



(White Paper) **ViewWise™ 5.5**
Imaging-Centric Integrated Document Management

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What is ViewWise? and What Can it Do for Your Organization?

ViewWise is a feature-rich IDM/Imaging Solution for the small to medium-sized Enterprise (SME) Market. The features and functionality of our flagship product line ViewWise rival products offered by major industry leaders to the nation's largest customers. Our solutions are engineered around the needs of the SME market, ie. simplicity of installation, use, support and maintenance. ViewWise is specifically designed to operate in both WEB and LAN based environments, leverage an SME firm's existing investment in their IT infrastructure, and operate on a variety of distributed and centralized topologies, with the ability to integrate with other software applications within diverse operating environments. Complemented with the professional services of Computhink and its Partners, ViewWise solutions offer rapid implementation, significantly improved productivity, reduced costs and increased profit margins at accelerated rates...real returns essential to our customers.

Imaging Centric Integrated Document Management is a concise description of what Computhink provides, the widely accepted concept of utilizing imaged documents in lieu of original/paper documents, combined with native electronic file format documents to provide easily accessible compound documents within a fully secure and managed IDM environment.

This combination has consistently been proven to result in significant office productivity with an accelerated return on investment and an overall low initial cost. Image enabling is designed for organizations that want to leverage the investments they've made in e-mail systems, hardware, applications and systems software, databases and other infrastructure. ViewWise offers a range of powerful IDM/Imaging solutions that utilizes the existing systems and equipment in almost any office environment coupled with the local and Internet network options being provided via a today's server technologies. If desired, ViewWise can enable adding IDM/Imaging options to the systems already in place, and/or form the basis for new business processes and solutions. ViewWise flexibility and powerful configuration and setup options allows the user to start with one or a very few solution benefit targets, often fully justifying the costs on these first solution rollouts, then extend at low incremental costs into many areas of an integrated business.

For over twenty years, scanning technologies have improved and imaging has been implemented in organizations across the board as a major information management tool. Today, the results afforded by image enabling have been significantly enhanced with the advent of the integrating both images and native electronic documents into a "Compound document" and then complementing them with comprehensive and secure management, which reflects the primary IT implementation goal for institutions.

The ViewWise product range offers ideal solutions for users who want a premium IDM/Imaging solution, but don't want the headaches associated with extra employee training, large or high-risk investments, time-absorbing maintenance and days of scheduled downtime often associated with implementing a new application/infrastructure. ViewWise allows you to get the benefits of a powerful IDM/Imaging solution straight out of the box—with little or no maintenance.

ViewWise utilizes industry leading database engines and operating systems and can allow administration from anywhere on the network. Seamless integration means less hassle for you, and more efficient and productive employees for your organization.

Image enabling/IDM with ViewWise leverages the investments an organization has already made in hardware, software and people/expertise for their infrastructures, saving countless resources.



One Piece of the Puzzle

IDM / Imaging is still only one piece of the IT puzzle. The information technology field is an ever-changing sector with upgrades and enhancements emerging constantly. It seems as though someone comes out daily with the most revolutionary technology of the century. The options for possible office solutions are unlimited and often confusing or risky.

IDM / Imaging, is the tried and tested way to increase office efficiency through drastically reducing paperwork and processing time. ViewWise provides a repository for all data input, scanning, email, fax, and software applications, allowing electronic images and native electronic file format files to be consolidated into a system wide searched and accessed repository with relatively no hassle at a significantly reduced expense. ViewWise provides out-of-box solutions that can be acquired, installed and maintained for a fraction of the cost—in both money and time—over other IDM / Imaging solutions on the market.

IDM/Imaging are only two components of many possible productivity-enhancing office solutions, but ViewWise makes these bonus technologies more affordable and manageable.

Complementary Technologies

IDM / Imaging can be more easily understood in context of being one of the inter-dependent technologies that fit together like the gears of a transmission to provide your operational solution. Each gear can function independently, and can provide impetus.

Collectively, however, the interaction between them is critical to the smooth acceleration and efficient of a company's operational system. As an example imaging, integrated document management, email and workflow, can work together to complement and enhance the efficiency of each other.

