BuyersLab PLATINUM TESTED SOLUTION · 2 0 1 9 ·

Digitech Systems PaperVision Forms Magic

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Product Snapshot

Product: PaperVision Forms Magic

Version: R90

Software Developer: Digitech Systems, LLC

Web: www.digitechsystems.com

For more information on Digitech Systems products, see Buyers Lab's coverage at Keypointintelligence.com/research/Software

About BLI: Since 1961, BLI has been a leading test laboratory in the world of digital imaging equipment. BLI is completely independent in all of its testing processes and subsequent reporting. All of BLI's product evaluations are conducted by highly experienced employees in its on-site testing facilities in the United Kingdom and United States where hundreds of new copiers, printers, wide-format devices, scanners, and multi-function (MFP) products are evaluated and reported on each year.

OVERVIEW

PaperVision Forms Magic, from Digitech Systems, is a unique document-classification module for the company's PaperVision Capture document workflow platform. Powered by the company's patented artificial intelligence (AI) technology, Forms Magic helps eliminate manual data entry for captured documents by automatically recognizing, classifying, and extracting data. At the heart of Forms Magic are patented machine-learning algorithms that enable the automated processing of structured documents without the lengthy setup process required by traditional capture/extraction software. Captured data can be exported and sent to electronic workflows and line-of-business applications, streamlining information onboarding and in turn improving decision-making throughout the organization.

CHIEF BENEFITS

STREAMLINE PROCESSES – Forms Magic automates the recognition of data-intensive structured documents, which greatly reduces the amount of time required to capture and process information.

REDUCE ERRORS – By extracting and populating fields automatically and classifying documents intelligently, Forms Magic essentially eliminates error-prone manual data entry and costly misfiling of documents.

SAVE MONEY – Forms Magic frees knowledge workers from tedious document classification tasks, allowing them to focus on higher-value work. It can also speed the time it takes to intake and process invoices, which lets companies take advantage of early-payment discounts (and avoid late-payment penalties).

IMPROVE DECISION-MAKING – The timely, accurate capture of business-critical data makes information accessible to stakeholders and decision-makers within the organization.

OUR TAKE

Digitech Systems' developers have been in the vanguard of bringing AI technology to bear on the challenges of document extraction and classification, and it comes to fruition in PaperVision Forms Magic. Rather than relying solely on traditional optical character recognition (OCR), the patented Forms Magic technology delivers the ability to "learn" the types of structured documents an organization receives and to intelligently group like documents together based on a range of parameters and commonalities, including the text itself, the position of the text on the page and more. It's as close to the lofty ideal of robotic process automation (RPA) as we've seen among document capture/data extraction products.

Since it is fully integrated with PaperVision Capture, Forms Magic shares all of that platform's inherent strengths. It enables organizations to capture structured and unstructured paper and electronic documents or files and route them into the corporate database or line-of-business applications for further processing—essentially merging paper and electronic processes through one holistic solution. Granted, adding Forms Magic to a PaperVision Capture system does add a bit of complexity up front, since there is some document setup and training that needs to happen. But that process is less burdensome than traditional capture/extraction program customization, which involves programmers manually importing and setting up forms. And the time-savings for end users, not to mention the improved accuracy of data processing, certainly makes it worth the investment.

FEATURES & PRODUCTIVITY

Forms Magic enhances the productivity of knowledge workers in a number of ways. The solution employs AI techniques to automatically sort documents and extract pertinent data—essentially eliminating the labor usually associated with such sorting and extraction. The technology does not rely on OCR alone to recognize documents and data; instead it examines each document in seven different dimensions to ascertain what the document is, where the pertinent data resides, and how the document should be processed. The recognition engine hones in on key points that distinguish one class of document from the next, so even if a crucial word like "Invoice" is missing or illegible to the OCR engine, the software is still able to discern what the document is and process it accordingly.

The module also offers a host of convenient features. The system can automatically cluster similar documents (if the setup and "learning" processes have been completed), or users can associate the incoming documents with a category manually. For recognition and extraction Forms Magic has OCR and OMR (optical mark recognition) engines, and can recognize hand-printed characters in text boxes thanks to its ICR (intelligent character recognition) engine. There is also a Communication Server component that lets users chat directly with one another while in the program.

