

KONNECT SOFT

PRODUCT DESCRIPTION

FOR

KONNECT ECMS

ELECTRONIC CONTENT MANAGEMENT SYSTEM

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1 OVERVIEW

Konnect Soft's Electronic Content Management System is a system of components enabling information publishers to produce, manage and deliver their data electronically to:

- Hardcopy
- Web
- CD-ROM
- Or a host of other output formats including XML

These components are combined in the Konnect Soft's Konnect eCMS product which can be used to meet the huge variety of requirements and different data of information publishers.

A primary objective of this system is to increase the efficiency of the entire publishing process, reduce costs, decrease staff efforts and cut the "time to market" for information products – with a system which is intuitive, easy-to-use and highly customisable to the exact requirements of the client's specific editorial processes. The Electronic Content Management System is a system that empowers users and publishers to fully control their own content.

See section 30 for diagrammatic representations of some of the data flows involved.

This document is an initial overview of some of the functionality offered by our system which is best utilised in conjunction with a demonstration of the system itself.

1.1 Benefits

Benefits of the system include:

- Provides a system to manage the editorial tracking, processing and delivery of content
- Decreases compilation costs
- Improves your productivity
- Allows organisations to publish frequently with more accurate data – whether the content is delivered in print form or electronically
- Encourages the supply of more regular and better quality updates to information
- Allows the supply and updating of information to be carried out electronically
- Facilitates the update and verification of information by all parties involved
- Facilitates different methods of updating so that organisations have the maximum flexibility to update their data in the easiest possible way
- Increases quality and currency of data
- Accelerates the return on investment made in your publishing business
- Capacity for integration with other database systems

1.2 Note on terminology

Administrators

Refers to client users of the system who have a high level of rights to configure the system and potentially control what level of rights users have to the system. Multiple persons can be administrators and often senior editors perform administrative functions by controlling the level of access remote editors have in the system.

Content

Refers to the data/information in the system that may consist of a combination of different fields/properties in the data repository. Content is the actual text or data which often appears in the delivered content such as a book, CDROM or web site produced from the system.

Delivery	Refers to delivering content from the Konnect eCMS system into another format or system. This is often referred to as "exporting" in other systems, however the concept of delivery is to process the content to produce something in a form that is ready to be used by a publisher or user of the system (which may involve a lot of processing intelligence), rather than just producing a plain exported file.
Editors	Used as a generic term to apply to client staff.
End users	Refers to non-client staff who use the web site, for example to access content (the target audience browsing the web site i.e. your customers).
System/client users	Refers to client staff who use, maintain or modify information on the system.

2 PUBLICATIONS SYSTEM

2.1 Re-using data for multiple publications

Konnect Soft's publication classification system provides the best available means of managing content in terms of re-using both new and existing data for multiple publications and output formats.

All data within the data repository can be listed/classified as being in one or many publications, allowing the client to easily deliver existing content for different publications and for different output formats.

2.2 Classifying by publication/content set

Konnect Soft's Electronic Content Management System is built around the concept of allowing data to be classified as belonging to specific "publications". This allows the **same** data element or record to be present in one or many publications so data can be re-used (relationally) in different publications with minimum effort.

The term "publication" is used here in the widest sense to mean **any set** of information that the publisher may wish to provide to external organisations or individuals. The data that constitutes the hardcopy publications is an obvious example, but this system also allows other data types to be designated as a "publication" including:

- Information delivered via a web site, or parts thereof
- Information delivered on CD-ROMs
- A set of data that is exported, licensed or "fed" to another organisation
- Etc.

The eCMS system **separates the content structure**¹ or order of records in a publication or content set **from the content itself** – which gives the publisher more flexibility and control of their content. When a user inserts an item (record or an entire section) into another section/heading in the system, they are actually inserting a reference to the selected items ID into the content structure. Therefore content is separate from the structure and items (record or entire sections) can be re-used as many times as desired.

2.2.1 Publications and headings

A publication is a collection of textual records and headings, directory entries, or just records ordered in a particular way. Records and headings can be re-used in multiple publications or copied between different publications and modified. The same data can appear in different publications but with a different heading structure.

In effect one can create a copy or linked version of a publication that re-uses anywhere between 1% and 100% of the heading and record structure of the original publication.

2.2.2 Content areas

The term publication is used here because many publishers are familiar with the fact that a publication is built from a **set of data**. However more generally data in the repository can be classified as belonging to content areas. A content area can include any data to be shared or re-used within the organisation:

- Notes
- Standards documents used by staff
- Research
- Work in progress
- Other areas that could benefit by being shared within the organisation

Content areas do not need to be published as printed material, delivered on the web or CD-ROM. For example, research notes are initially produced within the general "Research" content area and then moved into the relevant publication as they are used, as the basis for new sections, articles or amendments to existing material.

¹ In this case the content structure is the order and hierarchy of records, sections, chapters, etc that make up publications or sets of data. The structure specifies the sequence the records and headings in a publication appear in. Internally in the eCMS system this is a collection of ids represented in a tree type data structure, where the ids refer to the records or items which appear in the publication.

The system can handle as many publications as required, there is no real limit. As the data is stored relationally, a publication consists mainly of the headings structure and order of a publication, and references to records from the "pool" of general content.

2.2.3 Creating a new publication

Creating a new publication consists of the following easy-to-use steps:

- Go to the publication area of the user interface
- Choose the "Create a new publication option"
- Choose a name for a publication
- Classify a group of records as belonging to a publication

See section 2.4.

2.2.4 Publications and content delivery

A publication or content area controls the ordering of headings and records and allows the re-use of data. Publications are independent of the means by which content is delivered i.e. a number of different methods of content delivery can be utilised for each publication.

A single publication can be:

- Exported into DTP format and used to produce a printed hardcopy
- Used to produce a CD-ROM
- Delivered as content to a specific web site
- Delivered as a data feed
- Delivered as content designated, for example, for web-enabled TV, PDAs
- Etc.

If the content of the same publication were delivered using all of these methods, then it would have the same structure and content in the output generated for each different method of content delivery (but would be styled differently for each format, which is controlled by the template and style sheet used). The points above are examples of different ways of delivering the content of a publication. A publisher has the freedom to:

- Use all or none of these delivery formats
- To change how they deliver the publication at any time
- To change the way the publication appears in the different formats (by changing templates and styles associate with a particular publication)

Users also have the freedom to create copies of the publication which have basically the same content but just vary slightly the way it is structured for delivery in different formats.

Publishers can re-use any amount of data from any publication in any other publication in any way they desire.

See section 6.

2.2.5 Publications and taxonomies

More details to follow

2.3 Relational database technology

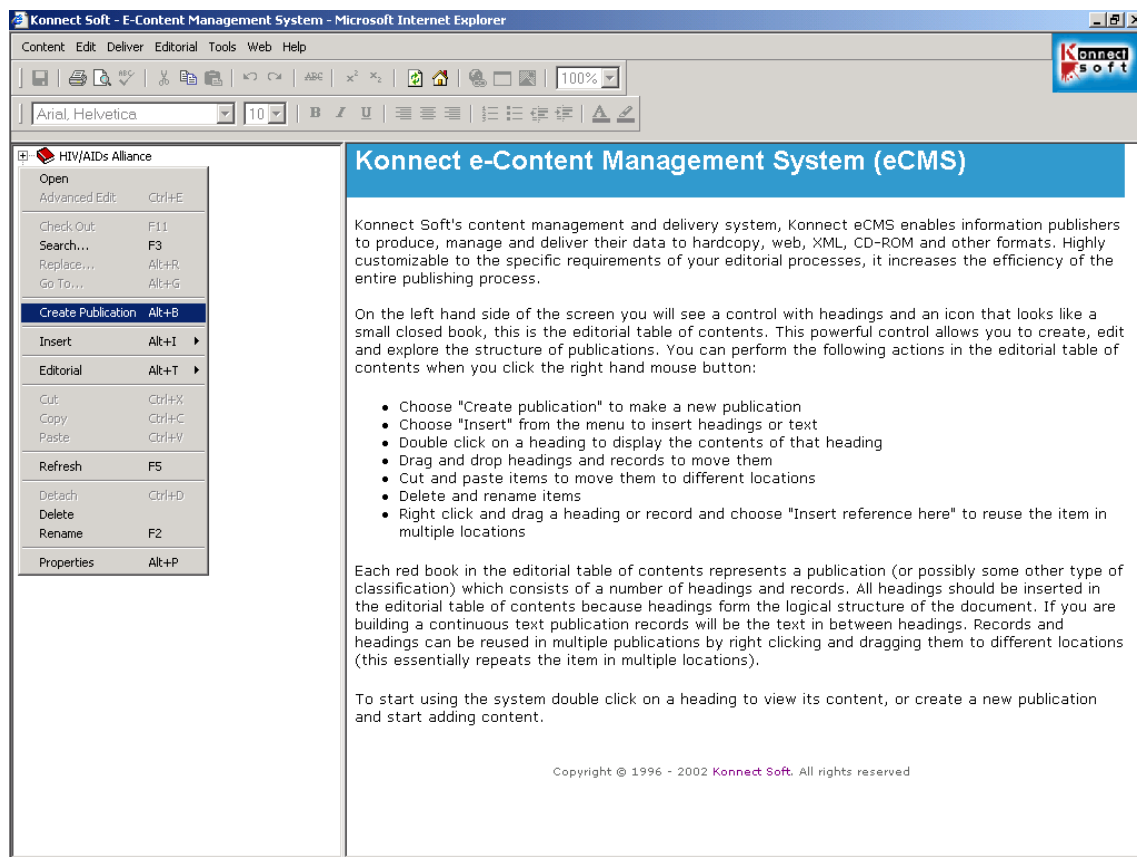
Publication definitions are kept in distinct parts of the central data repository database and all key data areas can be assigned to different publications. In this way data can be re-used in multiple publications without duplication.

Users can define as many publications as they wish and give the publication any name required. When a publication is initially created it can be thought of as an empty container into which links to existing content and new content can be inserted.

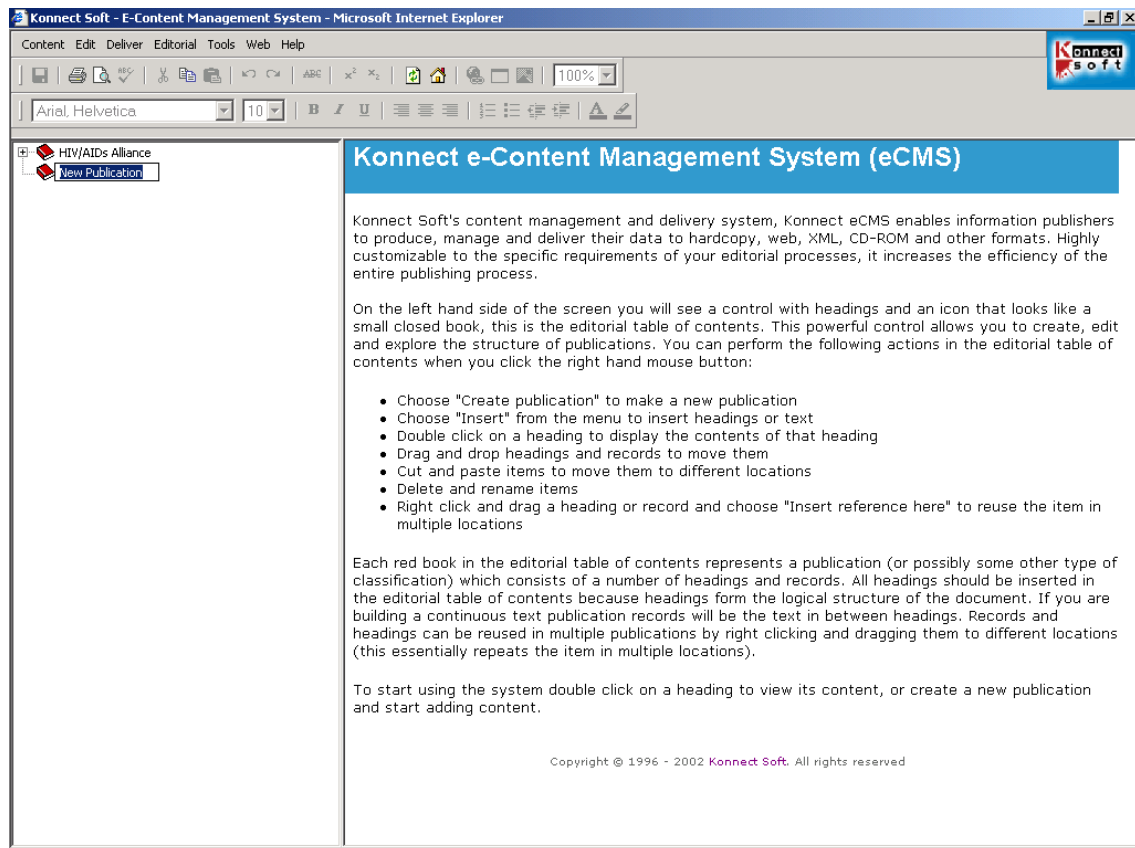
This use of relational database technology gives the system the maximum extensibility and allows for full re-use of data.

2.4 Working with publications (screen shots)

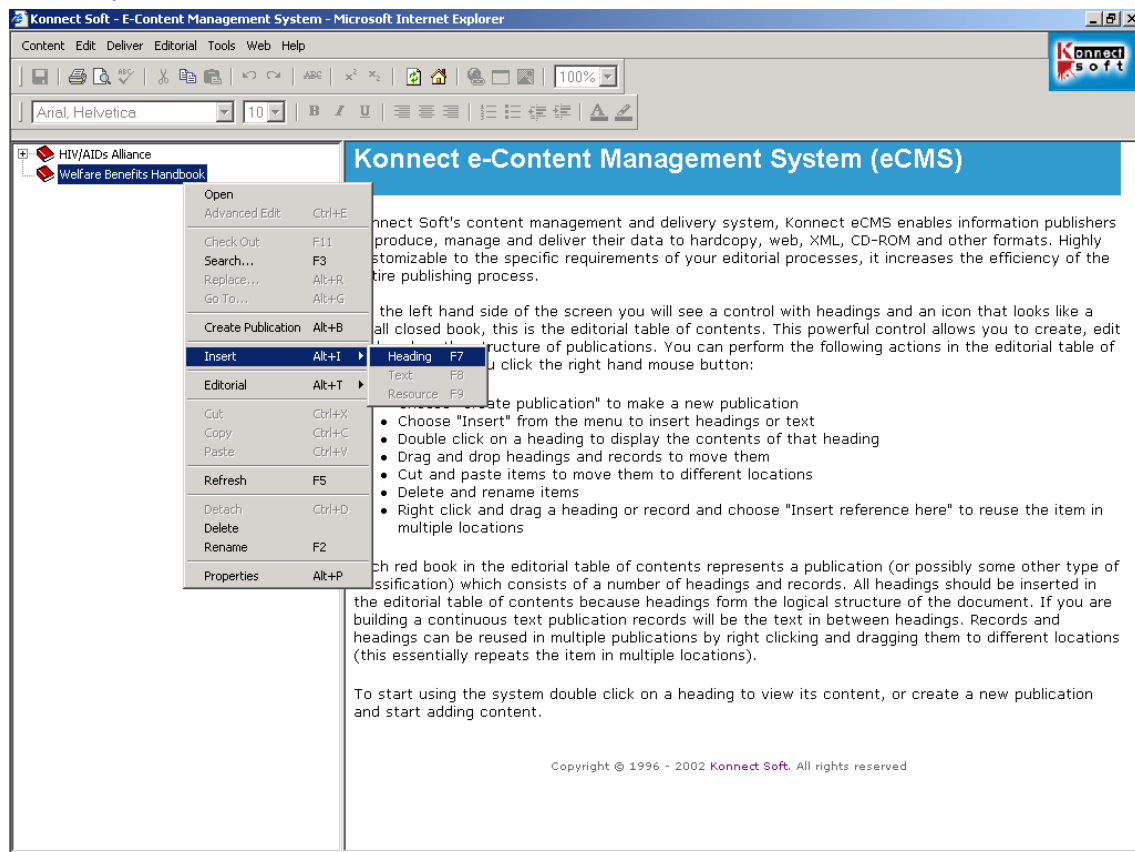
Editorial tree view of a publication. The blue icons represent chapter and the red icons represent sections. This is the standard interface - for the advanced web interface see 7.4.



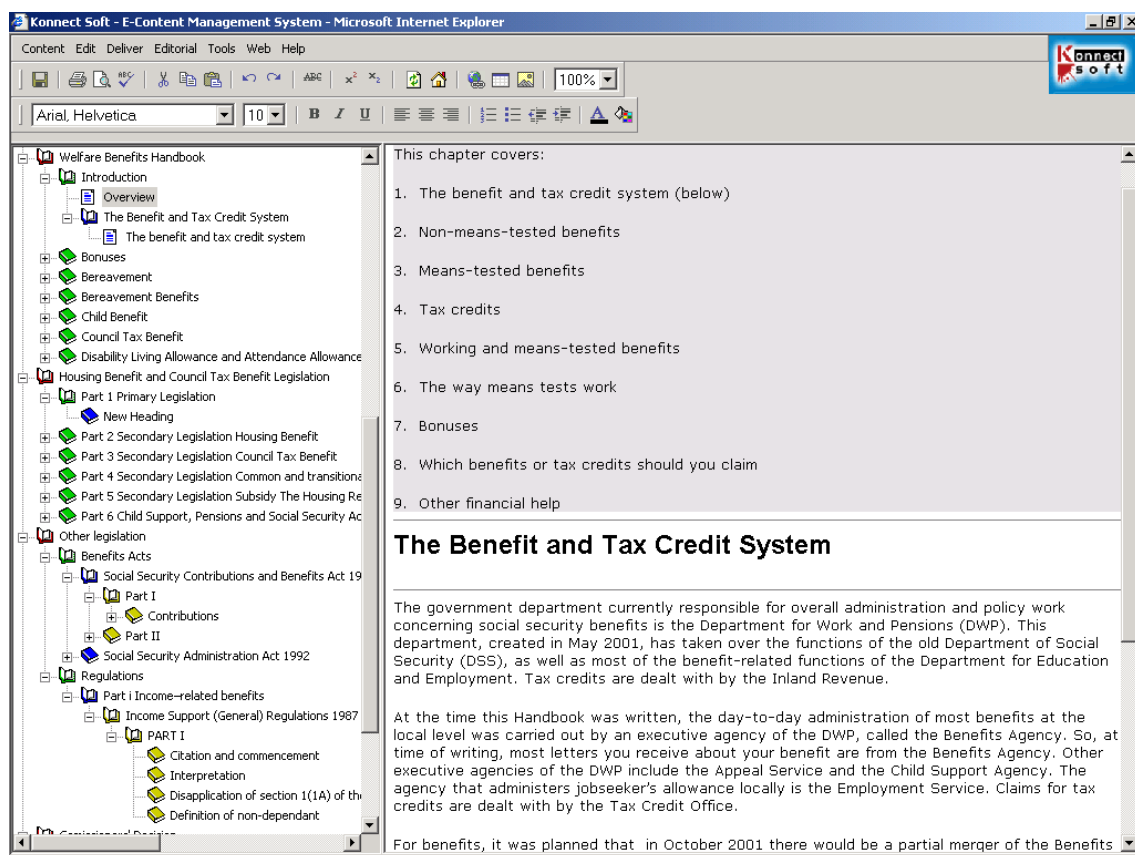
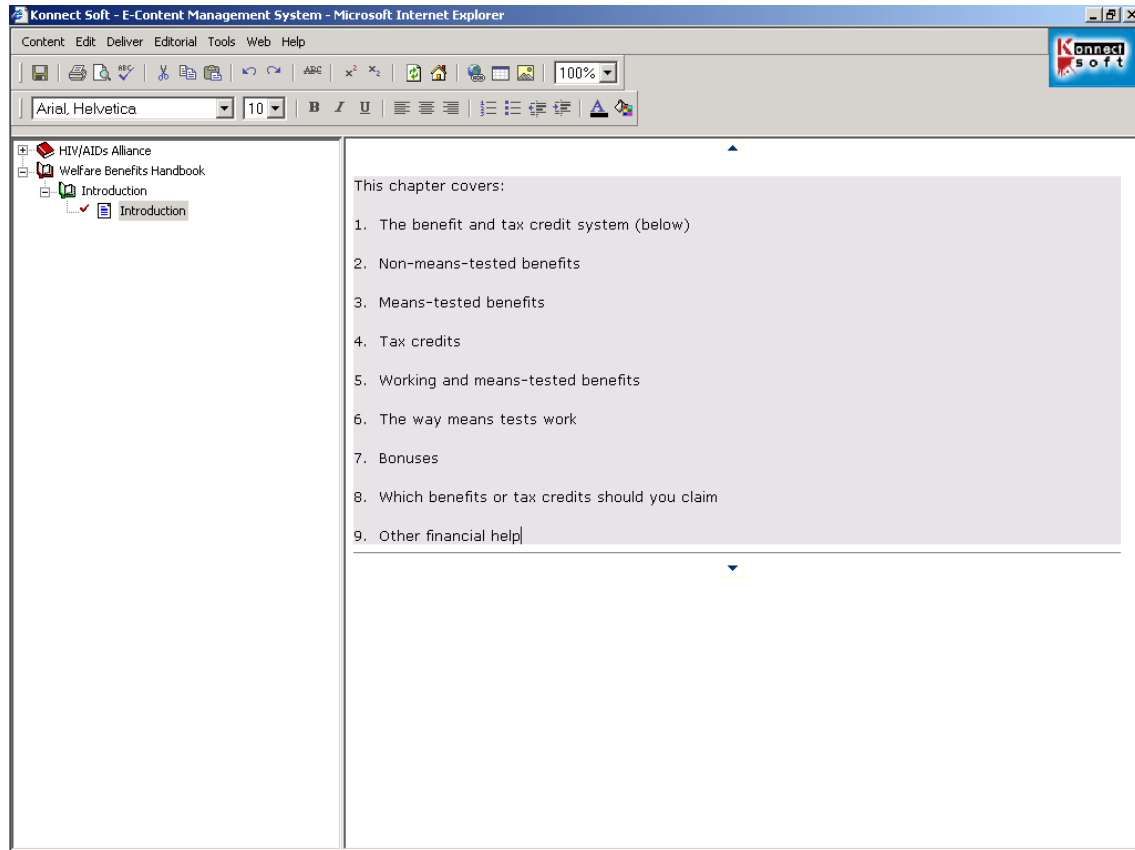
Clicking the new publication button display the new publication dialog



The new publication is created



By right clicking on the empty publications, users can add new content



3 THE DATA REPOSITORY

In simple terms, the “data repository” is where the all elements of your content sit in a powerful database application. The system pulls the elements required out of this repository to deliver relevant publications to end-users.

The data repository consists of a database or databases of related content areas, system data and external files. The repository supports functionality to:

- Hold all data used to maintain publications
- Maintain and control the editorial process
- Deliver content to end users
- Manage the web site
- Provide online products and services
- Etc.

The advantages of this system are that:

- All data is stored in one system
- Any data in the system can be re-used and cross-referenced to any other data in the system
- Everything is managed with one system/interface
- All content management tools can be applied
- Full support is provided for remote workers i.e. editorial staff can access the system from any location via the internet

Konnect Soft's data repository stores both continuous (discursive) text data and directory type data. Importantly, this fully integrated publishing system also supports links between directory and continuous text publications and allows mixing of these content types.

The contact management system allows directory type features to be used in the online provision of products and services. Examples would be - customer account data can use the directory model organisation and contact relationship features to hold information on different types of customers, and an organisation's own product catalogue can use the product tracking features available for creating directories of products, see section 3.2.6.

3.1 Redesign of the data repository

Subject to the current set-up of the client installation, existing backend systems may need to be amended or redesigned and the data migrated to the new system. Publishers can maintain some or all of their existing databases, or alternatively these can be migrated completely to Konnect Soft's data repository. If the publisher wishes to retain some of their databases these will be built into the data repository allowing them to be linked to other data and use the functionality of the content management system.

The data repository is deployed to take full advantage of relational technology.

3.1.1 Migrating the system

The new data repository is designed while the client continues to use the existing system, the objective being to minimise any disruption or downtime to the production process.

Once the new system components, for example:

- The editorial system itself
- Hard copy output functionality
- Web output functionality

.... have been fully tested by Konnect Soft, these are then are installed to the client's network utilising non-live data for testing.

Phased implementation of functionality and data migration are applied as appropriate.

3.1.2 Test procedures

Necessary test procedures are defined by Konnect Soft according to installation requirements.

3.1.3 Going live

Following the test phase and when the client is ready to switch to the new system, Konnect Soft migrate client's live data into the new system. The extent to which this can be automated is subject to the format of the client's data.

3.2 Continuous text data structure

"Continuous text" describes data in a structured full-text form. This as opposed to the more complex and highly-structured "fielded" data one typically finds in a database.

The continuous text model is designed to handle structured textual content ordered by headings where the headings are the logical division used to organise the records and associated publications.

In the continuous text database system a publication is a collection of headings and records (from the general pool of available records) ordered in a certain way.

The textual content is stored within the database as XML allowing style and formatting information to be preserved in an independent re-usable format.

Textual records can hold very large amounts of content (i.e. large data quantities representing many pages of text).

3.2.1 Data granularity

Granularity is the relative size, scale, level of detail or depth of penetration that characterises an object or activity. In the content of database records, the granularity specifies how much data a record contains. It does not determine the exact amount of text but rather whether a record corresponds to a line of text, paragraph of text, page of text, etc.

The data repository is based on relational database technology where data is stored as records. Headings and data that were previously part of a document are stored as separate records in the repository. This gives the publisher the maximum flexibility to categorise, re-use and structure their data.

The granularity of text records determines how much and what type of data is stored in a record. Records are the smallest assignable unit, which means one can re-use an entire record in multiple publications or areas (but one cannot re-use part of a record). The granularity of records in the content management system is defined as the text between headings (i.e. text records never contain a heading).

A record can contain a line of text or a page of text - the size is defined by the user. Whenever a heading needs to be inserted, a new heading record is added and a text record is inserted below the new heading record. Multiple text records can be attached to each heading record to allow editors to divide content in the exact way they desire to facilitate re-use of content.

3.2.2 Headings and structure

Konnect Soft provide the level of structure or data granularity required by the client's system. These might, for example, correspond to:

- Chapter
- Section
- Heading
- Subheading
- Paragraph
- Other levels as desired

Editors are able to add, delete and modify all levels and headings and are able to assign records to different headings. These headings can then be used to generate the client's publications as well for links and for the table of contents.

Records can be attached to any level of heading and heading levels do not need to be consecutive (i.e. one can have a level 1 heading and then a level 4 heading with no levels in between).

3.2.3 Cross linking/cross-references

A mechanism is provided for handling cross-references from the text of a record to other records within the continuous text databases. Tags are used to indicate a link from the text of one record in the database to another record. Cross-references can be made to the start of a record or section, or to within the body of a record itself. This is handled by allowing editors to insert an anchor point to the point in the text to which they want to link.

Editors are able to view these cross-reference tags in the database records but in the hard copy publications they appear as SEE references to another section (without the tags). On the web site references appear as hyperlinks that take the users to the web page for the record to which the reference refers. (The tags used to mark these cross-references do not appear on the web site or in any other products.)

3.2.4 Classification

Each record can be classified as being of a certain type. The list of classifications can be controlled by permitted users, allowing them to decide how data is categorised. This system allows users to categorise data, for example, as legislation, scientific, medical, business, definitions, internally authored, unreported cases, etc. Users are then able to use the extensive search facilities of the editorial system to search for all records in a publication with a certain classification.

The classification feature also facilitates importing data from external files which maps to records of certain classification but not others (for example importing consolidated legislation which replaces records categorised as “legislation”, but not records with other classifications, such as commentary).

3.2.5 Converting an existing system - continuous/free text database

Data elements from the existing system are used in the new system as appropriate and additional fields are added to facilitate new functionality. The system has a facility to indicate:

- Which records are ready for hard copy publication
- Which records are ready to be published on the web site

3.2.6 Advanced features

3.2.6.1 Storing content in multiple language

The system can store content in different languages and supports the use of accented and extended characters.

The system can also be configured to support non-European languages such as:

- Chinese
- Thai
- Japanese
- Etc.

Data is stored in Unicode to support these languages and special facilities can be provided. Please enquire for more details.

3.3 Fielded/directories model data structure

Konnect Soft's fielded/directory model data functionality is designed to handle inter-related data groups (see section 3.3.11). Some of the common issues in directory model and contact management databases are the relationships between organisations and “contacts”; and organisations, contacts and products/services. A company can be owned by another company, and may have many employees, each employee may have multiple contact details and have multiple relationships with other employees (they may manage or be managed by, etc.), and a company may sell a number of products. All these relationships are handled by Konnect Soft's directory model, which can be customised to handle any data set.

Fielded data typically concerns:

- Organisations
- Persons/contacts
- Products
- Services

- Activities
- Etc.

These are called the central entities, and the system stores descriptive data for all entities.

All information is stored in the same base structure, although the amount of information provided for a record varies according to its nature.

Konnect eCMS can be configured to be used with different database models and can be configured to use a clients existing relational database model if it is present, or a database model can be design for client where they are migrating from some non relational format.

3.3.1 Full data management for all entities

3.3.1.1 Multiple address, e-mails, phone numbers, etc.

The system does not limit the number or classifications of the data stored about the central entities. So the user is never restricted to only storing one or two phone numbers, e-mail addresses, etc. for an entity; as many as are required can be used. For example **multiple** pieces of data on the following items can be stored:

- Addresses
- Geographical information
- Telecom type details:
 - ⇒ Phone
 - ⇒ Fax
 - ⇒ SMS
 - ⇒ Etc.
- E-contact details:
 - ⇒ E-mails
 - ⇒ Web sites
 - ⇒ Instant messaging
 - ⇒ Etc.
- Classifications:
 - ⇒ Job types
 - ⇒ Company types
 - ⇒ Multiple specialist classifications
 - ⇒ Etc.
- Relationships between entities:
 - ⇒ Parent-subsidary
 - ⇒ Relationship between contacts (manager-subordinate, team leader-team member)
- Type of entity:
 - ⇒ Entrant
 - ⇒ Update contact
 - ⇒ Sales contact
 - ⇒ Etc
- Descriptive text
- Notes
- Administration details:
 - ⇒ Creation date
 - ⇒ Last modification date
 - ⇒ Modification history

- ⇒ Creator
- ⇒ Modifier

.... and many more details, including the ability for the user to add custom fields.

The system can be configured to restrict the number of entries or type of data which the user can enter (to only allow one address entry for example), or alternatively let users enter as much information as desired to maximise data capture. Where multiple entries are stored about an entity, each one can be:

- Classified (office phone, direct line, mobile, etc.)
- Configured as primary, secondary, tertiary, etc.
- Each entry can appear in single or multiple publications, allowing the information stored for different publications to be varied slightly where required

This allows for as much or as little detail about an organisation to be stored in the database as is required. The system is configured to adhere to the publisher's current business model, and has the flexibility to allow new, different or additional types of information to be captured as is desired. Konnect Soft's system puts the control in the hands of the user to configure the system to meet their exact needs.

3.3.2 Indexes/taxonomies

Existing index fields are migrated to the new system and editors with sufficient rights have the facility to add new index entries.

For each record, editors are able to add any index terms from a complete list of index terms. Also editors with sufficient permissions can add index words to the list of index terms.

3.3.3 Foreign language capability

The system can store data in a large variety of languages. Different publications in different languages can be produced or a single publication can contain data in multiple languages. Any existing language translations can be maintained and there is the facility to add new language versions for each record.

3.3.4 Compilation tracking

The system allows compilation information to be stored for all entities so that the publisher can track and store the following information:

- Response rates
- When update requests were sent out
- When responses were received
- Update requests in different media:
 - ⇒ Postal
 - ⇒ Fax
 - ⇒ Phone
 - ⇒ E-mail
 - ⇒ Unsolicited online update by entrants
- History of updates
- Relationship between a group of entries who all have the same update contact
- Last time the entry was updated with data supplied by the entrant
- Opt-out information for all entrants

The system can generate reports on:

- Entrants that have not responded since a certain date
- Entrants who have repeatedly not responded
- The date of last response by each entrant
- And many more reports

The system can also generate reminders that certain entrants have not responded by a specified date. This information is sent to a specified editor or editors, and reminder e-mails can be sent to entrants if desired. This system is configured to allow Konnect Soft's EEUS system to be used for even greater cost savings and more efficient update process - see section 19.

3.3.5 Campaign management

The directory database model stores information about campaigns, such as direct mail or telesales, allowing this data to be imported and exported to sales and marketing applications.

The campaign management support functionality includes support for

- Groups
- Campaign history
- Source code tracking

The general opt-out preferences for users can be used with campaign management.

3.3.6 Mailing suppression/contact method preferences

The system tracks mailing suppression (opt-out) preferences for all entities. This allows individual contacts (or organisations) to **not** be included or contacted about:

- Mailing lists
- Campaigns
- Promotions
- Directory updates
- Etc.

The system allows tracking of:

- Contact preferences for different areas
 - ⇒ Such as “don't include me in mailing lists”, but “send me promotional material/news on product X”
- Preferred way of being contacted – “contact me by e-mail but not by phone”, “contact by letter but not e-mail”
- Additional user defined preferences

The person that the contact prefers to talk (e.g. allocated account manager) can even be stored in the system. Also people can opt out of all forms of contact.

3.3.7 Types of contact

The data repository handles the complex relationships between different types of contacts (a contact can have one or several of the following roles):

- Sales/marketing (decision maker, prospect, suspect, etc.)
- Editorial
- Entry/recipient (for directories, databases, etc.)
- PR
- Accounts
- Purchase/billing
- Other user defined

The system recognises that:

- Often the entrant in your directory is also your marketing contact, although another person entirely might actually supply the update information for the directory (e.g. handling the details for several products or companies), and that another contact deals with accounts issues

Or a single contact may, for example, perform all the roles of, for example:

- A directory entrant may be an editorial "expert", purchaser of publications and the PR contact

The systems supports any level of data capture or separation, and data can be exported for use by different departments to ensure that everyone can use the most up to date details.

3.3.8 Sales, marketing and financial information

The directory model includes handling of detailed sales, marketing and billing information. It allows organisations to keep track of customers (individuals, organisations, etc), marketing contacts (mailing lists), product catalogues, and all related types of information. Because the model is fully relational financial information about any item (whether it is under the broad categories of product, organisation or contact) can be stored. Relevant financial data can also be exported into/imported from the client's financial package.

The directory data model is part of Konnect Soft's data repository and benefits from sharing a common interface and the ability to make any parts of the data, as desired, fully accessible on the web. All directory model data is contained in the data repository appearing under classifications/publications, likewise for continuous (discursive) text data. Customer accounts may appear under a customer accounts publication, product details may appear under the product catalogue publication.

Also any data in the system can be exported into a format that can be used by typesetters allowing product catalogues to be printed, mailing lists or directories to be published, etc.

3.3.9 Address management and geographical classification

3.3.9.1 Address data

The system stores detailed address data including:

- 3 free-format address lines (with the ability to store up to 5 address lines) – **in addition** to those fields detailed below
- City
- State/province/county
- Zip/postcode
- Country
- Geographical classification

Geographical classification is a flexible system which allows publishers to use as much or as little detail to store geographical information as they require. The standard configurations include:

- Continents
- Countries
- Regions/states
- Cities/towns
- Smaller regional divisions

3.3.9.2 Classifications

The system can be configured to use different classifications - such as the publisher's own top level country classification which could, for example, be based on GDP of the country or any other criteria. Smaller divisions are automatically classified as belonging to the larger divisions and this is reflected in the user interface so that when a country is selected then the available cities for that country are displayed.

The client has full control over the level of detailed stored, and they can choose to allow free entry of city or country names if desired, or use the default system pull down lists. Users with sufficient rights can modify any of this geographical data.

3.3.9.3 Multiple language versions

Multiple language versions/translations of all data can be stored, to allow country names to be stored in different languages for example.

3.3.9.4 Address validation

The address system can be integrated with address management software to allow address validation, quick lookup/entry based on post/zip code, etc.

3.3.9.5 Address block format

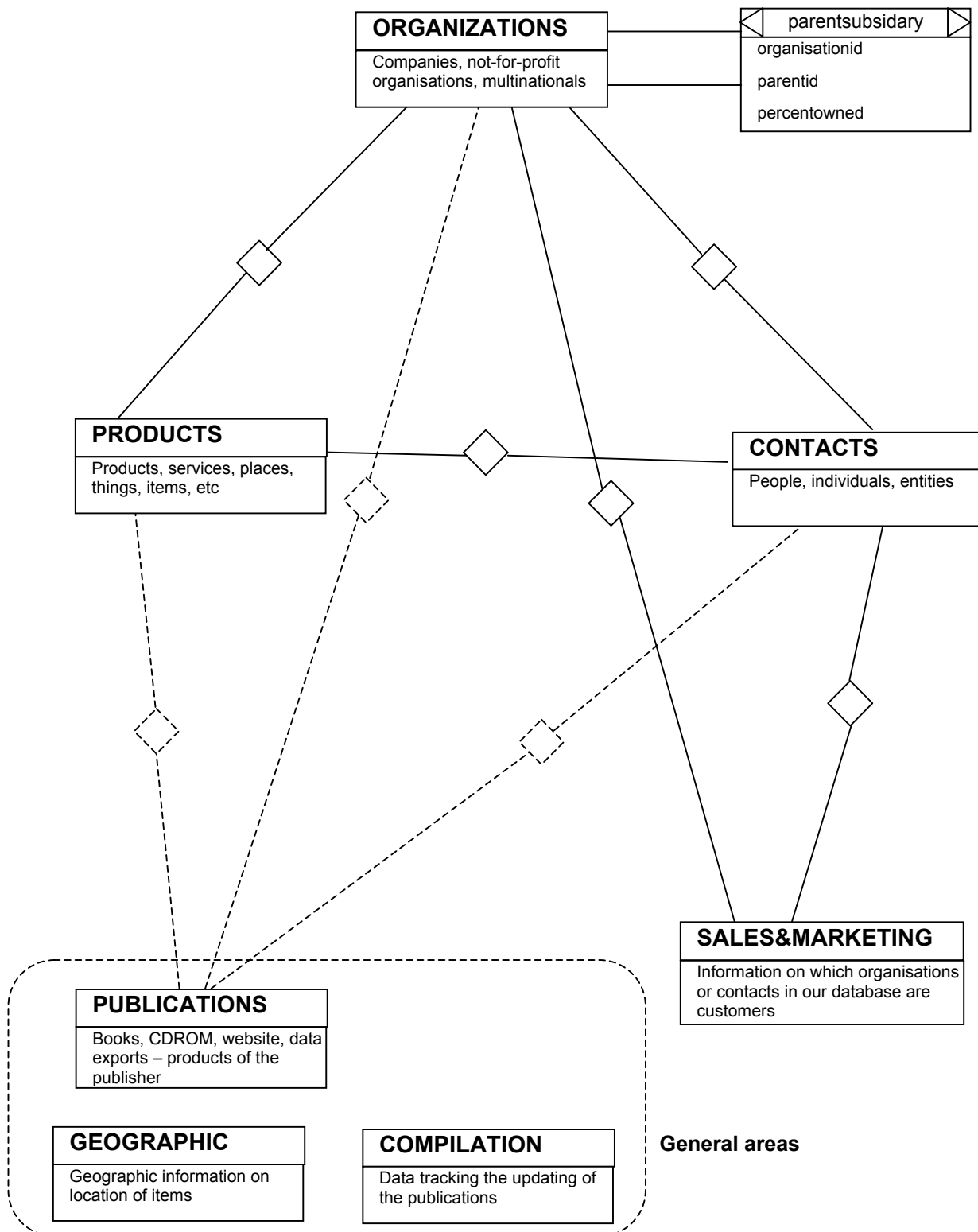
Addresses can be configured to use different templates for different countries, groups of countries or regions so when addresses are displayed or delivered, they use the correct format for the country to which they apply, or a particular format specified by the client.

3.3.10 Fully relational system

The directory model system is fully relational (highly normalised) thereby eliminating data redundancy.

The powerful database model is hidden from the user with an excellent easy-to-use user interface which allows the user to utilise the relational functionality without the headache of having to understand a complex database structure.

3.3.11 Directories model top level overview



3.4 News data management

Functionality for news or other fast-changing information can be supplied by Konnect Soft as required.

In some cases this information may be housed on the web server only as a standalone component (and maintained through a browser-based user interface), or alternatively the system can also be integrated within the main data repository.

3.5 Custom fields

The custom fields functionality allows users to define their own additional fields for different types of records and to add data into these fields. This provides enormous flexibility on top of an already highly powerful system, allowing fields to be added, deleted and modified without the need for complex database design changes.

See section 7.40.

3.6 Editorial system interface

See section 7.5.5.

3.7 Attaching meta data to records

The system allows users to define meta data and attach it to a type of record (so it is available for all records of that type) or to a selection of records.

More details to follow

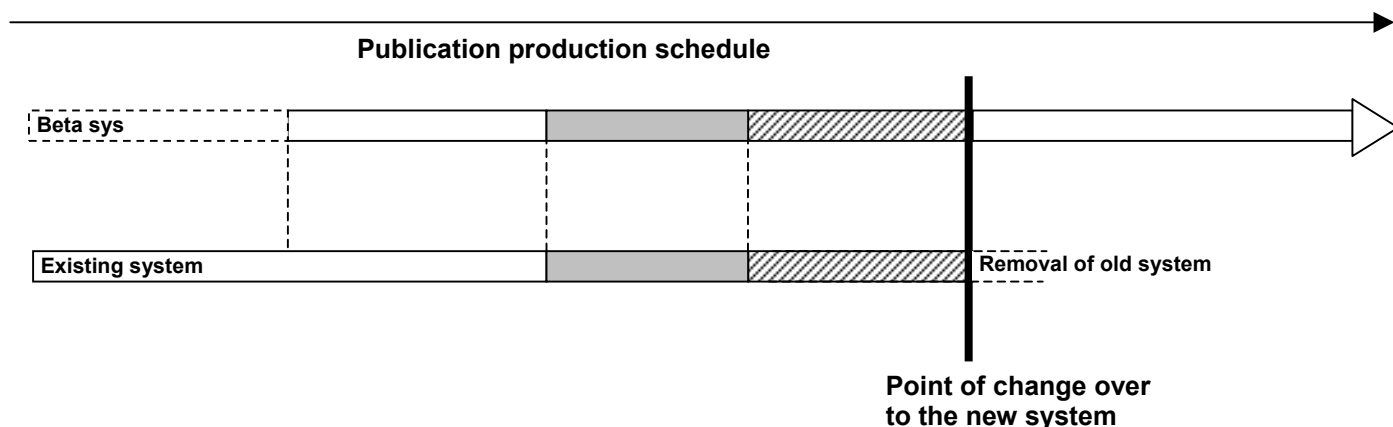
4 IMPORT/MIGRATION OF DATA AND LEGACY SYSTEMS

4.1 Overview of data migration

Konnect Soft provide systems that are designed to minimise the impact of migration, for example for transferring data from existing systems/legacy systems to the new content management system. This is achieved by allowing partial import of data for testing purposes and running the systems concurrently. Client staff are then able to use the system with test data to learn, experiment with and test the functionality before the change over to the new system.

Once the testing is complete and the client is satisfied with the new system, then a full import of the data from the old system into the new system is performed. The client verifies that all data has been imported correctly and, as circumstances dictate, some or all data can be re-imported. Often it helps the client to import some data before deciding on the precise import configuration. Once it has been verified that all data is present in the new system, then a period can follow where the old and new systems are concurrently updated until the client confirms that full transfer to the new system.

This process ensures that no data is lost and gives several levels of fault tolerance. Konnect Soft aim for a single live import of the data set, but fail-safe mechanisms exist to ensure data integrity and that the client is fully satisfied before they start using the new system.



4.2 Using the standard data import functionality

4.2.1 Importing multiple files

Documents are selected using an import program which allows the client to select a file or files to import into the new data repository. The program contains a file selection dialog, which allows the client to select a single file, a directory containing multiple files, or multiple directories from which to import files.

4.2.1.1 Multiple file and directory selection dialog

Example screen

Data Import

Selected item: **Refresh**

Import type: **Settings**

Template: **Settings**

Database:

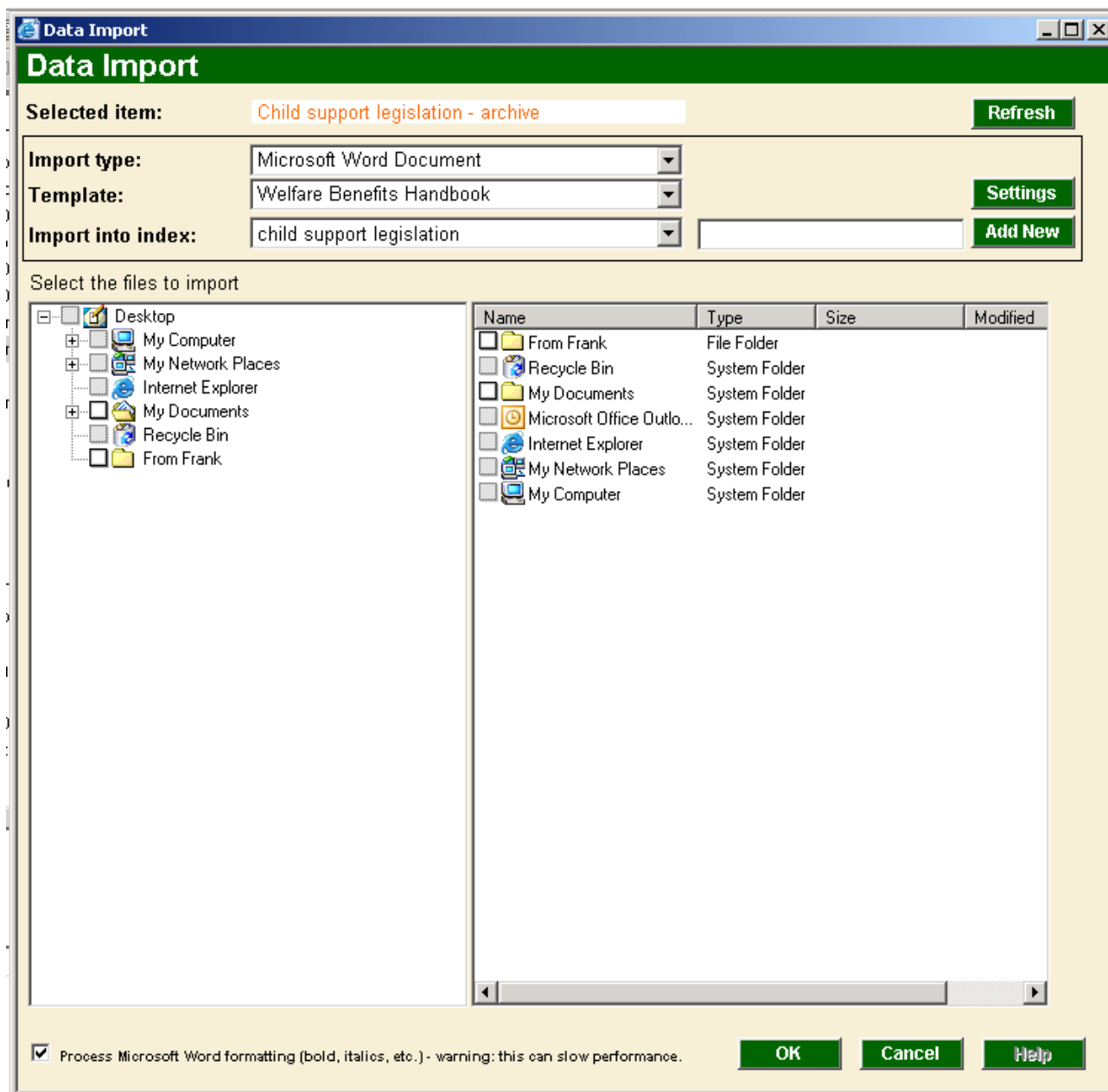
Source database: Researcher:

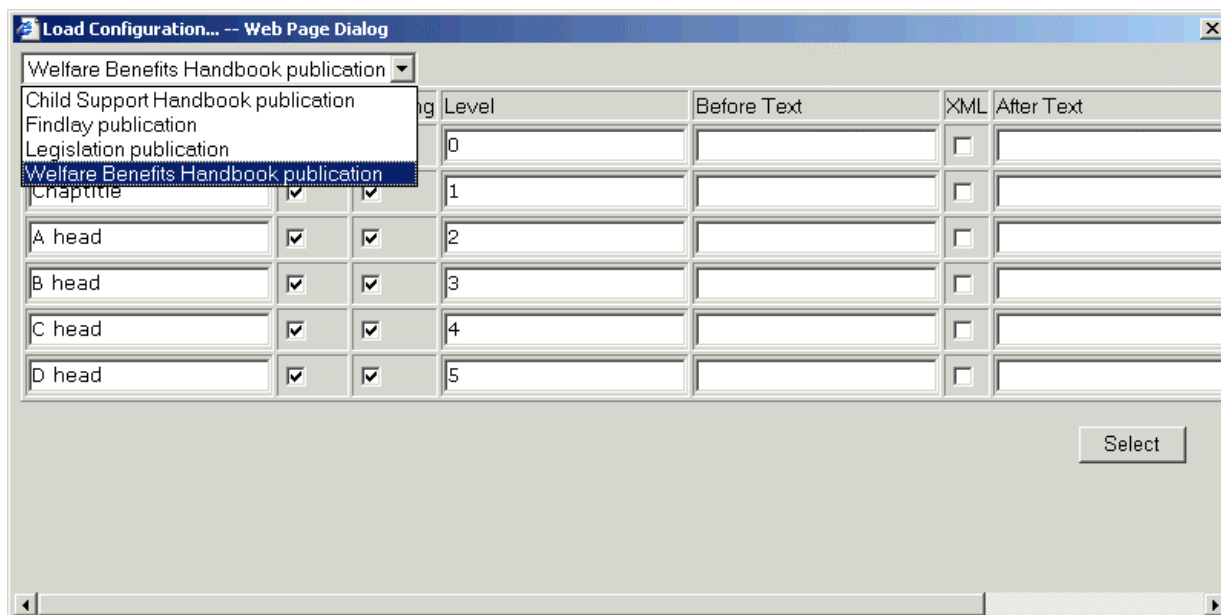
☒ Check for duplicates **Import duplicates into:** **Advanced**

Select the files to import

Name	Type	Size	Modified
☐ From Frank	File Folder		
☐ Recycle Bin	System Folder		
☐ My Documents	System Folder		
☐ Microsoft Office Outlo...	System Folder		
☐ Internet Explorer	System Folder		
☐ My Network Places	System Folder		
☐ My Computer	System Folder		

OK **Cancel** **Help**





Once the files have been selected the user is prompted for the publication within the data repository that they wish to insert the documents into, and the import procedure then begins.

4.3 Data import component – Microsoft Word to database import

Konnect Soft's data migration component enables the import of Microsoft Word documents into the Electronic Content Management System. Functionality is provided which allows the user to control when they import data and exactly which data is imported. Editors can use this program to control the migration process and schedule it around their production demands.

4.3.1 Documents to text records and heading records

Documents are split into multiple records based on the level of granularity defined. A single document may be split into several records and headings. Word styles used for headings are converted into heading records in the new database and the text is converted into records linked to these headings records.

4.3.2 Styles

The system preserves:

- Styles
- Manual formatting
 - ⇒ Bold, italics, superscript, special characters, etc.

Styles are converted into XML delimited blocks of text with a reference to the style name. This allows:

- Styles to display differently for different output formats
- Styles to display differently in the same output format but in different publications
- The appearance of a style in different types of output is controlled by using style sheets and templates

4.3.3 Indexing, cross-references and footnotes

Indexing, cross-references and footnotes from the Word files are preserved on import into the data repository.

Cross-references are imported into the system as XML cross-references. Each cross-reference refers to a destination publication so that when data is exported:

- If the publication referred to is outside the data set exported, it just appears as a textual reference
- If the export/delivery format is electronic and supports linking then the cross-reference can appear as a link, if the destination publication is included in the data set

4.3.4 Verification

A verification view is provided which allows the client to view their data in the new system to confirm it has imported as desired.

This allows clients to:

- Import and inspect the results
- Fully test the import procedure and move to the new system only when they are fully ready
- Delete the import and re-run the import procedure (i.e. the process is repeated until the desired results are achieved)
- Check for any potential difficulties with the imported text

Text in the verification view appears approximately as it would appear on the printed page, and the user can print from this view.

4.4 HTML import

HTML import behaves in a similar function to the Microsoft Word import functionality (see section 4.3). Much of the formatting within HTML files can be preserved (by converting it to XHTML). The data migration component can be configured so that:

- HTML headings are imported as headings in the system
- Paragraph elements can be imported as separate records or combined into one record

4.4.1 CSS import

More details to follow

4.4.2 Web page import

More details to follow.

4.5 SGML import

More details to follow.

4.6 XML import functionality

XML can be imported into the system using the data migration component. The system allows users to map XML elements to the Konnect eCMS data repository structure.

The XML import is configured for different types of XML (different XML DTDs/schemas):

- This involves specifying which elements map to headings or taxonomy items in the system
- Configuring which elements correspond to records (which elements the content is split on)
- Mapping elements to fields
- Unmapped items are imported as record content
- XSLT transformations can be run as part of the import process
- Import templates/configurations are contained within settings templates which can be:
 - ⇒ Saved
 - ⇒ Retrieved and editing
 - ⇒ Copied/duplicated
 - ⇒ Deleted
 - ⇒ Classified using the taxonomy components of the eCMS system

4.6.1 Advanced functionality

4.6.1.1 Cross-reference and index term parsing

This functionality allows users to import specified elements in the XML file that represent cross-references between objects to cross-references in the Konnect eCMS system. This is useful for importing cross-reference information from different sources into the system.

Similarly users can select elements in the XML which represent indexed items or index terms and import them as index terms into Konnect eCMS.

4.6.1.2 Advanced interface for XML import

The standard XML import functionality uses templates to map the XML to database objects. These templates can be modified by users but do require some general technical and XML knowledge.

The advanced interface allows less technical users to configure the XML import functionality. It allows users to specify the XML elements and select the database fields/objects that the XML elements map to. Users still retain the ability to edit the raw template format and to insert complex XSLT transformations where desired.

4.6.1.3 Import images

Where an XML file references external images, the image import functionality can import these images (as long as they are accessible to the system at the time of import). Either the images can be uploaded to the server at the time of import (data is read from the client and uploaded to and processed on the server), or an entire directory structure including images can be uploaded and processed on the server. Images are stored in the imported content as references to images in the system (which are identified by a system ID).

