

# Technology Infrastructure

Butler Group Subscription Services

## Web Content Management TECHNOLOGY AUDIT

### Ektron

CMS400.NET

**Abstract** *Ektron CMS400.NET is, first and foremost, a Web Content Management product built on the Microsoft .NET framework. A mid-market offering, CMS400.NET offers immediate out-of-the-box content management functionality while also providing an extensible Web development platform. An attractively priced and feature-rich solution, CMS400.NET enables organizations to distribute the workload associated with keeping internal and external Web sites relevant and up-to-date. This product will appeal to non-technical authors and content contributors, as well as Web developers and corporate Web Masters. Although Ektron does not purport to be an Enterprise Content Management (ECM) vendor, the company's complementary document management product – Ektron DMS – makes this offering an attractive proposition to small and mid-sized organisations. Macintosh users are currently excluded from using this product, as the editor components require a PC platform to run. Organisations moving on from first-generation Web sites should take a close look at this product.*

#### KEY FINDINGS

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|--|--|
| ✓ A multi-lingual WCM product, offering good functionality at an attractive price. | ✓ Facilitates the creation of Web sites that are accessible to people with disabilities. |
| ✓ Supports the requirements of technical and non-technical users equally well.     | i A Microsoft .NET-based product that integrates with SharePoint Portal Server.          |
| i Relies heavily on Microsoft Application Center to scale Web sites.               | X The editing tool is an ActiveX control, and only runs on the PC platform.              |

Key: ✓ Product Strength X Product Weakness i Point of Information

#### LOOK AHEAD

Ektron plans to update CMS400.NET to support the Microsoft .NET 2.0 Framework when released, and is also working on making this product more attractive to Web site designers and developers, by providing additional server control functionality.

## ► FUNCTIONALITY

A presence on the World Wide Web is something all companies and organizations must now consider if they are to communicate effectively with customers, stakeholders, investors, partners, suppliers, analysts, and staff. While simple Web editing tools and a hosted site can meet initial requirements, there inevitably comes a time when more functionality is required. It is at this point that organizations tend to bring in Web design expertise to help them make that step-up to the next level, commissioning a custom site with dynamic content and enhanced functionality.

For an increasing number of organizations, Web Content Management (WCM) now forms just one part of their Enterprise Content Management (ECM) strategy – a view that takes a holistic approach to Content Management (CM); while for others, WCM still remains a discrete domain – separate from Electronic Document and Records Management (EDRM), Knowledge Management (KM), Digital Asset Management (DAM), Workflow, Collaboration, and Digital Rights Management (DRM).

**Product Analysis** When it comes to getting corporate content on the Web, speed, control, and cost are the key issues for most organizations. If corporate Internet, Intranet, and Extranet Web sites are to remain relevant, then content must be regularly updated – often on a daily or even hourly basis. For content to be published in such a way, it requires a CM platform that is simple enough for the casual business user to master, yet powerful enough to provide Web masters and developers with everything they require to create compelling Web sites that encourage return visits.

Despite much consolidation in the ECM market, pure-play WCM vendors do exist, and yet the relatively low-profile of these vendors often makes them invisible to all but the most diligent of procurement managers. As a result, organizations find themselves deploying costly and complex solutions when they might otherwise be reaping the benefits of a more cost-effective product.

This apparent lack of choice in the small to medium sized enterprise (defined by the European Union as an independent company with fewer than 250 employees and either an annual turnover not exceeding €40 million or a balance sheet not exceeding €27 million) has, in many cases, driven many organizations to build their own CM solutions – a strategy Butler Group would not normally recommend. In-house solutions can have their benefits, especially if they target highly-specific business processes, but we do not believe CM to be one of these.

