Document Automation Solution Vendors for Insurers 2007

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Executive Summary

This report is Celent's second look at document management for insurers, but the first report that focuses entirely on document automation. The first report, *Document Management for Insurance: Overview and Solution Spectrum*, August 2006, provided short profiles on nine document automation vendors and 18 document handling vendors. This report provides in-depth profiles on 11 document automation vendors.

Document automation is the authoring or automatic generation of a document to communicate with external parties, such as regulators, agents, policyholders, or prospects. It is high on CIO priority lists, with more than half of the CIO respondents to Celent's 2007 CIO survey either implementing or actively considering document management initiatives. In the Celent report *Insurance Software Deal Trends 2004-2005,* document management deals outpaced nearly all other areas in terms of number of deals closed. Especially high in volume was document creation at life/health companies.

Recent years have seen a substantial amount of convergence among document automation solutions. For example, nearly all of them now offer a WYSIWYG ("What You See Is What You Get") interface for template design, as well as both ad-hoc and batch capability. At an even more detailed level, most vendors build templates from document components, allowing a content author to create text blocks, rules, and logic once and then reuse it across multiple templates. As service-oriented architecture (SOA) has become a landmark in most insurers' technology road maps, all the profiled document automation vendors have made a major commitment to SOA, either building solutions from the ground up using Java and/or .NET or providing web service wrappers.

This report uses Celent's ABCD Vendor View, which is a standard representation of a vendor marketplace designed to show at a glance the relative positions of each vendor in four categories: **A**dvanced technology and technical flexibility, **B**readth of functionality, **C**ustomer base, and **D**epth of client services. Unlike a simple "four-quadrant" map, **solutions in the upper right are not necessarily the best solutions**—in an area as complex as document automation, there is no one "best" for all cases. Insurers should consider which factors in breadth, technology, experience, and client service are most important to them, and use the profiles and comparative tables in this report to generate their own short lists. For example, if a carrier doesn't need archiving or content management along

with their document automation, a system lower on the breadth axis might be an excellent option.

Figure 1: ABCD Vendor View for Document Automation Vendors 2007

Celent ABCD Vendor Comparison

Source: Celent
* Skywire Software includes Documaker and IStream

Introduction

This report is Celent's second look at the document management for insurers, but the first report that focuses entirely on document automation. The first report, *Document Management for Insurance: Overview and Solution Spectrum, August 2006*, provided short profiles on nine document automation vendors and 18 document handling vendors. This report provides in-depth profiles on 11 document automation vendors.
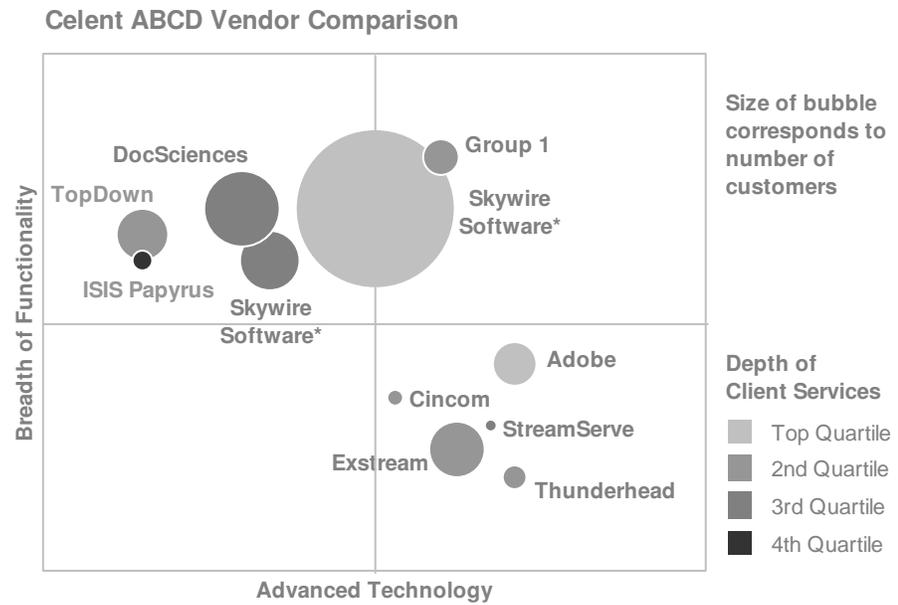
This report includes full profiles for the 10 systems that fully met the inclusion criteria described in the "Report Methodology" section of this report, as well as one limited profile for a vendor that did not fully meet the inclusion criteria. The report also includes numerous comparative charts and tables across a variety of metrics.

This report makes use of Celent's ABCD Vendor View tool. In contrast to a simple four-quadrant map, the ABCD Vendor View presents a comparative view of the vendor marketplace that visually represents four elements: **A**dvanced technology and technical flexibility, **B**readth of functionality, **C**ustomer base, and **D**epth of client services. The ABCD Vendor View is a simple graphical representation of a highly complex market space. While it is a useful snapshot, it is not a substitute for the detailed information found in the profiles.

Celent defines "document automation" as—at a minimum—a system that allows the automatic generation of a document or documents from a managed template with both variable data and business rules. This definition does not include more simplistic "mail merge" technology. Today, most document automation vendors provide an array of similar features, including a WYSIWYG ("What You See Is What You Get") interface for designing templates, both ad-hoc and batch capability, componentized documents, and a commitment to SOA, as well as various insurance-specific interfaces. This report examines the vendors of systems that at a bare minimum offer the ability to create a template with placeholders for data and defined business rules that will be used to automate the generation of multiple documents.

Report Methodology

Eligibility for Inclusion

In order for a document automation vendor to be included in the 2007 report, the vendor had to meet three criteria:

- At least one new sale to one new insurance carrier customer within the last 24 months

- At least two live North American insurance customers, at least one of which must be a carrier

- At least two reference clients available to discuss the system

These criteria were designed to maximize the number of systems that can be reasonably expected to remain available (and viable) based on vendor size and strength, maturity of each product and its client base, and other important factors. Based on these criteria, this report includes detailed profiles on 10 vendors as well as one limited profile.

Evaluation Process

After receiving completed RFIs for the systems, Celent conducted follow-up calls with personnel at each vendor. Reference calls were then made to at least two reference customers for each system to gain insight beyond a vendor's own responses. Both the RFIs and the reference surveys provided quantitative and qualitative data, much of which is included in this report. Vendors had an opportunity to review their profiles for factual accuracy but were not permitted to influence the evaluation. Although some of the vendors profiled in this report are Celent clients, many are not. No preference was given to Celent clients for either inclusion or evaluation.

Celent's ABCD Vendor View

Celent has developed a framework for evaluating vendors called the Celent ABCD Vendor View. This is a standard representation of a vendor marketplace designed to show at a glance the relative positions of each vendor in four categories: **A**dvanced technology, **B**readth of functionality, **C**ustomer base (i.e., relative number of customers), and **D**epth of client services.

The Celent ABCD Vendor View shows relative positions of each solution evaluated, and does not reflect an abstract evaluation. Each vendor solution is judged relative to the others in the group.

While this is a standard tool that Celent uses across vendor reports in many different areas, each report will define each category slightly differently. For this report, some of the factors used to evaluate each vendor are listed in Table 1.

Table 1: ABCD Factors

Category	Factors Include
Advanced Technology (and flexible technology)	• Code base, including modernity of language and consistency of architecture • Support for SOA (web services) and ACORD XML • Support for multiple methods of integration with existing architectures • Use of XML or open-source means for representing documents • Separation of content and layout/design within document templates
Breadth of Functionality	• Number of functional components (e.g., ad-hoc interface, content management, workflow mapping) • Ability of business users to make changes without IT • Number of platforms supported
Customer Base	• Number of live US/Canadian customers • Number of customers on most modern version of system
Depth of Customer Service	• Availability of BPO and ASP options • Size and experience of product team and implementation team • Partnerships • Breadth of additional services offered

Source: Celent

Note that the number of supported platforms and databases was used as a factor in determining the breath of functionality placement and not advanced technology placement. Due to the evolving nature of the industry, vendors with the latest technology are often the least likely to offer mainframe support. Before creating a vendor list, clients should utilize the technology table to determine whether a particular solution supports the necessary infrastructure.

Reading the ABCD Vendor View

The ABCD Vendor View positions each solution in a single X/Y scale, with the horizontal axis displaying the relative level of advanced technology and technical flexibility and the vertical axis displaying the relative breadth of functionality. The size of the system's

customer base is represented by the size of the bubble, while depth of client services is represented by color density. For size and depth, the vendors are divided into quartiles based on their relative position. All the vendors were graded on the same scale, regardless of their target market segment. Quartiles were determined by relative position to the highest scorer. It is important to note that positioning and evaluation are relative to this set of solutions.

The ABCD Vendor view is intended to provide an easy-to-understand picture of a complex marketplace. Unlike a simple "four-quadrant" map, solutions in the upper right are not necessarily the best—in the complex world of document automation, there is no one "best" for all cases. Insurers should consider which factors in breadth, technology, experience, and client service are most important to them, and use this report to generate their own shortlists.

Figure 2: ABCD Vendor View: Document Automation Vendors 2007

Celent ABCD Vendor Comparison
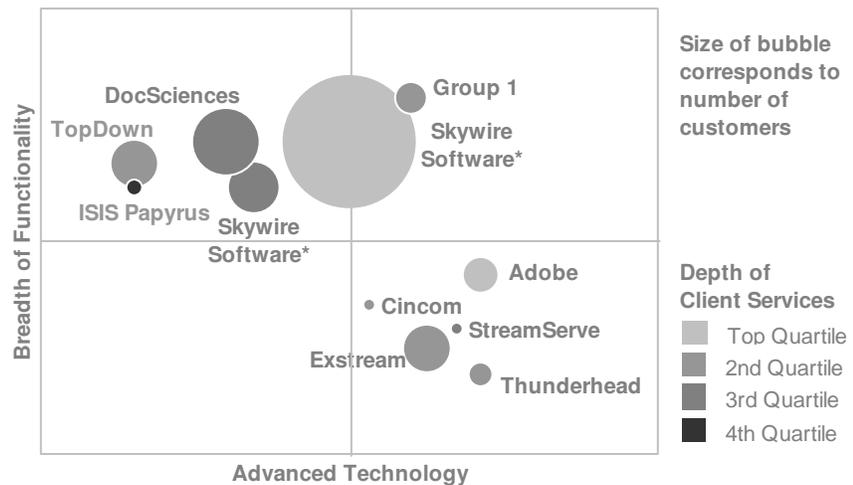
Source: Celent
* Skywire Software includes Documaker and IStream

This ABCD Vendor View for document automation reveals an interesting trend that may help carriers make vendor selections. In general, solutions with more advanced technology have less breadth of functionality, as they have chosen to focus their efforts exclusively on document automation. Other vendors, often with a longer history, have built a wider range of document management functionality and support a wider range of platforms, though they may not have modernized all the systems to the same extent.

Note that StreamServe appears in the ABCD Vendor View despite the fact that it has been included in this report only as a limited profile. No reference checks were done to validate

its technology or functionality, and at the time of this report StreamServe has no North American insurer clients.

The Role of Documents in Insurance

Insurance is about information, and despite advances in electronic data management and transmission, including the ubiquity of the Internet, much of that information enters, leaves, and lives in the insurance life cycle in the form of a paper document.

