Hummingbird DM Integrated Document Management Software

Summary

Hummingbird DM is the integrated document management component of the Hummingbird Enterprise suite. Hummingbird DM represents re-branding of the former DOCSFusion, PowerDOCS and CyberDOCS products.

Note

Hummingbird began shipping Hummingbird Document Management (DM) version 5.1 in June 2003. This release provides performance enhancements and reporting capabilities. Hummingbird added an automated e-mail management solution to extend Hummingbird DM's capabilities. Hummingbird also made two acquisitions in the records management arena: LegalKEY (record management [RM] for law firms) and Valid (RM for U.K. government agencies).

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Overview

Hummingbird DM is part of a suite of Hummingbird products, known collectively as Hummingbird Enterprise. An integrated yet modular solution suite, Hummingbird Enterprise is designed to help enterprises manage the entire life cycle of their business content and knowledge assets. Hummingbird DM is an integrated document management (IDM) product that provides the underlying content repository and document management services for Hummingbird Enterprise. In addition to Hummingbird DM, Hummingbird Enterprise consists of the following core components:

- Hummingbird Portal — the Web portal interface
- Hummingbird Business Intelligence (BI) — a complete reporting and analysis package
- Hummingbird Extraction, Transformation and Loading (ETL) — a data integration solution that extracts, transforms and loads data between applications, databases, data stores, data marts, data warehouses and document management systems
- Hummingbird Knowledge Management (KM) — a collection of technologies that deliver search, categorization and information retrieval capabilities
- Hummingbird RM — a records management tool
- Hummingbird Collaboration — a document/project-based collaborative environment

All components have a single common user interface. The components can be installed as stand-alone applications or in conjunction with other components in the suite. Currently, Hummingbird DM, Hummingbird BI, Hummingbird KM, Hummingbird RM, Hummingbird Collaboration and Hummingbird Portal are tightly integrated. When integrated with Hummingbird Portal, Hummingbird DM serves as the portal’s underlying content repository.

Hummingbird DM represents a major product release and a re-branding of the previous DOCSFusion, PowerDOCS and CyberDOCS products. It replaces DOCSFusion and DOCS Open as the strategic document management platform from Hummingbird. New features and enhancements in Hummingbird DM include improved compound document support, new search user interface, enhanced administration and deployment capabilities, and tighter integration with other components in the Hummingbird Enterprise Suite, particularly the records management and search capabilities. The Hummingbird DM suite itself includes the Hummingbird DM server and client software, as well as the following companion products:

- Hummingbird Collaboration
- Hummingbird Web Publishing
Hummingbird targets Hummingbird DM primarily for use in managing an enterprise’s internal business content and, when used in conjunction with Hummingbird Web Publishing, for publishing documents and content to an intranet or extranet site. Through its relationship with RedDot, Hummingbird can address customers' Web content management needs. Hummingbird resells the RedDot products and is developing the integration between the two offerings.

**Architecture**

Hummingbird DM is built on a three-tier architecture consisting of a Data Tier, the Transactional Tier and the Client Tier. The Data Tier, or the Hummingbird Repository, consists of an SQL database containing the DM library, a file store containing one or more document servers, and a full-text index of the stored documents. Document metadata, forms and user profile information are stored in the database, while the actual documents are stored on the document servers. Document servers can be shared machines or dedicated servers.

The Transactional Tier consists of the Hummingbird DM Server and the DM Web Server. The DM Server software includes DM Server, the DM Server Admin Tools and SearchServer 5.3. The DM Server handles access to the database that stores document metadata, and it manages the storage and retrieval of the physical documents. The DM Web Server is the Web interface for Hummingbird DM; it replaces the CyberDOCS software.

The Client Tier is where users create, access and manage documents. Hummingbird DM provides a single client that offers several user interfaces, including the DM Webtop and DM Extensions, which expose DM features in e-mail clients and user authoring tools as well as the Windows Explorer.

**Migration Issues**

Established DOCSFusion customers can upgrade to Hummingbird DM free of charge as part of their standard maintenance agreements. DOCS Open customers can migrate to Hummingbird DM for a nominal per-user upgrade fee. Upgrades to Hummingbird DM 5.1 are supported from Hummingbird DM 5.0, DOCSFusion 4.0, and DOCS Open 3.9.5 and 3.9.6. According to Hummingbird, its previous DOCSFusion offering can coexist with Hummingbird DM, enabling users to gradually transition to the new offering. DOCSFusion client applications will work with Hummingbird DM, but they cannot take advantage of the new Hummingbird DM features.