4.7 Structured text file import

The structured text file import allows users to import text files into the system and map different parts of the file to fields in the system. This can be used with delimited format or with structured formats with field names and content. The structured text import works by looking for specified patterns in the text and mapping content that matches these patterns to specified fields in the system.

4.7.1 How it works

If a text file has a consistent structure, then that structure can be read or interpreted by the import component. Text files can be delimited, which means the fields are separated by a certain character (or several characters) i.e. the delimiter. When the component reads the file it knows that all the text between each delimiter is the contents of a field, and by the order of the fields or through a field name line, the fields can be mapped to fields in Konnect eCMS.

For other types of text format one may have a field name followed by the field content, which runs up to the next field name. Field names may be surrounded by certain characters, or there may be a table between the field name and contents, etc. The structured text import functionality uses technologies such as regular expressions to match patterns in the input files.

4.7.2 Import templates

For each different textual import format, a different import template can be created and then selected to import files of the type for which it is defined. Templates are stored as a special type of record in the system and can be created, edited, copied and deleted using the normal system functionality. This makes it easy for the user to create new templates, modify existing ones, etc.

Users do require some technical knowledge to modify the templates.

4.7.3 Importing citation formats

Many different structured formats can be imported including citation formats such as:

- MEDLINE
- BibTeX
- ENDNOTE
- Etc.

See the examples in section 4.7.4.

4.7.4 Examples

Below are some examples of the types of formats that can be handled by the structured text file import. Any textual format which has a comparable pattern to these files can also be handled.

MEDLINE type format

```
UI - 22630360
TI - Rheumatic manifestations of hepatitis C infection.
SO - Curr Rheumatol Rep 2003 05;5(3):200-4
```

```
TA - Curr Rheumatol Rep
VI - 5
...
```

Endnote

```
%0 Journal Article
%A Gettys, Jim
...
%D 1990
%X A technical overview of the X11 functionality. This is an_update of the X10
TOG paper by Scheifler & Gettys.
```

Backslash field indicators

```
\id BF127895\title Text to XML convertors using pattern matching
templates\author Astel, Jack\summary Pattern matching templates provide an
incredibly powerful way of handling
...
```

Non-SGML angled brackets

```
<<type>> Journal Article
<<author>> Gettys, Jim
...
<<date>> 1990
<<overview>> A technical overview of the X11 functionality. This is an update
of the X10 TOG paper by Scheifler & Gettys.
```

4.7.5 Text to XML conversion

For advanced users the imported content can be converted to XML before import, and then further transformed using advanced XML transformations (XSLT). This can be useful for restructuring the imported file, or possibly if the text file contains some embedded text fragments.

4.8 Updating existing data with an import

The standard data import component imports data as new records/classifications, however this functionality re-imports data into an existing set of classifications. This is done by matching a field in the imported content (usually a name or identifier) to a field within the existing system content. If the items match then the relevant content in Konnect eCMS are updated with the data from the import file rather than the data being inserted as new records.

This option allows users to import data into an existing content to retain special features of the content, such as:

- Heading structures
- Links to the existing content
- Cross-references
- Index terms
- Footnotes
- Annotations
- Citations and special references
- Meta data
- Etc.

Using this import functionality the structure of the existing content is maintained and only the text or certain aspects are updated.

This can be used to re-import data that has been exported and then:

- Batch processed
- Cleaned – by address cleaning software for example
- Updated in other systems
- Updated externally
- Etc.

More details to follow.

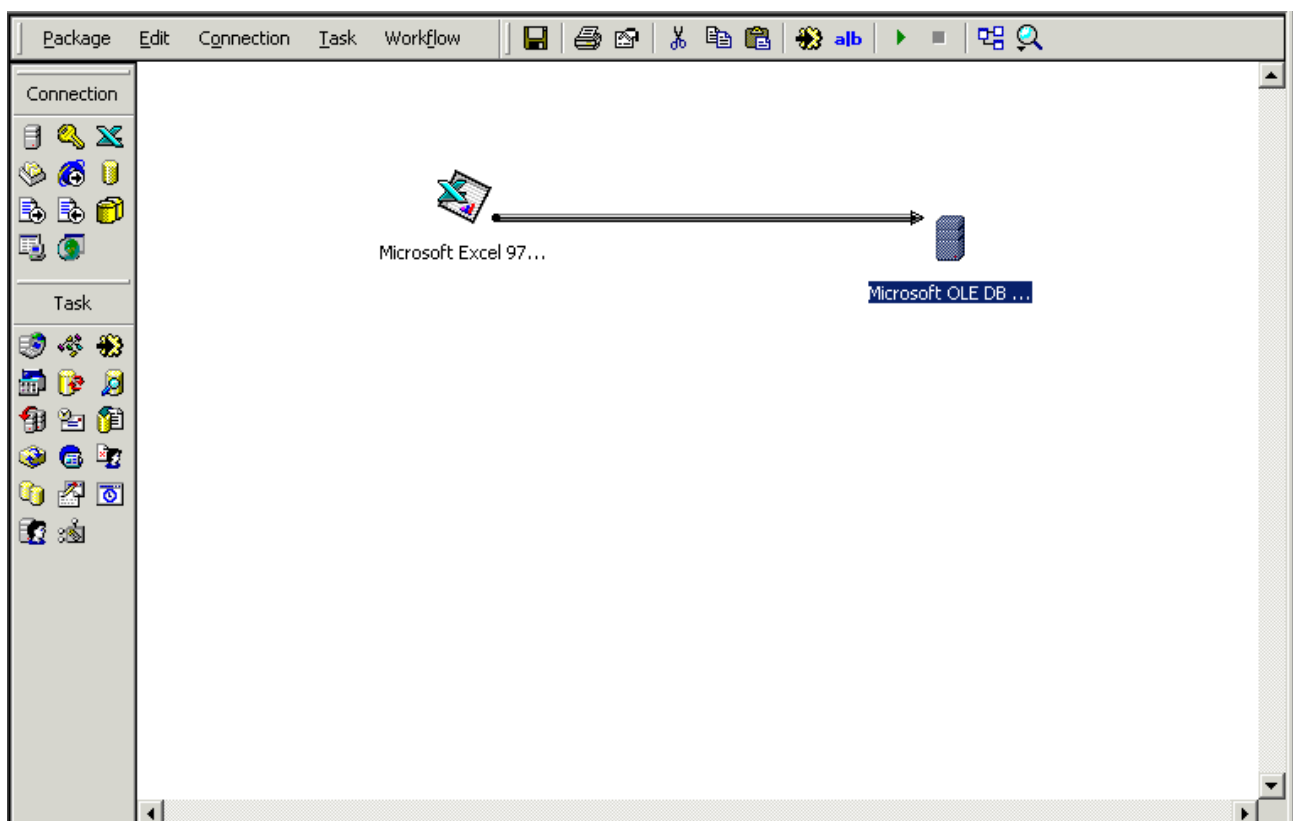
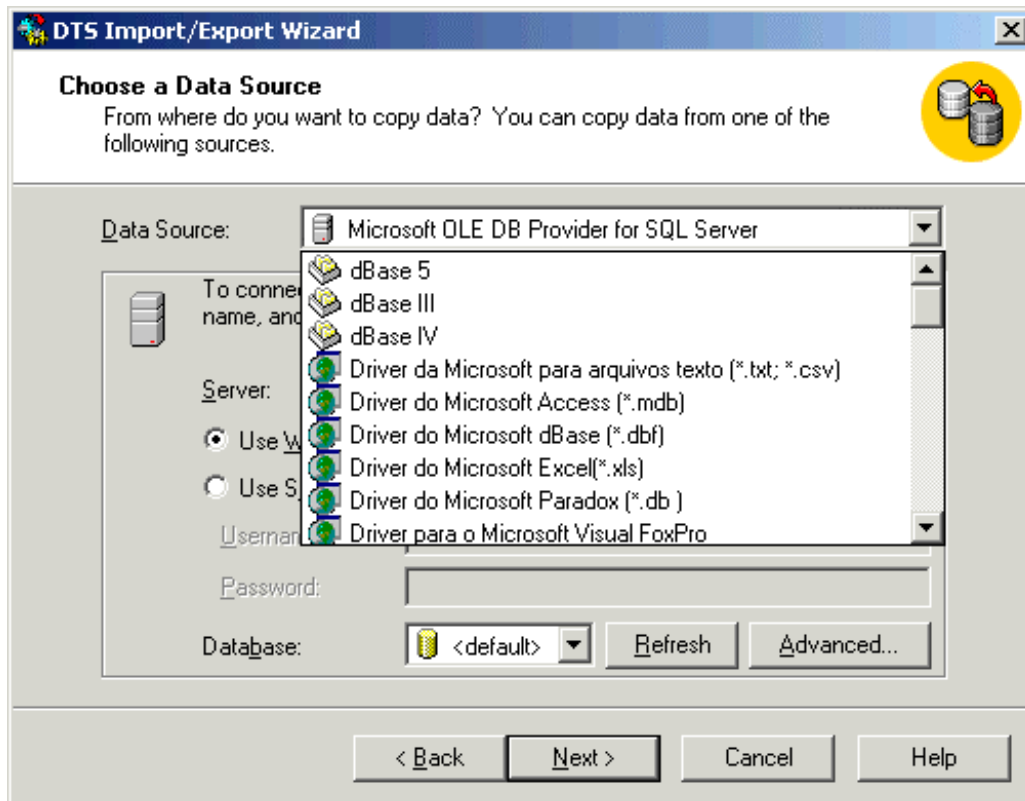
4.9 Import/integration of other databases within the data repository

Konnect Soft have a number of data import libraries which allow import/export of data from other databases and file formats into the content management system. Data from the following applications can be imported:

- CSV and other delimited formats
- dBase (5, III & IV)
- Microsoft Access 6, 95, 97, 2000 & XP
- Microsoft Excel (all versions)
- ODBC data sources
- Oracle
- Other text files
- Paradox
- SQL Server 6.5, 7 & 2000
- Visual FoxPro
- Etc.

Once data is imported into the data repository it benefits from the full system features such as replication, accessibility through the content management interface and being able to be integrated with all other data in the repository.





4.9.1 Periodic import/export

Data can be periodically imported to deliver read-only data into the system, or a bi-directional data flow between systems can be set up. Alternatively the external database can be incorporated and redesigned where there are issues with the existing structure.

4.10 Importing other data formats

Import templates can be configured for:

- PDF
- QuarkXPress
- PageMaker
- Other formats

The combination of the highly relational nature of the data repository and Konnect Soft's wealth of experience in handling different data formats, means that import filters can be configured for any structured format.

Import parsers are configured using our mapping system which reads information specified by the client and imports this into the relevant part of the data repository.

4.10.1 Scheduled imports

Scheduled imports allow data to be automatically imported from other systems. This can bring data from various other specialised applications into the system so that it can be referenced or re-used. However the data is still maintained in the system it is imported from, so users can continue to utilise the benefits of those systems.

4.11 Conversion, validation and reporting

Whenever data is imported a report is generated which provides details of:

- The amount/size of data imported
- The number of records created or modified
- Number of record split, modified or converted
- Number of items ignored
- Any problems/errors with the import
- Suspected duplicates
- Processing time
- Etc.

This allows the user to see exactly what has been imported and verify it against the source data. The system is designed to prevent data loss or errors. If the user suspects that there has been a problem they can delete the imported data set and re-import. Generally speaking all import programs allow the import to be cancelled at any time (and resume functionality can be provided).

For users who want even more detailed information than that provided in the reports this is available in the form of log files, and different levels of logging are available.

4.12 Configuring the data model/incorporating other data models

In some cases clients wish to preserve their own data model as well as utilise the features of the eCMS system, in which case this is accommodated by the system.

More details to follow

4.13 Advanced import functionality

4.13.1 Detecting and filtering duplication on import

See section 7.37.4.

5 XML

5.1 Overview

XML or “eXtensible Markup Language” is a widely used system for defining data formats. It provides a language for defining any type of document structure, or to define a common file format or exchange file format. XML can be used for the task that publishers have traditional utilised SGML for, which is to store content in a output format independent structure.

However, one of the weaknesses of using XML files is that one uses the file system to handle manipulating large amounts of interrelated data. Konnect Soft's system gets around this limitation by combining database technologies with the benefits of XML. Data is stored in the database to utilise all the benefits of relational databases for data storage and management. Within the database, textual content is stored as XML to preserve stylistic, formatting information, system tags (cross-references, index terms, etc.) and meta-data in a structure independent of output format.

The eCMS system has the following XML related features:

- Content is stored in the database using XML within records
- It can import any XML data
- Can deliver/export all content as XML:
 - ⇒ Content can be delivered at the press of a button
 - ⇒ XSLT can be used in delivery templates to transform delivered data
 - ⇒ Web content can be delivered as XML and converted to HTML by XSLT templates
- The publisher can licence their data to third parties who can utilise data delivered as XML for display on their own site/system
- Offers Application Programming Interfaces (APIs) which can deliver XML to third party or other applications

5.2 XSLT

5.2.1 Transforming data

More details to follow

5.3 Other XML related features in this document

Any content in the system can be delivered as XML at the click of a button. Different style sheets can be applied to this data to present it for different purposes. See also section 7.31.

XML related technologies such as XSLT can be used to transform the data for web delivery, typesetters and exports to third parties.

For details on how XML data can be exported from the system for use by typesetters and other organisations see section 17.1.2.

For details on importing XML files see section 4.6.

For details of a special component that supports the use of an external XML editor to edit parts of the content see section 7.31.

More details to follow

6 DELIVERING CONTENT

6.1 Overview

The delivery requirements of publishers mostly require a huge effort by staff in preparing data for publication - effort that needs to be repeated frequently (and ideally flawlessly) for each output format, thereby creating a significant drain on organisational resources. Accordingly, efficiencies introduced here have a major impact on productivity.

Konnect Soft have addressed this issue with our Electronic Content Management System which is designed to allow data to be easily delivered in a variety of formats. This is achieved by keeping the content independent of the output format in a neutral expandable structure. Also by using a template and component-orientated approach, this allows data to be generated in different output formats without the need for manual intervention by editorial staff. The number and type of output formats can be increased or changed by the client and as their needs alter.

6.2 Output formats

Konnect Soft's system provides support for the following output formats.

6.2.1 Hardcopy

Hardcopy products can be produced **directly** from the data repository. A system of filters provides output in pre-defined:

- DTP formats (QuarkXPress, Adobe InDesign, Ventura, etc.)
- Page make-up/typesetting system formats
- XML

The hardcopy production system is configured with a template for each new publication. All records in the publication can then be delivered from the system which generates output in the necessary format and "page make-up ready" (for proofing and supplying to the printers).

In this way the publisher can carry out their own proofing and production of print-ready PDFs.

6.2.2 Web site

The web site typically makes direct use of the database system which is periodically synchronised with the local versions (see section 7.28). The web site can potentially access/display all data in the databases, but the client has precise control of what data appears on the web site and is available to which users. This system is automated and completely eliminates the need for staff to manage uploading files to keep their web site up to date (this is handled automatically behind the scenes by the system).

Functions performed by the web site are detailed in section 11.14.

6.2.3 CD-ROM

Data filters for CD-ROM or diskette based publications can be supplied, including for clients utilising Konnect Soft's own Konnect EPS - Electronic Publishing Solution search and retrieval software system.

Konnect EPS offers the advantages of high performance full-text retrieval software designed specifically for the needs of information publishers (further details and Konnect EPS Product Description available on request).

6.2.4 XML

The content management system fully supports XML. XML with different schemas can be generated with data exported conforming to all XML requirements (i.e. in technical terms exported files are valid XML documents).

The system allows XML exports to be generated containing all required support for typesetting/hardcopy production.

Accordingly XML can be produced in any DTD/Schema desired and different XML technologies can be used, including:

- XSLT
- XSL-FO
- DocBook DTD
- XHTML
- Etc.

6.2.5 Other output formats

These features can be provided on request.

6.2.5.1 Mailing lists

Data filters enable mailing list functionality to be provided either to third parties or delivered via the client's own web site. (Please enquire for further details of mailing list functionality available from Konnect Soft.) See section 15.

6.2.5.2 Custom exports

The system allows users to export parts of the data set for one-off or more regular exports to provide data to third party organisations (e.g. when data is sold or otherwise supplied). If the third party wishes to use part of the client's data set supplied in certain format, system users can create a specific export to provide this data. See also section 6.2.5.3.

6.2.5.3 Data feeds

Where data is being provided to other parties (for example data licensed to a third party web site), the data is filtered to provide the relevant "feed" either in real time or on a periodic basis.

The publisher has the ability to specify custom slices of data, which can be extracted and exported.

See section 12.11.

6.2.5.4 Electronic bulletins/alerts/newsletters

Another form of content delivery is the automatic production of e-mail bulletins sent to end users which subscribe to e-mail lists. As the content management uses relational database technology, users can subscribe to bulletins/alerts on the different areas of content that they are interested in. Periodically bulletin e-mails are then automatically generated and according to schedule sent to subscribers (including, as required, editorial content).

6.2.5.5 Citation formats

Data can be delivered in citation formats (which are often text formats with field names) such as:

- MEDLARS
- ENDNOTE
- Etc

For use with/import into bibliographic software.

6.2.5.6 Other file formats

Data can potentially be exported in the following formats:

- QuarkXPress
- PageMaker
- Word
- PDF
- SQML
- Others

6.3 The delivery wizard

Content delivery wizard

Use this wizard to produce publications for delivery to your customers. The delivery wizard allows you to publish information in a variety of output formats including hardcopy (for typesetting or "page make-up" for printing), XML, web site, CD-ROM (data files for a CD-ROM), e-mail bulletins, delimited (e.g. CSV) and other types of data.

The first step is to choose which publication you wish to deliver (this will already be selected if you have chosen it from the main screen) and then which output format you require.

Selected item European Psychology Yearbook

Demonstration version - not all functionality enabled

☐ Hardcopy
 ☐ Web site
 ☐ XML
 ☐ CD-ROM

☐ Loose leaf
 ☐ E-bulletin
 ☐ PDA
 ☐ SMS

☐ Delimited
 ☒ PDF
 ☒ Use Template

☐ Other

Template: Clowes XML export

Enter file name: European Psychology Yearbook - Clowes XML export - 16 7 2003.xml

More details to follow.

6.4 Template controlled system

Templates are applied to different publications and different output formats to determine the way the data appears in different publications. There may be several templates for the web that specify how the data looks on different areas of the site, with separate templates for hardcopy export, etc. Templates are used to control all data that is exported to files from the system, and they can be modified to change the structure/appearance of data exported, fields included, etc., without the need to change the data or reconfigure the system.

6.4.1 Publisher control of templates

Editors can access the templates used to export data and can make changes without the need for typesetter intervention. (Templates do incorporate some relatively complex database access code, but this can be modified by Konnect Soft or the client's own IT staff.) This mechanism gives publishers control of the export format.

The same template can be used for several publications if the editors produce them in the same styles, or slightly modified templates can be used for each to change the style or structure. The data export component and templates allow publishers to export content into any ASCII text-based format. See section 17.1.3.

6.4.2 XSLT

XSLT can be used in delivery templates to transform the delivered content as desired. This is especially useful when users want to deliver into multiple XML formats, as the same base template can be used with different XSLT transformations.

6.4.3 Advanced field selection control

This control allows users to select which fields are included in the delivery template in a field chooser interface. The fields selected are saved into the delivery template definition for use within the template (only selected fields can appear in the output).

6.4.4 Lists of replacements

Users can define lists of replacements for items in the content. This can be used to translate abbreviations into full terms, or to compact longer phrases into abbreviations. It can also be used as a “last stop” global replacement for problems in the content, although it is better to use the database global search and replace component for this (see section 7.15).

6.4.5 Technical details on delivery templates

Delivery templates consist of the following items:

- Optional SQL statement
- Core eCMS template section:
 - ⇒ Headers
 - ⇒ Footers
 - ⇒ Structure per record
 - ⇒ Replacements/filters
 - ⇒ Conditional statements
 - ⇒ Etc.
- XSLT
- Links to other external components
- Post processors

6.4.5.1 Optional SQL statement

Delivery can contain an optional section containing a SQL statement or stored procedure, which determines which content is delivered. If this section is not specified, then the selection of content is passed to the delivery component dynamically by the system when the delivery is run.

6.4.5.2 Core eCMS template section

This is the core template section that specifies how the database content is mapped to text/markup within a file. It specifies which database fields are included in the output and what markup appears around each field or group of fields. It can also contain a lot of powerful functionality such as replacements for specified text, group for delivered items, headers and footers, etc.

The core template section can be configured to produce all types of output including:

- SGML
- XML
- HTML
- Folio Views - Folio flat file format
- RTF
- QuarkXPress Xtags
- CSV or other delimited format
- And many other formats...

In many cases, the core eCMS template section is all that is needed. However if the user is delivering into XML or SGML formats, it is often useful to define the delivery using an XSLT transformation.

6.4.5.3 XSLT transformations

The XSLT transformation section is optional and can only be used if the eCMS template section produces valid XML. The default configuration for the eCMS template section automatically produces valid XML, so XSLT can be used, unless the user changes the core template section to produce a non-XML format (such as CSV). The XSLT can contain functionality implemented in scripting languages, such as VBScript, to provide even more powerful functionality for performing complex operations on the data as it is delivered.

6.4.5.4 Links to other external components

The template can contain links to external components which can be called to process the content as it is delivered. For example an external component that changes the colour depth of images linked to the content could be called whenever images are processed. This mechanism allows users to incorporate powerful third party functionality into the delivery process.

6.4.5.5 Post processors

External applications can be automatically called on the completion of delivery to further process the delivered content.

6.5 Advanced delivery of external files

External objects are files which are stored in the system (or for which a link or reference to the file is stored) along with meta data which is attached to the file (see section 7.30), images are an example of a special type of external file. When content is delivered external files can be converted by running a converter for files of specific formats. In the system users can define which converters are associated with different file formats.

More details to follow.

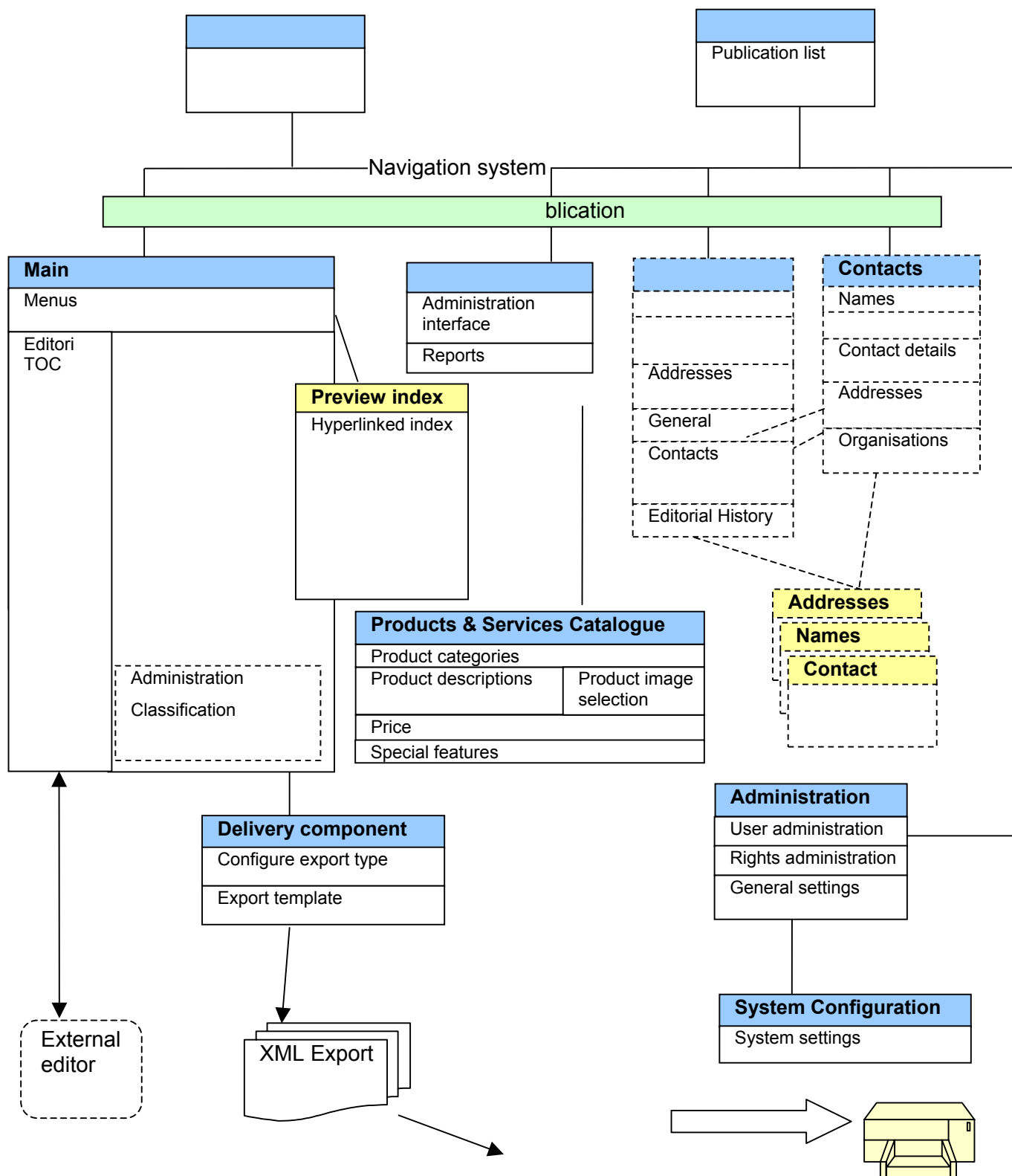
7 EDITORIAL SYSTEM

Konnect Soft's editorial system is specifically designed to allow all client users (editors, contributors, etc.) to jump in and get to work immediately on the data repository.

The system uses a web browser to access the data that is intuitive and presented in a familiar and user-friendly interface, which means that only a minimum of training or familiarisation is required. Users get all the power of relational database technology and XML with an interface of the level of "Office like" applications – this allows users without advanced technical knowledge or training to leverage the power of these technologies.

Traditionally the problem with databases and is that the interfaces and systems have been difficult to use and fragmented, and required a large amount of IT expertise to run and manage. Konnect eCMS aims to eliminate these problems by allowing users with the business knowledge to use these technologies to produce, manage and deliver information.

7.1 Interface map



7.2 Browser based interface

The editorial system incorporates web server technologies and the user interface is browser based. Most functionality is implemented on the server, which users access through their browser.

The advantages of Konnect Soft's choice of browser based functionality include:

- Its ubiquitousness
- Users are usually familiar with the basic web browser functionality
- Powerful functionality
- Can be distributed easily
- Enables remote editing
- Can be easily integrated with other software
- Good client server model, allows processing to be performed on the server:
 - ⇒ When a user performs an operation which effects a large amount of data in the system, the processing is performed on the server rather than using the limited resources of the client computer
- Better scalability - because the server performs the processing, more resources only need to be added to the server rather than to all user ("client") machines

This has the benefit that anyone with web access and a browser can potentially use the system, thereby eliminating the need to install complex software on each users machine. Users also have the ability to bookmark areas of the interface to go directly to the part of the interface they use most often.

7.3 User rights/permissions

The content management system is designed so that the rights to perform any action, and the ability to access any data within the editorial system can be controlled by the administrator with the access control mechanism (see section 8). The administrator simply needs to go to the permission control page and select the function they want to control (such as create new records) and select which users have permissions to perform this action. Also they can choose publications and select which users have rights to access different publications.

This mechanism allows the system to provide different levels of functionality to different users. It allows the system to be configured for use by external editors, contributors or part time staff who may only be authorised to perform only more limited actions (to support proof reading, indexing, commenting data, etc.).

The remote access capabilities of the system combined with this user rights functionality allow staff to continue working no matter what their geography location.

7.4 Editorial table of contents / taxonomy editor

This extremely powerful component allows users to explore, navigate, edit and manage the structure of all their data in the system. It provides a visual table of contents representation of the different classification and relationships between content. The editorial table of contents (TOC) tree view is a taxonomy editor which allows users to control:

- Taxonomies
- Classifications
- Publications
- Records
- Headings
- Indexes

.... using a graphical table of contents interface.

7.4.1 Taxonomies

The taxonomy features allow publishers to easily build and maintain their own taxonomies (systems of classifications) or re-use existing ones, and apply them to data within the Electronic Content Management System. Some examples of taxonomies are those maintained by Yahoo (www.yahoo.com) and Open Directory (<http://dmoz.org/>) which are used, to classify web sites (and information within web sites).

A publisher can create different taxonomies, using their own classifications, in the same way that they create publications. Using the system to create a taxonomy is like creating a publication where the different classifications/areas are analogous to headings in a publication. The taxonomies can be as detailed or as simple as required.

With Konnect Soft's system, taxonomies can be used to classify records, headings or entire sections of a publication. Editors can choose existing terms from their taxonomy, or add terms to it while they are editing in order to classify data within the system. Classifications can be changed and each piece of data in the system can belong to single or multiple classifications, and the classifications used can be in multiple taxonomies.

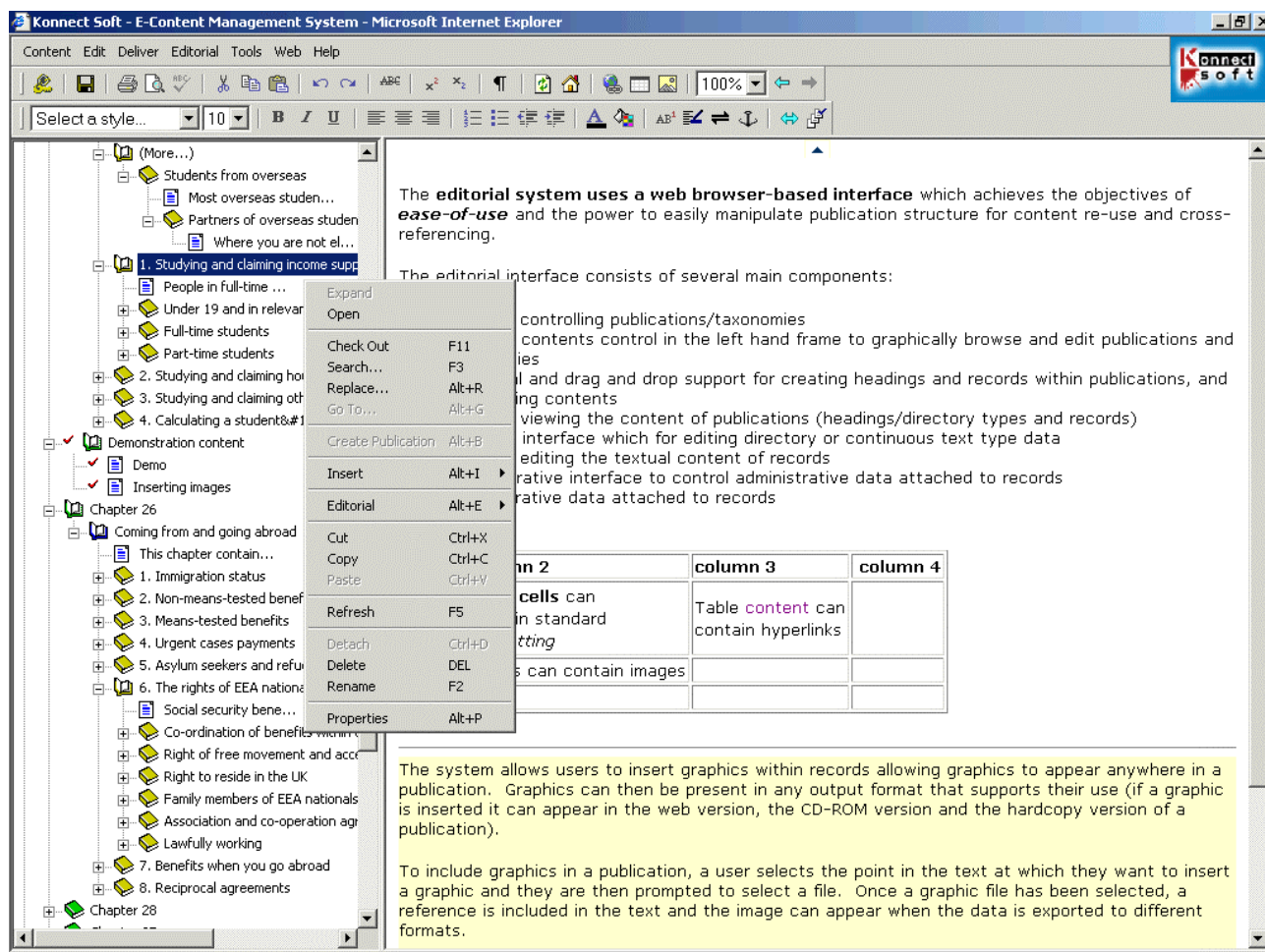
7.4.2 Standard operations

The TOC supports cut and paste, drag and drop, and right click functionality (similar to Windows Explorer), providing editors with very powerful functionality to manipulate publications, headings and records.

Operations that can be performed by this component include:

- Ordering/moving
- Searching (see section 7.6.9)
- Creating new records, headings or classifications
- Re-using content in different publications
- Creating new publications or taxonomies
- Deleting
- Renaming
- Selecting records to edit
- Etc.

Browser based interface



7.4.3 Headings

The editorial table of contents (TOC) allows editors to control how headings within a publication are structured (similar to the Microsoft Word outline view and document map interface functionality, but for all data in the repository, **not** just a single document).

Using the editorial TOC a user can:

- Insert a new heading at any point in the existing publication (by selecting the point in the publication to insert the heading and choosing the new heading option)
 - ⇒ Headings can be inserted below existing headings to create a subordinate heading
 - ⇒ Existing headings can be demoted to appear below other headings
 - ⇒ Lower level headings can be promoted to appear as a higher lever heading
- Rename a heading by clicking on it and selecting the rename option (like renaming a directory in Windows Explorer)
- Click and drag headings to move/change their order within a publication
- Click and drag a heading to move it between publications
- Delete a heading
- Copy headings between publications

This extremely powerful functionality allows editors to very quickly:

- Restructure publications
- Add new material to publications
- Create new publications.

If a new publication is being proposed, editors can, if they wish, first create the heading structure without immediately populating it with data. This "skeleton" publication can then, for example, be filled with data from existing publications or with new material written by authors (or any combination of the two).

When the publisher wishes to produce printed material, deliver data to a web site or to a CD-ROM, then it is a simple matter of ensuring the heading structure is correct and then selecting the export option. Data can be exported into a format that can be used for typesetting, and when opened within the typesetting application, the heading and general publication structure that the editors have created using this interface is reflected in the output.

7.4.4 Directory content

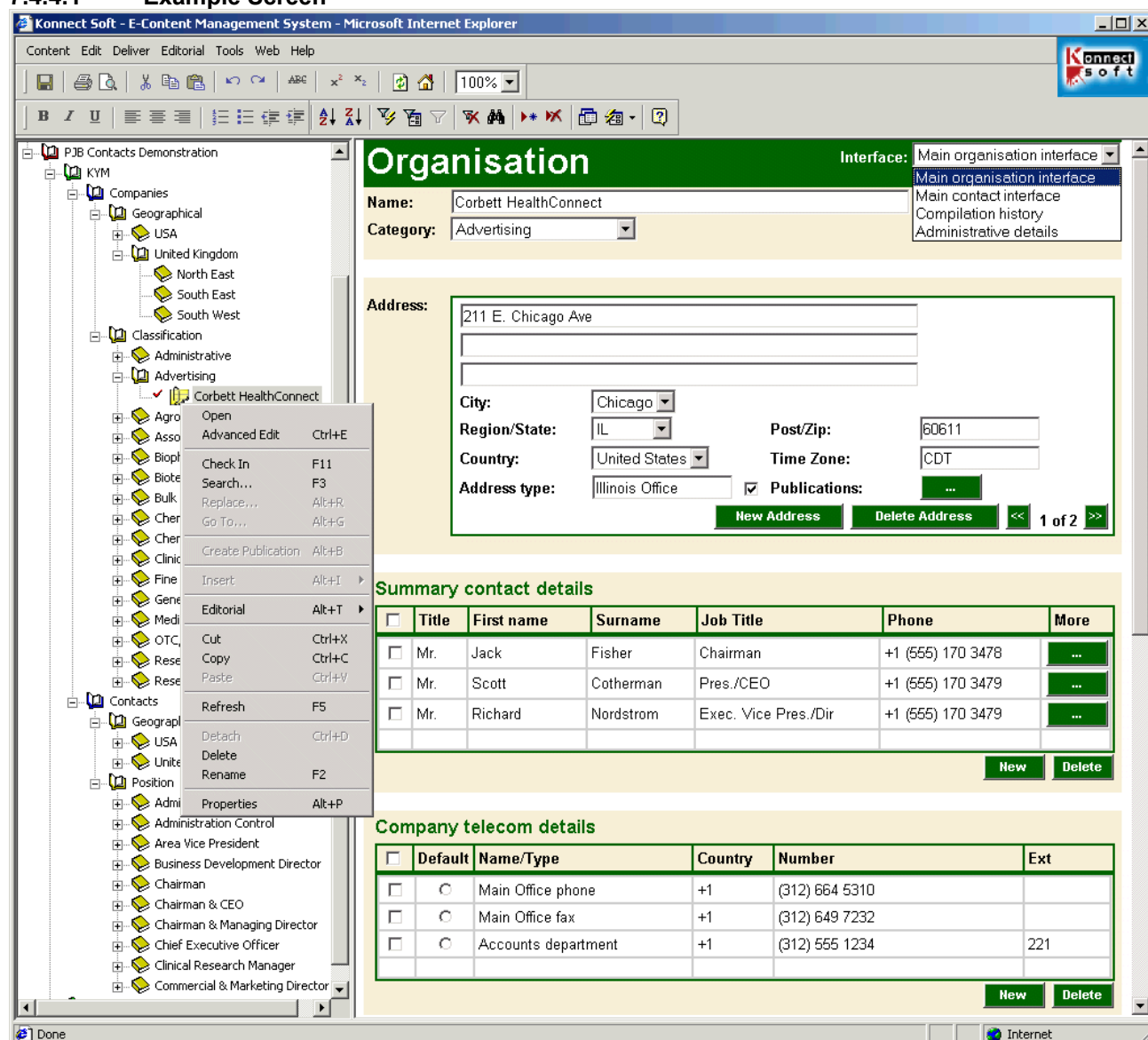
The editorial TOC can manage textual records and headings, and can be used to browse and edit directory model data. Directory publications appear in the editorial TOC along with all textual publications but when directories records are selected, the default editorial form/interface configured for the directory is opened in the right hand side of the interface (rather than for "continuous text", the continuous display of textual data).

Directories can be configured to display in the editorial TOC in different ways - common ways of viewing and managing the data are:

- Taxonomies, indexes or classification - one may browse contacts by job title for example
- Hierarchical regional data such as country, region/state, city etc., where each level expands to show the regions and records it contains
- Alphabetical ordering by name
- Other special criteria which can be configured

The editorial TOC provides an excellent means of navigation the content as well as the ability to build and refine taxonomies. It can be used to select sets of records to process (search, modify, etc.).

7.4.4.1 Example Screen



7.4.5 Re-use of content/records

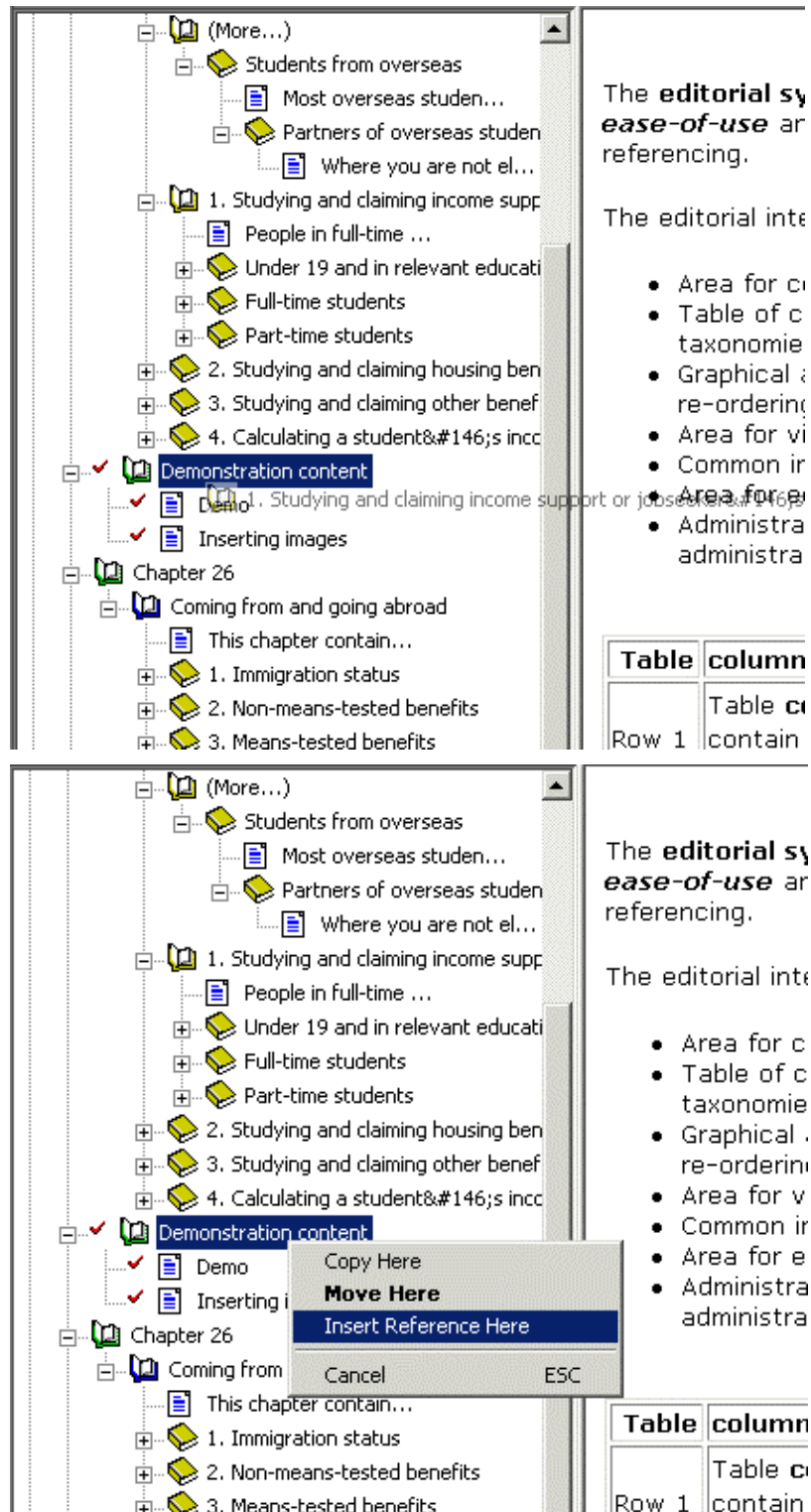
A crucial issue for publishers is the ability to re-use content in multiple publications. The ability to easily re-use content and control re-use is one of the main goals of Konnect Soft's Electronic Content Management System. This is facilitated by using the editorial TOC control - the best interface for controlling re-use of content.

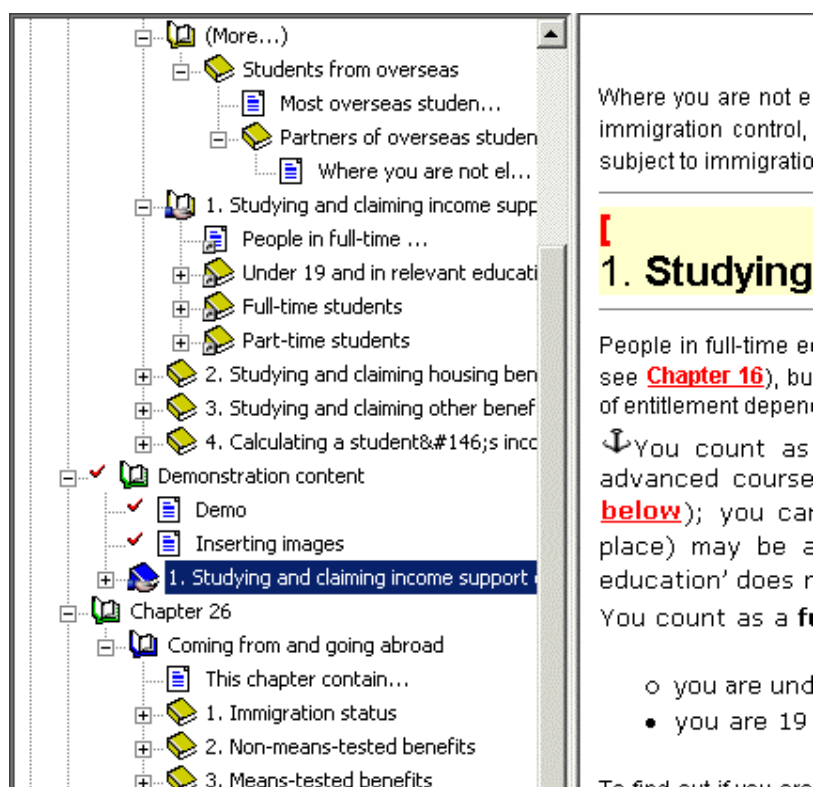
This system allows:

- Re-use of records in different publications/classifications
- Re-use of records in different places in the same publication/classifications (if the user has a requirement to repeat the same content)
- Re-use of headings/categories and all content contains therein, in multiple publications
- Records to be unlinked so they are no longer re-used

For technical details on how the system allows records to be re-used see section 28.

Using right click and drag functionality to re-use content





7.4.5.1 Inserting records into multiple publications

To re-use a record an editor needs only to select a record from an existing publication using the TOC and drag it into another publication in which it is also to appear, and choose the re-use this record option. The record marker then appears in a different style and colour in the editorial TOC to notify the user that it is used in multiple places.

7.4.5.2 Re-using entire sections/categories

As well as individual records, entire sections, categories or headings can be re-used in multiple publications. If a user selects a heading, then it can be dragged into another publication and all content is also re-used in the publication that the data is inserted into.

7.4.5.3 Change once, update everywhere

When a record is re-used it only needs to be changed once and it then changes in all the publications that it appears in. This is due to the fact that there is actually only one occurrence of the record, but one is telling the system that one wishes to use it in multiple places (i.e. these are relational linkages).

7.4.5.4 Customising re-used data for different publications

Where an editor wants to re-use data from an existing publication, but also wants to add extra information specific to the new publication, then this can be done by creating another record (to contain the extra information), above or below the record being re-used, and then inserting the content specific to the new publication.

Where an editor wants to re-use data from an existing publication, but also wants to add extra information specific to the new publication, then this can be done by creating another record (to contain the extra information), above or below the record being re-used, and then inserting the new content.

7.4.5.5 Viewing and managing all locations in which a item is used

The system also has a view of data where the user can view and manage all the locations in which an item is used. Items can be deleted, detached (unlinked so they become copies), and navigated (clicking on one of the links to a record takes the user to that version of the record in the system).

7.4.6 Copying/duplicating records

Editors may wish to duplicate a record or section in multiple places, but not actually re-use the same content (so when the original changes the copy does not change). For example, this may be done because they do not want the content to change in the publication they are inserting into when the original record changes (perhaps they want reference to a historical piece of legislation rather than having the amended version).

This facility is also used when editors want to duplicate existing content and then modify it or use it as a starting point for writing new content (similar to using the **Save as** feature in Microsoft Word and then modify the document to create a new document).

This is performed simply by selecting the record or heading to copy, dragging it to the new location and choosing the copy option.

7.4.7 Ordering

Users can click and drag records and headings to change their order. Items can be moved within a heading, between headings or even between publications.

For example a user may want to move a section from its position as the third section in a chapter and make it appear as the first entry in that chapter. Using the editorial TOC the editor clicks on the section and drags it to the appropriate position.

Click and drag re-ordering can be used at will to re-order headings and records within headings.

7.4.8 Multiple selection

The editorial TOC control allows users to select multiple headings or records and use the interactive editorial TOC functionality to manipulate these records. Users can use CTRL/SHIFT-left click selection functionality to select individual items, blocks of items or a combination of both. Once selected, users can use the standard TOC functionality to perform operations such as:

- Search selected items
- Moving/ordering or copying selected items
- Re-using selected items
- Deleting selected items
- Applying changes to selected items

7.4.9 Advanced publications features

The editorial TOC can be configured to allow editors to perform some very powerful operations on data. Using advanced publications features users can:

- Duplicate entire publications
- Merge entire publications

For example a user may have a publication which is delivered to users as a book and decide they want to create a booklet which contains parts of the book content. The editor could use the duplicate publication function to duplicate their book, rename the new publication to the name of the booklet. Then it might be a simple matter of remove unwanted areas from the publication, adding material specific to the booklet, and the booklet is ready to print.

When a user selects the duplicate option they can choose to either create a copy of the entire publication where no content is linked, or to create a new publication which contains exactly the same content all linked to the original publication. If the first option (copy) is selected then changes to the duplicated publication do not effect the original publication, however if the second option (link) is selected then any changes to the content will affect the original publication because both publications are using the same content.

Merging publications involves selecting multiple publications in the editorial TOC and choosing merge. The user is asked for a new name and all the publications selected are combined into a single new publication, containing all the records and headings from the selected publications, with the new name specified.

7.4.10 Example of possible use of the editorial TOC feature

If an editor decides that they want to manage training packs within the content management system, one can, for example:

- 1 Click on the top level in the editorial TOC
- 2 Choose create a new publication
- 3 Name the publication “Training Materials”
- 4 Right click on their new publication and choose insert heading
- 5 Name the new heading “Training Packs”
- 6 Right click on “Training Packs” and choose insert heading
- 7 Name the heading “Content Management System Training”
- 8 The contents, for example, of Word documents can be easily cut and pasted into this area
- 9 An editor may want to insert section 11 from “Using an Internet Management System” which is already present in the system into this training pack
- 10 The editor would click and drag the content from its current publication into “Content Management System Training” and choose re-use
- 11 Now the content is linked and when an editor updates section 11 the changes will automatically be reflected in the training pack

7.5 Advanced taxonomy features

7.5.1 Overview of taxonomy specific features

The advanced taxonomy features take taxonomies to a higher level of sophistication supporting interlinked taxonomies with synonymous and meta data.

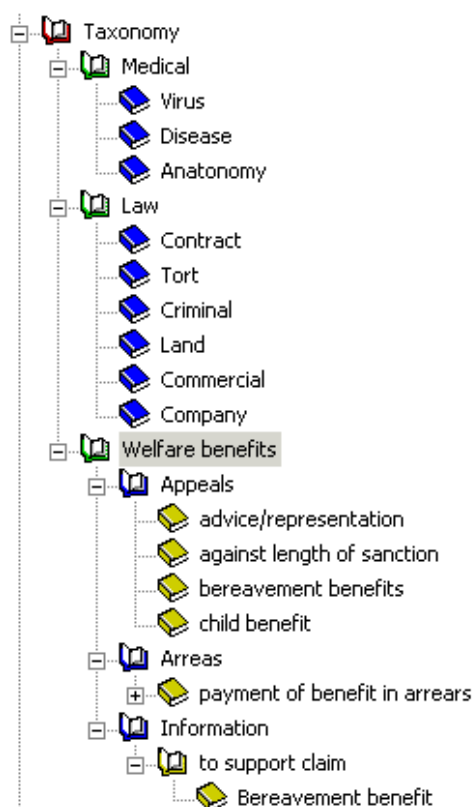
With this functionality a single term or classification can be present in several taxonomies and the user can switch between the different taxonomies that a term is present in. For example the term **Dengue Fever** may be present in a:

- Medical taxonomy under: Virus - **Flavivirus – Dengue Fever**
- Travel taxonomy under: **Medical - Sickness - Tropical – Dengue**
- Town planning taxonomy under: **Sickness - Virus – Mosquito transmitted – Dengue**

The user can create different taxonomies and then insert links between the related terms.

The taxonomy component can be used to create and manage indexes for publications. It can also be used to manage thesauruses and other databases of synonyms. Taxonomies can be delivered to create indexes in a hardcopy publication, or can be viewed in a tree structure or a drill-down link structure on the end user web site.

Taxonomies are fully searchable utilising powerful mechanism functionality that allows editors to easily locate terms for modification or classification purposes.



7.5.2 Advanced taxonomy features

7.5.2.1 Multiple language features

Each term in a taxonomy can have multiple translations. Users can switch between different language views of a taxonomy and add and modify translations as required.

7.5.2.2 Algorithm for taxonomy navigation

Terms in a taxonomy may or may not be hierarchically ordered. Non-hierarchical terms are identified as non-descriptors (ND). A designated field within the taxonomy database model identifies this. For each non-descriptor there is one or more references to a descriptor (DE), which has a hierarchical structure.

7.5.3 Taxonomy Editor

Using the tree or TOC control (see section 7.4), editors build up taxonomies inserting, editing or deleting terms. Sub-trees may be moved, or assigned to other terms anywhere in the hierarchy. If the rights control system is used to manage this component, publishers can then control who can add, edit and delete terms within different taxonomies (e.g. giving senior editors the right to control taxonomy structure and other editors rights to just add terms).