Although the industry is slowly progressing toward a less paper-intensive workflow, the majority of incoming and outgoing communication in most stages of the insurance life cycle is still paper-based. Table 2 provides a high-level overview of different types of documents that play a major role in the insurance life cycle.

Table 2: Document Creation and Document Handling in the Insurance Life Cycle

Stage	Document Creation Issues	Document Handling Issues
Product Definition	• Policy language must be drafted in a collaborative environment (actuarial, marketing, compliance) • Policy forms and rates must be filed with the state regulators	• Workflow for collaborative document creation
Distribution	• Product information, application forms, and product information must be created and distributed to agents • Agents must have the ability to generate proposals for prospects	•Workflow for collaborative document creation
Underwriting	• Rejection letters must be created and distributed.	•Completed applications and additional requirements documents (parameds, inspection documents) must be received and stored in a case file accessible to underwriters
Issuance	• Policy documents must be created and distributed	• Policy documents must be archived for compliance purposes
Billing	• High-volume customer and agent commission statements must be printed and mailed	• Statements may be archived

Source: Celent

Table 2: Document Creation and Document Handling in the Insurance Life Cycle

Stage	Document Creation Issues	Document Handling Issues
Service	• Automated notifications and individual messages must be created and distributed	• Incoming and outgoing communications must be archived and associated with customer records
Claims	• Correspondence must be created and sent	• First notice of loss (FNOL), adjuster reports, third party reports, and correspondence must be accepted, tracked, and stored in a case file accessible to claims adjusters

Source: Celent

Key issues in document creation are complexity (the number of different elements that must be assembled into the document) and volume (the number of documents that must be produced and distributed). Figure 3 shows the relative role of complexity and volume in some typical insurance document types.

Figure 3: Complexity and Volume in Insurance Documents
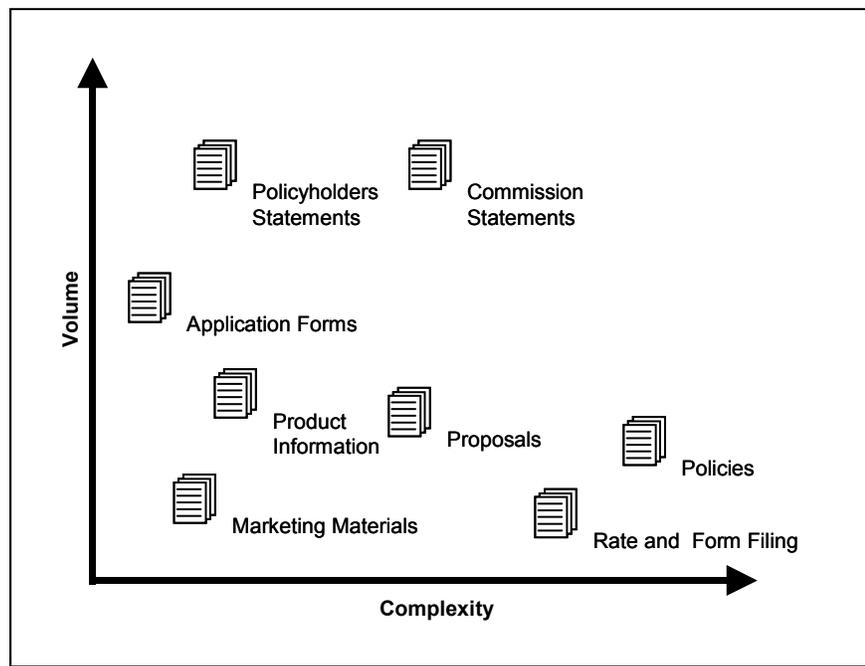
Source: Celent

Other important issues in document creation are: version control, making sure documents that are accessible to external stakeholders are most current; compliance, making sure that documents that are created have been approved for use by the compliance department; and accessibility of underlying information, the ability of a document creation system to access the information needed (policy language, account data, etc.) to create the appropriate document.

Document Automation Components

There is a good deal of confusion among insurers about the document solution providers market. There are scores of providers in the market, and many claim to be all things to all customers. However, in general, solutions generally fall into either document automation or document handling. This report focuses exclusively on document automation solutions.

All document automation solutions comprise both **design-time** components and **run-time** components. The design-time components allow users to set up templates with document metadata, which is information that describes the final document. The run-time components combine the templates with production data to generate final documents for distribution.

Document Automation Design-Time Components

Document automation solutions simplify a company's document generation process by allowing the mass creation of documents from a common template. A document template is a set of content, variable data, business logic, layout design, and marketing material that will be combined with production data and turned into a printed file, a PDF, an email, or any form of document specified by the user and allowed by the system.

In order to create these templates and set up the process for how a template is generated, document automation solutions provide a set of design-time components. These tools, for the most part, have a smaller user base, because the people responsible for the template and process implementation are a select group of business and IT users in a central office location. The design tools are typically thick-client applications installed only on a few desktops, though some vendors do utilize web-based interfaces for some or all of the design.

Not all vendors use the term "template." Some refer to it as a "form," a "framework," or by another name. For the purposes of this report, a "template" refers to the set of metadata that, when combined with production data, will generate a final document. Though the template might differ between vendors—some are stored as XML, some in a proprietary format, some as a Microsoft Word document—they all serve the same purpose: to allow the creation of documents with minimal effort.

Figure 4: Document Automation Design-Time Components

Workflow		
Input / Data	Authoring / Design	Output / Distribution
Content	Layout / Presentation	Business Logic / Rules
	Variable Data	Marketing Content
Document Process		
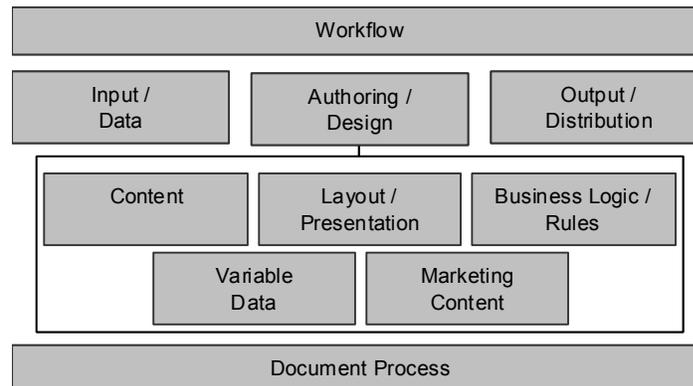
Source: Celent

Document automation solutions typically have the following design-time components, as shown in Figure 4.

- **Authoring/Design**. Current vendors all provide a WYSIWYG interface (i.e., a user interface that resembles or is actually built on word processing or desktop publishing software) for designing document templates. Some vendors will have all template elements edited by a single user, while others will separate template elements into different tools for different users. Templates consist of the following elements:

    - Content. The content of a template determines what information and text the final document will contain. Content might be an address block and the text of a letter.

    - Variable Data. Typically defined alongside the content, the variable data consists of placeholders that will be mapped to production data during document generation. If the content includes a variable data address block, an actual client's address will be used at run-time.

    - Layout/Presentation. The layout and presentation of a document determine the final look and feel of the generated document. Some vendors provide an interface as close to a standard word processor as possible, in which case content and layout are done by the same user. Other vendors separate layout into its own interface, allowing multiple layouts to be applied to the same set of content.

    - Business Logic/Rules. For more complex documents, there may be rules in a template that change the final output based on the production data. For example, users in Texas might see an additional block of text.

Rather than creating a second template for Texas clients, one template can be used with conditional logic.

- Marketing Content. Some vendors provide a secondary interface where marketing or other business users can update text without needing to edit the main template. An example would be a box on a correspondence letter where a marketer could change important notifications.

- **Input/Data.** In order for a template to be useful, it needs to be able to use production data in the generated document. All vendors have a notion of mapping data to the variable data in the template, though with some vendors this mapping is done through code, others through a visual mapping tool, and others a combination of both.

- **Output/Distribution.** Once a document is ready to be generated from a template, the final format and distribution method must be determined. Most vendors provide a tool, either as a separate interface or part of the main design environment, that lets a user determine what kind of document will be generated (such as a print stream, PDF, HTML page, or XML) and through what channel it will be distributed (such as a printer, fax, email, web page, or SMS).

- **Workflow.** This allows collaborative creation of documents and review and approval of templates.

- **Library or Repository.** This is a database of document components, forms, and even archived versions of completed documents.

Document Automation Run-Time Components

Document Automation solutions have a set of run-time components to combine templates with production data and generate final documents. The run-time components will allow either direct user interaction or an automated process to select a template and merge it with production data. The business logic defined in the template, if any, will determine what pieces of the template to use. The variable data will be filled in by the appropriate production data. Then the content (including the optional marketing content) and the data will be put into the correct layout and the final document will be generated.

The run-time components will either perform this task to generate a single, ad-hoc document, or will apply a large set of data to generate a large number of documents in batch.

Figure 5: Document Automation Run-Time Components

| Ad-Hoc Process | Ad-Hoc Interface | Batch Process |

Ad-Hoc Portal | Ad-Hoc Doc Editor

Composition Engine

Workflow
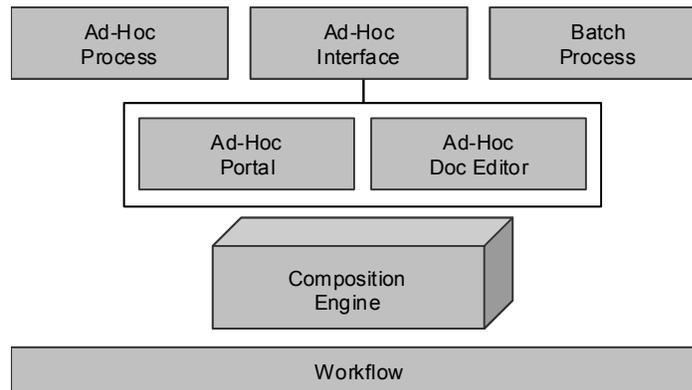
Document automation solutions typically have the following run-time components, as shown in Figure 5.

- **Composition Engine.** The composition engine will take the data, template, and output rules to generate the final document and distribute it through the appropriate channel. The engine is usually accessible via web services or API calls. There are three ways to interact with the composition at run-time: the Ad-Hoc Process, the Ad-Hoc Interface, or the Batch Process.

- **Ad-Hoc Process**. Most vendors allow the generation of single documents through integration to the composition engine, similar to the batch process. This Ad Hoc process may return the document for immediate use rather than distributing it elsewhere. For example, a claims system might make a call to the composition engine and return an ad hoc-generated correspondence letter. The user would always remain in the claims system.

- **Ad-Hoc Interface**. Some vendors provide prebuilt interfaces—usually web-based—where end users can generate single documents from templates and keyed data. This can be broken down further into two parts:

  - Ad-Hoc Portal. The Ad-Hoc Portal is an out-of-the-box application that allows an end user to search for and select a template, enter data, and generate a single document. This is not provided by all vendors, and often clients choose to build their own portals or bypass the portal with a direct integration to their administration systems.

  - Ad-Hoc Document Editor. The Ad-Hoc Document Editor is an interface that allows an end user to manually edit a generated document. For example, it might allow a user to select certain prewritten paragraphs

for inclusion or make alterations to editable text. Often this editor utilizes or looks like Microsoft Word. Even if a vendor does not provide an Ad-Hoc Portal, the vendor might provide a document editor that can be called up through integration with the Ad-Hoc Process.