Sites implementing Hummingbird DM must create new indexes to take advantage of the new features in SearchServer 5.3, which is not backward-compatible with previous SearchServer versions. Once Hummingbird DM has been implemented, any established SearchServer indexes created by the DOCSFusion Indexer can be used for searching, but the Hummingbird DM Indexer cannot update them. In addition, with the release of Hummingbird DM, Hummingbird no longer supports Verity as the underlying search engine or recognizes Verity indexes. Established DOCS Open or DOCSFusion customers migrating to Hummingbird DM must re-create their full-text indexes with SearchServer; however, they will be able to create the SearchServer index while maintaining the Verity index for established users. Users connecting to the DM Repository via the Hummingbird DM Client cannot search the Verity indexes.
<table>
<thead>
<tr>
<th>Table 1: Specifications: Hummingbird DM</th>
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<tbody>
<tr>
<td><strong>Product Type</strong></td>
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<tr>
<td><strong>Current Version</strong></td>
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<td><strong>Installed Base</strong></td>
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<tr>
<td><strong>Date Announced</strong></td>
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<td><strong>Date Generally Available</strong></td>
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<tr>
<td><strong>Architecture</strong></td>
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<tr>
<td><strong>Server Operating Systems Supported</strong></td>
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<td><strong>Web Server Support</strong></td>
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<td><strong>Client Operating Systems Supported</strong></td>
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<td><strong>Web Browsers Supported</strong></td>
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<td><strong>Databases Supported</strong></td>
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<td><strong>Standards Supported</strong></td>
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<td><strong>Communications Protocols Supported</strong></td>
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<tr>
<td><strong>System Security</strong></td>
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<td><strong>System Administration Tools</strong></td>
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<tr>
<td>Table 1: Specifications: Hummingbird DM</td>
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<td>----------------------------------------</td>
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<tr>
<td><strong>Native Language Support</strong></td>
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<tr>
<td>In addition to English, Hummingbird DM is translated into French, German, Italian, Spanish, Japanese and Korean. Content can be stored in the user's native language, since Repositories may house documents and profiles generated in multilingual environments. Hummingbird DM also supports a variety of native languages when indexing source documents to support full-text searching. Hummingbird DM embeds Hummingbird SearchServer, which uses Unicode characters, for indexing and text search functionality. Out of the box, SearchServer fully recognizes Simplified Chinese, Traditional Chinese, Danish, Dutch, English, Finnish, French, German, Italian, Japanese, Korean, Bokmal Norwegian, Nynorsk Norwegian, Portuguese and Swedish. For languages not listed, some additional configuration or customization is required to enable SearchServer to recognize specific rules for word breaks or terms for accurate indexing and searching.</td>
</tr>
<tr>
<td><strong>User Interface</strong></td>
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<tr>
<td>Hummingbird provides a single client with multiple points of entry: the DM Webtop, which is browser-based; integration with user authoring tools; and desktop interfaces through Microsoft Outlook and Windows Explorer.</td>
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<tr>
<td><strong>Application Integration</strong></td>
</tr>
<tr>
<td><strong>General</strong></td>
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<tr>
<td>Hummingbird DM, through ODMA and macros, provides integration with third-party office applications, such as Corel WordPerfect, Microsoft Excel, Microsoft PowerPoint, Microsoft Project, Microsoft Word (XP and 2000), Microsoft Visio and Workshare DeltaView. Applications may be integrated actively or passively (isolating integrated functions in a single menu item). It also supports Interceptor integration, a way to integrate products that do not support macros or other programming tools commonly used to integrate applications. Hummingbird DM can also be integrated with e-mail clients, such as Lotus Notes, Novell GroupWise and Microsoft Outlook. It can be integrated with SAP through a third-party partner offering.</td>
</tr>
<tr>
<td><strong>Customer Relationship Management (CRM) System Integration</strong></td>
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<tr>
<td>Through the companion Siebel DM Extension, Hummingbird DM integrates with Siebel's CRM system (Siebel 6.3 and 7.x), enabling native DM functionality within the Siebel desktop. It also lets users associate Siebel records with relevant documents in the Hummingbird DM repository.</td>
</tr>
<tr>
<td><strong>Portal Integration</strong></td>
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<tr>
<td>Hummingbird DM can be integrated with Hummingbird Portal to serve as the portal's underlying content repository. The Hummingbird Core Services (HCS) Server handles communication between Hummingbird Portal and Hummingbird DM. When Hummingbird DM is used through the portal, it can be integrated with enterprise resource planning (ERP) systems from SAP and J.D. Edwards. Through its open API, Hummingbird DM can be integrated with third-party portals.</td>
</tr>
<tr>
<td><strong>Application Development/Customization</strong></td>
</tr>
<tr>
<td><strong>Hummingbird DM API</strong></td>
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<tr>
<td>Application development/customization is accomplished through the Hummingbird DM API (customizable with any Component Object Model [COM]-oriented development environment, such as Visual Basic, C++ or Delphi). The Hummingbird DM Webtop uses a mixture of JavaScript and Active Server Pages (ASP), with support for ActiveX controls.</td>
</tr>
<tr>
<td><strong>Hummingbird DM Extensions</strong></td>
</tr>
<tr>
<td>The Hummingbird DM Extensions are written with Microsoft Visual C++, using Visual Basic for Applications (VBA) extensions, COM and ODMA.</td>
</tr>
</tbody>
</table>
### Table 1: Specifications: Hummingbird DM