The idea is simple synergy. The sum of the parts is greater than the whole. Managing data from whatever source is great for an office, but the integration is key to ensuring the total operational solution and achieving optimum efficiency.

The goal is to provide effortless Integration of solution components to provide an inter-dependent technology solution, each component having the ability to work independently, but together enhancing the effectiveness of each other.



ViewWise Enterprise

Paper Processing & Conversion

In the ViewWise Network options the imaging component of the “transmission” is the transforming of paper information into an electronic file through capturing or scanning. This can be accomplished by facilities integrated in ViewWise itself as well as by importing images and data/metadata from a variety of types of data capture and forms processing products in today’s market.

ViewWise currently supports over 30 industry standard image file formats including PDF and DjVu. The latter being a relatively new image compression technique specifically geared towards the compression of scanned documents in color at high resolution. This means that you have the option to retain the native image file format of the original document when indexed, stored or transported throughout the network, intranet or enterprise.

This is significant because the files maintain their original layout and content for both legal and aesthetic reasons. This eliminates the extra time it takes to double-check a document to see if the file maintained its integrity. This saves both time and unneeded hassle. In the case of DjVu it offers the smallest files sizes currently available yet retaining excellent document quality and resolution, a prerequisite for true web ready documents facilitating minimal file transfer times and optimal use of existing bandwidth.

Complemented with enhanced scanning features, batch scanning and batch indexing, paper can be processed at an accelerated rate. Information can then be extracted manually or automatically by OCR technology for use with and for full text and focused search, repurposing for various output options such as export as PDF or Word Doc, and the population of indices.

Integrated Document Management

The Integrated Document Management component of the “transmission” enables the input and storage of any electronic file formats, image or otherwise in a compound repository know as a ViewWise document. These are located in an easy-to-use storage and retrieval system based on the standard physical file cabinet analogy, using a Room, Cabinet, Drawer and File dialog enabling the simulation of centralized or distributed physical filing systems. Documents are classified by an unlimited number of documents types each with it’s own respective user defined indices and property definitions. This unlimited number of indices can be complemented with masks and default values to standardize and regulate the input of data by different users.

In addition, ViewWise allows images to be annotated with up to sixteen independent layers while maintaining the integrity of the original scan, for tax and legal purposes. Included in the numerous annotation capabilities is a password-protected “Redaction” feature that enables users to secure areas of images and or pages from view to all but those who have been granted access. This and other annotation features and functions makes’ collaborative editing faster and more organized than ever before

ViewWise also allows multiple users throughout the enterprise to access the very same document simultaneously. This eliminates missing, lost and incomplete documents or unnecessary wait periods for a document, common frustrations with traditional non-electronic filing systems.

To find documents ViewWise provides a comprehensive array of search options, all available



in one user friendly interface – incorporating drill down in the filing structure, clarification of document type, focused and conditional search on one or more indices, full text search, search previous versions and revisions, searches by creators and or creation / modification dates. ViewWise even enables full text search on the comments fields applicable to each document. These simple and or complex search configurations can then be saved as named search templates to be used again and again.

Once identified, documents can be made available for output in a variety of options – email, fax, print, Send To, export and OCR. Each has been addressed with ease of use and maximum flexibility in mind and can be affected in one of three ways - as an individual page - as multiple selected pages or as complete compound documents.

For example, after making a selection, activating the email option brings up a ViewWise interface where a user designates whether they will send a copy or a reference. Reference would be selected when sending to someone on the same ViewWise network thereby using little or no additional file size over and above the email body itself. A copy is selected when sending to someone outside the system. Options then can be made to burn annotations into the image, incorporate redactions, etc., and then zip multiple formats/pages/documents into a single zip file, ready for attaching to the email. The system interfaces with the user's email system bringing up a blank email with the applicable file attached. Export enables the repurposing of images into 110 different file formats including PDF and DjVu and creation of files in directories.

Advanced Check Out/In is also available, taking a copy of the documents from the master system to a laptop and taking them on the road. The checked out documents are complete with the associated filing structure, document type and associated indices plus the applicable version / revision rules for the document from the master system. While checked out, the documents are still available in view only mode in the master system. When checked back in, subject to modification rights being applicable, these documents and the associated elements are then updated on the master system.