- **Batch Process.** Though not always a prebuilt component, the batch process is the means by which large numbers of documents are generated from a template and production data. There may be a utility to set up batch processes, or this may be handled through a data file dropped into a file system, or the insurer might make a web service call to the composition engine with data and a template name.

- **Workflow.** This allows review and approval of documents being created by managers or compliance personnel.

Document Automation Users

Depending on an insurer's needs, multiple types of users may be working with a document automation solution. A list of typical users is as follows:

- **Template Designer**. The template designer is responsible for creating the templates that will be used to generate final documents. Based on the complexity/usability of the vendor's authoring tool, the template designer might be a business user or a member of the IT team. Some vendors expect all template creation to be done by a single user (or a single type of user), while others split the roles further:

  - Content Author. The content author is responsible for determining the content of a template. This user also sets up the variable data and business rules that will be executed based on production data. This may be the same user as the Designer and Marketer, depending on the vendor.

  - Designer. The designer is responsible for creating the layout and the presentation look and feel of a document. This might mean laying out the document in a Microsoft Word-like interface, or it may mean creating complex style sheets and HTML. This may be the same user as the Content Author and Marketer, depending on the vendor.

  - Marketing Content Author. The marketing content author edits text that will be included in the final document. Typically this is the same user as the Content Author, but some vendors allow a separate role.

- **IT/Data User.** The IT/Data User is responsible for mapping data from one or multiple sources (such as a database, sm. files, flat files, or a web service call) into a structure the template designers can use in their templates and the composition engine can use to generate the final document.

- **Ad-Hoc/End User**. The Ad-Hoc/End User interacts with the system at runtime, requesting single documents based on a specific customer or keyed data. An example end user is a call center operator, a claims processor, or anyone who needs to generate a document from a template.

Differentiators in the Solution Space

Recent years have seen a substantial amount of convergence among document automation solutions. Nearly all of them offer an idea of document components, allowing a template author to build text blocks, rules, and logic once and then reuse it across multiple templates. As service-oriented architecture (SOA) has become a landmark in most insurers' technology road maps, all the profiled document automation vendors have made a major commitment to SOA, either building solutions from the ground up using Java and/or .NET or providing web service wrappers.

Despite these similarities in functionality, there are still many differentiators in the document automation space. Some are the typical factors clients must consider when selecting any vendor: price, vendor reputation, size of organization. Other differentiators are:

- **Mainframe Support.** With the widespread use of new technologies, many vendors provide systems built entirely with Java or .NET. While this is advantageous for most insurers looking to purchase a document automation system, those requiring mainframe support will find that only a few vendors will meet their needs.

- **Template Composition Interface.** The tools for composing templates tend to come in two styles: either the vendor provides a proprietary thick-client application for designing templates, or the vendor provides a "plug-in' to Microsoft Word (or another third party document composition tool).

  - Third-Party Plug-in. A third-party plug-in allows the users to compose templates in a familiar environment, such as Microsoft Word. This does not mean there is no training requirement; it still takes time to learn the added features for setting template metadata and rules within the third party interface. These plug-in solutions sometimes provide the additional benefit of allowing home office users to reopen an edited document with all the template information intact.

  - Proprietary Interface. Vendors that provide a proprietary interface attempt to give either a tighter integration between the different areas of template metadata or to give more functionality than a plug-in to a third party application can provide. These proprietary interfaces typically have a look and feel similar to Microsoft Word, though there are some exceptions. Some utilize the proprietary interface to make a more radical shift, which is explained in the next bullet.

- **Separation of Content and Layout.** Some vendors choose to keep content and layout tightly integrated, such as a vendor that utilizes Microsoft Word for template creation. This means one user can be responsible for all aspects of the template. A recent, powerful change in document automation space comes from vendors that have chosen to separate the content and layout responsibilities of template creation. These vendors provide

proprietary interfaces where the content is handled by a business user and the layout and presentation are handled by a different designer. This separation results in many advantages. It allows one layout to be applied to multiple templates, making it much easier to create a uniform look and feel across all company documents. It also allows different layouts to be applied to one template, meaning a business user can create a template that can be easily sent through different channels (mail, email, web, SMS). These solutions tend to provide more flexibility but also require different types of users and more training. What kind of vendor an insurer should select depends on how that insurer does or wants to do document creation. An insurer that does not have a large marketing team may want one person to be able to create an entire template. An insurer that already has trained designers may find that separating content from layout fits into its existing operations.

- **Content Management and Workflow.** Document automation vendors provide different levels of content management and workflow within their solutions. Some provide a robust suite of document handling functionality, including archiving and true content management with adjustable approval processes for both new templates and generated documents. Others provide a subset of this functionality, and others require insurers to integrate with third party archiving and content management systems, possibly by providing prebuilt connectors. Insurer needs may vary, depending on what third party systems are already in place.

- **Data Mapping.** In order for a template to be useful, it needs to be able to use production data in the generated document. Some vendors provide very advanced, visual tools to map data to the variable data in a template while others require this to be done through code. While the visual interfaces are excellent tools for IT and will always provide value, whether they are necessary depends on how an insurer approaches document creation. Will an insurer often be creating new templates that use different sets of data? Will the underlying data models be changed frequently? Will the data used by existing templates be changed frequently? If the answer is yes to any of those questions, a visual data mapping tool will help save significant IT maintenance and development time.

- **Prebuilt Ad-Hoc Portal**: Some vendors provide a prebuilt user portal—usually web-based—where end users can generate single documents from templates and keyed data. Other vendors require the client to implement such an portal, if one is required. Based on conversations with reference clients, many insurers are not using the prebuilt ad-hoc portals and instead, for ad-hoc document generation, have integrated the vendor composition engines into their administration systems or existing processes. But for insurers looking for a shortened deployment time, portals can be very useful. Insurers should determine whether they will need a prebuilt ad-hoc portal before making decisions based on availability.

- **Library of Insurance Forms.** Some vendors provide a library of insurance forms that have already been converted into templates. This may be a library of ACORD XML forms or a selection of regulatory state PDFs. Few (if any) reference clients were using these libraries when they existed, because clients focused on converting their own documents into templates. But insurers that would like to make use of existing libraries can choose to work with vendors that make such libraries available.

- **Usability.** Though most of the template creation applications cover a similar set of functionality, there are different levels of usability. Usability is very important because it will impact training time, and, perhaps more importantly, it may be the difference between business users happily adopting a new solution and an IT team continuing to implement business user designs. This report attempts to describe the usability of each vendor's system through both reference client opinions and demos given to Celent; however, insurers should look for themselves before making a selection.

Though these are the major points of differentiation, there are other areas where individual vendors excel or fall short. The in-depth profiles highlight such instances, pointing out features or functionality that help distinguish one vendor from another.

Comparative Charts

Celent has prepared a number of tables in an attempt to summarize various aspects of the vendor solutions in one place. These tables gather information found in the vendor RFIs, demonstrations, and reference calls.

Key Functionality

Table 3 illustrates the components available in document automation systems. A solid dot (●) indicates a component that is part of the solution.

Table 3: Key Functionality

Vendor	Ad Hoc Document Generation	Ad Hoc Portal	Ad-Hoc Document Editor	Batch Document Generation	Template Creation	Component-Based Document / Rules Assembly	Storage in Document Archive	Document Collaboration Tools	"Review and Release" Feature	Rule-Based Workflow Management	Search/Retrieve Capabilities for Documents	Search/Retrieve Capabilities for Templates
Adobe LiveCycle	●	●	●	●	●	●		●	●	●		
Cincom Eloquence	●	●	●	●	●	●		●	●	●		●
Document Sciences xPression	●	●	●	●	●	●	●	●	●	●	●	●
Exstream Dialogue	●		●	●	●	●		●				●
Group1 CCM	●			●	●	●	●	●	●	●	●	●
ISIS Papyrus	●	●	●	●	●	●	●	●	●	●	●	●
Skywire Software Documaker	●	●	●	●	●	●	●	●	●	●	●	●
Skywire Software IStream	●	●	●	●	●	●	●	●	●	●	●	●
StreamServe Persuasion	●	●	●	●	●	●	●				●	●
Thunderhead NOW	●		●	●	●	●		●	●			●
Top Down Client Letter	●	●	●	●	●	●	●	●	●	●	●	●

Source: Vendor RFI responses; vendor interviews

Table 4 illustrates the send/print functionality available in document automation systems. A solid dot (●) indicates a send/print feature that is part of the solution.

Table 4: Send/Print Functionality

Vendor	Send/Print Function								
	PostScript	AFP	Fax	HTML	XML	PDF	Email	Multiple Print	SMS
Adobe LiveCycle	●	●	●	●	●	●	●	●	●
Cincom Eloquence	●	●	●	●	●	●	●	●	●
Document Sciences xPression	●	●	●	●	●	●	●	●	●
Exstream Dialogue	●	●	●	●	●	●	●	●	
Group1 CCM	●	●	●	●	●	●	●	●	●
ISIS Papyrus	●	●	●			●	●	●	
Skywire Software Documaker	●	●	●	●	●	●	●	●	●
Skywire Software IStream			●			●	●	●	
StreamServe Persuasion	●	●	●	●	●	●	●	●	●
Thunderhead NOW	●	●	●	●	●	●	●	●	●
Top Down Client Letter	●	●	●	●	●	●	●	●	●

Source: Vendor RFI responses; vendor interviews

In Table 5, the "platform" columns indicate which platforms the document automation system can be deployed on. A solid dot (●) indicates a preferred platform, and a hollow dot (❍) indicates that a platform is an additional option. Some solutions can run on multiple platforms without preference, so that no platform is marked as "preferred." Likewise, the "database" columns indicate which databases the document automation system supports, with a solid dot (●) indicating a preferred database and a hollow dot (❍) indicating an additional option.

Table 5: Technologies Used

Vendor	Application Platform						Database Platform				
	Windows	Unix	Linux	OS/390 or zSeries	Other Mainframe	OS/400	Oracle	DB2/U2b	Microsoft SQL	Sybase	Other SQL
Adobe LiveCycle	○	○	○				●	●	●		○
Cincom Eloquence	●						○	○	●	○	○
Document Sciences xPression	○	○	○				○	○	○		
Exstream Dialogue	○	○	○	○		○	○	○	○		
Group1 CCM	○	○	○	○		○	●	○	●	○	
ISIS Papyrus	○	○	○	○			○	○	○	○	○
Skywire Software Documaker	●	●	●	●	○	●	○	○	○	○	○
Skywire Software IStream	●						○	○	●	○	○
StreamServe Persuasion	○	○	○				○	○	○		
Thunderhead NOW	○	○	○				●	●	●	○	○
Top Down Client Letter	●						○	○	○	○	○

Source: Vendor RFI responses; vendor interviews

Table 6 illustrates the application server options available in document automation systems. A solid dot (●) indicates a preferred application server, and a hollow dot (○) indicates an additional option. Some solutions can use multiple application servers without preference, so that no application server is marked as "preferred." Not all systems require an application server for deployment.

Table 6: Application Server

Vendor	Application Server					
	WebLogic Server (BEA)	Windows Server/.NET	JBoss (Red Hat)	WebSphere (IBM)	Oracle OC4J (Oracle Corporation)	JRun (Adobe)
Adobe LiveCycle	○	○	○	○		
Cincom Eloquence				●		
Document Sciences xPression	○		○	○		
Exstream Dialogue*						
Group1 CCM	●	●	●	●		
ISIS Papyrus*						
Skywire Software Documaker	●	○	●	●	○	○
Skywire Software IStream	○	●		○		
StreamServe Persuasion				○		
Thunderhead NOW	○		○	○		
Top Down Client Letter		●				

Source: Vendor RFI responses; vendor interviews
*Does not require an external application server. Please refer to individual profiles for details.

