Digitech Systems PaperVision Capture v73

★★★★★ Feature Set
★★★★☆ Value
★★★★★ Ease of Administration
★★★★★ Ease of Use
★★★★☆ Compatibility
★★★★★ Software Integration
★★★★★ Security
★★★★⯪ Reseller Support and Training
★★★★☆ Customer Support and Training
★★★★★ Documentation
★★★⯪☆ Global Business Readiness
★★★★★ Upgrade Path

OVERVIEW

PaperVision Capture, from Digitech Systems, Inc., is an enterprise-class document capture and workflow solution designed to meet the needs of paper-intensive businesses. The solution can serve in a centralized scanning environment or in organizations where capture functions are distributed across multiple systems and geographic locations. The platform is also fully scalable, designed to support a single scan station or a multinational scanning operation. A modular system, PaperVision Capture covers the full gamut of capture/workflow needs, including batch scan capture; metadata, barcode and full-text indexing; and even handwriting recognition for capture/processing of forms data. In addition to capturing hardcopy documents, PaperVision Capture can also capture some electronic files and offers integration with a variety of enterprise content management (ECM) systems and line-of-business applications. The solution can serve in general business environments such as HR and accounts payable, as well as in vertical markets such as healthcare, education, manufacturing, financial services, retail and service bureaus.

Strengths

- Wide range of modules let each organization tailor a capture solution to its unique requirements
- Supports any certified ISIS or TWAIN scanner
- Streamlined user interface for administrator and operator tasks
- Strong security features
- Excellent extensibility with custom code support throughout
- Can work with remote locations
- Wide range of optional connectors available for integration with SharePoint and other platforms
- First year of maintenance and support included

Weaknesses

- Limited native redaction function
- No control-panel integration with leading MFPs and scanners
- Works only under Windows operating systems
- Full functionality requires licensing of several modules

What We Thought   ★★★★⯪

Information is what drives a business, and PaperVision Capture addresses many of the problems that companies face when trying to combine paper and electronic records into a coherent and reliable data flow. The program can take input from scanners or other sources, and run the documents through a series of steps to get the data into the corporate database or line-of-business application.

The hallmarks of PaperVision Capture are its power and flexibility. The combination of available features and ability to integrate custom code at any point make it more than just a way to dump scanned data into a repository. It has the intelligence to automate the tasks that can be handled by a computer, to streamline the tasks that require an operator's input, and to make the entire process secure and reliable. Yet despite its nearly unlimited flexibility at every turn, the application remains easy to operate and manage.

In the simplest terms, the product can take your source documents in just about any format and extract the information so that you can put the data to work for your company. Whether it is purchase orders or contracts, or reader response cards,

PaperVision Capture can automate the tasks that can be automated, and streamline the manual tasks so that they can be handled as quickly and efficiently as possible. PaperVision Capture excels at automating the steps that can be automated, while speeding the processing of information that requires operator attention. It allows secure integration of remote offices, and has sophisticated features that help level workloads for both employees and machines.

The product has two major components. One provides administrative controls, while the other governs operator tasks. Each of these includes a comprehensive range of features that let you shape the working environment to your needs. For example, you can configure the application so that users log in through a Gateway server to work on their assigned batches instead of having direct database access. In this setup, users do not require read/write security access to network files and folders, so they are prevented from accidentally adding or deleting data in a corporate file structure.

This is just one simple example of a host of choices you can make throughout just about every aspect of using the program. The administrative controls let you choose who can access which parts of a document processing workflow. You might have one group of operators authorized to perform certain data entry tasks for a type of document, and yet only give access to members of another group when it comes time to perform a quality control check on the data.

Another area where this flexibility and power comes into play is in the job definition process. A job is defined as a series of steps that are performed on a batch of input documents. (These documents can come from a supported scanner, or can already exist as electronic image files.) A graphic interface makes job definition an easy matter of drag and drop, but then the customization starts. The default settings may be sufficient for your needs; open the detail for a step, however, and a universe of options become available. For example, if you define a Barcode step, you can use the Properties settings to force a new document break when a barcode is detected. (The program can read six different 2D barcode formats, including QR Code, as well as 20 1D formats, including Postnet, UPC, and EAN codes.)