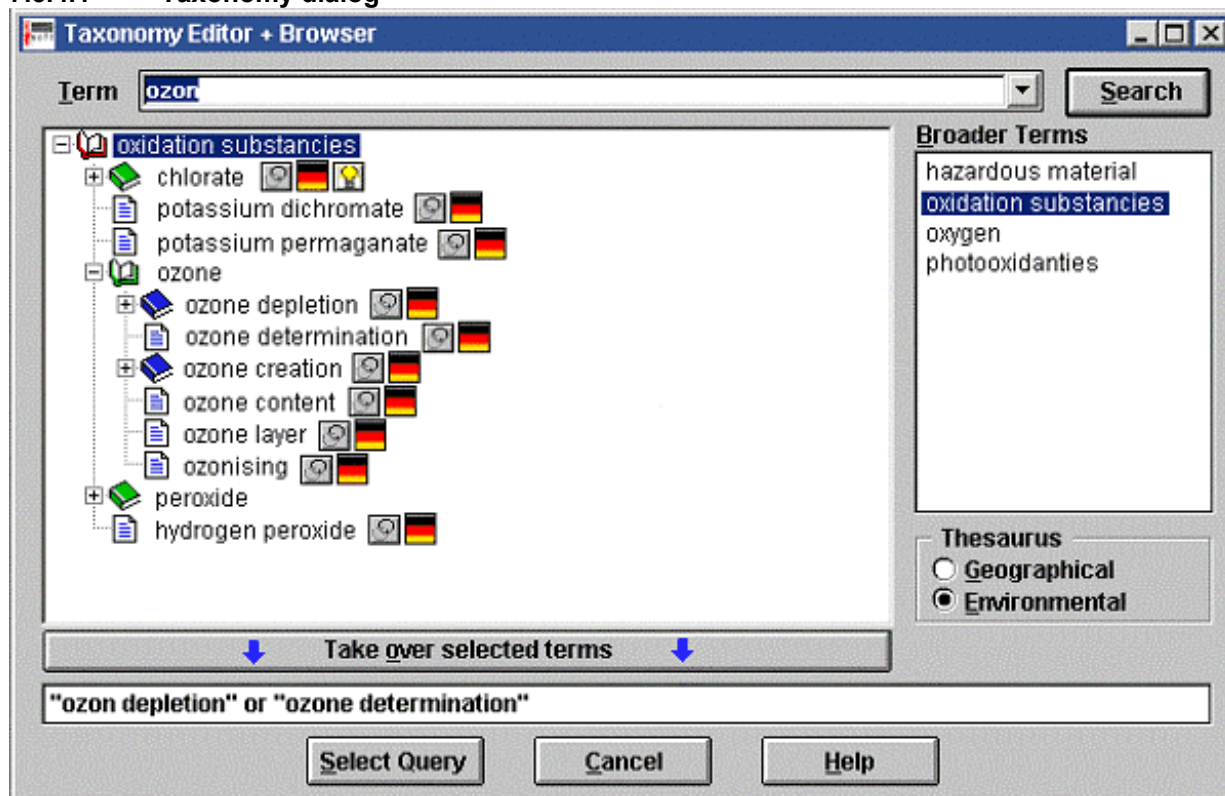
The following information is stored with the taxonomy terms:

- Release status e.g. to approve, approved, released
- Sort as sort string under which the term should be sorted
- Broader terms references to broader terms
- Narrow terms references to narrow terms
- Synonyms synonym words, full-text index
- Inversions **see** cross references
- Related terms **see also** cross references
- Created name, date, notes
- Updated name, date, notes
- Approved name, date, notes

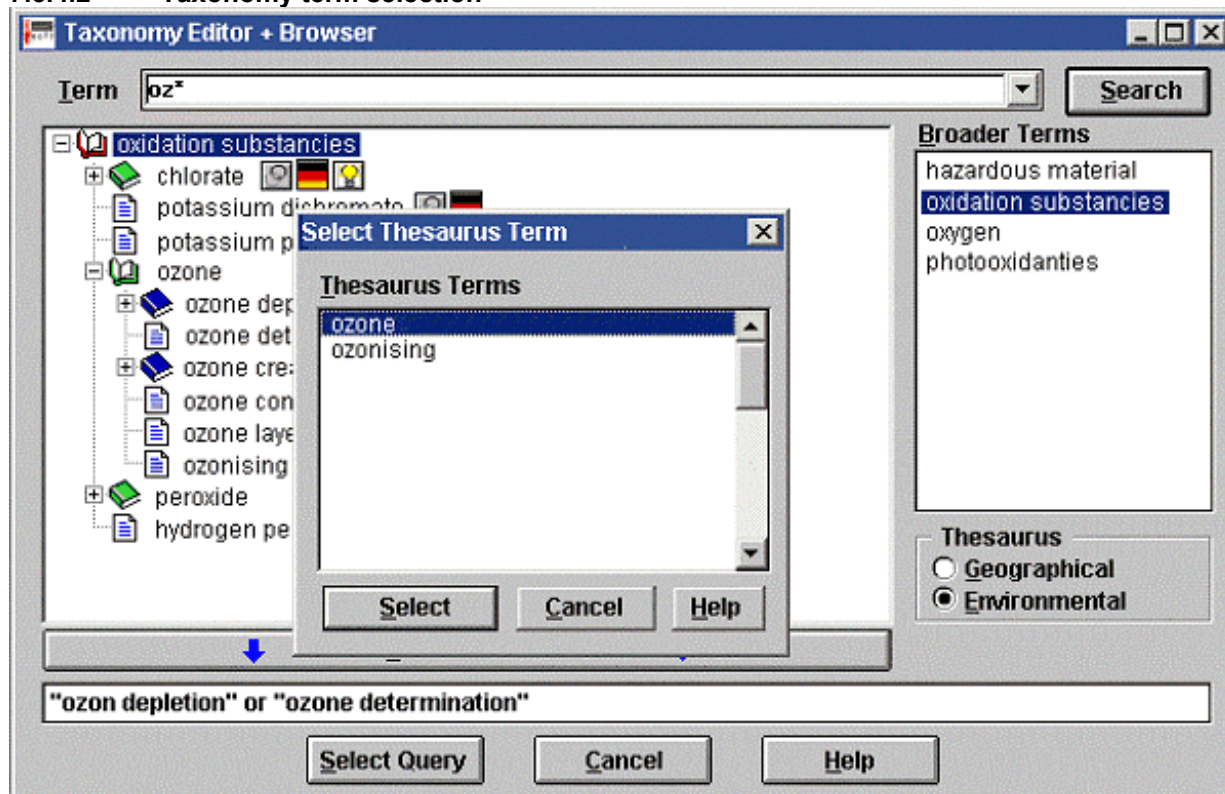
7.5.4 User interface – searching the taxonomy

The example below shows the advanced taxonomy searching system which allows editors to quickly and easily locate terms within deep, very detailed taxonomies that can contain thousands of terms. The screen shots below show the taxonomy editor/editorial TOC integrated into a Windows application interface, however the functionality is the same for web applications.

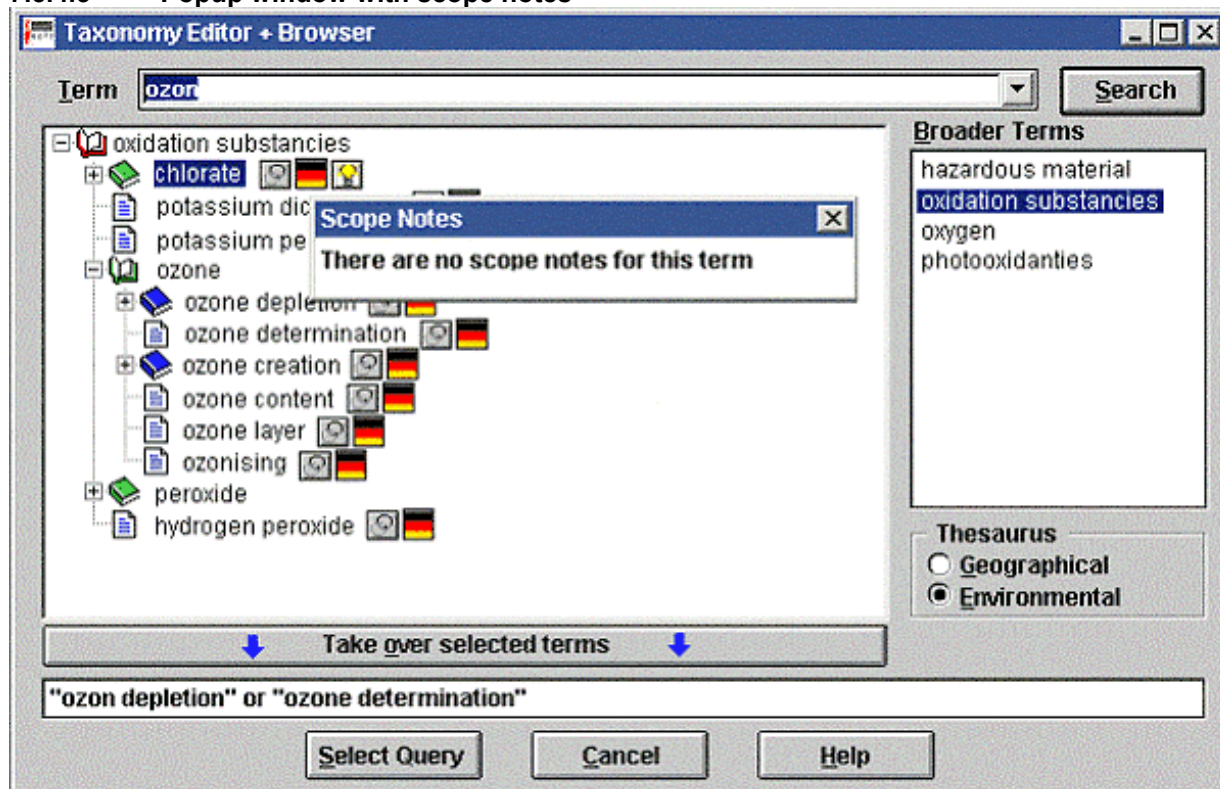
7.5.4.1 Taxonomy dialog



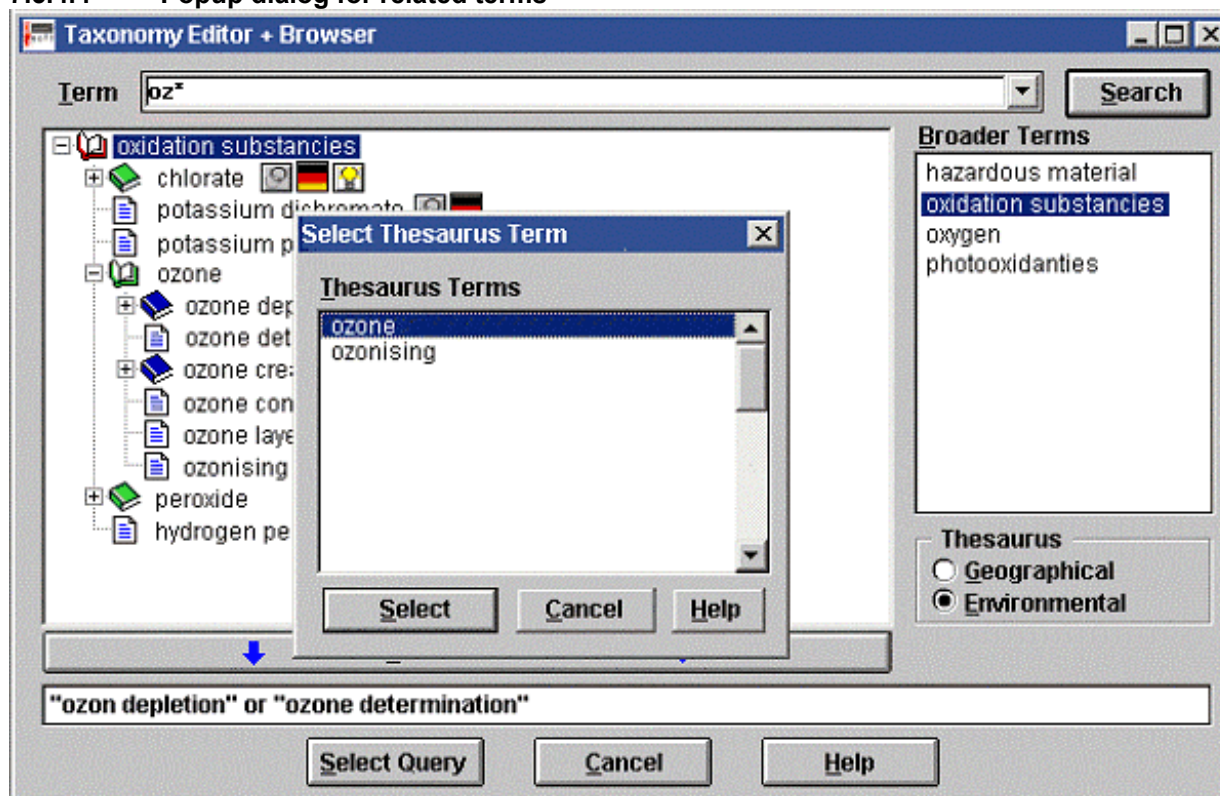
7.5.4.2 Taxonomy term selection



7.5.4.3 Popup window with scope notes



7.5.4.4 Popup dialog for related terms



7.5.4.5 End user interface

When the taxonomy dialog opens, a term actually entered in search is taken over to the search field in the taxonomy window.

A taxonomy term is represented with its broader and narrow terms. Buttons displayed with a term are - scope notes, related terms or the translation. Clicking on one of these buttons displays the associated information in a popup window.

Terms can be selected to form a query and a query can be run from the search form. To the right of the taxonomy tree is a list box of all broader terms which allow switching between the several broader terms.

Below that the actually selected taxonomy is checked. If a term appears in one taxonomy only, then the other taxonomy button is disabled. If a term appears in multiple taxonomies, then both taxonomy buttons are active and an end user may switch between the two.

A taxonomy dialog consists of the following elements:

- Search field “Term”: A search term can be entered here. A term can be left- or right-truncated. A history of entered terms can be opened in a combo box (to the right of the search field) so that earlier entered terms can be re-selected. By default this search field receives the search term from the search form when the taxonomy dialog opens.
- Button “Search”: A term is searched. In the case of the search result consisting of one hit, the corresponding taxonomy tree will be displayed. In the case of more than one hit (i.e. truncated searches or DE descriptors) a dialog will be displayed to select the desired term.
- List box for tree presentation: The hierarchical tree is displayed here. Initially, three levels are displayed:
 - ⇒ Broader term of the search term
 - ⇒ The search term
 - ⇒ The narrow terms of the search termIf there is no broader term, then the term is displayed as the root of the tree.
- The list is horizontally and vertically scrollable. The scroll bars are displayed if required. A double click on a tree node expands or collapses the corresponding sub-tree.
- Up to three small buttons may be displayed following a term:
 - ⇒ ☐ Scope notes: A small popup window displays the scope notes of a term.
 - ⇒ ☐ Related terms: A small popup window displays related terms. A term can be selected here to be taken over to search query (to be search via the search form).
 - ⇒  Translations of the term (the example shows German configured as the primary translation language). Translations are displayed in a small popup window. The preferred translation appears first.
- List box “Broader terms”: The broader terms of the currently selected term are selected by default.
- Button “Take over selected terms”: A search query is built from terms which are selected in the taxonomy tree. The search query appears in the search query field at the bottom of the taxonomy dialog.
- Search query display field: This field shows the query built from selected terms - from the taxonomy tree or related terms. Multiple selected terms can be selected at once and are combined with the Boolean OR operator. Terms which are taken over subsequently are combined with the Boolean AND operator.
- Button “Select Query”: The search query is taken over to the currently active search form.
- Button “Cancel”: Taxonomy dialog closes and the search query is not taken over to the currently active search form.
- Button “Help”: Opens the online help for taxonomy.

7.5.5 Advanced taxonomy import

There is a vast range of existing taxonomy data that a publisher may want to import:

- The taxonomy import process allows users to import a taxonomy from external files
- XML format is often use for the taxonomy import but other structure formats can also be imported
- Existing taxonomies can be updated from source files without effecting the items classified under the taxonomy

This functionality utilises the data import component, see section 4.

7.5.6 Taxonomy text terms matching

In the Konnect eCMS system the eTOC component manages relationships between data in a hierarchical relational way. Internally the system stores a list of the identifiers of all the taxonomy items from the eTOC that apply to a record (i.e. that a record is classified under). The taxonomy terms are not stored in a text field, like in some systems, but in a true relational hierarchical tree format.

If users wish to import lists of terms and have them appear in the eTOC, this component can be used to match the textual terms to eTOC terms in the system. Often this is needed when external files which contain a list of subject/classification terms are being imported.

Using this mechanism the textual terms in a record being imported would be matched against taxonomy terms in the eTOC and, if they where the same, then the record would be classified under the matching taxonomy entry. Unmatched terms could cause new items to be created in the taxonomy, or alternatively could be imported into a special field for unmatched taxonomy items (in this way they could later be manually linked, if desired).

7.5.7 Flagging items

Items in the taxonomy can be marked or flagged indicating to users that they should be checked, updated, etc. This is a very useful reminder and checking mechanism and the flags can be set to be private for a user or global for all users.

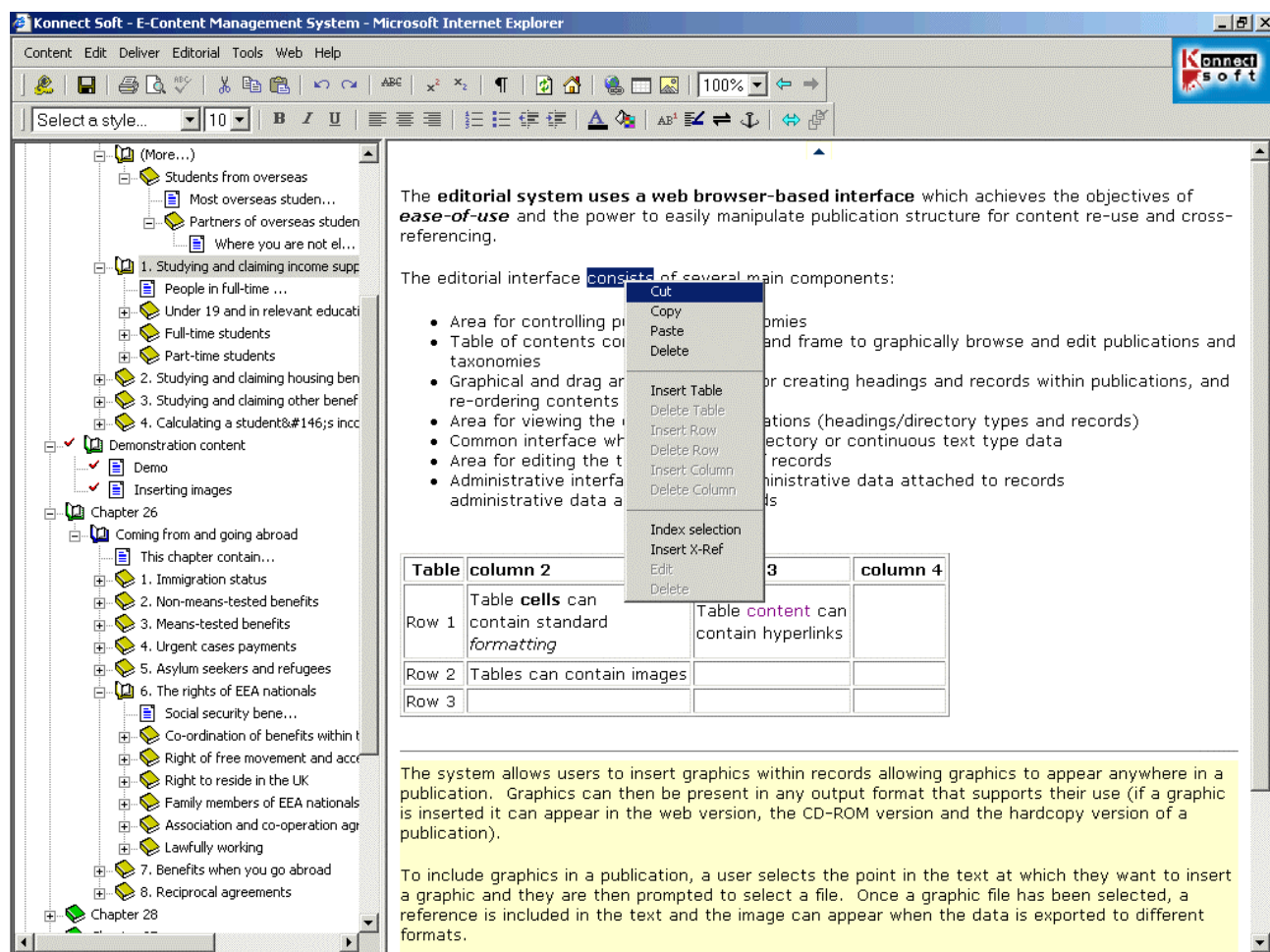
7.6 Editorial interface - general

The Konnect eCMS system provides a user-friendly interface to a very advanced, flexible database-based system. The editorial system uses a web browser-based interface which achieves the objectives of ease-of-use and the power to easily manipulate publication structure for content re-use and cross-referencing.

The editorial interface consists of several main components:

- Area for controlling publications/taxonomies
- Table of contents control in the left hand frame to graphically browse and edit publications and taxonomies
- Graphical and drag and drop support for creating headings and records within publications, and re-ordering contents
- Area for viewing the content of publications (headings/directory types and records)
- Common interface which for editing directory or continuous text type data
- Area for editing the textual content of records
- Administrative interface to control administrative data attached to records

A standard system of menus and toolbars give access to different options, screens and functions. This system is similar to the Microsoft Office interface thereby providing users with a familiar environment. Users are able to open multiple editorial system windows open at once and view and manipulate different data in each.



7.6.1 Textual editing interface

This interface allows users to work on either a part or all of the fields in the continuous text databases. The editorial interface for editing continuous text content is word processor like with standard buttons and right click menu options.

Textual content can contain styles, formatting; images and editorial mark up (cross-references, index terms and footnotes). Users can select any area of text within a record and apply styles or formatting to it.

All of these features are designed be easy for any user with word processing ability to use (while hiding from the user the full details of the XML structure used to support the formatting).

This textual editing interface component supplies the ease-of-use and usability of a word processor, but with the underlying power of XML.

7.6.1.1 Main screen

A main screen is provided through which the editors can access all fields and areas of the database. They are able to input text into this screen, change the headings and access the indexing fields and administration area. Editors are able to access the enhanced text entry and indexing areas by clicking on a button on this form.

7.6.1.2 Ordering of records for hard copy

See section 7.4.

7.6.2 Viewing data

From the editorial system users can view the contents of publications in a similar format to the way they would appear on the printed page (as continuous, styled text). When viewing data in this format, it is displayed as a continuous flow of information despite the fact that (behind the scenes) it is separated into multiple records in the database.

The search and table of contents controls can be used to easily locate data and users can easily switch between the edit and view modes.

7.6.3 Configuration

The user interface to the data repository is designed to allow system users to:

- As appropriate, perform necessary existing tasks from a legacy system
- Provide new facilities required for the new system

Wherever possible the user interface is made to be consistent across the different databases.

7.6.3.1 Resolution

The user interface to the system is designed for a resolution of 800 x 600 at predominantly web safe colours. Forms are designed to fit within a 800 pixel width but have some areas which the user has to scroll down to access. Less frequently used areas are located at the bottom of the screen so that users do not have to scroll down to access commonly used fields.

7.6.3.2 Administrative interface

There is a facility in the user interface for editors to track changes to records. This functionality tracks the date of the changes and editors are able to add descriptions of the change. The changes are not recorded automatically in order to avoid the situation where every minor change made to a record by a user is logged.

7.6.3.3 Enhanced text editing area

An enhanced text entry facility provides an interface that is optimised for entering text. Editors are able to use this area when entering or modifying larger volumes of text and close it or switch to another view when they are performing other functions.

Editors are able to cut and paste text into this field.

7.6.3.4 Indexing area

This area of the user interface provides facilities for indexing a record. The indexes contain the terms from the current databases and can be consolidated where separate databases are merged.

Editors with sufficient rights are able to modify the list of indexing terms, where there are terms which are redundant or need to be renamed under the new system.

7.6.4 User management

The user rights management component provides an interface where the client can add, modify or delete the users who have access to the editorial system and web site.

This is a separate interface where the list of users can be viewed and individual user details can be edited. See section 8.2.

7.6.5 News

Where the news article management component is used then an interface is provided for the news database so that editors can edit the articles locally (as well as through the web site). Editors are able to add articles at the local offices and these articles are then uploaded to the web site when the databases are synchronised (where replication with a web server is being used).

7.6.6 Navigation

System users are able to use the search interface to locate records to edit.

When a system user with sufficient rights is logged on, they are able to run a search and select a record from the results. See section 7.6.9.

7.6.7 Validation

The data entered into the editorial forms is validated to ensure that only appropriate data is entered into fields (i.e. that take required data of a certain type). For example, only date values are allowed in date fields and numeric values into numeric fields. Where a value is required for a field, the user is prompted to enter it before they can save the record.

Specific validation requirements are enabled in consultation with the client.

7.6.8 Check-in/check-out system

When a record is edited the system records it as “checked out”, until the user checks it back in, or after a 30-minute period of inactivity. Inactivity means that the user has not saved the record, or performed any other operations on the web site (such as go to another page). This system also allows a report of current work on the web site to be generated (see section 7.16).

7.6.9 Help

Context-sensitive help provides assistance on specific areas of the interface when the editors click a help button.

Tool tips and default text indicating the purposed of a field can also be configured to provide guidance for users.

7.6.9.1 Advanced help features

Content sensitive help

Area specific help can be configured for different controls so that when a user clicks the help button or presses the help key, help for that specific area is shown.

Help is stored in the system as content, with the advantage that this can be amended by the users themselves (with sufficient rights) to include notes, amendments, etc.

Editable help

This option provides the help content as a special publication in the system which users can annotate or edit as if it were normal continuous text content (it simply appears as another “publication” in the taxonomy). This allows editors and publishers to annotate/update the help according to their own special requirements/work flow. The content can be copied and reused to produce customised handbooks on using the system for internal training for example.

7.6.10 Advanced contributor review system

The contributor review system provides an alternative and simpler interface to allow contributors to input data into the system, rather than giving them access to the full editorial system (although the alternative here is to provide this and limit their rights, so they can only perform limited operations).

Often this option is used to make just certain data available to external contributors where, for example, one wishes users not to have wider access to the system (even where tightly controlled rights/permissions may be in place). This may be appropriate for general web based input, or where there are a large number of external contributors.

The power of the system lies in the fact that the data entered is stored directly in the database attached to the item or area which the contributor is providing data on. Editors can then edit, copy, move or “publish” it as normal data, rather than receiving an external e-mail from the contributors and having to paste it into the system as is the case with many other systems.

When a user with contributor rights or above logs in to the web-based continuous text editing area of the system, extra options are presented on the navigation bar that are not viewable or available to the ordinary end user:

- Logout button
- User's name
- Administrative pull-down menu containing links to:
 - ⇒ Recent work report
 - ⇒ Continuous text administration

- ⇒ Directories administration
- ⇒ News administration
- Etc.

Contributors are able to add comments to records, but these comments are stored in a separate part of the system and are not seen by end users.

Comments only become part of the text viewable by end users if editors chose to incorporate these comments into the body of the record. This facility allows persons outside the client organisation to supply reviews, translations, comments, etc. in respect of content, but without the ability to directly edit it.

7.6.10.1 Records available to contributors

Contributors are only be able to see records that have been made available by editors for contributor review. Contributors see the normal record (as an end user does) but there is a button on the record which activates the contributor update form. The update form allows them to see the original record which has a field into which they can add their changes. The user name of the contributor who has modified the record is stored in the database along with the comments they have added and the date of modification.

7.6.10.2 Multiple contributions

If a contributor has already modified a record and logs on again and selects that record, then they are able to see their previous comments. They can choose to modify their previous comments or to add new separate comments. Contributors are not able to entirely delete their previous entries, although they are able to delete the text they entered - a record of their user name and the date the entry was made will still be present in the system, as only editors have the right to fully delete these entries.

7.6.10.3 Editing the same record

If two contributors log on to the system and try to edit the same record at the same time, then they can both add separate entries to that record. If they are using the same logon then the last contributor to try and access the record is locked out from editing the first contributor's work.

7.6.11 Advanced editing functionality (miscellaneous)

7.6.11.1 Change case

This function provides support for changing/toggling the case of selected text between different cases: lowercase, uppercase, etc.

7.6.11.2 Field prompts/hints

This functionality allows users to configure initial "prompt" type text that appears in fields for a new record. This is not actually default or initial text because it is not actually saved in the system, and only appears if a field is empty. As soon as a user enters some data then these prompts disappear.

7.6.11.3 Special characters

Special characters are supported by the system, including:

- Accented characters
- Mathematical symbols
- Currency symbols
- Other extended characters

The system usually stores data in Unicode (which means it can essentially hold any special character from most character sets). Buttons for commonly used special characters can be configured on the toolbar providing users with quick insert functionality. Users can also insert special characters using other applications (such as the character map).

7.6.11.4 Record templates

Different templates can be configured and used within the system as required by the users.

Record templates provide a special field and interface configuration for different types of content, which may include particular meta data attached to each record (e.g. publication organisation, author, contributor, researcher, subject area, source, etc.).

The fields of the record template can then be viewed and edited by the user in the main content view (whereas the standard template shows only text and headings without meta data – although this can be edited in the property window).

Different templates can be configured and used within the system as required by the users.

7.7 Directory database management

Organisation Interface: Main organisation interface

Name: Corbett HealthConnect
Category: Advertising

Address: 211 E. Chicago Ave

City: Chicago
Region/State: IL
Post/Zip: 60611
Country: United States
Time Zone: CDT
Address type: Illinois Office
Publications: ☒ Publications: ...

New Address Delete Address << 1 of 2 >>

Summary contact details

☐	Title	First name	Surname	Job Title	Phone	More
☐	Mr.	Jack	Fisher	Chairman	+1 (555) 170 3478	...
☐	Mr.	Scott	Cotheman	Pres./CEO	+1 (555) 170 3479	...
☐	Mr.	Richard	Nordstrom	Exec. Vice Pres./Dir	+1 (555) 170 3479	...

New Delete

Company telecom details

☐	Default	Name/Type	Country	Number	Ext
☐	☐	Main Office phone	+1	(312) 664 5310	
☐	☐	Main Office fax	+1	(312) 649 7232	
☐	☐	Accounts department	+1	(312) 555 1234	221

New Delete

7.7.1 Main screen

This allows access to the entity name/title, address fields, index fields, related contacts, description text and most of the other fields. Multiple editorial screens can be configured to support the most frequent editorial operations carried out by the editors. This ensures that the system is quick and efficient for editors to use.

7.7.2 Administration interface

The administrative interface for directory records contains fields to record if update forms or e-mail have been sent to the organisation, and whether a reply has been received.

7.7.3 Editorial support for common operations

The editorial system has been created to maximise efficiency by being configurable to provide support by the most common labour intensive operations performed by editors.

7.7.3.1 Intuitive (Microsoft) Office-like interface

The system has an Office-like toolbar and pull-down menus, which means users with experience of Office find it easy to use. All functionality is designed to be used by editors without the need for "technical skills". Standard operations like cut and paste are all supported by the system.

7.7.3.2 Powerful search functionality

All editorial screens have a "search mode", with the feature that all the fields into which an editor can input data are, at the click of a button, also searchable.

Data entered is searched upon - very powerful searches can be built up very quickly by normal users (without any knowledge of SQL or complex database structures). This functionality is highly intuitive to users working with the system, as they can quickly switch into search mode and retrieve any set of records that they wish to work with.

See also section 7.6.9

7.7.3.3 Copy/duplicate functionality

Editors can duplicate an existing entry to rapidly create a new record with the same details, or produce a new entry from the same category (e.g. for a company).

7.7.3.4 Search and replace functionality

Users can run search and replace functionality to modify the contents of different fields. See section 7.15.

7.7.3.5 Shortcut keys

Shortcut keys are available for standard, most commonly used editorial operations.

7.7.3.6 Spell checking

Allows text in the different database fields to be spell checked.

7.7.4 Advanced directories model editorial support

7.7.4.1 Sorting data

The system provides a very user-friendly interface for sorting data - users can sort on fields within the standard editorial interface by selecting the field and choosing the type of sort that they wish to perform.

7.7.4.2 Customisable quick entry lists

Support is provided for quick entry lists for different fields. All users can use these lists to enter commonly used data in a few keystrokes, and users with sufficient permissions can add or modify entries in these "look up" lists.

7.7.4.3 Validating data

Validation can be configured and adjusted for individual fields to ensure only valid data is saved in the system.

7.7.4.4 Automatic fields

The system can be configured to automatically track dates, IDs, modifier, creator, modification history and other types of data.

7.7.4.5 Bookmark records

This functionality is integrated with the web browser bookmark or favourite functionality to allow an editor to bookmark items that they are working on and at any time to easily return to that item. The bookmarks are saved in the browser and selecting them opens the system at the bookmarked record (once the user has logged in).

7.7.4.6 Tagging

Records can be tagged for export or other operations.

7.7.4.7 Labels

The labels interface allows system users to generate mailing labels containing the address details of organisations.

7.7.4.8 Field suppression

The field suppression configuration allows editors to suppress individual fields so that they do not appear in the published/delivered output for an item/entry.

7.7.5 Editorial update forms

The functionality available to users depends on their rights level.

Functionality provided includes:

- Add records
- Modify records

- Delete records
- Etc.

When a record is added, its initial status is “not published”, and therefore it does not appear in any publications until it has been checked.

7.7.5.1 Going live on a web site / publishing content

Modifying records includes the ability to make a record go live on the web site (or within any published medium). If this is done online, the record is then viewable by end users immediately. Before an editor takes a record live for the web site (sufficient rights are required here), they get a warning message asking them if they are sure they want to make this change. Once a record has gone live, this can be reversed at any time by giving the record non-live status.

7.8 Editorial system searching

The system is based around the concept of editorial field searching. This means that:

- All fields that can be edited can also be searched on
- Users can input search terms into fields to search for all records which contain/match the data entered

The search functionality provided by the system allows editors to:

- Rapidly locate data to work with
- Verify/check data
- Navigate data within the system

Users have the ability to search:

- Within a publication/classification
- Across multiple publications
- Within particular parts of a publication

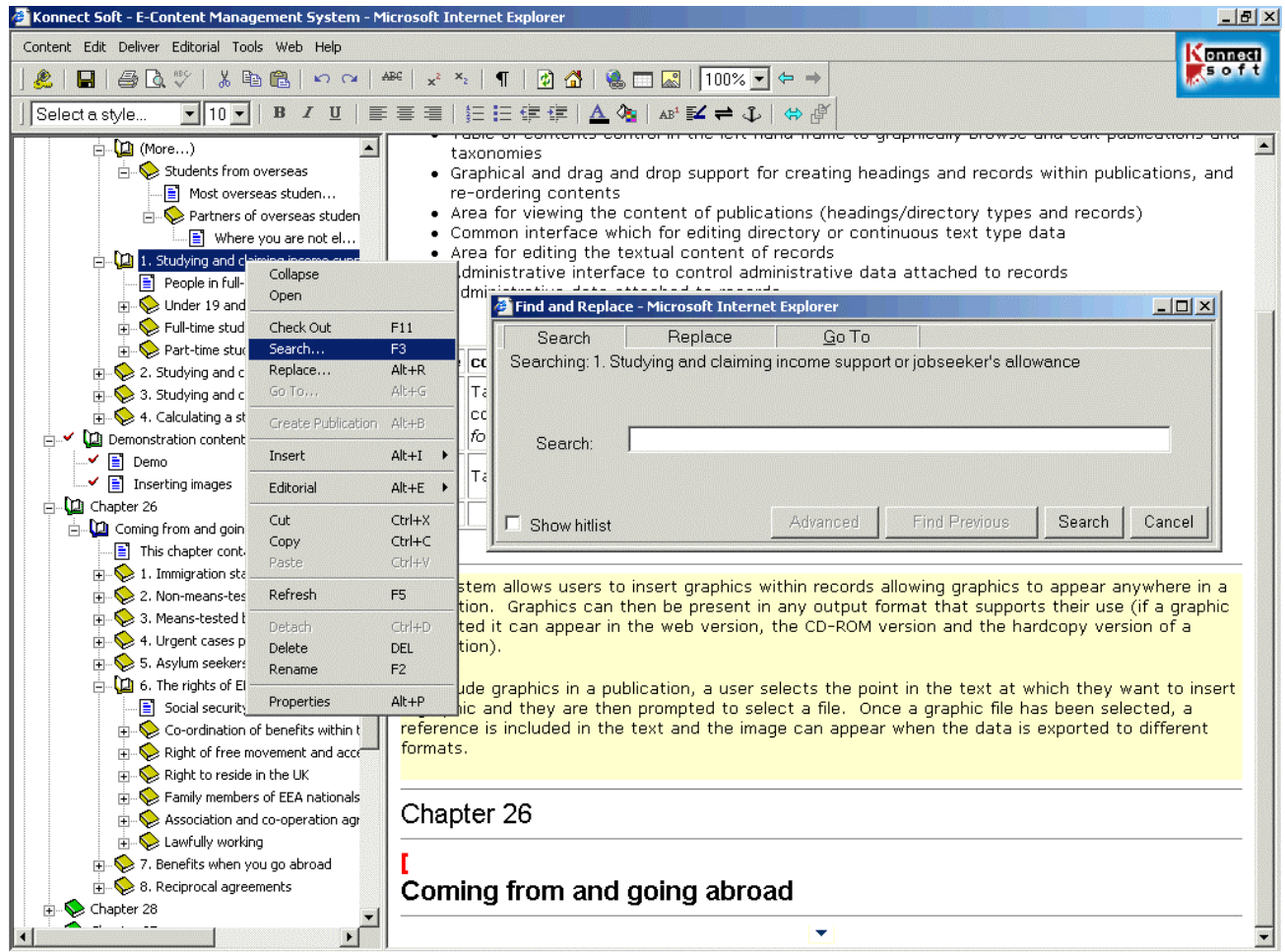
Using the editorial TOC control users can select an area of content they wish to search, right click on it, and choose **search** to only search the selected area.

Once a user has retrieved a group of records, then they have the ability just to work within the records retrieved. The interface shows that they are in search results mode and only working with a subset of all records. So if an editor wished to update or view “all companies in New York”, they can perform a search for these companies and then just work with this set of data. The editor can return to “all records” mode at any time, or when finished working with the subset of records.

7.8.1 Continuous text search functionality

Continuous text search is similar to a “find” operation in a word processor, however it operates on the selected item from the eTOC/taxonomy. Because all content is in the one system, users no longer need to worry about divisions between documents. What may have once been a document often corresponds to a heading in the eTOC, and users can easily search over content that would have previously been divided up amongst multiple documents – or they can target a specific part of the content to rapidly locate it.

The speed of the search depends on the amount of content being searched over, and advanced index/search optimisation features are used to improve performance here.

Example screen**7.8.2 Fielded/directories search functionality**

When a user selects the search option the current interface view is loaded in search mode – this is the same as the normal editing mode view, but with all fields “empty”. Users then enter their search terms into the fields and then click on the search button to execute the search. Additionally in search mode, users can load saved searches and execute them again.

Example screen

Konnect Soft - E-Content Management System - Microsoft Internet Explorer

Content Edit Deliver Editorial Tools Web Help

Search mode

Selected item: ...glucocorticoid-induced osteoporosis : Admin ☐ Search only this item

Socioeconomic

XAC: AND XID: AND XMD: AND

XRV: NOT

AUT: OR

VOL: AND AND OR NOT

PAG: AND

XYR: AND

XPT: AND

XLA: AND

Date created:

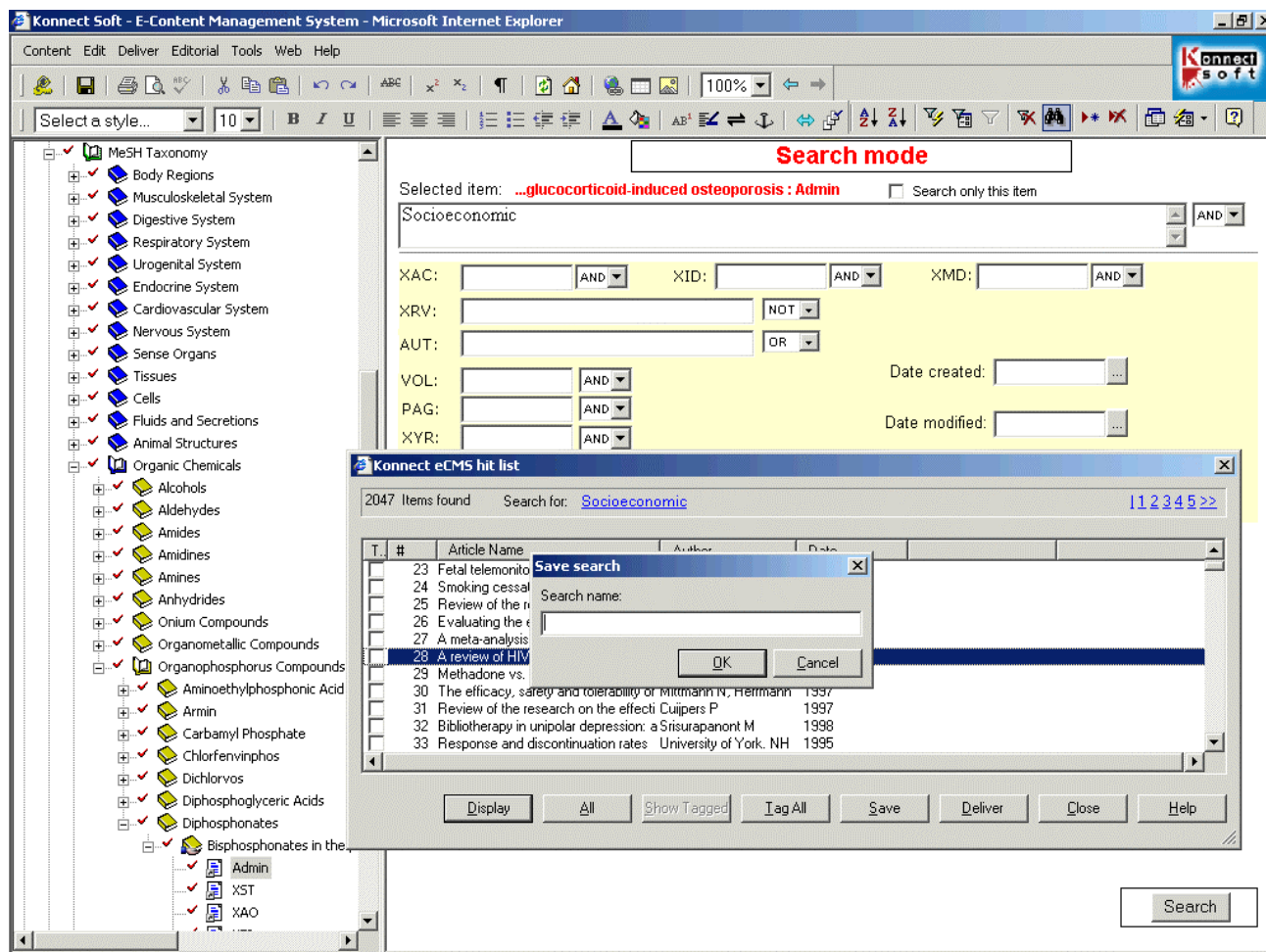
Date modified:

☒ Search all article text

7.8.3 Advanced search save and edit functionality

Users can save their searches and retrieve them at any time. The search component supports the ability to:

- Save searches
- Retrieve saved searches
- Modify and re-save a saved searched
- Delete previously saved searches
- Save searches as public (available to other users) or private searches

Example screen**7.8.3.1 Editing saved searches**

User can retrieve and edit previously saved searches, and perform advanced operations like:

- Merging saved searches
- Edit the SQL of a saved search
- Edit the name or notes for a saved search
- Delete previously saved searches
- Duplicate/copy then edit saved searches

Merging saved searches (Advanced option)

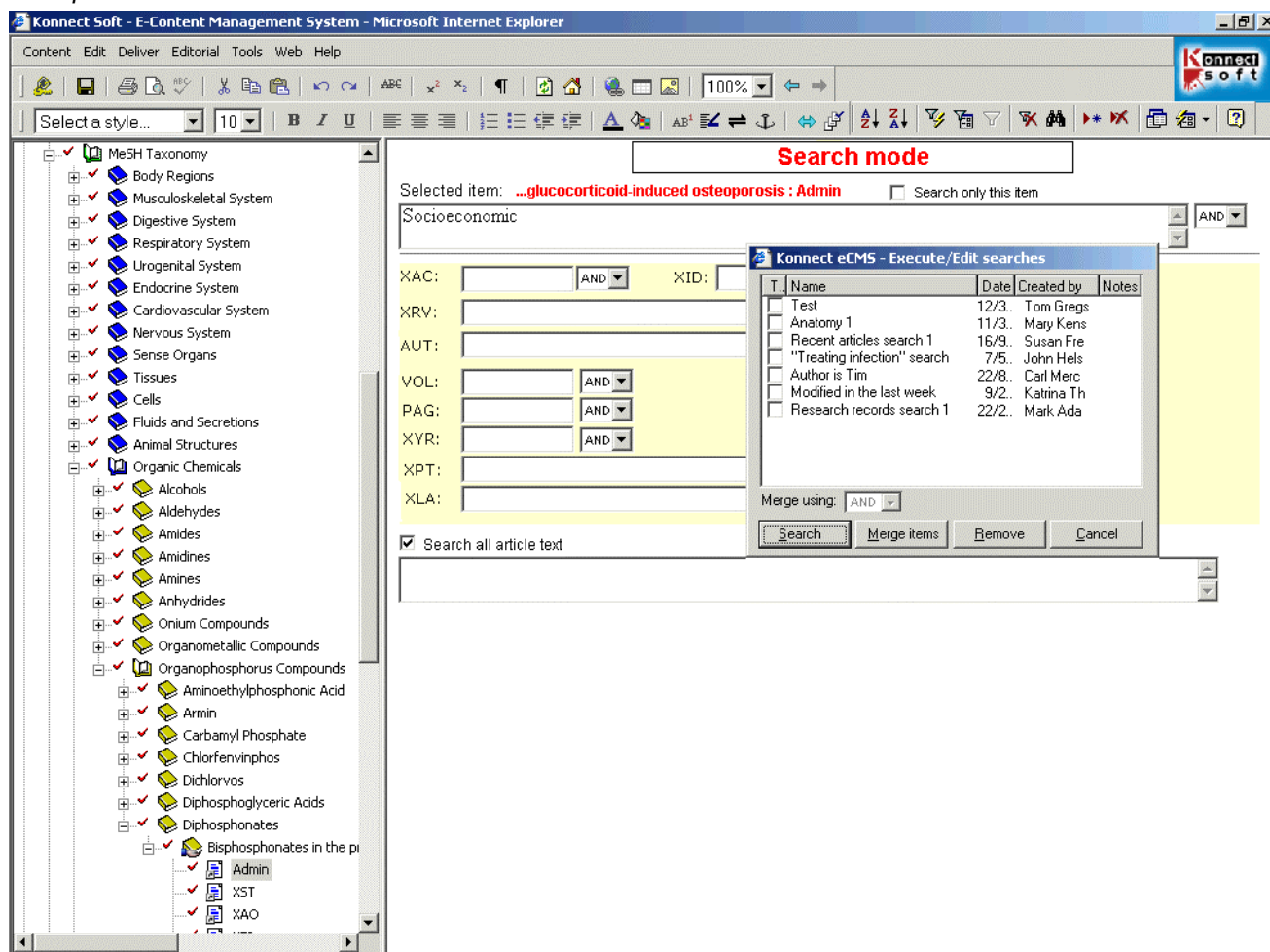
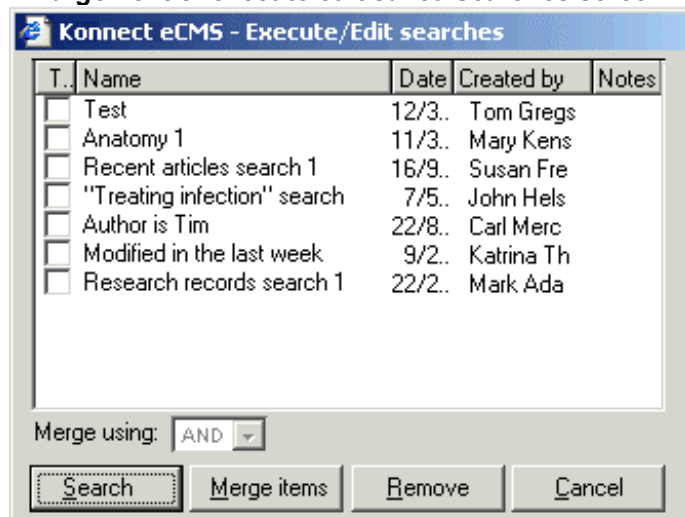
To merge saved search users select the searches they want to merge and the merge operator. Merge operators are:

- AND
- OR (UNION)

The merged search is saved as a new search containing the combined search instructions.

Edit raw search instructions (Advanced option)

Users can edit the raw search instructions, SQL (TSQL) for a search, but this is only recommended for very advanced users as the SQL strings can be very long and complex, and it is very easy to “break” the syntax of the search (the system reports if this is done and restores the original search).

Example screen*Enlargement of execute/edit saved searches screen***7.8.4 Creating a new publication/item with the search results**

This functionality allows users to save the results of their search under an existing or as a new publication/content item (heading) in the system. The records and headings which form the content can be copied into the new item or re-used/inserted as references (see section 7.4.5).

7.8.5 Advanced search/hit list functionality

7.8.5.1 Advanced searching

Omit searches

Users can search for all records that do not match the search data they enter (a NOT search). This works in the same way as a normal search except users choose omit mode and only items which do not match the search criteria are returned.

Combining multiple searches

Sometimes users may want to build up a search and join the results with another search - this is supported by allowing the user to enter their first search, and then to choose "combine" to add an additional search. For example, a user may create a search for all companies in Scotland that have a "turnover exceeding a certain monetary value, and that are multinationals", and combine this with a search for "all US companies who have offices in London, England". This advanced functionality builds up very sophisticated searches over the database, yet allows the user to manage this process with an easy-to-use user interface.

Boolean logic support

For advanced users Boolean logic is supported, and users can enter AND, OR, and NOT directly into the search fields to perform advanced searches.

7.8.5.2 Hit list view for continuous text records

As an additional alternative view of editorial search results, a hit list can be displayed in table/column format allowing editors to select records from the hit list to work with.

Users can edit records in the hit list view and perform the following operations:

- Delete
- Copy/duplicate
- Update of the data displayed in the hit list fields

7.8.5.3 Collapsed TOC for search results

An advanced function of the editorial TOC is to display a collapsed TOC after a search has been run. When this function is utilised only the headings for records retrieved by the search are displayed in the editorial TOC. Accordingly, if an editor searches for records in only one chapter, just the chapter searched on is displayed in the TOC. This advanced feature allows rapid navigation of the search results and allows editors to utilise the full features of the editorial TOC on a subset of all records.

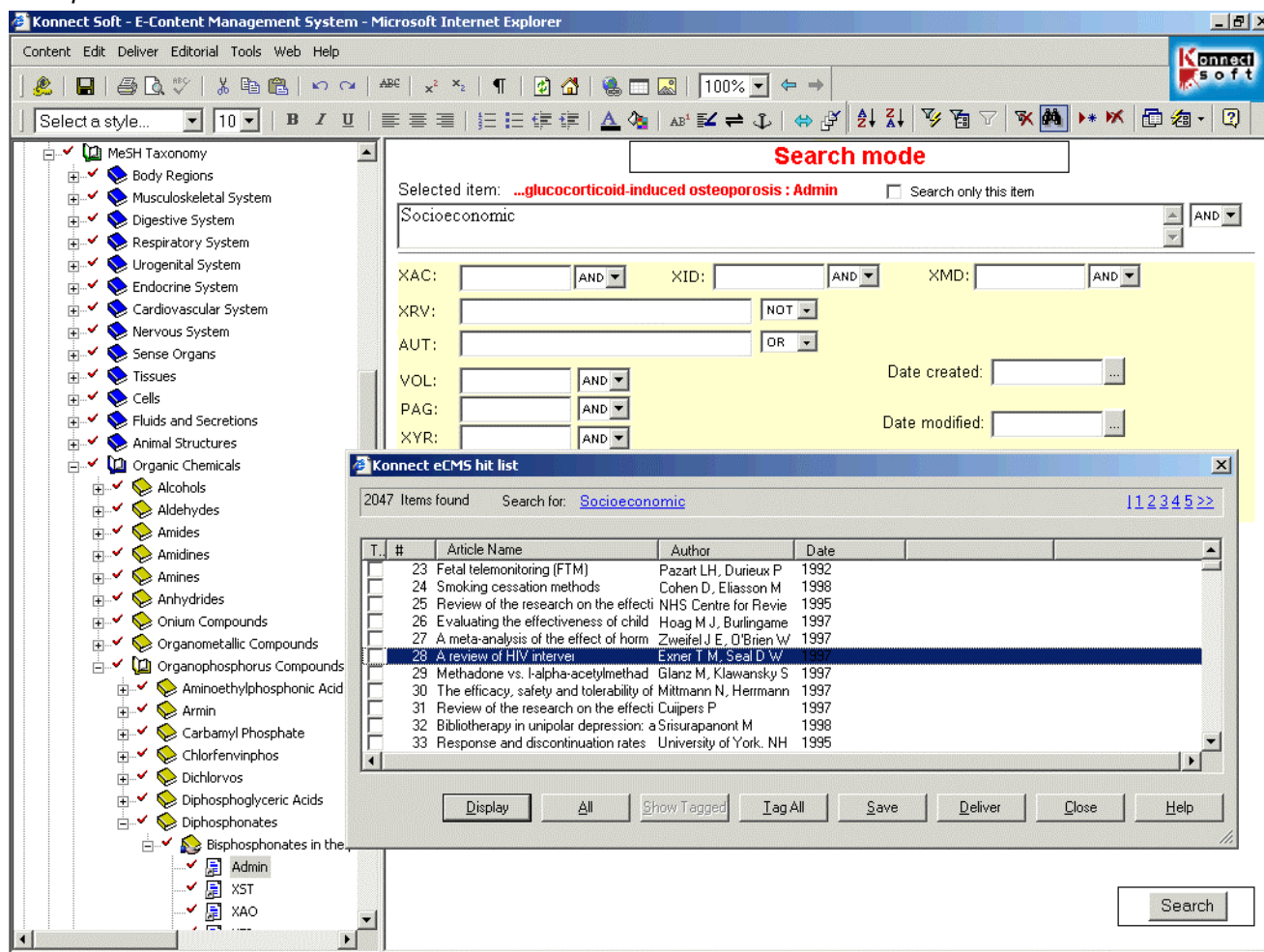
7.8.5.4 Delivery of search results

See section 7.9.2.

7.9 Advanced table/hit list view

7.9.1 Editing data in hit list/table view

As well as being able to view and update records via the editorial interface which shows the fields for each record, user can also view and edit data in a table form. The editable hit list view of data can be displayed after a search is run, or all records in a selected eTOC branch can be displayed. The table view of data is very useful for rapidly updating a group of records or sorting and view selected records.

Example screen**7.9.2 Delivering data from the hit list view**

This functionality allows users to click on the delivery button to delivery all or selected items from a hit list into a selected delivery format (by selecting any of the available delivery templates). This means users can run a search and just deliver the selected records providing a very powerful way of delivering data.

