



MySource Matrix Features Overview

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General Features

Browser Based

MySource Matrix is entirely browser based and is therefore compatible with a wide range of client standard operating environments.

Published content may be created in such a way that it is accessible through any web browser (ie no requirement for Java, JavaScript or DHTML support).

To access the editing interfaces, the editor's browsers must possess Java (1.4 or above) and be either Internet Explorer 6.0+ (Windows only) or a recent version Mozilla browser such as Firefox or Camino (on Windows, Mac OSX and Linux).

Dual User Interfaces

MySource Matrix allows users to manage content using one of two interfaces:

- **Simple Editing Interface** - this is sometimes called "front-end editing" and allows authors to edit content via the WYSIWYG editor on a simple web page interface. It therefore offers a strictly limited set of functionality, and is designed to allow authors with little or no MySource Matrix training and limited computer skills to edit content. Authors can generally create simple content after 1-2 hour's hands-on instruction.
- **Administration Interface** - this interface provides access to the full contents of the MySource Matrix system and all of its functionality. The interface is still non-technical but it will require training to be able to operate properly. Its complexity could be compared to a program like Dreamweaver.

Asset-Based Architecture

MySource Matrix is built upon an 'asset-based' architecture rather than the 'page based' structure of lower end CMS's. The concept of 'assets' is an important one to understand, as it is this architecture that makes much of the functionality possible in MySource Matrix.

MySource Matrix treats all content in your system as assets. There are many different types of assets, but common examples include:

- Designs
- Documents
- Images
- Links
- Metadata
- Page contents
- Sites
- Tables
- Users
- Workflow schema

One example of the many advantages of an asset based system is the ability re-use content in many places. Images from one page may be reused in other parts of the site or a paragraph on your "News" page could be re-used in the in the "News" section on your home page. Or a table of seminar dates from your "Events" section could be re-used in a "What's Coming Up" section on your home page.

Further advantages include the fact that access (security restrictions) can be controlled at the asset level rather than at the site or page level alone. This has the powerful result of allowing you to control all aspects of user access right down to the different parts of a single page.

Multi-User Authoring

MySource Matrix fully supports a multiple author environment. It includes:

- Asset locking before editing (check-in and check-out).
- Comprehensive security features allowing you to define the functions available to each user, and the assets to which they have access.
- Optional "Safe edit" mode which creates a managed copy of another asset for editing.
- Transparent versioning including who made which change and when.
- An internal messaging system for communicating with other authors.
- An author's "Workspace" that allows authors to share assets.
- Comprehensive customisable workflow functionality.

Asset locking takes place at the attribute level, so that it is not necessary to lock the whole asset to make a change. For example, one editor may safely change metadata for an asset, while another changes content on the page. This facilitates a multi-author environment where different authors have different roles.

Content Creation

Powerful Authoring Environment

MySource Matrix provides a powerful authoring environment that is highly visual and intuitive to use. Usability is improved through a combination of several features, including:

- Where possible, the use of standard software conventions to make learning the system easier. For example, the asset map looks like Windows Explorer and the WYSIWYG editor looks like standard word processing software.
- The provision of a filtered functionality view. MySource Matrix allows administrators to restrict the amount of functionality a content author can see so they only need to learn the elements that are relevant to their job.
- The inclusion of contextual help and training tools.

User-Friendly Interface

MySource Matrix includes a simple, intuitive user interface which is designed to allow non-technical authors to easily enter content. There are two interfaces provided for editing content:

- The first, known as the *Administration Interface*, allows full access to all of the functionality of MySource Matrix.
- The second interface is known as the *Simple Edit Interface* or sometimes “front-end editing”.

System administrators may control precisely what functionality and instructions are available through the Simple Edit interface and so ensure content can be updated by users with minimal training.

MySource Matrix includes a WYSIWYG (What You See Is What You Get) browser-based editor in both the *Administration* and *Simple Edit* interface. The WYSIWYG editor allows authoring of content without any HTML or other technical knowledge.

Contextual online help is available from within MySource Matrix and the WYSIWYG editor, and tool tips are displayed if the user hovers their mouse over any icon in the application. This is augmented by user documentation which is available online through the MySource Matrix website. The help is written clearly using simple language, and includes workshops to help authors through the process of creating content.

It should be noted that MySource Matrix allows administrators to restrict the amount of functionality a content author can access in WYSIWYG editor, so authors only need to learn the elements that are relevant to their job.

Usability

MySource Matrix is designed to meet accepted usability standards in all aspects of its functionality. Navigation is provided via an intuitive asset map, and assets are added and created via a point-and-click interface. Other usability features include it being quick to learn, efficient for skilled users, error resistant, obvious in its use, without requiring extensive knowledge and has easily identifiable and intuitive labels and icons.

In addition, MySource Matrix supports the creation of content that support accepted usability standards. Users can choose to apply multiple designs to suit their preference, you can add multiple navigation tools such as menus, breadcrumbs, site maps, and you can incorporate feedback mechanisms for your users into the page design.

Customisation of User Interface

MySource Matrix allows an administrator to customise many aspects of both the *Administration* and *Simple Edit* Interfaces:

- You can configure the tools available in the WYSIWYG editor for each user group. For example, you could remove the *Bold*, *Italics* and *Underline* icons for basic authors so that they are only able to select from your preset styles.
- You can configure the Administration Interface to define which of the editing screens a user group has access to. For example, you may wish basic authors to be able to edit content, but not metadata.

- You can configure the *Simple Edit* interface to define the layout of the editing interface, and which of the editing screens are available in addition to the WYSIWYG editor for updating content. For example, you could allow users to edit metadata, or change the status of a page from *Under Construction* to *Live*.

Controlling Content Editing

Content editing is managed through the combination of:

- Page status (e.g. *Under Construction* for unpublished content or *Safe Edit* for live content)
- Asset locking (to ensure authors cannot accidentally overwrite each other's content)
- Workflow
- Security restrictions
- Design abstraction from content
- Automated QA tools (e.g. link integrity management and standards compliance tools)

Restricting Styles/Fonts

MySource Matrix only allows the user to select from the styles you have defined in the stylesheet associated with your design. You can also customise the interface for specific user groups, to remove the font selector or other style selector icons from the WYSIWYG editor toolbar.

Separation of Presentation and Content

Design Templates

MySource Matrix separates content from presentation through the use of “design” templates, which are used to define the layout and look-and-feel of pages. The design controls such things as the:

- General “look and feel” of a page (including style sheets)
- Common page elements (e.g. the header and footer)
- The navigation structure (e.g. menus and bread crumb trails).

The authoring environment (WYSIWYG editor) ensures style-based editing, by forcing editors to select a preferred style from a pull-down menu of formatting options, the contents of which is driven by the design style sheet.