Among all the fixed options within each job step's Properties settings, you also have the option to include VB.NET or C# custom programming code. If this does not provide sufficient flexibility for you, there is also a Custom Code job step type that lets you write programming code that can execute during batch processing. Optional connectors are also available from Digitech Systems and third party developers. Digitech Systems can also provide additional support services, from creating custom code to providing complete custom job definitions.

One fundamental feature of the PaperVision Capture design is that it gives the administrator controls that can make batch processing as efficient as possible. For example, each step within each job can be assigned a priority level, which will automatically prioritize batches enabling resources to handle the tasks with the highest priority. The program can automatically distribute tasks to different "automation services" (Microsoft Windows services). These services can be installed on multiple machines on a network — either servers or workstations — and you can also configure a system so that multiple services can run on a single server or workstation. Another time-saving feature is pre-caching, which can load specific or user-defined pages (i.e., the first page) of a document while the rest of the batch is still being downloaded, so that the operator can process the information without delay.

As a result, the operator sees a simplified view of the overall operation; the program only presents those batches that the operator has been assigned. It is easy for the operator to see what needs to be done next.

With its ability to work with remote locations, strong security features, two separate OCR engines, and extensive tracking and management features, PaperVision Capture pays a swift return on investment, according to the company. Complex jobs can be created quickly by IT staff with little or no programming experience, and the operator interface is so streamlined that training requirements should be minimal.

In short, nearly any description of PaperVision Capture will be incomplete, given the depth of its feature set. The program manages to deliver this wide-ranging potential without becoming complex. The user interface for both administrative and operator tasks makes it relatively easy to limit the information to the choices that are available and relevant to the current step in the process. The program focuses on just one aspect of information management — the capture process — and performs that function with flexibility and efficiency.

Product Profile

Product: Digitech Systems PaperVision Capture

Version: 73

Software Developer: Digitech Systems Inc., Greenwood Village, CO

Server Requirements: Processor not older than 4 years; 2-GB RAM; 1.75-GB hard drive space; Microsoft Windows XP Pro (SP 3), Server 2003 (SP2), Server 2008 (SP1), or Windows 7 (SP1) (32- and 64-bit versions supported); Microsoft.NET 3.5 (SP 1) or later (included on installation media); Windows Installer 3.1 or later (included on installation media); Microsoft SQL Server 2005 or later (Microsoft SQL Server Express included on distribution media).

Workstation Requirements: Same as server

Supported Devices: All certified ISIS- and TWAIN-compliant scanners

Availability: PaperVision Capture is available through a network of more than 400 worldwide resellers and distributors.

Suggested Retail Pricing: The following suggested retail prices for the various modules include 12 months of maintenance (required for support):

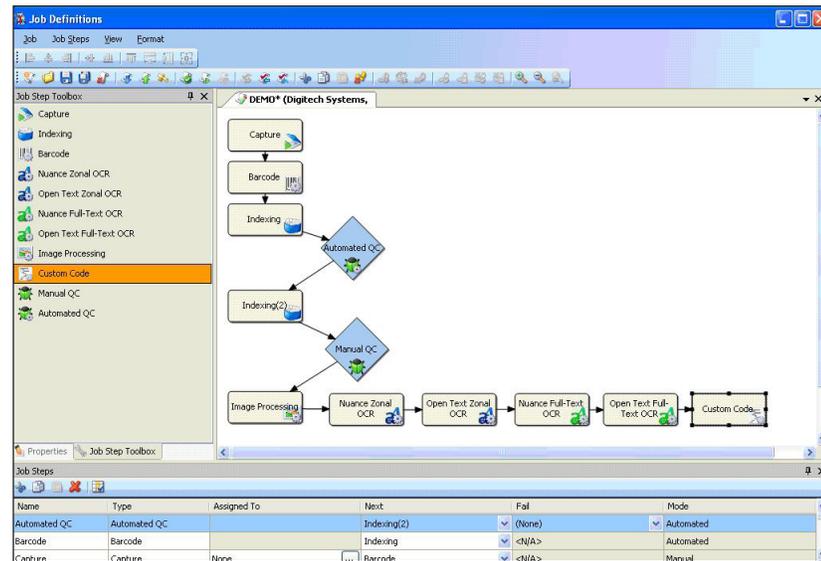| PaperVision Capture	Named licenses	Concurrent licenses
Scan	$1,548.50	$3,097.50
Index	$1,548.50	$3,097.50
Image Processing	$1,548.50	$3,097.50
1D Barcode	$1,548.50	$3,097.50
2D Barcode	$1,548.50	$3,097.50
OCR	$1,548.50	$3,097.50
Handwriting	$3,097.50	