In Table 7, a solid dot (●) in the "Language Used" columns indicates which languages comprise a system's codebase. Note that some systems are written in more than one language.

Table 7: Codebase

Vendor	Languages Used								
	Java	C++	.NET	C	Visual Basic	COBOL	RPG	Assembler or Other Binary	Other
Adobe LiveCycle	●	●							
Cincom Eloquence	●	●	●						
Document Sciences xPression	●		●	●					
Exstream Dialogue		●							
Group1 CCM	●	●	●	●					
ISIS Papyrus		●							
Skywire Software Documaker	●	●		●					
Skywire Software IStream	●	●	●						
StreamServe Persuasion	●	●	●						
Thunderhead NOW	●		●						
Top Down Client Letter		●	●		●				

Source: Vendor RFI responses; vendor interviews

Adobe: LiveCycle Enterprise Suite

Company and Product Background

Adobe Systems, founded in 1982, is best known for its PDF and Flash technologies, with the Adobe Reader and Flash Player installed on over 700 million computers and devices globally. Adobe has extensive experience working with dynamic content, document creation, and printing, both for business and personal use, so it is no surprise that it has moved into the document automation space.

The Adobe LiveCycle Enterprise Suite is a relatively new entrant to the market, first launched in 2004. Adobe has had customers using enterprise form-filling technology since its acquisition of Accelio (formerly JetForm Central Pro) in 2002, but has only recently released enterprise batch capabilities as part of the LiveCycle suite in June 2007. Of Adobe's more than 6,400 employees, approximately 600 are working on the LiveCycle product. Adobe has leveraged its ubiquitous presence as a document platform and its track record for creating intuitive end user interfaces to create an innovative and technically advanced document automation suite.

Customer Base and References

Adobe lists 100 customers using the LiveCycle suite of products, with at least 75 utilizing the full ad-hoc document generation capabilities. As the enterprise batch functionality was not released until June 2007, only a few customers are doing batch document generation in production at this time, but there are an additional hundred customers utilizing batch generation with the JetForm Central Pro solution, which Adobe acquired in 2002.

Marquee clients include MetLife, Safeco, Trumbull, CNA, and Farmers Home Mutual. Though Adobe did not provide a full breakdown of its insurer client base, its customers appear to range from US$100 million in premium to over US$5 billion.

Products and Functionality

Adobe LiveCycle has many components, the two most significant applications being the Designer and Workbench. The LiveCycle Designer is the authoring tool for all template design and development activity, including more complex tasks such as mapping data and designing interactive Flash templates. The LiveCycle Workbench is a tool for mapping business processes, including incoming data to a template, and setting rules to determine the correct templates to use based on production data.

The Adobe product suite includes all of the functionality queried in the Celent RFI except for document archiving. Instead, Adobe provides connectors to help integrate with other enterprise archiving or content management solutions. Not all this functionality is part of the LiveCycle suite, however; Adobe has a wide range of document automation products. For example, Flex Builder, a tool for creating rich Internet applications, would be sold as a separate tool and then used to create the ad-hoc document creation interface.

The greatest advantage LiveCycle brings to the document automation space is the near-ubiquitous presence of Adobe Reader. The Adobe Reader contains much more interactive functionality than what a typical user sees, and these advanced features can be unlocked by an Adobe PDF document generated and managed by Adobe LiveCycle.

This means that, for ad-hoc document generation, there is no need for any new software on an end user's computer. Instead, an Adobe PDF document can be passed around from user to user, and within the Adobe Reader there will be an interactive interface for altering and generating the final document.

Adobe LiveCycle also excels at the creation of interactive—rather than static—documents, helping to build an end-to-end process that does not require paper. A generated PDF can be sent to a user and filled in electronically, and the data can be automatically gathered by the insurer. In case printing by the end user is necessary, Adobe provides a dynamic bar-coding feature. As a user keys data into a PDF, a 2D bar-code is automatically created that contains all that data. When the printed document is rescanned by the insurer, all of the data is captured without the need to rekey or even scrape the text. The LiveCycle suite also allows the easy generation of interactive Flash documents. A document designer can use the same template not only for printing and email, but can also apply a Flash layout and create a dynamic document web page.

The LiveCycle Workbench is a powerful tool for the users integrating document templates into a company's systems and business process. Adobe is one of the few vendors that provide an easy, flowchart-based interface to speed the creation and maintenance of workflow, data mapping, and service calls.

Adobe also provides some insurance-specific functionality, including a prebuilt correspondence management application that aids in ad-hoc document creation. Adobe has a library of ACORD XML Forms that have been preconverted into the intelligent PDF format.

Usability

The Adobe LiveCycle Designer provides a complex set of features for rule-building and data-mapping. To allow this, the Designer interface looks more like a development environment than a word processor, and this may be difficult for some clients who do not have trained document creation teams. The full power of the LiveCycle suite will be more fully realized by an organization that invests in a multi-part team, with some resources handling content creation and different resources handling layout and design.

Reference clients also noted running into minor bugs in the LiveCycle Designer. While these clients were more than satisfied with the tool and Adobe's response to issues, it is important to recognize that as a newer product in the marketplace, it has not had the years of production usage and testing that some other solutions bring to the table.

Professional Services

Adobe Consulting has approximately 150 trained engagement managers who are deployed worldwide and are trained on the implementation of LiveCycle. In addition, there are several trained and enabled global SI partners. Reference clients have had only positive remarks about Adobe's support and service.

Technology

The Adobe LiveCycle suite is supported on Windows, Linux, Sun Solaris, and IBM AIX and works with Oracle, DB2, MS SQL, or MySQL. All components, except for Production Print, work with any J2EE application server. Production Print simply requires a standard

server. LiveCycle supports integration using most methods and allows for easy creation of web service or API calls to specific document templates.

Implementation and Costs

Adobe states that it will take one to several weeks to install the document automation solutions and deploy for the first function. This is below the actual numbers provided by reference clients, for which it took six or more months. As with all document automation projects, a significant portion of the implementation time is the conversion of documents. A client using base functionality and pulling from the preconverted library of ACORD XML forms might find a shorter implementation time frame.

Adobe quotes the price as ranging from US$50K to $500K, depending on components licensed. Due to the breadth of Adobe's offerings—not all of which are part of the LiveCycle suite—there is a wide range of costs depending on how complete a system is wanted by a client. Licensing LiveCycle for one CPU to manage production printing might be a low-cost solution, but to utilize LiveCycle as a complete document automation system will be on the higher end of the scale. This does not include services or the 20% annual maintenance.

Summary

The Adobe LiveCycle suite is one of the most technologically advanced document automation systems on the market. Adobe has leveraged its presence as a document platform and its track record for creating intuitive end user interfaces to distinguish themselves in the document automation space. An insurer looking for an industrywide document platform with a true straight-through process can find a technological edge with Adobe's ability to create interactive documents and manage them at all stages. The suite is complex, however, which may scare off some smaller insurers, and it remains to be seen whether the insurance-specific interfaces will be adopted by industry clients.

Cincom: Eloquence

Company and Product Background

Cincom is a privately held software vendor focusing on intelligent management of documents and data. Cincom was founded in 1968 and today employs over 800 staff, has annual revenues over US$170 million, and offices in 18 countries. Of those employees, 125 are working directly with the document automation system.

Like many vendors in the document management space, Cincom has decades of experience in the insurance industry and has added a new product suite to its document automation solution portfolio. Since the 1980s it has offered a document automation suite for mainframe and client-server platforms, but Eloquence is a new, SOA-based system that first went into deployment in 2006 and became generally available in 2007.

Customer Base and References

Due to the relatively recent release of Eloquence, Cincom has only three insurance clients using the system, ranging in size from under US$1 billion in premium to over US$5 billion in premium. Cincom is not new to the document automation space, however. There are over a hundred insurance clients using its legacy Intelligent Document Solution suite.

Products and Functionality

Although Cincom Eloquence provides both interactive and batch capabilities, Cincom has chosen to focus primarily on the interactive, ad-hoc document creation need. Eloquence aims for ease of use, allowing business users to design and manage documents with complex personalization rules. The three components of the system are: Eloquence Author, a document design tool used by both business users and IT; Eloquence Engine, a J2EE service-oriented engine for generating the documents; and Eloquence Web, a web-based interface where end users can access templates and generate ad-hoc documents.

The system also promises easy integration to existing applications, databases, and infrastructure. This includes pulling data from existing data sources when users of Eloquence Web generate an ad-hoc document, saving the need for rekeying. Since the primary emphasis is on enabling interactive processing, the other integration points are primarily to a document archiving system or, if the client chooses not to use the one built into Eloquence, a content management or workflow system for document/template approval.

Usability

Cincom has taken usability very seriously in the creation of the Eloquence authoring tool, with the goal of moving document composition out of IT and onto the desktops of non-technical, business-line professionals. According to reference clients, this goal has been successful. Eloquence Author embeds Microsoft Word to give users a familiar interface for design and formatting, but surrounds it with all the necessary tools to set up variable data and business rules. These tools are well-designed and have a Windows look and feel that is familiar to users.

Eloquence Author also provides a "flow chart" view into the document, which is something not found in other document automation solutions. While this may not be a familiar way of thinking about a document, the designer, once over the learning curve, gets an intuitive and logical way to think about different pieces of text and how they are put together into a final document based on different business rules.

The Eloquence Web module provides two implementation methodologies – 'out-of-the-box' or customized (via APIs). With an 'out-of-the-box' implementation, Eloquence Web provides a guided-workflow interface that is sufficient for customers interested getting up and running quickly. While sufficient for rapid implementations, the 'out-of-the-box' interface falls short of the standard set by the authoring tool. As one reference client stated, it looks rudimentary when compared to Eloquence Author. There are also more screens than necessary when stepping through the process of finding a template and generating a document. Despite this, Eloquence Web's 'out-of-the-box' implementation differentiates it from many other vendors that do not provide any 'out-of-the-box' interface for the end user generation of ad-hoc documents.

Eloquence Web can also be implemented in a customized mode via APIs which allows organizations to tailor the interface to their existing processes and integrate with their core business applications.   Eloquence Web provides numerous integration points that can be used for notifications, for document enhancement, and to add new routing and channels for document delivery.

Professional Services

The Cincom professional services team consists of 40 people, and Cincom does not work with any implementation partners. A typical implementation only requires one or two Cincom consultants, and despite the small size, clients have been very pleased with Cincom's support responsiveness and consulting services. Cincom provides 24x7 support as part of the annual license fee and offers training at an additional cost.

Technology

Cincom's Eloquence is a new product built with both J2EE and .NET technologies. The authoring tool embeds Microsoft Word and therefore requires Windows operating system. The server, despite being J2EE, is also wedded to the Windows platform, and it requires IBM WebSphere as an application server along with JMS or WebSphere MQ for a messaging infrastructure. WebSphere is not part of the Eloquence license and must be provided separately by the client.

Despite the somewhat restrictive operating system and application server requirements, the architecture is otherwise very open, allowing most databases and supporting integration through web services, JMS, or most other means. It does not have any default support for ACORD standard XML.