ViewWise System Components

ViewWise Enterprise elements include the ViewWise Server, which incorporates Internet Server functionality as standard, the Administration Module for configuration, control and maintenance of the system, the Desktop client for power/input users and Web client options for search, view and output options. These are complemented with an array of connectors and agents, which include the Microsoft Office Agent. If selected, during installation, Microsoft office applications are updated with a ViewWise icon on their respective tool bars. On selecting the icon the applicable document/file is immediately saved from the application direct into ViewWise, including email via Outlook and any associated attachments.

ViewWise is a system of capturing paper images and/or electronic file formats and compiling them into compound documents allowing them to be indexed and shared easily and effectively with or without workflow. ViewWise is packed with integrated, timesaving features and essential functions to meet users needs.



Electronic Storage

Storing information has traditionally been accomplished with filing cabinets and or row upon row of linear filing shelves. We all know that the paper output technique is inefficient because it consumes such enormous amounts of time, paper and physical storage space. Manually searching for specific data within the paper output can take hours or even days.

A very few years ago the concept of storing large amounts of data electronically was not possible and or was very cost prohibitive. Today's generations of storage systems and software can provide the required functionality and more for a fraction of the price. Magnetic and/or optical storage eliminates the problems highlighted above and also deals with the possibility of deterioration due to age, adverse temperatures, or weather conditions that can lead to mildew or other forms of paper spoiling situations.

Electronic Storage options are an essential complementary technology that enables all electronic data to be stored on a wide range of media rather than outputting to paper. When stored on a hard drive, one gigabyte, 1000 MB of data, is equal to the contents of two four drawer filing cabinets, assuming that one page equals 50,000 compressed bytes. One optical (CD) jukebox can hold the contents of 400 four-drawer filing cabinets. Today's tape library automaton store the equivalent of many jukeboxes. The implementation of these options is depend on the access time required, the amount of information being stored and the anticipated / required frequency of access.

Online access is the first level and used for near instant access for documents, which are being utilized in the business processes and or are accessed on a day-to-day basis. Magnetic disk, usually in the form of RAID access systems, provide moderate cost and high storage capacities/low access times of Hard Drives and the associated hardware to make a very cost effective answer for these needs. Near line storage is for documents that are less frequently accessed, but still need to be readily available. For example optical jukeboxes provide greater storage capacity but can have a delay of a few seconds while the applicable optical media (CD or Platter) is automatically loaded and accessed. Off Line storage is the other option usually utilized to archive documents off to a given media. With ViewWise the metadata is retained in the database so that documents can still be searched for and identified however when access is requested the applicable media label is detailed on screen so that a user can then manually place that particular media volume in a network drive where the documents can then be accessed.

Subject to security privileges allocated, the movement of documents can be effected at any time, quickly and easily moving them from one location to another, from one storage media to another, and or archiving off to an applicable media, all under control of the AdminWise module.

ViewWise offers central and distributed storage across an array of online, near-line and off-line storage media. Complemented with Check Out/In functionality ViewWise provides maximum flexibility in document access, storage management and transition.

Optical Character Recognition (OCR)

Optical character recognition (OCR) is a technology involved with scanning and capturing. OCR allows text to be read by the computer and changed to digital form. Thus computer-generated documents can be scanned, converted to text and saved. Changes can then be made to the document since the text is actually transformed into electronic form.

OCR is incorporated in a wide variety of ViewWise functions, including preparation of documents for full text search, copying to the system clip board, as the major component of the "Send To" function where images can be sent to industry standard applications and the text transformed into



the applicable file format, and the versatile ViewWise export function. Here Images can be transposed into 110 different image and text file formats including PDF and DjVu. OCR/ICR forms extraction functionality is made available by ViewWise connectors facilitating import from standard industry forms extraction applications like ReadSoft's Eyes and Hands application.

OCR complements ViewWise solutions by allowing employees to scan documents and then transform when needed to electronic, editable text. On a system level OCR is also utilized to make both text and image files full text searchable .