Feature Set

★★★★★

Digitech Systems offers the PaperVision Capture platform as a set of modules so that customers can purchase just those functions that are needed. Typical installations start with the Scan and Index modules, and then add others such as 2D Barcode, OCR, or Image Processing functions.

Available modules include:

- **PaperVision Capture Scan:** Scan and import documents into batches

- **PaperVision Capture Index:** Hand-key index value population, match and merge, and validation within batches

- **PaperVision Capture Image Processing:** Color and bi-tonal image processing to perform image manipulation and cleanup; also enables automatic page deletion based on criteria such as page dimensions, color content, and blank pages

- **PaperVision Capture Barcode 1D:** One-dimensional barcode recognition for index value population and document break insertion; recognition can be performed as images are captured or as a separate automated process

- **PaperVision Capture Barcode 2D:** Two-dimensional barcode recognition for index value population and document break insertion; recognition can be performed as images are captured or as a separate automated process

- **PaperVision Capture OCR:** Optical character recognition for index value population and document break insertion either automatically or while indexing; available with Nuance or Open Text OCR engines

- **PaperVision Capture Full Text OCR:** Full-text OCR for extracting pages of text and converting recognized results to specific file types as an automated process; available with Nuance or Open Text engines

- **PaperVision Capture OCR TTS Add-On:** OCR text-to-speech (TTS) add-on for extracting pages of text and converting recognized results to .WAV audio files either automatically or while indexing. Available with Nuance OCR only.

- **PaperVision Capture Handwriting:** Constrained (boxed) handwriting recognition for index value population and document break insertion as an automated process. Available with Nuance OCR only.

- **PaperVision Capture QC Manual:** Enables operators to apply quality-control (QC) tags to batches, documents, pages, and indexes; also allows operators to review batches, documents, pages, and index values using QC Auto Play operations

- **PaperVision Capture QC Auto:** Perform QC review of batches, documents, pages and indexes as an automated process

The program works with Microsoft SQL Server (a copy of SQL Server Express Edition is included on the installation media), but it can export processed full-text data to

more than 30 different formats, including XML, Microsoft Word, and PDF files. Scripts are included for many common formats, but optional scripts and custom code make it possible to send output to any format desired. PaperVision Capture provides an export for Microsoft SharePoint, and a wide range of other third-party connectors are available to integrate the program's output with other software platforms.

In PaperVision Capture, job workflows can be constructed via an intuitive drag-and-drop flowchart designer.

PaperVision Capture has robust and sophisticated workflow management capabilities. The source information can come directly from any scanner that supports either certified ISIS or TWAIN (though Digitech Systems recommends that TWAIN only be used for low-volume jobs), or it can automatically import image files. The administrator can create job definitions that guide the process after the capture step is complete. This can include manual or automated indexing of the documents, OCR processing (both Nuance and Open Text recognition engines are offered), barcode reading, image processing, and extensive quality control (QC). Job steps can be assigned to specific individuals or to defined groups of operators. The workflow can branch based on the results of a step; a document that fails a QC step can be routed for further manual processing by an operator.