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Hummingbird Imaging</td>
<td>A client tool that provides document-imaging capabilities. It enables users to capture, index, annotate, manage and store scanned paper documents and faxes within the Hummingbird DM repository.</td>
</tr>
<tr>
<td>Hummingbird RM</td>
<td>Hummingbird RM is a core element of Hummingbird Enterprise and integral to Hummingbird DM. It enables enterprises to set disposition rules and treat documents as electronic records, thereby controlling the complete life cycle of all physical and electronic knowledge resources. Hummingbird RM and Hummingbird DM share the same repository and user interfaces. Hummingbird RM complies with the U.S. government’s Section 508 accessibility requirements and with the U.S. Department of Defense (DOD) standard.</td>
</tr>
<tr>
<td>Hummingbird Web Publishing</td>
<td>Based on the Stellent Transit Central technology (which Hummingbird re-licenses), Hummingbird Web Publishing enables business documents stored in Hummingbird DM to be transformed into Web-viewable formats for publishing to an intranet, extranet or low-end Internet site.</td>
</tr>
<tr>
<td>Hummingbird AutoCAD DM Extension</td>
<td>An extension that enables Hummingbird DM users to manage AutoCAD engineering drawing files.</td>
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<tr>
<td>Hummingbird Collaboration</td>
<td>Hummingbird Collaboration is a secure Web-based collaborative workspace for dispersed teams across the enterprise. It works with both Hummingbird DM and Hummingbird Portal to provide an environment for managing complex projects involving both internal and external participants. External participants only get access to corporate documents they are authorized to see. Documents stored in Hummingbird DM can be copied, mirrored (synchronized) or imported into Hummingbird Collaboration project folders. Hummingbird Collaboration supports the World Wide Web Consortium Web Services standard for interoperability between Internet-enabled applications.</td>
</tr>
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### System Requirements

