

Oracle Content Services 10g: Content Management for the Rest of Us

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EXECUTIVE OVERVIEW

In the past few years, major changes have been taking place in the content management marketplace. Customers that previously considered content management to be a niche application focused on workgroup or departmental deployments for meeting specialized publishing-oriented requirements are increasingly requesting true enterprise deployments that deliver content management capabilities to all their users. These changes have created a need for a scalable, affordable, and highly usable solution that bridges the huge gap between limited capability file servers and specialized, expensive, and complex content management applications. Oracle refers to such a solution as *content management for the rest of us*. This white paper discusses the drivers of market evolution and shows how Oracle Content Services 10g delivers the solution that the changing market has been seeking.

EVOLUTION OF THE CONTENT MANAGEMENT MARKET

The products that most people think of when they hear the term “content management” began to emerge about 15 years ago to support the creation, management, and publication of unstructured data (or content) for users who specialized in content production in highly regulated industries. However, the vast majority of content is actually used by those of us who are not content specialists (about 95% of all business users) and that content mostly resides on desktops and file servers—without any real management at all.

In the past few years, three conditions began driving major changes in the market and have given rise to a need for solutions that bridge the huge gap between limited capability file servers and specialized, expensive, and complex content management applications. First, the rapid and accelerating explosion of all types of content—documents, emails, instant messages, images, etc.—has driven a need for putting better content tools in front of all enterprise users to help them make sense of the flood of data or at least keep them from drowning in it. Second, a series of corporate scandals focusing on the discovery, alteration, or inappropriate destruction of documents and emails has dramatically increased awareness about the risks resulting from proliferation of poorly managed content. Finally, a plethora of government and industry regulations emerged—largely in response to these

META Trend: Through 2005, organizations will be forced to expand their definitions of what content requires formal management, due to increasing compliance and legal risk

**Meta Delta: Document Management: Massive Opportunity for the Mass Market
MetaGroup, September 2004**

scandals—that dramatically increased the costs of compliance as well as the risks of non-compliance.

The net impact has been to transform content management from a niche market, catering to content specialists at the very top of the “user pyramid,” to a mainstream technology that serves virtually every user in an enterprise. The term “enterprise content management” or ECM was, until now, a misnomer since it originally meant a solution specifically for content production specialists that managed the different types of content in the enterprise— not one that met the needs of a broad range of users.

ORACLE RESPONDS

While this market evolution and expansion was unfolding, Oracle was steadily becoming more interested in the opportunity. It was also steadily improving its ability to eliminate the arbitrary distinction between structured (transactional) data and content. Unlike other content management products that use a complex conglomeration of database-managed metadata and a flat file-system for actual content storage, Oracle perfected the use of the database for storage of all content-related information—metadata, relationships, indices, system state—and the content itself. As a result, the reliability, security, and immense scalability of the Oracle database, together with its powerful tools for business continuity, access control, search and query, auditing and tracking, etc. became available to content as well as transactional data. A new paradigm emerged where all information can be managed using the same tools and made available to all applications whenever and however it is needed. Oracle products such as the Internet File System (iFS), its successor the Content Management Software Developers Kit (CM SDK), and the Oracle Files component of Oracle Collaboration Suite are prime examples of the paradigm shift.

By its second release in mid-2003, Oracle Files had become a robust and highly scalable solution for consolidated file management and sharing and lightweight document management. Oracle’s own use of Files is a powerful example of the product’s capabilities. One Files application running on a single instance of the Oracle database meets virtually all the file management and sharing needs of Oracle’s 40,000+ employees worldwide, managing over 22 million documents and 7 Tbytes of storage and growing at a rate of over 30,000 new documents a day.

THE NEXT STEP: ORACLE CONTENT SERVICES 10g

Oracle Content Services 10g is the next generation of Files, building on the powerful Files infrastructure with a new level of functionality, usability, and expandability. Content Services 10g provides precisely the tools and facilities customers are looking for, seamlessly surfaced in familiar environments when and where users need it and without changing the way they work. Oracle Content Services 10g will provide key customer benefits including:

META Trend: By 2007, most Global 2000 organizations will take a Web services-based infrastructure approach capable of addressing all forms of digital content through their life cycles. This will result in greater overlap with storage and relational database vendors for strategic G2000 deployments that will increasingly blur data and content management.

Meta Delta: Document Management: Massive Opportunity for the Mass Market
MetaGroup, September 2004

“We needed to have a system that would allow us to securely put documents in and retrieve them easily, with version control and the ability to associate metadata (such as product categories) with them. Oracle Files met all of our requirements.”