7.10 Styles and formatting

Styles can be applied to selected text within a record, and existing styles can be changed or removed. Standard manual formatting is applied using an interface similar to Microsoft Word for:

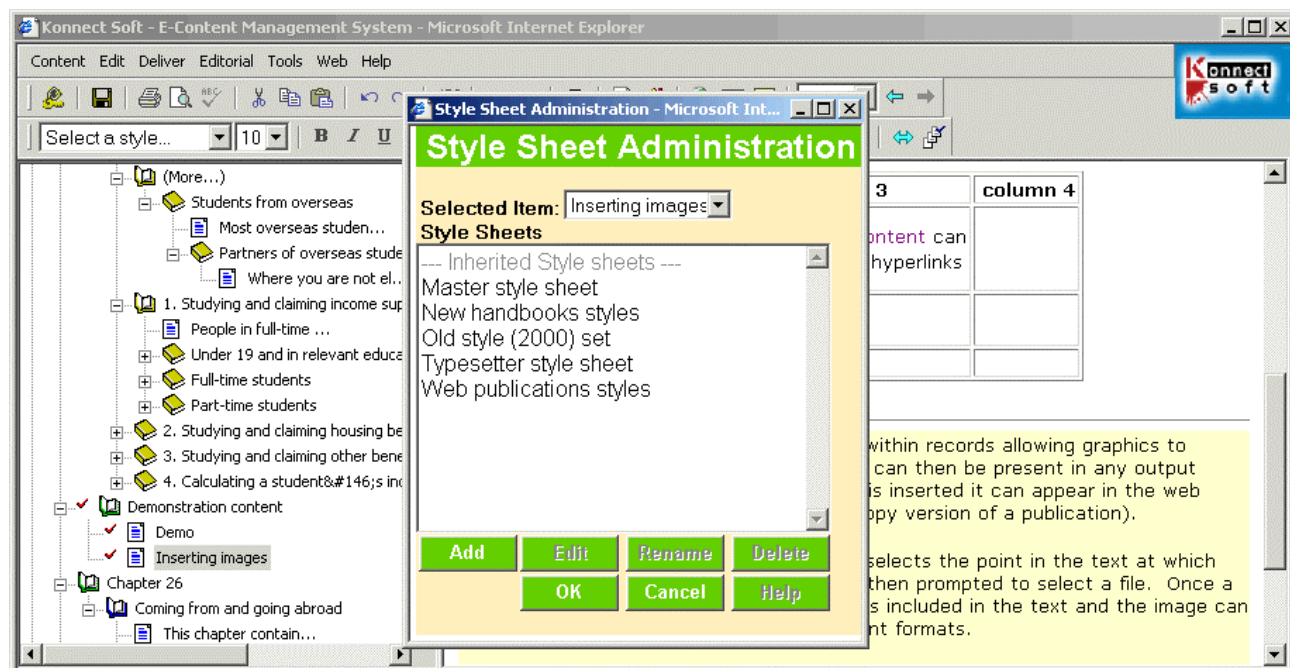
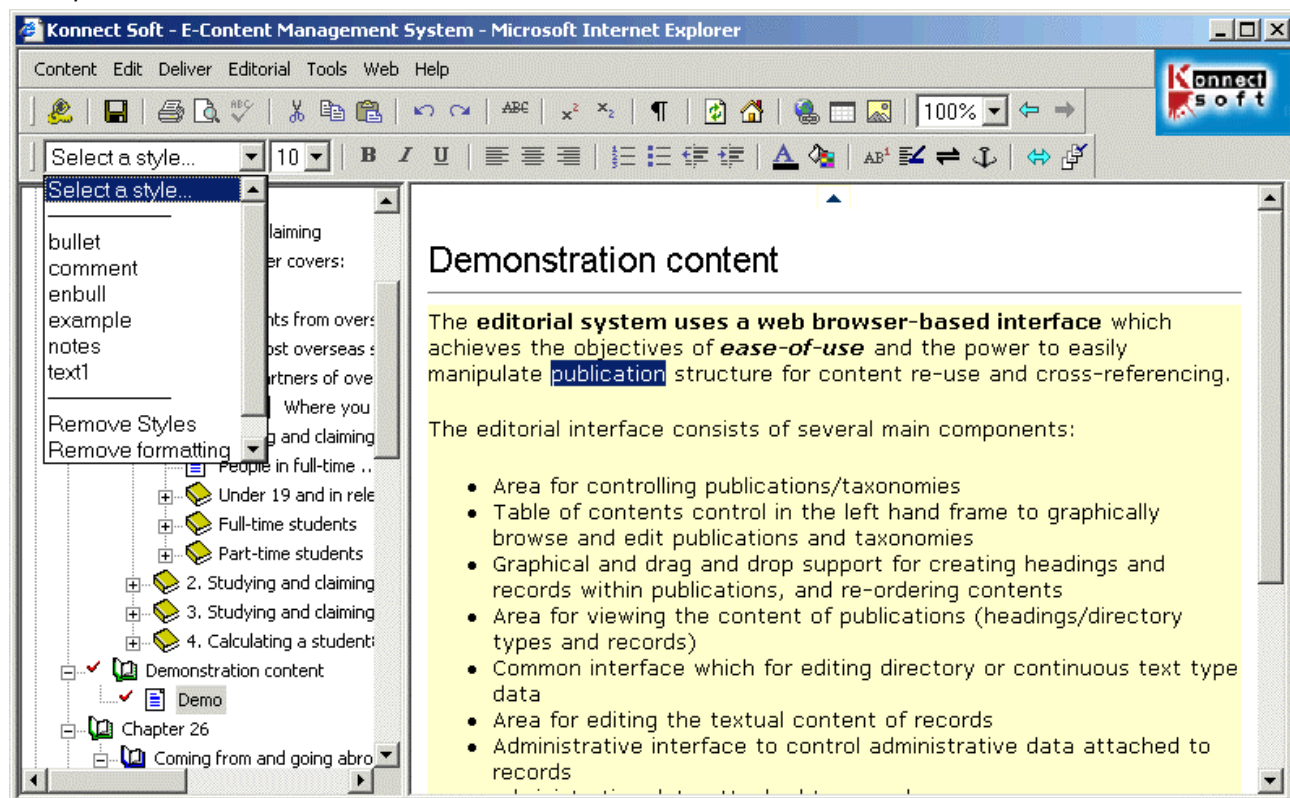
- Bold
- Italics
- Underline
- Superscript
- Subscript
- Special characters

There is support for:

- Bulleted lists
- Different paragraph styles

The styles applied in the system are generalised styles (paragraph style 1, body style 1, text 2, etc.) and appear differently in each different format used for content delivery by configuring style sheets and templates - see section 6.4.

Example screens



7.10.1 Content structure kept separate from output format

Using this system content structure is kept separate from output format, while also supporting the use of different styles.

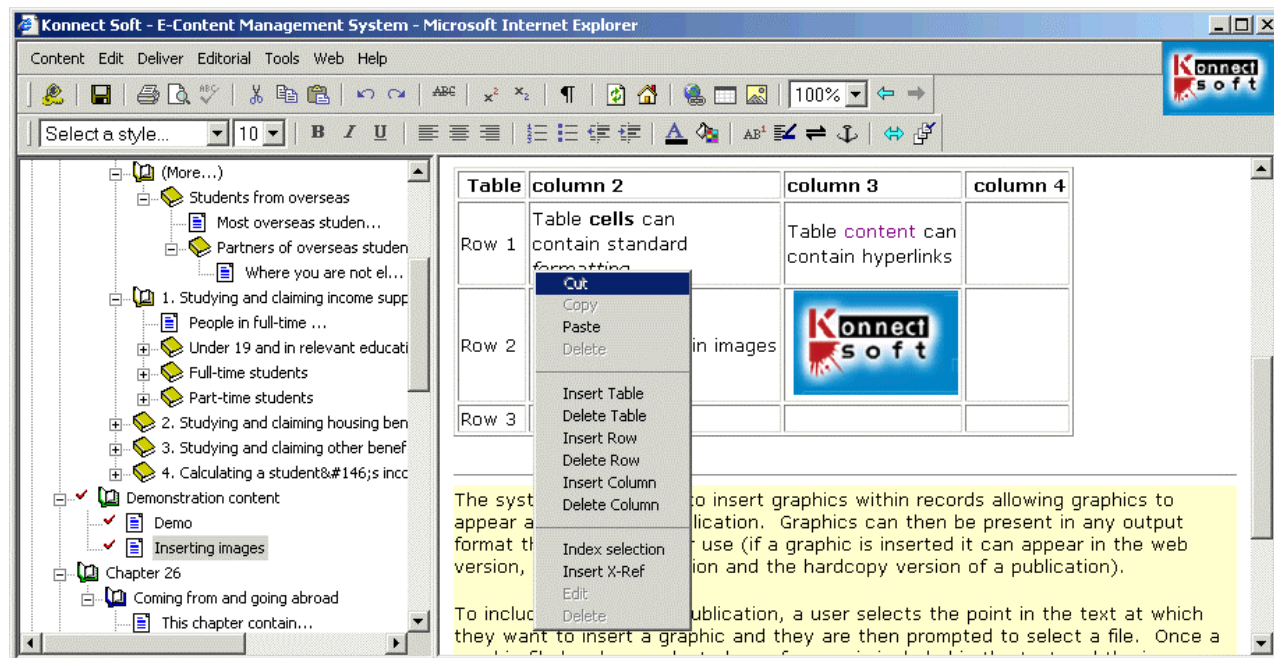
7.11 Table editor

The editorial system supports the use of tables within records. Editors have standard table functionality to:

- Insert a new table
- Delete a table

- Insert or delete rows and columns
- Modify the size of rows and columns
- Header rows
- Configure borders

The table functionality provides similar features to those available in HTML tables.



7.12 Managing graphics

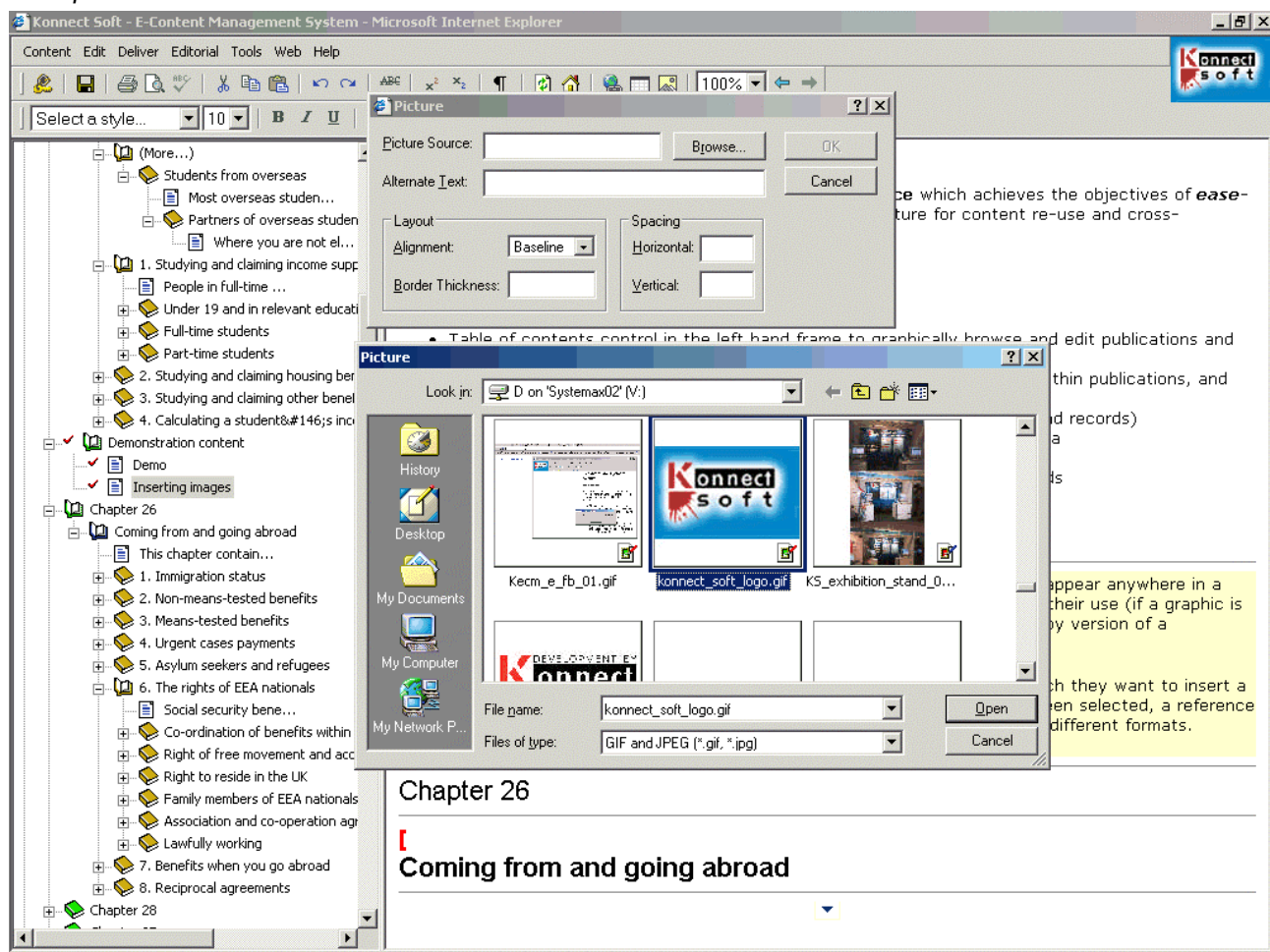
7.12.1 Standard functionality

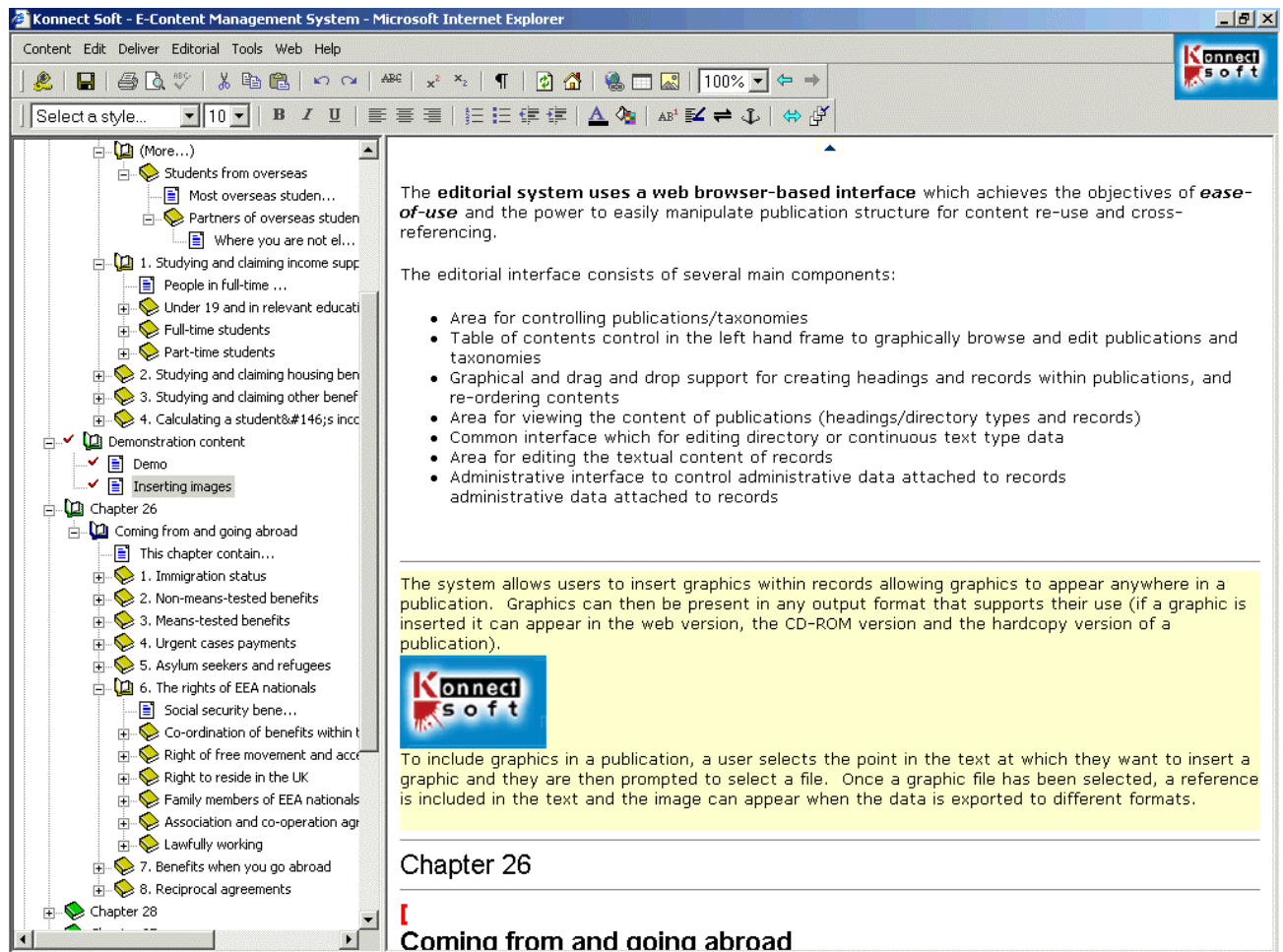
The system allows users to insert graphics within records allowing graphics to appear anywhere in a publication.

To include graphics in a publication, a user selects the point in the text at which they want to insert a graphic and they are then prompted to select a file. Once a graphic file has been selected, a reference is included in the text and the image can appear when the data is exported to different formats.

Users can select images either from their local disk or network, or users can browser/choose from the existing images already in the system.

Example screens





7.12.2 Advanced image management features

7.12.2.1 Technical details on image storage

Images are stored in the database by default which means they can be copied, moved, and deleted easily. The system has an option to store images as files which may be useful for especially large or complex images (see section 7.12.2.6).

7.12.2.2 Meta data

Advanced image management allows users to use meta data fields for images such as:

- Name
- Title
- Caption
- Description
- Notes
- Creator/designer
- Application
- Etc.

Additional meta data fields can be configured as by Konnect Soft required.

7.12.2.3 Multiple image version management (high resolution/low resolution)

This advanced functionality allows users to attach several different versions of an image to the same point or location in the text of the system. Often the following versions are useful:

- High resolution for print
- Medium resolution for large web display
- Low resolution
- Thumbnail for web preview

As many different images as required can be used here.

Using this method graphics can then be present in any output format that supports their use (if a graphic is inserted it can appear in the web version, the CD-ROM version and the hardcopy version of a publication).

7.12.2.4 Tables view of images

Users can view and browse a table view or list of images in the system and perform standard operations on these images (such as modify their meta data, delete, etc).

7.12.2.5 Browsing images in preview mode

The advanced image functionality allows images in the system to be browsed in preview mode which displays thumbnails to the user (for supported formats) – these can be opened to view in full size.

7.12.2.6 Database based or file based storage

The system can store the images in the database as binary object referenced by fielded/meta data or by ID for ease of management, or it can store the images in the file system and reference them from the database. Either method still supports browsing, attaching meta-data to and re-using images, but sometimes a particular method is preferable (for example if the images are also being used by external applications, then it is better to store them on the file system).

7.13 Spell checking

Standard spell checking support is provided to allow editors to check individual records.

7.13.1 Advanced spell checking

This powerful functionality allows editors to spell check entire areas of a publication. Editors can select the spell check option from the editorial TOC and check the entire section.

Advanced spell checking includes “ignore all” and “change” all functionality which operates over selected headings/items to allow users to update large amounts of content (there may be thousands of records in a selected item which can be updated by “change all”).

7.13.1.1 Central custom dictionary

Spell check facilities that allow all editors to use a central custom dictionary are available. Editors are able to add words to the custom dictionary and all editors are able to use the added words.

7.13.1.2 Spell checking synchronisation option

Additional functionality can be provided to enable the spell checking dictionary to be exported to the web, so that all editors use the same custom dictionary (both local editorial system users and users accessing the remote editorial system through the web site).

7.13.1.3 Multi-language spell checking

More details to follow

7.14 Word count

This feature counts the number of words and characters in a selected area of the content. Users can select this function from the editorial TOC to determine how many words are contained in any part of a publication. This could be an entire publication or all the content below a chapter, section or any heading.

Alternatively a user can choose to obtain a quick summary of the word count for the current record that they are working on.

7.15 Database global search and replace

Standard search and replace functionality allows editors to search and replace text in the record they are currently editing.

7.15.1 Advanced search and replace functionality

Advanced search and replace functionality allows users to select different publications and headings and to search and replace within these areas. This is powerful functionality as users can search over many records which make up a publication rather than searching only a single document.

Users can utilise the editorial TOC to select the publication or heading to perform the search and replace on.

One of the benefits of an integrated database based content management system is that this type of operation can be performed across multiple records. This compares with systems which use external editing applications, where there is usually limited support for search and replace across multiple documents.

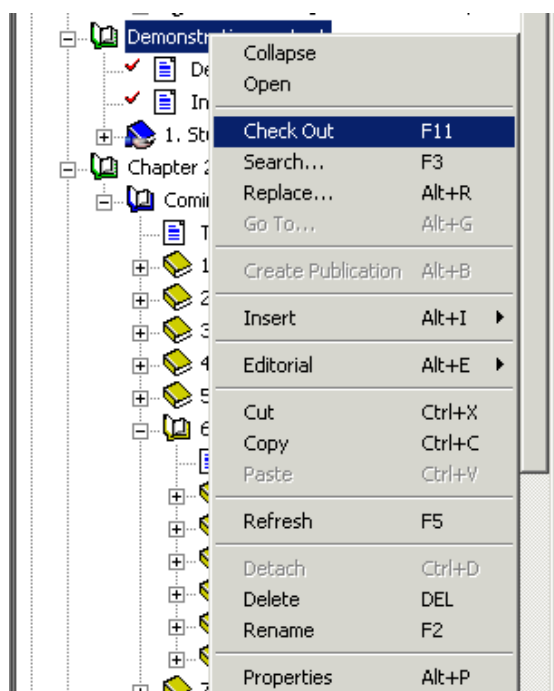
7.16 Check out

7.16.1 Standard check out support

When an editor edits a record, the record is checked out and other editors are locked out from editing the record. However, because the data is divided into records, the system **does** support a large number of editors working on one publication or even one section of a publication at a time. This is because a section of content may (behind the scenes) consist of many different records, and different users can work on each different record.

See section 7.16.3 for checking out entire sections.

Example screen



7.16.2 Remote editorial check out

When a remote editor is editing a record and an editor at the main office attempts to edit the same record, then a conflict can occur. The system can be configured to lock out access for remote and local editors when someone checks out a record (for example if an editor in the USA edits a record and then a UK editor attempts to edit the same record, the UK editor is informed that the record is locked). Local users must have a persistent live internet connection to support this option.

7.16.2.1 Remote editorial work report

An alternative to using this functionality is for editors to check the remote editorial work report to see who is working on remote records.

7.16.3 Checking out entire sections

If rather than just checking out records, editors require the ability to check out entire sections (to stop all other users from working on an entire area while they work with it), this functionality is supplied by this component.

An editor with sufficient rights can select a section from the editorial TOC and check out the entire section, preventing any other editors from accessing it. This is useful if someone is working on the content and ordering of a chapter and they do not wish anyone else to access this area until they have finished.

7.17 Data administration

7.17.1 Standard functionality

All records in the editorial system have administration information associated with them. This information includes automatically generated content:

- When the record was created
- Who created the record
- Date and time of last modification
- Who last edited the record

.... and data that can be manually configured including:

- Notes about each record, which can be categorised as:
 - ⇒ Proposed amendments
 - ⇒ General notes
 - ⇒ Etc.

The notes can then be seen by other editors and can be used to inform them of issues to take into consideration when editing or just be provided for general reference.

Standard workflow management is included in the system. Editors can designate content areas corresponding to different workflows (e.g. publications for work in progress and records requiring sign off) and edit records in these areas that are at a certain stage in the editorial lifecycle. Once a record has reached the next stage in the workflow, it is moved from the one content area to the next. For the publisher who requires more advanced workflow management, the advanced component can be installed as required.

7.17.2 Advanced workflow administration

See section 7.35.

7.18 Editorial/modification history tracking

A history of modifications made to a record can be maintained for content for which publishers wish to track the history of changes. Also see the version tracking functionality that also automatically tracks editorial history (see section 7.25). This component can track the history of modifications to items where version tracking is not turned on (it tracks the date and time of all actions that it records).

This functionality can:

- Automatically track who edited a record and when
- The type of editorial modification made
- Track actions such as spell checking to show a record has been spell checked
- Notes can be manually added about the modification of a record
- Workflow stages can be tracked, see section 7.35
- History can be deleted after a set period of time

7.19 Printing/proofing – data view

Users can print formatted data from the editorial system which reflects the format of the printed publications. The data printed is in a generic continuous HTML format which displays headings in different styles and also displays the styles and formatting in the text.

The print function includes a preview option which displays content in the view screen allowing users to see what they are printing. Printing includes all styles, formatting and tables (tables may under circumstances break across pages) - see sections 7.9). Different level headings and different types of text are displayed in different styles (these can be configured in the style sheet used for the editorial system). When printing is performed users get the standard print dialog as if they were printing from Internet Explorer.

The standard editorial system functions can be used to select data to print:

- Users can select items from the editorial TOC and print out these items.
- Users can perform a search and print out only records returned by the search

7.19.1 Advanced printing support

Advanced printing support allows users to print hidden codes. From the system one can:

- Select which parts of the data one wishes to print
- Show codes:
 - ⇒ Index terms
 - ⇒ Cross-references codes
- Print footnotes
- Administrative data
 - ⇒ Date last modified
 - ⇒ Modifier (user name)
 - ⇒ Workflow status
 - ⇒ Etc.
- Related records
- Adjustable templates for the print view of data
- Other codes

This provides a powerful mechanism for proofing the data by giving users an easy method to quickly generate and check print outs of different parts of publications.

7.19.2 Advanced print template management

If this component plug in is selected, then users can control the templates used to generated print output. The templates can be edited to control the appearance of the print page.

More details to follow.

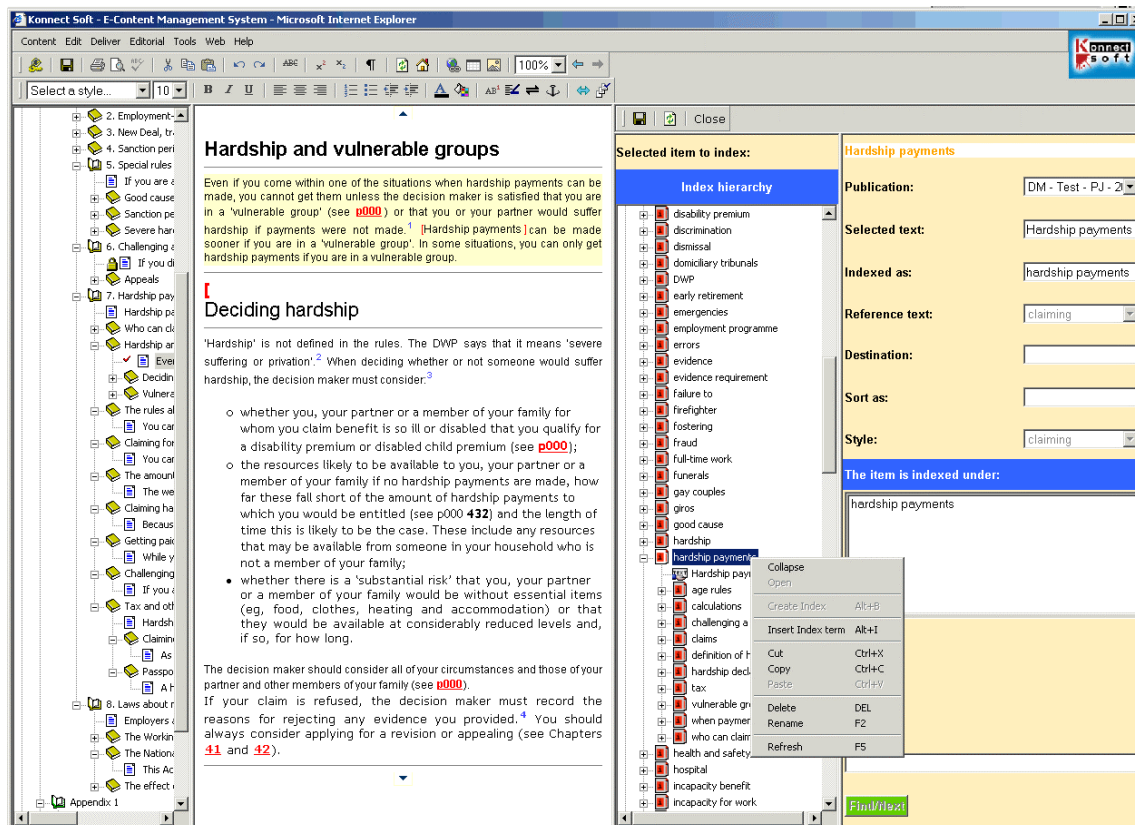
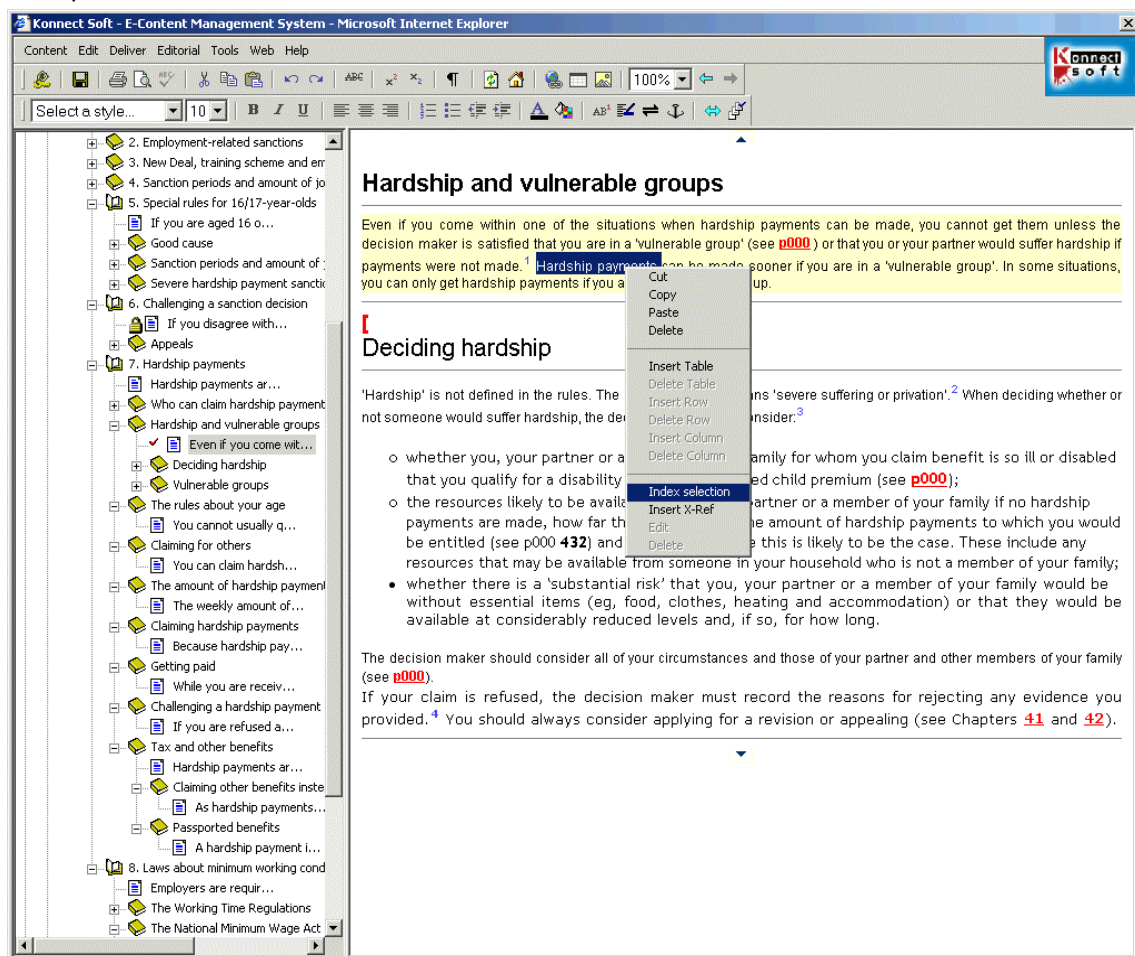
7.20 Indexing facilities – continuous text

Extensive indexing facilities are provided that allow users to:

- Index text within a record
- Use index words or phrases, not present in the actual text (i.e. these are indexed as index terms)
- Index headings
- Associate multiple index terms with directory entries
- Index multiple records/ranges
- Support multiple levels of indexing
- Preview/generate indexes for publications

To index text within a record, a user selects the text they wish to index, chooses the index term to be used, and then defines where it is to appear in the hierarchy of index terms.

Example screens



7.20.1 Indexing ranges

To index a range of records the user selects the records from the editorial TOC, chooses the index option and enters the index terms and hierarchy to apply to the selected records. This provides very powerful and easy-to-maintain index range administration. Users can also select a record and see all the index ranges that affect it – the index ranges can also be removed or modified. A master index range screen displays all index terms that have been applied to a range of records (along with the start and end record) can be viewed and administered.

7.20.2 Preview index generation

The system allows users to:

- Select a publication
- Generate an index for the publication with hyperlinks back to the indexed text
- Use the hyperlinks to jump back to individual headings, records or text/fields within records
- Re-index text and generate the preview index again

This powerful feature allows **index previewing on the fly**. It helps prevent the index checking bottle-neck associated with producing printed publications.

To produce the preview index, the system parses all the records and headings in the publication selected by the user and builds up the index. Information on the type of index words (whether they are **see** or **see also** references), the level of index they are in and their relationship with other index terms is all read by the system to produce the preview index.

The preview index is generated as a web page which opens in a new window containing a 2 column view of the index terms. It can also be printed to support visual verification. The preview indexes do not contain page numbers, namely just the identifiers of records which are hyperlinked back to the indexed record or heading.

The screenshot displays the Konnect eCMS interface within a Microsoft Internet Explorer browser. The main window shows a tree view of content on the left and a text area on the right. A context menu is open over the 'Generate preview index...' option. A secondary window titled 'eCMS - Preview Index - WBH_test_19.02' is open, showing the generated index. The index is presented in a two-column format with hyperlinks to the original content. The interface includes various toolbars and a status bar at the bottom.

Preview Index for WBH_test_19.02

Click on the heading is the path below to see the index for that area

Generated by: Step ()

Generated/Updated on: 2/25/2003 12:19:18 PM

Selected index: 234342

Index for: WBH_test_19.02

Please note - the numbers below are not page numbers. They are number of the index item in the content (1st, 2nd, 3rd, etc)

Page 1 of 7 << < 1 2 3 4 5 6 7 > >>

Table	column 2
Row 1	Table cells can contain standard formatting
Row 2	Tables can contain
Row 3	

The system allows users to publication. Graphics can be inserted it can appear in the publication).

To include graphics in a publication, users are prompted to select a file. Once a graphic file has been selected, a reference is

Record per page: Page 1 of 7 - goto page: 200 1 << < 1 2 3 4 5 6 7 > >>

OK Cancel Help

7.21 Glossary features

7.21.1 Standard glossary creation and updating

The content management system allows editors to easily create and maintain glossaries. When electronic output is created, terms in the content that occur in the glossary can be linked, or can have glossary tool tips assigned.

When words are linked to the glossary section, the glossary is generated as a separate set of pages and the links take the user directly to the defined term in the glossary. If glossary tool tips are used, the glossary definition of the term is displayed when the user clicks on the word, or clicks on a symbol next to the word. (This is similar to the display of comments in Microsoft Word, but the tool tips can be configured to display as a link or as an icon next to the word. Clicking on the icon or link causes glossary tool tip to display. This means the user does not have to be careful where they position the mouse to see the tool tip, and they can click on the symbol to show the tool tip and it will remain until they “click it away”.)

When electronic output is produced a special glossary parser and scanner identifies and links (or inserts tool tips for) all occurrences of the glossary terms.

The glossary entries/definitions are created just like normal records, but are created in a special section, which is designated as the glossary section for a publication or for multiple publications. Editors then create an item for each glossary entry and add the definition just as they would create any other textual content. Editors can browse the glossary entries easily with the editorial TOC and can use the full power of the system to modify or rearrange the entries.

7.21.2 Advanced glossary features

Stem word linking is an advanced feature of the glossary-linking component which links all instances of a glossary word in the content, even if they are not identical to the term defined in the glossary. For example, if a term defined in the glossary is “defend”, the system can be set up to link “defending”, “defends”, etc.

The advanced settings allow users to configure the glossary parser to only link the first occurrence of a glossary word in a designated section, or to link all occurrences.

As well as being delivered electronically, glossaries can be output into hardcopy format as a glossary section within a printed publication, or as a separate booklet of glossary terms.

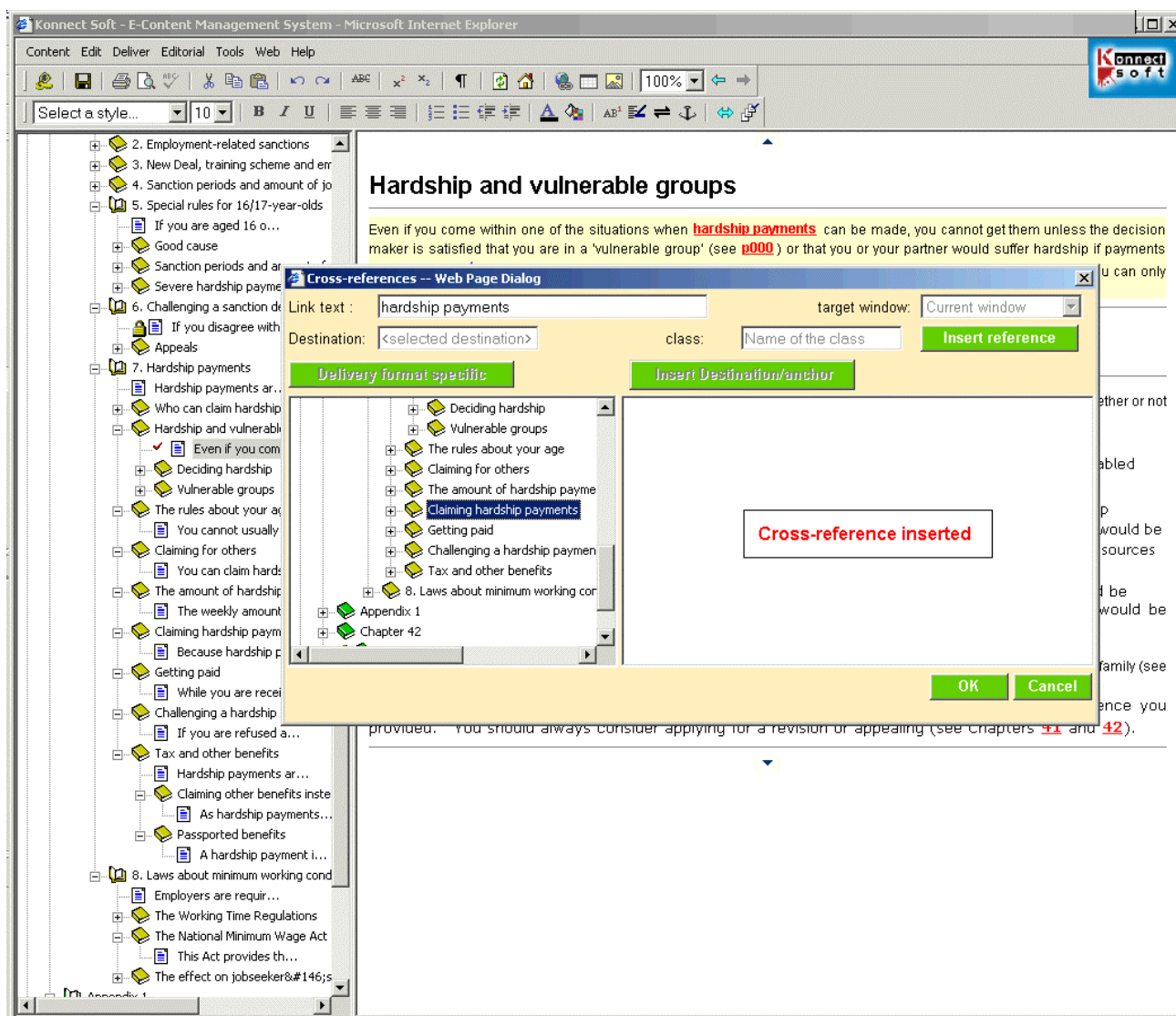
7.22 Cross-references

When a user wants to insert a cross-reference to another record in the data repository, then they are presented with a dialog that shows all available records in a tree structure (this interfaces re-uses features of the editorial TOC). They can expand branches of the tree to drill down to the individual record that they wish to select, or they can choose a high level heading in the publication and link directly to the heading.

Once the editor has selected a record in the cross-reference insertion interface, then they can view the text of the record and select a point within the text where they wish to insert the reference to. An anchor is automatically inserted in the text and the cross-reference then points to this anchor. This system allows linking to any point within the data set.

The system allows cross-references to appear differently in different delivery formats. In printed material they will appear as page references and in web and CD-ROM output they appear as links.

Links are validated by the validation component - see section 7.23.



7.23 Link checking/validation

Konnect Soft's Electronic Content Management System allows publishers to build and maintain huge data sets consisting of hundreds of publications containing hundreds of thousands of cross-references. When editors remove or move areas in publications as they work, links that pointed to the area that was removed will no longer be valid.

The link validation component checks cross-references between records and documents within the data set. This component highlights bad links (those that point to a record that has been moved or deleted) in red, so that editors can easily see where there is a problem link.

Reports are also provided which show the total number of links, the number of bad links and allow all bad links in the data set to be deleted. If the user selects this option, then a program processes the data set and removes all bad links. Alternatively a user can step through all the problem links, correct them and go to the next one using next/previous type functionality.

7.23.1 Moving and deletion of records

When a user moves and deletes a record, a link validation report is shown which displays all the broken links to the deleted or moved record. Users can click on the individual bad links to jump to the problem record and correct it.

7.23.2 Renaming records

When records are renamed it does not affect the links in this system as links reference the identifiers of records which are independent of their name.

7.23.3 Checking external web site links

This component periodically checks the content and e-mails a specified user informing them of any potentially broken links. It checks external web site links by automatically requesting a page from a site and informing the user if the page fails to load. This is can often be caused by temporary problems with the site or connection so the component rechecks any suspected bad links before informing the user.

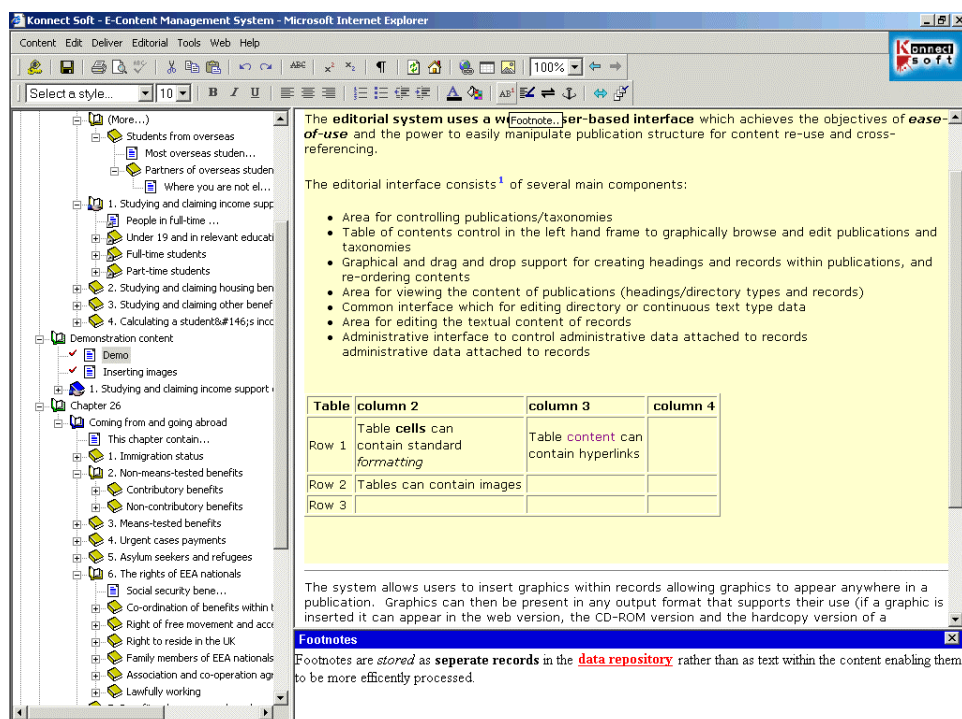
More details to follow

7.24 Footnotes

Standard footnote/endnote support is provided by the system. Footnotes are stored as separate footnote records attached to a record and the system can be configured to:

- Generate them as endnotes displayed at the end of a section
- Generate footnotes below each record

Footnotes can be included or excluded when printing. The style of footnotes in each different output format can be controlled using style sheets and they can be automatically linked in web or CD-ROM output.



7.25 Version control

The version control features of the content management system allow different versions of a record to be saved at different times. Users can:

- View all the different versions of a record present in the system
- View the text of a previous version of a record
- Restore an old version of a record
- Assign different versions to different publications
- Delete old versions of a record

This functionality can be hidden from standard users and only made available to users with a sufficient level of rights. The version control system allows editors to save a set of records when they are published, so they can refer back to the version that appeared in a previous publication. This functionality supports the archiving of the published versions of content allowing publishers to maintain a database of all previous versions of any publication.

Version history for: This Handbook deals ... - Microsoft Internet Explorer

Version History

Selected item:

☒ Item is a branch (heading) (Number of items in branch: [click here](#))

Show versions - from: to: Page 1 of 1 |<< < 1 > >>|

☐	No	Name	Date	Creator	Notes
☐	6	This handbook more versions...	Current version		
☐	5	This handbook more versions...	18/11/2003 15:22:10	Konnect2	New version
☐	4	This handbook more versions...	18/11/2003 15:22:05	Konnect2	New version
☐	3	This Handbook...	18/11/2003 15:21:17	Konnect2	Test
☐	2	This Handbook...	18/11/2003 15:20:53	Konnect2	Check OUT
☐	1	This Handbook deals ...	18/11/2003 15:20:30	Konnect2	

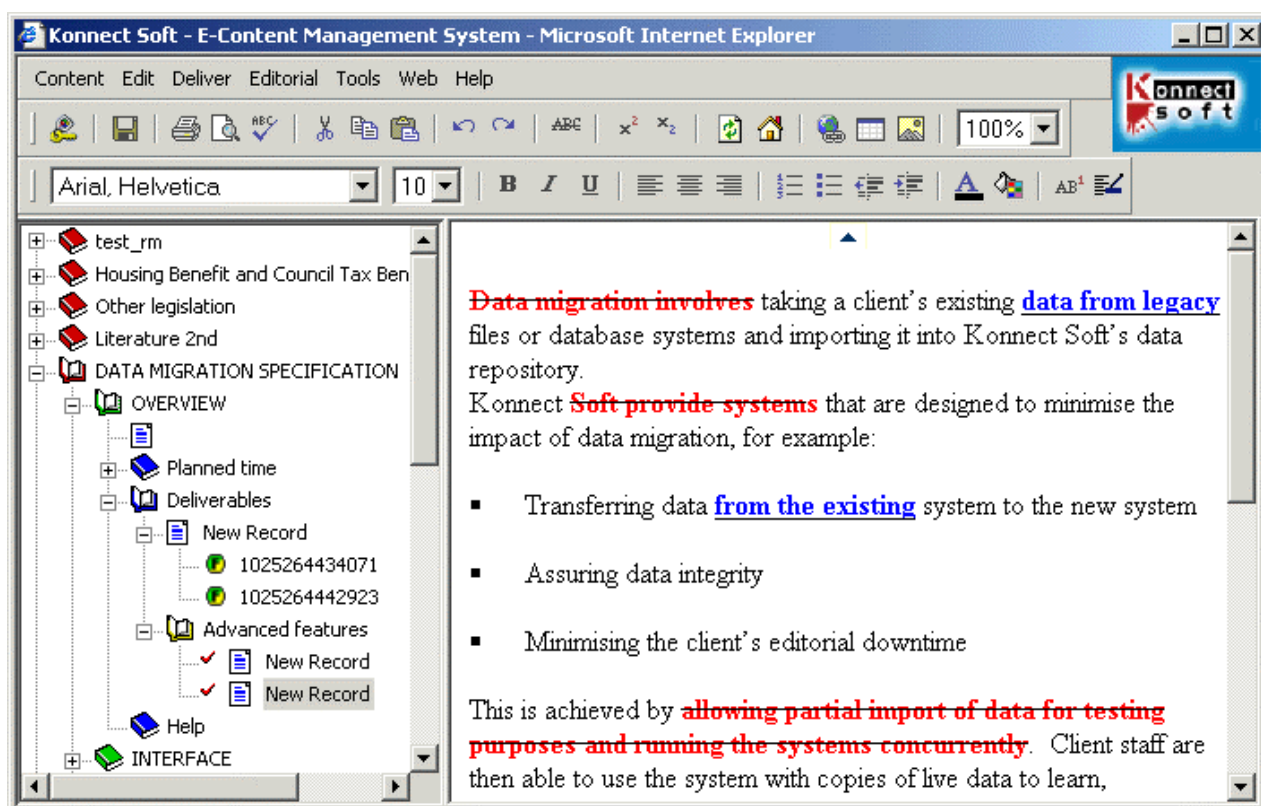
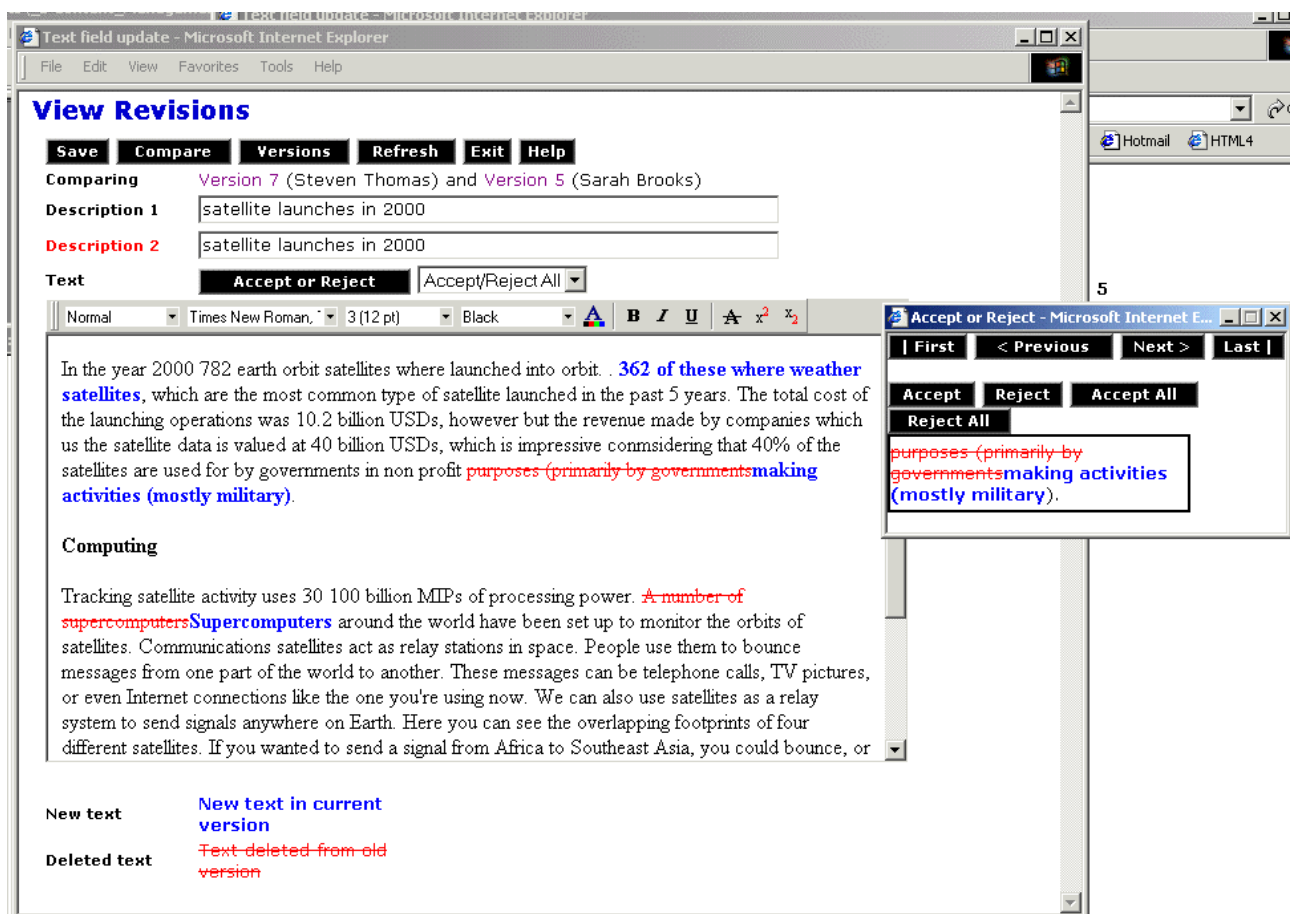
Record per page: Page 1 of 1 - go to page: |<< < 1 > >>|

7.26 Revision tracking

Revisions functionality allows editors to see changes made to the data by different users so that they can decide whether changes should be applied (accepted) or rejected.

Functionality areas include:

- Track changes to textual data – changes are recorded and can be viewed by users:
 - ⇒ New data
 - ⇒ Changed data
 - ⇒ Deleted data
- Accept or reject changes
- Compare versions of a record
- Identify changes by author and date/time
- Tracked changes are displayed when the data is printed



7.27 Editorial work report

This report allows system users at the client's offices to see which data remote editors are currently working on. The report's purpose is to prevent local editors from changing records that remote editors are working on. This system is designed to prevent the situation where someone updates the same data on the web that is being updated in the backend editorial system.

The report consists of a web page which is launched when a system user opens the database forms. Whenever the page is refreshed it displays an updated list of who is editing data on the web.