CMS400.NET, from U.S. software company Ektron, is a WCM product designed from day-one to address the needs and requirements of the mid-market. Designed with both business user and developer in mind, CMS400.NET provides Web designers with a rich and sophisticated Microsoft .NET-based platform, the content of which can be created and managed in an easy fashion by non-technical users without them having to know about things like HTML, JavaScript, or any other Web-centric languages or formats. From a content contributor's point-of-view, Ektron CMS400.NET provides a Web-based editing tool that is as easy to use as any word processing package.

In conjunction with well-designed site templates, the ease-of-use afforded by this product enables organizations to spread the effort – and therefore the cost – required to keep a corporate Web site or Intranet site relevant.

In common with Ektron's other CM products (CMS200 and CMS300), CMS400.NET frees the content producer from the worries and concerns of layout or graphical appearance. Instead, the focus is on creating and publishing content in a streamlined and efficient manner. By separating the Web site content from the Web site structure, organizations can change or redesign a Web site without it affecting the actual content. This approach to CM also means that organizations can create Web sites for particular groups of users. For example, site designers can use Ektron to produce templates that support the Web Content Accessibility Guidelines ([www.w3.org/WAI/](http://www.w3.org/WAI/)) – an initiative led by the World Wide Web Consortium (W3C) to promote accessibility of the Web. Support for Web Accessibility Initiative (WAI) standards is becoming increasingly important, as many organizations (particularly those in the Public Sector) must now create accessible Web sites to meet new statutory regulations.

Ektron's Web content editors – eWebEditPro and eWebEditPro+XML – have established the company as a strong supporting player in the ECM market, where its technology is embedded in several top-tier WCM solutions.

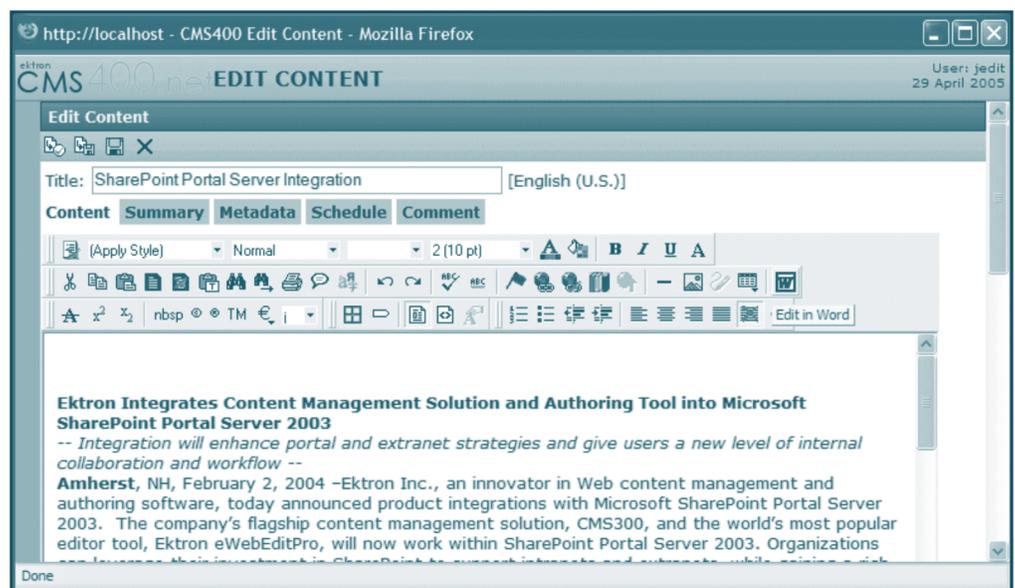


Figure 1: Editing Content with eWebEditPro

CMS400.NET is a WCM product based on Microsoft's .NET technology – and ASP.NET in particular. ASP.NET is Microsoft's next generation Active Server Pages (ASPs) technology, and a feature of Internet Information Server (IIS). ASP.NET is different from ASP in two significant ways: First, it supports code written in compiled languages such as C#, C++, and Visual Basic; and second, it features server controls that can separate this code from content and mark-up, thereby allowing 'What You See Is What You Get' (WYSIWYG) editing of pages.