Designs can be applied to a page, group of pages or an entire site, and each system may have many designs installed, so it is possible to have a different look and feel for policy documents and media releases, for example. Content may also have different designs applied to it depending on how the content is requested, through a public website or through an intranet for example.

MySource Matrix allows you to use the same design throughout your site, but customise certain features for particular areas. For example you may have several sites that use the same basic design which includes a logo image at the top of the screen. You may wish to customise the logo image, depending on the particular site. You can even customise the associated stylesheet.

Support Creation Of Any Type Of Template With No Limitations

MySource Matrix allows you to create an unlimited number of designs. Since MySource Matrix supports almost any HTML/CSS/JavaScript based template the only limitations on design are standard web-publishing limitations (eg Accessibility, W3C conformance, Usability etc) rather than limitations imposed by the CMS.

Design Customisations

MySource Matrix includes the powerful feature of allowing you to use the same design throughout your site, but customise certain features for particular areas. For example you may have several sites that use the same basic design which includes a logo image at the top of the screen. You may wish to customise the logo image, depending on the particular site. You can even customise the associated stylesheet.

Ability to Re-Purpose Content

MySource Matrix allows site users to define their experience by choosing between multiple designs when visiting your site. For example, if appropriately configured, a page may be viewed as any of the following:

- As an HTML/XHTML page using the standard website design;
- In a printer friendly format (also an HTML/XHTML page but with alternate formatting suitable for printing);
- As a low-bandwidth version;
- Or in a highly web-accessible format;
- As a text only version; or
- In a PDA suitable format.

This functionality is available out of the box, however the client must allow for the time to create the appropriate design templates for each of these formats.

Printer Friendly Designs

MySource Matrix allows you to create links in your design that will allow the user to select an alternate design. For example, you could add a link entitled "Print Friendly Version" or an icon image, which changes the design to a print friendly design when the user clicks on it.

Creating and Updating Page Designs

The average author does not need to understand how designs are created or loaded to the CMS. Rather, they will select their desired page design from a point-and-click list of options.

New designs are created using standard web design strategies (i.e. they are HTML pages with associated images and style sheets). Before loading a new design to the system, certain MySource Matrix specific XML tags must be added to the HTML which tells MySource Matrix how to interact with the design. For example these tags will define where the content should be displayed or how the navigation should appear. A full list of tags is available as part of the design documentation which is available for free download from <http://matrix.squiz.net/documentation>.

Styles-Based Authoring

MySource Matrix uses CSS style sheets to control the presentation of web content, including paragraph and character styles. It supports the latest version of CSS (CSS2).

The WYSIWYG editor forces editors to select formatting options from a drop down menu of styles (e.g. heading, sub heading, normal text etc). These styles correlate to elements defined in the CSS style sheet (e.g. <p>, <h1>, <h2>,). These style sheets may be created and configured by an administrator, and changes are applied to the appropriate content.

Support for Rich Media

MySource Matrix allows authors to embed many multimedia files in your content. This includes rich media objects such as graphics, sound, video (Windows Media files, Quicktime movies), and Flash within content. Such objects can be entered into MySource Matrix at the same time as the text content and with appropriate metadata. Alternatively, you may include a reference to such an object already in the content management system or a URL external to it.

Support for Streaming Audio/Video

MySource Matrix supports the embedding of audio or video files from a streaming server, if the streaming server can present files from at a static URL.

Support for Multi-Language Content

MySource Matrix and its modules (e.g. searching) fully support multi-byte character encoding (UTF-8), thus providing full internationalisation support. MySource Matrix allows authors to nominate which Unicode character sets should be used on a particular page, or whole section of a site. These pages can then be published in any language from Chinese to Swahili. Enabling this functionality simply requires the editor to select the applicable language character set from the Unicode list. The asset based structure of MySource Matrix makes it easy to publish content in multiple languages. It allows you to create separate content hierarchies to cater for your non-English content. You can create appropriate non-English designs, and the site navigation is automatically created from your content structure, which you create using the appropriate language.

Spell Checking

MySource Matrix provides a visual spell checker as part of the WYSIWYG editor and includes automated suggestions and corrections. The dictionary can be set on the server for different languages, or customised dictionaries.

Search and Replace

MySource Matrix allows you to search and replace content within a single page, a site sub-section or the entire repository. The *Search and Replace* tool lists each instance of the located search term, and allows the user select which occurrences to replace. You can also select which asset types and the status of assets to be included in the search,

Immediate Previews

MySource Matrix allows an author to preview a page as it will appear in the published site, by selecting *Preview* for the given asset .

Valid HTML

Web content created in the WYSIWYG editor is filtered through the open source tool HTML Tidy to ensure it forms valid HTML (conformant with HTML 4.01), or XHTML if preferred (XHTML 1.0). HTML Tidy includes its own validation tools and reports.

Import From Microsoft Word

MySource Matrix allows you to easily cut-and-paste content from Microsoft Office applications (such as MS Word) or HTML generated by other applications (such as Dreamweaver). The structure of tables, bullet text and numbered text is retained, while the styles from your associated stylesheet are applied.

Content copied from other sources may not comply with web publishing standards or may include unwanted application specific hidden information. MySource Matrix includes two tools to automatically “clean” content copied from other sources:

- The first is a tool available in the WYSIWYG editor that allows the content author to selectively strip formatting information such as Microsoft stylesheet information and unwanted XML tags.
- The second is a facility where content authored in the WYSIWYG editor may be automatically cleaned by HTML Tidy. This open source application automatically cleans HTML and ensures it conforms with the desired HTML standard (eg XHTML 1.0 Strict).

Accessibility - Automatic Validation

MySource Matrix may be used to publish sites that conform to W3C Web Content Accessibility guidelines. Sites published from the CMS may satisfy all accessibility requirements up to WAI Conformance Level "Triple-A" - Priority 1, 2 and 3 checkpoints. Content may be cleaned by HTML tidy before being stored by the CMS and HTML Tidy includes its own accessibility checks. Some editing tools include automatic-prompts and checks for authors to help them ensure content is web accessible, for example the WYSIWYG editor will not allow an editor to add an image without adding an alternate description. Where objects in the content management system are by their nature less accessible such as PDF documents, Flash presentations moving and still images, MySource Matrix supports ways of making the content accessible by including its own checks and prompts to ensure appropriate accessibility information are entered at the time of authoring.

Orphan Pages

MySource Matrix does not allow pages to become orphaned, since pages can only be created beneath a site or page, and when an asset is deleted, all sub-assets are also deleted.

Tables

Many business documents make extensive use of tables and MySource Matrix provides full table editing support within the WYSIWYG editor. Capabilities include:

- direct manipulation of tables from within the editor
- row and column spanning
- formatting control over tables

The correct options for accessibility markup are also supported for tables, i.e. the use of <th> (table heading) tags. In addition, HTML Tidy ensures that the code is valid.