<table>
<thead>
<tr>
<th>Hummingbird DM Server</th>
<th>Requirements</th>
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</table>
| DM Server             | • DM Server: A Pentium processor (dual Pentium III 600MHz or greater recommended) with a minimum of 1GB of memory; Microsoft Windows NT Server 4.0 or Windows 2000 Server/Advanced Server.  
• DM Web Server: A Pentium processor (dual Pentium III 600MHz or greater recommended) with a minimum of 1GB of memory; Microsoft IIS 4.0 or 5.0 or iPlanet Web Server 4.0 or 4.01. Hummingbird recommends that DM Web Server be installed on a different machine from DM Server. |
| Hummingbird DM Webtop | Pentium III processor (500MHz minimum, 600MHz or greater recommended); Microsoft Internet Explorer 6.0 or 5.5 or Netscape 7.02  
DM Extensions: Minimum Pentium processor (500MHz) with 128MB of RAM; recommended Pentium III processor, 600MHz, with 256MB RAM, running Microsoft Windows 98, Microsoft Windows 2000, Microsoft Windows XP or Microsoft Windows NT 4.0 Workstation with Service Pack 6a or higher |
<table>
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<tr>
<th>Table 2: Features and Functions: Hummingbird DM</th>
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<tbody>
<tr>
<td><strong>Document Import/Capture</strong></td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Supports the import and creation of electronic</td>
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<tr>
<td>documents. Documents can be word processing</td>
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<tr>
<td>documents, spreadsheets, forms, graphics files,</td>
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<tr>
<td>HTML files and e-mail messages and their</td>
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<tr>
<td>attachments. Hummingbird DM also supports</td>
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<tr>
<td>scanned images of hard-copy documents through</td>
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<tr>
<td>the Hummingbird Imaging option. A document can</td>
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<tr>
<td>be created using established templates. Documents</td>
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<tr>
<td>can also be added to the system by dragging and</td>
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<tr>
<td>dropping them from the Windows desktop or</td>
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<td>Explorer, as well as from within Microsoft</td>
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<tr>
<td>Outlook e-mail messages and attachments. A batch</td>
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<td>import utility enables documents to be imported</td>
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<tr>
<td>from a local hard drive, from a network drive,</td>
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<tr>
<td>or from a diskette or CD-ROM. File formats</td>
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<td>supported include TIFF, PDF and Joint Photographic</td>
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<td>Experts Group (JPEG).</td>
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<tr>
<td>Image Capture</td>
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<td>Through the optional Hummingbird Imaging module,</td>
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<td>paper documents can be scanned in and stored as</td>
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<tr>
<td>digitized images in the Hummingbird DM</td>
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<tr>
<td>repositories. Supports TWAIN and Image and</td>
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<tr>
<td>Scanner Interface Specification (ISIS)-compatible</td>
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<tr>
<td>scanners. Includes optical character recognition</td>
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<tr>
<td>(OCR) capabilities. OCR output can be plain</td>
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<tr>
<td>text, Microsoft Word or HTML. Hummingbird Imaging</td>
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<tr>
<td>supports binary and color images.</td>
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<tr>
<td>Indexing</td>
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<tr>
<td>Hummingbird DM uses Hummingbird’s SearchServer</td>
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<td>engine for full-text indexing. With Hummingbird</td>
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<tr>
<td>DM, the default is to index the last major</td>
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<td>version of a document unless there is a Published</td>
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<tr>
<td>Version, at which point the Published Version is</td>
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<tr>
<td>the version indexed. Multiple indexes can be</td>
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<tr>
<td>maintained for the same library for load</td>
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<tr>
<td>balancing or backup. Hummingbird DM has a Profile</td>
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<tr>
<td>Paper Document option that lets users index the</td>
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<tr>
<td>Profiles of external documents, that is,</td>
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<tr>
<td>documents that are not stored electronically.</td>
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<tr>
<td><strong>Document Access Services</strong></td>
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<tr>
<td>Organization/Navigation</td>
</tr>
<tr>
<td>Hummingbird DM uses the concept of folders,</td>
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<tr>
<td>which are collections of related documents.</td>
</tr>
<tr>
<td>Folders replace the containers that were known</td>
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<tr>
<td>as Projects and Binders in the DOCS Open and</td>
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<tr>
<td>DOCSFusion products. Folders can contain</td>
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<tr>
<td>documents and subfolders. With the DM Webtop,</td>
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<tr>
<td>Public Folders are presented in a hierarchical</td>
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<tr>
<td>tree view. The DM Webtop also supports the</td>
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<tr>
<td>concept of related items. This feature lets</td>
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<tr>
<td>users create logical associations between</td>
</tr>
<tr>
<td>documents. Users have the ability to create</td>
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<tr>
<td>personal workspaces, which are containers that</td>
</tr>
<tr>
<td>hold references to various Hummingbird DM items</td>
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<tr>
<td>(for example, documents, folders, quick searches</td>
</tr>
<tr>
<td>and uniform resource locators [URLs]).</td>
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<tr>
<td><strong>Table 2: Features and Functions: Hummingbird DM</strong></td>
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<td>--------------------------------------------------</td>
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<tr>
<td><strong>Document Import/Capture</strong></td>
</tr>
<tr>
<td><strong>Access Control</strong></td>
</tr>
<tr>
<td>A user name and password are required to access documents. Authors can apply access control to documents and their profiles as they are created or entered into the system. Access rights are assigned to individual users or to user groups (role-based). Users can be assigned to library groups. By default, the user who enters a document will have all access rights to it. Access rights granted include the following: control access; view, edit, retrieve, copy or delete documents; view published version only; and view or edit profiles. Hummingbird DM includes a deny right, which can be applied to remove rights from a user or group. Users can also be granted the capability to control access to a document (that is, to change access rights). Hummingbird DM provides four pre-defined Rights Templates. In addition, it provides a custom template that allows users to assign custom rights. These custom rights are determined by selecting a combination of the nine access rights options already provided.</td>
</tr>
<tr>
<td><strong>Mobile Support</strong></td>
</tr>
<tr>
<td>Hummingbird DM includes an Attaché feature that lets a user work with documents while the network is unavailable or the user is disconnected from the network. The Attaché feature is activated by installing Active Application Integration. The Hummingbird DM client lets users add documents to Attaché and synchronize Attaché documents back to the DM Webtop once reconnected to the network. With the Windows Explorer DM Extension or Microsoft Outlook DM Extension, users may also add or import new documents while undocked; view, print and edit shadowed documents; and save e-mail documents using Microsoft Outlook integration. It also supports application integration via ODMA, passive integration and the Interceptor mode. In addition, it will automatically monitor Hummingbird DM server availability. The Attaché feature does not support quick searches, folders or paper documents. In addition, Hummingbird DM supports alerts on key DM activities, which can be made available to wireless devices.</td>
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<tr>
<td><strong>Searching</strong></td>
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<tr>
<td>Hummingbird DM ships with Hummingbird’s SearchServer engine as the default engine for searching and retrieval. It supports quick searches, content searches and profile (attribute) searches. Content searches can include keywords and return a result’s list ranked by relevance. Date searching is also supported. Frequently used search criteria can be saved as a quick search. Supports the capability of previewing documents in a results list before retrieving them. Supports query by example (QBE). Hummingbird provides new search interfaces, including a content, custom and easy search interfaces. Easy searches are designed for nontechnical users who wish to perform content searches.</td>
</tr>
</tbody>
</table>
### Table 2: Features and Functions: Hummingbird DM