And as part of the PaperVision Capture ecosystem, Forms Magic users benefit from the features of that platform. The program can intake paper and electronic forms and run the documents through a series of steps to get the data into the corporate database, an ECM system, or a range of line-of-business applications where it can be easily accessed and acted upon. Also of note is the platform's customizable nature thanks to a host of optional business rules that can customize the system to a particular organization's needs. For example, the General Business Rule verifies that certain detail fields have been populated or meet certain criteria, such as date range. The Capture Index Rule verifies healthcare claims against the National Provider Identifier database to verify that provider IDs are valid. Healthcare providers will also be interested in the HIPAA 837 Business Rule, which is used for the input of medical claim data by generating an approved HIPAA 837P EDI ANSI claim file for payment submission. For accounts payable needs, the AP Business Rule ensures invoice or statement line item totals are correct, and even verifies that detail line items within an invoice were calculated correctly.

USABILITY

Forms Magic shares the same approachable, intuitively designed user interface of PaperVision Capture, and should be easy to learn for those familiar with a dedicated scan-capture program. Those new to capture products will need some degree of training, but the automated features built into the system help to minimize user intervention.

Users that have been assigned to the Forms Designer step by the PaperVision Capture administrator can create and edit Forms Magic forms, as well as process documents in batches through Forms Magic to extract data for use in other job steps. The user interface features a row of menu boxes (Batch, View Documents, Manage Forms, Batch Processing, Color Dropout Features, User Preferences) that give quick access to various tasks. From the Forms Magic Designer, a user can test classification and extraction, configure forms, indexes, and color dropout filters, and process and submit batches. Mastering the various steps for configuring forms will take some training, but the excellent PaperVision Capture User Guide includes several chapters dedicated to Forms Magic.

The program also features handy conventions to enhance usability. For example, the View Documents menu lets the user view documents individually or view all the documents in a given batch. The Pages pane displays a thumbnail of each page in the document, and toolbar buttons let the user quickly

zoom in/out, fit the document to the page, move to the next or previous document, and so on. The convenient Clustering feature automatically groups all like documents in a batch based on the first page of each document, and then compares them against any previously saved forms. Visual and percentage indicators show the confidence level the software has for the various data elements it has recognized/extracted automatically, so the user can attend to only entries where the data may be suspect. And the Forms Designer offers a preview of document setup by displaying output (complete with extraction results) to ensure accuracy before a batch is actually processed.

IT ADMIN & SECURITY

As with PaperVision Capture, initial installation and configuration of Forms Magic is typically handled by the reseller placing the system, and getting the most out of the powerful platform will require training for the administrator assigned to manage the system. Steps to get up and running include:

- Creating or importing a Forms Magic project (a collection of forms and form types, classification information, and extraction data)

- Completing the Forms Index Mapping step (to initially teach the system which areas of a form contain which index values)

- Importing images for clustering and classification (Forms Magic will group like images into clusters)

- Configuring indexes and detail fields for each setup image

- Create color dropout filters to apply to a zone on a form (if needed)

- Test the classification and extraction process

The system gives very granular configuration control over every area. For example, in the Advanced Forms Magic Project Configuration dialog box, the administrator can specify options such as Search Word Optimization (which will improve classification performance in large projects by searching for large words first), Use Text Lines (further increases classification speeds by searching for collections of words on a line of text), High Precision Classification (useful if the Forms Magic "brain" component of the database contains different forms that are very similar) and much more.

Fortunately the intuitive user interface and excellent documentation make learning the ins and outs of the system as painless as possible. And the program features helpful conventions to aid administrators, such as pre-defined templates that allow them to graphically define and add new form types in seconds.

On the security front, Forms Magic improves document and data security implicitly by allowing organizations to turn paper forms into electronic files that can be stored within a document system that is password-protected. Forms Magic also shares all of PaperVision Capture's security features, such as 256-bit AES encryption that can be applied to images, index values, and OCR data to prevent unauthorized access. Security settings allow users to be assigned to specific job steps or groups to ensure that access to documents is granted to only users who need it, and only system administrators can alter security and job settings. In addition, the non-repudiation feature guards against any tampering with or modification of the source images, protecting the integrity of the original. Batch

destruction policies can be set by the administrator to comply with government retention/privacy regulations.