Images

MySource Matrix incorporates a Java image editor allowing you to manipulate image assets, including adjusting the quality and size of an image. It also enables you to create *Image Variety* assets which allows you automatically create a resized version of an asset based on a preferred width or height.

Inbound Content Syndication

Inbound information can be managed using a tool known as *Remote Content* - a screen scraper application. Irrelevant information can be stripped and formatting replaced on screen-scraped content. URL information may also be intelligently replaced to allow users to surf through the remote content source without leaving MySource Matrix.

User Feedback

MySource Matrix provides a "Custom Form" page template that allows you to create web forms using a simple point and click interface. You can use this template to create a user feedback form, and nest this form in the design of your page so that it is included on all pages. All form submissions are logged within MySource Matrix and can be exported in XML format or CSV format, allowing them to be imported into spreadsheet programs such as Microsoft Excel. The individual submissions are stored as assets and may therefore be managed like other assets in MySource Matrix.

User Contributed Content

MySource Matrix provides powerful user contributed content functionality with a combination of the *Asset Builder* page template, and the *Simple Edit* interface. The *Asset Builder* page template and *Simple Edit* interface allows site users to create new assets such as pages, or other content types such as reviews. Users are presented with the WYSIWYG editor on a simple web page interface and are able to input new content. MySource Matrix also allows site users to upload files to predetermined areas of a site. Using the *Asset Builder* page template, users can also categorise their uploaded files from a preset list. At the back end, the *Asset Builder* can be configured to place the uploaded files in the correct site location so that they are presented to end users via the appropriate pages, such as the news page or 'white papers' page.

Custom Forms

MySource Matrix provides a "Custom Form" page template that allows you to create web forms using a simple point and click interface. You can create basic 'Contact Us' forms that send email to a designated administrator, or create complex forms that allow email to be sent selectively based on the information entered by a user. The form interface is customisable and allows for the creation of a variety of form elements, such as text boxes, selection lists, and email addresses. Additionally, questions can be grouped into form sections and reused throughout the system to minimise form administration. The "Custom Form" page template also allows rules to be set on information entered into a form to ensure form submissions contain valid responses. For example, you may create a selection box and apply a rule that forces a user to select at least one option.

'Send To a Friend'

MySource Matrix also allows you include a link to a form containing a "Send To a Friend" field in the design of your page. MySource Matrix allows you to flexibly define the contents of the "Send To a Friend" email, and allows you to include the URL, the Subject, a message and a "From" email address, and additional "To" email addresses.

Calendar

The MySource Matrix Calendar package is an optional module of MySource Matrix that allows you to include Calendar pages within your site. A Calendar page is similar to an Asset Listing page, and lists the Calendar Event assets that you have created in your system. Calendar Events can either be individual one-off events, or periodically recurring events, known as Recurring Calendar Events. Calendar Events can be created in the Administration Interface, or more usually using a members area of your site on an Asset Builder page. You can specify different views for your Calendar Page, allowing your events to be viewed by year, month, week, day or by individual event.

Content Management

Content Reuse

A single page or piece of content will often be used in different contexts, or delivered to different user groups. This is a prerequisite to managing different websites, i.e. intranet and multiple internet sites from the same content source. While whole topics are often used in multiple locations, paragraph level single sourcing is also possible.

Single sourcing capabilities are integrated into the core design of MySource Matrix, since all content is stored as assets - these may be sites, pages and content of tables within pages, files, users etc. Each asset is a separate entity that may be easily re-used in many different places, by creating a link to the original data source rather than duplicating it. This is done via a simple drag and drop exercise on the asset map. In this way a whole site, a page, or even a single paragraph may be used many times on many sites.

When content is presented on multiple pages/sites, it inherits the destination page/sites design and style sheet applicable for each location. You can see the linked assets for a particular piece of content on the *Linking* screen, in addition to the different URLs and effective designs for each asset on the *Settings* screen.

You can see a live example of the same single-sourced content presented within two differently designed sites <http://www.gatekeeper.gov.au> and <http://www.agimo.gov.au/infrastructure/gatekeeper>

To create spotlight boxes on right or left hand sides of your page, you can create “nested content” areas that nest a particular piece of content into another. You can nest the same piece of content in multiple locations.

Multiple Websites

With appropriate hardware, MySource Matrix allows you to create an effectively unlimited number of sites within a single CMS installation. Sites are created and configured via a point-and-click interface, and you can move sites or site sub-sections by dragging and dropping within the asset tree.

You can specify the domain name and URL for each site, and apply a separate design template (page layout) and metadata schema to each site, if appropriate. You can also re-use design templates and metadata schemas across sites, if required.

Pervasive Linking

Maintaining link integrity is native functionality of MySource Matrix. As assets are moved around in the asset map (through the point and click interface) the navigation structures are instantly and automatically re-built and all link integrity is maintained.

Attempts to remove an asset or group of assets will alert the user to potential link problems (e.g. broken links), and allow the user to take remedial action. Please note that links on other pages are not automatically removed, since this could result in residual nonsensical content. MySource Matrix also includes a *Links Report*, which shows the status of internal and external links in content authored in MySource Matrix.

Link Checking

MySource Matrix only allows you to create to internal links to existing assets, and attempts to remove an asset or group of assets will alert the user to potential link problems (e.g. broken links), and allow the user to take remedial action. MySource Matrix also includes a *Links Report*, which shows the status of internal and external links in content authored in MySource Matrix

Specifying Javascript for Links to Multimedia Resources

MySource Matrix allows you to edit HTML directly within the WYSIWYG editor, including the addition of scripting code such as javascript, which can be used to link across to multimedia resources.

Working With Groups of Pages

MySource Matrix offers many tools to support the management of groups of pages. These include:

- A visual map of asset relationships (the asset map).
- The option to cascade inheritance of many properties (e.g. designs, metadata, workflow).
- Tick-box selection of groups of assets so large areas of a site may be made *Live* or marked for review simultaneously.

Navigation Structures

The architecture of your website may be redefined in MySource Matrix using a simple drag and drop interface. Navigation menus are automatically created from this structure and hide links where users do not have permission to access those pages.

User Navigation Aids

MySource Matrix provides users with consistent and logical navigation aids. This includes automatic generation of the site navigation menu, and may highlight the user's current location in the site hierarchy.

The following dynamic navigation context cues are also supported:

- **Dynamic menuing** – provides support for multiple intuitive menuing systems. Website architecture may be redefined using a simple drag and drop interface. Menus automatically hide links where users do not have permission to access those pages.
- **Dynamic site map** – MySource Matrix provides the *Site Map* page template in the CMS Module that allows you to create a self generating site map that updates itself as your site structure changes.
- **Breadcrumbs** – creates dynamic bread crumbs which show a user where they are in relation to other web content.