Although Ektron's template paradigm means that Web sites can be built very quickly and easily without any software development, the company is keen to promote the product to Web site developers and System Integrators (SIs), as the underlying .NET platform offers developers an ideal opportunity to build additional functionality over and above that which comes out-of-the-box. Indeed, while Ektron is happy to develop relationships with larger organizations, its primary route to market is still very much through Web development shops and consultancies.

There are only a handful of 100% .NET WCM products on the market today (even Microsoft's own CM product, Content Management Server 2002, is COM-based), and so Ektron is keen to promote this relatively new product to those companies and organizations favoring the .NET development paradigm over Java 2 Platform, Enterprise Edition (J2EE).

CMS400.NET has features that products twice the price do not. For example, organizations wishing to host content in multiple languages should investigate the product's support for XML Localization Interchange File Format (XLIFF) – a format for exchanging localization data. Many Public Sector organizations would benefit from this facility, as they are increasingly expected to publish information on their Web sites in several different languages.

Ektron clearly sees CMS400.NET as a Web integration platform as well as a WCM system, but the company should be wary of sending out mixed-messages to the market, as the slightest confusion could impact sales significantly. While for some the term CM may well be synonymous with WCM, Butler Group has a very clear definition of what CM is and what it is not, and we would therefore categorise CMS400.NET as a WCM product. Although Ektron is now moving into the Document Management (DM) arena, the company has no archiving solution or native capability to publish directly to any other medium other than the Web.

Ektron has won plaudits from WCM market watchers over the last couple of years, and rightly so. The product performs as advertised, and does this at a price-point that is likely to find favor with any Finance Director. Indeed, the relatively low price-point could mislead the casual observer to think that CMS400.NET is an entry-level product: it is not. Organizations with many authors and several Web sites or Sub-domains, should study Ektron's product licensing structure very carefully, as it could potentially prove quite expensive without the right kind of licensing deal.

## **Product Operation**

CMS400.NET consists of a core set of controls which provide low-level functions such as database access and user authentication. These controls are then augmented by another logical layer of software which provides the CMS400.NET User Interface (UI). The next layer provides the developer with an Application Programming Interface (API), Web Services interface, and the Windows SharePoint Services WebParts interface. The final layer in the CMS400.NET product architecture is the application layer – this is the layer developed by the corporate developer.

### **Some key features of Ektron CMS400.NET:**

- **eWebEditPro+XML.** This is an easy-to-use, browser-based content editor that enables non-technical business users to create, capture, author, and use XML documents and data. Arguably the world's leading XML editor, eWebEditPro+XML, allows users to create sophisticated, standards-compliant HTML/XHTML content, while Webmasters retain control of the site's overall look-and-feel.
- Dynamic data collection forms can be created quickly and easily with eWebEditPro+XML. Data collected by these forms can be stored as XML, and then repurposed in a variety of business applications. Repeating sections, conditional formatting, and data validation features are fully supported, and the tool's spellchecker can also utilize Microsoft Word's specialized dictionaries if they are installed on the content author's PC. If users prefer to author their content in Microsoft Word, then a button on the eWebEditPro tool bar facilitates this usage scenario.
- Section 508 of the United States federal Rehabilitation Act (and the similar W3C "User Agent Accessibility Guidelines") requires federal agencies to make information technology accessible to the disabled, and so many government Websites in the US are now being redesigned to be 508-compliant. As a US company, Ektron has been quick to respond to this requirement, both in terms of product usage and content generation. For example, eWebEditPro supports section 508-compliant data tables, whose key elements are the caption element, the summary attribute, and headings.

eWebEditPro has extensive support for converting special, extended, and double byte characters. This feature enhances eWebEditPro's extensive multi-language support, since it means that all characters from European and Asian languages can be successfully entered by an author and then displayed on any Web page (provided the characters are supported by the visitor's browser and operating system).