The Image Processing module can work with BMP, TIF, or JPG files, and comes with a wide range of filters that can be applied to a defined zone or to the entire page. These processes range from removing noise or watermarks to cropping the image, to detecting and changing colors. There is a redact function, but it only works on predefined zones; you would need to use custom coding to redact based on the text output. It is easy to configure a job so that an image processing filter is only applied to specific pages in a document; for example, the first page might be rotated clockwise by 90 degrees, but the remaining pages are left unchanged.

All steps of each job are recorded, whether they are performed automatically or by an operator. The source data can be scheduled for automatic destruction, and a record will be made when the batch is destroyed.

Indexing can be automatic using OCR or barcode data, or it can be based on data keyed by an operator. Zoned zoom features make it easy to locate text or barcode information in a specific location on a document page for automated processing, and to make it easier for operators to find and read text data. PaperVision Capture has a wide range of features that ensure the integrity of the data. For example, operators can be required to blind rekey index data; if the two entries do not match, the document is flagged for further attention. The program also includes a non-repudiation feature for the source image that detects if the original is altered in any way. Documents can also be processed to have one-to-many index values, such as with individual order detail lines on a purchase order.

The barcode modules can read 2D or 1D formats. The six 2D formats supported are DataMatrix, PDF417, QR Code, Royal Post, Australian Post, and Intelligent Mail. The 1D module supports 20 formats, including EAN, Postnet, and UPC varieties. Multiple zones can be defined to locate barcodes on a page, and the information can be used to populate an index or automatically create document breaks. Custom code permits wide-ranging other uses for the barcode data.

The program can connect to data sources from remote locations, and operators can be on remote networks; the data can be encrypted and kept secure during all steps of the processing. Each job step is assigned a priority level which can automatically level workloads for individual operators and make sure that a batch is processed making the most efficient use possible of available resources. Administrators can also adjust priorities on the fly, so that rush batches can be processed ahead of other documents.

Value   ★★★★☆

Digitech Systems prices PaperVision Capture à la carte based on modules selected by the customer. This allows an organization to custom-tailor a solution that fits its needs, without paying for functionality that will never be used. The most basic configuration would include the Capture and Index modules, which also deliver an extensive collection of scripts and filters; of course, most companies will want some of the other modules as well. The most common additions include Image Processing, 1D Barcode, 2D Barcode, OCR (Nuance or Open Text), and Handwriting. Customers can purchase licenses for desired modules at an MSRP of $1,548.50 per named user license (except for Handwriting, which is $3,097.50) or $3,097.50 per concurrent user license. The license price includes a year of maintenance by Digitech Systems including all software upgrades and technical support. (Note that the program is sold by a network of resellers who may charge separate maintenance and professional services fees.) After the first year, a maintenance and support agreement costs 20 percent of the installed software charge, which is typical for this class of product.

Overall, the system is priced in line with the best-known enterprise capture product, although slightly higher than some alternatives. This difference is mitigated in part by the fact that only the desired modules need be purchased, as well as by the fact

that the system is so flexible and can be extended easily using custom code. The wide range of third-party extensions adds value to the system, as does its scalability for enterprise-level applications. That said, it should be noted that there are other packages that take an "all-inclusive" approach to pricing that could offer a better value for some installations.
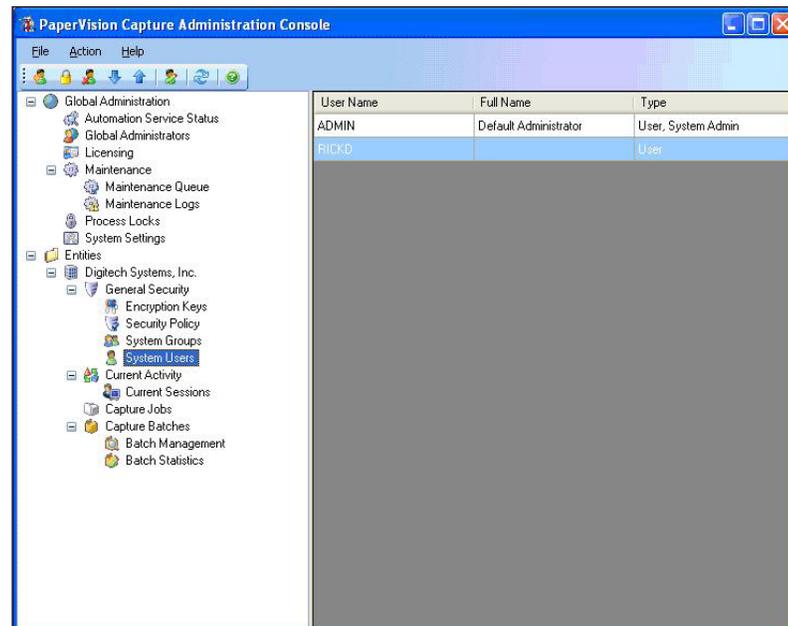
Ease of Administration ★★★★★