Database Content

For managing content stored in external databases, if the external database application is web-enabled, it is possible to incorporate the interface into your website using the *Remote Content* page template which is provided as part of the CMS module. This page template allows you to embed the contents of an external web site within the design of your own site.

MySource Matrix also provides the DB Data Source to allow you to connect to a local or an external database and execute a query. The results of the query will be displayed as shadow assets in the asset map. The DB data source asset also contains a GUI interface to build simple queries.

Document Management

MySource Matrix stores all content as “assets” including documents, images and files of any type (including rich media). This allows for the easy creation of document libraries and image libraries.

All files are stored in their native format, including PDF files, Microsoft Office Documents, images, sound files and movies and these may be filed in one or more logical repositories (“asset folders”) and displayed in multiple sites.

MySource Matrix provides the following functionality for all assets (including files):

- The ability to be loaded into the system via a browser. (MySource Matrix is an entirely browser based system).
- Security permissions for read and write permissions may be set for individual users or user groups.
- Metadata may be captured, and flexible schema definition is supported.
- All assets are versioned and must be locked (“checked-out”) before editing.

The various content organisation and presentations tools in MySource Matrix allow the information to be organised and presented in a client pre-designed format. In other words MySource Matrix includes tools for the simple creation of image libraries, document libraries, multi-media libraries etc.

Bulk Upload

MySource Matrix allows you to bulk upload images or other files by placing the files in a directory and running a script.

RSS

MySource Matrix provides a data source asset to read external RSS feeds and display the entries from the feed as shadow assets in the asset map. When used with the *Asset Listing*, you can redisplay RSS feeds from other sites inside your MySource Matrix system.

MySource Matrix also provides the *RSS Feed* asset, to generate outbound RSS Feeds without the need for formatting. The asset takes care of sending the correct headers and suppressing the site design. The *RSS Feed* asset currently supports RSS 1.0 (RDF), RSS 2.0 and Atom 1.0. The RSS Feed asset works in

conjunction with either an *Asset Listing* or a *Whats New* page configured so the RSS feed can be generated from a list of assets.

Digital Rights Management

Some clients have responsibilities to preserve their own intellectual property rights, those of their content creators and of others. To that end a range of features enabling management of intellectual property are essential features of a content management system.

MySource Matrix currently includes some intellectual property rights management functionality, in that it allows System Administrators to define their own metadata schema, if desired. Hence, Administrators can define tags controlling obligations and restrictions for IP management. Further, the asset-oriented nature of MySource Matrix makes configuring this functionality to a particular client's needs relatively straight forward.

Publishing Principles

Search Engine Indexing

Web pages created in MySource Matrix are capable of being indexed by internal and external search engines. MySource Matrix gives all pages a sensible URL rather than terminating the URL with a complex GET which cause some search engines to be unable to crawl the site.

MySource Matrix also supports the creation of a robots.txt file thus allowing the control of the discoverability of content items by external search engines. It is also possible to apply a metadata schema that includes information for specific search engines such as a "re-index after" definition.

Web Services

Using the custom asset architecture of MySource Matrix and the functions available with PHP, it is possible to build interfaces to other applications using WSDL, UDDI or SOAP.

Integration with External Systems

MySource Matrix is an open source system, to which the full API is available. Integration with other systems tends to be easier because the source code is open, and because open source projects, including MySource Matrix, tend to use other open source systems (e.g. databases) and open standards (e.g. PEAR) that are also easy to integrate with.

Virtual Hosting

MySource Matrix supports retaining consistency with website host and domain names, and changes in web architecture do not impact website host name identification. It does this via the *Remap Manager*, which allows system administrators to remap any URL hosted on this webserver to another URL. You can even upload a CSV of URLs to be remapped. Please note that virtual hosting is often referred to as a service whereby your website is hosted on a single server with many other clients' websites. For a website with moderate to heavy traffic, Squiz recommend that MySource Matrix be installed on a dedicated server.

Importing And Exporting Content

MySource Matrix provides a number of tools for the import and export of content...

Import

- MySource Matrix allows you to easily cut and paste content from Microsoft Office applications (such as MS Word) or HTML generated by other applications (such as Dreamweaver). Content copied from other sources may not comply with web publishing standards or may include unwanted application specific hidden information. MySource Matrix includes tools to automatically "clean" content pasted from other sources, such as removing Microsoft stylesheet information and unwanted XML tags, and ensuring it conforms with the desired HTML standard (e.g. XHTML 1.0 Strict).
- MySource Matrix also provides the DB Data Source to allow you to connect to a local or an external database and execute a query. The results of the query will be displayed as shadow assets in the asset map. The DB data source asset also contains a GUI interface to build simple queries.
- RSS Data Source - MySource Matrix provides a data source asset to read RSS feeds and display the entries from the feed as shadow assets in the asset map. When used with the Asset Listing, you can redisplay RSS feeds from other sites inside your MySource Matrix system.
- Squiz can develop scripts to automate the import of content. The complexity of this task depends on the type of content, and the systems/data repositories involved. Since MySource Matrix is an open source product, the full API is available should the client choose to develop the scripts themselves or utilise a third party.
- *Remote Content* – this page template allows you to embed the contents of an external web site within the design of your own site. You can even define the start and end tags to specify content on the remote page will be discarded until this tag is reached. This allows you to strip off the design component of the remote page, to simplify its look when nested in your site.
- *Custom Asset* – this involves building an asset to interface to a specific system that is proprietary to a particular client.
- *Asset Bridge* – this involves building an asset to interface with a system that is not proprietary to a particular client. An example is the LDAP Bridge asset.
- Using the custom asset architecture of MySource Matrix and the functions available with PHP, it is possible to build interfaces to other applications using WSDL, UDDI or SOAP.

Export

- RSS Publishing - MySource Matrix fully supports the creation of RSS with the RSS Feed asset. This asset generates outbound RSS Feeds without the need for formatting, and takes care of sending the correct headers and suppressing the site design. The RSS Feed asset currently supports RSS 1.0 (RDF), RSS 2.0 and Atom 1.0.

- Some assets allow XML or CSV export of content, for example form submissions may be exported in XML or CSV format.
- Squiz can develop scripts to automate the export of content. The complexity of this task depends on the type of content, and the systems/data repositories involved. Since MySource Matrix is an open source product, the full API is available should you choose to develop the scripts yourselves or utilise a third party.
- *Custom Asset* – this involves building an asset to interface to a specific system that is proprietary to a particular client.
- *Asset Bridge* – this involves building an asset to interface to a system that is not proprietary to a particular client. An example is the LDAP Bridge asset.
- Using the custom asset architecture of MySource Matrix and the functions available with PHP, it is possible to build interfaces to other applications using WSDL, UDDI or SOAP.