- **ASP.NET Server Controls.** CMS400.NET delivers a set of ASP.NET server controls that enable developers to work in a highly visual, drag-and-drop environment. As a result of the product's underlying .NET architecture, developers can also build Web sites and Web applications using Microsoft's Visual Studio.NET development environment.
- **XML Indexing.** CMS400.NET includes built-in XML indexing. Once created, XML data can easily be indexed, thereby enabling Web site users to perform highly detailed searches with extremely accurate results. This facility affords the product a certain degree of personalization capability, as content can be served to the user based in his or her preferences or behavior. This feature does not, however, make CMS400.NET a full-blown personalized Web platform; but it does offer the developer many interesting possibilities.
- **Workflow.** Ektron CMS400.NET includes useful workflow capabilities that enable and automate many of the tasks associated with the ongoing management and maintenance of a Web site. The functionality afforded by this feature permits organizations to allocate tasks to those in the business best suited to the job at hand. Serial and parallel workflows provide support for task approval and rejection as required.

Administrators can selectively add approval permissions on a per-user basis, assign tasks to users, and centrally manage users and user groups through integration with Active Directory. Users can check-in content, schedule content to go live and expire on a particular date and time, view or restore any previously published version of content, and preview staged content before publishing through so-called 'virtual staging'.

- **Multi-Lingual Web Publishing.** CMS400.NET enables content managers to handle end-to-end site translation and localization – a feature that is increasingly becoming important to commercial and government organizations. Working in conjunction with the product's workflow engine, CMS400.NET natively supports XLIFF, the widely adopted translation and localization standard. CMS400.NET also provides built-in machine translation capability, for 'on-the-fly' translations – a useful feature when standard paragraphs of boilerplate are used within a site.
- **SharePoint Portal Server 2003 Integration.** Nine of CMS400.NET's custom display functions have been converted into Microsoft SharePoint Portal Server (SPS) WebParts, thereby enabling information and content from a CMS400.NET Web site to be displayed and presented in an SPS page. The growing popularity of Microsoft's portal solution – particularly within the Public Sector – presents something of a challenge and an opportunity for Ektron, as one could argue that CMS400.NET, together with Ektron DMS, can do much of what SPS does, only in a fully .NET fashion. There is a suspicion, however, that Microsoft may well fold Content Management Server 2002 into a future release of SPS in order to enhance the overall appeal of this product, and if this happens, then products like CMS400.NET could well step-up to fill a gap in the market.

**Product Emphasis** CMS400.NET delivers the tools and functionality required of small and mid-sized organizations. It builds upon the Microsoft technology stack to deliver a modern, .NET-based WCM solution. While designed with the non-technical business user in mind, CMS400.NET also provides developers and Web site administrators with powerful tools and functionality.

By leveraging the underlying Microsoft infrastructure (and with a little help from Microsoft Application Center 2000), CMS400.NET is capable of scaling to meet the needs of the SME market. CMS400.NET stacks-up very well against the mid-market competition – Microsoft CMS 2002, RedDot, Immediacy, Paperthin, Smartsite, and EPISERVER; indeed, Butler Group believes that CMS.NET could also compete well in certain situations with solutions from heavyweight ECM vendors.

Ektron has clearly set its sights on the huge SME market, and so we expect the company will continue to extend its offerings to include more ECM-like functionality in the future. The company is already offering Ektron DMS400 – a highly functional, Web-based document management system – and so the company could, through acquisition or merger, offer a mid-market ECM suite to a constituency currently making-do with point solutions.

## ► DEPLOYMENT

An initial installation of CMS400.NET takes a matter of minutes. Organizations wishing to evaluate the product can do so by downloading a 20-day trial version from the Ektron Web site. The 90-megabyte download contains everything required to perform a preliminary assessment of the product, database included (Microsoft SQL Server Desktop Engine – MSDE). Once up and running on a suitable machine (this includes Windows XP), business users can take a look at the editing and content management features, while developers can explore the development opportunities.