The PaperVision Capture software is typically installed and configured by the reseller, though the software installs on a workstation in under five minutes, according to Digitech Systems. The distribution media includes copies of Microsoft .NET Framework, Microsoft Windows Installer, and Microsoft SQL Server Express Edition if other versions of those programs are not already available on the customer's system. The operator program is also simple and straightforward to install.

The system makes it simple to use a scanner as an input device when creating batches of documents for processing. The administrator does not need to do anything in the way of configuration or software installation. Instead, the operator can choose the input source at the time of the batch creation, and any certified ISIS or TWAIN scanner that is installed on the operator's instance of Windows will be available to PaperVision Capture.

The Administration Console is easy to navigate, with a familiar Windows hierarchical tree on the left and a large working pane on the right.

The Administration Console uses a familiar Windows hierarchical interface along the left hand pane of the window to make it easy to access all the different features without being swamped in menus and choices. The top level sections are Global Administration and Entities. The Global Administration section covers tasks such as system status, license management, maintenance, process lock monitoring, and system operation settings. The Entities section allows the administrator to define multiple separate units within the system. This is useful if an enterprise wants to keep jobs and data separate for different companies, divisions, or departments. Within each entity, the administrator can configure and monitor security settings, job definitions, and the status of batches. The fact that all these choices are available all the time, with an outline structure that can be collapsed or expanded, means that the administrator can accomplish all management tasks without leaving the one program.

The right hand pane of the program window displays data for that specific task. In the case of a report or log, the administrator typically can just double-click on a data line to open a new window that will provide more detail or permit configuration changes. The system records a broad range of statistics about every aspect of batch processing. For example, it records the number of characters saved, the number of documents indexed, and the number of pages scanned or rescanned. It tracks how much time was spent in each aspect of the job steps, as well as the total time spent on a step and how long the batch was taken by an operator for that step. This data can be sliced and diced any way you want: by job, by batch, by operator, or by step. All the data is stored in the application's SQL database, so with proper access, you can draw the data directly into Excel or use any database report writer to create reports that present the data the way you want.

The job definition interface is different. The administrator can drag and drop one of the different task types from the left pane's list to create a graphic map of the workflow in the right pane. For each step, the left hand pane can be expanded to show a long list of configuration choices. All settings are filled in by default, eliminating the need to tediously fill in the blanks for routing steps. Just about every aspect of a step can be configured, however. Most use drop-down lists or simple data entry fields (such as True/False), but they also permit the insertion of custom code if needed.

For example, in creating an Index step, click on the ellipses after the "Assigned" line to open a window listing the different users and groups. You can then use the checkboxes to control which operators will be given access to this step.