The form contains:

- List of modifications to records since the last synchronisation
- List of modifications since a specified date
- List of users currently logged in
- List all records currently being worked on

7.27.1 Recent work report – screen example**7.27.1.1 Continuous/discursive text database recent work report****Last updated:** 4:35pm(GMT) 11/10/2000**User Logged on to this page:** JSmith[Refresh](#)[Logout](#)

(updates page with current user data)

7.27.1.2 Records worked on since last synchronisation

<u>User name</u>	<u>Record worked on</u>	<u>Record ID</u>	<u>Date/time of check out</u>	<u>Date/time of check in</u>
JSmith	Questions about viral load	345344	10:22am 11/10/2000	10:53am 11/10/2000
JSmith	Types of viral load tests	564564	12:40pm 11/10/2000	1:22pm 11/10/2000
JSmith	The development of HIV/AIDS services	345345	12:50pm 11/10/2000	2:22pm 11/10/2000
SJones	Nitazoxanide	344535	11:16pm 11/10/2000	11:30am 11/10/2000
AField	Adefovir – key research	324321	9:40am 11/10/2000	10:17am 11/10/2000
AField	Amprenavir - key research	324242	10:22am 11/10/2000	12:12pm 11/10/2000
AField	Immune deficiency syndrome 2	233443	1:33pm 11/10/2000	-
AField	Questions to ask your doctor	234242	2:47pm 11/10/2000	-
AField	When to switch	244323	3:12pm 11/10/2000	-

7.27.1.3 Users currently online

<u>User name</u>	<u>Logon date/time</u>	<u>Last save performed</u>
JSmith	10:00am 11/10/2000	2:22pm 11/10/2000
AField	9:35am 11/10/2000	12:12pm 11/10/2000

7.28 Related record support

Users can create a list of records which are related to the record they are working on (i.e. create relationships between records). Unlike cross-references or links, related records do not appear in the body of the text but appear in an administration area in the editorial interface:

- The list of related records is linked to the records they refer to allowing users to jump to all related resources quickly and easily
- This also allows editors to track which records are affected by a change to the current record (e.g. to see records which would be affected if the current record were deleted)
- When a user inserts a link in record 1 to related record 2, both records are updated as being related (i.e. when they go to record 2 it has a reference to record 1)

This component uses the editorial TOC component to allow a user to click and drag a related record from the TOC into the list of related records.

7.29 Auto text and quick entry lists

7.29.1 Quick list management for directories

This component provides pull-down/automatic lists of values for specified fields. The user can activate these quick lists and choose an entry, and the selected data is entered into the specified field.

Each pull-down list contains an item at the top called “-edit...” which allows users with sufficient permissions to modify values in the pull-down list.

Also see section 7.33.

7.29.2 Auto text lists for textual content

The auto text plug-in allows editors to activate a quick pull-down list at any time and select an entry with a mouse click to insert the selected text. This can be used to quickly insert longer words or phrases into the text.

This component also has its own data store and can be administered by users so they can enter their own words and phrases (as well as modifying and deleting existing entries).

7.29.3 Advanced Auto correct functionality

Auto correct functionality corrects misspelled/mistyped words. The auto correct function has its own data store containing errors and the correct versions of words or phrases they are replaced with. Users are able to update this data store and add common errors and the corresponding automatic correction.

7.30 External file management system

This system manages files outside the database which are part of the publishers data set. This can include diagrams (plans), documents (e.g. Word documents sent to the publisher as information on updated details about an organisation), image files for logos, advertisements, photographs, video files (e.g. MPEG), and any other files which might be associated with a database entry. Information about the editorial history of these files is maintained as well as an interface that allows users to open the files in a specified application.

This component is supported by the general editorial system functionality. So users are able to locate a record using the search mechanism and then view all document files associated with the record. Documents of a certain type only can be viewed, or all documents for a record. Each external file entry or record has an ID, and within the system is referenced by its ID (so it can be present in multiple locations in the system).

7.30.1 Meta data

To store extra structure information about a file in the system, meta data can be configured for external files. Multiple meta data fields can be configured for different types of external files.

7.30.2 Advanced functionality

7.30.2.1 Multiple versions

Multiple versions of an external file can be associated with one external file record/entry in the system. For example there may be an external file entry for a document in the system where the user needs to hold references to all the different versions of the document – the system then holds references to the different versions of the file.

7.30.2.2 File associations

There is an area in the user interface from which users can set which applications are associated with different types of files. For example, an appropriate graphics software application can be configured to open images, maps, plans, technical drawings etc. for which an organisation might have entries in its directories.

7.30.2.3 Editorial history

There is a facility in the database to track update and editorial information for the external files. Information can be automatically recorded whenever a file is edited (this option can be turned on or off by administrators) and in addition editors can make notes about which modifications were made. Standard information logged is date and time of modification and details about the user who edited the entry. If users only preview a file (or open it in an application without changing it), then this is not logged in the editorial history.

The search interface allows users to search, for example, for all images modified over a certain time period, or all modifications by a certain user, and so on.

7.30.2.4 Image preview

Where the external files are images and the image preview option is selected, preview images are automatically generated. When the user browses the list of image files they also have the option to browse previews of the images. The system can be configured to produce preview images as thumbnails or normal size images (to allow for the case where many of the image files are very similar).

See also section 7.12.

7.30.2.5 Delivery of external files

External files can be delivered along with normal content into a sub-directory in the folder where the content is delivered. If the content is being delivered as a mix of XML and external files, it can be automatically compressed/zipped for easy download or e-mail on.

Where content is delivered to the web, external files often appear as links on the web site to the file in the system (which are opened or downloaded by the user when they click on them).

7.31 XML record import/export for external editing

7.31.1 XML tagging within database fields

XML tagging can be included within the textual database fields containing description or data about entries. The tagging support allows formatting within the textual data to be retained, this includes:

- Tables
- Numbered lists
- Bulleted lists
- Headings
- Tab separated lists
- Other tagging that is reflected in different styles of text

This tagging can be edited with an XML editor when the user checks the data out (this is an additional option that can be used instead of the standard browser based XML editing which allows users to edit the XML).

7.31.2 Export all or parts of a data set

As well as maintaining tagging within the fields in the database, a component is available to export either part of or the entire record set into an XML document. The document is created by exporting data from all the required fields in the database that correspond to required elements in the XML DTD, and also exporting the optional elements that are selected by the editor.

7.31.3 Import valid XML documents

This facility provides the ability to import XML documents (that comply to the new DTD) into the database, updating the corresponding record with the data from the document. Changes are only recognised and imported in certain parts of the XML document. For example changes to the header of the document are not recognised, but changes to elements/tagging within the body (elements within the text element) are applied to the database when importing into the database fields.

7.31.4 Tag settings

Tags that appear before and after the field contents of database fields are configurable in the system (e.g. `<name>` and `</name>` appear before and after the name field when exported from the database in the XML document header). These tags are initially set to correspond to the XML output for the new DTD but can be changed to allow the DTD to be modified in future.

7.32 Legislation/special reference format support

Special references are references to items such as legislation, legal cases, scientific journals, literature, documents or other items which have conventions which govern how they are referenced or cited.

This component allows editors with sufficient rights to create lists of these items which can then be selected by users when they wish to create a reference to a term in the list. This allows references to listed materials to be generated in a standard format.

This is applicable where references to items must be formatted in a standard way. For example references to books, journals, legislation, cases, etc. where there is a standard format for quoting the reference.

Special References -- Web Page Dialog

Special References*

Reference Type: UK Statute

Long Name: Employment Act (2002) Use default ☒

Short Name: Employment Act (2002) Use default ☒

Name of Act: Employment Act Year: 2002 Jurisdiction: UK

Notes: 2002 Chapter 22 - ISBN 0 10 542202 9

Save New Delete Link Search Show All

Special References [All]

[untitled]

Testing Act (2004)

☒ Long Name ☐ Short Name Long Name Insert Close

7.32.1 Inserting citations

This component allows users to build up or import lists of special references, and then insert citations to these items from a window showing the total list of references. The format of the inserted citations is controlled by the component ensuring that it is consistent.

7.32.2 Table of cases

This feature can be used by an editor to generate a table of cases:

- An editor can initially list all the cases that are referred to in a publication
- Whenever a reference to a case needs to be inserted, users simply select a case from the pull-down list of available cases
- If a reference to a new case needs to be inserted, then cases can be added to the list of available cases “on the fly”
- When cases are added users are required to use the case reference form which forces one to enter the case in the correct format

The following fields are examples of fields that can included:

- Plaintive/appellant
- Defendant/respondent
- Year
- Reported/unreported
- Type of report series
- Number of series
- Page number of case
- Court

The final definition of the fields can be configured according to the client's preferences. If cases are present in the publication, then the system can be automated so that references to cases link to the cases in the system.

7.32.3 References to legislation

A special form can also be displayed to control the format of references to legislation. Like the table of cases functionality, this system allows editors to enter a list of legislation, which appears as a pull-down list from which users can insert a reference to a piece of legislation.

7.32.4 Bibliographic references

This functionality allows users to compile lists of and insert references to items like:

- Journals
- Articles
- Papers
- Books
- Etc.

Information such as the following fields can be maintained by the system:

- Editions
- Dates of issue
- Authorship
- Typography
- Volume
- Pages
- ISSN
- Etc.

This data can also be delivered into citation type format, see section 6.2.5.5.

7.32.5 Delivering tables of references

The special references stored in the system can be automatically output tables, such as:

- Tables of cases
- Table of statutes/regulations

- Table of authorities
- Etc.

Because the delivery component, is used different output formats such as XML can easily be configured. See section 6.

7.32.6 Advanced features

7.32.6.1 Linking to the referenced data

If the user is citing items that they are actually storing in the system (for example where a publisher is referring to legislation and also maintaining the legislation in the system itself), then they can link the citations to the actual cited data in the system. If the references are to externally held data, then they can link the citations to an external web site/URL.

7.32.6.2 Scanning for references

This advanced functionality scans selected content for references, and if found converts them into special references. This fixes the format of all references detected so that they correspond to the defined reference format.

7.33 Abbreviations component

Abbreviations are used to manage the repetition of long words or phrases in a publication, especially in directory publications (to decrease directory size). The abbreviations component allows editors to manage and use lists of abbreviations to:

- Add abbreviations for different terms to the lists of available abbreviations
- Configure which fields the abbreviations apply to/can be used in (all fields or only certain fields)
- Modify existing abbreviation definitions
- Generate a glossary or table of abbreviations in content delivered to the end user
- Use abbreviations in different fields in the database

Editors are able to easily enter abbreviations by choosing them from a pull-down list of options for the field that they are editing.

When a user wants to modify the existing list of abbreviations they simply select the edit option, and if they have been given permissions to edit the abbreviations list, then they can create, delete and modify abbreviations in the list.

Abbreviations can be configured to apply only to a specific field or fields, or they can be available in all fields. This component allows editors to easily and efficiently manage the use of abbreviations in any publication produced within the system.

7.34 Integration with other backend systems

Integration with existing backend systems is enabled as required, for example:

- Sales and marketing systems (see section 20)
- Finance and accounting systems
- Production systems
- Address management
- Etc.

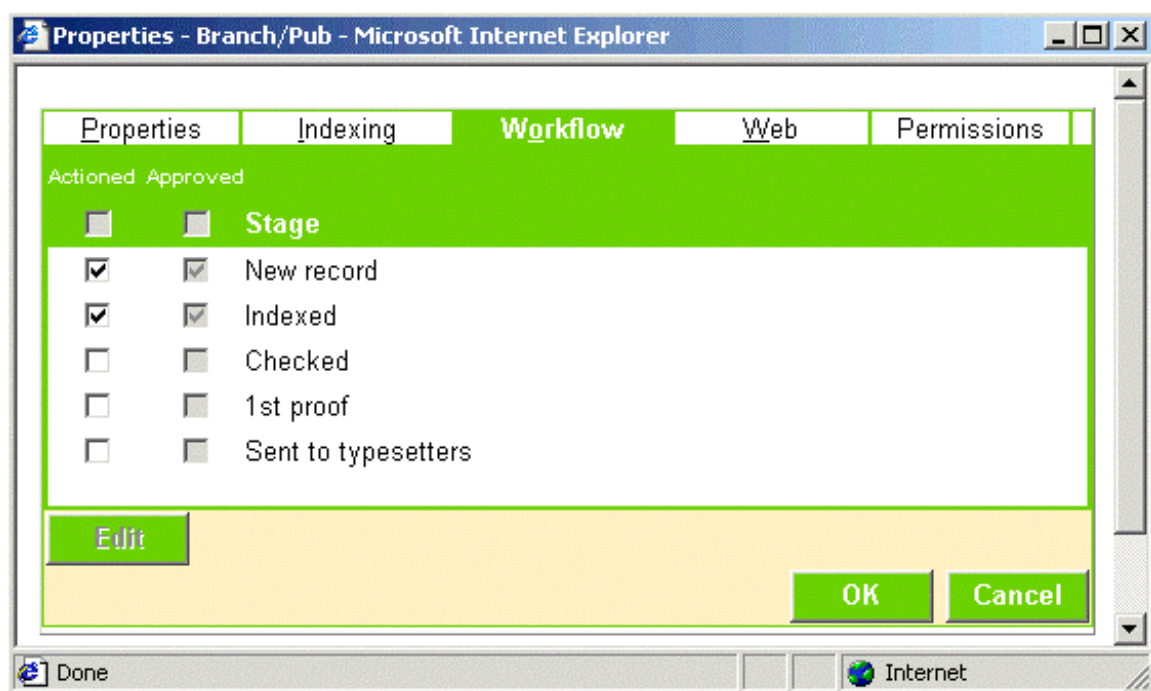
7.35 Workflow/approval

The system allows editors to track the stage in the editorial/production process that a piece of data is currently at:

- The administration feature supports different workflow stages configured by editors with sufficient rights
- Different workflow stages can be configured for different publications

- Configuration so that when an editor saves changes to a record they must update the status field:
 - ⇒ They can have the option to **not** change the status, but making this a required field reminds them to update it
- Normal users may be required to go through a series of steps for a record before it can be published/updated, however senior editors can be given permissions to over-ride this requirement
- Using the editorial system search facility editors can search for all records that are in a certain stage in the workflow process (e.g. awaiting sign-off by a senior editor)
- Using the editorial TOC control an editor with sufficient rights can update the workflow of multiple records in one go
- Features provided include the facility to generate a **to do** list which shows all records in a publication which have not reached a certain stage in the editorial lifecycle

This component helps publishers to track and enforce their workflow practices for the management of content throughout its lifecycle.



7.35.1 Example workflow stages

Publishers can use this administration facility to define workflow stages:

- New record
- Indexed
- Checked
- 1st proof generated
- Sent to typesetters
- Awaiting final check
- Etc.

These options can be set in the workflow configuration interface which individual editors can set for records. Administrators can modify this list to change the workflow steps.

7.35.2 Tracking workflow history

The workflow history of records in the system can be tracked. When this option is turned on the system records the date of changes to the status of an item and which user updated the item. Users can view the data for different time periods and search the data to audit the history of a record.

See section 7.18.

7.35.3 Advanced workflow functionality

7.35.3.1 Event management/notification component

This component allows users to specify that when a record reaches a certain stage in the editorial process, a certain action should be performed – such as:

- A notification e-mail should be sent to a specified user
- At a certain workflow stage, a report should be generated or a record should be copied to a specified location.

The e-mail notification mechanism can be used to inform users that some content has reached a certain stage in the process and is ready for them to edit. For example, when a record reaches a certain stage another related record should be deleted, etc.

This is extremely powerful functionality for automating many manual editorial tasks.

7.35.3.2 Alternative workflow path/decision handling

This advanced plug-in for the workflow component allows users to manage multiple workflow branches, or alternative workflow options based on choices made at different stages.

For example if an item is selected or categorised as an item for a full review, it may have set of workflow stages. However if it is not selected then it has a different set of workflow stages (partial review and archive maybe).

Often an organisation's workflow concerning a unit of information will depend on choices made at certain stages in the content management process. This advanced component allows a publisher to specify that a certain stage is a workflow branch and that the specified choice made at a given stage determines the following workflow stages.

In the workflow interface, users can choose which stages are branching stages or decision making stages. Users can then specify different outcome workflows for each different choice available at the decision making stage.

This component also records the decisions made at different workflow stages along with notes on the decisions.

7.36 Multi-user/concurrent users

A high number of concurrent users is supported by the system due to its use of server based technologies (and browser based access), and the support for checking out records that are being worked on. When a user works on a record, it is checked out and other users cannot access it - but they can see who it is checked out by. When a user finishes work the record is checked back in and other users may again access the record.

The number of concurrent users supported is mainly limited by the hardware that the system is running on, and, on recommended hardware, it supports hundreds of concurrent users. Because the system is scalable, where support for a very high number of concurrent users is required, then more powerful hardware can be used to run the system, and the system can be configured for a clustered (multi-server) environment.

7.37 Duplicate checking/detection

7.37.1 Automatic duplicate warning for new records

When enabled duplicate checking warns users when they create a record which has the same name and geographical data as an existing record (e.g. the same name and post/zip code). Users see a warning and can choose to display the suspected duplicate item, to check whether it is really a duplicate, cancel the operation, or ignore the warning and create the record.

7.37.2 Searching for duplicates

Duplicate detection is another function, which can be run by clicking on a button or selecting a menu option to detect duplicates. It searches for all items in the system where the name (this looks for similar not only equal names) and address data indicate that the items may be duplicates (it runs a special search for duplicates). The criteria that are often used are, for example, name and postcode, but this configuration can be modified – an advanced functionality option allows the user themselves to configure.

The user then views a list of all the possibly duplicates and modify the items returned to rapidly de-duplicate the content.

7.37.3 Auto merge

Auto merge functionality will merge two selected contact records into one and save conflicting data (where the data is different in the two merged contacts) into the notes field.

7.37.4 Defining rules for detecting duplicates

Common criteria for locating duplicates in directory type data are:

- Companies - where two records have similar names and the same postcode
- Contacts - where two records have similar surnames and the same postcode

These criteria are used because fields like address and first name may be different even where the entry is really a duplicate. Other criteria for different types of data are the name of an article or item being imported.

Regular expression matching can be used to match fields containing similar but not identical data. For example names containing the following expressions can be treated as the same for purposes of finding duplicates:

- "Ltd" and "Ltd."
- "Limited" and "Ltd"
- "The company name" and "Company name"
- Etc.

Where the user has specific requirements for handling duplicates, the system is configured to use the rules that accommodate this.

7.37.5 Actions on duplication detection

There are several options on import:

- Records can be flagged as potential duplicates
- Records can be merged with conflicting data being saved to a special field
- All duplicates can be put into a special category so they can be easily processed by the editor
- The user can manually “step through” the duplicates
- The duplicates can be deleted (or not imported in the case of the import functionality)

Where records are flagged or categorised as duplicates, when opened by the editor the record displays a label that a suspected duplicate exists, and a link to the duplicate record. Editors are then able to open both versions in separate windows, compare them and merge or delete the records as desired. On completion of the import a report is generated displaying the number of suspected duplicates and list any merges performed.

7.37.6 De-duplicating on import

When data is initially imported into the system any duplication can be handled. The import program can be configured to merge duplicates or flag duplicate records on a number of criteria.

7.38 Archiving data

Data can be archived manually by the user or automatically based on specified criteria (such as last modification date and type e.g. news data is often archived if it is older than a certain date).

The archived data is placed into a separate category and is not usually used for standard editorial operations (such as searching, search and replace, etc.), although it can be browsed, modified or retrieved by the user as required.

Archived data can also be transferred to a special archive database to reduce the main database size and increase performance (once it has been transferred it can still be restored at a later time). Generally the system tends to archive rather than permanently delete data - although the administrator can change this configuration if desired.

7.39 Batch record update

Using the editorial TOC to apply changes to multiple records in the repository users can:

- Select multiple records using multiple selection functionality
- View the editing screen for the selected items
- Update the data for all selected items with the changes they make in the editing screen

This allows editors to update data relating to multiple records (all records below a particular heading, all organisations in a certain country for example), to modify notes, delete the all data in a field, etc. This is similar to find/replace functionality but is used for batch type updating when an editor wants to set the same data in a field for all selected records.

This component allows users to select the multiple records and then opens them in the normal editorial view. Fields that can be modified for all records will be active and other fields will be disabled. When the user chooses save, the changes are applied to all records in the selected group.

7.40 Custom fields

More details to follow.

7.41 Multiple language and translation management component

This component allows users to manage multilingual content in the system, allowing translations of records to be stored in the database.

This component allows the user to specify that one record is a translation of another record – or derives content from another record (this utilises the related record component, see section 7.28). The system can then notify users when a translated record, or a record with translated elements or a related record in a different language has been changed. This allows users to see which related or translated records have been changed and decide if the translations should be updated.

There are also links between a record and all its translations, or all its multilingual versions. In this way users can easily navigate between the different language versions.

A side-by-side view of a record and its translation is also available allowing users to rapidly compare and update the content of both records.

For example, this facility allows different records to be pulled out for different language areas of a web site.

More details to follow.

7.42 Template management

Templates are stored in the system as a special type of editable content. Templates are divided into import templates, file delivery templates and web delivery templates. They appear under a special "templates" system classification/publication and can be managed in the eTOC/taxonomy editor just as all other content.

This provides an extremely powerful mechanism for managing templates because templates can be classified under different classifications, copied, edited, moved, etc. as with normal content. So when a publisher wants to modify a delivery template to produce a book or CD with a different look or containing a different data set, they can simply copy an existing delivery template and modify it.

Templates can be edited in an external editor and exported to disk, and re-imported from the disk.

7.43 Editorial alerts and event handling

This component allows users to specify that when a record reaches a certain stage in the editorial process that a certain action should be performed – such as a notification e-mail being sent to a specified user. Or, for example, maybe on a certain workflow stage (see section 7.35) a report should be generated or a record should be copied to a specified location.

The e-mail notification mechanism can be used to inform users that some content has reached a certain stage in the publishing process and is ready for them to edit. For example, perhaps when a record reaches a certain stage another related record should be deleted, etc.

This is extremely powerful functionality for automating many manual editorial tasks.

This component would allow the publisher to generate a letter to the editor, etc. when a article reached a certain stage in the editorial process.

Also see section 12.3, the functionality here can also be used on “editorial” events and sent to system users rather than end users.

7.44 Metadata management

More details to follow.

8 ACCESS CONTROL

With a substantial editorial and publishing system in place, a wide range of editors, authors, employees, and contributors potentially all feed different types of content to your system. For security reasons one simply cannot allow all these people complete access to edit and manipulate your data.

Tracking these contributors and the areas where they are permitted to go, can be an administrative nightmare. Konnect Soft have addressed this problem with a highly secure access control system which allows access, based on the rights that the publisher chooses to assign to each contributor.

The content management system allows the publisher to control which system users have access to different parts of the data and user interface, and what level of rights, they have to these areas.

Konnect Soft's Electronic Content Management System utilises a powerful system of rights control and rights administration allowing administrators to control users' access to all parts of the system. When combined with the system's fully distributed remote worker support, this feature allows publishers to benefit from editors and authors working in any location in the world.

8.1 Integration with Microsoft Windows security

The editorial system is integrated with the Windows NT/2000 system of rights so that it automatically recognises the user that is currently logged in. This means that user accounts correspond to NT/2000 user accounts and therefore users do not have to log on twice and double updating does not need to be performed for user name and password information.

Separate user information relating to the editorial system is stored in the database but when a user is added, the administrator can select from the list of available NT/2000 users rather than having to manually duplicate the information. When a user attempts to access the system, their level of rights is checked and they can proceed to perform the allowed operations.

8.2 User management component

The system allows administrators to easily add new users or groups and modify existing user details. User accounts can be created for all editors (local and remote), contributors, administrators, checkers, etc. – essentially for everyone who uses the system. When a user edits data their modifications to the data are tracked so that editors identify the creator and modifier of different content.

The system can limit each user account to allow only one person to log in per user account at a time.

8.3 Controlling user access – rights control

8.3.1 Controlling access to the interface

The access control component allows administrators (users with sufficient rights) to control the level of access different users have to the system. This component is very flexible and allows the system to be configured for individual users to restrict them from using parts of the interface (e.g. no access to the system configuration screens) or to restrict users from performing certain operations (e.g. including data in a publication).

Access rights functionality for users is set in the user rights management area of the interface, where an administrator can select users and control what access they have by choosing options from a list of permissions for different areas and operations.

The right to control access to all of the areas on the user interface and to control who can use any of the editorial system components is provided by this system.

8.3.2 Controlling access to publications

The system can be configured to control which publications a user can access. Publications can be hidden from individual users so that when they login to the content management system, they only see the publications they have access to. Also a publication can be visible to editors, but restricted in that they cannot modify the content of the publication.

8.3.3 Advanced data access control

The system can be configured so that administrators can select individual parts of a publication and control who can access this content. This extremely powerful functionality allows users to be restricted so that they can only modify, for example, a specific chapter or section; data with a certain classification or a certain group of records. In combination with the remote access features, advanced data access control can facilitate a highly distributed remote workforce all working on different parts of the data in the system. This functionality is accessible from the editorial TOC allowing administrators to right click on an area of a publication and enter the user access control interface to select which users can access the publication.

Properties - Branch/Pub - Microsoft Internet Explorer

Properties Workflow Rights

Rights Administration

Selected Item: This chapter covers:1. □...

System Account
Administrator
Everyone
Konnect1
Konnect2
konnectsoft02

Add
Remove

Permissions	Allow
Full permissions	☐
Modify content	☒
Editorial functions	☒
Edit index terms	☒
Edit cross-references	☒
Edit footnotes	☒
Configure/Edit workflow stages	☐
Approve workflow stage	☒
Update workflow stage	☐
View content	☒

☒ Inherit permissions from parent item (untick to set permissions on this item)

OK Cancel Apply

8.3.4 Examples of user rights levels

Below is an example of just a few possible configurations that can be generated from the available levels of users rights present for the system. In the table below (which shows an example slice of all possible rights levels) higher-level users inherit all the rights of lower level users, plus the additional rights listed.

User level	Description/rights
Administrator	Can modify user rights.
Senior Editor	Can make live changes to all data. Can edit or delete contributors comments.
Editor	Can submit updates/changes but they require editorial sign-off. Can see all records. Editors can give a record contributor review or previewer status. Can create user names and passwords for contributors.
Contributor	Can make comments but cannot modify the record itself.
Previewer	Can view material made available to a contributor, but cannot write comments. Can only see material that has been made available for contributor review through this interface.

8.4 Advanced configuration of different interface forms/views

Access control allows administrators to create different user interface configurations for different system users, which can be saved as forms or views. The system allows administrators to control which views a user has access to, thereby controlling how the system looks and behaves for the user.

A form/view may include and exclude different controls, and controls can be hidden from certain users or disabled. The configuration of a interface view can control what a user can do in the interface, and what data they can see.

For example the administrator may configure a view for editors, which contains the taxonomy control, the content control and the indexing control, but does not contain the cross-references control.

A default view can be specified for a user, and when they log onto the system they see this view. Different views can be selected from a pull-down list of views.

User with higher levels or rights may have access to the views for all users.

8.5 Remote editorial access

When a remote editor wishes to access the system they need to select the system login page in their browser and enter their username and password. If permitted by the administrator, they can then gain access to some or all of the editorial system features.

The fact that the editorial system is fully accessible remotely and that user rights control can be used to control what functions remote editors can perform, provides a very powerful distributed system.

8.6 IP address management features

The system recognises which public IP address a user accesses the system from and can restrict or enable access to system users based on IP address.

More details to follow

8.6.1 Detecting possible unauthorised access by IP address

More details to follow

9 SYNCHRONISATION OF DATA

Where the web server is not located within the client offices, there is normally a requirement for data to be synchronised.

Synchronisation of data between the web site and the client offices is performed using SQL Server Replication. This allows clients to perform synchronisation of the data between the web site and the client offices according to their exact time and frequency requirements.

9.1 Replication

Replication involves having copies of the databases at different locations, which can all be updated, and which contain all data from all locations after synchronisation.

Synchronisation means that only:

- New records
- Records that have changed
- Information about which records have been deleted

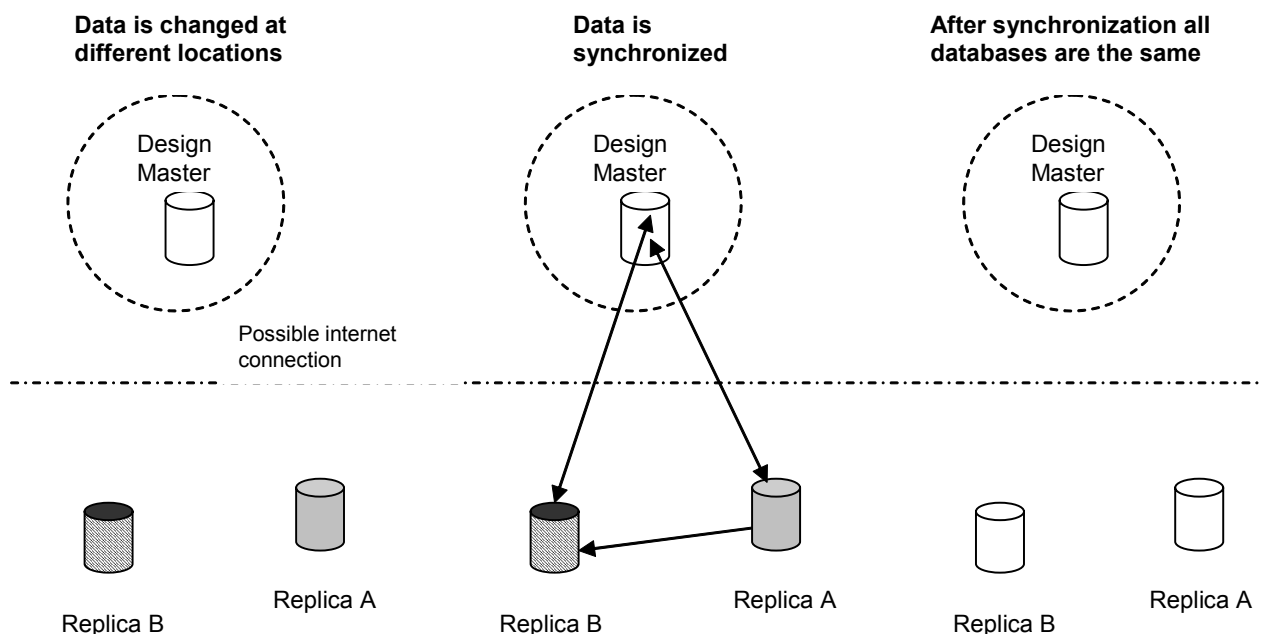
.... are transferred to the other replicas.

If the replica is the database on the web server then replication effectively uploads the data to the web site and downloads only new or changed data (e.g. orders and subscriptions made on an end user web site).

Replication also allows several geographically dispersed offices to all use the same system and merge their changes so they all essentially work on the same dataset.

Where enabled, the system allows all replicated databases to be edited/administrated through the web server/site.

9.1.1 Diagram



9.1.2 Features

Replication offers a host of features including:

- Allowing individually changed records to be updated without the whole database needing to be uploaded (it is the only practical solution to achieve this)
- Allowing editors, reviewers and external contributors to change data (over the internet) in the web database and these changes to then be reflected in the local database

- Reducing potential web production bottlenecks by eliminating the need to upload entire databases and by the use of built-in replication synchronisation and conflict management
- Ensuring data integrity and security by using a built-in database replication system rather than exclusively using custom import/export filters
- Replication is the best technology for long and medium term development of such systems in respect of content management.

Replication typically includes the following databases:

- Continuous (discursive) text
- Directory content databases
- News database
- Links database
- Users/subscribers database

9.2 Data conflicts

This component manages conflicts between data changes on the web server/site and the editorial system

Although the recent work report reduces the chance of conflicts occurring, this situation is still of course catered for by the system.

A conflict happens where the same record is updated (or deleted) on the web site **and** on the back-end editorial system. Where such a conflict occurs, the system is pre-configured so that the editorial system data “wins” (i.e. is kept as the live data), and the data from the web server/site is stored in a separate holding area.

For example a conflict could appear if an editor updated a record on the web server/site and the editor also updated the same record at the client offices. The update made at the offices is retained in the database and the update performed through the web server/site is stored in a separate conflicts area of the database.

System users are able to check the conflict table and view any data that has been entered on the web server/site that has conflicted with the backend system. System users are able to cut and paste this data into the record, in the event that they decide the data entered into the web site should be the live data.

9.3 Exchanging data with other applications/interoperability

Often there will be a requirement to link the system with another application (to import and export data to and from another application). This might be a link to the sales, marketing or financial system or some other specialist internal database which holds some of the same data as the content management system.

The system can be set up to automatically (on a scheduled basis) export data to another system and import data from other applications (this can be done in a wide variety of formats – see section **Error! Reference source not found.**). It can be configured to replace existing data on import or where there are differences between existing and imported data this information can be stored for editorial review/acceptance. For example:

- All updates to the billing contact might be automatically imported from an financial package such as Sage, replacing what is in the content management system
- But the details of the entrants might be exported from the content management system for use in the marketing system.

9.3.1 Data exchange packages

Data exchanges packages are configured for each external system with which data is being exchanged. These packages hold the specific configuration to handle the import and export of data between the systems and any specified business rules. These packages are re-usable and can be duplicated where a user wants to set up data flows between several similar applications.

9.3.2 Data exchange APIs

For medium or large organisations this sort of interoperability is essential to allow the system to be integrated with the other databases run by the organisation. Konnect Soft can configure the desired integration or can make the data exchange APIs for the system available to the client where they want their IT Department to control the integration.

9.4 System data flows

See section 30 for diagrammatic representations of the data flows involved here.

10 REMOTE EDITORIAL ACCESS

10.1 Overview

Even the smallest companies may not have all personnel/contributors located under the one physical roof e.g. clients may have a multitude of contributors who are not only in separate offices but also working in different countries and in different time zones, and potentially delivering content 24 hours a day.

Konnect Soft's content management system can be made fully available to for these remote users. Regardless of where they are located, users only need an internet connection and Internet Explorer 6* to be able to access the system remotely. Because the system is browser based and uses advanced replication, remote editors can perform any operation that local editors can perform i.e. remote editors actually use the same system as local editors, but just over a different connection (i.e. over an internet connection rather than a local network connection).

The user rights control system allows administrators to configure the system so that individual editors can only access certain data and perform certain operations (this functionality can be applied to local and remote editors). This allows publishers to have different types of remote editors to support a fully distributed work force.

The system can be configured so that editors can, for example:

- Change data in one publication
- Add and modify data but cannot delete data
- Edit text but cannot change add, edit or re-order headings/classifications
- Etc.

See section 8.

10.1.1 Configuring remote access

Using the content management system search functionality editors can search for all records modified by individual remote editors and review these records. Using the access control functionality administrators can control which content users can access enabling different remote editors to be used for different publications or data sets.

10.2 Contributor/editor review area

10.2.1 Overview

There is a password-protected area on the web site which contributors or editors can logon to, to make comments on or submit changes to a record. System users provide the contributors, or remote editors, with a URL and a password. When the contributor goes to the URL, they are prompted for a password. Upon successful validation of the password, they are able to submit comments, notes, or suggested changes to a records (contributors have an editorial user account configured with a special set of rights defining what actions they can perform and what data they can access).

10.2.2 Editorial notification

Once the text has been submitted, it is stored in the database and editors may receive an e-mail notification that data has been submitted. Editors are then able to review the submitted text and modify the record as required.

10.2.3 Remote editing

This system allows remote editors to submit changes to records, but these changes remain provisional until an editor at the client offices accepts them and inserts them into the record. In the same way contributors' comments do not show up on the live site, unless editors choose to insert them into the live record.

10.3 Securing remote access

Access to the system is fully secured before being opened to remote users. Methods used to secure the system include:

- Restricting access to specified IP addresses/ranges
- Operating on a secure port
- Support for encryption and certificates
- Operation over a secure VPN connection
- All users are required to have a secure user name/password
- Support for Windows 2000 security
- Logging of log on attempts
- Fully secured database
- Etc.

Everyone using the internet is assigned or operates through an IP address (sometimes several users share the same IP with Network Address Translation for example). The system is often secured to only allow access to the IP addresses (or address ranges) used by the remote users (in addition to the requirement that everyone has a password to access the system), which provides a good basic level of security. Password complexity can be enforced by the system which requires that all users have a password of a specified length and complexity (such as a mix of letters, numbers and special characters).

10.3.1 Higher security levels

For higher levels of security, the system can run over SSL and only allow access to authenticated users.

10.3.2 Firewall

Konnect Soft can assist in installing and configuring a firewall for the internet connection to the server which the system runs on - please contact us for further details. See section 30.2 for further information.

11 WEB SITE – DELIVERING CONTENT TO THE END USER INTERACTIVELY

11.1 Introduction

Below are listed major components that are typically required for a system delivering “released” content via the web site.

Each of the components is (in most cases) a separate area of the site consisting of a central page and, possibly, links to other pages.

The web based components can be integrated with the Konnect eCMS editorial system so that all content is managed from the editorial system, or the web components can be separate (if one has a different editorial system but wants to use some web component).

11.1.1 Integration with already existing web sites

Where the client has a site with functionality or design elements which are to be retained, Konnect Soft as required integrate the new additional components from our system within the existing infrastructure.

11.2 Compatibility and technologies

11.2.1 Browser compatibility

Versions of browsers supported:

- Internet Explorer 5, Internet Explorer 6
- Other browsers types or older versions, as required

If users are using an older browser they are warned that they may experience problems with the site, but they are allowed to browse the site. (Links to download areas for updated browser versions are supplied.)

11.2.2 Cookies

These may be used by the site, but not extensively. If cookies are used to store data about a user, then there is a link to a statement on privacy that informs the user about exactly what the information is used for. If the user has cookies turned off, they are warned that the site may not function properly.

11.2.3 Graphics and display

The site is optimised for a screen width of 800 pixels and utilises predominantly web safe colours. Utilising a screen width of 800 pixels means that the site also operate on higher resolutions, but is viewable on the lower resolution settings.

11.2.4 JavaScript

The site uses JavaScript that is compatible with the supported browser versions (see section 11.2.1). JavaScript provides powerful features that can make the site faster, offer extra functionality and enhance the user experience. If users have JavaScript disabled, they receive a warning saying that the site uses JavaScript and they are informed about the low graphics version of the site (where specified by the client). They are then be able to choose to enter the normal site or the low graphics version.

11.2.5 Java

Java is not heavily used and is avoided on main pages where loading time is important. It may be used on some pages where it is the best tool for the job, but applet sizes are minimised and earlier versions are used to ensure browser compatibility.

11.2.6 Platform compatibility

Site functionality is primarily designed for PCs, but is tested under Macintosh platforms to ensure there are no major compatibility issues.

11.2.7 Speed

Given the frequent client requirements to provide the web site to the user with slow internet connections or old machines, the site can as required be optimised for speed of page loading. Programming and coding techniques are used that reduce the loading time of pages on the site.

11.3 Design

The design incorporates colours, font types and sizes, images for buttons, a universal navigation bar and theme images for various areas of the site. New designs, where specified, replace or modify existing aspects of all pages that need to be changed.

11.3.1 Site graphic design

The objective is to fully support the desired corporate/product identity and, as required, utilise any existing or new graphic designs from the client.

Site graphic design or re-design are implemented as required by Konnect Soft's own designers. New design concepts are presented in advance of implementation for approval by the client.

Where the requirement is to use a third party design company, Konnect Soft can work closely with the client's designers to ensure that objectives are met here (Konnect Soft supply the necessary specification details for implementation).

11.3.2 Integration with an existing web site

Where the requirement is for the content management system to be integrated with an existing web site, the current corporate/product identity of the client is adopted utilising existing web graphics and designs to achieve a unity of look and feel. New design concepts are presented in advance of implementation for approval by the client.

11.3.3 Style sheets

Style sheets are used wherever possible, but only features that do not compromise browser compatibility are used.

Style sheets make the site much easier to maintain, allow more consistent use of styles and give access to many features not available with standard HTML styles.

11.3.4 Navigation

More details to follow

11.4 Accessibility for users with disabilities

11.4.1 Overview

The objective here is to increase the accessibility of content delivered over the internet/intranet to all end users including those with disabilities.

Accordingly one needs to consider not only the look and operation of a web site, but also how easily it can be accessed by people with disabilities.

There are many reasons to make your site more accessible including:

- Demonstrating good corporate responsibility by not discriminating against people with disabilities
- Complying with existing legal requirements (such as the US government's Section 508 and the UK's Disability Discrimination Act)
- Specifically targeting the large number of people with disabilities amongst online users
- Accommodating an ageing online population who as they grow older experience similar issues to those with disabilities

In the case of legal responsibilities, for example:

- In Europe governments tend to frame their legislation around the Web Accessibility Initiative developed by the W3C (World Wide Web Consortium) which sets technical standards for the web
- In the USA there is a law known as Section 508 which is accompanied by detailed technical guidelines for accessible web design

11.4.2 Achieving accessibility compliance

Meeting web accessibility guidelines has significant benefits, as with effective implementation every visitor to your site benefits from the enhanced and structured design, whether they have special requirements for access or not. In particular, information sites can benefit from being made accessible because part of making a site accessible involves effectively communicating information to end users utilising good structure and navigation techniques.

Implementation is concerned with a wide range of elements including text, graphics, colour, frames, dynamic elements, multi-media, etc. that affect the experience of the visitor. Individuals with disabilities access the web in several ways as they may use customised browser settings, such as font size, colour, and screen resolution and may also rely on assistive devices. See also section 11.17.

11.4.2.1 Level of compliance

Accessibility can be provided for sites according to the level of compliance required. For example, in the case of W3C's compliance levels can be supplied to meet:

- Conformance Level "A"
- Conformance Level "Double-A"
- Conformance Level "Triple-A"

.... satisfying the priority checkpoints of the Web Content Accessibility Guidelines.

11.4.2.2 I have an existing site – how should this be handled?

For an existing site which has not originally designed with accessibility in mind, compliance can often be achieved relatively easily.

Where there is a requirement to upgrade accessibility levels, Konnect Soft:

- Reviews any existing site or content
- Checks for accessibility compliance
- Supplies proposals for improvement
- Implements improvements according to the level of compliance required

11.5 Searching

11.5.1 Overview

Usually the purposes or one of the purposes of a web site is to provide information to users. To effectively do this, the information must be accessible, and one of the key ways of making it accessible is through the provision of a powerful, flexible, intuitive search solution (navigation is another important aspect). The web site search functionality offered by the system allows users to perform anything from simple to complex searches to rapidly locate the information they are looking for. Different levels of search and different search mechanisms are utilised to effectively locate information.

11.5.2 Single search gateway

Konnect Soft can provide a single search page/gateway through which all searching can potentially be done. There is a link from the top navigation bar to the search area so that users can easily access this search area at any time. This search page defaults to a full site search, but the user is **also** able to easily choose to search a more specific set of results – see section 11.5.4.

11.5.3 Full text and full site search

Indexing technology is used to index **all** site content including:

- Records in the database
- Static HTML pages
- PDF files on the site
- Microsoft Office documents
- Text files
- Etc.

This component can search a combination of continuous text data and documents, and fielded data (where it searches all fields). The full site search mechanism provides a powerful and easy way for users to access the content of the site.

To limit users' choices in the search mask, the data sets available to them can, if desired, be controlled using the subscription and authentication component (see section 14.2).

11.5.3.1 Automatic re-indexing

Data is automatically re-indexed when it is changed, and the user has a high level of control over searches and their results.

11.5.4 Targeted search

The targeted search provides users with a mechanism to search only part of the site at a time. This is useful for users who have a better idea of what they are looking for, or who can tell from the options which area they wish to search.

11.5.4.1 Dynamic search forms

Search forms change dynamically when the users make their selection, displaying additional criteria that can be filled out for a particular area. If the user leaves these areas blank, then the full subset of the site is searched. If they fill out multiple fields, then the search returns only records that contain all of these conditions.

11.5.5 Fielded search

The web site search functionality can be configured to allow end users to search over some or all of the different fields in the data repository (This is often more relevant for fielded or directories model content rather than continuous text content). Essentially almost any field in the editorial system data can be made available for search on the web site search (although usually there are administrative fields that the client may not want to make available to end users) including:

- Meta data
- Textual content
- Date fields
- Directories fields
- Taxonomy terms

...and all other fields in the system.

Different types of controls are used for different types of data including:

- Date selection controls
- Pull-down lists for classifications
- Standard text boxes
- Controls requiring validation

The searching component also supports a combined search over all fields.

11.5.6 Results/hit list

After the user has performed a search, they are taken to a results page which lists all the results from the search. These results may actually come from different areas of the site (see section 11.5.3) but are all listed on the one page.

- Results are returned as pages of records (hits) which the user is able to navigate through to get the next or previous page of results, or jump to a given page
- Users can sort the results by any field in the hit list by clicking on the column header for the hit list
- There are two types of hit list which can be configured for search results:
 - ⇒ Table form where information is presented in columns
 - ⇒ Search engine form where information is shown as a list of items identified by headings (and sometimes other meta data e.g. date)

11.6 Advanced search functionality

11.6.1 Search operators

The following functionality is supported by the advanced search component:

- Boolean operators
- Data range searches
- Search within previous search results
- Proximity operators
- Synonyms
- Stop word lists
- Regular expression operators for advanced users

Often sites have a standard search mask and an advanced search, which the advanced search functionality is more accessible from.

11.6.2 Searching within results

Searching within search results functionality allows users to further refine a search, by running a search over their search results.

11.6.3 Saving searches

The saved searches functionality supports:

- Users saving their **own** private searches and retrieving them when they next access the site
- The system can be configured to save the user's searches in the database or on the end user's machine (if for example there are concerns about privacy)
- For searches saved in the database administrative details can be saved about the search such as:
 - ⇒ Date and time of the search
 - ⇒ The IP address of the user who saved it
 - ⇒ The user name of the user who saved the search
 - ⇒ Etc.
- Administrators adding publicly available saved searches i.e. they are made available to the end user – these can for example:
 - ⇒ Be interesting or topical searches
 - ⇒ Be searches that locate commonly searched for information
 - ⇒ Appear as links on different pages that run a search and display the hit list to users
- Saved searches can be retrieved and edited

See also section 12.14 and 15.

11.6.4 Joining search sets

Sometimes a user will run one search, and then run another search and want to view the results of both searches merged together. Essentially this functionality creates a new search which returns both sets joined together.

Saved search functionality is needed to support this, see section 11.6.3.

11.6.5 Search results display/download

Search results can be made downloadable in a number of formats. This is often combined with mailing list type functionality for search and selection. See section 15, the same component is used but without payment being required for the information if the publisher wants to make it freely available.

Hit list tagging is available to select which items from the results set the users wants to view or download, there is a check box next to each item in the hit list to allow users to select some records within the hit list.

Delivery functionality is used to control the format of the downloadable search results, and different formats are configured using delivery templates.

11.6.6 Thesaurus and synonym use

Thesauri/synonym lists can be used with the search functionality. This requires the advanced taxonomy editing features component which is used to administer the thesauri/lists, see section 7.5.

11.7 News

Recent news articles can be shown on the home page, but are also typically accommodated on a separate area of the site where users can view and search all articles.

11.7.1 Searching

Users can search for news stories within a given month or year as well as over a defined time period (e.g. between 27 March 1999 and the 30 October 2001).

Alternatively, one can search for specific words in the title of the article, in addition to words in the body, or title and body.

11.7.1.1 Search criteria

- All (title and body text)
- Title (only)
- Body text (only)
- Start date
- End date

11.7.2 Administration

When a system user with sufficient rights has logged on to the site, they are presented with buttons that allow them to administer (edit, delete, add, etc) the new articles.

The administrative system includes the ability to:

- Add an article
- Delete an article
- Edit an article

Articles have the following functionality.

11.7.2.1 Release dates

A release date can be any future date. The article is not released until this date but can still be edited and modified before it is released, but it is not viewable by end users.

11.7.2.2 Rankings

The ranking facility in the current system is fixed so that all current articles start unranked, but remain in the order they are in at the point of migration to the new system. Editors are able to apply a ranking to articles to make them appear higher or lower in the list. This rank is applied by a pull down menu which specifies the following levels of ranking:

- Highest, high, medium, low, lowest

.... where highest appears before all articles ranked as high, high before medium, etc. All articles start in the new system with a medium ranking.

11.7.2.3 Fields

Fields include:

- Release date
- Ranking
- Date created
- Editor/author
- Title
- Body text

11.7.3 Hit list

When users choose to view the articles or the results of a search are displayed, the hit list is displayed which includes the following options.

11.7.3.1 Show headings only/show summary text

Users are able to toggle the display of the article summary text **on** or **off**. If summary text is turned off, then only the headings of the news articles display (with more entries per page being displayed). If summary text is turned on, then the hit list displays the article title and the first few lines of summary text from the article.

11.7.3.2 Page Navigation

The hit list includes the following fields:

- Date published
- Title
- Summary text (this is not a separate field but just the first 200 characters of the article)

11.7.4 Display

The display of news articles includes the following elements:

- Navigation buttons (previous article, next article, back to recent articles/hit list)
- E-mail to a colleague/friend link

The four most recent new items are displayed on the home page, allow users to jump straight to a recent article.

11.8 Continuous text display and navigation

11.8.1 Administration

Administration of the continuous text records are controlled by marking records in the database as “web ready”. Once a record is marked as web ready and the databases are synchronised, then end users are able to search, browse and view this content. The “web ready” status can be removed when editors no longer wish the record to appear online.

11.8.2 Continuous text display

11.8.2.1 Cross-references

Cross-references in the continuous text records are converted into hyperlinks in the web pages that the user views. Cross-references to other continuous text records and links to other types of content (such as the directory model databases) are also catered for.

11.8.2.2 Table of contents for the page

The records are displayed as a single HTML document per record. If a record has sub-headings, a table of contents is included on the right hand side of the page. This table of contents is repeated to the right of every heading in the document, so that users can follow a link from any heading to any other heading. Included are buttons for next heading, previous heading, and top of page next to each table of contents.

11.8.2.3 Tables and Images

There is the facility for editors to add links to tables and images to the continuous text records. The images are actually stored in separate files with a link indicating which file should be included. When these records are displayed on the web site, tables are formatted as HTML tables and images as GIFs or JPEGs.

11.8.2.4 E-mail the information/article to a colleague/friend

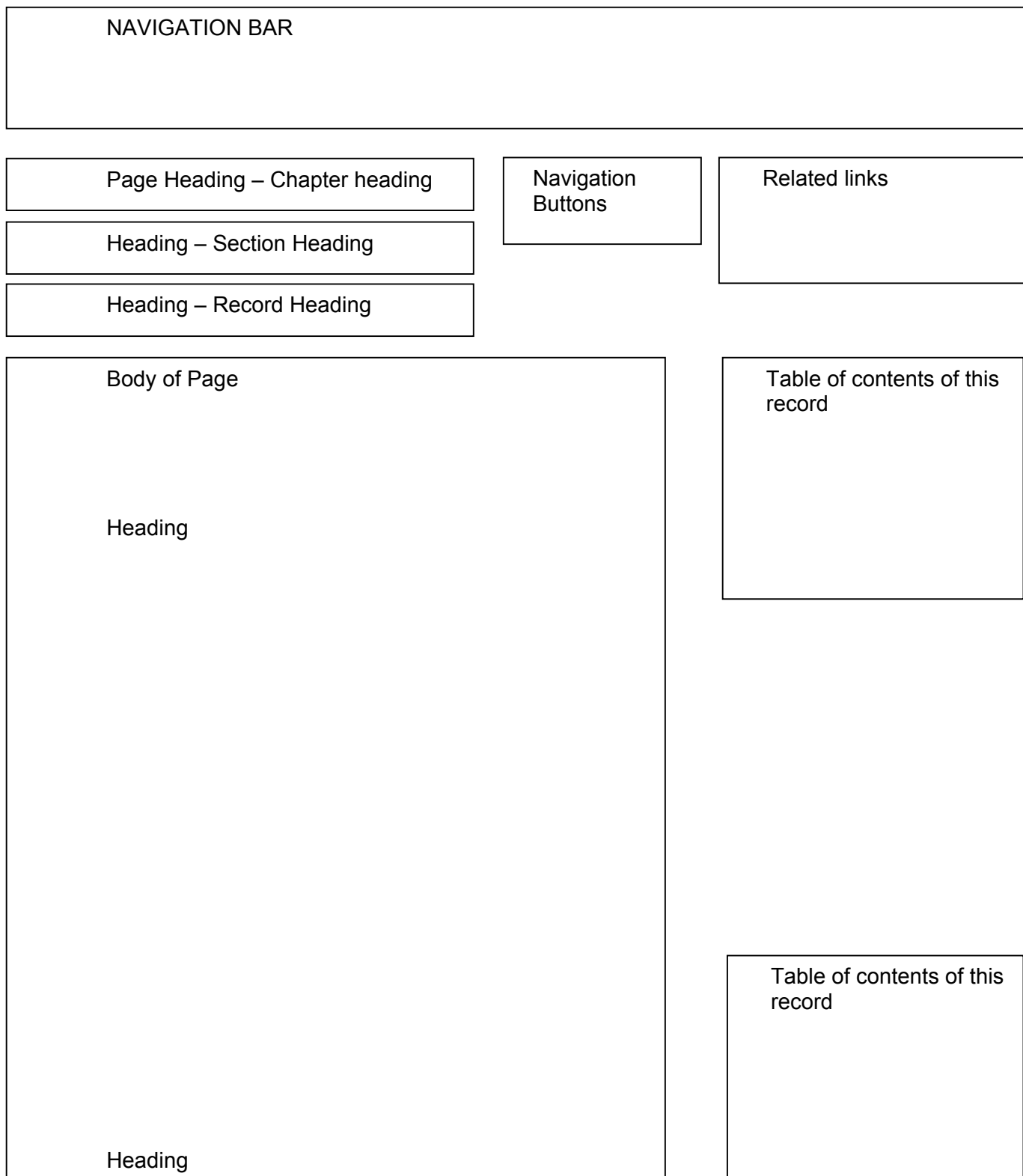
This generates an e-mail to a recipient specified by the end user containing a link to the article posted. Users are able to add their own text to the message.

11.8.2.5 Other comments about the record

Editors have the option to add data into a separate area/field in the continuous text database which displays at the top of the page. If nothing is added, then this section is not present, but it allows for future comment on the records for the web site.

This is an optional facility for adding comments on a particular record. Where there is a concern that this field will create too much editorial overhead, it can be disabled.

11.8.3 Page design for continuous text display – diagrammatic example



11.9 Continuous text table of contents

This feature adds an expandable table of contents of all the continuous text records that have been made available online to the continuous text area. The table of contents reflects the heading/level structure of the continuous text records and allows users to expand headings with a Windows Explorer tree type structure where one can expand down to record level.

The table of contents is a combination of dynamic client-side code, which allow users to expand the headings with a very quick response time, and some server-side processing to avoid very long initial loading times for the table of contents.

11.10 Directory display and navigation

The following functionality is provided for directory pages.

11.10.1 Directory hit list

This page displays the result of a search over only the directory database. A “hit list” of directory records where, for example, addresses or location details are displayed. This is formatted as a columnar table or list of hits as links to the display view. Results are returned in pages where there are a large number of hits, and the users are able to navigate between these pages.

11.10.2 Directory display

The pages display the details of an individual directory entry.

11.10.2.1 Update forms for directory entries

On the display page for directory entry, there is a link to an update form for that organisation which allows authorised users to submit changes to the details for that record. This data is then stored in the database for editorial review. The editors are able to view what data the users have submitted and can choose to accept some or all of the users changes to the live record. Editors may receive an e-mail informing them that someone has submitted an update to a directory record's details, and display information on which records have been updated.

