DexFLOW Overview

Dexik Workflow Solution (aka DexFLOW) combines document management with powerful workflow automation at the unbeatable price. A leading content management product, DexFLOW:

- Requires little to no coding so you do not spend a fortune on services.
- Is easily customized to meet any customer requirements.
- Integrates with a great range of software you already have – MS Office Suite, Microsoft Great Plain Dynamics, MS SharePoint, Crystal Reports, CourtView, etc.
- Combines document imaging, case/customer management, document management, records management and workflow in a single platform.
- Automates the identification, indexing, classification and filing of imaged documents regardless of how they're captured
- Offers both Windows and thin-client interfaces.

DexFLOW allows organizations to automate business processes, reduce the time and cost of performing important business functions, improve organizational efficiency, and address the need for governance, risk and compliance through the management and control of content from virtually any source.

The DexFLOW solution focuses on managing the input, output, archival, and management of data in a multitude of ways, providing efficient management tools to maximize data, utilize the data, and enable your core systems to interface with DexFLOW. In short, DexFLOW will:

- Reduce paper handling and storage
- Eliminate lost documents
- Provide faster access to information
- Provide online access to information that was formerly available only on paper
- Improve control over documents and document-oriented processes
- Streamline time-consuming business processes
- Increase document security
- Implement detailed document audit trail
- Provide metrics to help measuring productivity, and identifying process efficiency

DexFLOW Components

DexFLOW specializes in the seamless integration of storing scanned or downloaded documents in a secure image repository with the power of workflow and reporting. DexFLOW gives users the ability to create, search, and execute business-critical documents and processes.

DexFLOW Server

The foundation of all DexFLOW content management solutions is Dexik Workflow Solution Server. The Server consists of multiple modules serving specific tasks. The highly modular architecture of DexFLOW provides multiple benefits for clients, VARs, VADs and system integrators. The benefits of this approach include the following:

1. **Smart load-balancing**: since each module performs certain tasks and the system keeps all the task statistics, it is easy to identify bottleneck in the solution and resolution is even simpler – just add threads to specific Agent or add a new Agent handling the modules with high workload.

2. **Unmatched Performance**: all the database record and content manipulation routines are performed on the servers; the user just receives the resulting data blocks back on the client. As a result all searches, image modifications, copy, split merge and other actions are performed instantly.

3. **Easy 3rd Party System Integration**: DexFLOW Modules can be implemented in many possible ways, integrated with web-services and utilize the 3rd party API components. Integrating with 3rd party system, like for example AS400 legacy application or database is as easy as writing your own Module DLL and plugging it into the solution.

4. **Advanced Expandability**: to expand the application business logic or add another level of integration with specific hardware or software, with DexFLOW there is a simple and safe way. Implement custom module based on our core API, add it to the script/UI and the job is done.

DexFLOW Solution Modules can be logically divided in 5 groups:

1. **Workflow Basic Modules**: these are modules that perform different kind of workflow operations, like handling security context, workflow events, creating documents, parcels and other records in the database. These modules also gather all kind of settings, scripts and rules that are later used both in Manual and Automatic nodes for work item processing. The group consists of Workflow Engine, Security Engine, Messaging Server, Event Processor and Workflow Context Provider.

2. **Content Management Module**: this module performs all the operations on the physical documents: scanned, attached or captured otherwise. That includes handling capture, split, merge, copy, delete and other similar operations as well as communicating with Viewer to provide user with interface to View, Edit and Annotate documents. This module can be integrated with 3rd party Content Management Hardware and Software, like EMC Centera, FileNet, Microsoft SharePoint and other systems.

3. **Service Modules**: these modules serve different manual and automatic processes providing interfaces for Barcode, OCR and ICR recognition, Electronic Form Generation, AD (Microsoft Active Directory) Integration, Broadcasting

Services, Document Format Conversion, Workflow Monitoring and E-Mail Management.

4. **Automatic Processing Subsystem**: the modules in this group provide our workflows with unmatched abilities for automation: Barcode Indexing, OCR Indexing, Document Import, Retention Management, Full-Text Search Indexing, Automatic Image Redaction and other processes. Dexik provides easy to understand, point-and-click UI for all the standard components. Additionally, the logic for most of the automatic processes is stored as .NET (C#, VB) scripts, allowing our customers to use those as samples or perform alterations on the process business login when necessary. Some customers are fine with the logic provided, but some customers write their own scripts for both server side processing and manual processing.

5. **Custom Modules**: modules built by customer requests, implementing various specific tasks, like information validation in 3rd party systems, performing updates on external databases, exporting document collections in a certain format and other.

Dexik Workflow Server configuration is simple and common parameters can be carried over from global configuration to improve solution setup time. Basic 2-3 servers setup is taking 20-30 minutes to set up from scratch, when the data structures and workflow setup is complete.