<table>
<thead>
<tr>
<th>Document Import/Capture</th>
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<tbody>
<tr>
<td><strong>Viewing</strong></td>
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<tr>
<td>The Hummingbird DM Viewer is based on the Inso Outside In viewer technology from Stellent. Documents can be viewed in HTML, viewed by the DM Viewer (formerly known as FulView) and viewed in their native form. The DM Viewer supports the viewing of over 200 file formats; however, PDF files require that Adobe Acrobat or another PDF viewer be installed on the local computer. The HTML viewer dynamically converts the document into HTML for display in the browser. Hummingbird Imaging includes a Multiple Document Interface (MDI) for viewing multiple scanned or faxed documents simultaneously, and it supports thumbnails of the individual image pages. Other viewing features include rotate, pan and zoom; the capability of viewing two pages of one image simultaneously; and side-by-side comparisons.</td>
</tr>
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| **Caching**             |
| Hummingbird DM supports compression and caching of documents and content at the workstation level. In addition, Hummingbird offers a DM Server Content Cache capability that can be deployed on DM Servers to improve the performance of remote workgroups in centralized environments. Content that needs to be accessed by remote users can be saved locally in cache. Document updates/changes are automatically synchronized between the local content cache and the source repository. |

<table>
<thead>
<tr>
<th>Document and Content Management</th>
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<tbody>
<tr>
<td><strong>General</strong></td>
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<tr>
<td>Basic library services include check-in/-out and version control. A Document History feature maintains a log of all actions performed on a document. With Hummingbird DM, documents can be exported and saved to a file system. They can also be saved as shortcuts on the Windows desktop. Hummingbird DM supports the concept of shadow documents, in which an additional copy of every document stored in the repository is saved to a local hard disk and is accessible to the user when offline via the Attaché folder.</td>
</tr>
</tbody>
</table>

| **Document Check-In/Checkout** |
| At checkout, users can copy a document or lock it. Copy leaves the original on the server and allows others to access and edit it. Documents checked out using the Copy option cannot be checked back into Hummingbird DM, but they can be imported as versions or new files. The Lock option prevents other users from editing a checked-out document. Multiple documents can be checked out simultaneously. |

| **Version Control** |
| Stores and manages up to 99 versions of a document. Each version can, in turn, have up to 26 sub-versions. Features supported include edit version comments, delete version and delete document without deleting the profile. Edits made to a document can be saved as a new version, a sub-version or a new document. With the Windows Explorer and Microsoft Outlook DM Extensions, users have the ability to publish a document version and to make a document version read only. Users with rights to “view published version only” can view the document. Users with broader access permissions can evolve the document to its next publishable state. |
## Document Import/Capture

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Compound Document Management</td>
<td>Hummingbird DM supports compound document management through its extended folder model and Microsoft’s Object Linking and Embedding (OLE) technology. It includes a “where used” function that reports how a document is referenced in folders as well as how the document is used in links from within applications. Through OLE, Hummingbird DM lets users create and update links between Microsoft Word, Excel and PowerPoint documents, and Corel WordPerfect, Presentations and Quattro Pro documents stored on the Hummingbird DM server. In addition, users can create a link to an OLE-compliant document and place it into any other OLE-compliant document.</td>
</tr>
<tr>
<td>Linking</td>
<td>Hummingbird DM also supports linking to profiled documents via a DM URL that, when navigated, opens up a browser window and displays the linked document.</td>
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<tr>
<td>Annotation/Markup Capabilities</td>
<td>Hummingbird Imaging provides markup and annotation capabilities, including highlighting, red-lining, sticky notes, redaction (black out) and digital stamps. It also provides full control over the annotations, including color fonts, fill style and fill shape.</td>
</tr>
<tr>
<td>Workflow</td>
<td>Document- and folder-routing capabilities are provided through the optional Hummingbird DM WorkFlow module. It supports parallel and sequential routing, both of which can be combined in a single route. Ad hoc exceptions can be handled through subrouting. Routes can span multiple libraries. Provides reusable route and task templates. Supports e-mail notification. An administrator can set up a single DM WorkFlow site that serves several DM libraries. Hummingbird partners with third-party solutions to support customers with more complex production workflow requirements.</td>
</tr>
<tr>
<td>Electronic Mail Integration</td>
<td>Hummingbird DM works with Messaging Application Programming Interface (MAPI)-compliant e-mail systems and can be integrated with Microsoft Outlook, Novell GroupWise and Lotus Notes e-mail clients. A Hummingbird DM document can be attached to a mail message. Mail messages and attachments are stored in Hummingbird DM as a single document, or users may choose to save messages and attachments as separate files. Via Hummingbird’s advanced integration with Microsoft Outlook message header, information can be captured as profile metadata. Hummingbird DM can capture message threads and display them to the user, including attachments that may have been profiled separately from the message. The Microsoft Outlook DM Extension supports searching for related documents (for example, attachments or message threads) and storing message parameters. Administrators can now define defaults for saving messages: message (.MSG), rich text (.RTF) formats or both. In the latter case, users select the format when profiling the message. Outlook messages can be automatically saved on sending. Through the Automated E-Mail Management Solution, Hummingbird DM supports server-side profiling, both rules-based and automatic, of e-mail messages. Attachments can be extracted and checked in as related documents so that the contents can be full-text indexed. The Automated E-Mail Management solution is an extension to Microsoft Exchange and is deployed on an Exchange Server.</td>
</tr>
</tbody>
</table>
Table 2: Features and Functions: Hummingbird DM