11.10.3 Advanced directories display

11.10.3.1 Street mapping for directory records

The user is able to see a map of the location of an organisation (in the United Kingdom down to the street level). There are different levels of zoom so that one can locate addresses to the street level.

11.11 Taxonomy explorer/GTOC (graphical table of contents)

This component is similar to the editorial taxonomy/table of contents component (see section 7.4) except it is a taxonomy explorer displayed on the end user web site. It allows users to view/navigate data rather than being able to edit data, and it is an HTML/JavaScript based component so it supports more browser versions.

This is a very powerful mechanism which allows users to visually explore the structure of the content. The GTOC can represent headings and sub headings, or classifications, or different record types, or combinations of all of these types. When a user clicks on an item in the GTOC, the page for the item is loaded.

Sites using the GTOC usually use a 3 frame layout but are still bookmarkable. The GTOC is scalable and only loads a manageable chunk of data at a time (so if there are 1,000 records in a branch, then they are not all loaded at once).

The GTOC is updated by the web delivery component (see section 12.15) so the administrator can control when it is updated (on a scheduled/automatic basis or only when a user manually updates it).

More details to follow

11.12 User rights

A system of user rights is implemented for the site which control access to restricted areas. Each user who updates, maintains or administers the site has a user name, password and level of rights on the site.

Different levels of rights allow users to perform different tasks. For example someone with editor rights may be able to add news articles and modify existing articles, but may not be able to delete them. Someone with administrator or web master rights is able to perform all operations on the site.

Access to restricted areas of the site operates through a login page. Where users try and access restricted portions of the site without logging in, they are then redirected back to the login page and requested to login.

11.12.1 User levels

User levels include:

- Normal web user
- Contributor
- Editor
- Senior editor
- Web master
- Administrator

Not all of these levels are necessarily implemented for all areas of the site, but provision is made for these levels in design of the site to allow for future expansion.

11.13 Site layout/navigation

11.13.1 Use of frames

In most cases frames are not utilised for the web site. The navigation bar is normally present on all pages.

11.13.2 Navigation bar

The navigation bar appears on every page on the site, but is normally not contained in a separate frame. It gives users quick access to any part of the site independent of what area they are currently browsing.

The navigation bar graphics and text are a central focus of the redesign phase.

11.13.2.1 Quick bar/shortcut menu

If desired a “quick bar” can be provided on the navigation bar which takes the user straight to specific areas of the site without having to navigate sub-menus. This is a pull-down type menu - when users click on the term they go directly to the page in question.

11.14 Bulletin board

The bulletin board includes the following functionality:

- Users can create new posts
- Users can reply to existing posts (creating a discussion thread)
- Users can search all posting or search subsets of postings
- Option to view all posting since a certain date
- Administrative functionality is provided to remove posts - this only accessible to system users
- Etc.

Please consult Konnect Soft for a full list of features for this component.

11.15 Site map

A site map concept is a high-productivity method of navigation reflecting the exact structure of the new site and can be supplied as required. A tool tip type pop-up box (using the same or similar mechanism as www.aidsmap.com/sitemap.asp) is displayed with an explanation for each area on the site map.

11.16 Help

The help functionality component provides the infrastructure for help text creation by the client.

This infrastructure contains all entry points for help text, the specifications for which are delivered to the client as a Word file, where each entry point is listed as a heading. The client then authors the help text and delivers this back to Konnect Soft where it is then integrated into the web site.

11.16.1 Area specific help – web site

Help popup windows, which are small browser windows, contain help on a particular area of the site. The user can read, close, minimise, etc. these windows and still retain their current context in the system.

Also tool tips are used throughout the site to give descriptions of particular areas or elements of the site.

11.17 Text only/low graphics version

A separate low graphics version of the site can be created which includes all the text and links in the normal site but with minimal use low colour graphics and icons. If a user has pictures switched off, this version of the site is still usable and does not lose any functionality. This is similar to the BBC News “low graphics version” (<http://news.bbc.co.uk/default.stm> and http://news.bbc.co.uk/text_only.stm). See also section 11.4.

11.18 Donations – charity sector

The donations area of the site allows users to make donations by either sending their contact details to the client (who is then contacted off-line to arrange a donation) through an invoice/credit facility, or direct through an e-commerce facility. The area also contains a postal address to which the end-user can send donations.

11.18.1 E-commerce

An e-commerce area is enabled for making donations. This utilises SSL (secure sockets layer) encryption to protect the users credit card details. The end-user enters their credit card details to make the payment, which is then automatically credited to the client account.

11.18.1.1 Fields

Fields include:

- Card number
- Card type
- Card expiry
- Card name
- Card address
- Card city
- Card state
- Card zip/postcode
- Card country
- Phone number
- E-mail
- Comment/message

11.19 Glossary linking

Glossary linking functionality can be provided for the continuous text database records. This functionality links (or displays tool tips for) occurrences of words defined in a glossary in the continuous text pages displayed on the web. The system can be defined to only link the first occurrence of a particular word in a continuous text record to the definition, or link all instances of the word.

If the tool tip option is used, links open in a popup window that contains the definition of the term clicked on. The advantage of using a new popup window is that users do not lose their place in the document, as they can simply close the window and continue reading.

See section 7.21 for a description of the editorial functionality.

11.20 End user feedback/contact us

A feedback/contact area is created which consists of a feedback form. Users are able to choose from a list of feedback options including:

- Report broken links
- Comments
- Suggestions
- Etc.

All feedback is stored in a database table and there is the option of having it also e-mailed to the editors. System users with sufficient rights are able to set who e-mails are sent to for the different feedback options users have.

For example, reports of broken links may be sent to the web master - the system user simply logs on to the system and chooses to have feedback in this category sent to webmaster@clientsite.com. Alternatively, system users can also logon, view and search over the entries in the feedback database. If e-mail for a feedback area is turned off, then the data is stored within the database without automatic notification being received.

There is an option for each feedback area that allows auto-response to be turned on or off for that area. Auto-response sends out an e-mail informing the end user submitting the input that their feedback has been received and is being processed.

Users submitting feedback have the option of submitting personal details although this submission is not normally a mandatory requirement.

11.20.1.1 Fields

Fields include:

- Category
- First Name
- Last Name
- E-mail
- Telephone
- Fax
- Organisation
- Address
- Country
- Comments text
- Contact as soon as possible

11.20.1.2 Required fields

Comments is the only mandatory field.

11.21 What's hot (on the site)

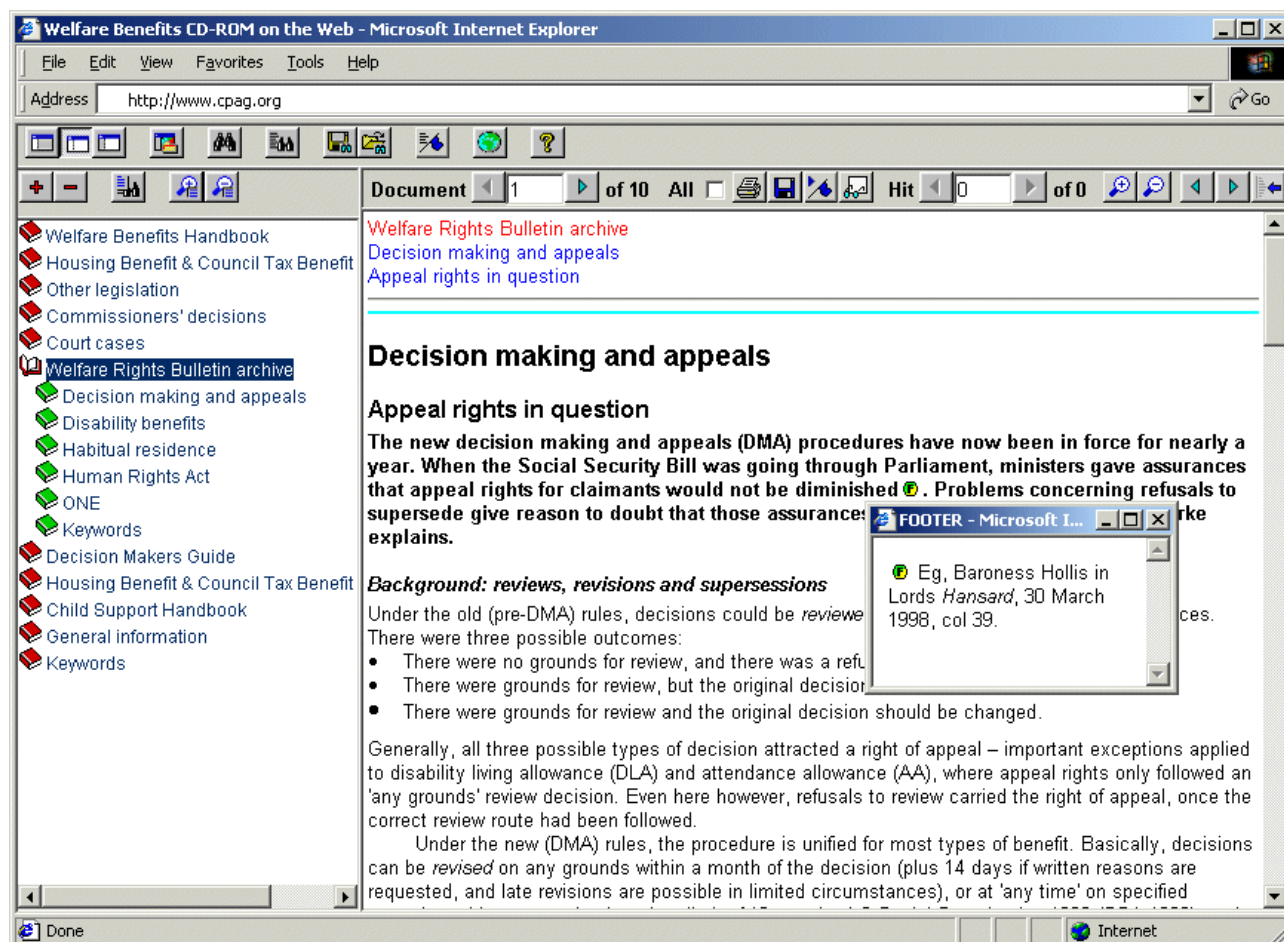
An automatically generated "what's hot" area can be included in the front page. This utilises a program that analyses web server log files to create a list of the most accessed parts of the site. The log files can be analysed weekly or monthly to generate this section.

11.22 Delivering content on the web utilising Konnect EPS

Konnect Soft's electronic publishing system Konnect EPS is used to produce CD-ROM based publications. This system also provides a web publishing component **Konnect EPS Web** which provides the same feature-rich functionality of the CD-ROM application but on the web.

The Konnect EPS Web component fully integrates with Konnect Soft's Electronic Content Management System.

See Konnect EPS Product Description (available on request from Konnect Soft) for functionality details.



11.22.1 Security and access control

Konnect EPS Web can be delivered on a restricted area of the site only accessible to subscribers (alternatively it can be made freely available to all end users). To enter this area users require their user name and password, and the sophistication of the access control mechanism can be controlled by the publisher (if desired) to provide the exact level of security required. See section 14.

11.22.2 Updating the web content

Once the Konnect EPS Web component is configured for data in the content management system, this data is periodically automatically updated with the changes made by the publisher. This eliminates the need for any separate production process to update the web site, for the publications in the content management system configured as being Konnect EPS web publications. Whenever editors update the data in these publications the changes are automatically reflected on the web site.

12 WEB SITE ADMINISTRATION

Administration Options

Welcome user: [pjansen](#) to NAM Editorial System on [23/09/2002](#) at [19:12:39](#) [Log Off](#)
 You are logged with a rights level of **Super User**

Choose the area you wish to administer from the list below

 Help/Documentation	Documentation on the system
 News articles	Create, edit, delete, etc news articles
 Users administration	View, change user rights
 Treatments	Web editorial system for treatments
 Review treaments articles	Articles that have been made available for review by
 Links	Modify the links displayed in the links area
 Update the site	Modify web pages online.
 Recent work report	This shows what treatments (discursivetext) records are being edited currently, and which records have been edited since the last synchronization.
 Home Page Administration	Used to customize the home page, generate another homepage for the users and maintain different versions.
 Configure automatic bulletins	Allows modification of the settings for the automatic bulletin, including changing the frequency
 What's New	Update the what's new area of the site
 Bookshop Administration	Allows the product update, tracking the orders, uploading new products and other administration features for bookshop
 Discussion Forums	(live site only) From you can administer all the feartures of the discussion forums.
 Multiple Web Publication Administration	Allows to web enable a publication, its recommended to use it with caution as the action cannot be undone and affects the integrity of the Website.
 Search Phrase Tracking Administration	Track search phrases entered in different search masks/search interfaces on the web site.
Advanced user functions	
 See configuration/settings for the site	

These components are separate areas of functionality that are not necessarily part of the core system.

12.1 Overview of web site administration

The term administration is used here to indicate control over the functioning and management of the web site. Essentially the issue is putting the control in the hands of the publisher to allow them to manage their own content. The web site administration components aim at giving the publisher control of the web site to reduce the need to rely on "IT expertise" to make any modifications.

12.2 Advanced news administration

This extends the existing news administration system to include the following features.

12.2.1 Preview of articles

Editors are able to preview changes before submitting an article to the live system. The preview function opens up the article in a new browser window, which displays the article as it will appear once it has been submitted. Editors are able to preview the list of articles to see where the article will appear in the list.

12.2.2 Easy ranking user interface

When an editor creates a news article it initially appears in the list of articles with a medium ranking. There are arrows next to articles which allow users to promote or demote articles in the list of articles. There are two sets of arrows next to the article title, one set moves the article up or down one level, the other set moves the article to the top or bottom of the list of articles.

12.3 User alerts/e-mail bulletins

Configure bulletin settings

Next bulletin to be sent on: 24/09/2002

General bulletin configuration settings

Bulletin Set Name: Weekly bulletin **Save** **View Log** **Help** **Log Off**

Last bulletin sent: 17/09/2002

Last number of subscribers: 10

Frequency of bulletins: 7 days The bulletin goes out at 8:00pm on the scheduled day

Notification e-mail settings

Editorial warning: 8 hours

E-mail address of editor: test@konnectsoft.com

Subject of notification e-mail: Update of bulletin and what's new

Text of notification e-mail: Notification: This weeks bulletin and what's new material has been generated. The bulletin e-mail will go out to all

Default Subject of bulletin: New at

Format: Plain/Text

Master Header: New at aidsmap.com, <date>

Please forward this bulletin to anyone who may be

Master Footer: IF CLICKING A LINK DOESN'T WORK...
Copy it, and then paste it into your browser's address bar.
Select the entire link (which starts with http:// and may

Items **Add**

Name: NEWS **Save** **Delete** **Up** **Down**

Content: News

Include ☒ Prelim text: *****

End Text:

Name: TREATMENTS **Save** **Delete** **Up** **Down**

Content: Treatments

Include ☒ Prelim text: Check out recent updates to treatments information on the

Functionality for user alerts (i.e. updates or bulletin information) is a general facility to send electronic messages (e-mail, SMS, etc) to users informing them of new information, changes, events, etc. It includes the following functionality.

12.3.1 Automated alerts

An automated facility is created that generates alerts for users informing them of changes to the site. This includes:

- Changes made to the specified publications or data
- News articles that have been added

12.3.1.1 Significant editorial changes

Within the content management system there is a field that indicates whether there have been “significant” editorial changes to a record. If an editor fills out this field then notification that the information in question has changed, automatically appears in the alert.

12.3.2 User preferences

12.3.2.1 Areas of interest

The system can hold user preferences regarding what subjects users wish to receive bulletins on, and the subject areas are defined and managed by the publisher.

12.3.2.2 Advanced search selection

Areas of interest can be defined by running a search and specifying the search results set as an area of interest.

12.3.2.3 Delivery format

- Plain text
- HTML
- Attachments allowed:
 - ⇒ PDF
 - ⇒ Word
- Language
- Frequency of update

12.3.3 E-mail bulletins

The automated alerts functionality is usually used to automatically inform users of changes to the content/site (new or changes articles, items, etc.), and e-mail bulletins are used more where there is editorial input into the bulletins which go out to all users who have subscribed to a periodic bulletin service. The bulletins contain automatically generated content that will inform users of changes and other items such as news, promotions and general information.

Before a bulletin goes out:

- Editors receive an e-mail containing a copy of information intended for publication
- Editors have at this point the opportunity to make changes to this data:
 - ⇒ The e-mail contains a link to an administration page, from which editors can modify the automatically generated e-mail
 - ⇒ If the editors do nothing then the e-mail is sent as is without any changes

Once the bulletin has been sent, the fields in the database are cleared so that these changes do not appear in the next alert, unless the editor chooses to include them again.

Example screen

Bulletin for 17 September 2002

Current Date: 23 September 2002 **Release:** ☒ **Settings**

Release Date: 17/09/2002 **Frequency of bulletins:** 7 days

By changing the data below you will be modifying the changes that go out to users. Initially the automatically generated text displays.

Subscriber List

Subject: New at Konnect Soft, September 17 2002

Format: Plain text

Message Body

New at Konnect Soft, September 17 2002

1. News headlines
2. eCMS - New content management system features
3. EEUS - Cut your directory update costs in half
4. Publisher solutions

Please forward this bulletin to anyone who may be interested in these items.

Insert Attachments

select a file: **Browse...** **Upload File**

Save **Restore Original** **Clear** **Preview**

Central Admin

12.3.3.1 Fields

- E-mail subject
- E-mail body

The e-mail body includes links to the records that have been marked as having significant editorial changes. The links have the titles of the records themselves followed by a URL which links to the record. The e-mail also includes introductory text and headings for the different sections.

12.3.4 User registration

There is a facility for end users to sign up for these alerts, which potentially only requires an e-mail address but also offers the option for users to supplying additional information. Where an alert covers different subject areas, users have the facility to sign up for some or all of the different areas.

These user details are stored in the database.

12.3.4.1 Required fields

- E-mail
- Type of alert/bulletin

12.3.4.2 Typical additional fields

- First name
- Last name
- E-mail
- Telephone
- Fax
- Organisation
- Address
- Country
- Type of bulletins – information updates, events, news
- Subject area, product/service details, etc. - checkbox
- User preferences – see section 12.3.2
- Mailing suppression 3.3.6

12.3.5 Editorial system e-mail list management

Functionality allows e-mail addresses and contact detail lists to be imported into the system and managed there as required, allowing bulletins/mailings to sent to prospects, clients, etc.

12.3.5.1 “Remove” feature

Konnect Soft online “remove me from this list” forms can be provide which can interface directly with the Electronic Content Management System changing the user’s suppression preferences to indicate that they do not want to receive e-mail for the specified bulletin.

12.3.5.2 Remind me of my password feature

More details to follow

12.3.5.3 Confirmation of subscription

More details to follow

12.3.6 Sending marketing e-mails

All e-mail lists are fully accessible to the administrator (system users with specific rights), who can send marketing e-mails to everyone on a list. These marketing e-mails are composed by a user and then sent once read to all selected lists.

12.3.7 E-mail delivery issues

More details to follow

12.4 Advanced contributor review area

12.4.1 Administration

This component extends the basic contributor review functionality. It allows editors to add text to the contributor area through a standard text input system or, for example, upload a PDF file for review as well as display normal continuous text records for review.

12.4.1.1 Fields

- Heading
- E-mail address of editor
- Notes

12.4.2 Direct editorial change of continuous text records

The user rights system is extended to give certain users rights to directly edit continuous text records online without editorial validation being required. This privilege is normally only given to senior editors who could sign off records for publication on the web, after which changes immediately go live.

12.5 Event management system

The event management system tracks items that:

- Occur on specific dates during the year
- Have a set number of places available
- Require advanced booking (or at least those items for which it is useful to have advanced bookings)

This system is integrated with the products and services catalogue to allow administrators to specify details of services available online.

The system supports storing data on:

- Length of events (events last more than 1 day)
- Location
- Number of places
- Costs of events
- Presenters/tutors/lecturers

12.5.1 Types of event

A calendar selection screen is provided to allow users to choose the dates for the events. Examples are:

- Training courses
- Conferences
- Seminars
- Lectures
- Others

12.5.2 Automatic calendar generation

Users can maintain the individual list of different events in this system and then use the calendar generation function to generate a calendar showing all events for a specified year.

12.5.3 Forthcoming events

12.5.3.1 Submitting event details

This is an area on the site where end users can submit details of forthcoming events. Any end users can submit details of an event to the site. When an event is submitted a password is generated that allows only that end user (or a system user) to remove that event. System users are able to delete or modify any events.

Required fields

- Date
- Event name/title
- Category
- Description
- Country
- Location

Fields

Additional fields typically include:

- Date
- Event name/title
- Category
- Description
- Audience
- Country
- Location/address
- Contact name
- Contact organisation

- Contact telephone
- Contact fax
- Contact postal address
- Contact e-mail

12.5.3.2 Browsing/searching events

End users can also search or browse events through a search form interface. When events are browsed they are listed in order of date. Users are able to search events by multiple criteria, for example:

- Date range
- Name
- Category
- Description
- Country

12.5.3.3 E-mail bulletin about events

Users are able to sign up to receive by e-mail bulletins about events. This functionality utilises the same interface as the user alerts - see section 12.3. In this way users are able to sign up for bulletins about events as well as updates to the site.

12.6 Links

12.6.1 Administration

The administration facility allows system users to:

- Add new link categories (where link categories are pages of links)
- Modify existing link categories
- Delete existing link categories
- Add new links including the display name, category and description text
- Modify or delete existing links

When adding links, users have the facility to enter information on which continuous text records the links are related to. If this information is entered, then these links are displayed when users browse the relevant continuous text records

12.6.1.1 Fields/tables

- Category
- Link URL
- Link display name
- Link description text
- Related (continuous text) records

12.7 What's new

This area contains the current site update history, which is automatically generated with updates being added each week. The updates are by default the same as the e-mail bulletin on "what's new" that goes out to the end users, however editors are able to edit the text of the update just as for the user bulletin.

This function is performed through the same interface as for the e-mail bulletin and there is the option to either use the e-mail bulletin text or to modify it for the news on site area. The text is formatted appropriately for the "what's new" area, although within the e-mail it is normally supplied in plain text format. The editor receives an e-mail that reminds them that the bulletin is going out and that the "what's new" section is being updated. The e-mail contains links to the administrative areas of the site where they can modify these e-mails.

12.8 Online store

In many cases publishing clients have a requirement for an online bookstore allowing customer to purchase physical product over the internet. As required, an online store area of the web site can be enabled. This option can include administration facilities allowing system users to modify this area without the need for HTML editing or programming.

12.8.1 Bookstore administration

For example, users are able to:

- Add new products
- Modify details of existing products
- Delete old products details
- Modify the textual descriptions of the products

See section 14.3.

12.9 Site administration system

The administrative system component provided by Konnect Soft is a browser-based system that allows system users to modify the site in different ways. System users are able to modify web pages through the browser without having to download the page and use an HTML editor. The administration pages ensure that the updated page is in the correct location utilising the correct file name.

This system is an alternative to using the continuous text editorial system to administer a web site. The continuous text editorial system uses XML content and mainly deals with structured publication content rather than HTML content. HTML and web page editing have many quirks and specialist features that mean sometimes specialised editors are best used to administer these pages.

This component can be used with existing web sites even where the client is not storing all their content in the Konnect eCMS system.

12.9.1 Web page editing

12.9.1.1 Adding links to continuous text pages

This is a mechanism that allows system users to add links to records within the continuous text database. When system users choose to add a link to a continuous text record or headings, they are then presented with an expandable table of contents from which they can select headings from the highest to the lowest level.

Example of the table of contents view for selecting records

- ☐ Introduction to AIDS & HIV
 - ☐ The basics
 - ☐ Origins of the HIV epidemic
 - ☐ Definitions
- ☐ The immune system & HIV
- ☐ A healthy lifestyle
- ☐ Viral load, CD4 counts and other tests
 - √ Why regular monitoring is important
 - ☐ CD4 count
 - √ Predicting prognosis with CD4 counts
 - ☐ HAART and CD4 counts
 - √ Monitoring treatment
 - ☐ Viral load
 - ☐ Other markers
 - ☐ A to Z of Medical tests
- ☐ Anti-HIV therapy
- ☐ Symptoms and illnesses

(Example taken from the NAM Publications' HIV & AIDS Treatments Directory)

When the records or headings that are required are ticked and the system user submits the results, links to the web pages containing the records are inserted into the page that has been selected to contain the links.

So, for the example above, the user sees:

[Why regular monitoring is important](#)

[Predicting prognosis with CD4 counts](#)

[Monitoring treatment](#)

The links take the end user straight to the record in question if they are links to a record. If the links inserted are heading links, the end user is taken to a page where the sub-headings or records below a heading are displayed. There is a facility for removing links once they have been inserted.

12.9.2 Modifying text on the site

On pages for which the administration interface has been implemented, system users are able to edit the text of the pages. When they choose to edit the text they are taken to a page where the text appears in text boxes and can be modified. Once changes have been made, the editor can then preview the altered page before choosing to submit the changes to the live site.

12.9.3 Inserting Images

System users are able to add images to pages which have the administration facility enabled. To add an image the user simply chooses the file that to be inserted preventing the creation of links to images which are not present.

12.9.4 Style administration area

This consists of a page where system users with sufficient rights can change the style of the site. Users are able to change the colours, fonts, and font sizes for certain areas of the site. From pull-down menus the user is able to select an area of the site and choose the styles to be applied to that area.

12.9.5 Online publication/PDF administration

Where PDF publications are provided online to end users, this facility allows system users to upload new PDF files through an administration interface. Facilities include:

- Add new headings
- Change the order of existing links
- Edit existing links

Functionality to support multilingual versions can also be provided.

12.9.6 Front page administration system

An administrative interface allows system users to modify the content of the different areas of the front (home) page. For example, the page might be divided into different columns and the degree of modification depends upon the area type with users are able to move the content areas on the front page up and down within columns, but not within rows.

System users are able to:

- Add hyperlinks to other web sites into the content areas of the page
- Add text
- Turn a border property on or off for each area or content item of the front page

12.9.7 Front page components

Content areas selected by a client might include the following.

12.9.7.1 Latest Items

Includes new promotional items or links to parts of the site with new functionality - fully editable with the capacity to add linked images (including animated GIF files).

12.9.7.2 Search Interface

This contains a search box to search the whole site and has a button taking one to the search area (advanced searches, or additional search options). The text in this area is modifiable but the search input box remains static.

12.9.7.3 Marketing

This area contains information on client products and services. System users are able to add and change the products promoted in this part of the page.

12.9.7.4 Editorial Area

This area contains links to and descriptions of the data from data store available on the web. The editors are able to add, delete and modify links in this section as well as add descriptive text and headings.

12.9.7.5 What's New

This section is automatically generated taking portions of data from the separate "what's new" area on the site. System users have the ability to change the automatically generated description if they wish. This data is periodically changed when the "what's new" section is updated.

12.9.7.6 Notes, Copyright, About

This is a miscellaneous section containing text, images and links which is fully editable.

12.9.7.7 News

Editors can modify the text that is displayed in this section. This area displays the top 6 or so news headlines but gives editors the ability to specify more or less headlines if they wish to change the extent of this area.

12.9.7.8 Sponsors Area

Where appropriate, this area is enabled and contains a list of sponsors logos, names and descriptions. System users are able to add new sponsors, delete and edit existing sponsors. There is a facility for adding images to the web pages.

12.9.8 Site administration screens

Normal home page (as it appears to the end user)

aidsmap **nam** **International HIV/AIDS Alliance** **HIV**

take me to... home what's new search site map help contact us discussions

to search aidsmap now
click on the map ▼

or search below

GO

The wheel
Your personal pill planner

Visit our bookshop
test

AIDS Treatment Update
June 2001 now online

Don't forget that you can now read online all our **Information Booklets** Click here or on the image below.

What do you need?
A UK-wide survey about living with HIV - take part here

Oral sex - new factsheet on risk of HIV transmission

British HIV Association
New UK draft treatment guidelines available for comment
BHIVA clinicians feedback from the First International AIDS Society conference on HIV Pathogenesis and Treatment now available

Feedback from the Eighth Annual Retroviruses Conference, Chicago

Access to HIV treatment
A community toolkit for needs assessment
A new tool developed so help communities identify practical measures to improve treatment access, from the International HIV/AIDS Alliance

Emerging therapies for HIV infection

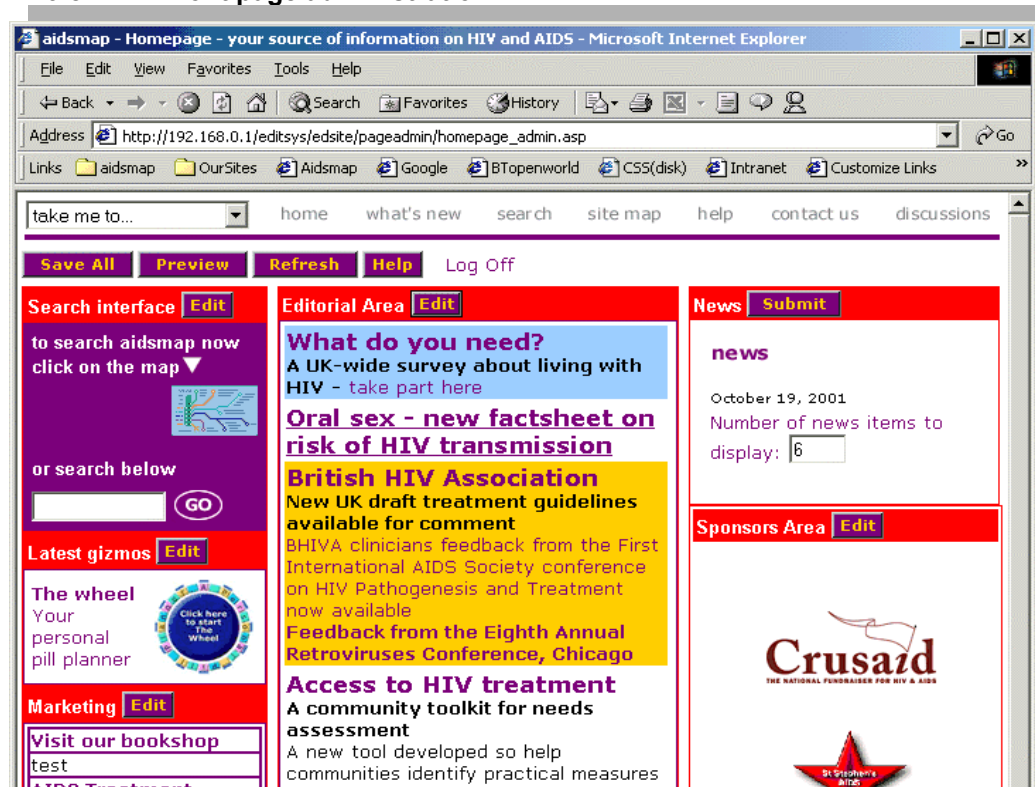
news
October 22, 2001

- Response to HAART in non-Europeans: Conflicting data from UK centres
- New European resistance testing guidelines
- Ho refuses to give up hope of eradicating HIV
- Improving adherence: Every little helps
- d4T & fat wasting - more evidence
- STIs: more questions than answers

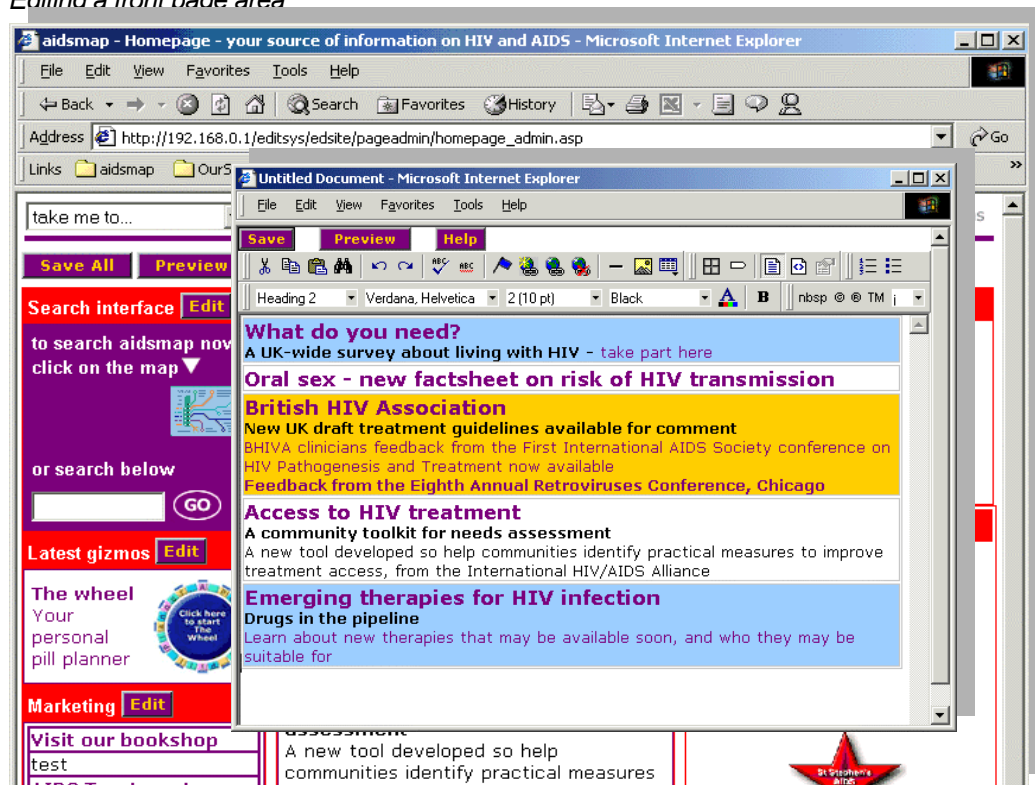
➤ Previous news headlines

Crusaid
THE NATIONAL FUNDRAISER FOR HIV & AIDS

12.9.8.1 Front page administration

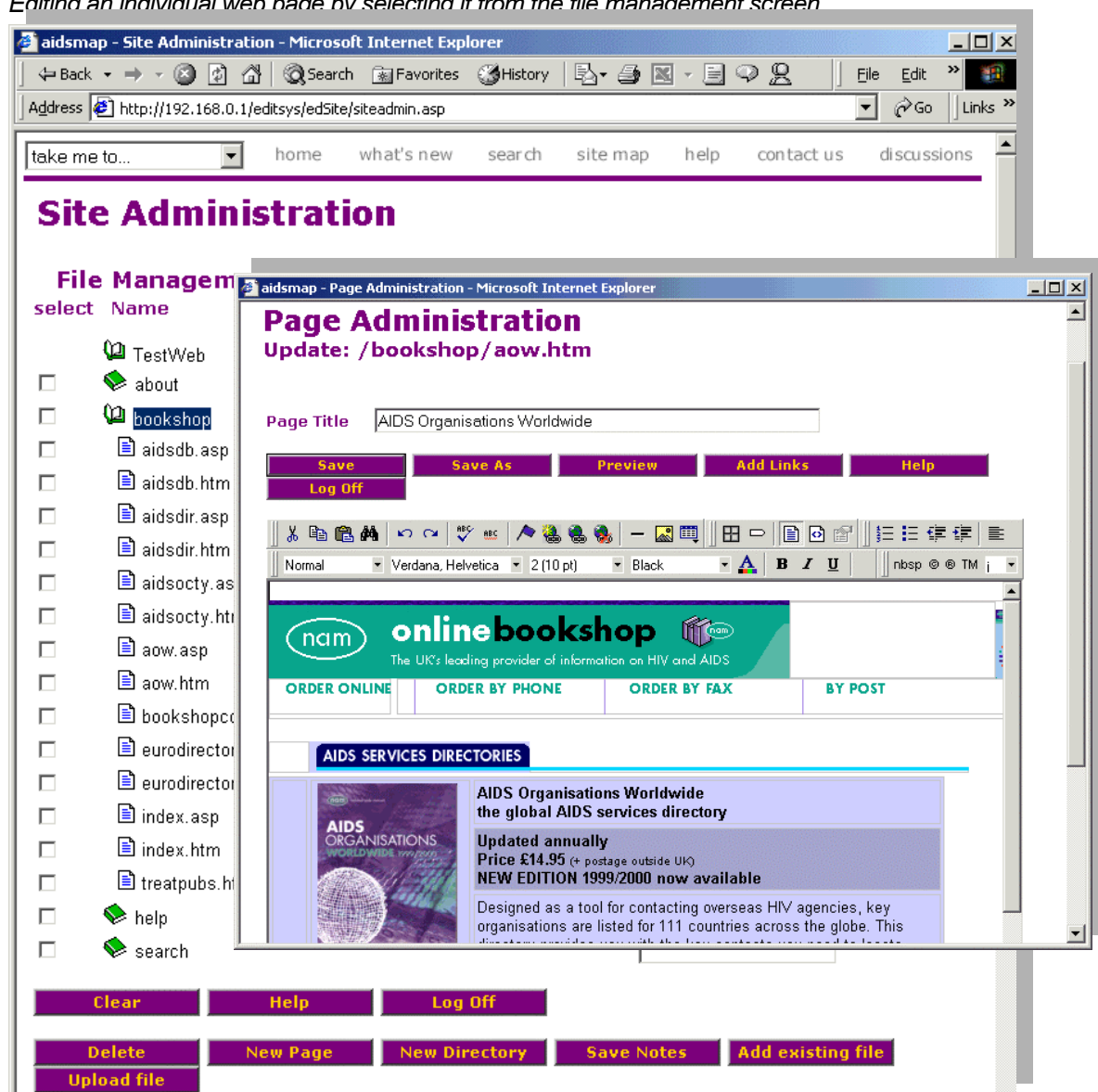


Editing a front page area



12.9.8.2 Web page administration

Editing an individual web page by selecting it from the file management screen



12.10 Newsletter functionality

Where applicable - this area of the site contains a link to the current edition of the newsletter which, according to configuration, only registered users (utilising login name and password) can access. There are also links to the previous newsletter editions available through this page (including the newsletter archive). Online newsletters in PDF file format (utilising Adobe Acrobat Reader) are downloadable as well as viewable (i.e. when a user follows the standard link to the PDF file it opens in their browser, but one can also choose to download a local copy to ones PC).

12.10.1 Administration

An automated facility is provided to upload the latest version of the newsletter.

12.10.1.1 Free-to-view option

If required, functionality can be enabled whereby:

- Newest newsletter editions are available only via access control
- But the archive editions are free-to-view by all users

In such a case, as they are uploaded by editorial staff:

- Newest versions automatically become the "current protected version" and are access protected, accessible only by subscribed users
- Previous newsletter editions versions automatically go into the archive and become accessible to all end users (without a password)

12.10.1.2 Latest newsletter subscribers

The database contains a list of registered users who are able to login to access the latest newsletter online. System users are able to add or delete users from this list as well modify existing user details.

12.10.1.3 Fields

- User name
- Password
- First Name
- Surname
- E-mail

12.10.2 Existing newsletter subscription details

As required existing newsletter subscription details are migrated to the new system.

12.10.3 Online subscriptions

Konnect Soft can provide online subscription functionality as required.

End users are able to obtain a subscription online by entering their credit card details and address details or by generating an invoice for subsequent payment. SSL is used to encrypt the end user's credit card details. This functionality can as required give users:

- Access to the latest online newsletter editions
- As well as a subscription to the hard copy version delivered by post

Where the end user requests an invoice for subsequent offline payment, once credit terms have been agreed/payment has been made, access to the purchased subscription item is then enabled by the client via the administration interface.

12.11 Data feeds to 3rd parties

Konnect Soft provide, as required, a transparent “interface” between the client web site and the web site of a licensee (i.e. 3rd party receiving the data feed). This allows the licensee to be sold or provided with a system where they are able to present a search mask to their own end users within their own web site, which searches and displays the actual content from the client site.

12.11.1 Benefits of the system

This system has many benefits over the scenario of providing exports from the data repository:

- Licensees can be offered/sold this as a value-enhanced service without the need for extensive intervention by their IT personnel
- The most current data from the client is always displayed, whereas an export becomes rapidly out of date giving users the impression that the data is of poor quality (our experience is that parties start out with good intentions of updating regularly with new exports but this seldom runs according to plan)
- The client controls exactly what data is presented to the end users
- Search and hit list mechanisms already created for the client site and optimised for the data are utilised – the development overhead of the licensee recreating this functionality should not be underestimated – overall this is a more efficient process than the provision of multiple exports for each licensee
- This ensures also that the client controls the way data is searched and displayed rather than according to the licensee's interpretation of this all-important issue
- Data “fed” to the licensee's web site can become a distinct publication within your data repository giving you separate editorial control, if required

12.11.2 Retaining the licensee's site branding

The licensee may utilise a re-badged version of the client's existing interface:

- The licensee receives a search screen in the design of their site, which accesses a hit list that also uses their site design (i.e. the end user thinks that they are within the licensee's web site rather than the client site)
- The licensee can be provided with a web page that simply needs to be installed into the relevant location in their site. From this page the hit list and subsequently the display pages are accessed
- Also the licensee can be provided with a mechanism which allows them to link directly to a particular hit list or to particular individual records of the client web site, but at the same time maintaining the navigation bar of their own site

12.12 Optimisation for search engine visibility

Appropriate META tags, keywords and page titles supplied by the client are inserted within the web pages to aid in search engine listing and rankings.

Konnect Soft can also advise the client on which facilities to use to submit to search engines (one can either submit to individual search engines or use the service of a company which submits to a list of search engines). These processes are all designed to improve search engine listing.

Functionality is provided for the web site so that a number of domain names registered by the client can be accommodated by means of:

- Either pointing them to indexing pages which contain search keywords for robots/web crawlers (the user does not see these pages as they are redirected to the normal site)
- Or setting up the web server so all pages point to the home page or sub areas of the site

Konnect Soft can assist the client in the domain name registration process, providing advice on which sub-domains to register and which parts of the site they should point to.

12.13 Tracking site usage

Site statistics can provide a wealth of information including the following features:

- Online HTML reports for the previous day, week, and month (other time periods are possible if required, such as fortnightly or every second day)
- An HTML report of all activity on the site to date, that is updated daily
- Word, HTML, or text reports e-mailed direct to client staff – these can be received daily, weekly, or monthly

The online reports are accessible from a password-protected area of the site and are generated automatically for the time periods specified. This allows the client an overview of activity to date and recent activity on the site.

12.14 Search term/phrase tracking

12.14.1 Standard functionality

One of the best indicators of what information users want to access on your site is obtained from an examination of what they are actually searching for.

Under this system, every term a user searches for (i.e. every search query executed by a user) on your web site is stored in the database along with the date and time of the search. This then allows one to analyse what users are searching for and track search trends over time

The tracking component displays a list of the most frequent searches on the web site, and can also be used to provide targeted information based on what users are searching on.

This component records the complete search **term** (a user may input either a single word or a phrase as the search term), which is recorded as one entry in the database log, i.e. it does not split a phrase into individual words. In this way the actual text that the user searches is recorded.

12.14.1.1 Analysing and using the results

Analysing these search results allows one then to improve the structure of the web site. Other components such as the web site administration components (e.g. home page administration, e-mail bulletins features etc.) can then be used to make the information that users are searching for more accessible.

12.14.1.2 The administration interface

The main administration screen lists all search terms and the number of times they have been searched for (e.g. "tenofovir" has been searched for 52 times, "adherence" has been searched for 48 times, "symptoms" has been searched for 43 times, etc.).

One can order the results by the search term/phrase or the number of hits, by clicking on the respective column headers. The default sort order displays from the most frequently to the least frequently searched for terms i.e. giving you the top search terms.

Displaying results for a specific date range

By entering a start date and an end date one can view the information searched for over a specific time period (e.g. between 1 March 2001 and 1 May 2001 administrators could see that the phrase "South Africa" was searched for 70 times). Clicking on an individual phrase displays detailed results for that phrase.

Displaying the results for different searches

If your site has different targeted searches for different areas the "change, the area" pull-down menu allows one to look at the results from different searches performed on the site. The "All searches" option shows the results for all searches combined.

Phrase Tracking for Aidsmap.com

Change the area

From to

Phrase	Hits
tenofovir	52
adherence	48
symptoms	43
lipodystrophy	42
kaletra	42
statistics	42
aids	32
Trizivir	31
hiv	31
IL-2	28
Nevirapine	26
azt	23
women	23
hepatitis C	23

[1](#) [2](#) [3](#) [4](#) [5](#) [next ▶](#)

12.14.1.3 Results for an individual phrase

The detailed view for a search term displays the frequency of searches for that term over different time periods. This can also be configured to show daily, weekly or monthly summaries.

Single Phrase Tracking for Aidsmap.com

Summary of daily hits for : **Nevirapine**

Date	Hits
08/04/2002	1
09/04/2002	6
13/04/2002	1
14/04/2002	3
16/04/2002	1
17/04/2002	1
18/04/2002	7
26/04/2002	1
03/05/2002	1

12.14.2 Advanced functionality

The advanced search phrase tracking component displays graphs of the frequency of different search phrases over different time periods.

12.15 Multiple web area delivery

Konnect Soft's system is built around the concept of allowing data to be classified as belonging to "publications". This allows the **same** data element or record to be present in one or many publications so data can be re-used (relationally) in different publications with minimum effort.

The system allows publications to be delivered in a variety of formats. So the same publication can appear on the web, on a CD-ROM and as hardcopy. Alternatively a publisher can create different publications for each delivery format and re-use the same content in each of these publications (if desired).

Displaying data on a web site is a special type of delivery format. The system allows web sites to be updated with new information as frequently as required, even, subject to editorial approval, as the information is changed. So unlike other delivery formats, where one delivers content on a periodic basis, often on annual, bi-annual or monthly cycles (such as DTP or page makeup-ready output for hardcopy), web delivery is a status which a publication has. This means the web site is constantly updated with new material (rather than containing an update produced at a specific time). Although not commonly used, it is also possible to deliver the web content periodically (as with other more static publications formats) rather than utilising having frequent automatic updates.

The multiple web area delivery component allows publishers to control which publications appear on their web site, i.e. any publication in the system can be given "web publication" status.

It is also possible to create publications which are delivered to a number of different web sites. This advanced functionality can be used as a form of "data feeds" to third parties – see section 12.11.

12.15.1 Standard web publication functionality

The standard web publication functionality allows publishers to specify which publications appear on a web site. Once a publication is classified as being a web publication it will be updated according to the web site update settings (which can be configured to update the site on a weekly, daily, or hourly basis).

To make a publication appear on the web - a publication is created in the standard way and then the web publications interface is used to classify the publication as a web publication. Once an administrator changes the status of a publication to "web publication", the publication is then made available on the web site. At this point, the content can be found by the web site search mechanism, by search engines, and linked to from pages on the site (such as the home page or table of contents for a publication).

When existing publications are classified as web publications, the system goes through all the data in the publication and creates web pages for the content. If there is a large number of records in an existing publication the system will process all these records.

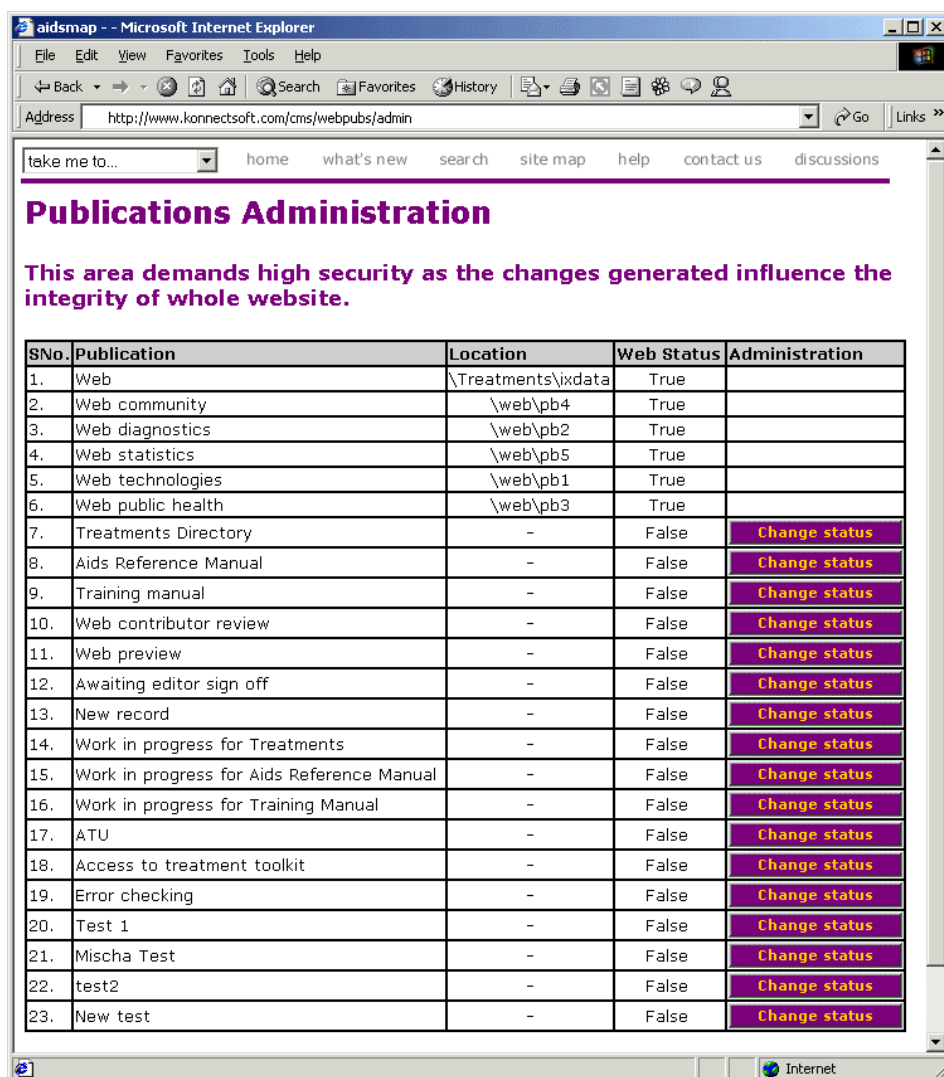
Konnect Soft's access control component is used to secure this area so only administrators with sufficient permissions can deliver content to the web.

Web publications can of course still also be delivered in other formats (hardcopy, CD-ROM, etc.).

12.15.1.1 Standard web publications administration interface

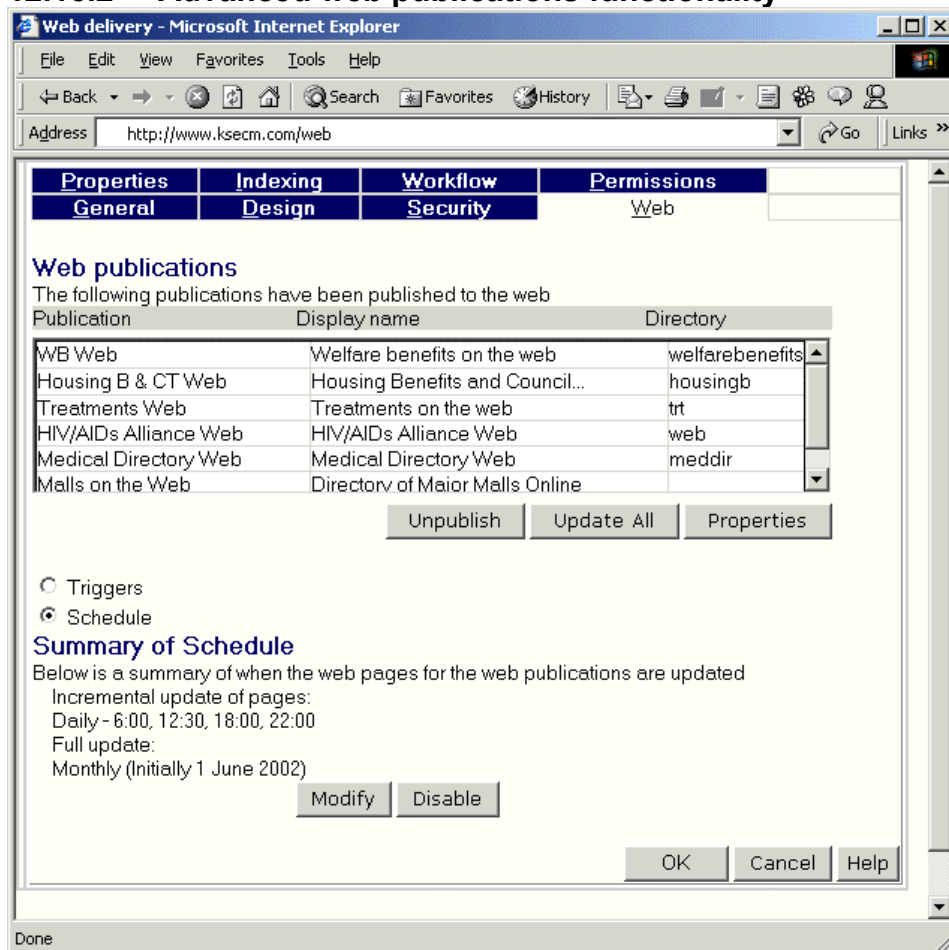
The screenshot displays the Konnect eCMS Standard web publications administration interface. The interface is divided into several sections:

- Top Bar:** Contains menu items (Content, Edit, Deliver, Editorial, Tools, Web, Help) and a toolbar with various icons for editing and publishing.
- Left Sidebar:** A tree view showing the content structure. The selected item is "Introducing NGO/CBO support work" under the "English NGO Support Toolkit".
- Main Window:** Displays the "Web properties" dialog box for the selected item. The dialog has tabs for "Properties", "Workflow", "Rights", "Web", and "CD-ROM". The "Web" tab is active, showing "Web delivery settings".
 - Heading and content from a page:** A checkbox that is currently unchecked.
 - Page title:** A text field containing "Introducing NGO/CBO support work".
 - Main heading:** A text field containing "English NGO Support Toolkit".
 - File/directory name:** A text field containing "4AE7FC38-D7AB-4E27-B82F-23FF69F04D5B.htm".
 - Style sheet:** A dropdown menu showing "(not implemented)".
 - Template:** A dropdown menu showing "(not implemented)".
 - Buttons:** "Generate Section Introduction", "Preview", "Update", "Delete", "Ok", and "Cancel".
 - Footer:** A section titled "You have selected:" followed by "Introducing NGO/CBO support work".
- Right Hand Pane:** Contains text describing the system's functionality, including mentions of "hardcopy", "efficiency", "editorial table of contents", and "actions in the editorial table of contents when".



Clicking the change status button makes the publication a “web publication” and creates web pages for the records in the publication. The publication is then updated automatically according to the update frequency of the web site.