XML Support

MySource Matrix allows documents to be stored in their native format, which may be XML, but need not be. This approach was chosen to increase functionality rather than restrict it, since transforming a document to XML format typically loses information.

MySource Matrix allows web content authored through the WYSIWYG editor to be converted to valid XML (XHTML 1.0) by HTML Tidy, before being stored in the CMS.

Clients may choose to add a third party application such as the XML module from Open Office to automatically transform standard office documents into XML before being stored in the CMS (Please see www.openoffice.org for more information). Squiz is happy to provide a quote to implement a suitable third party (open source) tool for transforming specific document types to XML as required by the client.

Using the custom asset architecture of MySource Matrix and the functions available with PHP, it is possible to build interfaces to other applications using XML, SQL, ODBC, SOAP, COM object, etc. Please see www.php.net for a list of all protocols that could be supported.

Publishing Process

Capabilities

Content managed by MySource Matrix must move through a workflow before content can be published as *Live*. Workflow is defined as the controlled transition between the various asset statuses. The default MySource Matrix workflow and the various asset statuses are shown in the following diagram and explained in more detail below:

- **Under Construction:** When an asset is first created, it has the status *Under Construction*. An asset with this status cannot be seen by anyone except authorised content editors. *Under Construction* assets can be edited by authorised editors in MySource Matrix.

- **Live:** An asset with this status is considered published in a MySource Matrix system. Any changes made to *Live* asset are seen immediately in your site. Live assets with customised workflow schema applied may not be edited in MySource Matrix unless their status is changed to *Under Construction* or *Safe Edit*.
- **Safe Edit:** This allows you to make changes to *Live* content within MySource Matrix, without the changes being seen until the changes have been approved. It allows you to make changes to an existing site over a period of time, and only make the changes visible when you are ready. The current *Live* version of an asset is seen in the site, and appropriately authorised users (those with write access) may see the *Safe Edit* version. If the *Safe Edit* version of the asset is made *Live*, the old *Live* asset will be replaced with the newer *Safe Edit* version. If the user cancels the *Safe Edit*, the changes are discarded, and the previous version of the asset remains *Live*.
- **Up For Review:** This status indicates the *Live* version of an asset is due for review. Each administrator for the asset receives a message notifying them that it is time to review the asset. If workflow has been associated with the asset, each of the users in the first step of the workflow also receives a message. MySource Matrix allows you to change the status of assets at a nominated future date and time, and this feature is often used to change the status of assets to *Up For Review*. A user can then change the status of the asset back to *Live* if it passes the review, or to the *Safe Edit* status if changes are required.
- **Archive:** An asset that has a status of *Archive* is not visible within your site, and is not editable within MySource Matrix.

You can change the status of a site or section of a site, and cascade that status change to the assets contained beneath in the hierarchy. MySource Matrix manages the status change as a transaction and will either change the status of all assets, or roll-back all assets to the original status.

Offline Archiving

Content scheduled for expiry may be automatically moved to an archive area, with workflow automatically initiated, if appropriate.

Scheduled Publishing

In MySource Matrix it is possible to schedule a status change to take place for an asset at a particular date and time. Hence an asset may be scheduled to go from the *Under Construction* status to *Live*. If no workflow processes have been defined, the asset will be made *Live* at the scheduled time.

If workflow has been associated with the asset, the approval process will commence at the scheduled time – hence when workflow is in operation, most clients change the status directly from *Under Construction* to *Live*, rather than scheduling it at a later time. The asset administrator then schedules the final status change from *Approved to go live* to *Live* at the appropriate time.

Timed Review/Expiry

Content owners may be notified in advance of an expiry date so that they can take appropriate actions, by setting the future status of a page from *Live* to *Up For Review*. If workflow has been associated with the asset, each of the users in the first step of the workflow also receives a message.

Automated Archival of Content

An asset can be scheduled to change from the *Live* to *Archive* status, thus removing the asset from the site. Squiz does not recommend content be removed from this archive state until records management policies deem it appropriate for the files to be deleted and this is best done by having an administrator “purge” content older than a nominated date. Content that has been purged from the system will not be available in roll-back mode.

Automatically Generated Review and Expiry Dates

MySource Matrix allows you to define a trigger to automatically set future statuses for review and expiry dates when an asset is created.

Bulk Publishing

MySource Matrix supports bulk publishing, by allowing you to change the status of a site, folder or parent page, and cascade the changes to all assets beneath that asset.

Listing Items By Review and Expiry Dates

MySource Matrix provides the *Asset Listing* page template that allows you to list assets and their attributes, ordered by particular attributes or metadata fields – for example Status. So you could view a list of all pages with a *Status* of *Up For Review*. You can also view a list of the scheduled status changes in Cron Manager.

Set Expiry Date Based on Business Rules

MySource Matrix allows you to define a trigger to set a future status change, and apply it to a particular site or sub-site, or a content item type.

Workflow

Capabilities

The internet is a published media that the public may rely upon to make certain decisions. It is imperative that publishing controls (workflow) protect an organisation from accidentally publishing incorrect or inappropriate information.

MySource Matrix includes a fully-featured workflow management system, allowing administrators to define publishing and sign-off procedures. Workflow ensures certain control steps are met before allowing content to change status – e.g. move from *Under Construction* to *Live*.

You can define as many workflows as you wish, and you can define a standard workflow which you can duplicate and use as a template. A single workflow can be applied to your entire site, or you can apply different workflows to different areas of your site if appropriate. For example, you could apply one workflow to your standard site pages, another to your media releases, and another to your images.

MySource Matrix workflows may be composed of:

- single or multi-step workflow
- serial or parallel approval
- individual or role-based approval

MySource Matrix allows for the “manual” initiation of workflow when an asset is published, amended or archived, MySource Matrix allows workflows to be “automatically” initiated when content passes a nominated review or expiry date.

This feature is provided via an intuitive user interface which like all other parts of MySource Matrix is browser based and requires no programming skill to operate.

Where Workflow Applies

If no workflows are defined for an asset they follow the standard workflow, transitioning through the different statuses, as described before. However, you can define your own custom workflows, known as workflow schemas, to define an approval process on top of the default workflow.

Workflow schemas apply on any transition to the *Live* status. This is shown in the diagram below, with dotted red lines indicating the transitions where workflow schemas apply:

If the status of an asset is changed from *Under Construction* to *Live*, for example, the associated workflow schema is initiated and the asset must move through at least two intermediate workflow statuses *Pending Approval* and *Approved to Go Live*.

When a user initiates workflow for an asset that is from *Under Construction*, the asset is first given the workflow status of *Pending Approval*. The asset stays with this status until all the approvals defined for the workflow schema are completed at which point the asset status is changed to *Approved to Go Live*. A system administrator or a user who has administrator privileges for the asset can then change the status of the asset to

Live. Similarly, when moving between *Safe Edit* and *Live*, the workflow statuses are *Safe Edit Pending Approval*, and *Safe Edit Approved to Go Live*.