Being a Microsoft-centric product through-and-through, CMS400.NET should ideally be installed, configured, and managed by a Microsoft Certified Systems Engineer – although usually, an Ektron partner would provide this service as part of a Web site design project. A public-facing Web site requires additional levels of security to that of an Intranet site, and although Ektron provides good documentation to accommodate this, Butler Group recommends that organizations seek expert advice in this area.

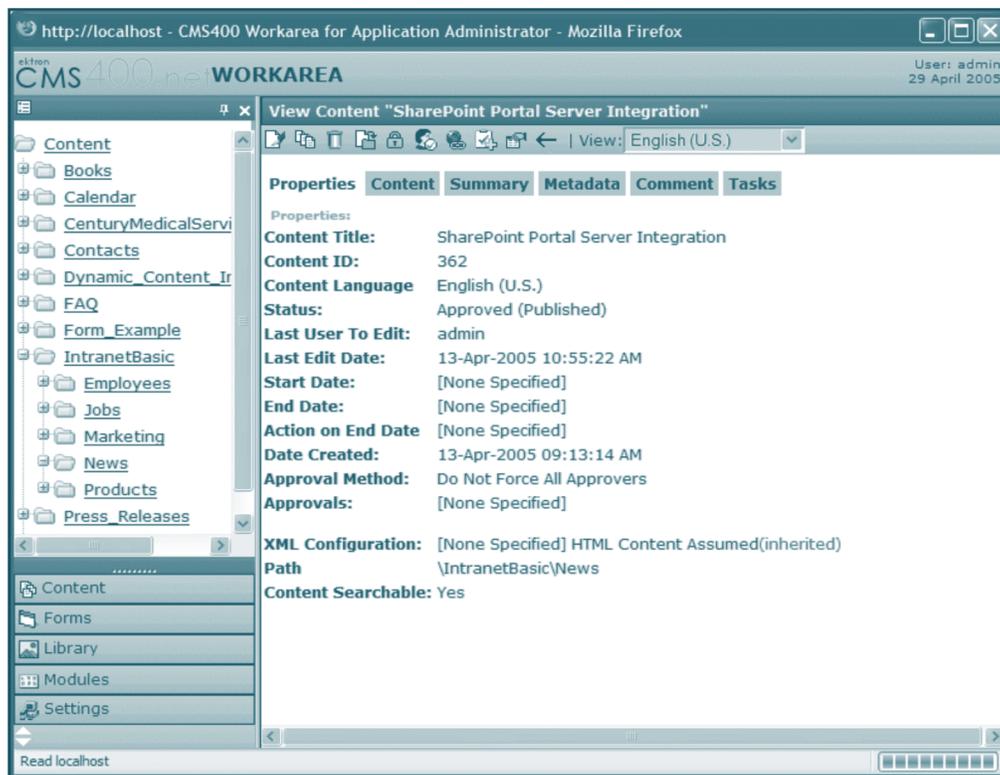


Figure 2: Managing CMS400.NET

By default, Ektron CMS400.NET is installed directly on a production server, and the virtual staging server manages changes to the Web site's content and assets. While this model represents a popular method of staging content, it is unlikely to meet every organization's deployment expectations. If an organization wants to use a physically separate staging server, then Microsoft Application Center and SQL Server can be readily configured to accomplish this. According to Ektron, once it's setup and configured, Application Center is able to deploy all aspects of a CMS400.NET site (files, templates, and assets) with relative ease. In a similar fashion, database content can be copied into the production environment using Microsoft SQL Server utilities.

System-wide control of CMS400.NET is through the Workarea module (see Figure 2). In an attempt to make business users feel at home, Ektron has fashioned the UI for Workarea on Microsoft Outlook 2003. Depending on privilege rights, Workarea presents the user with all of the information required to manage content, forms, files, site settings, etc.

