library system or as a standalone system. It supports scanning, enhancing, storing, cataloging-indexing, searching-retrieval, and linkages to bibliographic records on other systems.

Although searches offer image capture and editing hardware and software, most customers appear to have purchased these elsewhere, relying on Sirsi to provide the image server and the link to the patron access catalog.

Sirsi Corp.
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www.sirsi.com

Hyperion users appear to be using the system for many applications, including reserve room materials, distance learning information, lecture notes, curriculum guides, and dissertations, as well as images of special collections.

Hyperion appears to be the most widely used imaging system supplied by a library automation vendor. Customers include the libraries of the Army Corps of Engineers, Ball State University, Brigham Young University, Eastman Kodak Co., Naval Post Graduate School, and the University of Oklahoma.

Sirsi offers two seminars; one entitled "Strategic Planning Workshop" starts from scratch and designs with staff an entire digital media archive program; the other, entitled "Operational Planning Workshop," focuses on fast implementation.

VTLS, Inc.

VTLS, Inc.
703-231-3637
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www.vtls.com

VTLS, Inc. a vendor of turnkey systems and software packages for Hewlett-Packard and IBM computers, initially developed a new generation of software for image storage and display a decade ago on a NeXT™ computer that had a high-resolution 17-inch console, CD-quality music synthesizer-digitizer, 8 Mb of real memory, 330 Mb of hard disk storage, and 256 Mb of read-write-erase optical disk storage. The software was called the VTLS InfoStation (VTLS-IS), a hypermedia (multimedia) information access system for library automation. One of the first installations was at the National Agricultural Library.

In the past five years, the company has broadened the range of products and services to include a service bureau for scanning and editing of images. Images are normally created in TIFF, with JPEG derivatives produced for display on the Web. The images are delivered on CD-ROM or DAT tape. Direct loading is available into a VTLS database for customers using VTLS' search and retrieval software.

VTLS has developed MetaCat to provide a library with a Web-based cataloging utility for capturing image metadata. It uses configurable entry templates so data can be entered using normal language, choosing elements from list boxes, and selecting repetitive information from pull-down menus, thus removing the need to enter tags and subfields. MetaCat can be used to import and map raw data to MARC when earlier cataloging was not in MARC. Records may also be created in Dublin Core.

Another product developed by VTLS, is a Hi-Res Image Navigator, which is a high-resolution image-viewing interface using Mr. SID compression software developed by LizardTech Inc. The software allows for rapid retrieval of large or highly detailed images in a Web-based environment with no visual loss in quality. Images are scanned and compressed using a special encoding process. The compression ratio is generally 20:1 for grayscale and 50:1 for full-color images.

Images can be loaded on the same server as the Library's VTLS patron access catalog or on a separate server. The 856 link provides access to the images, so patrons searching a patron access catalog can move between related documents and see images linked to bibliographic data.

VTLS also provides collection hosting services for customers that do not have their own hardware and software for supporting an image database.