Reviewer Has the Ability to Change Status

A user who is part of the workflow can either accept or reject the changed asset. Accepting the changes moves the asset to the next step in the workflow. If it was the last step in the workflow, accepting the asset changes its status to *Approved To Go Live*. A system administrator or a user who has administrator privileges for the asset can then change the status of the asset to *Live*.

Resilience Against Organisational Change

MySource Matrix allows you to define the conditions that comprise the steps in a workflow to specify which members of a user group are required to make the approvals. When people leave or join the department, they are simply added to the appropriate *User Group*, and no changes are required to the workflows.

Viewing Workflow Status

Authorisation of publishing of content takes place via a simple intuitive workflow screen. The *Workflow Details* screen provides information about the status of a workflow, shows the approvals and comments made to date and allows the authoriser to either approve or reject the work.

Workflow Reports

MySource Matrix provides various tools to enable management of job allocation and workflow, including:

- Viewing each of the approvals and comments made to date for a particular asset on the *Workflow Details* screen.
- Colour coding of different statuses of assets in the asset tree
- Viewing assets with statuses of *Pending Approval*, *Approved To Go Live* etc using the *Search Folder* template
- Notifications to appropriate users regarding their required involvement in the workflow via the internal messaging system and by email.

Defining a workflow

Workflow schema management is provided via an intuitive user interface, which like all other parts of MySource Matrix is browser based and requires no programming skill to operate. A workflow schema can be made up of multiple steps. The following example is a workflow schema with two steps:

- Step 1 – Edit Content
- Step 2 – QA Process

Each step can have several conditions that specify approval is required from users or a group of users. The condition is made up of a user or group of users, and logic applied to those users i.e. specifying either “All” or “At Least N” members of the group have to approve the change.

In our example, the *Edit Content* step contains two conditions requiring approval from the following users:

- At least two Content Editors, AND
- All Content Approvers

The QA step has one condition requiring approval:

- At least one QA Manager

Including Multiple/Alternative People in Workflows

Multiple people can be defined as part of a workflow by either including them individually as parallel steps, or including them in a user group that is included as part of a step in the workflow. Including user groups in a workflow allows for alternative people to complete the workflow approval steps, and therefore provides more flexibility in the workflow approval process.

Email Notifications

When a user changes the status of an asset to *Live*, each of the users in the first step of the workflow is notified via the internal messaging system and by email. As the asset passes through the steps in the workflow, the relevant users are notified.

Feedback on Approval/Rejection

Any user included in the workflow can either approve or reject the changes, and can enter a log message to provide feedback on the page requirements. You can display either all log messages or just the most recent messages.

Workflow and Multiple Locations

If content is re-used in multiple locations, content is published to each location once the workflow is complete, if the same workflow is applied to each location. If different workflow applies to different locations, the content is only published to each location when the appropriate workflow is complete.

Workflow Carbon Copy

When a user changes the status of an asset to *Live*, each of the users in the first step of the workflow is cc'd on notifications - via the internal messaging system and by email. As the asset passes through the steps in the workflow, the relevant users are carbon copied.

Workflow Duration

MySource Matrix allows you to specify a duration for each approval step in a workflow. If the approvals have not been completed by this period after the workflow has commenced, an email notification is sent to the administrator.

Emergency Override

MySource Matrix allows an administrator to override a workflow if required in an emergency, by temporarily removing the workflow and directly publishing the asset.

Workflow Administration

Appropriately authorised users can create, delete, or update a workflow, including modifying the conditions. Updates to a workflow are applied to status changes that take place after the updates are applied.

Proxy Workflow

Workflows may be defined using roles (user groups), and user accounts may assigned and removed from these roles as required. In other words a user may act as “proxy” to someone else when required. Further, individuals may be assigned to roles based on specific conditions. For example if a user is accessing the system from a specific IP range (or some other business rule) they may have access to additional functionality in the system.

Graphical View of Workflows

Workflows can be created in a hierarchy of folders that is presented graphically as part of the main asset tree. Authorised users may “expand” the view to see the details of the workflow in heading form and the specific steps and rules. Each heading may then be further expanded to reveal details of the workflow configuration.

Integration with Security Model

As for all assets in MySource Matrix, there is tight integration between the workflow and security systems. Access to workflow assets is restricted to users defined as administrator for that workflow. Allowable actions during the approval process can be specified as part of the workflow, and workflow rules can only be overridden by a system administrator. MySource Matrix can be configured to interface to and LDAP directory for user and role information.

Including External Users in Workflow

MySource Matrix provides a fully devolved content creation and management via its web interface, and all external users are provided with a username and password which they can use to edit and approve assets.

Metadata

Standard Metadata Entries

Metadata is considered an intrinsic part of successfully managing assets within MySource Matrix. It is easy to add standard schemas such as AGLS and Dublin Core, or define your own standards if more appropriate, via an intuitive point and click interface.

MySource Matrix allows this metadata to be:

- Manually entered.
- Automatically created by the CMS (e.g. the date and time a page was last modified).
- Enforceable (pages without complete metadata will not be allowed to go live).
- Indexed by the search engine

Configurable Metadata

In addition to the included standard schemas outlined above, MySource Matrix allows clients to define their own metadata schema through an intuitive user interface to support their particular business requirements. Different metadata schema may be applied to different assets as deemed appropriate by the client. For example, images may require different information from press releases.

In addition, the metadata schema that applies to an asset depends on the schema that is applied to the part of the site in which it is located. This means that you can re-use a page in different sites which have different metadata requirements.

Intuitive Interface for Creating Metadata

MySource Matrix allows content authors to enter metadata through an intuitive user interface. You can create your metadata schema to include drop down lists or checkboxes of pre-determined options, and allow for restricted values from a thesaurus as described below.

Help Text

MySource Matrix allows you to enter a “Description” for each metadata field, which is displayed as help text beneath the field on the *Metadata* screen.

Large Metadata Fields

MySource Matrix supports large metadata fields. Metadata text fields can be multi-line and can support data of the order of gigabytes.

Reviewing Metadata

Metadata forms an intrinsic part of an asset, and is reviewable at the same time as all other components of an asset such as the content.

Automatic Keyword Extraction

MySource Matrix provides an automatic keyword extraction feature to show each word extracted from the contents of your site, ordered by the most commonly occurring words. A user can cut and paste the appropriate keywords to be used for metadata.

Version Control

Rollback

MySource Matrix delivers full versioning of all assets. The system automatically stores all changes to each asset, when the change was made and by whom.

Appropriately authorised users may view the history of the system, or asset, or group of assets (sites) and roll-back to view information from a specific point-in-time in the past. For example, it is possible to view the system exactly as it appeared on the 3rd April 2003 at 2:22pm.