- Srinivas Ramachandruni, Senior Programmer Specialist, Western Digital Corporation

- Increased productivity by making information throughout the enterprise easier to find, manage, and share
- Reduced risk through better control of information and establishment of consistent information policies and processes
- Facilitate compliance with government and industry regulations through records management
- Lower costs through consolidation of server hardware, software licenses, and administrative support

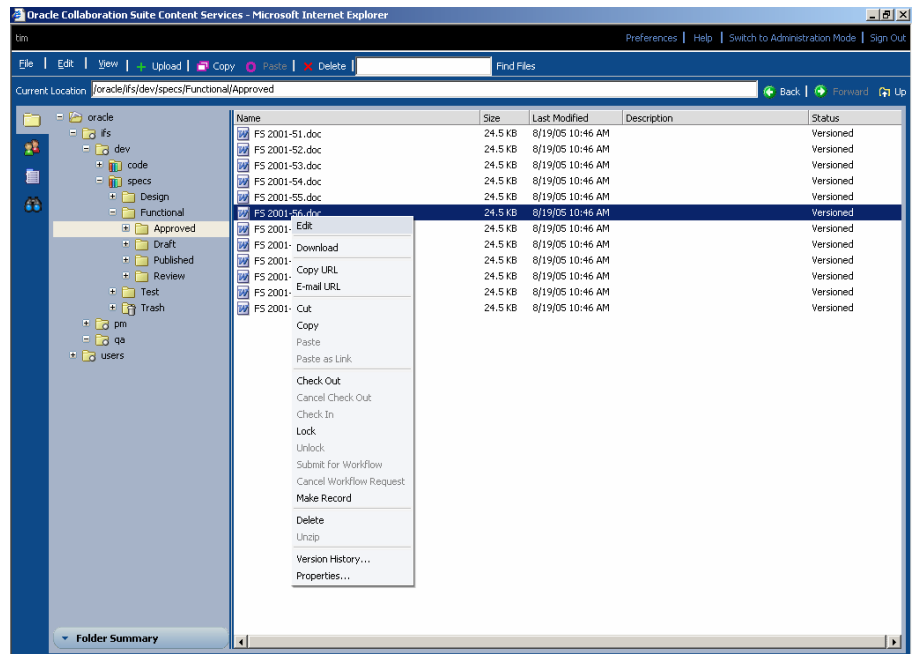
The new capabilities of Content Services 10g are summarized as follows:

File and Document Management

Oracle Content Services 10g provides a number of significant file and document management capabilities in three areas: rich user interfaces, flexible access control and user management, and policy-based management behaviors.

Oracle Content Services 10g delivers an rich experience for both Web and Windows desktop users. A new highly interactive Web interface allows content to be easily accessed anytime anywhere from any Web browser. Utilizing the Dynamic HTML capabilities of Oracle UIX 3.0, this interface provides a user experience scarcely distinguishable from thick client applications via a dynamic tree view, right-click and pull-down menus, and drag and drop.

Oracle's vision of content management is filling a need that traditional solutions ignored. What hasn't existed is what I would call a content management function for the masses—a low cost, easy to approach way to manage file-based information more effectively, so it's not simply files thrown out on file servers.
- David Yockelson, Senior Vice President and Principal Analyst, MetaGroup

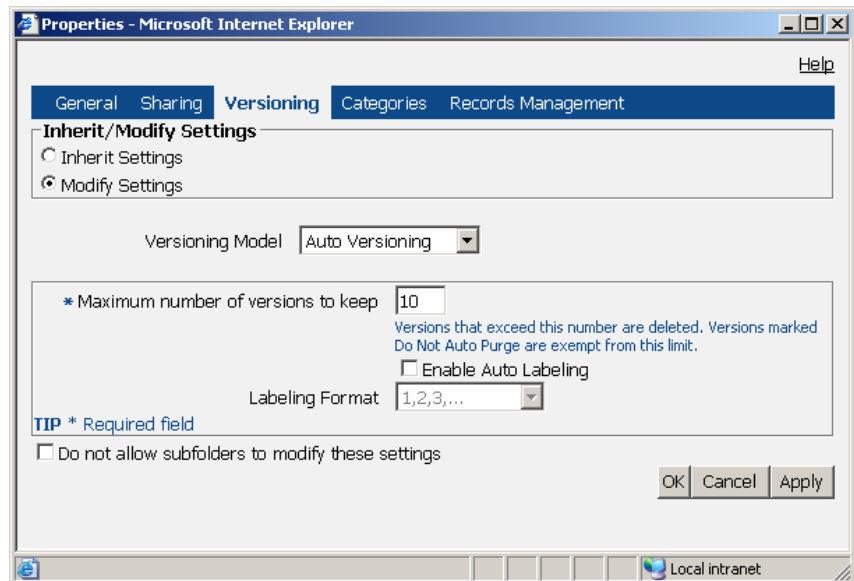


Advanced integration with Microsoft Windows through the new *Oracle Drive* Windows plug-in permits users to seamlessly access Oracle Content Services 10g's content and functionalities directly from Windows Explorer. Finally, Oracle Drive

features seamless offline content management capabilities, allowing users to easily access and manage content when they are disconnected from the network.