If complex business logic implementation is required, DexFLOW Server can be expanded with business-logic related modules, for example: Case Management System (CMS) Engine that uses Workflow and Document Management modules to implement complex business logic. At the same time, the DexFLOW base stays unmodified, providing a solid basement for the new solution. With the help of DexFLOW Solution and API building industry specific integrated desktop application is matter of weeks, not months or years like before.

Dexik Workflow Solution is one of the few products on the market that allows customers to take full advantage of the 64-bit architecture. All the solution components are available in both x64 and x86 packages.

Content Management: Check-In/Check-Out or Collaboration

Dexik Workflow Solution Content Management is flexible and secure application server that allows storing documents and other content on the file system. Since there is no direct access from the User to the Content Storage – the security is as tight as content management systems from leading providers at a fraction of the cost.

Dexik Content Management Server supports storing any types of documents, implements Document Versioning, and provides abilities to annotate documents. With the ability to configure advanced security settings for Document Content objects and Digital Signature implementation – you can be sure that your solution will comply with the most advanced and strict requirements, keeping solution simple and content safe.
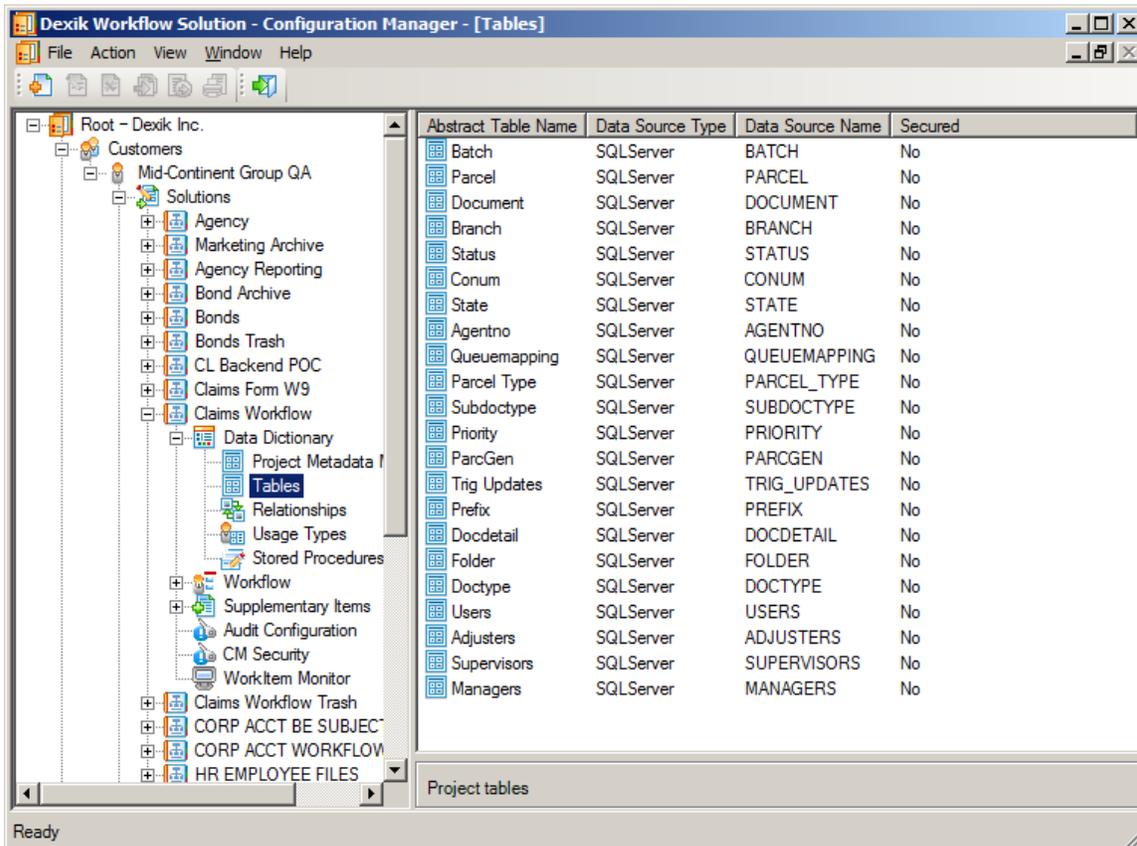
Dexik Content Management Server can be configured in two modes: Check-In/Check-Out and Document Collaboration. The Check-In/Check-Out mode is the default one.

Dexik Workflow Solution can be easily integrated with 3rd party Content Management Systems, like FileNet, EMC Centera or Microsoft SharePoint Server.

Metadata

DexFLOW Data dictionary setup is very flexible in comparison to the competitors. Basic DexFLOW setup starts with 3 tables:

- Document: for storing records associated with physical or logical documents.
- Parcel: for storing parcels, entities that travel through workflow. A Parcel can contain 0 document or more.
- Batch: for storing batches, the registration information records pointing to batches of documents scanned together as one set.