Implementation and Costs

The Eloquence licensing includes an initial license fee, an annual usage license charge, and the initial service fees for installation and implementation. The initial license fee will be between US$150K and US$300K, depending on the number of output formats and web users. The annual usage license charge will be 20% of the initial license and the implementation service is estimated at 30–40%. For a US$200K initial license fee, the

total cost of ownership in the first year will be US$320K (consisting of US$200K initial license fee, US$40K annual usage license charge, and US$80K initial services fees) and US$40K for annual usage license charge in following years.

Cincom states that it is typically less than 30 days to install the Eloquence solution and deploy it for the first function. One reference client took significantly longer due to the fact that it was deploying the system during a Beta period, while another reference client stated that it was in live production within 19 days.

Summary

Celent believes that Cincom Eloquence has one of the most advanced and well-designed authoring tools for creating document templates. The combination of the familiar Word interface with the ability to flowchart the components of a document allows business users to create complex rules without IT assistance. Cincom emphasizes interactive, ad-hoc document creation, with some clients choosing to enhance existing batch solutions with the Eloquence suite. Eloquence is fully scalable for both interactive and batch document generation.

Document Sciences: xPression

Company and Product Background

Document Sciences is a large California-based company (Nasdaq: DOCX) that markets document management solutions to a broad spectrum of industries. Founded in 1991, the company today employs 500 staff, half of whom are currently working with its document automation product.

To many in the insurance world, Document Sciences is already a familiar name. Approximately 200 insurance clients are running its older Autograph system. Its newer document automation tool, xPression, has been generally available since 2003. xPression is a Java-based solution designed for Windows or Unix.

Customer Base and References

xPression has a client base of 65 insurers, which are weighted slightly toward the life/health/annuities sector. It should be noted that as of the writing of this report, xPression 3 had just been released, so most customers are still running on the previous version. The bulk of the product's insurance client base is companies earning between US$5 billion and $100 million in annual premium. Marquee clients include AIG, AXA Financial, Blue Cross Blue Shield, Genworth, MassMutual, Mutual of Omaha, Prudential, and Sun Life.

Reference clients were enthusiastic about xPression's document creation functionality and the vendor's responsiveness. Some noted minor technological glitches and problems with the user interface, which Document Sciences will hopefully address in later releases of the product. One client noted that the offshore resources used by the company to carry out its conversion seemed to lack in-depth understanding of insurance documents at that time, although this may have since been addressed. On the whole, reference customers were pleased with the firm's industry knowledge.

Products and Functionality

xPression is a highly componentized solution that offers a wide array of tools tailored to meet distinct needs. Its XPRS Server component handles on-demand, interactive, and high-volume batch generation, printing, and document storage. Document Sciences offers two primary tools for ad-hoc design: xDesign, which the company recommends for hierarchical, text-intensive documents; and the set of xPresso tools which are better suited to WYSIWYG document template creation, including graphically rich communications. The company emphasizes how by means of these various components, xPression can tailor an insurer's document output according to preferred customer communication channel (i.e., print, email, PDF, fax, etc.).

xPression features a series of prebuilt, certified integration points to other systems, including EMC Documentum and IBM FileNet. With the release of the newest version of the product, Document Sciences has also brought to market xPressForms, a web-based prebuilt forms library for P/C insurers that allows for customization via variable data in XML or in relational databases.

Usability

Like many of its competitors, Document Sciences emphasizes its product's ease of use. xPression's xPresso design tools offer rule-based customization and variable personalization plug-ins to Microsoft Word, Adobe InDesign, and Adobe Dreamweaver, which allow business users to work within a reassuringly familiar environment. xPression's xDesign authoring tool takes a more traditional approach to layout, with rules wizards set against schema trees, but it also incorporates Microsoft Word.

The two reference customers Celent spoke with had IT resources involved in making changes to the system's underlying rules, with design of the documents in the hands of business users. In some cases, this represented a shift away from the insurer's original intention of having business users take full control. Reference clients generally praised the system's usability, though they noted that the design tool has some minor flaws, such as some difficulty in undoing steps when working with templates.

Professional Services

Document Sciences estimates that a medium-sized engagement would typically require 4 vendor resources; 8-10 carrier staff, with wide variation in the level of involvement demanded of those individuals; and 4 third party resources, if a systems integrator is used. Implementations last an average of three to six months. The company reports that 90% of deployments over the past two years have come in on time and on budget.

xPression is also available on an ASP basis through Document Sciences' partners.

Technology

xPression is built on a SOA architecture using J2EE, XML, and SOAP Web Services. Though it is mostly written in Java, a few components are in .NET or VB, and plug-ins to Adobe and Dreamweaver are in C++ since Adobe does not yet support Java. The system uses an open-standard XML or relational database schema, or xQuery to access a variety of other data sources.

xPression is quite flexible with regard to technology options supported. The product is certified for use with Windows, RedHat Linux, AIX, and Solaris, with additional options available. Windows is the preferred operating system, with OS/400, Linux RedHat, AIX and Solaris as additional options. The firm estimates that about half of its integrations are based on Web Services. IBM WebSphere is the preferred application server, but xPression is also compatible with a variety of additional options.

xPression is also an impressively scalable system, with the capacity to process documents in the range of 100–250 pages per second on a two-CPU low-end Windows machine.

Implementation and Costs

Document Sciences charges a flat enterprise license fee for the system. The number of users and the number of components are also factored into the total cost. For total first-year costs, the license fee comprises roughly 50%, with the initial installation and customization and the annual maintenance fee making up another 25% and 20%, respectively.

As noted above, installation typically takes three to six months. Training and support fees are included in the overall license agreement.

xPression is available in two base configurations, which are designed to serve the needs of either large enterprise class organizations or of midsize organizations. The list price of xPression Enterprise Edition, which encompasses the breadth of functionality required for enterprise environments, is US$450,000. The list price of xPression Workgroup Edition is US$150,000, with various add-on components available. Both editions are highly scalable and may ultimately include a number of additional add-ons, depending on the client's requirements.

Summary

For insurers in search of a provider with a well-established client base, Document Sciences is a good fit. Its xPression product has achieved significant market momentum since its release in 2003, despite a few kinks in early releases. Nevertheless, Celent believes that xPression's scalability, breadth of functionality, and ease of integration make it a compelling option for many large to midsize insurers.

Exstream: Dialogue

Company and Product Background

Exstream is a privately held company, founded in 1998, focusing exclusively on document automation solutions. It has over 300 employees, with 40% of its 50-person services and support team working on insurance industry projects.

Dialogue was introduced in 1999, and last went through a major upgrade in April, 2007. This included the release of Dialogue Live, which allows an interactive format for ad-hoc document creation.

Customer Base and References

There are nearly 50 insurer clients in production on Dialogue out of its 400+ customers, plus 15 more insurers that have purchased the product since July 2006. Exstream has slightly more P/C insurers and trends toward clients over US$1 billion in premium, but its client base includes all sizes, including some major MGAs. Marquee clients include aigdirect.com, ING, and TIAA-CREF.

Reference clients have had high marks for Exstream and are using the system in a variety of ways. Some focus heavily on ad-hoc document creation and have integrated Dialogue into their daily process, while others rely mostly on the batch processing.

Products and Functionality

The Dialogue suite consists of the Dialogue Design Manager, which is an authoring tool for document templates, rules, and logic, the Dialogue engine for generating documents ad-hoc or batch from the templates, and the Document Live interface, which lets an end user create a document from a template.

There is also a separate web interface called Dialogue Anywhere for content creation. This allows a template designer to separate the layout from certain content such as marketing material. The system also allows content components and rules to be reused across documents.

Dialogue can generate a document in many formats, including a powerful proprietary Dialogue Live Format (DLF). A DLF document can be opened on an end-user's machine with an installed Windows application. This can be done on or off-line, and the user can create an ad-hoc document from the DLF document, generating a PDF, XML, RTF, or another DLF document to be imported back into the system. For a client who does not want to install the DLF application on end-user desktops, it is also possible to create smart PDFs, which will be prefilled with information. The end user can then fill in the remaining forms, and Dialogue will scrape the PDF for information and read it back into the process.

Another important part of the process is Dialogue's ability to use a generated document as an input for the next set of generated documents. Just like using an XML file or a database as a data source, a designer can base templates on data coming in from returned PDF or DLF documents. That way a user's input to a smart PDF can automatically generate correspondence or other responses.

Since Exstream focuses exclusively on document automation, the Dialogue suite does not include archiving or workflow technology. Instead, it can be integrated with third party archiving, BMP, and ECM solutions, including some "off the shelf" connectors.

Usability

The Exstream Dialogue Designer is not the flashiest interface available, but it is very functional, and reference clients spoke highly of its usability. Some clients had business users handing off images to IT, which then entered the designs into the tool, but others had business users doing all of the work in Designer, from proof of concepts all the way through testing.

Professional Services

Exstream has a 50+ person team doing professional services and support, and all reference clients were pleased with Exstream's services and response times. In addition, Exstream offers onsite training and provides monthly online webinars.

Technology

The Dialogue suite supports a wide range of operating systems, including MVS or z/OS, OS/400, multiple versions of Unix such as AIX, Solaris, and HP-UX, plus multiple versions of Linux and Windows. It is compatible with Oracle, DB2, and MS SQL Server, and does not require an application server. The codebase is entirely C++ and the design tool is a Windows-based thick-client application. Some portions of content, such as marketing text, can be edited via a web browser.

The Dialogue Engine supports most forms of integration and can be established as a service for document events with a messaging framework. Dialogue Real-time can be used in conjunction with traditional message-oriented middleware products (WebSphere MQ, JMS, MSMQ). In cases where a web service layer is desired, Dialogue can be deployed as a service within .NET and J2EE environments.

Implementation and Costs

Exstream states that an implementation can take between 100 and 1500 hours, depending on scope. Reference client projects ranged between four and nine months with relatively small teams (two to three people), not including those doing the document templates.

Licensing costs for Dialogue are based on three factors: per server or site license; a la carte selection of components, which includes middleware connectors and output formats; and size of the client, based on premium, number of users, and number of generated documents. A small implementation with a limited set of functionality and servers can be as low as US$175K, running as high as US$2 million for a multibillion dollar carrier with full functionality and a site license. Exstream will also provide introductory-use pricing with a restricted number of production documents.

Summary

Exstream Dialogue offers a technologically advanced solution that can help a client create a straight-through process for generating documents, sending them out to clients,

and bringing the data back into the system. With very reasonable pricing for smaller deployments, Dialogue will be particularly attractive to insurers that are looking to start out with a limited document automation implementation that can grow over time into an enterprisewide solution.

Pitney Bowes Group 1 Software: Customer Communications Management Suite

Company and Product Background

Group 1 Software has been part of Pitney Bowes (PBI: NYSE) since 2004. Pitney Bowes is a 35,000 person, US$5.7 billion company in the mailstream technology space. Its focus on integrating digital and physical communications made a document automation company an attractive addition. Of the Pitney Bowes employees, 500 are part of Group 1 Software.

First released in 1993, DOC1 is the core product of Group 1's Customer Communications Management Suite. Through development and acquisitions, DOC1 has been joined by products encompassing Document Archival and Retrieval, Electronic Bill Payment, Document Presentment, Document Management, Workflow Management, Content Management, Data Acquisition and Manipulation, Printstream Manipulation, and Printstream Validation.

Customer Base and References

The Customer Communications Management Suite is used by 30 insurers. These clients are evenly split between L/H and P/C, and tend to be larger than US$1 billion in premium. Because the Customer Communications Management Suite has so many components, each client is using the system in different configurations, though most spoke very highly of the functionality provided.