The security model within Content Services 10g extraordinarily flexible, with fine-grained permissions and access specified at the folder and document level. Role-based access control includes a rich set of out-of-the-box roles and also permits customer-defined roles to be built up from the basic permission bits. Finally, access management is available through groups as well as individual users.

Behaviors controlling the management of information lifecycle such as versioning, attribution, and records management can be specified through policies established on a folder-by-folder basis. Versioning can be disabled, applied to content manually by users, or automatically applied based on the occurrence of a specific event such as check-in. The maximum number of versions to retain before archiving can also be specified. Category attributes can similarly be applied manually or automatically. Individual Category attributes can be given default values (set as user-editable or not), and mandatory user entry of values can be specified. Records management (detailed below) is also managed through policies on a folder-by-folder basis. While Content Services 10g policies will normally be managed by a small subset of users with specific administrative permissions, the tools for setting up policies are straightforward and consistent, allowing use of a delegated policy management model dictated by the needs of the business.



By utilizing automated policies instead of requiring the user to remember to perform a lot of extra steps, these important lifecycle management capabilities become truly useful and the risk of user rejection often associated with content management deployments is minimized.

Web Services

Oracle Content Services 10g provides complete access to application functionality programmatically via J2EE- and Microsoft.NET-compatible Web Services APIs. These APIs are being used to integrate Content Services 10g with other Oracle products including E-Business applications, Portal, and Oracle Workspaces, and can also be leveraged by ISVs and implementation partners to integrate Content Services 10g with other applications as well as to automate and extend application functionalities.

Business Process Automation

Oracle Content Services 10g supports custom workflows through Oracle BPEL Process Manager. Eight workflow templates are delivered out-of-the-box with Content Services 10g that can be customized or extended as required. New workflows can be built with BPEL Process Designer and made available to Content Services 10g as well.

Also included are powerful capabilities that allow workflows to be associated with specific folders and automatically triggered when events such as document check-in or deletion occur in those folders. Workflows can be specified as blocking (the triggering event remains in a pending state until the workflow completes) or non-blocking (the triggering event completes and the workflow is launched as a side-effect.) In addition, workflow template parameters can be set up with defaults and/or user entry enforcement in much the same way as Category attributes.

These custom workflows can be used to drive review and approval cycles, notify users that a new document version has been checked in, or prevent the deletion of a document without a manager's permission. In addition, workflows can call Content Services 10g Web services for performing an extensive set of management actions, enabling the automation of a wide range of business processes.

Records Management

With regulatory compliance issues becoming increasingly important, records management capabilities are an important enhancement available in Oracle Content Services 10g. Records management provides the ability to specify that a document or other content entity is to be retained for a certain period of time, prevents or controls changes to the document during the retention period and disposes of the document in a prescribed way once the retention period has expired.

Content Services 10g records management provides a dynamic records management Web UI with secure login that permits file plan-based record organization, record search, and flexible classification and retention policy management. Records may be declared manually by users or through policy-based record declaration applied on a folder-by-folder basis. Content Services 10g records management is scheduled DoD 5015.2 certification in late-CY2005

“ [Oracle Content Services 10g] is not specifically designed to compete in the existing ECM market, rather to expand that market substantially, out of departmental deployments to the entire enterprise, in effect it will have a major impact.”

**- Alan Pelz-Sharpe and
Christopher Harris-Jones, Ovum**

CONCLUSION

The content management market is evolving from specialized vertical applications to true enterprise deployments. These changes will expand the market substantially and require solutions that can bridge the huge gap between ubiquitous file servers and traditional high-end ECM products. Such solutions must provide horizontal functionality across the entire enterprise and complement existing departmental content management focused on specific vertical applications.

To meet the requirements for true enterprise deployments, a solution must deliver content management for all enterprise users, everywhere they want it, and for every business processes that requires it, it must provide users precisely the functionality needed without changing the way they work, and it must scale to support the largest enterprise— at costs that finally make enterprise deployment affordable.

Oracle Content Services 10g meets these requirements, providing customers with increased productivity, reduced risk, enhanced compliance support, and lower cost, and making content management truly available for the rest of us



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