<table>
<thead>
<tr>
<th>Document Import/Capture</th>
<th>Support for mainframe-generated reports or print-stream data is through a third-party partnership. Hummingbird partners with Acartus (formerly Maximal Systems). The Hummingbird DM repository can store reports from Acartus’s Max Retriever product.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Capabilities</td>
<td>Hummingbird DM includes a runtime version of the Hummingbird BI/Query tool. Customers can use and modify standard reports based on metadata from the Hummingbird DM/RM database schema. Reports about document-related activities can be saved in the Hummingbird DM repository. It provides nine standard document management and 30 standard records management reports that can be modified.</td>
</tr>
<tr>
<td>Archiving/Storage Management</td>
<td>Supports optical disk and other near-line storage media. A Storage Management utility automates archiving, deleting and moving documents. It also lets users restore documents that were previously archived. With Hummingbird DM’s storage management features, document images can be processed for simple archival and deletion. When Hummingbird RM is implemented, more sophisticated disposition and destruction rules can be applied.</td>
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</table>

Analysis

Hummingbird has a range of assets acquired from PC DOCS, Fulcrum and PeopleDoc, plus portal and business intelligence technology. It has moved to create a coherent brand and product structure encompassing content and document management, collaboration and information access. From a document and content management perspective, Hummingbird targets markets that emphasize intellectual capital management and regulated industries, including financial services, professional services, telecommunications and legal, as well as government (federal, state and local) agencies. Hummingbird has traditionally been strongest in the legal and government markets. Applications for which Hummingbird DM and its predecessors have been implemented include contract and proposal management, CRM, correspondence tracking and control, International Organization for Standardization (ISO) 9000 certification, competitive intelligence, policies and procedures management, and technical document/engineering change management. Though its average implementation has about 1,000 users, Hummingbird does have several customers with named user licenses in the thousands and unnamed Web licenses exceeding 100,000 users.

Hummingbird’s current strategy accentuates document management as a core component of its enterprise information management strategy. Future product development plans/strategies call for moving away from its current Microsoft-centric position to a more open environment. Hummingbird intends to migrate the Hummingbird DM application server to the Java 2 Platform, Enterprise Edition (J2EE) and the DM Web Server to a JSP platform and to offer key DM functions via a Web-services interface.

Pricing

Hummingbird DM is priced by named user and lists for $449 per user. Price also varies, ranging from $150 to $500, depending on the optional modules chosen. In addition, Hummingbird offers packages that include various other Hummingbird components to provide enterprise suite solutions as well as point solutions that address specific customer needs. For example, a Hummingbird DM package that includes DM, RM, Imaging, DM Workflow and Collaboration capabilities starts at $975 per user. Hummingbird also offers a per-CPU pricing model for some of its product configurations. Annual maintenance costs for the
Standard plan start at 18 percent of the software license cost, which is competitive with maintenance costs from other document management vendors.

GSA Pricing
Yes.

Competitors
Hummingbird has focused on building out a smart enterprise suite (SES), but is also a significant presence in the integrated DM market. Hummingbird's primary IDM competitors at present are Documentum, FileNet, iManage and Open Text. Hummingbird faces many challenges from these vendors, which are adding functionality to compete in the content management and collaborative applications space. Documentum and FileNet, in particular, have positioned themselves as strong contenders with revamped product lines focusing on enterprise content management. FileNet and Documentum's products require considerable development and customization, while Livelink is an out-of-the-box solution. Documentum and FileNet both provide their own Web content management solutions, while Hummingbird provides basic Web publishing as an add-on and true Web content management (that is, template-based content creation and editing, site management and content delivery services) through a partnership with RedDot. Documentum has augmented its product family with project team support and collaboration capabilities (eRoom) as well as with records management functionality. FileNet, though strong on imaging and workflow, lacks records management and collaborative functionality in its current suite. From a collaborative document management standpoint, Hummingbird competes most closely with Open Text and iManage.