Workflow

Workflow is essentially the process that connects a specific user to the document or image management system. It's an infrastructure that actually delivers the documents to the users who need to view them and or process them according to business practices and procedures. Workflow technologies are often used in network, enterprise or intranet environments.

Workflow is simpler than e-mail because a user does not have to know or type in anyone's address. The entire process is automated. This significantly speeds up day-to-day processes that would otherwise be done through paperwork, snail mail, e-mail or a trip down the hall.

ViewWise provides a connector that enables this type of integration. ViewWise documents can initiate workflows, transferring available metadata to populate workflow action forms, making available the attached files, being invoked at steps in the workflow, adding other files to support sub-workflow processes and then when the workflow is complete, take all the data, files and audit trail components of the workflow and add them to the originating ViewWise document as an additional page(s) for easy access at a moments notice.

The ability to integrate and incorporate Workflow into a ViewWise-based solution makes the whole business process concept run smoothly, efficiently, and eliminates time wastage and costly errors.

Forms Recognition and Zonal Extraction

Forms recognition is another complementary technology used for imaging. Forms recognition allows the extraction of structured data from forms for use in applications processing and allows the ViewWise imaging system to then store and manage high volumes of standard government or industry forms without full manual indexing. These may include tax forms, insurance forms, medical forms, invoices and many others. Organizations can actually train the system to recognize and identify the forms most pertinent to their industry.

Zonal extraction takes forms recognition technology one-step further by actually defining a specific area within a form and scanning only that particular information. This is especially handy with work orders or repetitive forms where only a portion of the paper needs to be captured and imported.

Once a form or a zone has been defined OCR/ICR is applied, verification and or quality control applied and the resultant data, together with the image of the applicable form, are forwarded to View Wise and the data is utilized to auto index and auto file the documents. Forms recognition and zonal extraction features can speed up the scanning process of stacks of forms, significantly cutting down the capture and subsequent indexing time on all documents of that nature. This will boost efficiency and further leverage the investment in ViewWise.

ViewWise takes imaging further by offering interfaces to industry leaders in forms recognition and zonal extraction technologies.



ViewWise Integration — Bridges to Existing CRM, ERP and other Applications

ViewWise, via our APIs, Agents, Connectors and interfaces, has and can be easily integrated to many CRM, ERP and other application packages. Adding imaging to your organization's production further leverages a lofty investment in third-party software like ERPs and e-mail systems.

Integration is a fundamental concept for ViewWise allowing quick implementation for immediate return on investment as business processes are instantly made more efficient and reliable. Our solutions also don't require the extensive training, downtime and hassle often associated with other connecting systems.

ViewWise Agents work like connector pieces between ViewWise and third-party applications, allowing ViewWise to be accessed directly from the third-party software product without opening a different program.

The GroupWise Imaging Agent is a good example of a connector used with an e-mail system. A user could access ViewWise directly through an e-mail system like Novell GroupWise simply by clicking on an embedded ViewWise file within the GroupWise universal mailbox files on the left-hand side of the GroupWise interface window.

This process is so simple because e-mail programs like GroupWise are most likely to be open on a user's desktop throughout the day. For a user to access any ViewWise image file, all the user has to do is click.

Currently ViewWise Agents connect to Microsoft office, GroupWise, and many more.

ViewWise APIs, Agents and connectors are bridges that make the most of other applications by image enabling systems that an organization already has invested in and currently works with on a daily basis.

The Industry Takes Note

ViewWise has gotten the spotlight industry wide with the award of the Business and Commercial Advanced Imaging Award of the year 2002. Novell has officially sanctioned ViewWise as its imaging enabling and IDM partner, and now offers ViewWise as the preferred Novell solution as both it's imaging enabling solution for GroupWise 6+ and as the recommended Novell IDM solution with ViewWise Enterprise.

Through this strategic partnership with Novell, ViewWise supports over 34 million desktops worldwide—a number which continues to grow exponentially.

The first imaging system to utilize a Java-based server, ViewWise is packed with innovative features, unprecedented intuitive design and conforms to industry standards..

ViewWise has a long history of meeting and exceeding customer demands with solution oriented systems. Periodically updating and maintaining them, we incorporating the latest technologies and advancements to safe guard our customer's investment.