CMS400.NET ships with documentation in the form of Adobe Acrobat files, and is divided into separate Setup, Admin, User, and Developer guides. The information contained within these guides is extensive and well illustrated.

## System Requirements

Recommended server requirements:

- Microsoft® Windows® Server 2003.
- Intel Pentium 4 Hyper-Threaded or Intel Xeon™ processor Processor (with 800MHz Bus).
- 1 GB RAM or higher.
- RAID Array for Hard Drives.
- MS SQL Server (on separate server) – Microsoft SQL Server 2000 or Microsoft SQL Server Desktop Engine (MSDE) 2000 for development.
- Microsoft ASP .NET Framework 1.1.
- Microsoft IIS 4.0 or higher.

### Client requirements for editing (all browsers are supported for viewing):

- Microsoft Internet Explorer 5.0 or higher, Netscape 7 (IE 5.0 or later MUST be installed), or Mozilla FireFox 1.0.

### Optional requirements:

- Visual Studio.NET, Allaire HomeSite, Macromedia/Allaire ColdFusion Studio, Macromedia Dreamweaver, or Microsoft FrontPage 2000.

## ► PRODUCT STRATEGY

While Ektron has no problem with selling direct to end-user organizations, the preferred route is through channel partners, including a growing network of partners such as Web development and design firms, interactive agencies, system integrators, and the like. Ektron technology partners include Microsoft, Mondosoft, and Esker, and the company has OEM and strategic partnerships with vendors who bundle the eWebEditPro editing tool (Silkroad, Documentum, Interwoven, FatWire, Microsoft, Percussion, and Vignette). Internationally, Ektron sells through distributors located across Europe, in Australia, and the Middle East.

Licenses are purchased outright along with an annual maintenance subscription which is required for the first year (optional thereafter). The maintenance subscription is set at 20% of the purchase price, and covers support, upgrades and updates, development and staging licenses, and various license privileges.

CMS400.NET version 5.0 is due mid-2005 and will focus on providing support for Microsoft's .NET Framework 2.0, Lightweight Directory Access Protocol, and more languages.

## ► COMPANY PROFILE

Ektron was founded in 1998 and employs over 50 staff based mostly in the US. In an aggressive market that is littered with numerous acquisitions and mergers, Ektron has continued to grow and prosper. Much of this prosperity is due to the company's philosophy of providing lower-cost, easier-to-use products to small- and medium-sized organizations.

Ektron is headquartered in Amherst, New Hampshire, USA, and has an office in the UK. Ektron has established a thriving international distribution network covering Europe, Australia, and the Middle East. Currently, Ektron's business is heavily reliant on its home market, with 75% of revenues coming from North America. In common with other vendors in this segment of the market, Ektron is seeking to grow its revenues in other markets through its growing partner network.

As a privately held company, no detailed financial figures are available; however, we have been told by Ektron officials that the company continues to be profitable. Ektron is first and foremost a software company, and so does not draw any significant revenue from professional services.

Ektron's client base is broad and varied, covering Health, Education, Engineering, Finance, and Professional Services. Over 127 organizations have deployed CMS400.NET, and in total, Ektron has sold its CM solutions to over 2,000 customers (if one includes Ektron's other technologies and products, this number swells to 15,000 integrations).

## ► SUMMARY

With organizations of all shapes and sizes taking to the Web in a big way, Ektron CMS400.NET is ideally placed to meet the requirements of the SME market. The company has well-established credentials, and is able to offer a product that leverages the popular Microsoft Windows operating system. The product's multi-lingual support, adherence to standards, simple UI, and attractive price, means that CMS400.NET is likely to appeal to all constituencies – business content author, administrator, developer, and finance officer. Replete with features, CMS400.NET provides extensive out-of-the-box functionality which can be extended and enhanced even further through the .NET Framework development environment.

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