Documentum
To further extend the broad enterprise content management capabilities delivered with Documentum 5 and to build out its product portfolio to move toward an SES, Documentum made two strategic acquisitions in the fourth quarter of 2002: collaboration vendor, eRoom, and records management vendor, TrueArc (formerly Provenance Systems). Documentum's release acquisition of eRoom and the release of Documentum eRoom Enterprise puts it even more directly in competition with Hummingbird. It enables Documentum to address the ad hoc work-in-process segment of the content life cycle in addition to the structured management and approval process. Documentum's Team Manager and the eRoom product suite have been rationalized as part of the integration process and are now known as Documentum eRoom Enterprise. Documentum also continues to sell eRoom as a stand-alone offering. Documentum eRoom Enterprise is an out-of-box solution that includes both real-time collaboration features, such as chat, e-mail and an integration with WebEx, along with team collaboration capabilities, such as shared workspace, task management, project templates, role support and integration with Microsoft Project.

Open Text
Though Open Text is extending its market reach to offer an SES that combines team collaboration support, portals and content management, Livelink has a document-centric foundation. In addition to document management services, Livelink provides a strong suite of collaboration tools that includes group calendaring/scheduling features and work-routing capabilities. Livelink was designed from the ground up for the Internet and Web infrastructure, and its support for standards like Java, ActiveX, PDF and HTML make it highly extensible.

Like Hummingbird DM, Livelink can be used as the underlying content repository for enterprise information portals. Hummingbird has had its own portal for some time now, but Open Text has recently acquired portal vendor Corechange. With this acquisition, Open Text has closed the gap in its portal
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functions and improved its position among vendors of SESs. In addition, through Livelink Unite, Open Text supports integration into various portal frameworks, including iViews for the SAP Enterprise Portal. In addition, Open Text also provides its own real-time collaboration capabilities through MeetingZone. Hummingbird’s collaboration capabilities focus more on threaded discussions and asynchronous document collaboration. It recently announced a partnership with Centra, an e-learning and real-time collaboration vendor. Hummingbird will integrate Centra’s e-learning and real-time collaboration capabilities with the Hummingbird Enterprise suite.

Livelink does not support integration with Microsoft Exchange repositories at present, and its integration with Lotus Notes/Domino is not bi-directional. Hummingbird, in contrast, can be integrated with Lotus Notes, Microsoft Outlook and Novell Groupwise e-mail.

Interwoven/iManage

On 6 August 2003, Interwoven announced a definitive agreement to merge with iManage for $171 million in cash and stock. Interwoven and iManage customers will benefit from having a single vendor that offers broader, more tightly integrated content management capabilities. The vendors’ long-term viability improves with the merger. As a combined entity, Interwoven/iManage can compete more effectively against Documentum and FileNet in the content management market and against Open Text, Vignette, Hummingbird and IBM in the emerging SES market. The deal is expected to close by year-end 2003.

iManage has successfully targeted Hummingbird in its traditional stronghold — the legal sector. With the WorkSite suite, iManage provides integrated software that enables enterprises to optimize their value chains by helping members to collaborate and exchange information. The iManage WorkSite suite is a content management and collaboration suite available for Microsoft Windows and for Java environments. It provides modular application services for document management, collaboration and workflow, as well as a portal application. The applications have a single code base and share a common repository. Documents, project workspaces, tasks, events and discussions are all stored in the same repository. Like Hummingbird, iManage provides both content and metadata searching. Recently, iManage expanded its product suite with enhancements and new capabilities, such as report management capabilities and an e-mail management solution. iManage offers a Java-based workflow solution, WorkRoute MP Pro.

Strengths

Distributed Architecture With Failover/Load Balancing

Hummingbird DM is built using a multitiered, distributed architecture that supports failover and load-balancing capabilities by enabling clusters of physical servers to act as one logical server. A cluster is a group of DM Servers that reside on the same network and serve the same libraries. This feature enables client users to be automatically switched to another Hummingbird DM Server in the event of a server failure. Client user requests can be distributed among servers as needed to balance processing loads. It also supports document shadowing (system administrators can disable this function, however), whereby documents that a user is working on are copied and stored on the user’s local hard drive; the user then edits or works on the local copy. This improves network efficiency by reducing traffic and ensures that documents are available in the event of a server failure.

Integration Capabilities

Hummingbird DM provides tight integration with Microsoft Office, Windows Explorer and Microsoft Outlook. It incorporates several levels of integration: passive, active and interceptor. Passive integration results in a single menu that supports the integrated functions while allowing the application’s native functions to continue to be available. Active integration allows Hummingbird DM to integrate with the
native menu items for file access. Interceptor enables Hummingbird DM to integrate DMS control into Windows applications. Through its partnership with Siebel, Siebel customers can directly access the Hummingbird DM Server from their Siebel browser-based interface. From within the Siebel client, they can search for and retrieve documents as well as create document versions and document profiles.

**Enterprise Capable Repository**

Hummingbird DM is designed for implementation as an enterprisewide solution, and its repository can scale to millions of documents. According to Hummingbird, the theoretical limit per repository is 100 million documents, with up to 99 versions and 26 sub-versions of each document. A Hummingbird DM repository can contain multiple SQL databases and multiple libraries. It can also support multiple document servers and full-text indexes.