The rest of the setup totally depends on customer's business needs. It could be fairly simple, like three levels setup where each document has a Document Type assigned and belongs to single unique Folder. It could be a setup where single document simultaneously belongs to 2 or several logical folders, like for Insurance industry single document may belong to a Policy and Claim folder simultaneously. It could be a recurring subfolder setup that mimics the file system, like in Windows explorer: there might be unlimited number of subfolders inside a folder and each subfolder can contain document.

Customer IT or integrators can expand existing tables by adding indexing fields, build new tables and link the tables with each other, defining the parent-to-child relationship between database objects.

Workflow

DexFLOW Workflow provides ability to design new or customize existing workflows based on the business requirements. With DexFLOW, you will be able to:

- Automate your daily activities
- Perform automatic routing
- Define approvals based on certain conditions
- Set flags and priorities
- Send notification emails
- Update fields based on defined criteria

These are just a few examples on what automations can be achieved using DexFLOW Workflow. We provide a wide-range of customizations capabilities that are built into the system. Most of the automatic processes are either VB.NET or C# scripts, allowing customer's IT and programmers to perform most of the customizations "on-the-fly" without the product change or usage of consulting from the vendor. Same applies to Actions that are defined in each manual node configuration. Workflow Administrator can choose from variety of standard actions, like View, Edit, Search, Modify Record, Send, Merge, Split and others. It is allowed for the Administrator to design the toolbar visually by changing the position, caption and icons for the buttons.

The other possibility for expansion is adding custom actions that are described as C# or VB .NET code. Within these actions Dexik provides a wide range of API for accessing database records and physical documents.

Workflow group also allows managing different supplementary items like OCR, Barcode and Electronic forms, Stamps, ERM Models as well as visual UI forms for Data Query, Indexing and Table representation.

Dexik Workflow abilities match up with any capabilities of the competitor products and surpass those on multiple occasions. This allows our customers to build workflows easier and make those more time and process effective.

Designing Workflows

Using Workflow Configuration Manager designing a workflow is as easy as drag and drop required objects to the workflow map:
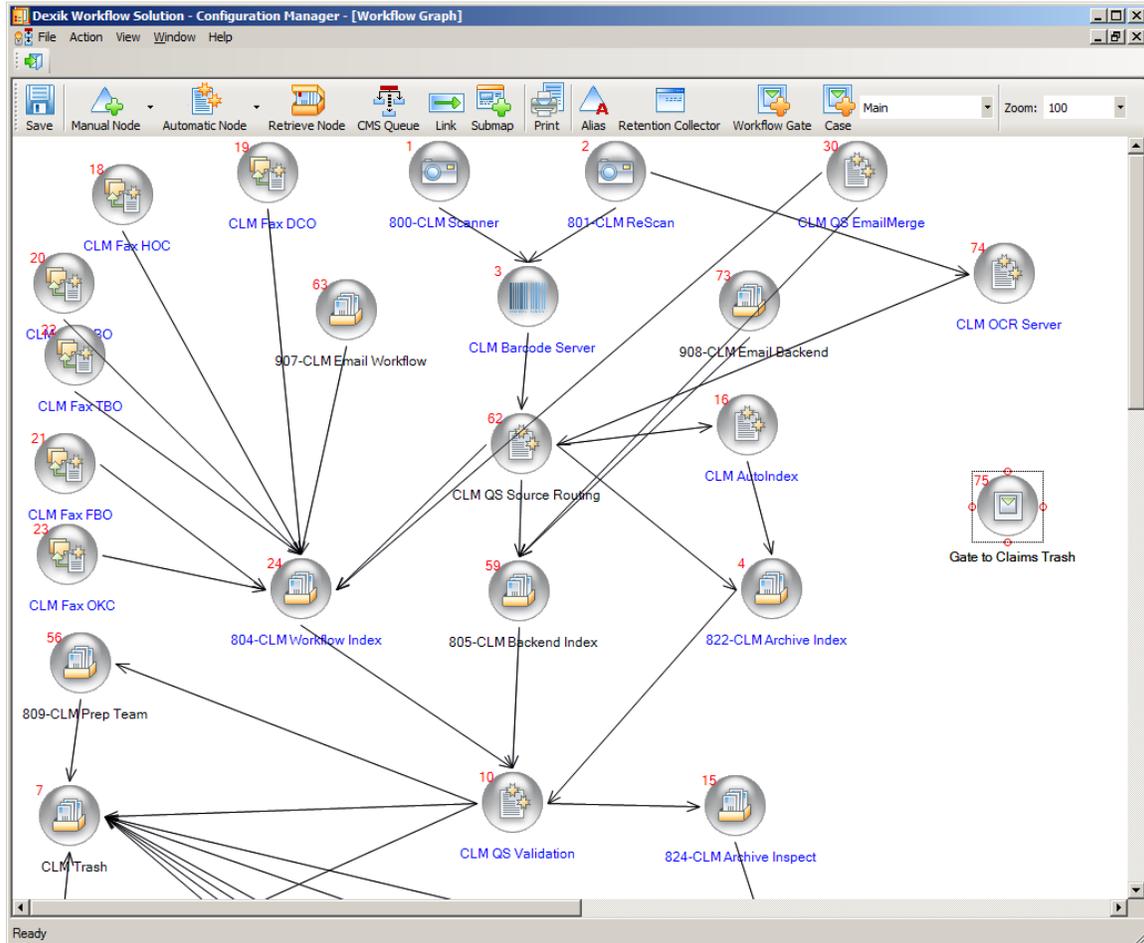
For each workflow object, you can set up various configurations:

- Select user actions from the extensive list or create your new ones, define shortcuts.
- Design escalation algorithm.
- Define send rules for each work item based on certain criteria.
- Assign groups and users.
- Define events triggered on certain actions in the queue.
- Set up user actions to be executed. DexFLOW provides an extensive list of pre-defined actions for automation. You can also easily create your own scripts on VB.NET or C#.

Workflow Node Types

Dexik Workflow Solution provides a wide-selection of manual and automatic nodes to choose from. Although, the node configuration could be changed after the node was created there are certain groups that define node main pre-configured purpose:

- **Retrieve**: this node is primarily used to quickly locate the information in the document management system. The configuration contains selection of Query and Table forms for visual UI presentation.

- **Manual Nodes**: these nodes present a variety of UI used to capture, review and process work items and documents. **Capture**, **Indexing Queue** and **Mailbox** nodes are built in regular "Parcel-Document" view and differ only by the set of pre-configured actions. Usually, **Capture** is used for scanning and basic indexing purposes, **Indexing Queue** is used to fully index the document and **Mailbox** is a queue that is primarily used for inspection, review and processing. However, since the actions are linked to specific node, not the specific node type this categorization is for customer references only.

- **Advanced Manual Nodes:** there are two advanced manual nodes: Explorer View and Advanced Mailbox. Explorer View provides user with easy to use interface for Retrieval, similar to Windows Explorer. This node is used when it's necessary to cover "recurring subfolder" structures (subfolders within subfolders).

  Advanced Queue provides an interface to review documents grouped by other entity than parcel. For Insurance industry example, based on the configuration certain users will be working with documents in their mailbox grouped by Insured and the other users will work from Policy level. This UI flexibility allows better organizing user's desktop and improves overall processing time.

- **Workflow Gate Node:** this node is used to send items between different workflows. Workflows can either have the same data structure or different data structures. In case of different data structures, administrator can define data transformation logic.

- **Retention Collector Node:** this node is used to review collection of documents that have been identified for retention, based on the rules defined by Workflow Administrator. This is an Inspection node to request final review and collection approval from business user. After the collection is approved, the automatic process will destroy documents and database records.

- **Custom Manual Nodes:** VAR, VAD or integrator can build custom UIs and integrate those directly to Dexik Workflow Console. This integration is based on Dexik API and is completely seamless for the end-user.

- **Automatic Nodes**: automatic nodes combine automatic processes, like: Automatic Indexing (Barcode, OCR), Retention, Automatic Import, Routing, Conversion, Automation Redaction and other processes. The Workflow Administrator defines the necessity to use certain processing logic at certain step in workflow. The purpose of these nodes is to decrease manual processing necessary to classify a document and provide users with assistance in processing (validation, routing).

- **Case Management System Queue**: special type of node designed to build advanced Case Management System with flexible, but intuitive UI.

Workflow Events

Workflow Events is a powerful tool that allows Workflow Administrator to automatically trigger an operation when certain events occur. Two basic events are Work Item arriving to the node and Work Item leaving the node. Basic events could be complemented with additional ones by request, like: Document Indexed to Document Type. Document Viewed, Created or Modified.

When the event trigger occurs, the event is automatically executed. The simplest example of the event is e-mail notification, but it could be anything from automatic routing, information validation, document printing, etc.

Events help to simplify Workflow design process and make Workflow Map easily readable as these remove necessity to create additional node that will arrange the extra automatic step in processing.

Operations with Workflows

Using Workflow Configuration Manager, system administrator can perform the following tasks:

- Design workflow from scratch or based on the pre-defined solution templates provided with the DexFLOW system.
- Import and export workflows.
- View specific tasks performance, document location in the system.
- Distribute work items as required between the users and/or automatic processes.

User and Group Security

DexFLOW system provides very flexible security mechanism to meet any customer requirements. For each user and/or group DexFLOW provides ability to:

- Define access to the workflow objects.
- Set up content management security – annotations, stamps, document and page notes, etc.
- Configure ACL security.
- Synchronize with Active Directory, thus eliminating the necessity to set up users and/or groups manually on the DexFLOW system.
- Configure single login to the DexFLOW system so the user is authenticated automatically by MS Windows workstation credentials.