12.15.2 Advanced web publications functionality



The advanced web publications functionality includes the following features:

- Control the update frequency for the web site
- Add/remove "web publications"
- Temporarily disable or suspend the updating of the web site
- Delivery web publications to other web sites (e.g. one may deliver an entire set of content to another organisation who displays it on their site)

12.16 Search mask administration

There are often many fields in the system and the publisher may not want them all to appear on a particular search mask. The search mask administration component allows:

- Administrators to configure which fields and options are included on a search mask
- To save different search mask configurations
- To make different search mask available on different areas of the site:
 - ⇒ There may be one public available search mask and another search mask for subscribers
 - ⇒ Different types of subscriptions could have access to different search masks
- When new fields are added to a publishers content they can use this component to make them available on the search mask

This component is usually combined with the site administration system to allow the publisher to configure where the search pages appear on the site and to link to them, see section 12.9.

12.17 Extranets and intranets

Any of the functionality list in sections 11 and 12 can also be present/installed on an extranet or intranet if desired. The eCMS system can deliver to a web server or the companies intranet or extranet servers without problems. Basically whether the site is a public web site, extranet or intranet does not matter to the system.

Also see section 12.15.

13 ADVERTISING

13.1 Enhanced directory entries

13.1.1 Standard features

Enhanced directory entries are supported in the system and the subscription and e-commerce components can be used to allow end users to purchase enhanced entries online (a link to the purchase screen can be included in e-mails sent to directory entrants).

Editors also have the ability to manually change the property of an entry to give it the enhanced entry status where users do not purchase this online.

Enhanced entries features include:

- The ability to support different levels of enhanced entries which include different features
- Each entry/record has an entry type field, which lists whether the entry is normal or a type of enhanced entry (this is a pull-down list which includes all the different types of enhanced entries)

Entry types can be configured to include different features/fields:

- Enhanced entries:
 - ⇒ Logos
 - ⇒ Text
 - ⇒ Special styles (fonts, background, etc.)
- Semi-display advertising
- Images/pictures (multiple images per entry are supported) including display advertising
- Etc.

If an entry does not have enhanced status, the system can be configured to lock the fields designated as enhanced entry fields (image, logo, etc.), which means the editor has to change the status of the entrant before they can enter data into these fields (unless the editor has been given permission to override this restriction). This ensures that only entrants that have purchased/renewed an enhanced entry receive these extra features.

13.1.2 Advanced features

Advanced features allow:

- Editors to create and administer the different types or levels of enhanced entries and configure which fields/features each level includes
- Level 1 may include a logo, level 2 could include a logo and text, level 3 could be semi-display, etc.
- Different pricing and marketing names can be assigned to each level (so publishers can create special offers for enhanced entries, change what is included over time, etc.)
- Any of the fields present in the system can be controlled in this manner (and enhanced entries can be created for entries that have more than one street address)

13.1.3 Delivery formats

Support for web, CD-ROM and hardcopy delivery of enhanced entry data is supported including the insertion of display advertising for hardcopy output

13.2 Web and CD-ROM banner advertising

In addition to the functionality detailed in section 13.1, banner advertisements can be configured to display on web pages and on the CD-ROM interface for records delivered from the system.

The banner advertising component allows the user to:

- Configure which advertising displays on the web:
 - ⇒ Per record
 - ⇒ For an entire publication
 - ⇒ Following a particular search sequence
- Configure the same or different advertising to appear on the CD-ROM
- Display rotating banner advertising on the web and CD-ROM
- Configure static images for certain records (instead of rotating ads)
- Manage the image files used for advertising:
 - ⇒ Upload new advertisements
 - ⇒ Update the selection of images used for different banners
- The system records all ad “clicks”
 - ⇒ Reports on which ads were clicked over different time periods are generated
- This can be configured to run with the online shop so users can purchase advertising online

Banner ads are stored within the data repository allowing system users to add, change or delete banner ads as required. Banner ads are only displayed once they have been cleared for publication.

More details to follow

14 ACCESS CONTROL AND E-COMMERCE FOR END USERS

14.1 Introduction

Konnect Soft's Access Control and E-commerce system enables publishers to control access to content delivered to the end user via the web or on CD-ROM.

Extensive e-commerce features handle purchase, payment and billing.

In addition online shop functionality also caters for the sale of product that is physically delivered to the customer (e.g. printed publications).

14.1.1 Web based content

14.1.1.1 Delivery

Web browser

Content is delivered via the web browser allowing the user to:

- View
- Print
- Save browser window to local PC disk

Download/export

Content can be downloaded/exported – examples include:

- ⇒ Documents e.g. PDF, Word, etc.
- ⇒ Supply of mailing lists
- ⇒ Applications i.e. fully searchable electronic publications (e.g. Konnect EPS application also available on CD-ROM)

14.1.1.2 Charging for content

Charging functionality to support payment models including subscription and pay-per-slice is provided by full e-commerce features.

14.1.2 Purchasing physical product

14.1.2.1 The Products

Physical products, typically sold by publishers, are delivered via an online store and include:

- Printed publications
- CD-ROM titles
- Unlock codes for CD-ROM based applications
- Etc.

14.1.2.2 Purchase of products

Products are ordered/purchased utilising full e-commerce functionality in the form of an online shop – see section 14.3.3.

14.2 Access control (subscription) management

14.2.1 Overview

Access control and usage monitoring includes the following mechanisms to verify authorised users:

- User accounts (i.e. only authorised users gain access, if they have a subscription or account)
- Free access (i.e. no access control invoked)

Note: Where IP addresses are used to control access, these usually correspond to a user account or subscription and this functions as if a user is automatically logged in.

Usage is monitored as required with criteria including:

- Number of documents/records
- Time usage

Mechanisms to protect and control usage include:

- Maximum number of documents/records viewable per time period
- Maximum number of users
 - ⇒ Concurrent
 - ⇒ Authorised
- No concurrent use of user identities
- IP address checking
- Etc.

This functionality allows full management of access rights for end users who wish to gain access to content/products.

The publisher manages access control utilising following component capabilities:

- Subscriptions
- IP address access management
- Users accounts

Where access to content is restricted, generally users access the system through a login screen or area, unless non-login IP addressed based access is used. It is possible to have a mixture of free and restricted content and only require the user to login to access the restricted content.

14.2.2 Access control options - web based content

The product/price list contains all products/access methods which can be purchased in order to access the content via the web (or on CD-ROM) including:

- Subscriptions based on:
 - ⇒ Organisations
 - ⇒ Individual users
- Demo subscriptions
- Pay-per-slice
- Site licence plus user fee
- Free of charge (with or without access control)

14.2.2.1 Subscriptions

A subscription designates access to full or partial content and includes:

- Price
- Specified subscription start periods
- Expiry date, or number of days valid from signup date
- Automatic renewal feature
- Dates of reminders to re-subscribe
- Product details – definition of authorised data sets/product sets
- Etc.

Access to “sets” of content

Content can be divided into different products (i.e. one does not necessarily need to offer access to all data – a publisher can designate sub-sets of the data as different products). Access to these “partial” data sets is defined behind the scenes by search criteria/expressions which are utilised for the individual products. Any records which do not fit the search criteria defined here are not available to the end user to view, print or export.

Expiration and auto-reminders

When the subscription is about to expire the user receives an e-mail reminding them to re-subscribe. The publisher defines the date or number of days before expiry at which point the user can be reminded by e-mail to re-subscribe. Up to three reminder dates can be defined along with the message text to be e-mailed.

All users subscriptions are checked periodically to see if they are about to expire or have already expired. Each user whose subscription is about to expire (e.g. a defined number of 30 days before expiration), or has expired (e.g. a defined number of 15 days after expiration), is automatically sent an e-mail.

This e-mail contains either a pre-expiration reminder if it is sent before expiry, or a post expiration reminder if it is sent after expiry. The e-mail contains a link taking the user to a subscription renewal page where they can renew their subscription.

Automatic renewal

Automatic renewal of subscriptions can be activated as required.

14.2.2.2 IP address access management

Validation of IP address allows organisations with static IP addresses or ranges to be authorised to access content without supplying any login details (where enabled).

The system can enable access by individual IP addresses or by ranges of IP addresses. The administrative interfaces allows:

- IP addresses to be assigned to organisations and subscriptions
- IP addresses can be blocked
- The IP addresses of users accessing the system are logged
- Reports can be generated showing which IP addresses have access the system

Restricted access can also be given to clients to allow them to update a limited number of IP address details. This is useful when a customer may be a large organisation with a large number of IP addresses and a subscription may be sold to allow them to access the system from a fixed number of IP addresses. It is sometimes best to let the network administrator from the client organisation control which exact IP addresses they use, while the Konnect eCMS system administrator controls how many IP addresses they have available.

14.2.2.3 Demonstration subscriptions

Demonstration subscriptions are essentially treated in the same way as normal subscriptions but:

- Without payment being required
- Providing only partial access to content (the criteria for which are specified by the client) i.e. the demonstration set of content

14.2.2.4 Pay-per-slice

Pay-per-slice functionality gives publishers the ability to charge users for small units of information, for example, each search result the user wants to download. This functionality can be required before users are allowed to view search results or before they can download or browse particular pages or files.

The publisher designates the price per unit of the content that a user can access. The content is quantified in terms of the number of:

- Searches performed
- Hits viewed in a hit list
- Detailed views
- Records printed
- Exported records

Reminder threshold - repurchase

Where a system of slice thresholds is utilised, up to three threshold values are available. At the point at which these are reached, reminders are issued to users to re-purchase/re-subscribe.

Example screen

Directory of Major Malls Pricing Administration
Please press [HELP](#) before changing anything

Pricing

Type (Check to delete)	Type	Unit price	Min.	Hits	Days	Addon
☐ DMM on the Web Full subscription: 3500 Views /	10	799.00	799.00	3500	365	☐
☐ DMM on the Web 6 months subscription: 1400 Views /	11	0.00	0.00	1400	180	☐
☐ Add-on Trend Demographics Ful	12	449.00	449.00	3500	365	☒
☐ DMM on the Web Two Region subscription: 1500 Views /	20	499.00	499.00	1500	365	☐
☐ Add-on Trend Demographics Two Region	22	229.00	229.00	1500	365	☒
☐ Level I Report	31	0.50	10.00	0	365	☐
☐ Level II Report	32	0.75	20.00	0	365	☐
☐ Level III Report	33	4.00	0.00	0	365	☐
☐ Contact file download	41	1.00	50.00	0	365	☐
☐ Mailing List	42	0.25	50.00	0	365	☐
☐ 90 Day/1000 hit access subscription to DMM on the	90	0.00	0.00	1000	90	☐
☐ 60 Day/500 hit access subscription to DMM on the	91	0.00	0.00	500	60	☐
☐ Demo Subscription	99	0.00	0.00	100	60	☐

Check if you want to add a record:

☐

Submit

Price administration allows administrators to control pay per slice and subscriptions

14.2.2.5 CD-ROM access

CD-ROM users can get access to a CD-ROM by purchasing online one of the following unlock methods:

- Standard unlock code for local CD-ROM access
- Unique unlock code for local CD-ROM access
- Standard network unlock code, restricted to <n> simultaneous users
- Unique network unlock code, restricted to <n> simultaneous users

An unlock code for local CD-ROM access allows one to access the CD-ROM which is located in the local CD-ROM drive of the PC. A unique unlock code is bound to a PC on which the CD-ROM software is initially installed.

Downloading the application itself

Also, an option is available to download the application normally supplied on CD-ROM. (Subject to the speed of the user's internet connection, long download times may be incurred here).

In this case, the application is accessed from local hard disk access rather than CD-ROM.

Restriction of simultaneous network users is available for Windows networks with or without a dedicated server. In the case of dedicated servers, Windows NT Server 4 and Windows 2000 Advanced Server are supported.

In the case of network clients, workstations running Windows 95, 98, Me, NT4, 2000 and XP are supported.

14.2.3 Product/price list – physical product

Full details of products and purchase options can be made available to the user via the online shop – see section 14.3.3.

14.2.4 Users accounts

A list of users who have subscribed to or otherwise purchased access to the content is maintained.

An account is associated with each user containing relevant details with administrator functionality allowing one to create, delete or modify user accounts. A user account typically includes:

- Login details
- Contact details
- Usage details
- Order and payment information including:
 - ⇒ Order details - all products purchased along including purchase history
 - ⇒ In the case of pay-per-slice, the number of slices utilised are shown and the remaining usage credit before a repurchase is required

Functionality is supplied to export user and purchase data from the system in order to interface with back office systems (e.g. sales and marketing databases, financial, inventory, etc.).

14.3 E-commerce

14.3.1 Overview

E-commerce functionality is implemented wherever the client wants to give users the ability to purchase online. Konnect Soft provide real time credit card processing linked to any of the major providers. All e-commerce functionality utilises secure communications to protect the client's data.

The system utilises appropriate purchase options:

- Credit card (real time credit card transaction verification) - multi-currency payment can be supplied as required
- Payment following invoice

.... incorporating self-invoicing features.

14.3.2 Web based content - access purchase

A user registers by providing appropriate contact details and can then online order or purchase an access method.

Access to content delivered over the web is normally controlled by these login details to verify identification.

Purchases are selected from the product price list which are then added to the shopping cart for check out and purchase.

Once access for the applicant has been enabled by the client following fulfilment of payment criteria, login details are then forwarded to the end user.

14.3.3 Online shop

14.3.3.1 Overview

Konnect Soft's online shopping solution can, if required, be implemented independent of the rest of the system i.e. it is available as a standalone component.

The online shop is a highly flexible system which can be used to offer any type of product. Full functionality is supplied to support the search, selection, purchase and billing of product. This functionality is, for example, particularly suited to the needs of an online bookstore where physical product is ordered and despatched to the customer.

The online shop requires minimal human intervention.

14.3.3.2 Shopping basket/cart

Konnect Soft provide flexible functionality allowing site visitors to keep track of their product selections in advance of checkout and purchase.

14.3.3.3 Credit card payment

Credit cards are checked and authorised online with all major cards supported.

An online credit card payment gateway is utilised to validate and bill credit cards in real time. This functionality increases security, reduces labour costs and (subject to the product or online service) fulfils the order automatically.

The online payment gateway bills the credit card automatically and deposits the payment into the supplier's account.

Multi-currency facilities are provided as required.

14.3.3.4 VAT/sales tax and shipping calculations

Dependent on the products selected and where the customer is located, prices are, as required, calculated in terms of:

- Applicable VAT/sales taxes
- Shipping zone rates
- Etc.

14.3.3.5 Product catalogue - updating product details and images

All product information is stored within database files. Products details are easily updated i.e. adding new and editing existing entries. Just some of the features available are detailed below:

- Updating product descriptions
- Updating product categories
- Introduction pages
- Altering prices
- Product images - upload to add new products
- Etc.

14.3.3.6 Order tracking

Functionality allows one to list orders by day and enter comments as to the order progress. An additional option also enables users to login or click an email link to view the current status of their order.

Progress comments can be viewed by customers (where enabled).

14.3.3.7 Customer tracking

Customer name and address information can be stored awaiting the customer's next visit to the online shop (where enabled).

14.3.3.8 Customer accounts database

Customer account records are created automatically when a customer makes an order for the first time.

These accounts can also be created or edited by the site owner from the administrative backend.

14.3.3.9 Customer discounts

Percentage discounts can be set for individual customers.

14.3.3.10 Removing products from the site

If one needs to temporarily remove a product from the site (e.g. if it is out of stock or a seasonal item), this is achieved with simple "check box" functionality.

Temporarily closing the whole online shop can also be easily done from the administrative backend.

14.3.3.11 Design

The design of the online shop can be customised to reflect the existing style of your site.

14.3.3.12 Statistics

Statistics are available analysed for example by month, product category, etc. (where enabled).

14.3.3.13 Reporting

This facility allows administrators to generate reports that summarise orders for different products or services over different periods including:

- Different time periods by specifying a start and end date for the period
- Different products or product categories:
 - ⇒ Users can specify a product category to view all purchases of that product in the period specified
 - ⇒ Specify individual products or services to just view the purchase of that particular item
- View different types of purchases:
 - ⇒ All credit card purchases
 - ⇒ All payment by invoice
 - ⇒ Access by users with accounts
- View a list of all individual purchases
- Reports containing hyperlinks to customer and order details
- View monthly or annual totals

14.3.3.14 Integration with back office systems

Options are available for providing links to and integration with back-office systems including:

- Customer, sales and marketing databases
- Inventory
- Invoicing and financial systems

14.3.3.15 Security

All e-commerce functionality utilises secure communications (using encryption and certificates) to protect the client's and users' data.

14.3.4 Products and services catalogue

The product and services catalogue can be used for the online shop and to create a general catalogue of an organisation's products and services which can be supplied as a printed copy. This component is fully integrated into the content management system and appears as a separate publication or content area in the editorial TOC.

14.3.4.1 Links between products

Users are able to insert a link from one product to other related products. This allows the sale of product bundles, where a special price is given for a package including several products. For each linked or related product the number of issues included can also be configured.

14.3.4.2 Styles and formatting support

Product descriptions can utilise different styles and formatting as well as tables and graphics to create a catalogue to promote products containing visually rich content.

14.3.4.3 ISBN and product ID number support

The catalogue will ensure that books have unique ISBN numbers (for a given year). If a user attempts to enter an ISBN number that has already been used they will receive a warning prompt. The system also supports different types of product identifiers for other types of product.

14.3.4.4 Date of book publication

The product catalogue can report the stages in production from the initial point when a new publication is proposed, to the time when authors start working on it, and finally to the point it is printed and available for distribution. As this data is tracked it can be made available to users of the web site to keep them informed about the progress of a publication (this data can also be included in e-mail updates).

14.3.4.5 Additional information

Introduction and miscellaneous sections can be included in the catalogue and categorised by publication so that printed and web versions of the catalogue can be produced containing different content but the same core products.

14.3.4.6 Printing a product catalogue

Where specified, the system allows users to export the catalogue into data for a typesetting system using all the export facilities of the content management system. This allows the catalogue to be professionally printed and sent to customers. All products and services could be stored in one system and different catalogues could be produce for books, training, membership, etc. depending on how the export filter was configured.

14.3.5 Payment methods

Payment functionality is supplied to support “charging for content” as well as the purchase of physical product.

Payments can be made by one of the following options:

- Credit card (real time credit card transaction verification) - utilising where required multi-currency payments
- “Payment to follow” by:
 - ⇒ Bank transfer
 - ⇒ Cheque
 - invoice/proforma invoice can be generated in advance of receipt of funds
- Granting of credit account
 - ⇒ Following purchase order receipt
 - ⇒ Other mechanisms

14.3.6 CD-ROM users

CD-ROM users need to supply an unlock code in order to use the application, which can be purchased online. (The CD-ROM software as part of the setup process requests an unlock code and supplies a link to the relevant area of the web site):

Once payment is received or credit terms have been allowed, access is enabled:

- Either by sending the unlock code by e-mail to the end user
- Or, an option is also available where the CD-ROM software automatically downloads the unlock codes

In case of unique unlock codes, the user is in any case directed to the relevant area of the web site.

14.4 Mailing list functionality

This functionality enables the internet delivery of direct marketing mailing lists. See section 15 for further information.

14.5 E-commerce screens

14.5.1 Online shop

http://www.aidsmap.com/shopcart/asp/product.asp?product=60 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Mail Link

Address http://www.aidsmap.com/shopcart/asp/product.asp?product=60 Go

Links aidsmap OurSites Aidsmap Google BTopenworld CSS(disk) Intranet Customize Links

take me to... home what's new search site map help contact us discussions

order by email	enquiries	conditions	address	view basket
bookshop home	categories	book search	shipping	order tracking

NAM's Online Bookshop

My Basket
no. of items:

your basket is empty

total: £0.00
inc. VAT*: £0.00
* where applicable

 [view basket](#)

Our Categories

- AIDS and Society
- AIDS Services Databases
- AIDS Services Directories
- National AIDS Manual
- SUBSCRIPTION
- Treatments Publications

HIV and AIDS Treatments Directory



The most comprehensive publication available on medical aspects of HIV & AIDS, this 550 page directory offers practical information to help with the complexities of making decisions about treatment, and the practicalities of taking medication.

Updated twice a year
Price £64.95 per single copy, or £109 for a two-edition subscription (+ postage outside UK)
Prices for people living with HIV:
£12.95 for a single copy, or £19.95 for a two-edition subscription

	code no.	price (£)	VAT (£)	
HIV and AIDS Treatments Directory	ISBN 2345	12.95	0.00	ADD TO BASKET
For people living with HIV.				
Two Edition Subscription	ISBN 2345	19.95	0.00	ADD TO BASKET
For people living with HIV.				
HIV and AIDS Treatments Directory	ISBN 1234	64.95	0.00	ADD TO BASKET
Two Edition subscription	ISBN1234	109.00	0.00	ADD TO BASKET

Adding a new product

NAMShop - Microsoft Internet Explorer

Address: http://192.168.0.1/shopcart/shopback/prodtype_back.asp?prodtype=15

Links: aidsmap, OurSites, Aidsmap, Google, BTopenworld, CSS(disk), Intranet, Customize Links

aidsmap nam International HIV/AIDS Alliance HIV

take me to... home what's new search site map help contact us discussions

Shop Admin Home

The Shop is Open
Close the Shop

Orders
List recent

Categories
AIDS and Society
AIDS Services
Databases
AIDS Services
Directories
National AIDS
Manual
SUBSCRIPTION
Treatments
Information Series
Treatments

Treatments Publications ADD A NEW PRODUCT | MODIFY THE PAGE

HIV and AIDS Treatments Directory

HIV and AIDS Treatments Directory	ISBN 2345	12.95	0.00	MODIFY
Two Edition Subscription	ISBN 2345	19.95	0.00	MODIFY
HIV and AIDS Treatments Directory	ISBN 1234	64.95	0.00	MODIFY
Two Edition subscription	ISBN1234	109.00	0.00	MODIFY
ADD A VERSION OF THIS PRODUCT				

AIDS Treatment Update(ATU)

AIDS Treatment Update - Annual Subscription	ISBN 2345	50.00	0.00	MODIFY
AIDS Treatment Update - Annual Subscription	ISBN 3456	69.00	0.00	MODIFY
ADD A VERSION OF THIS PRODUCT				

NAMShop - Microsoft Internet Explorer

Address: http://192.168.0.1/shopcart/shopback/modify_version.asp?prodtype=15&v=1198p=60

Links: aidsmap, OurSites, Aidsmap, Google, BTopenworld, CSS(disk), Intranet, Customize Links

aidsmap nam International HIV/AIDS Alliance HIV

take me to... home what's new search site map help contact us discussions

Shop Admin Home

The Shop is Open
Close the Shop

Orders
List recent

Categories
AIDS and Society
AIDS Services
Databases
AIDS Services
Directories
National AIDS
Manual
SUBSCRIPTION
Treatments
Information Series
Treatments
Publications

Versions: HIV and AIDS Treatments Directory

Show on Site? ☒

Version Name:

Code Number:

Product:

Price (ex Tax):

Weight (Kg):

Tax Band: %

Delivery Time (days):

Description (Not required):

New Product

Customers
List / Find

15 MAILING LIST FUNCTIONALITY

In addition to generating revenue from subscription/copy sales and advertising, many Konnect Soft clients also offer mailing lists or marketing databases for sale. Generating the files containing the lists to supply to mailing list users is often a time-consuming and therefore high-cost task, thereby affecting the profitability of this operation.

This ceases to be a problem for our clients who have implemented our Mailing List Delivery System which handles everything from list specification by the end-user, capture of payment details, real-time credit card processing, and list file generation and delivery. All these options are also available to system users using the system to provide mailing lists to clients based on phone or e-mail enquiries.

15.1 Web delivery of mailing lists

This section deals with web delivery/purchase of mailing lists by end users, however relevant features are also available to editors themselves using the editorial system who wish to produce a mailing list for an external customer or for internal (often marketing) purposes (see section 15.2).

15.1.1 Benefits and functionality

Benefits of making this content available over the internet include:

- Allows the user to “self search” and download the data required
- Attracts new customers and more frequent users
- Lower administration and management costs
- Access can, as appropriate, be controlled by subscription and/or “pay per slice”
- Provides the foundation for:
 - ⇒ Electronic data compilation - see section 17
 - ⇒ Automatic content management
 - ⇒ Etc.

15.1.2 Logic

15.1.2.1 Search, select and download

In order to make the content searchable and downloadable for the web site, the data is contained within a database resident on the web server.

Search technology enables users of the web site to:

- Easily conduct targeted searches
- Refine selections
- Purchase data
- Download data

Stages include:

- Choose from list sources (where multiple sources are available)
- Target selections are made by the user with easy-to-use multi-criteria selections being supported
- A search results in an immediate count and, as required, a “hit list” of abbreviated information matching the search criteria – the amount of information to be displayed here is subject to the business model of the client
- Where a hit list is displayed the user can select all/individual records for purchase and download (viewing of these records can, as required, be made available)
- A maximum number of hits can be specified (e.g. 1,000 from a data set of 10,000) – for example where the user wishes to carry out a partial/test mailing, the 1,000 records can then be tagged within the system allowing the user to return for the remaining 9,000 without the risk of receiving the same mailing contact again
- Modify your selection criteria
- User receives a price for the download and can view overall price menu

- User can further refine the selection
- “Additional” fields (where required) to be included in download can be specified by the user
- The user’s list (i.e. their selection) is placed into the shopping cart
- User proceeds to checkout
- User licence is accepted
- Purchase is made
- Lists are downloaded prior to leaving the site
- User is presented with invoice which can be printed/saved
- The user is assigned a user name and password and can return to the site login and download the list again for a specified amount of time (controlled by the publisher)

15.1.3 Access control and payment

Functionality here includes:

- Supply of secure access control to support the client’s business model
- Use of the lists can be metered as required
- Access can, as appropriate, be controlled by subscription and “pay per slice”
- Invoicing is automated to reduce administration

15.1.4 User administration

“Control panel” functionality is available allowing the client to self-administer the system, for example, in terms of:

- The set of data available for download
- “Trial” subscriptions
- Access control - maximum number of records/downloads:
 - ⇒ Per session
 - ⇒ Per subscription
 - ⇒ Per user
- Pricing:
 - ⇒ Price levels
 - ⇒ Price per record
 - ⇒ Minimum purchase levels
- Subscriber information
- Subscription information:
 - ⇒ Products included in subscription
 - ⇒ Subscription duration

In this way the client can easily self-initiate product and price changes as and when required.

15.2 Exporting/local delivery of mailing lists

Mailing list functionality is also available to editors, administrators and other editorial system users who can export mailing lists in electronic format to provide to customers or to people within their organisation.

- Editorial system users can use the same interface as end users to select the data, but without the requirement to purchase data
- Editors can be given full access to the dataset to select any data desired for a mailing list
- The delivery part of the system (see section 6) can be used to configure the exact properties of the output format produced (the default is delimited format, but other format mailing lists can be exported)

15.2.1 Recording data selected

A query is initially made to select the data and fields to be included in the mailing list (for example all organisations in the retail sector with over 200 employees in London):

- This information can be saved and all or part of the list can be exported
- Editors can see the number of records retrieved and preview/browse the output
- As above with the web download option editors can export part of the list (organisations with first letter of the name is from A-C), and tag the exported records as exported for a named client or user
- The client can later return and ask for more of the list and the editor can retrieve the originally query and export part or all of the remainder of records
- New and modified records can be included in subsequent exports provided to the client
- Random sample from the total amount of records retrieved by the query can be provided to the client as a sample of the data (this is also recorded and when the client wants further data, the remainder can be provided)
- Mailing functionality monitors which records were included in a mailing – this information is stored in the database allowing clients to produce reports to analyse the "most valuable" data (e.g. the data included in the most mailing lists over a specified time period)

15.3 Mail merge ready

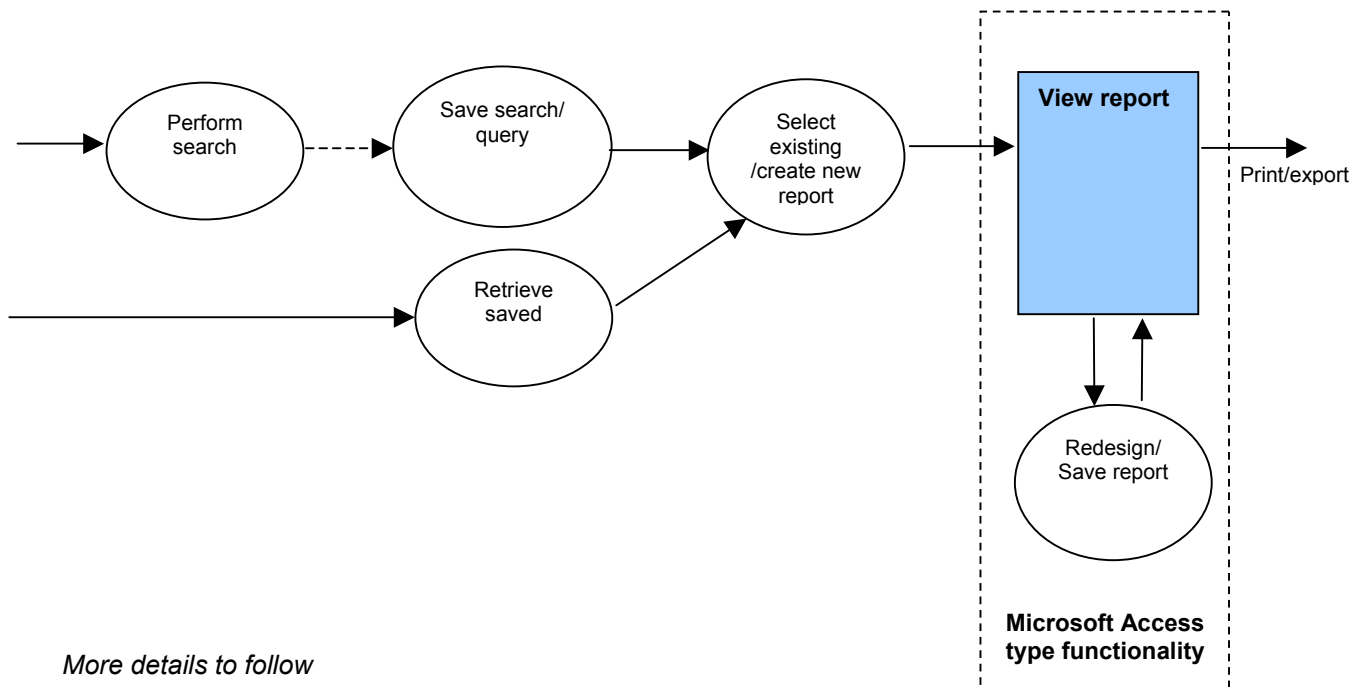
Any mailing list created can be exported into a delimited format ready to be picked up by mail merge software (e.g. Microsoft Word which is configured by default). The features detailed above are used to select the mailing list data to export and choose the export for mail merge option to produce a file ready for mail merge.

Microsoft Word automation allows the mailing list to be automatically opened in Word in mail merge mode with the selected mail merge document opened and linked to the mail merge file produced. The merge can either be started automatically or the user can change/review the settings and click merge to begin the merge. The mail merge configuration settings within the system allow the user to select which page setup and mail merge document are used with the Microsoft Word integrated functionality.

16 REPORTS

The system allows editorial system users to create reports based on queries run from the editorial system:

- Users can run a query (search), save it and create a report based on the search
- Because all editable fields in the system can be searched on, users can easily build up complex queries (see section 7.6.9)
- User can use existing reports to display the results of their query or a new report can be created for each query
- Because reports and queries can be loaded and saved, users can retrieve reports/queries that were previously created
- Reports are opened in Microsoft Access (alternatively other report writing software can be configured for this), displaying the results of the query run within Konnect eCMS
- Users can then utilise the standard features of Microsoft Access to modify the appearance and layout of the report



More details to follow

17 HARDCOPY PUBLISHING

Electronic Content Management System exports are produced in tagged ASCII format, for example, as XPress Tags ready to be imported by designated printer/page designer into QuarkXPress.

The output files include designated style names assigned to each field of the document. Special characters (e.g. subscript, superscript, underline etc.) are supported where these are included in the data.

17.1 Hardcopy output / exporting for typesetting

Two options are outlined here:

- Output to DTP format
- Output to XML

The first option provides support for in-house typesetting and the second option allows data to be shipped to any supplier able to process XML (a substantial advantage here is that this relatively “neutral” format allows the client greater flexibility in choice typesetter/printer avoiding the scenario where one is “totally tied” to a single supplier).

17.1.1 Output to DTP format

17.1.1.1 QuarkXPress

Where this option is utilised, the Electronic Content Management System exports are produced in tagged ASCII format e.g. XPress Tags - ready to be imported by designated printer/page designer into QuarkXPress (QuarkXPress 4.1 utilising XPress Tags Filter 2.05 or Xtags XTension).

The output files include designated style names assigned to each field of the document. Special characters (e.g. subscript, superscript, underline etc.) are also supported.

Cross-references

Cross-references are visualised as SEE references which designate the headings referred to e.g. “See Chapter 1”. Alternatively the SEE references may be resolved to page numbers when loading into QuarkXPress.

Indexes

Index tags are generated in the QuarkXPress exports, which allow indexes to be generated (utilising QuarkXTension Index 1.22 which is a standard extension included in QuarkXPress 4.1). This allows the generation of an index of up to 4 levels. Each level may be assigned a designated style. Several different indexes may be generated whereby one level is counted as a title of an index section.

To fulfil specific client indexing or cross-referencing requirements, customised QuarkXPress extensions (XTensions) can be supplied by Konnect Soft.

Formatting information

Formatting information e.g. layout and typographic information is not included within the data file - this is defined within the style sheet which dictates the page design.

The advantage of this approach is that the highest level of flexibility to achieve the desired layout is gained.

The work which remains to be done by designated printer/page designer within, for example, QuarkXPress includes the following functions:

- Assigning the desired typographical attributes to style names in respect of the style sheet to be utilised with the Electronic Content Management System
- Final pagination
- Insertion of headers and footers (page reflecting or otherwise)
- Insertion of logos (for which placeholders can be included within the XPress tagged file)
- Insertion of advertisements including filler ads
- Etc.

The proofing process

The advantage of this approach is that:

- Data can be output with full typographic and layout attributes
- Output is easily proofed by editorial staff
- Amendments can be made and the cycle repeated as many times as required - without expensive correction or run-out charges being incurred.

Ideally, even where the page design is accomplished out of house, the relevant design system will also be run in house enabling “proofing on-the-fly” and the production of PDF files at will.

In this way, the proofing process more easily highlights:

- Required data amendments
- Data inconsistencies
- Incompleteness of data
- Layout and design issues that need to be addressed
- Etc.

17.1.1.2 Other DTP systems

More details to follow

17.1.2 Output to XML

Data can be exported from the system as XML for delivery to typesetters. The XML data contains information which allows page numbers to be generated for:

- Cross-references
- Indexes
- Footnotes
- Etc.

17.1.2.1 Identifiers

The XML generated contains unique identifiers for all headings, records and destination points within records. This allows the typesetter to generate page number references by locating the ID of the area within the text that a reference or index term points to. When the typesetter imports the data, they can associate page numbers with different unique identifiers – this provides all the information necessary to generate any type of page references required by the publisher.

17.1.2.2 Cross-references

The XML contains link or cross-reference tags with the identifiers for the link destination (i.e. similar to an HTML link except, instead of pointing to a web site, it references an ID). Also in the XML there are anchors or destination points marked as having specified IDs. Where there is a link to a different publication (that is not included in the export for the typesetter), the links are formatted as a textual reference to a publication.

Typesetters who can accommodate XML, can utilise the IDs in the links and the IDs in the destinations to generate page numbers for the links.

17.1.2.3 Indexes

Text that is indexed contains special indexing tags which have information on index terms and their hierarchy. Terms indexed within the text also have a unique ID that is used to generate the page number references back to the point in the text that is indexed. Where a range of records is indexed, the index terms are associated with the ID of the first record in the range and the last record in the range of indexed text.

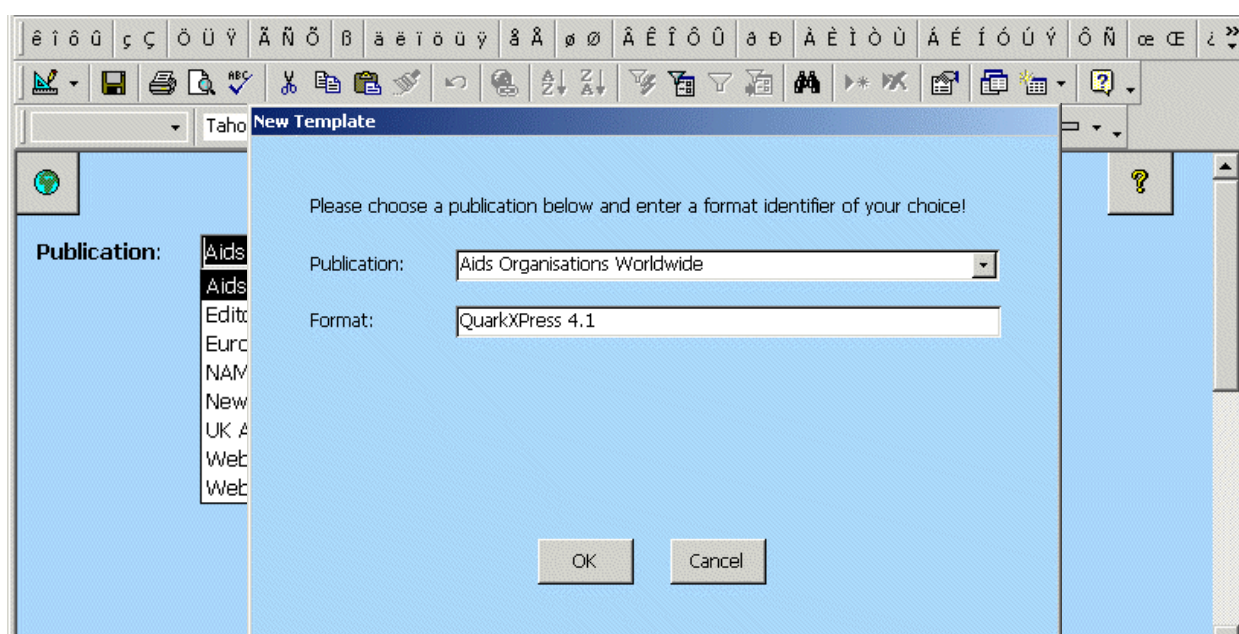
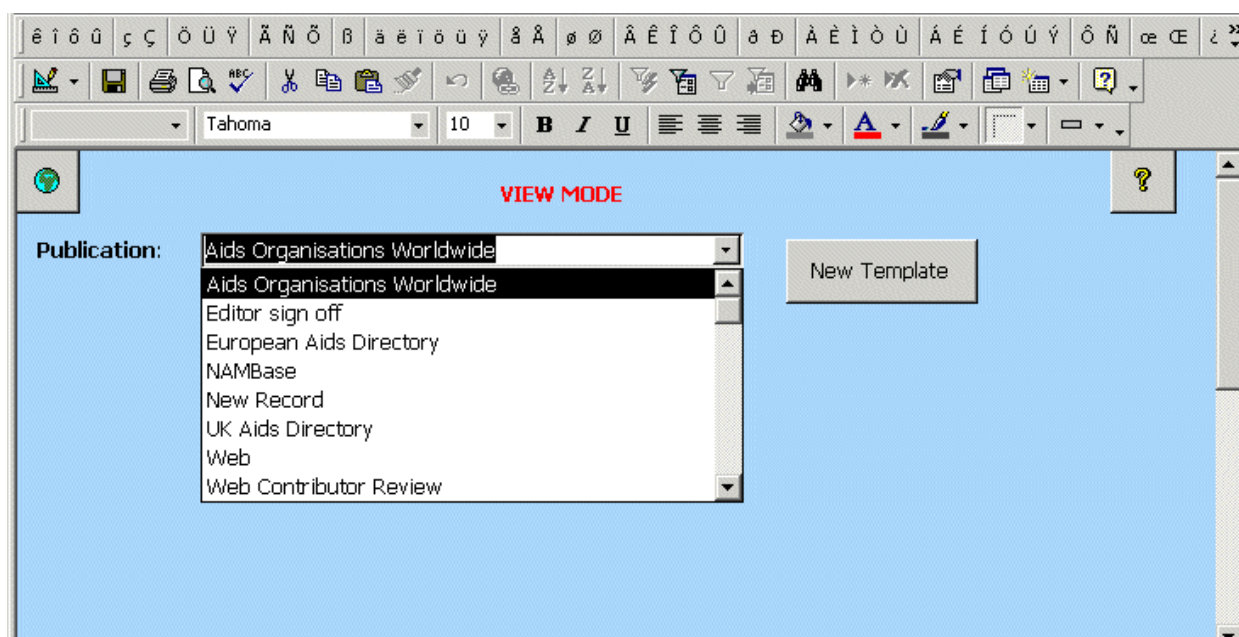
By processing all the information in the index tags, the typesetter can generate the sorted hierarchical index, and by processing all the references to the IDs, the page number references in the index can also be generated.

17.1.3 Penta format output

The delivery system can output into a format that can be imported into the Penta typesetting system to produce print ready output.

Please contact us for more details.

17.2 Hardcopy export – example screens



EDIT MODE

Publication: Aids Organisations Worldwide

Format: QuarkXPress 4.1

New Template

Output File Name: D:\Project\AOW.XTG

Number of Records: 100

Output Preview Program: d:\Program Files\QuarkXPress 4.1\QuarkXPress.exe

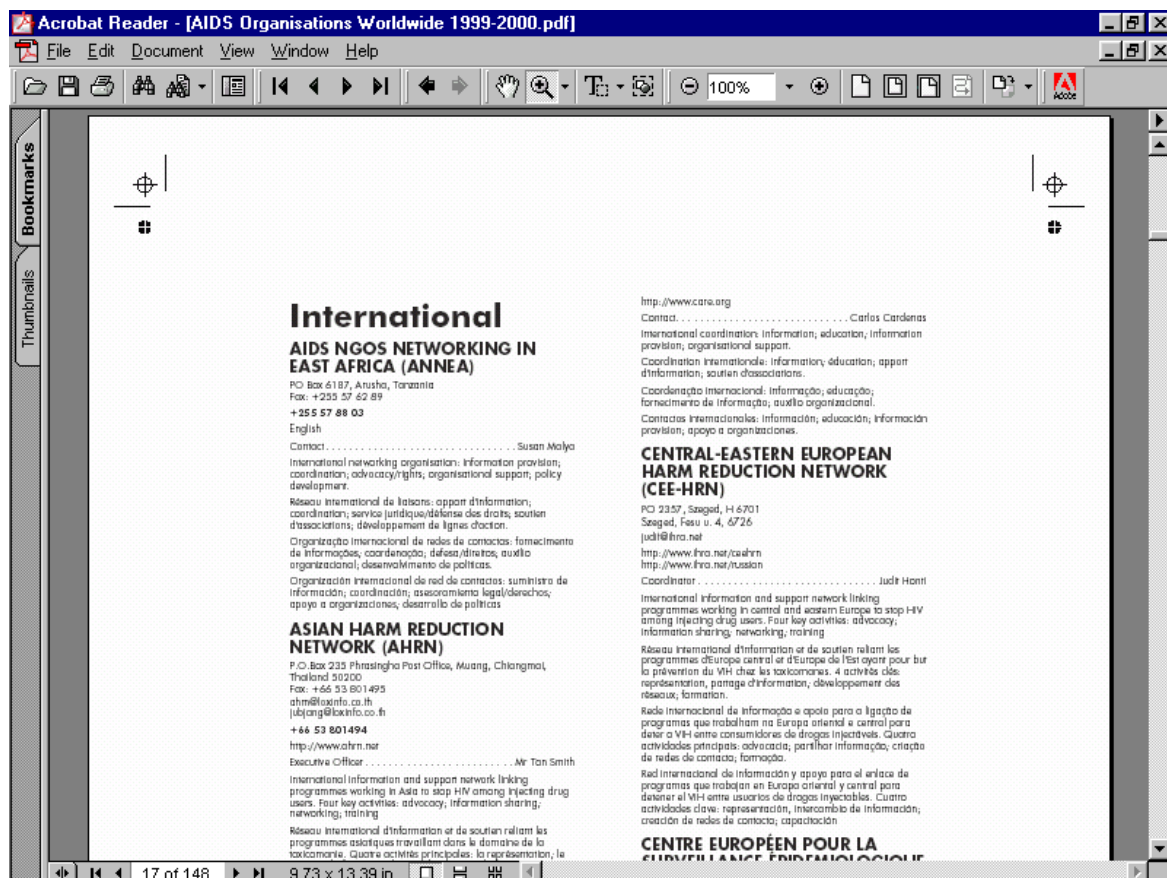
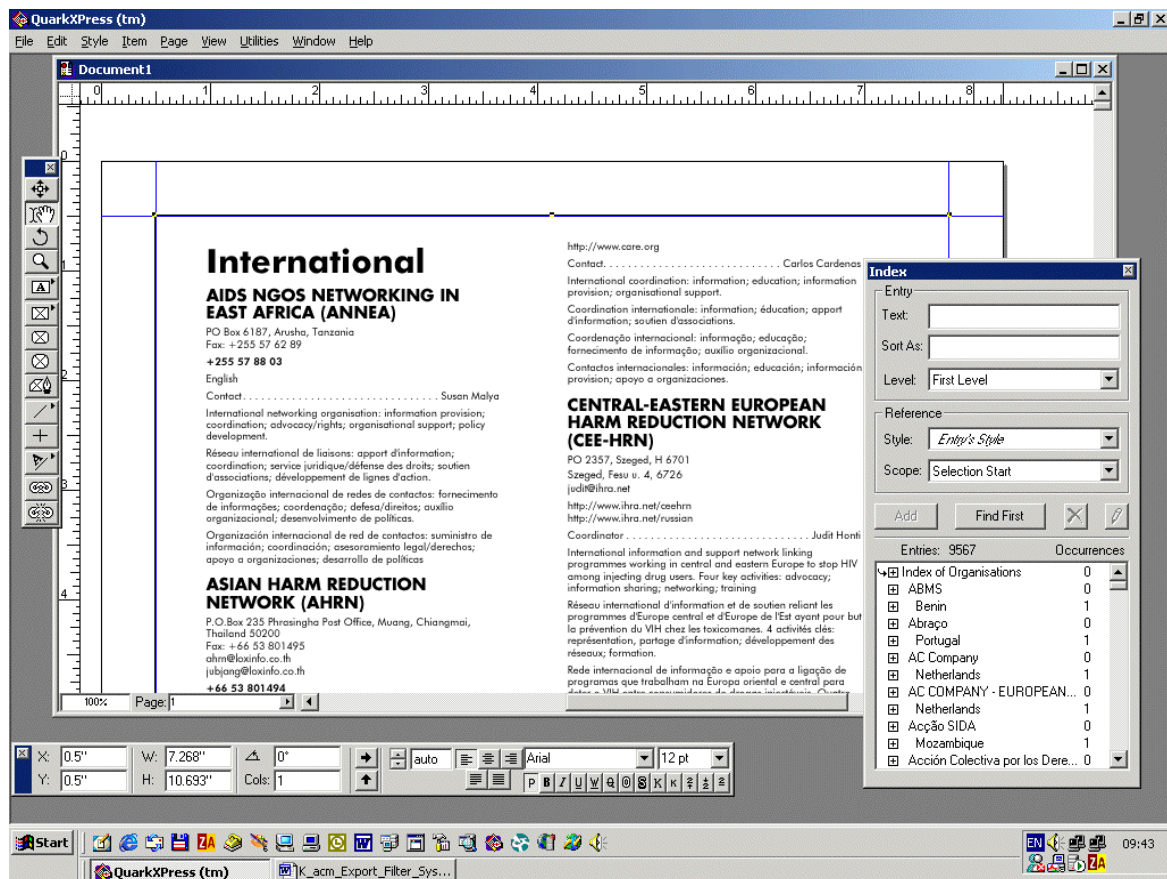
```
<Dpp-Template>
<Comment>
  Hardcopy Template for AIDS Worldwide Organisations - Part 1: International Organisations
  Output format: QuarkXPress 4.1, XPress Tags tagged file (XTG file)
  Target XTensions: Index 1.22, XPress Tags Filter 2.5
  Created: June 2001
  Last update: 16.08.2001
              16.10.2001 Optimized index
</Comment>

<General>
  <Output-File Name="aow.xtg" />
  <Data-Source Type="ODBC";DATABASE=organisations;Trusted_Connection=Yes" />

  <Query>
    SELECT
      citynames.primarycityname,
      organisationsmain.org_title, organisationsmain.agency,
      organisationsmain.streetadress1,
```

☒ Use Default External Editor

notepad.exe



18 CD-ROM PRODUCTION

In the same way that the system exports data ready for hardcopy production, data can also be exported from the system ready for the production of CD-ROM based publications - including Konnect Soft's own Konnect EPS (Electronic Publishing System) format.

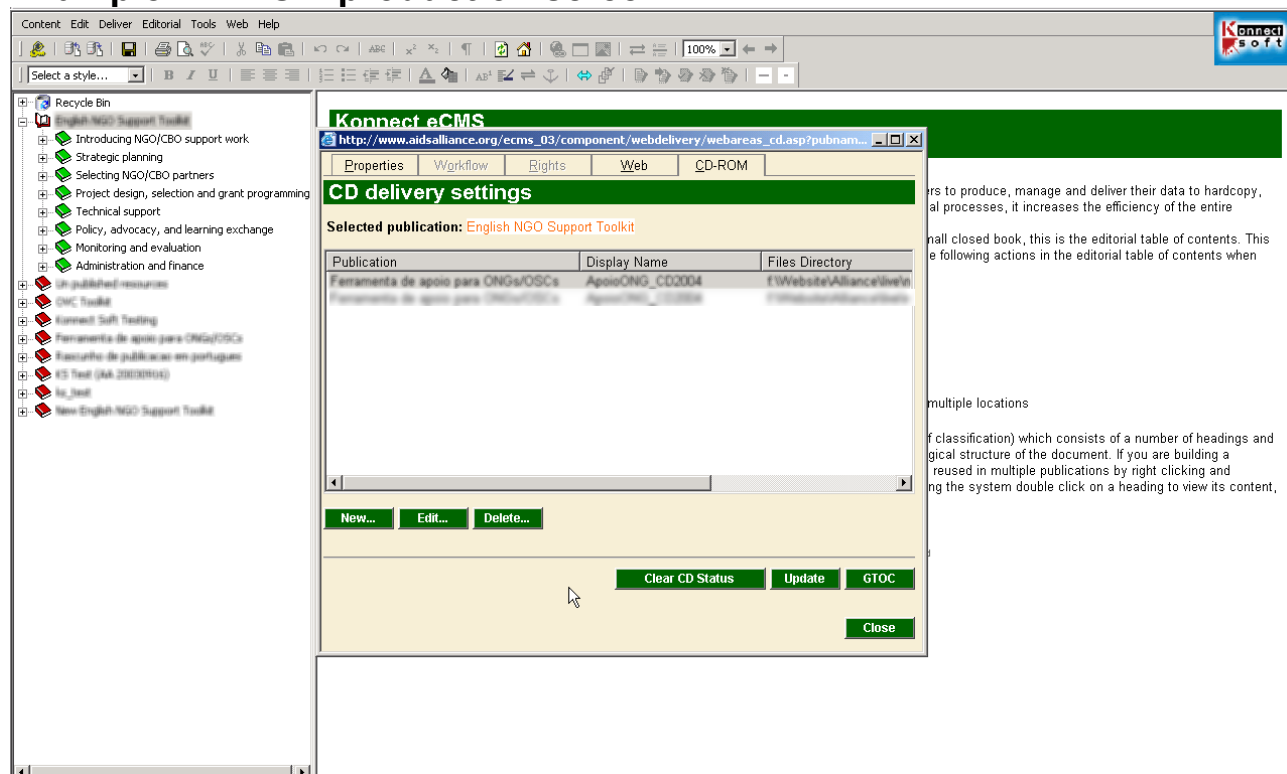
The data contains necessary information to produce the relevant CD-ROM title including:

- Cross-references
- Indexes
- Footnotes
- Others

This CD-ROM production system uses an automated and highly integrated production process. This system allows the publisher to produce the data for the CD-ROM by simply clicking a button on the interface of the content management system - the data then only needs to be imported into the CD-ROM production system.

Please contact Konnect Soft for further details of CD-ROM production, or request our Konnect EPS (Electronic Publishing System) Product Description.

18.1 Example CD-ROM production screen



19 ELECTRONIC COMPILATION BY END USERS

Konnect Soft's **Electronic Content Management System, Konnect eCMS** is a system of electronic data collection enabling end users (i.e. database entrants/recipients) to electronically update their own data.

It provides functionality for easy submission of electronic data by entrants, allowing editorial staff to then approve and release this updated data for publication.

This system saves time, money and resources, as it transfers the effort of basic data entry and checking **from** your editorial staff **to** the entrant.

See **Note on terminology** section 19.6 for explanation of terms.

19.1 Overview

Konnect eCMS sends an e-mail message to database entrants including a link to an electronic update form.

Once recipients have checked/completed the content of the update form, they return their updated entry over the internet to the publisher/information owner. These revised entries are automatically sent to the update database, with data integrity being assured by an embedded security code.

From here, Konnect eCMS enables the publisher to view the newly updated entries on screen and visually compare them with the existing entries, before releasing them into the master editorial database. The publisher can further edit any entries as required, and mark any records which should not be released. Once this selection and editing process is complete, this "fresh data" is released, whereby the existing data in the editorial database is automatically updated.

The potential productivity gains from this technology are substantial.

19.2 Benefits – cost savings and productivity gains

Konnect eCMS is a highly efficient, internet-driven system designed to automate the process of collecting and updating directory type content. This innovative software product offers publishers/information owners major advantages over traditional paper-based systems for updating entries including:

- Increased response rates for entrant updates
- Improved response times for update mailings
- Allows more frequent updates of directory content
- Increased quality of data
- Reduced key/re-keying work for the publisher
- Potential for very significant cost savings
- Substantial productivity gains

19.3 Who should be using Konnect EEUS?

Those needing to send data to third party persons/organisations for verification/update, or for the first-time collection of new data.

Examples of information types needing to be updated include:

- Contact details
- Companies
- Persons
- Address details
- Preferences
- Products
- Services
- Etc.

This update process typically involves the sending of data such as:

- Directory entries
- Update forms
- Registration details

End uses for the data include:

- Directory entries
- Subscription details
- Contact/mailling lists
- Registration details
- Membership details
- Product buyers guides
- Who's who details
- Etc.

19.4 How does it work?

Konnect eCMS sends an e-mail message addressed to the relevant recipients plus an update form holding each entry's data extracted from the master editorial database.

Following transmission, the e-mail message plus update form are retrieved by the recipient when checking their e-mail. The recipient is requested to check their existing entry (i.e. the information held on them) by clicking on a link which opens their update form in a web browser

The recipient views their existing entry in a web browser and can immediately make any necessary changes directly to this update form. The update form can at any point be saved to file, printed or the update request e-mail containing the link to the update form can be forwarded to another recipient.