Products and Functionality

The range of functionality available from Group 1 Software is what makes this vendor stand out. The DOC 1 Suite, which includes the authoring tool and engine for creating templates and generating documents, is only a small part of the suite. The Customer Communications Management Suite also includes: DOC 1 Data Flow for visually mapping data from the source to the document, StreamWeaver for printstream manipulation and editing, StreamSure for printstream comparison and editing, e2 Vault for archiving, e2 Online Account Management for handling printstreams online, e-Messaging for multichannel document distribution, and OpenEDMS for content management. The suite does not currently include an ad-hoc end user interface, but Group 1 Software plans for this functionality to be available by the summer of 2008.

The DOC 1 Designer has all the necessary pieces to make it a valuable document template authoring tool, with a Word-like editor, the ability to add different levels of rules and logic to a template, and the ability to reuse document components and logic across multiple templates. It also provides the ability to identify sections of a document for editing by other users, such as a box of text where the marketing department can go online and update messages without having to touch the main template.

The entry and exit points for the document automation suite provide some functionality not found in other vendor solutions. The data flow utility allows a user to visually map incoming data from a database, complex extract file, or other data sources. This piece,

like many components of the suite, can also be used as a stand-alone tool to map data to applications that are not part of Group 1 Software.

The tools for print stream manipulation and editing are also very powerful. StreamWeaver allows a user to visually manipulate a print stream, such as adding a bar code to all documents before they go to the printer. StreamSure lets a user compare print streams side-by-side and allows detailed test cases for print streams that have been changed. Both of these utilities can be used with any print streams, not just those that have been generated by the DOC 1 Suite. When the data mapping, document automation, and print stream applications are used together, the tight integration allows indexing information to carry between all steps.

Usability

Individual components of the Customer Communications Management Suite are well-designed. Some of the data mapping and print stream manipulation interfaces are more complicated, but this is functionality that is not normally available in a graphical user interface. Any training time on those applications should be compared with the time it would take for a development team to make the changes in code.

Reference clients stated that business users had trouble using the design tool, and therefore IT remained responsible for doing template creation. The tool itself does not appear to be more complicated than other vendor solutions, but it may be a function of the complexity of the overall suite. With so many components there are also many interfaces to learn, and even within the design tool there is a separation of the main designer and the online Content Author.

Some reference clients also noted concern about bugs or poorly documented functionality, especially between versions. However, ratings of the help desk were very high.

Professional Services

Group 1 Software has a 75-person support and services organization, but this is backed by the larger Pitney Bowes organization. Group 1 Software offers onsite training and a number of implementation partners, including IBM and Accenture.

Technology

The Customer Communications Management Suite is supported on most operating systems, including OS/390 or zSeries mainframes, OS/400, and most versions of Unix, Linux, and Windows. Its support for the mainframe was cited by some reference customers as being a key factor in selection. It supports Oracle, DB2, MS SQL, or Sybase databases and BEA WebLogic, Windows .NET, JBoss, IBM WebSphere, or Sun Application Server. The system is written in a combination of Java, C and C++, and .NET technologies and it supports web services and most forms of integration.

Implementation and Costs

With such diverse components, pricing depends heavily on what modules a client chooses. Group 1 Software targets insurers that are US$100 million in revenue or greater, and a realistic configuration of the software would be US$200–250K. However, for

carriers greater than US$1 billion or with more than 20,000 users, licensing might get into seven figures. For smaller deals it is possible to work with an implementation partner.

Pitney Bowes Group 1 Software states that an average implementation can be achieved in approximately 1,000 person hours, or six months of elapsed time. Reference clients stated that implementations took between 9 and 15 months. Many reasons were stated for the long implementation periods, including technical issues with AS/400 integration as well as problems in a previous release of the Group 1 software. As with all deployment projects, implementation times may vary according to number of documents to be composed, the complexity of the business rules and logic required, and internal project dependencies.

Summary

The DOC 1 document automation suite is a good solution that provides more than the standard level of functionality. It suffers from some concerns about usability, but this is partially a result of the extra interfaces required to handle some of the advanced features not provided by other vendors. Where Group 1 Software excels is in the visual tools to do data flow mapping and print stream manipulation. While the price can be expensive, a full implementation of the Customer Communications Management Suite can truly be an end-to-end solution for document management and automation.

ISIS Papyrus: Process and Communication Platform

Company and Product Background

ISIS Papyrus is a privately held software vendor based in Vienna. Founded in 1988, the company provides document management solutions to a wide array of industries. Papyrus employs 265 staff and estimates that 70% of its resources have worked on insurance projects in the past two years. The firm already has a significant presence in Europe and is now seeking to grow its base in the North American market. Its US headquarters is in Southlake, Texas.

The ISIS Papyrus Process and Communication Platform was originally released in 1994. Most clients are running the current version 6.1, with Version 7 scheduled for release in 2008. Papyrus is written in C++ and includes a central repository for management of applications and SOA services.

Customer Base and References

Papyrus has roughly a hundred implementations with insurers in Europe and about ten with insurance customers in the United States. Twenty new clients have purchased the system since 2006.

Both reference clients Celent spoke with were using Papyrus exclusively for batch document generation. Clients praised Papyrus' document creation functionality and the stability of the platform. However, they indicated that implementations had been hampered by ISIS' lack of familiarity with the North American insurance sector as compared to the firm's experience in the European market, as well as by an inadequate number of resources on the ground. The firm notes that customers can engage more resources from its North American services team at higher cost, but since it is a small group, offshore resources might be necessary.

Products and Functionality

The Papyrus Process and Communication Platform offers an impressive range of features and is one of the few systems Celent surveyed that also provides robust inbound document handling functionality. The Papyrus WebRepository component serves ad-hoc document generation needs and also provides a series of management tools, including collaboration features, "review and release" functionality, and workflow mapping. The system affords insurers significant control over workflow via configuration tools, and third-party workflow solutions can also be integrated with ISIS processing.

ISIS also offers the DocExec tool for batch document creation and the WebArchive tool for storage and send/print capabilities. Template creation takes place within Papyrus Designer. This component allows users to add meta-information into a document that does not appear at print time, such as labelling an insured's last known good address. Papyrus also supports an impressive number of languages. Those in use today include French, German, Italian, Spanish, Cyrillic, Russian, Hebrew, Arabic, Chinese, and quite a few others.

The design tool also enables a wide variety of data-driven charts, to a level of complexity not found in other vendor solutions. For an insurer looking to embed personalized charts into their automated documents, this will be an important feature.

Usability

The Papyrus GUI is freely definable and can be switched between thin and thick client mode. There is also a web portal component that allows users to access and create business documents.

For end users, ISIS offers a fairly straightforward interface that allows template selection and the entry of data into preformatted fields. For business users, the design tool provides a series of "building blocks" from which to compose document templates, which are displayed in a series of tiled windows. Its text editing view resembles a distant cousin of MS Word. The rules editor and debugger treat rules as components, which are intended to be simple enough for manipulation by non-technical users.

The Papyrus design interface lacks the visual appeal of some of the other systems on the market, and as one reference client noted, the layout may prove an obstacle to business user acceptance. ISIS is aware of this issue and is addressing it in its upcoming release of the product. Moreover, the other reference client with whom Celent spoke said that once trained, business users had become comfortable with the system's design environment, and gave it a positive rating.

Professional Services

ISIS typically deploys one or two resources to implement its system, and has worked in the past with many different services integrators. The firm notes that there is no typical number of carrier staff who work on a project, due to wide variation in insurer resources and requirements, but references reported contributing an average of three to four resources. Implementations can be as short as four months, and the carriers interviewed by Celent said that deployments had stayed on budget.

Technology

The core of the Papyrus system is written in C++ and is platform-agnostic, with multi-platform class libraries to improve its speed and portability. Papyrus includes its own distributed peer-to-peer transaction engine and object-oriented database. Papyrus also supports Oracle, DB2/UDB and SQL server as database options. The solution uses its own rules language, PQL. As noted above, the GUI can be switched between a browser-based thin client mode and thick-client mode using the same set of plug-ins.

Papyrus can manage an enterprise SOA infrastructure through its WebRepository component, which interfaces with other vendor solutions via data and messaging. A number of adapters are available, including ones for SAP, XOM, LDAP, MQSeries and .NET; integration typically occurs through a commonly accepted exchange such as XML or HTML. Real-time transactions occur via .NET or SOAP adapters. Papyrus WebRepository provides its own web application server, eliminating the need for any additional application server. Rather than allowing direct API calls, ISIS Papyrus interfaces with data, messaging, and adapters.

Implementation and Costs

As noted, implementations of Papyrus tend to be shorter than average: references reported deployment times of between four and six months, though ISIS states that an implementation using the system's default frameworks would take only two to four weeks. Fees for training and implementation are separately priced as typical hourly technical consultancy fees. An annual product maintenance contract is offered at 15% of product purchase price.

ISIS charges a single initial fee for Papyrus, which is calculated based on the number of system components purchased and the number of concurrent users. A starting configuration with designer, formatting, post-processing, and print management solutions begins at US$200,000. A configuration including portal, versioning, change management and process management with 50 concurrent users would cost an additional US$150,000. Archiving, adapters and other output transformers are additional. The firm estimates that the software configuration cost comprises 70% of the first-year cost of ownership, with the initial installation and configuration, training, and annual maintenance making up the other 30%.

Summary

ISIS Papyrus is a fully contained document automation system, embedding its own database and running on any platform. The desktop design tool is not the most usable option, but will work with mainframes and allows some advanced features not provided by all vendors, such as dynamic chart creation. Insurers with a paper-based process that need a full document automation infrastructure may find that ISIS Papyrus will be the quickest option with the least number of required components.

Skywire Software: Documaker

Company and Product Background

Skywire Software was founded in 2000 and is a subsidiary of Hall Financial Group, a private investment firm with over US$2 billion in assets. Skywire Software has grown quickly through acquisitions and internal development efforts, and has 650 employees, 350 of whom develop, implement, and support Skywire Software's document automation products. It has over 1,000 customers in the insurance space, primarily through the acquisition of Docucorp in 2007. Document automation is only one part of the Skywire Software suite of offerings, with the full range of Skywire Software products offering coverage across the policy lifecycle.

Some elements of the CCM core technology were originally released in 1994. The Documaker CCM Suite (Documaker 11.0) was part of a major re-architecture released in 2004. Since then, upgrades were released in March 2006, May 2007, and January 2008.

Customer Base and References

Documaker has the largest insurer install base of any other document automation solution in this report, claiming over 1,000 insurer clients in North America and nearly 100 in Europe. Over 80% of its insurance customers are P/C, though with so many users of the system, the 20% L/H insurers using Documaker still add up to more than many other vendors' total client base. These customers cover all sizes and include reinsurers and MGAs, and the list includes 18 of the top 20 largest property/casualty insurance companies and 17 of the top 20 largest life/health insurance companies. Marquee clients include AIG, AETNA, MetLife, and Progressive.

Reference clients running the most recent versions of Documaker all had very positive remarks about the vendor and the solution. With so many clients and such a long history, there are also those who did not have good experiences, and some references for other vendors stated that they had consciously moved away from the Documaker product in the past. These issues were with earlier versions of the suite, however, and the latest version under Skywire Software seems to have continued success with only positive reviews.