DexFLOW Capture Tools

Composite Document Content

Viewer and Content Management allow combining different content type files into the single logical document. This allows users to keep scanned documents, Word, Excel, and Audio Recording as separate pages of a single document. From the user standpoint, this feature is very effective and convenient as UI will switch automatically when user browses through the document.

Scanning

Workflow Capture tools allow using both industrial document scanners for high volume batch scanning and ad hoc scanning using desktop versions of the scanners. The following scanning interfaces are supported: ISIS, TWAIN and Kofax VRS.

If the scanning driver allows setting up multiple scanning profiles, it is possible to utilize the UI that goes with the driver. At the same time, Dexik Viewer provides capabilities to create scanning presets and utilize those to quickly switch scanning settings.

When scanned, the document is saved in the Content Management: black and white content is saved as CCIT4 TIFF files and color content can be saved as TIFF, PNG or JPEG files, depending on configuration. Selecting storage format allows better balancing between storage space and image quality requirements for color content as difference between color compression types for the same file could be 25-30 times.

File Pickup

Workflow Viewer natively integrates with most common document formats: Adobe PDF, Microsoft Word, Excel, PowerPoint, InfoPath, WAV, AVI, TXT, RTF, HTML, etc. This feature allows user to attach document content that resides on the accessible location without converting this content to image format. However, if such conversion is necessary for legal or other purposes, the Conversion Engine can perform this task at the workflow step defined by Administrator.

Manual E-Mail Capture

Workflow Viewer allows capturing an e-mail from the POP3 mailbox directly into the Workflow. Upon capture, the Mail Body is saved as HTML and attachments are saved as separate document pages.

Recording Audio and Video

Workflow Viewer allows capturing audio and/or video streams directly from your web-camera or other device attached to your computer. This is very convenient for capturing phone calls, accidents or security footage and other related content. The content will be compressed for the purposes of saving the storage space and minimizing network traffic.

Tasks

In certain circumstances, it may be necessary to use native application for the certain file types. This can be the case for MS Office applications or for capturing and viewing some exotic format, like AFP. In this case, Administrator can define the "launching" application by extension and assign default content type handler, specific content type handler or specific executable to handle these files. In this case, the document will be always open in the corresponding application.

Document Form Generation

Electronic Form Generation is becoming more and more popular as organization starting their way towards replacing paper-based form documents with electronic forms. However, building forms is a challenging task in many systems and it requires significant resources. Dexik has simplified this task tremendously by using widely-known Microsoft applications, like Microsoft Word, Microsoft Excel and Microsoft InfoPath as electronic form designing applications. Any person with advanced MS Office skills is now able to set up document templates and electronic forms. Upon creation, the forms can be pre-populated with the information from the database. Dexik Form Generator also supports PDF/.FDF and DevExpress forms.

Electronic Forms (Data)

For certain businesses, it may be necessary to create an electronic document record, without attaching a physical document to that record. Later this information can be used to generate certain forms using Document Form Generation or just for Retrieval purposes.

Interactive File Import

Interactive Document Import module allows remote users to capture any types of documents through scan or drag&drop, perform basic or full document indexing (optional step) and initiate document "background transfer" to the server. This capturing approach is especially useful in one of the following business cases: user wants to utilize non-standard software package from scanner's manufacturer for any reason or user is capturing document from remote location with unstable or slow internet connection.

Automatic File Import

Import Server is designed to capture documents and indexing information from the file system location into the workflow system without any user supervision. The documents could be converted upon capture or left in their native format. The indexing information could be provided as CSV, XML or other standard type of file. Import Server is a high-performance application that can handle both day-to-day volumes and perform importing of large data sets.

Automatic Email Capture

Mail Capture is designed to automatically capture e-mails from one or multiple POP3 mailboxes directly into the Workflow. Upon capture, the Mail Body is saved as HTML

and attachments are saved as separate document pages. Very often Mail Capture is used together with Import Server for document conversion purposes.

Image Enhancement

Dexik Image Engine provides wide range of Image Enhancement capabilities: deskew, despeckle, invert, etc. These enhancements can be applied at the time, when the document is captured or later at any step in the workflow. Based on Intel IPP, Dexik Image Enhancement Engine provides unmatched performance, better results and stability.

DexFLOW Identification and Processing

Manual Indexing

Manual Indexing is the process that is performed by the workflow user to ensure that document is properly classified and categorized. Manual Indexing can be performed in several steps or driven by Indexing Wizard, the special UI that will drive less experienced user through the indexing process and speed-up processing for experienced users.

Automatic Document Classification

Dexik Workflow Solution provides wide range of capabilities for building different kinds of Document Classification workflows: from simple to complex ones. However, Dexik engineers made the configurations for the Document Classification components simple and intuitively understandable. A variety of automatic processes, like OCR, Barcode, Routing, E-Mail Capture and others allow easily implementing even what is considered to be complex customer requirements on Document Classification. Flex-OCR and free-form document classification make Dexik Workflow Solution the ultimate choice for the set of industries and applications: government, insurance, banking and others.