**Consistent User Interface Within Hummingbird Suite**

The Hummingbird Webtop provides a user interface that is consistent throughout the entire Hummingbird Enterprise suite. The Webtop replaces the former CyberDOCS and PowerDOCS clients and offers multiple entry points into the DM server.

**Security Features**

Hummingbird DM provides strong document-level security capabilities using an extended access control list (ACL) model. Security levels for documents and folders can be set on a user-by-user basis. The Hummingbird DM Server brokers requests from the DM clients so that users do not have direct access to the document store. With Hummingbird DM, enterprises have the ability to deny users or groups specific rights to an object. In addition, Hummingbird DM automatically assigns nondescriptive file names to documents stored in the document server. This further prevents unauthorized access to documents by users who may browse the document server via Windows Explorer or another method. Now with version 5.1, Hummingbird DM fully supports LDAP integration.

**Focus on Records Management**

Compared to many of its IDM competitors, Hummingbird has a strong focus on records management. It owns its own records management technology (having acquired the technology back in 1998) rather than simply partnering with third-party vendors. Although Hummingbird RM is priced separately from Hummingbird DM, the two offerings are tightly integrated and share the same repository for all documents and records. Open Text has similar capabilities with its Livelink Records Management module. iManage relies on third-party partnerships, including IBM (former Tarian offering) and MDY. When implemented together, Hummingbird DM and Hummingbird RM provide a shared user interface, as well as shared user/group administration, shared security, shared search and retrieval, and shared history/audit trail features.

**Limitations**

**Platform Restrictions**

Hummingbird DM is currently a Microsoft-centric tool in terms of its platform support and development environment. Hummingbird DM Server software only runs on Microsoft Windows NT or Windows 2000, not Unix servers. (Database servers, however, will run on whatever platforms the relational database management system supports, including Unix.) Hummingbird’s leading competitors (for example, Open Text, iManage and Documentum) all support Unix server environments in addition to Windows NT and have moved to support J2EE. Hummingbird was developed in C++ and uses Microsoft’s ASP and DCOM development tools. Recognizing the demand from customers for flexible deployment options,
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Hummingbird intends to support J2EE across the entire Hummingbird Enterprise suite, including Hummingbird DM, in the future. In addition, support for Web services is an important part of Hummingbird’s ongoing technology strategy.

No Packaged ERP System Integration

Although Hummingbird DM provides strong desktop application integration and is certified for integrating with Siebel’s CRM solution, integration with ERP systems like SAP or J.D. Edwards is available only when Hummingbird DM 5.0 is used through the Hummingbird Portal or through third-party partners of Hummingbird. Hummingbird does not offer “productized” integrations with SAP or PeopleSoft as many of its competitors do.

Limited Extensible Markup Language Support

Hummingbird DM currently has limited support of Extensible Markup Language (XML). Some of its competitors, like Open Text and Documentum, make extensive use of XML. Hummingbird DM can store XML documents in the repository, but is not able to parse XML content. It does leverage XML for designing the templates in the Hummingbird Web Publishing module, which can export documents stored in Hummingbird DM as XML or HTML. In addition, Hummingbird DM 5 includes SearchServer 5.3, which supports indexing and searching of XML documents.

Current Workflow Functionality Is Limited

Hummingbird DM WorkFlow is designed to enable business users to route documents through a review and approval life cycle and is specific to Hummingbird DM. It is not intended to be a tool for automating structured rules-based business processes. It does not include a graphical workflow designer tool nor does it launch external processes. Hummingbird intends to offer a Java-based workflow engine, which includes a Java-based graphical process definition tool, to replace Hummingbird DM WorkFlow. The new workflow tool will be a shared component across the entire Hummingbird Enterprise suite of products. Today, Hummingbird works with third-party partners to provide solutions for automating structured rules-based business processes.

Recommended Gartner Research


The Smart Enterprise Suite Magic Quadrant for 2003, M-19-3949

Insight

Hummingbird DM represents Hummingbird’s strategic platform for enterprise document management applications with a strong focus on collaboration and records management. It should be considered by organizations looking for a document management solution with strong security features, tightly integrated records management capabilities (for example, a single repository) and good desktop application integration capabilities and one that is easy to roll out with a proven track record in enterprise implementations. Hummingbird can handle an organization’s enterprise document management needs through its scalable, distributed architecture, with failover and load-balancing features. It can also be used for applications that involve ad hoc or low-to-mid-volume imaging, but it is typically not implemented for production imaging (over 50,000 images per day). In addition, organizations looking for a solution with add-on functionality to meet their evolving information management needs should consider Hummingbird DM as the content management foundation for Hummingbird’s SES, Hummingbird Enterprise.