SUPPORT & TRAINING

The reseller placing the system typically will have a support contract with its customers, though as long as the maintenance license is current, Digitech Systems will also provide customers with free telephone support. (Telephone support is available 9 a.m. to 7 p.m. Eastern time, Monday through Friday.) When Buyers Lab technicians placed anonymous calls (we did not reveal we were testing the product and its support) to the support line, we got through to a live technician promptly and received spot-on guidance. Digitech Systems also provides support through email and an online query form (although not yet live chat sessions), and the company maintains an online knowledgebase.

Resellers also generally handle training (Digitech Systems provides training material). With their reseller's approval, customers can also arrange with Digitech Systems for custom on-site training for a fee. The company provides customers with a syllabus of topics and then builds a course to suit the individual customer's needs.

For self-help once a system is up and running, the documentation included with PaperVision Capture is thorough and extensive, with large sections dedicated to the Forms Magic module. The company provides a searchable, hyperlinked PDF Administration Guide—a whopping 740 pages—with a table of contents that is a well-organized outline of the entire product. In-program help is available at all times in the Administrator Console, and provides the same content as the PDF manual. For end users there's an equally thorough 113-page User Guide. Notably, no prior familiarity with programs of this kind is assumed: The guide clearly explains the terms used in PaperVision Capture (Batch, Detail Sets, Document, Index and so on) and then details each task an operator would need to perform, from batch creation and capture to indexing and quality control. Non-technical staff should be able to navigate most of the content without any trouble, and as with the Administration Console, in-program help is available at all times.

VALUE

Forms Magic is sold as an optional module for the company's PaperVision Capture system. PaperVision Capture is sold on a named- or concurrent-user license basis, and modules are offered à la carte. Usage-centered licensing can be based on the number of documents classified, pages, or fields extracted. According to the company, a typical entry-level configuration of PaperVision Capture is priced below $4,000 and includes Capture and Index module licenses (which also deliver an extensive collection of scripts and filters) for two users and one scanning station for an unlimited number of scans; the Forms Magic module can be added for less than 20 cents per page processed, and that cost will drop dramatically as page volumes increase. The system's license price includes a year of maintenance. After the first year, a maintenance and support agreement is priced on an annual subscription basis based on the modules deployed.

Notably, the Forms Magic module can help lower the cost of deployment compared to other capture platforms, since the AI technology can handle automatically what would typically require custom coding under a professional services engagement. And that's not even addressing the harder-to-quantify cost savings in labor thanks to the automated sorting and data extraction.

STRENGTHS

- Incorporates forms fully into business processes by recognizing and classifying them automatically and extracting critical business data on the fly
- Uses patented AI technology to parse and process documents
- Also employs advanced OCR, OMR, and ICR engines
- Accurately classifies forms to streamline organizational processes and save money on labor
- Quickly turns data into information accessible by stakeholders that need it
- Improves document security by enabling organizations to convert vulnerable paper records into electronic files that are protected by user login, encryption, and multiple layers of system security

WEAKNESSES

- Setting up and utilizing the platform to its fullest may require training
- Though the product can recognize, classify, and extract documents in any language, the Forms Magic user interface is currently available only in English

PRODUCT PROFILE

Versions:	Forms Magic is one of several add-on modules available for the PaperVision Capture system.
Pricing:	The solution is priced on a named- or concurrent-license basis. Optionally, users may choose from a variety of click-based licenses as well. The Forms Magic module can be added for less than 20 cents per page processed, and that cost will drop dramatically as page volumes increase.
Major Features:	PaperVision Capture plus Forms Magic: Paper and electronic document capture; batch separation and processing; image cleanup; zonal and full-text OCR; manual and automatic metadata indexing; blind indexing and re-key verification to ensure data accuracy; quality-control and document-security features; document-classification engine driven by artificial intelligence, and features the ability to "learn" the types of structured documents an organization receives and process them accordingly
Server:	PaperVision Capture requirements: 8GB RAM; Microsoft Windows Server 2008, 2008 R2, 2012, 2012 R2, or 2016; Microsoft .NET Framework version 4.7 or higher; Microsoft SQL Server 2008 or later
Client:	PaperVision Capture requirements: 4GB RAM, Microsoft Windows 7, 8, 8.1, or 10
Compatible Hardware:	All certified ISIS- and TWAIN-certified scanners
Availability:	PaperVision Capture and Forms Magic are available worldwide from a network of resellers.
Languages:	The platform can recognize, classify, and extract documents in any language. The Forms Magic user interface is currently available only in English, although it is localizable (ready to be converted to Spanish, French, Italian, and German)