When compared to the competitors Dexik Workflow Solution allows building solutions faster and simpler. Combined with the lower initial costs, Dexik Solution saved our customers fifty percent and more in comparison with EMC Captiva at the same time decreasing implementation cycle length three times or more.

Barcode Recognition

Barcode Recognition process allows quickly identifying document classifications and applying corresponding indexing values to the document. This process is highly effective in reducing work hours necessary to index and classify documents in comparison to manual process. Dexik Barcode Processor is able to integrate with multiple Barcode Engines: internal, Axtel, Pegasys.

OCR/ICR

Optical Character Recognition (OCR) and Intelligent Character Recognitions (ICR) processes allow quickly identifying document classifications and applying corresponding indexing values to the document. This process is highly effective in reducing work hours

necessary to index and classify documents in comparison to manual process. For result verification and inspection purposes, the QA station could be used as additional option.

Dexik OCR allows processing both fixed form and free form documents, with simple setup steps at unmatched performance. Dexik is using ABBYY FineReader, the leader on the OCR market for recognition purposes.

Full Text Search

Full-Text Search process uses the text data extracted from the document to create the FTS catalogs in the database. These catalogs later allow quickly locating document or set of documents by specific words or phrases.

OCR should be performed first on the Image Documents to extract the text data.

Data Import

Import Server can be used to import data from CVS files or XML files. In this case, only records in the corresponding tables will be created without attaching a physical document.

Document Routing

Document Routing is an essential step in the workflow, that allows process optimization and work collaboration. Administrator can set up basic or advanced routing rules that will help system to determine the work item addressee, based on the certain indexing values or data validation results. Proper routing rules and techniques allow greatly decrease average processing time, especially within large departments or organizations.

Data Validation

Data Validation is a very important workflow step, especially when the system integration is in place between 2 or more different systems. The Data Validation results will determine the proper routing path, improve process effectiveness and protect against human errors.

Automatic Redaction

Redacting sensitive information is not only a mandatory step before placing any document into public portal, but it is often required for the organizations internally. Some employees may not be authorized to see certain data, like SSN, DOB or Account # and redacting this information manually is a time and resource consuming task.

AutoHide Server allows quickly identifying the sensitive information by templates, masks or patterns and hiding this information from the individuals without the certain security permissions. For result verification and inspection purposes, the QA station could be used as additional option.

Electronic Signatures

Electronic Signatures is a very important part of the Document Management System that insures document validity. To ensure that document wasn't altered since the approval step, the unique checksum is calculated and later document can be at any point verified against this checksum to ensure document integrity.

Document Retrieval

Document Retrieval is the main process of any document management system. This process allows users to quickly identify necessary information and documents and access that information in a timely fashion. The Retrieval is the final process and ultimate goal for any document management system. Dexik Workflow provides several retrieval capabilities for both data in workflow and in the archive storage. Retrieve and Explorer UIs are very flexible allowing users to define the way how search is performed and how search results are presented.

Reporting

DexFLOW Reporting system is very flexible and can be integrated with Crystal Reports. At the same time the system is self-sufficient, providing all the information necessary for the workflow solution to operate successfully. The system is very customizable; it is easy to build reports by customer's request. Among the standard reports that are provided out of the box are Audit Report and Statistics report.

DexFLOW Clients

For customer's convenience Dexik provides 2 types of standard client applications with the Workflow Solution:

- Workflow User Console: a Windows forms based application with advanced UI personalization capabilities;
- Workflow Web Console: a Silverlight-based OOB (Out-of-Browser) application, with full keyboard control and advanced UI personalization capabilities.

Both client applications use Dexik Viewer for document display and manipulation.