Individual pieces of old content may be copied and used to replace current content versions.

Version Numbering

MySource Matrix maintains version numbers for every asset in the system, with the format:

MajorNo.MinorNo.MicroNo

For example, an asset is created with the original version of 0.0.1 and with every change the micro number is

incremented (e.g. 0.0.2, 0.0.3 etc). Each time an asset is made live, the minor version number is automatically incremented. For example, when an asset is first made live, its version number is automatically updated to 0.1.0. To associate the pages of a site with a release or checkpoint, an administrator has the ability to manually change the major version number of the site. For example, set the version to 1.0.0. This change can be cascaded down to all the pages in a site.

User Management and Security

User Security

MySource Matrix has the following types of users, each of which has varying access levels:

- Normal User: has no access to authoring any content.
- Backend User: may author content if their profile allows them to edit that content.
- Administrator: may access the administration interfaces, including all content, and most system tools.
- Root User: may access the administration interfaces, including all content, and all system tools. There is only one "Root User" per system.

A simple and intuitive user interface is provided to allow an administrator to grant read, write or administration access to an asset or group of assets, by a particular user or group of users. As for all changes to assets, an audit trail is kept of changes to permissions of assets. Decentralised author access is secured through:

- User login and password (may operate through LDAP or Active Directory)
- Enforceable use of Secure Sockets Layer (SSL) encryption
- Optional IP range restriction
- Optional visual key

MySource Matrix employs *User Groups* to represent roles, and permissions can be granted to user groups. An example could be creating a *User Group* called "Department 1 Content Authors". Rather than granting access to write to pages within the Department 1 site to individual users, access is granted to this group. When people leave or join the department, they are simply added to the *User Group*, and no changes are required to the permissions of the pages within the department site. If individuals are members of more than one group, they will be given access to according to the permissions granted to each asset, with access being granted taking priority. MySource Matrix can also be configured to interface to LDAP for user and role information.

Permissions

MySource Matrix allows you to grant read, write or administration privilege to users or user groups:

- **Read Permission:** if a user has *Read* permission for a particular *Live* asset, they are able to view the asset in your site via their browser. Any MySource Matrix user with read permission can also view the asset in MySource Matrix. Unless you have denied public read access to a particular asset, the asset is always visible to the web-surfing public.

- **Write Permission:** if a MySource Matrix user has *Write* permission for a particular asset, they are able to view and update the editing screens of the asset in MySource Matrix, excluding changing status, site settings, permissions, and the workflow and metadata schemas. Users with *Write* permission may view the asset even if it is not *Live*.
- **Administration Permissions:** if a MySource Matrix user has *Administration* permission for a particular asset, they are also able to change the status, edit site settings, permissions, and the workflow and metadata schema for the asset in MySource Matrix.

LDAP Bridge

MySource Matrix provides the LDAP module which allows you to source user and role information from your LDAP/Active Directory. Once configured to connect to your LDAP/Active Directory, you can view all your external users and roles within MySource Matrix. You can also view the name, email address and other details for each user. When authenticating, MySource Matrix firstly checks in your LDAP users and then your locally defined users. Clients often take all information about MySource Matrix users (i.e. their staff) from the LDAP directory, and enter all site users for a members area directly into MySource Matrix.

Single Sign-On

MySource Matrix can be configured to authenticate from your Active Directory or LDAP server, to ensure that usernames and passwords are maintained in only one location and the same accounts are used across all systems. Users are still required to login to MySource Matrix after logging onto Windows. However, once authenticated, MySource Matrix can create a session for a configurable period (e.g. 1 day, 1 week or 1 month), thereby saving the user re-entering the username and password each time they use MySource Matrix.

Member Zones

MySource Matrix allows you to define areas of your site which require users to be authenticated before allowing them access. These are areas where public read access has been denied. MySource Matrix hides content in Members Areas from users that do not have appropriate levels of access, including removing references from menus and navigation systems.

Other Security Features

- **Session management** - when authenticated the system allocates a temporary session key that is tied to their IP address so that would be hackers may not spoof their session.
- **Centralised updates** - the centralised management structure ensures that client machines do not act as vulnerabilities to the system.
- **File type restriction** - it is possible to restrict files types that may be loaded to the CMS and these files are loaded to a non-executable directory. That means if someone were to load malicious code to the server it would not be executable on the server.

- **Executables restriction** - the system keeps detailed audit trails and logs so administrators may analyse attempted security breaches.
- **Audit trails** - the system keeps detailed audit trails and logs so administrators may analyse attempted security breaches.

Securing Different Areas Independently

MySource Matrix allows you to secure different areas of your site independently. You can set specific areas to be publicly accessible, and others to be Member's Only or Staff Only requiring users to be authenticated. You can even set certain areas of your site to required SSL authentication, and others to be unsecured.

External Security/Privacy

At the MySource Matrix level, the access control mechanisms of the underlying operating system are utilised to ensure that only the webserver user has write access to the public data directory (which is needed for storing uploaded files and cached content) and write access is denied to the PHP source code. The access control mechanisms of the database restrict access to the MySource Matrix and the HIPO Server processes. Additionally, it is important to ensure physical access to your webserver is restricted, and the user accounts are strictly controlled. External access to your server hosting the CMS should also be protected through a perimeter firewall, a firewall on the CMS server itself, and through the configuration of Apache directives, and the use of SSL. Finally, your server could be configured so that the Apache webserver is the only process listening to the network externally.

Security Audit

MySource Matrix has been security audited by the Defence Signals Directorate for use by Federal Government Sites and passed all audit requirements.

Secure Deployment on Internal and External Sites

MySource Matrix allows for the creation of secure websites with access restricted content. It may be used for the creation of Intranet's, extranet's and public websites with member's only areas. It should be noted that MySource Matrix has been security audited by Australia's Defence Signals Directorate and has been passed for the secure deployment of Federal Government websites.

Caching

Capabilities

MySource Matrix provides content caching support to improve the performance of high-load sites. Caching is supported for standard pages, asset listings, site maps, and search pages.

You can use permissions within MySource Matrix to display different page content depending on whether the user is logged in or not, and if logged in, depending on the groups in which the user is a member. MySource Matrix therefore caches the different versions of the page for public (not logged in) users, individual users and user groups.

For search results, the results of each search term are cached by the *Search Manager* and the look of each search result is cached by the *Search Page*. Search results can be sorted dynamically while still maintaining the speed improvements provided by the caching system.

The cache for an asset is cleared at periodic intervals, and the time period is configurable in the Cache Manager.

Web Cache Management Tools Support

MySource Matrix can be configured to support multiple levels of caching, depending on the individual system requirements. This includes the ability to use both forward and reverse caching engines to cache content generated by MySource Matrix.