A job definition can make provisions for some limited logic branching. For example, if a document fails an automated range test for a field, the workflow could divert that batch to a job step that requires operator intervention to verify the field data by looking at the original scan image. Other fields have drop-down lists that can be as simple as True/False, as is the case with the Operator Permissions fields. You can quickly assign whether operators will be allowed to add or delete documents, copy or move pages, or import images.
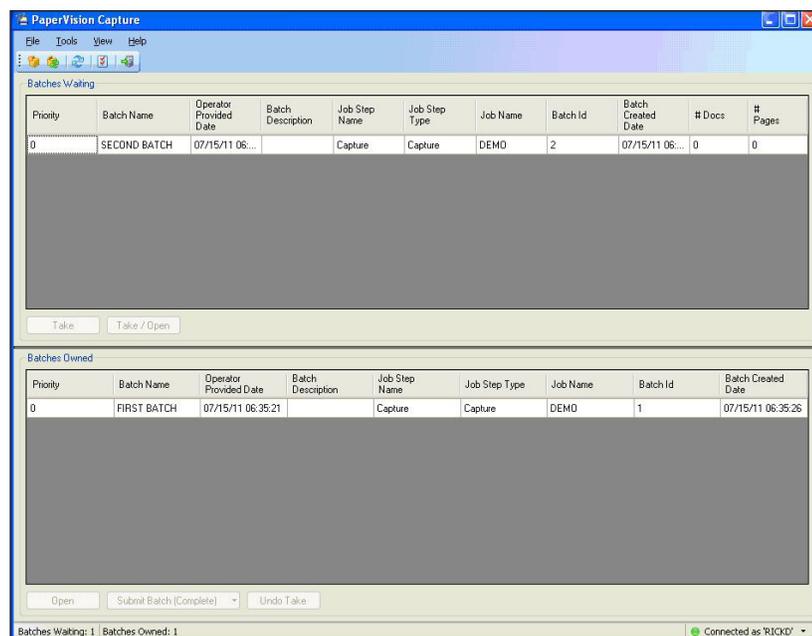
A job can be cloned to create a new job that can then be modified to meet different needs. For example, one could create a simple version of a common workflow, and then use this as a template for more detailed versions as required.

△ Ease of Use ★★★★★

PaperVision Capture uses a similar design philosophy for the Operator Console: keep it simple and display only the information that is relevant to the task at hand. The operator's window has just two regions: Batches Waiting and Batches Owned. If there are any batches that have been created that the operator is authorized to process, they will show up in the top region. The operator can then choose to "Take" a batch and open it for processing. Once an operator has taken a batch, it will show up in the list in the bottom region.
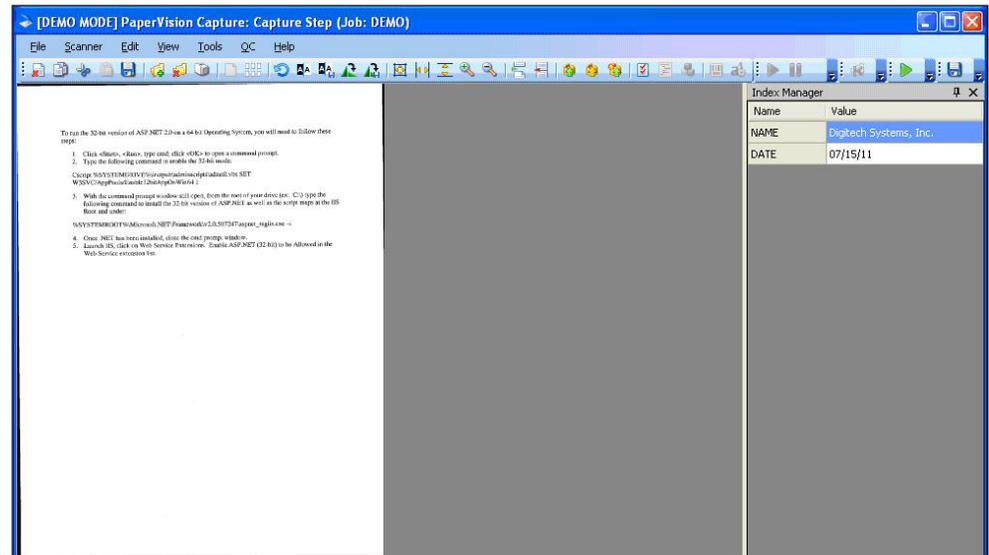

The Operator Console shows the user pending batches and the pertinent information relating to those batches, such as the step the job is in, the number of documents in the batch, and the number of pages.