Workflow User Console

Workflow User Console is an advanced application that integrates advanced UI capabilities, blazing performance and variety of personalization options.
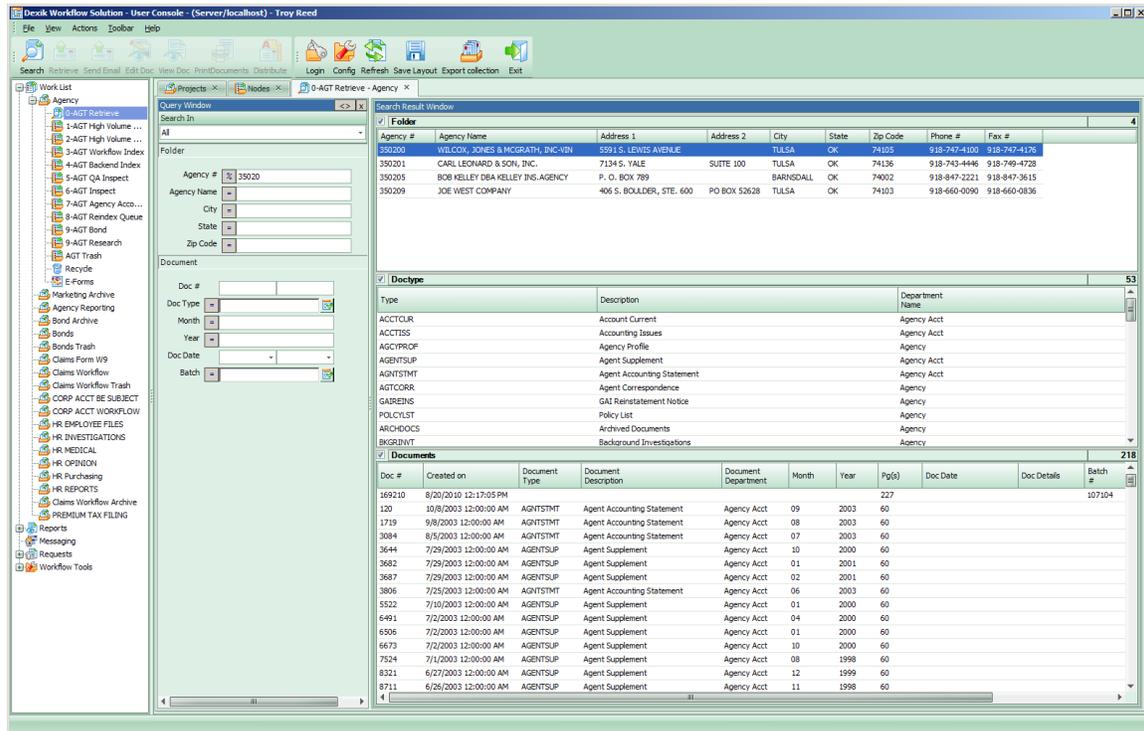
Workflow User Console is used to perform capture, indexing, review and retrieval tasks.

Console UI is fully functional and provides access to all standard and customizable features of the Workflow.

The personalization options allow users to adjust button and toolbar locations, table sort order, and table column width, select UI theme (skin) to ensure that processing is organized conveniently and effectively. User interface for different nodes can be organized as tabs or as separate windows, based on user preferences.

Workflow Web Console

Workflow Web Console is an advanced web-based application that integrates advanced UI capabilities, blazing performance and variety of personalization options.
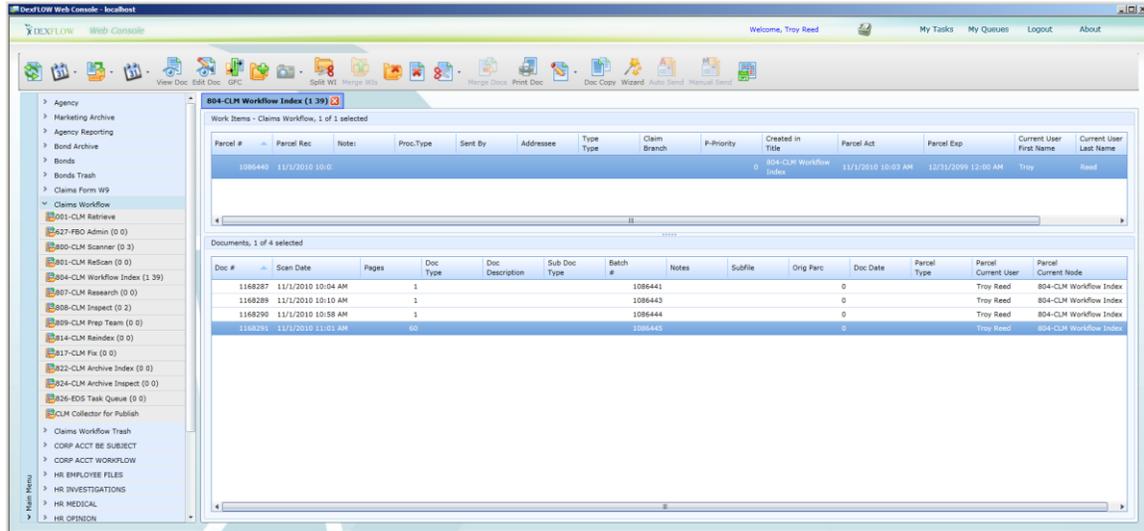
Workflow Web Console is built on the latest Microsoft technology for rich, web applications – Microsoft Silverlight 4.0. This technology allows users fully utilizing keyboard capabilities and provides an advanced UI for the web-based applications.

Before this technology was available, the only alternative for the rich, web clients was Java applet, a technology that is far from flawless. Traditionally, web applications tend to be more limited in terms of business functionality, generic capabilities and visual representation, leaving customers dissatisfied with the product.

Dexik Web Console is fully functional, implementing the same set of feature that Workflow User Console does, but in the web realm.