Products and Functionality

Documaker provides all the functionality covered in the Celent RFI. With a long product history and a wide client base, Documaker has proven to be a stable, effective tool that has continued to adapt to changing needs.

The suite of Documaker products includes: Documaker Studio, a tool for authoring document templates; Documaker Server, which manages the printing and document generation; iDocumaker, a prebuilt web solution to allow end users to select templates and generate ad-hoc documents; Documanage, the archiving and content management application; and Docupresentment, a web services layer to access the Documaker engine and archive.

Documaker Studio is a robust design environment that allows tight integration between content, data, and logic. Business logic can be applied to a document template by

dragging and dropping prebuilt rules, by following wizards, or by stepping into a script view and writing them in code.

The IDocumaker web solution allows both ad-hoc creation of documents through a web interface as well as the integration of an ad-hoc process to host systems. One reference client cited a very tight integration between IDocumaker and multiple host systems, allowing the client to generate ad-hoc documents across the company. The reference also noted that IDocumaker was used more as a framework and toolkit than as an out-of-the-box application, and therefore, in similar circumstances, the initial integration may take extra time.

Usability

Documaker Studio, the most complicated piece of the product suite, is often utilized by IT resources rather than business users. This is no surprise, considering the level of functionality and flexibility provided by the application. Skywire Software recognizes that more clients want to push the template creation responsibility out to business users, and the next version will feature a stripped-down interface that allows a simpler view into the document template.

Professional Services

Of the 350 employees who develop, implement, and support Skywire Software's document automation products, more than half are dedicated specifically to professional services and support. In addition, Skywire Software has a professional training organization that provides courses either in Atlanta or at the client's site.

Some reference clients did indicate past concerns with the project management and communication, but all stated that since the Skywire Software acquisition of Docucorp it has not been a problem.

Technology

The Documaker suite can run on almost any operating system, including mainframes, and can utilize any database. It runs with any application server, though J2EE is preferred over .NET. iDocumaker is a thin client Java application that can be installed on Windows or Unix.

The core system has evolved over a long time and is written in C and C++. Rather than scrap a successful and widely installed platform, the Java-based Docupresentment serves as a layer around the Documaker engine, and provides web service access to fit into an insurer's SOA strategy. Over time more of the core components will migrate toward Java.

Implementation and Costs

Skywire Software estimates that a typical implementation takes 90–120 days. References cited timelines ranging between three and eight months, each with two to three internal resources and two to three vendor resources. These implementations were either on time or under budget, with clients all very happy with the Documaker consulting since the Skywire Software acquisition.

Pricing for Documaker is based on total admitted assets, for life insurers, and on direct written premiums, in the case of P/C insurers. The pricing model for Documaker is based on solution or by product depending on client's requirements. License fees for the Documaker range on average from US$75,000 for a single entity correspondence license for the smallest of insurers to US$1.5 million for web-enabled policy production, including content management, for the largest of insurers. Maintenance is assessed in addition to the license fee at 20% annually, with customers utilizing Skywire Software's professional services team to varying degrees.

Summary

Documaker is the most widely used document automation tool in the industry for a reason: it has a long history, a complete set of functionality, a stable product, and supports almost any infrastructure. With the recent acquisition by Skywire Software, any lingering concerns about communication and service should be alleviated. Sometimes a long history also means a legacy system, and though Documaker has not been rebuilt from the ground up, insurers should rest assured that this is a modern system that will fit into their technology roadmaps.

Skywire Software: IStream

Company and Product Background

Skywire Software was founded in 2000 and is a subsidiary of Hall Financial Group, a private investment firm with over US$2 billion in assets. Skywire Software has grown quickly through acquisitions and internal development efforts, with over 1,000 customers in the insurance space, primarily through the acquisition of Docucorp in 2007. It has 650 employees, 350 of whom are working on their document automation solutions, though the breakdown between IStream and Documaker is unknown.

The IStream Document Automation Suite was originally released by InSystems Technologies in 1997. InSystems was later acquired by Whitehill Technologies, and most recently by Skywire Software. In addition to being acquired by Skywire Software in 2007, major upgrades to the Publisher and Document Manager components have been released this year.

The acquisition of Whitehill Technologies means that Skywire Software now owns two document automation suites, and this can be an issue of confusion to prospective clients. The two products have not come into much direct competition, however, as IStream has been traditionally used by Group Life and Health insurers. Eventually Skywire Software may merge the Documaker and IStream products onto one platform, but for the time being it will be maintaining both separately.

Customer Base and References

The bulk of IStream's 60-plus customers are Group Life and Health insurers, with 50 L&H clients 14 P&C. Marquee clients include BCBS Minnesota, Humana, and MetLife. There are also a few non-insurance customers for the product, but with the Skywire Software acquisition of Whitehill, the future focus will be on insurance-only clients.

Reference clients noted some customer service concerns, stating that responsiveness and capability varied based on the personnel assigned to a project. Like some similar concerns with Documaker, these issues have lessened since the Skywire Software acquisition.

Products and Functionality

The IStream document automation suite provides a full range of functionality with different areas of focus than the Documaker suite. IStream components include: IStream Publisher, the document generation and distribution engine; IStream Communicator, a web-based workflow and content management tool; IStream Document Manager, a document archiving tool; and IStream Writer, a plug-in to Microsoft Word that allows the creation of highly personalized document templates.

While there is a lot of overlap between the IStream and Documaker suites, a significant differentiator—and the reason for the different target clients—is the IStream Customizer. By avoiding a proprietary tool and instead using Microsoft Word as the interface for authoring document templates, IStream allows a high level of flexibility and interaction with a "final" document. A generated Word document can be passed to a third party, edited by the third party in Word, and then brought back into the IStream suite. This is particularly useful for Group Life and Health companies doing complex contract

negotiations, where a template-generated document may need multiple rounds of revision with a client.

Usability

IStream Writer provides a familiar document editing environment for anyone who has worked with Microsoft Word. The Word plug-in allows the easy addition of variable data and rules without leaving the Word interface. Clients using IStream all had business users in charge of template creation, demonstrating its ease of use.

After a document template is edited in Word it must be reimported into the IStream authoring tool. This is a less-intuitive step and requires a template author to utilize two interfaces instead of one. Though cumbersome, this process makes it possible for a user to reimport an altered document, such as a contract that has been changed by a client.

Clients were pleased with the IStream Communicator and its workflow abilities, using it to set adjustable approval processes for both templates and generated documents.

Professional Services

As part of Skywire Software, IStream now has a large support organization behind every implementation. Nearly half of the 350 resources devoted to document automation at Skywire Software are providers of professional services and support. In addition, Skywire Software has a professional training organization that provides courses either in Atlanta or at the client's site.

Technology

The IStream suite is tied to Microsoft Word and requires the Windows operating system. Oracle or MS SQL is required for internal IStream data, and any ODBC-compliant database can be leveraged as a source of business data. The presentation layer of the IStream Publisher Console can be run in any J2EE-compliant server, though WebSphere is required for the IStream Communicator.

Implementation and Costs

Skywire Software estimates a typical installation will take between three and six months and require four to eight resources, split between the vendor and client. Reference clients were happy with the ease of installation, one stating that the process was easy and the biggest issues were its own infrastructure. While the references saw slightly longer projects, nearing eight to nine, they were able to utilize small teams of three to five resources.

As with most document automation solutions, pricing for Skywire Software IStream varies according to client needs and is most affected by number of interactive users, anticipated throughput needs, and required output options. License fees range on average from US$75,000 for a smaller insurer with minimal output requirements to US$1.2 million for a very large insurer with significant throughput needs and numerous end users. Maintenance is assessed in addition to the license fee at 20% annually, with customers utilizing Skywire Software's professional services team to varying degrees.

Summary

The IStream suite allows strong personalization of documents within the bounds of Microsoft Word. It is ideal for clients who are dealing with contracts or other documents that, once generated from a template, will still go through multiple rounds of alterations. This ability has found IStream a strong following in the Group Life and Health space. With Skywire Software's acquisition of both IStream and the much larger Documaker, this focus is not expected to change.

StreamServe: Persuasion

New Entrant / Limited Profile

StreamServe is a privately held Massachusetts-based company that has achieved a global presence since its founding in 1997. It was more than 4,600 customers worldwide using an array of StreamServe products, including many global insurers. Its Persuasion document automation suite, however, is not currently in use by any North American insurers, and the company is therefore considered a new entrant for the purposes of this report.

The Persuasion suite of products appears to be well-designed and provides a full set of document automation functionality, missing only a workflow/content management piece to handle the approval process for ad-hoc documents. Streamserve expects to provide some of this functionality in a future release. The system breaks letters into four layers: Data, Content, Presentation, and Distribution. Managing each layer individually adds some complexity, but also provides abilities not seen in other vendors.

The input and output mapping tools available for use by IT are particularly compelling. These applications allow a user to visually look at an input source, whether a flat file, XML, database feed, or other forms of data, and create a mapping that will be used to bring this data into a document template. It is also possible to set up most kinds of connections to a template—web service call, JMS, direct TCP/IP, Java API, etc.—through the application interface. This should help cut down on IT time and maintenance.

The presentation design is handled in StoryTeller, a Windows-based application, and the content is done in the web-based Correspondence Management tool. Both products are currently in beta but appear to be attractively designed and contain much functionality. Unlike some other vendors that also separate content from presentation, the StoryTeller tool looks like it could be used either by a trained designer or by any business user familiar with Microsoft Word. The applications allow reusable blocks of text, rules, or design elements, and the distinction between presentation and content means that it will be easier to create style templates that are used across many letters.

The system is written primarily in C++ and will run on Unix, Linux, or Windows, though the StoryTeller design application is Windows only. Correspondence Manager, however, runs on a web browser and is therefore platform-independent. Persuasion supports Oracle, DB2, or Microsoft SQL Server, and it requires IBM WebSphere or TomCat for an application server.

StreamServe estimates three to six months for an implementation, handled mostly by internal staff. The company has approximately 75 people in professional services and a 25-person support team, plus it partners with IBM and Cap Gemini as third party system integrators. StreamServe licenses both a base and an enterprise package, though with the base package geared towards 300 transactions per year, it will not be adequate for insurers. The enterprise package includes 90% of the StreamServe functionality, with additional components negotiable, and starts at US$150K–$200K.

The Persuasion document automation suite looks to be a strong entry in the space and, despite some platform limitations, has a technological edge. The data and integration tools for IT users will appeal to clients that have many data sources or difficult integration

needs or want a solution that will be easy to keep integrated as other back end applications are replaced or upgraded. Once the StoryTeller and Correspondence Management applications go through a successful beta, StreamServe will be in a good position to add some North American insurers as clients.

Thunderhead: Thunderhead NOW

Company and Product Background

Thunderhead is a privately held company of 100 people focused on document automation for Insurance and other Financial Services industries. The company was founded in 2001 and is headquartered in London with a globally located staff, including over 20 sales, marketing, professional services, and support personnel in the United States.

The document automation suite was released in 2003 and went through a major upgrade in 2007. It utilizes XML for all data and distinguishes between content, data, and design to provide multichannel communications.

Customer Base and References

The Thunderhead suite is only in use by three insurers in North America, but the system has a stronger presence in Europe and Australia, with over 18 leading global insurers and more than 60 customers in total. Insurance customers are using the system for statements, policies, and both high-volume and individual customer communication. Reference clients were very happy with the system, one stating that it could not imagine working with a different document automation vendor.