The top menu line has a File command that lets an operator create a new batch or retransmit an existing batch without duplicating data. Starting a new batch will present the operator with a choice of sources for the documents: either installed scanners or image file locations. After documents have been added to a batch, it can either be submitted as incomplete — waiting for additional documents to be added — or as complete and ready for processing. The top menu commands are also available as icons on a toolbar below the menu line.

Processing follows the steps as defined in the Job. This means that the data is sent for automated processing for those steps that are handled by a computer. If a step requires operator intervention, then it will appear on a list of available batches. An operator will only see those batches that are available for tasks that have been assigned to that operator (or that operator's group). The operator can then take

possession of the batch and work on it. This locks the batch until the operator submits it as complete or releases as incomplete. If an operator has a batch open and leaves it idle for a predefined period (as configured by the administrator), the session can be released automatically so that the license does not get locked up, waiting for the operator to return.

The Operator Console shows a document preview so users can perform quality-control steps, such as data verification.

The operator interface makes it easy to perform data entry and verification tasks. Zoom regions can provide a close-up view of a location on the document. For example, an Index step might have a zoom region for the invoice number location. The enlarged image will make it easier for the operator to read the number and enter it correctly. It is also possible to define a task so that documents in the batch advance automatically, as would be the case when an operator is verifying keyed entries against the original image, which can speed processing. This careful control over what the operators see and when they see it means that training requirements are greatly reduced. The system of priority levels can be used to level workloads among operators, and the ability to give remote operators access to data means that staff in other locations can be used to process data so that the most important jobs are done first.

PaperVision Capture allows the administrator to build in all the batch decisions at the time that the job is defined. This means that document breaks based on content, image processing including rotation, and other tasks can happen automatically without requiring the operator to make these decisions manually during the capture process.

The system also can be configured to speed up processing by the operator. For example, the pre-caching feature allows specific or user-defined pages (i.e., the first page) of a document to be released to the operator while the rest of the batch is still being downloaded. This means that the operator does not have to wait for the entire document to load before starting the next step, which can save time.

Compatibility ★★★★☆

PaperVision Capture offers device compatibility that is on par with others in the class. For capture, it can be paired with any certified ISIS or TWAIN scanner, using compatible drivers. However, unlike some capture platforms, it does not include any direct integration with the embedded software platforms of scanners or MFPs.

The software uses "automation services" which are Windows services. These can run on servers or workstations, and can be installed on multiple machines. The system can also be configured so that multiple services run at the same time on a single workstation or server (though multi-core processors with plenty of memory are recommended in such instances). As with most competing offerings, the program works only under Windows operating systems (Windows XP and later), and is not available on other platforms.

Software Integration ★★★★★

PaperVision Capture offers excellent integration with other software platforms. Processed data can be exported to any application that supports its output formats, which include PDF, Microsoft Office, and XML. The program also supports optional connectors (some from Digitech Systems, some from third parties) for many popular back-end and line-of-business applications, including for Microsoft SharePoint, Laserfiche, and Hyland OnBase

If a connector is not available for a specific application, the integration of custom code makes it possible to create a connector, even for proprietary programs with unique file format requirements. The Administration Console documentation includes a section on how to use the custom code generators to create export scripts for ASCII output, Laserfiche, XML, and other formats. The Digitech System's API is also accessible from within the program's script editor. The program comes with a library of code samples that can be used to build custom scripts. The documentation includes extensive descriptions and examples of the API functions.

Professional services, such as custom code development, are also available from Digitech Systems, PaperVision Capture resellers, and third-party developers for projects that customers choose not to handle in house.

Security

★★★★★

Security is an integral part of PaperVision Capture's design. All data can be protected using 256-bit AES encryption. The non-repudiation feature guards against any tampering with or modification of the source images. Administrator and operator access can be controlled using passwords.

The fact that the administrator assigns access to operators for specific steps in a job definition means that an individual only sees that data which he or she is authorized to see, and is limited to the data that can be entered or altered.

The program does support redaction, but only for defined regions of a document page. There is not a feature that redacts based on the text content of the document, such as searching for a specific list of strings or data type (such as a Social Security number), but this can be achieved using custom code to process text produced by OCR. Custom redaction scripts are available as an option from Digitech Systems or through third parties including some of the resellers.