Document Viewer

Dexik Document Viewer is an application that allows users to create, view and manipulate document content. Viewer is fully integrated client that is securely communicating with the Workflow Server via TCP/IP.

Dexik Viewer support different types of annotations, like: document notes, page notes, posted notes, stamps, highlights, lines, text, redaction and bookmarks. When necessary certain annotations or annotation types can be secured.

Viewer thumbnails pane allows users to quickly manipulate pages: cut, copy, paste, move, delete, etc.
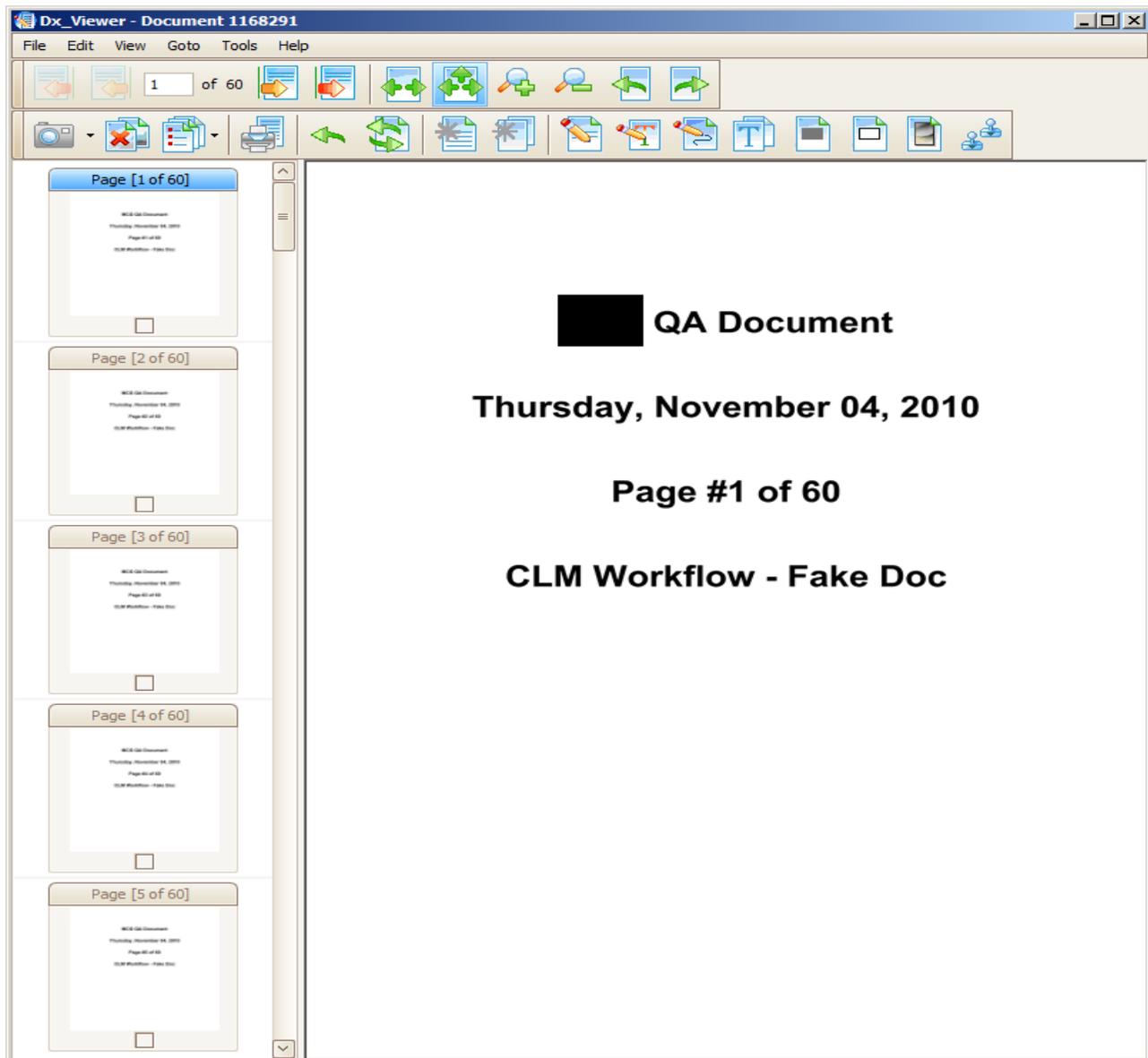
DexFLOW Audit Trail

Dexik Workflow Solution provides administrators with advanced auditing capabilities, allowing to quickly identifying user errors or workflow configuration flaws.

This report allows quickly tracking the document, checking if the workflow path was correct and if user error is identified – providing additional information or training to the user.

Since this report was introduced, it has tremendously improved issue resolution, response time and workload on the Workflow Administration staff.

FAQ

Our Frequently Asked Questions list is constantly expanding as we are adding most common questions asked by our customers and prospects. It is now detached into the separate file *Dexik Workflow Solution FAQ 1.1.pdf*