Products and Functionality

All data in the Thunderhead system is stored and manipulated as XML, allowing a flexible approach to document automation. All the elements of a document can be individually managed, including the layout of a document, the business rules and logic, and the look and feel. This allows a business user to generate a template and then take different look and feels created by a graphic designer and apply them to the new template.

The XML structure was designed with a focus on multiple channels, so the system can take one template and generate content for printing, email, archive, fax, SMS, or ACORD XML. Combined with the ability to design the look and feel of a document separately from the layout, this means that business users, graphic designers, and IT can all use the system to create a common branding strategy across all documents and all channels.

Like most of the document automation systems surveyed by Celent, Thunderhead provides a concept of document components, allowing a user to reuse blocks of text, rules, or entire subdocuments across multiple templates. Where Thunderhead excels is with its impact analysis tool, an interface that shows a user exactly where a component is embedded. This lets an author comfortably make changes to shared text with full knowledge of all the document templates that will be affected.

The Thunderhead suite includes an extensive ad-hoc document editing interface that includes a web-based tool usable by third parties. There is no ad-hoc portal; instead Thunderhead provides published WSDLs for rapid deployment and integration. In addition, there are several out-of-the-box web services to integrate with enterprise content management and workflow solutions, such as FileNet, IBM Content Manager, and EMC Documentum.

Usability

The Thunderhead platform is intended to move document authoring out of the hands of IT and move the responsibility of creating content to content owners and design to designers. The content studio does not provide as much of a "WYSIWYG" interface as some other vendors, but this is because the look and feel of a document is handled elsewhere. One click allows the content author to apply test data and a design, letting them see a preview of the final document. Reference clients had no problems getting business users trained on the Thunderhead Content Studio, and cited the focus on content rather than design as a positive feature.

This separation of content and design may take some getting used to for clients that currently have the same user manage both. The layout tool (not to be confused with the content tool) is geared toward designers and will require someone with knowledge of XSL to generate more than the default layouts. After the initial designs have been established, however, this approach will provide greater flexibility as well as a faster turnaround time for new documents.

Professional Services

A quarter of the 100-person company is devoted to professional services. Thunderhead recommends five of its resources for the deployment, including a project manager, architect, integration expert, implementation consultant, and trainer, as well as multiple document authors, depending on the number of documents to convert. Thunderhead estimates that an average deployment will take 60–90 days, while citing one that took only two weeks.

Thunderhead works with multiple implementation partners, including IBM Global Services, TCS, and HCL, and states that there are over 75 trained Thunderhead specialists at various third party consulting firms.

Technology

The Thunderhead platform is a J2EE system written half in Java and half in VB.Net/C++. It is SOA-compliant and built on 100% open standards, including XML and XSD (XML Schema Definition) for content and data, and XSL and cascading style sheets for presentation. Web services and APIs are published for easy integration, and it comes with many out-of-the-box adapters for leading ECM and workflow solutions.

The content designer is a .NET application that must be installed on Windows desktops. The server can be BEA WebLogic, Microsoft .NET server, JBoss, or WebSphere running on Windows, Unix, or Linux. Thunderhead only supports Oracle, DB2, and SQL Server for the rules and content repository, though data being sent to Thunderhead for document generation can come from any source that generates XML.

Implementation and Costs

The cost of the Thunderhead platform is primarily an upfront license fee, with a 20% annual maintenance. There is also a small percentage of cost (2%) associated with initial training. There are three common types of Thunderhead deployments, each with a different price range. If Thunderhead is licensed for a single application, such as generating correspondence letters from the claims system, it is typically in the range of US$200-300K, though it does support smaller implementations for midsize insurers.

Licensing Thunderhead to handle all document generation for an entire line of business will be in the range of US$400-600K. An enterprisewide license is negotiable and will usually be above $600K.

Thunderhead's pricing is not geared toward smaller clients or projects, though it justifies the cost by pointing to a wide feature set and a platform that can support an entire company's document automation strategy. It does not typically do deals that are less than $200K unless there is a opportunity for further sales.

As mentioned above, Thunderhead estimates that average deployments are between 60 and 90 days, and this has been confirmed by reference clients.

Summary

Thunderhead has utilized XML and other open standards to create a very flexible and powerful document automation system. Its system requires a multifaceted team to manage different pieces of the document process, and along with its aggressive pricing strategy, it is a solution that will likely suit only larger insurers. For a company with a team of marketers, designers, and content authors, the Thunderhead suite provides an excellent opportunity to manage a brand strategy across all documents and all channels.

Top Down: Client Letter

Company and Product Background

Top Down Systems is a privately held software vendor that specializes in providing correspondence and document automation solutions to a range of industries, with a primary focus in insurance and healthcare. Based in Rockville, Maryland, the firm has been in business for roughly a quarter of a century and employs 25 staff, all of whom have worked on insurance document automation projects in the past two years.

Since 1981, Top Down has offered a mainframe-based solution for interactive ad-hoc correspondence. The company released its more modern offering, Client Letter, in 2000. Client Letter provides a Windows-based web services-enabled platform for ad-hoc and batch document generation while also adding batch functionality, as well as expanded workflow features and a browser-based interface.

Customer Base and References

Client Letter has between 50 and 60 US insurer clients, most concentrated in the health sector. Eight new insurer customers have purchased the system since 2006. Marquee clients include United Health Group, EDS/Tricare, CareFirst, and many of the Blue Cross Blue Shield companies.

Reference clients have only had positive things to say about TopDown, with health insurers giving especially high marks for TopDown's knowledge of the industry.

Products and Functionality

Client Letter's components are highly integrated at both the functionality and presentation levels: ad-hoc and batch document generation components support all the same functions, with the data for batch simply being pulled in automatically by means of the Batch Manager component. The interface that ad-hoc end users see is known as the Document Generation component. End users can store documents in an archive, search for or retrieve documents, and, in the case of managers, exercise oversight by means of the "review and release" feature. The system also offers an archive management tool that displays a document's full history, including previous versions. Permissions-based document access and protections on sensitive graphics, such as signatures, allow for full HIPAA compliance.

Like many other document automation systems on the market, Top Down aims to move the design of templates into the hands of business. Business staff can use the system's Document Maintenance tool to create templates, search for and retrieve them from a repository, and manage rule-based workflows. This last feature is particularly extensive, affording business users significant control over the flow of tasks and information through an organization. Client Letter supports a wide variety of output formats and multichannel document distribution.

Document Generation, the ad-hoc portal and document editing application, provides significant functionality for the end user and is cited by TopDown as one of its biggest competitive advantages. The tool gives different end users—such as call center representatives or claims adjusters—control over template selection, data entry, and much of the ad-hoc generation of a letter. The system also allows adjustable process and

permissions, determining what data an end user can edit and whether a document should be reviewed. An insurer can integrate the tool into the process at any point, even choosing to integrate the ad-hoc process with an existing third party system and bypassing the tool altogether.

Usability

The template authoring interface is not as flashy as some other vendors, relying on trees of information and layers of tabbed screens. The complexity is partially due to the large amount of functionality, but without the benefit of wizards or simpler views, there may be a steep learning curve. In order to create variable data, the system requires users either to search through a potentially lengthy list or enter in a memorized name by hand. While this may not be an issue for someone who helped define the variable data names, it prolongs the training time for a new user.

The end user ad-hoc portal follows the same design as the template authoring application, and though it may not have a modern design, it does provide functionality not found in many other ad-hoc portals. The document editor embeds Microsoft Word in order to give users a familiar interface for working with the generated document.

The overall look and feel has not kept pace with newer technologies and appears similar to the crowded Visual Basic applications many insurers build in-house. Once the users have tackled the longer training times, however, they are very happy with the system. TopDown is aware of the need for a facelift and is working on a newer interface as part of the next major release.

Professional Services

Top Down estimates that deployment of Client Letter typically takes two to three months and demands an average of three to four vendor resources. Reference clients saw only slightly longer deployment periods of four to six months. Because of the prebuilt ad-hoc portal, clients are generally able to get an out-of-the-box implementation running in shorter timeframes and with less consulting. The company tends not to work with systems integrators. The cost of training up to 10 employees is included in the license fee, and Top Down charges US$2,000 a day to train additional employees.

Technology

Client Letter can only run in a Windows-based, .NET environment, but compensates for these limitations by providing significant database flexibility; the system supports all databases queried by Celent. SQL calls are the preferred integration method, but Client Letter is also able to accommodate all other methods Celent asks about, including flat files, JMS, and a custom API.

About 60% of the codebase is written in Visual Basic, with another 20% in .NET. For business users, a browser interface is preferred, but the system can also support a "thick" client-server deployment. All product functions are available via web services, and Client Letter can map to external web services for data retrieval.

Implementation and Costs

As noted, implementations of Client Letter typically take two to six months. Top Down charges a fixed-price, one-time license fee that covers all system components. This fee comprises 70% of the total first year cost of the system and is calculated off of a flat-rate base charge, which is modified according to the number of named users of the system. The initial customization and maintenance make up most of the rest of the first-year expense. Their projects range in cost from US$200,000 to US$1.5 million, with average deal sizes between US$400,000 and US$500,000.

The above numbers account primarily for software, as TopDown does not typically sell significant consulting or services. When additional implementation consulting is needed, TopDown provides additional fixed pricing statements of work. Support, both technical and business-specific, is covered under the maintenance charge.

Summary

TopDown has a strong healthcare client base and has successfully sold into many of the BCBS companies. The design is somewhat outdated and has not kept pace with the document automation industry, however, and clients looking for flashy or intuitive wizard-based interfaces may not be satisfied with the TopDown solution. Celent believes that TopDown will appeal most to clients that want to give a lot of control to end users who need to create ad-hoc documents, or that want a fully built ad-hoc portal that can be installed with little or no customization.

Conclusions

In recent years the landscape has changed for document automation vendors, with the technology available advancing faster than many insurers. Vendors are providing solutions that will allow customers to rethink their entire document production strategy, giving new kinds of users access to the process and extending the life cycle of an electronic document beyond printing. Current systems have either been built from the ground up or have been updated to support technologies such as .NET, Java, SOA, Web services, and ACORD XML. The only insurers with less choice will be those looking for mainframe support. There are few licensing options available for under US$150K, especially not for the amount of documents typically generated by a carrier, and deals involving more than one line of business appear to be US$400K or greater.

As the document automation space has matured, there has been a convergence of functionality and features offered by vendors. This is a positive development for clients, but it can make the selection process difficult. Insurers will need to answer some questions about how they will be using a document automation solution before making a vendor choice.

- Does the vendor need to provide an entire suite of document management applications, including archiving, content management, and workflow? Or will the document automation solution be integrated into existing document and process management applications?

- Will there be multiple users involved in the template authoring process, such as content authors, designers, and marketers? Or will one user be responsible for authoring the complete template?

- Will the document be edited by a third party once the initial generation is complete, and will it be delivered through interactive channels such as email or the web? Or will the life cycle of the document end upon printing?

- Does the solution need to provide a companywide document strategy, or simply fill a specific document automation need?

It is questions like these, rather than questions about basic functionality, that will drive vendor selection.

Future developments in the space will continue to push the boundaries of the concept of a document. Document automation solutions will tie in to Internet branding strategies, campaign management, industry analytics, smart forms, and instant messaging. As agents and policyholders get more comfortable with online interactions, so too will documents become less and less about printing and more about an interactive experience, and document management will become an ongoing process of communication with agents and clients.