The Future of ViewWise Solutions

ViewWise solutions are on the cutting edge of future imaging and document processing technologies, as evidenced by our use of our Java-based server that allows for maximum upgrade capability and flexibility.

As new technologies continue to enter the market, ViewWise can take you wherever you want to go. ViewWise uniquely covers the scope of past and future technology. ViewWise looks backward to image-enable the systems you bought in the past—leveraging your investment. It also looks forward to allow for up-and-coming technologies and future growth—at whatever pace you need to get there.

The future of image enabling and Integrated Document Management is exciting and without limit. ViewWise can take your imaging system wherever you want to go, and at the pace you want to take to get there.



Summary of ViewWise Benefits:

- **ViewWise leverages the investments** an organization has already made in hardware, software and people/expertise for their infrastructures, saving countless resources.
- **ViewWise is a system for capturing paper images and/or electronic file formats** and compiling them into compound documents allowing them to be indexed, easily shared and effectively managed with and without workflow. ViewWise is packed with integrated, timesaving features and essential functions to meet the most discriminating and demanding users needs.
- **All-encompassing inter-dependent technology solution** - IDM/Imaging are only two components of many possible productivity-enhancing office solutions, but ViewWise makes these key technologies more affordable and manageable. Our goal is to provide effortless Integration of solution components to provide an all-encompassing inter-dependent technology solution, each component having the ability to work independently, but together enhancing the effectiveness of each other.
- **Near instant retrieval of documents**, coupled with simultaneous access to documents by multiple users
- **Provided by a comprehensive array of search options**, all available in one user friendly interface – incorporating focused and conditional search, full text search, search of previous versions and revisions, search by creators, as well as by creation and modification dates, and enables the ability to save compiled search templates to use again and again.
- **Options for central and distributed storage** across an array of online, near-line and off-line storage media. Complemented with Advanced Check Out/In functionality ViewWise provides maximum flexibility in document access, storage management and transition.
- **Usage tracking of documents** – full audit trail of documents, who accessed them, what they did with them and when.
- **Version Revision Control** – Ability to set Version/Revision rules so that changes to the original files/raster images, metadata and or annotations are automatically registered and old versions/revisions made readily available together with the current version/revision.
- **File Security and integrity** – Provided on tree levels, ViewWise interacts with the Net operating system to utilize Users and Groups, then allows the granting of application privileges which include the ability to restricts documents from being altered or destroyed and lastly at the document level 128 bit encryption is applied so that even unauthorized attempts to access documents at the storage level are thwarted.
- **Easier implementation of retention rules** – documents that are electronically filed can be easily designated, and subsequently found to enable compliance with company and/or legal retention rules and regulations.
- **Incorporation of Workflow** into the ViewWise integrated solution makes the whole business process concept run smoothly, efficiently, and eliminates time wastage and costly errors.
- **ViewWise APIs, Agents and Connectors are bridges** that make the most of other applications by image enabling systems that an organization already has invested in and currently works with on a daily basis.
- **ViewWise has a long history of meeting and exceeding customer demands** with solution oriented systems. Periodically updating and maintaining them, we incorporating the latest technologies and advancements to safe guard our customer's investment.
- **The future of ViewWise is exciting and without limit.** ViewWise can take your system wherever you want to go, and at the pace you want to take to get there.



Conclusion

Imaging Centric Integrated Document Management is simply one component in a host of production-enhancing technologies, yet it's a valuable and important one in its own right. With or without complementary technologies such as workflow and forms extraction, ViewWise solutions can boost employee efficiency and save thousands of dollars in labor, physical space, eliminated errors and enhanced customer service facilitating a rapid return on investment. The benefits of ViewWise include easy out-of-box installation, minimal maintenance and superior integration.

The most unique benefit of ViewWise is the ability to leverage the investment you've made in your organization's hardware and software. It's a solution that can do amazing things for office productivity, customer service and bottom line.

The ViewWise image enabling is the most efficient, cost-effective IDM / Imaging solution on the market today.

More information on ViewWise

For additional information on ViewWise, please visit us on the World Wide Web at www.computhink.com or call 1-630 705 9050.