Portal, Personalisation and Web Marketing

Portal Capabilities

MySource Matrix includes many features associated with portal systems, including:

- Access may be restricted to people who require login.
- Automatic navigation filtering: menus and navigation systems such as dynamic site maps automatically filter out links that should not be displayed for a given user.
- Content within pages may be displayed selectively for individual users. (e.g. A block of text on a page may only appear if a user is logged in)
- Text within pages may be dynamically substituted by MySource Matrix, driven by "keyword". For example, it is possible to create a page that welcomes a user by name.
- Content may be displayed alternatively depending on a user's settings. (e.g. a user who is subscribed to a certain mailing list may see different information to a person not subscribed to that list)
- Search results only display user-subscribed content and assets may be syndicated for use in other systems.

Portal Functionality for Anonymous Users

MySource Matrix includes cookie based sessions for logged on anonymous users. These sessions are used to temporarily record information about a user's operations on the site. Some assets are designed to display alternate tailored content based on information stored in the user's session.

'MyPage' Concept

There are several tools within MySource Matrix that allow content to be personalised including:

- Dynamic generation of content to only show navigation elements that match the user's profile.
- The ability to hide or show sections of content on a page depending on the user.
- The ability to include keywords in content that may be dynamically replaced with personalised content – such as greeting a user by name.

Some assets include further functionality to personalise content. For example the calendar asset may be configured to only show 'my' events.

Online CRM

The Personalisation features of MySource Matrix can be further extended to provide personalised navigation experiences, based on a users activity within a web site. We have developed this asset in our work with Future publishing, who are using it to deliver personalised advertisements to site users.

Related Asset Listing

MySource Matrix provides the Related Asset Listing, which you can embed within your design and list assets that are tagged with the same thesaurus terms (ie, metadata) as the current asset. You can even set a weighting for an asset when tagged against the term, and the pages will be ordered in the Related Asset Listing according to the weighting assigned. For example, when viewing the 'products' page of a site, a user can be presented with related white papers or special offers through the use of the Related Asset Listing.

Bulk Email

The MySource Matrix Bulkmail module enables personalised HTML emails to be created, edited and sent to groups of recipients via email, on either an ad-hoc or 'triggered' basis or at scheduled intervals.

Bulkmail can be used to email items such as regular newsletters and promotional mailouts to any number of recipients while enabling system administrators to retain control over all aspects of the content, design and personalisation. Bulkmail also provides server scheduling facilities to optimise resource requirements for large mailings, including the ability to configure multiple mail servers for large mailouts if required.

Bulkmail integrates with all of your existing MySource Matrix assets meaning that it is straightforward to incorporate existing designs, text and user attributes into emails. Bulkmail allows you to attain a new level of

user interactivity by enabling you to tailor and schedule customised communications with your Web audiences, no matter how large, or how diverse.

The Bulkmailer application consists of four major components:

- **The Bulkmailer:** Bulkmailer is the engine that runs in the background dispatching emails according to your required schedule.
- **Bulkmail Manager:** allows you to view all queued or currently running jobs in the system and allows you to pause, resume or cancel Bulkmail jobs. The Bulkmail Manager interface is also available from within the Post Office and Bulkmail Job interfaces.
- **Bulkmail Post Office:** provides access to mail server settings such as choice of mail program (SMTP or Sendmail), email headers and threshold settings (which determine rate of bulkmail send). You are able to configure multiple Post Offices to handle large volumes or multiple email streams as required.
- **Bulkmail Jobs:** provides an overview of the Bulkmail job name, recipient lists, content generation method, and design selection.

In addition to the major components, the *Bulkmail Module* provides the following pages:

- **Subscribe to Email:** allows you to easily add a Request Subscription page to your site, with or without validation.
- **Create Bulkmail User:** quick add method to add Bulkmail recipient(s) manually.

Search Engine

Overview

MySource Matrix possesses a powerful search engine module. It allows full text searching and thesaurus-based searching of content in a website or intranet.

When an asset is added, edited or deleted from the CMS, MySource Matrix updates its searching index to reflect the change. The index provides a map with weighting of search words to the assets that contain those words. This architecture facilitates the following features:

- Searching is fast.
- Searches are real-time (i.e. the index is always up-to-date since it is instantly updated when content is edited).
- Searches may discover content across many different asset types, such as pages, files and users (NB assets must be registered with the search engine)
- Searches include metadata.
- Searches support plain text, including any combination of word or number.
- Searches support boolean searching.
- Indexing includes Word/PDF documents as well as native HTML pages.
- Searches are case insensitive.

- Selective weighting of results (the weighting parameters for each asset may be controlled).
- Searches may be restricted to certain areas of the site.
- Searches will only display results accessible by the user (results that relate to assets where a user does not have read permission will not be displayed).

Excluding Sections from Indexing

The MySource Matrix Search Manager allows you to exclude sites, sub-sites, site sections or individual pages from being indexed. You can even specify that particular asset types are excluded, or that page bodycopy is excluded but asset attributes are not.

Relevancy Ranking

MySource Matrix displays results according to relevancy, the algorithm being based on how many times a word appears in the content and where it appears in the content e.g. title or content. In addition, a system administrator can set the weighting of individual attributes on individual assets or asset types.

Search within Search

MySource Matrix allows you to define a search within search area in a separate bodycopy asset. You can then include both a “Search within a Search” and a “New Search” area on your results page, using keywords in the WYSIWYG editor for your *Search* page.

Best Bets Functionality

MySource Matrix allows you to specify that a particular asset is returned in the same position on every result page displayed. For example, if you always wanted the home page to appear as the first result, you would specify an asset position of 1 for the home page asset. No matter what the search term, the home page always appears as the first result. If no results are returned, company policy is not listed.

Fuzzy Matching

MySource Matrix supports fuzzy matching via a combination of word stemming, exact phrase matching, and Thesaurus searching.

Searching External Repositories

For searching across external repositories, clients have the option to use any third party search engine in conjunction with MySource Matrix. In a number of circumstances, other Squiz clients have found the need to search across multiple third party web enabled repositories, and have chosen to use search engines such as Encompass, Panoptic and Verity.

Search Results Presentation

You can fully configure the layout of your search results page using the WYSIWYG editor, and the page will have the site design applied so that the layout and style match that of the site.

An administrator can define which metadata fields are indexed for searching and the weightings applied to each field. In addition, for each asset being searched, you can adjusting the weighting of the attributes used in indexing.

Structured Taxonomy-Based Searching

MySource Matrix provides the functionality needed to provide alternate category-based browse structures. For example, being able to browse documents by topic, and by document type such as policy, manual, etc.

Search Log Report

MySource Matrix provides a *Search Log Report* to report on all searches performed on the entire system within a specified period of time. This report can be used to view popular searches on your site, and optimise weightings of assets to ensure better search results.