Company Profile

Vendor:	Digitech Systems, Inc.; Greenwood Village, CO
Phone:	877-374-3569
Web:	www.digitechsystems.com
Status:	Privately held
2010 Revenues:	Not disclosed
Employees:	50

Reseller Support and Training   ★★★★⯪

In order to sell the solution, resellers are required to be certified on PaperVision Enterprise, which is the company's full ECM (enterprise content management) platform that employs PaperVision Capture for the document capture portion of the management chain. Digitech Systems offers a week-long technical training class for PaperVision Capture at least ten times per year ($2,750 for the week). Web-based training for resellers is also offered monthly; the webinars are also recorded for access on-demand. The cost of this online training is $295 per session, which includes an unlimited number or participants from the company, and includes both the live event and the on-demand recording.

The training sessions are designed to help reseller sales and technical staff understand the product thoroughly, to be able to complete installations, and to provide troubleshooting support for their customers. Resellers are also supported by Digitech Ssytems' Client Development Managers who can provide detailed answers and assistance. There is also an online knowledgebase of information that can be accessed through the reseller portal on the company website.

For a fee, Digitech Systems will provide customized on-site training for resellers on request.

Customer Support and Training   ★★★★☆

Resellers typically have their own support contract with their customers, though as long as the maintenance license is current (included for one year with initial purchase), Digitech Systems will also provide customers with free telephone support. (Telephone support without a maintenance contract is available at $150 per hour.) Telephone support is available 9 a.m. to 7 p.m. Eastern time, Monday through Friday. Note that this is a narrower range of hours than some ISVs offer, since it is typical to cover the west coast until 5 p.m. Pacific time. When BLI technicians called the support line at various times, the toll-free line was answered by an automated attendant. When the choice for technical support was entered, a live technician answered promptly, generally on the first ring.

Digitech Systems has an online knowledgebase available on its website, though it requires Microsoft Internet Explorer (and you must install Digitech Systems' plug-in as well). The website also has additional support features, but these are locked behind a security wall that requires an account and login details to gain access. This information is primarily for resellers, though customers can get a password for access to a limited portion of the site. Digitech Systems also provides support through email and an online query form.

Resellers also generally handle training at the reseller or customer site, and may even contract with Digitech Systems for the training. The training materials are standard at the reseller training level, and customized for each customer level. With their reseller's approval, customers can also arrange with Digitech Systems for custom on-site training for a fee. They provide customers with a syllabus of topics and then build a course to suit the individual customer's needs. (Digitech Systems does not publish prices for this type of training.)

Documentation ★★★★★

The documentation for PaperVision Capture is thorough and extensive. In addition to an Installation Guide, the company also provides separate PDF manuals for the Administration Console (a whopping 463 pages) and the Operator Console (113 pages). They are structured in typical "engineer style," starting with the first item in the first menu, and working straight through to the last item on the last menu. The result is a well-organized outline that makes it easy to jump right to the desired topic. The text is searchable using Adobe Reader's search feature.

In addition, the content is clearly written with ample screen shots and examples. Non-technical staff should be able to navigate most of the content without any trouble. In-program help is available at all times in both the Administrator and Operator Consoles, and provides the same content as the PDF manuals.

Global Business Readiness ★★★★☆

Digitech Systems' network of resellers provides worldwide coverage for the program. Unlike some competing platforms, the program and its documentation are currently only available in English from the company. Digitech does offer a localization option, which allows resellers or the company to convert the product to other languages as needed.

Upgrade Path ★★★★★

PaperVision Capture is a comprehensive solution that is broadly scalable and can work with multiple locations and multiple entities. Should a customer need a full ECM platform, Digitech Systems offers PaperVision Enterprise, which is its on-premise ECM software. The company also offers ImageSilo, a cloud-based ECM service.

Version upgrades to PaperVision Capture are not released on a fixed schedule, but rather as needs dictate. Customers with a current maintenance contract receive all upgrades, minor or major, free of charge.