Once recipients have checked/completed the content of the form, they return their updated entries over the internet to the publisher by simply clicking on the "submit" button. The whole update process can be completed in just a few moments, and due to the immediacy of e-mail, recipients typically deal with the update without delay, with questionnaires no longer being "thrown into the pending tray".

These revised entries are automatically sent to the update database within the system with data integrity being assured by an embedded security code. The update database stores submitted entries awaiting approval by the publisher. In cases where an entrant submits an entry more than once, the update database stores all submitted entries in the updates history for a particular entry.

The publisher can now view the updated entries and visually compare them with the existing master entries, editing them as required. Where an entry's update history contains more than one update, the publisher views and processes them in chronological order. When an entry has been approved, the publisher then releases this updated entry by saving it to the master editorial database.

Where e-mail messages are not successfully sent (e-mail addresses are of incorrect syntax or bounce back), Konnect eCMS marks those records accordingly.

19.5 Streamlining the compilation process

Konnect eCMS streamlines the editorial content collection process for publishers which involves contacting each person within relevant organisations listed within the master editorial database.

Typically directory publishers/information owners need to prepare huge numbers of printed update forms, insert these into envelopes and mass mail by post or fax (often a number of times). The recipient then evaluates the information supplied, and modifies the paper-based entry forms, returning them to the publisher, where the forms are then collated for eventual manual update of the editorial database.

This whole procedure is:

- High cost
- Extremely labour intensive
- Prone to low response rates
- Often necessitates multiple fax and telephone "chasing of entries"

- Responses that **do** come in, come in slowly
- Forms sent to the wrong person do not get passed on to the correct contact

Konnect Soft's Electronic Content Management System (Konnect eCMS) has been designed to reduce these costs by providing a computer-based automated system, which:

- Reduces printing, mailing and personnel costs
- Greatly reduces preparation and set-up efforts of the update campaign
- Is totally dynamic and appears on the recipient's computer ready for immediate review and updating
- Eliminates collation time and much of the data entry aspect of directory publishing
- Leads to dramatically improved response rates and also shorter response times
- Is easily forwarded from the wrong contact, to the correct contact
- Eliminates vast amounts of paper
- Allows for more frequent updates

A major advantage of the system is that the preparation time and costs of running an update campaign are vastly reduced. Furthermore, Konnect eCMS is such a simple and fast update for the entrant to deal with that entrants are now tolerant of more frequent update requests. For the publisher, this means a more up-to-date directory/higher quality information and reduced costs to achieve it.

19.6 Note on terminology

Directory type data/content	Typically highly fielded content containing records of persons/organisations. SEE Entry.
Editor	Is used as a generic term to apply to publisher's/information owner's staff.
End user	A collective term for the Entrant or Recipient.
Entrant	The actual person specified in the entry contact details. The entrant is often different from the person who actually receives the update request e-mail. SEE Recipient.
Entry	An entry typically contains person and organisation contact details plus product/service, specialisation/activity and preferences information (held as records within the master editorial database).
Information owner	SEE Publisher.
Master editorial database	Data repository (of the publisher/information owner) containing all publication content and relevant contact details for the data collection process.
Publisher	Owner or holder of the directory type data/content held in database format within the master editorial database, who wishes to periodically update this data. Used also as a synonym for information owner.
Recipient	The contact person within each listed organisation (as recorded within the master editorial database) responsible for updating the entry. The recipient is often different from the actual person specified in the entry contact details – these are normally held within separate fields within the master editorial database.
Update database	Database used specifically by Konnect eCMS to e-mail recipients and receive back entry changes, or confirmation that no changes are required. The update database extracts a copy of the content from the master editorial database.
Update form	The electronic entry/update form in HTML format, a link for which is sent to entrants within an update request e-mail. It contains the entrant's data for them to check/modify and submit back via the recipient. The updated details are stored in the update database by Konnect EEUS for the publisher to approve and save to master editorial database.
Update request e-mail	An e-mail sent to recipients containing a message requesting them to update their entry.

19.7 More information

For more information, request a copy of Konnect Soft's Product Description for Konnect EEUS or download from www.konnecsoft.com/databasesys/eeus_pd.asp

20 SALES AND MARKETING SYSTEMS

More details to follow

21 TECHNOLOGIES EMPLOYED

21.1 Database

Relational database technology is fully utilised for all areas of the system as it provides a very powerful framework for managing publishers' data, which allows the generation of content in a potentially unlimited number of output formats.

By utilising advanced relational database design Konnect Soft can provide maximum flexibility in classification of data, and maximum reusability of content for different products or purposes.

The technology also allows Konnect Soft to provide systems that perform well and can handle the many and varied demands of the publishers editorial system, for example, delivering content to end users over a web site or exporting to different file formats.

Also the system is made easier to manage by storing all information in a single coherent structure and providing a large range of management tools to protect and secure publishers data. (Database storage, backup and security systems are just a few of the tools that take away the pain of maintaining the system.)

21.2 Standards

Konnect Soft follow published standards for development related technologies to achieve best possible compatibility and support from applications. This includes SGML/XML related field of technologies e.g. HTML, CSS, XHTML, XML, XSL, etc.

Konnect Soft develops code that correctly implements the standards for HTML, CSS, XML, etc.

Organisations whose standards we monitor include W3C, ISO, and IEEE.

21.3 Microsoft technologies

The main Microsoft technologies employed by Konnect Soft for the implementation of the Electronic Content Management System are listed below.

The technologies are selected as the most appropriate to our system architecture and include:

- Windows 2000/2003 Server
- Microsoft .NET
- ASP
- COM+
- ActiveX
- ADO/OLE DB
- SQL Server 2000
- SOAP
- Web services
- XML
- XSLT
- HTML/CSS
- Internet Explorer

21.3.1 Cost of ownership

A factor in the choice of technologies utilised by Konnect Soft is our objective of minimising the total cost of ownership to the client of software systems supplied. (For example, a PHP alternative may run on a low cost operating system but the development and more importantly maintenance and support costs can be much higher than an ASP/COM based system).

All appropriate recognised standards are adhered to (e.g. W3C standards for XML, HTML and CSS), to allow portability and compatibility with different applications.

Microsoft ASP technologies are developed using a component (both COM and non-COM) methodology to support an upgrade path and migration to new versions. Microsoft .NET is being integrated into the system to provide even greater flexibility and extensibility.

The goal of the choice of technologies and development procedures used by Konnect Soft is to create high-efficient systems which:

- Minimise maintenance overhead
- Allow modification of existing components without impacting other components
- Allow the system to be extended with minimal changes to existing components
- Minimise the overall cost of ownership

22 WEB & EDITORIAL SERVERS

22.1 Management and configuration

Konnect Soft provide setup and configuration of the web server which typically includes:

- Web server (IIS)
- FTP server
- Mail server
- SQL Server
- Index Server
- Web site analysis

.... and install all the necessary files: ASP, HTML, PDF, images, etc. for the entire web site system.

22.2 Ongoing management

Ongoing management of the web server is provided as required.

22.3 Hosting solutions

If required by the client, Konnect Soft can provide web hosting solutions to include the hardware, operating system and internet connection for the web server.

22.4 In-house versus hosted

If an organisation has an in-house web server located at their central office then it is possible to use the same database for the editorial system and web access. Running a web server can be an expensive, complicated, time and resource-consuming practice. Konnect Soft have the facilities to manage an in-house web server remotely for clients, negating many of the complications from this process.

To do this an organisation could employ a specialist web master to run the server and associated hardware and software (alternatively Konnect Soft engineers can manage the server). A web server does require a very high bandwidth internet connection with very high availability (also the speed/bandwidth of a connection can be related to how close it is to the backbone/point of presence).

Other factors which must be allowed for are:

- Server hardware costs
- Software costs
- Firewall
- Proxy servers
- Line downtime
- Routers and networking
- Backup system
- Security
- DMZ* (demilitarized zone)
- Ongoing monitoring
- UPS (uninterruptible power supply)
- Physical security
- Insurance

**Even when the largest organisations, the web server it is often separated from the editorial system (in what is called a demilitarized zone) due to security issues.*

22.5 Remote access to the system

Users require adequate bandwidth. Also see section 30.1.

23 ASSURING QUALITY

Our typical clients have a myriad of publishing requirements, often a multitude of problems, a lot of questions, twice as many possible answers on the table, and staff who themselves are not sure they have a handle on what solutions are out there.

This is typical of most of our clients at the time we enter the mix. Obviously the first step in our involvement with any client or potential client is the Systems Analysis phase (often, a necessary precursor to the actual implementation), which has the objective of evaluating the precise requirements, recommending specifying and designing a system which delivers the exact functionality required by the client.

23.1 Objectives

As the starting point in a project, Konnect Soft always aim is to determine fully the client's objectives.

This process is concerned with identifying project priorities and organising appropriate system delivery so that the most important components are delivered first with assured quality.

Konnect Soft's experience of analysis and defining these systems is used to assist the client in specifying exactly what they require, whilst at the same time also introducing them to alternative possibilities that they may not have been aware of.

23.2 Systems analysis

Often, a necessary precursor to the actual development is the Systems Analysis phase, which has the all-important objective of specifying and designing a system to deliver the exact functionality required by the client.

23.2.1 Approach

The Systems Analysis phase defines the exact requirement in technical and systems terms and is fundamental in respect of:

- The achievement of high quality systems
- Analysing the requirements of the system and examining alternative solutions
- Managing the level of complexity of the system required by the client
- Establishing a framework for good communication between project participants
- Providing a mechanism that allows both parties to check that the proposed system functionality
- Designing the precise system that delivers exactly what the client requires
- Ensuring correct allocation of resources to achieve system delivery
- System configuration
- Commencement of required project extensions
- Ensuring effective project management and control

23.2.2 Systems analysis tasks

To produce a framework which allows a project to deliver exactly what a client requires, the following stages are involved:

- Information collection, including interviews with relevant personnel
- Investigation of the current environment
- Defining the boundaries of the system
- Analysing the client's data
- Analysing the client's workflows
 - ⇒ Analysing the inputs to the system
 - ⇒ Analysing the outputs from the system
- Analysing the components required for the system
- Designing the basic top level model of the new system

Performing this analysis allows Konnect Soft to gather all requirements for this system and examine the factors affecting the resources, to be allocated for implementation of the different components.

23.2.3 Methodologies

Konnect Soft use a variety of systems analysis and design methodologies, as no single methodology is appropriate to all projects.

Our focus is on object-oriented analysis and design wherever possible, with component-oriented techniques also being heavily used. Other methodologies that are utilised include:

- Rapid Application Development (RAD) and prototyping
- Use of UML modelling
- Data flow diagramming
- Process modelling
- Usability testing of user interfaces
- And many others...

The objective of all our implementations is to provide:

- Maximum component re-use
- Maximum extensibility

.... so when a client requires changes or extensions in the future, this process is facilitated by this fundamental design.

Wherever possible functionality is grouped into components. This makes it easy for the client to understand and use the new functionality as it is provided as a named component, rather than a list of disparate changes to various parts of a very complex system.

23.2.3.1 Prototype or sample screen design

Our standard methodology for components to be customised is to provide clients with a prototype or sample screen design before implementing the functionality. This allows the client to check in advance that the interface provides the necessary functionality and to ensure that it meets their usability requirements.

23.3 Producing the new system proposal/specifications

The result of the system analysis phase is a detailed specification document defining the precise requirement and functionality to be delivered by the new system. This document typically includes:

- Details of the analysis
- System documentation including:
 - ⇒ DFDs (data flow diagrams)
 - ⇒ ERDs (entity relationship diagrams)
- Technologies to be employed
- Specification for the proposed new system
- Additional database tables and relationships required
- Basic user interface design
- New system design
- Description of how the new system will work
- Project milestones
- Timing
- Pricing information
- Etc.

23.3.1 Customising the Electronic Content Management System

A fundamental part of any project implementation is the customisation to produce a version of the Electronic Content Management System tailored to specialist requirements of an individual client organisation.

The system architecture is developed on object- and component-based foundations which allow additional plug-ins or extensions to be implemented without effecting the core system.

When systems analysis is undertaken for such a project, Konnect Soft produce a specification for functionality extensions, new components and underlying data repository configuration changes which incorporates all the client's requested functionality. In other words, part of the task of the systems analysis is to identify customisation requirements and any new component extensions to the system that need to be produced to provide the functionality required by the client.

All component functionality extensions are passed to senior developers in our Project Team who produce an implementation plan detailing how the component is to be implemented (drawing from classes in our extensive software library) along with a schedule. This is then used by the management team to compile a customisation costs worksheet that is used to arrive at the final pricing for the client.

23.3.2 Follow up

A briefing meeting with the client to review the results of this phase finalises functionality of the new system.

23.4 Project management

Konnect Soft work closely with the client to keep them up-to-date on project progress.

A Project Manager is assigned to the new project who oversees production of the project plan. The Project Manager is the main point of contact for the client and manages any issues that arise during the course of the project to assure high levels of client satisfaction.

23.4.1 System implementation strategy

Once systems analysis has been completed and the new system specification is produced, the Project Team construct a detailed project plan including an implementation schedule and resource allocation.

Internal specifications and implementation plans are used to create a schedule and resources are assigned to each component. Normally a senior developer is responsible for a group of components and individual programmers will implement each component.

For each component (that has a user interface), a user interface prototype is produced and then "signed off" before finalisation. Release milestones for alpha, beta, final etc. are used for larger scale projects, with each milestone including a testing phase. Beta versions are installed for the client giving them the opportunity for ongoing testing. Client confirmation is obtained before the final version is released, thereby assuring client satisfaction – in other words, only following client confirmation does a component receive "released status".

Tracking databases are used to deal with all client requests and testing feedback allowing the client to view the completion status of a request or error report.

23.5 Phased implementation

Components are implemented using a phased approach (i.e. the entire system is not produced all at once) to minimise disruption to the client and to help them better manage the impact on the editorial process and its staff.

23.6 Training

Training solutions are supplied tailored to the client's requirements.

23.7 Maintenance and support

Maintenance and support is provided by Konnect Soft according to the exact needs of the client.

24 SYSTEM LIFESPAN AND SCALABILITY

24.1 System lifespan

Technology changes at an ever-increasing pace. How do you know that your investment will not be redundant in 2 years, 1 year or 6 months because a new technology comes along to replace it?

Konnect Soft ensure that the system delivered has the maximum possible lifespan and can be upgraded and expanded indefinitely.

To achieve this goal, we use best possible software engineering techniques which include:

- System analysis and design
- Component based development
- Object oriented development
- Error monitoring and control systems
- Thorough documentation

These practices create systems that are easy to modify and extend, allowing the incorporation of new software and operating system developments.

At Konnect Soft we base our products on software from major proven companies (“best-of-breed” suppliers) and we continuously monitor market developments. Where possible software that has a proven track record is implemented, and we always use suppliers who provide good documentation and support.

24.2 Scalability

Our systems are fully extensible to handle any amount of data growth and changes required by the client company. The data repository uses powerful cutting-edge database technologies and as a result it supports:

- Clustering
- Replication
- Load balancing

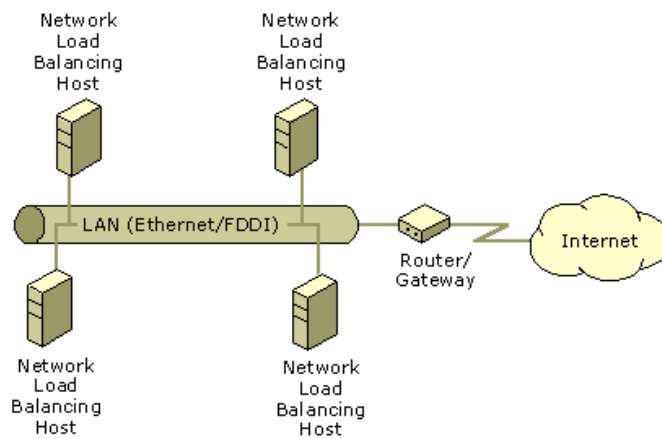
When running on a server configured by Konnect Soft, the system can hold a huge amount of data. If the publisher’s data should grow beyond the capacity of the original hardware to support it, then additional hardware resources can be added to handle the increased load.

A multiple web server solution can be used to provide redundancy with the use of backup systems to cover primary system failure. This also provides scalability by allowing for the use of load balancing.

24.2.1 Load balancing

Load balancing is the ability to distribute network traffic across multiple machines. Essentially this means that when a high number of users wish to access a web site, the load can be divided between multiple servers to ensure that response time is still good (perhaps the most prominent example of this is www.microsoft.com who have over 100 servers that cover aspects of their web site - 35 of these handle the load of delivering web site content).

Using load balancing and clustering our Electronic Content Management System content management system can deliver data onto web sites receiving millions of hits a day. Konnect Soft can provide expert advice on hardware and software requirements to support the growth of your system.



25 ABOUT KONNECT SOFT

Konnect Soft specialise in the provision of electronic content delivery solutions including:

- Editorial and back-office systems
- Database powered web sites
- Automatic content management
- Content delivery including web, CD-ROM and printed publications

.... for reference works, contact directories, buyers' guides, journals, periodicals and professional journals, technical information databases, etc.

25.1 What's different about the Konnect Soft approach?

25.1.1 Overview

- Devoted to meeting the requirements of information publishers
- Editorial focus
- Hardcopy production expertise
- Bridge the gap between the web and hardcopy production, while maintaining the strengths of both
- Empowers publishers – our clients control their own data and its delivery, rather than having to rely on a third party

Functionality areas include:

- Powerful flexible cutting-edge technologies including:
 - ⇒ Latest relational database technology
 - ⇒ Full XML compliance
- Maximum system lifespan - component based and fully extensible
- Combination of relational database technology and XML allows data to be read out in any format
- Granularity and relational nature of Konnect Soft data structures allow content to be split and recombined into different permutations

25.1.2 Features of our system

25.1.2.1 Fully relational content with high degree of granularity

System features include:

- Making your content fully re-usable
- Allowing one to assign different pieces of content to different publications
- Providing a content management system that is much more than just a document management system

25.1.2.2 Data granularity

One of the difficulties associated with many standard document based content management systems is that the granularity is not fine enough. Documents are stored as entire files and parts of a document cannot be easily re-used in different publications.

Konnect Soft's Electronic Content Management System provides granularity to the exact level required by the publisher. By storing text and headings as separate records, but at the same time providing an integrated editorial interface, we provide the flexibility of full content re-use along with an easy-to-use editorial interface.

25.1.2.3 Integrated browser based interface

The editorial interface is fully integrated with the content management system functionality itself without the need to use other applications as an interface.

On project commencement, customised interface screens can be delivered by Konnect Soft to allow the client to confirm that the interface meets their requirements. In this way Konnect Soft allow the system to be customised to the publisher's precise needs, rather than forcing them to use a generic interface which may not support all desired functionality.

25.1.2.4 Full remote editorial support

Remote editors access the system through the same interface as "local" editors. Rather than having an add-on component for remote editors, remote editors have the complete power of the system at their disposal.

25.1.2.5 True content delivery

Data in held within the Konnect Soft system is not associated with any particular output format.

Using the delivery component, data can be delivery into any format desired. The delivery applications use filters and style sheets which can be modified by editors without the need to pay suppliers for each change to the output configuration.

25.1.3 Other content management systems

25.1.3.1 Back-end and front-end system

Many content management systems are back-end orientated. These systems handle the basic classification of data into "publications" and manage data structure, but do not cover all aspects of content delivery to the end user. Back-end systems need extra configuration, development and management to handle the process from the generation to delivery of content to end users. Often these systems do not cover sufficiently the configuration of the web site and this becomes a separate process to manage.

The Konnect Soft system covers back-end systems and configuration all the way to front-end presentation to the end user. Additionally, our collection of components for web site administration, configuration, product delivery and site design allow us to provide an true end-to-end solution.

25.1.3.2 External editor based systems

- Must also support an external editor
- All editors need to install the external editor
- Licences are needed for the editor
- Is not a single integrated environment
- If importing into a database, the system is splitting and recombining data and any changes to heading structure and styles require it to be reconfigured
- Often use complex XML-based editor which have high training demands

25.1.3.3 File based systems

- Granularity is limited to the size of the files
- Content is not truly relational
- Cannot use database administration facilities
- Large files cause problems and small files are inefficient to work with
- Cannot use replication which is the best technology for a fully distributed architecture to support remote editors
- Usually have a lack of support for performing batch process over multiple documents, such as:
 - ⇒ Search and replace
 - ⇒ Spell checking
 - ⇒ Indexing
 - ⇒ Etc.

25.1.3.4 General products

Often content management products are aimed at organisation with an extensive IT Department which can support the set-up, configuration and maintenance of the system. Usually supplier support is limited and the training requirements can be high.

In contrast, Konnect Soft's Electronic Content Management System provides a product in the context of information publishers' data and customised for their needs. We are not limited by a pre-defined product structure. Our data repository model allows us to customise and configure a solution which delivers all the features needed by the individual organisation.

25.1.4 System maintenance

Konnect Soft are committed to the quality of our products and we provide quick and efficient response to system requirements. We utilise integrated remote administration to allow direct support to be provided on the systems that we supply.

26 MORE INFORMATION

More information on features offered by our solutions is contained in the following Product Descriptions:

- Konnect EEUS - Electronic Editorial Update System
- Konnect EPS - Electronic Publishing System
- Web Server and Hosting Requirements including Full Management Option

Konnect Soft functionality is component based and accordingly offers the client protection of their initial investment and a logical upgrade path to support their exact publishing strategy.

27 CONTACTING US

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28 APPENDIX - TECHNICAL DETAILS ON RECORD RE-USE

28.1 Inserting a reference versus copying

Konnect Soft's data repository (i.e. the overall data set) consists of a pool (or long list) of records (and headings) each with a unique identifier.

28.1.1 Inserting a record reference

Inserting a (record) reference allows one to include an existing record in multiple publications by just inserting the ID of the record into the publication structure of the selected publication. This is how records are re-used, by inserting references to records that already exist in one publication/the data repository into another publication.

If the record which is referenced in various publications changes, then the changes are seen in all locations. Theoretically a record can be re-used an infinite amount of times in publications. Also records can be repeated several times, if desired, within the same publication. The content management system allows publishers to set the limits on re-use by specifying that records cannot be re-used within the same publication for example (i.e. although the underlying system allows this, the option can be turned off).

Conceptually one can think of all records in a publication as references, where we are using an existing record in a publication. In practice we will distinguish between records in a single publication, which are normal records, and references in multiple publications, which are references or reference records.

References can be thought of as being similar to shortcuts in the file system.

28.1.2 Copying

When a record is copied, it creates a duplicate of the record value with a different ID. In other words, by copying a record between publications, one is really making a new record in the destination publication and giving it the same initial content (as the record copied), **before** it is edited. When the respective records change, they then have no affect on each other.

28.2 Example

An example is a technical/reference book or manual that is divided into chapters, sections, and sub sections. Each chapter, section and sub-section is a heading with text or other headings below it. The book is called **Making a Web Site: The Complete Reference** and it has the following chapters and sections:

- **Introduction**
- **Ideas, feasibility & specifying**
 - ⇒ **What is the idea?**
 - ⇒ **Will it work**
 - ⇒ **Create a specification**
- **Deciding on the technologies to use**
 - ⇒ **Scale of the development**
 - ⇒ **Re-use**
 - ⇒ **Resources**
 - ⇒ **Alternatives**
 - ⇒ **Trends**
- **How much will it cost?**
- **Planning the development**
- **Etc.**

Say the book was published and was very successful and readers were particular interested in the topics covered in the first chapters, and so the author decides to create a second book **Web Site: Project Management in 10 Easy Steps**, but:

- Re-using only the 2nd, 3rd, 4th and 5th chapters
- And adding some new material.

In Konnect Soft's content management system, the first publication is shown as a branch under the root of the table of contents (TOC) as **Making a Web Site: The Complete Reference**.

To create the new book the author right clicks on the root, chooses **New publication**, types the name **Web Site: Project Management in 10 Easy Steps** and clicks **OK**, and the new publication has been created!

Now they need some content, clicking on **Create a specification** (the 2nd chapter from "Making a Web Site: The Complete Reference"), they right click and drag it into their new publication and choose **Insert record (link) here**. Now the section is present in both publications and when it is updated, the updated content appears in both publications.

Next they choose **What is the idea?**, right click and choose **Copy**, then clicking on the new publication they choose **Paste**. A new entry for "What is the idea" appears in the new publication, but this data is a copy of the data from the previous publication. The author then changes the heading to **Turn an idea into requirements** and changes the content. These changes do not appear in the previous publication – this publication has a different focus and the content here will vary. In this way the author can quickly build up their new publication, re-use existing content and adding new material as is required. The editorial TOC interface provides the user a powerful and easy to use tool to control publication structure.

29 APPENDIX - DATABASE AND REPLICATION TECHNOLOGIES ---

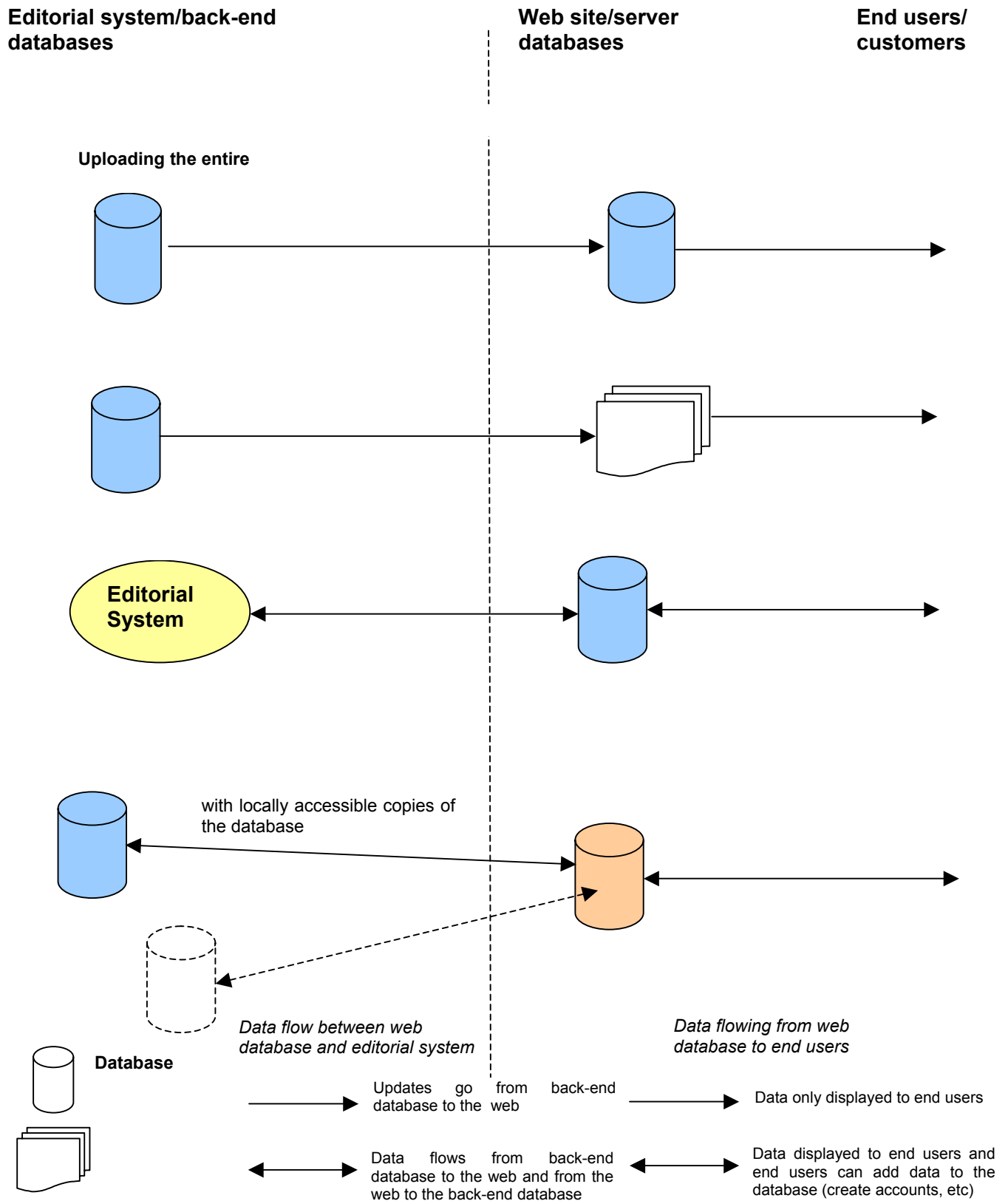
29.1 Synchronising data

When an organisation has content housed in an existing data repository/database which they wish to deliver via the web, different scenarios may apply:

- A copy of the database can be created and delivered online
- Data can be exported from the database and delivered online as files
- An in-house web server can be established and content displayed directly from their back-end database
- Applications can be developed to attempt to synchronise data
- Replication can be utilised

Problems with the first option include the fact that the entire database must be uploaded to update the data on the web site. This can take a long time (depending on the size of the database and the speed of the internet connection) and this process is also error prone. For example, if there is a problem and the upload is interrupted, then the web site may not function correctly.

29.1.1 Data flow scenarios



29.1.2 Allowing data to flow both ways

If an organisation wants to allow end users to interact with the web database, then they must handle the issue of data being exported to the web site, and the requirement to re-import data from the web site. A common scenario that requires a bi-directional flow is when an organisation has existing product sales and customer accounts systems and they want to allow customers to order/purchase products or services online from the web site.

When ordering offline within the back-end system, whenever:

- A new customer orders an item, a new customer record is created with the relevant purchase information being recorded
- An existing customer orders an item, relevant purchase information is associated with their existing account.

When ordering online, the normal requirement is for this to also happen on the web, however the new purchase information created on the web site then also needs to be imported into the back-end database. Also ideally where an existing customer purchases online, their existing account information should be utilised.

These types of transaction require data from the back-end database to be on the web server (existing customer records) and for new information to flow from the web into the back-end databases. This bi-directional data flow requires special functionality to automate the flow of data.

Systems which upload the entire database or export files to the web site do not allow for a downstream flow of data. Some applications or companies try and build their own synchronisation technologies, which is a difficult and expensive task. Most often a better alternative is to use replication which is an existing database technology which handles these issues.

29.1.3 Technical issues

What happens when users add data to the web and back-end databases at the same time (or in the same time period)? For example, a new customer may order books over the phone and another new customer may order over the web at the same time. In this case a new customer record will be created in the back-end database and in the web database. Now just say that currently both systems are up to customer ID C117446, so that two new customer records get created with customer ID C117447 (one in the web system and one in the back-end system). Now when the new web customer details are imported into the back-end database, then there is a problem as a customer already exists with this ID. The solution to this problem is the use of database replication.

29.2 Replication

Replication is a system by which databases can be modified at different locations and all the changes synchronised or copied to all the databases. With replication the usual situation is that each different location which is using and modifying the data uses a copy of the same database. These copies are called replica (or subscriptions) and are identical except for the local changes which have yet to be synchronised. After synchronisation the databases are then (for all intents and purposes) identical.

Replication is often used where users of the same database are in offices in different parts of a city, different parts of a country, or in offices in entirely different countries. All the users wish to access the same database, but they cannot connect directly because of various issues (e.g. the costs of a high bandwidth and reliable dedicated connection may be prohibitive). Replication makes it seem as if the users are using the same database by synchronising all the changes that different users make at different times (this can occur as and when desired e.g. hourly, daily, weekly, etc.).

29.2.1 Creation of replicas

When replicas of a database are initially created, all the databases are the same, apart from some special internal information. Once created, the replicas are then distributed to different locations in the organisation (such as the main editorial office, branch offices and web server). Users at these different locations then start using the replicas - adding and changing data.

When a user at one location changes some data and so does a user at another location also changes data, what then is the procedure?

As the users are working on different replicas, they cannot see each others changes, until these replicas have been synchronised. Synchronising involves taking these changes from each replica and applying them to the other replica (so each user can see the other changes). See also section 9.

29.2.2 Managing conflicts

It is possible for two users to change the same piece of data within different copies of a database (i.e. replicas) at different locations. These potential “conflicts” need to be managed – replication functionality utilises conflict management components which are configured to handle this situation. Konnect Soft’s conflict management component shows users where the conflict has occurred and allows them to merge both users’ changes so that no data is lost (alternatively one user’s changes can, if desired, be discarded).

Conflicts are avoided by the use of the advanced remote check-out component, see section 7.16.2.

30 APPENDIX - GENERAL

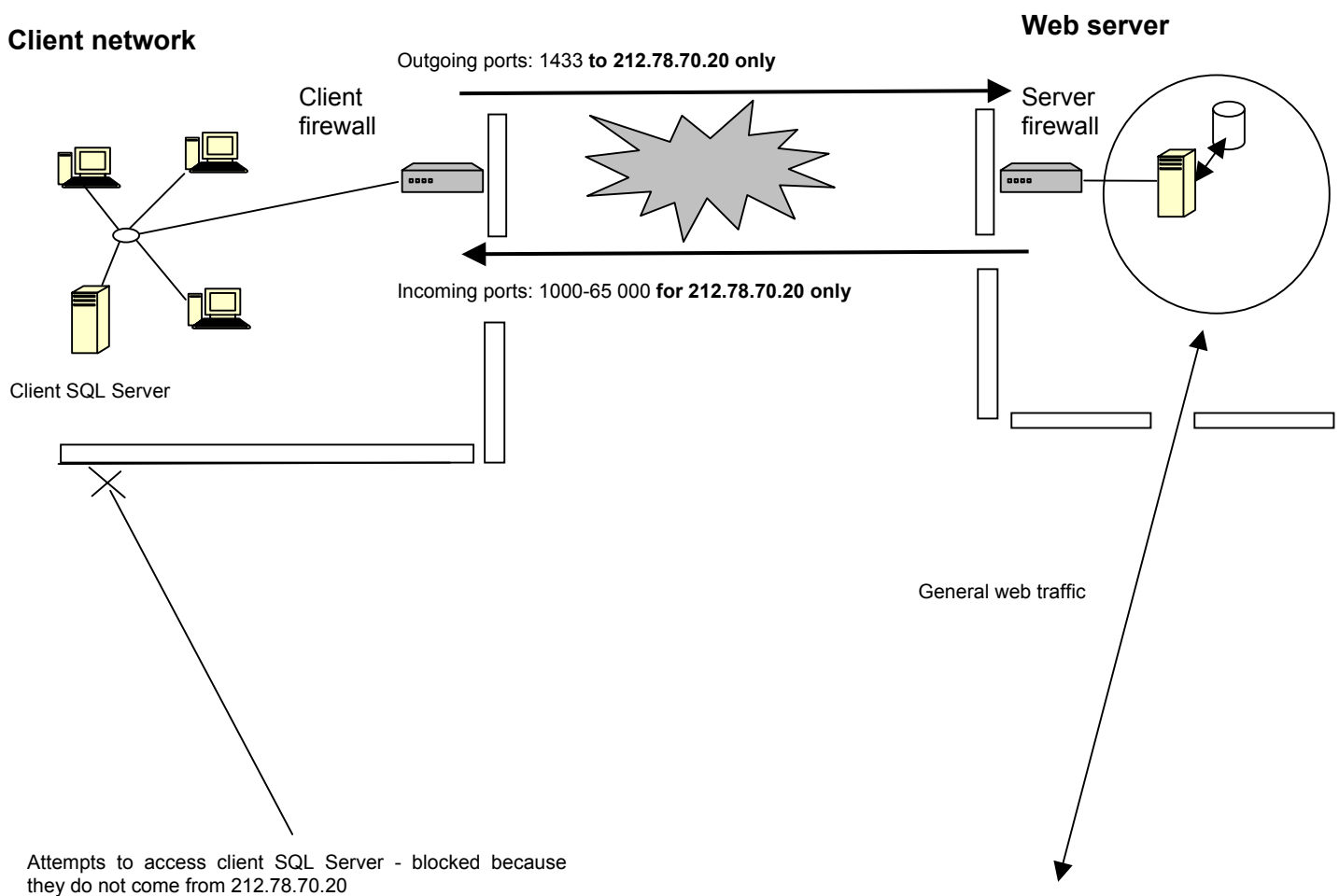
30.1 Internet connection for remote editors

Remote editors using the system require an internet connection with sufficient bandwidth (an active internet connection is required throughout the users session, if they are disconnected they will be logged off and will have to log in again). The minimum supported bandwidth for remote editors is 256 Kbps/user, a standard 512Kbps ADSL connection provides the required bandwidth.

Where an internet connection is shared between multiple computers in a network you must ensure that each individual user has an adequate amount of bandwidth.

A dial up modem connection is not supported.

30.2 Client – firewall – server configuration



30.2.1 Firewall configuration for Konnect Soft's eCMS system

For your users to access Konnect Soft's e-Content Management System (eCMS) running on a remote (web) server (referred to as the eCMS server) you will need to open certain ports in your firewall. These ports **only** need to be opened to the server on which the eCMS system is running, not to any other machines.

The outgoing port is used by the system to send commands to the eCMS server. The incoming ports are used to receive the responses to those commands.

First of all try the following configuration if that does not work try the alternative configuration listed:

- Open port 1433 outgoing in your firewall to the eCMS server IP/domain only
- Test accessing the system

If this causes problems try the following configuration:

- Keep port 1433 open for outgoing traffic
- Open ports 1024 to 65535 incoming **to the eCMS Server only**
- Test accessing the system

If you have further problems please contact Konnect Soft technical support on 0207 7348 6146 or support@konnecsoft.com.

30.3 The content management system and the server

Konnect Soft's content management system uses:

- Windows 2000
- A SQL Server 2000 data repository
- COM and COM+ components
- Some third party components
- Microsoft Indexing Services
- An ASP interface
- Web server - Microsoft Internet Information Services (IIS)

SQL Server needs to be installed and configured on the server, along with the COM components and ASP pages. Configuring and managing the system involves configuring SQL Server, IIS, Indexing Services, registering and updating COM components and managing the directory structure for the system.

This configuration and maintenance work requires full access to the server. Because the system involves a lot of work with the web server configuration, the most efficient solution is usually for Konnect Soft to manage the entire server.

As many operating system settings need to be configured and software needs to be installed, ordinary shared or virtual servers cannot be used and most clients select the fully managed solutions.

Konnect Soft have an experienced technical team of web masters (each with several years experience) who manage the server installations.

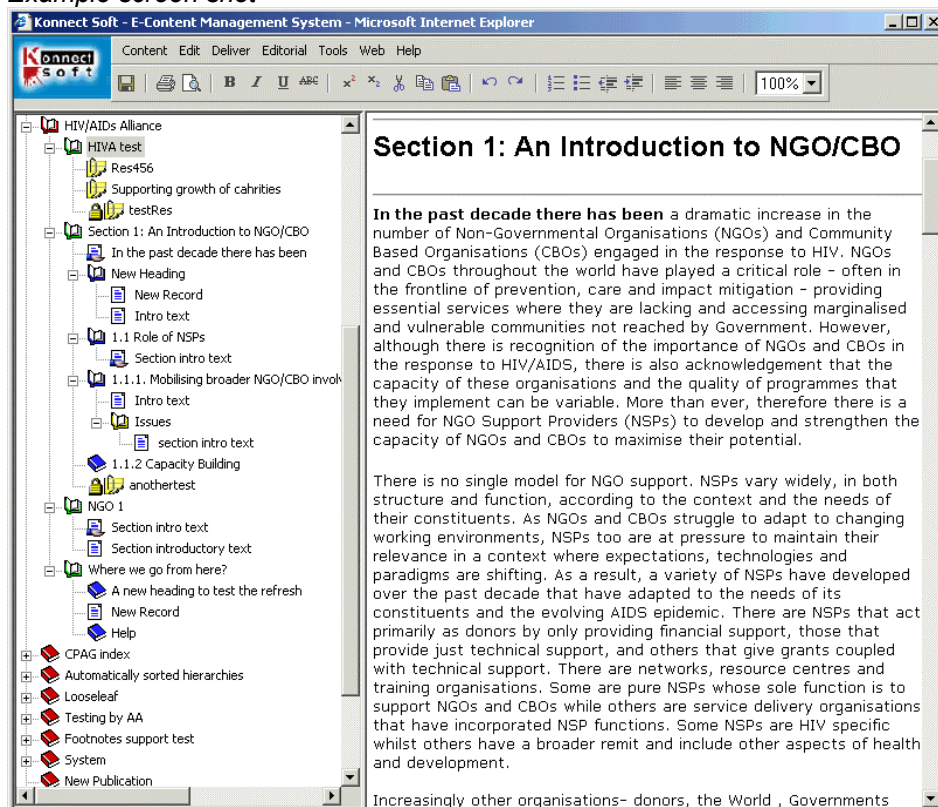
30.3.1 How the content management system works

Users connect to the system with a browser based interface and directly modify the data which is kept on the server.

Users initially open the content management system URL (e.g. www.konnecsoft.com/ecms/), and after logging in, they can edit the content.

Users add, edit and delete content in their browser and it is all saved in the SQL Server 2000 database on the web server. The data is editable through an interface somewhat similar to Microsoft Word but is stored within the database on the server as XML.

This allows the client to employ remote workers who can access the system from anywhere with an internet connection (Internet Explorer 6 and internet connection required).

Example screen shot

30.4 Data feeds to 3rd parties – interfaces

The content in the eCMS system and is accessible through the web interface or any publicly accessible APIs that the system provides (although publicly accessible these APIs may still require authentication). Konnect eCMS has a system that handles “data feeds” to 3rd party web sites by actually providing a direct interface to the server that the 3rd party wants to access data on.

Possible interfaces between Konnect eCMS and 3rd party sites are:

- FTP of web pages, XML files or other file formats to the 3rd party web server
- An HTTP/SOAP API to the eCMS to allow retrieval of data
- Replication
- An e-mail interface

If e-mailed attachments are used the system provides XML files because XSLT transformation can always be used to subsequently modify the format provided without needing to change the interface between the systems.

30.4.1 Directly accessing the server

This can use mechanisms as simple as hidden framesets to load the content and search pages from the server on the requesting site. The hidden frameset method works by having pages on the client site that open a page in a frame in the middle of the web page. The page load is actually on the source server but appears as if it were on the client site. Usually an initial search mask on the client site submits to the search/hit list page on the source server and the hit list results are displayed in a page with a hidden frameset (so they are actually retrieved from the source server).

The client server also passes the source server parameters such as details of the style sheet and template to be utilised. Style sheets (CSS) and templates (including XSLT) can be configured to make the pages appear in the style and format of the client site. The web pages are in a basic XML format so that they can be transformed to change the layout according to the client’s preferences.

A system of reloading the parent frameset with a query string parameter for the current page can be used if the client wishes to make the pages bookmarkable.

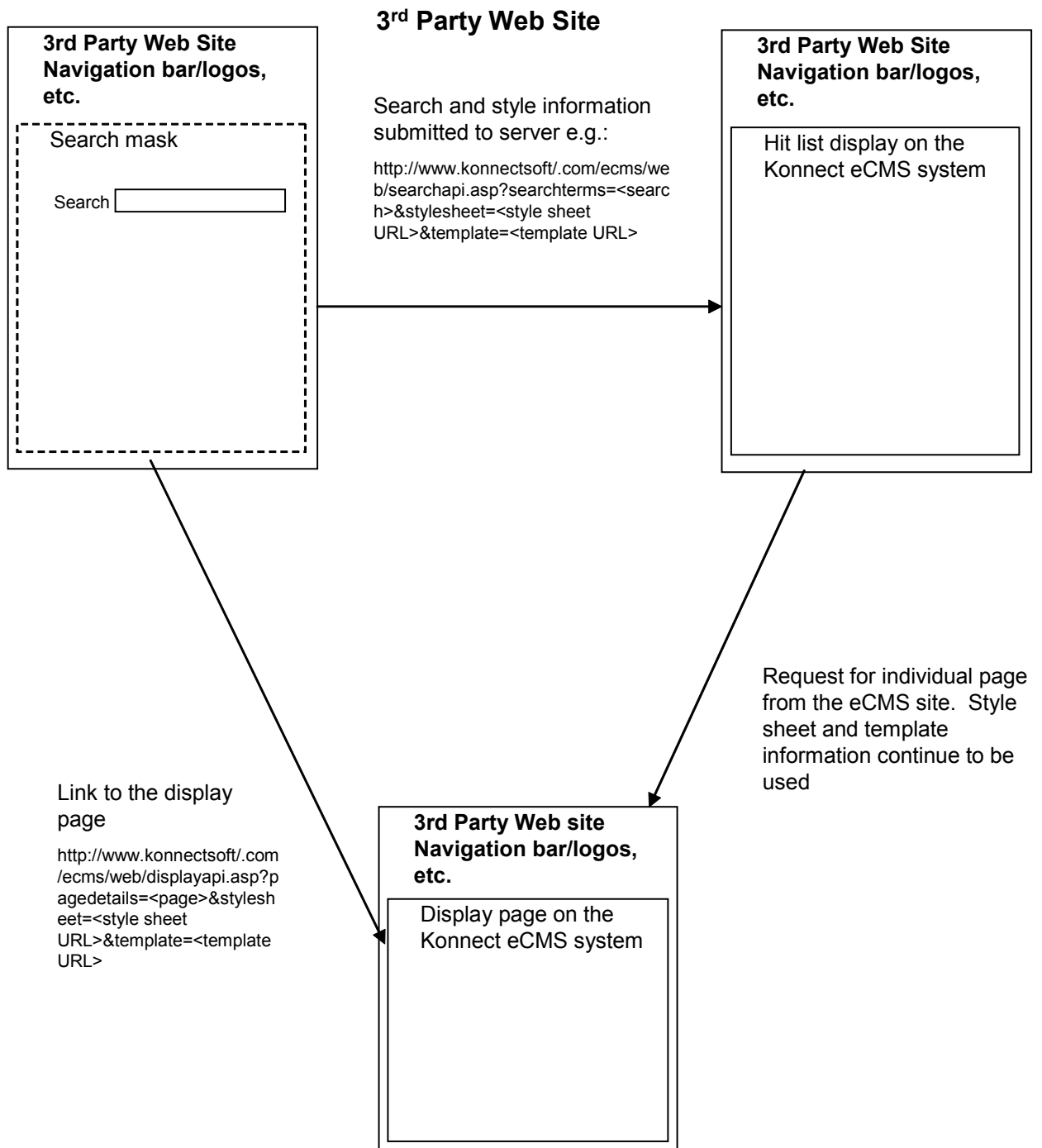
The end result is that a search page displays a hit list and then display pages which look as if they are running on the 3rd party site, but which are actually running on the Konnect eCMS server (in a hidden frameset). Users can search and navigate using the underlying Konnect eCMS search engine (not visible to the user) but with the 3rd party site interface.

The one limitation of the system is with combined searches over multiple databases hosted on different servers. For this functionality accessing the Konnect eCMS API or using FTP file exchange may be preferable.

The same technique can be used without framesets on servers that support dynamic pages that can process XML.

30.4.2 Diagram of the web interface to the 3rd party server

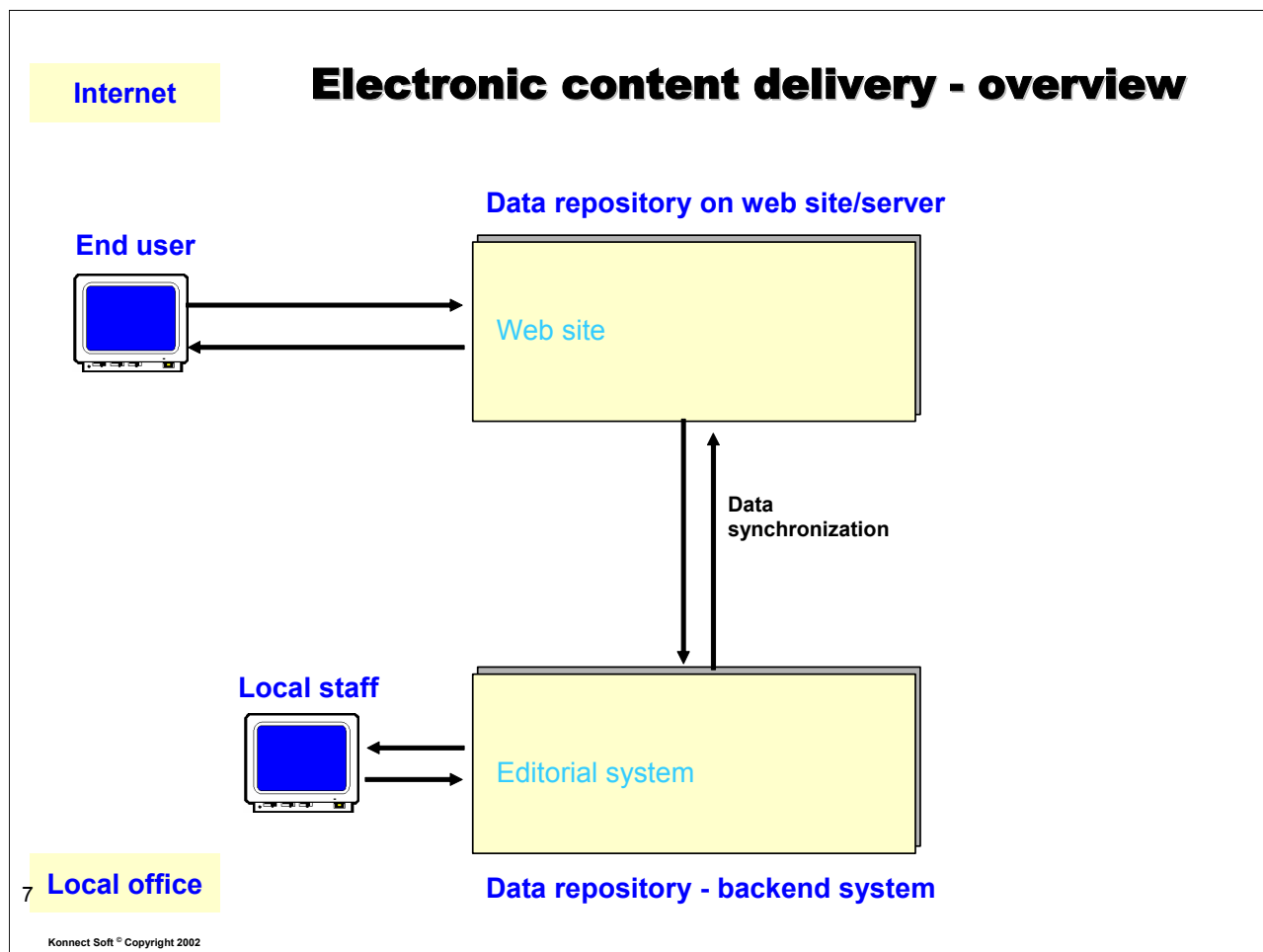
Microsoft Word diagram – should be viewed in print layout view



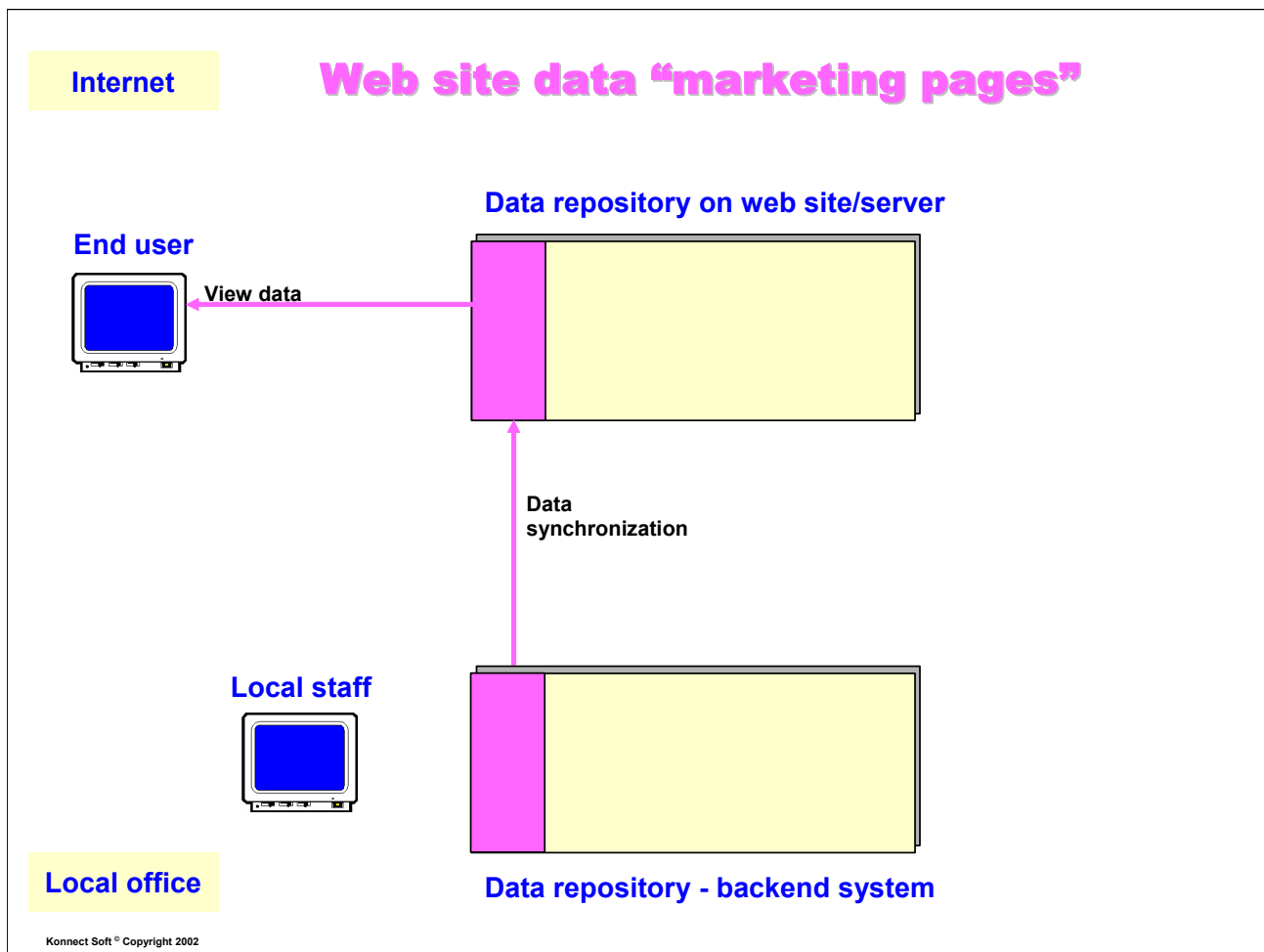
31 SYSTEM DATA FLOWS

Some of the functions performed by browser /web technology and the data flows involved are detailed below.

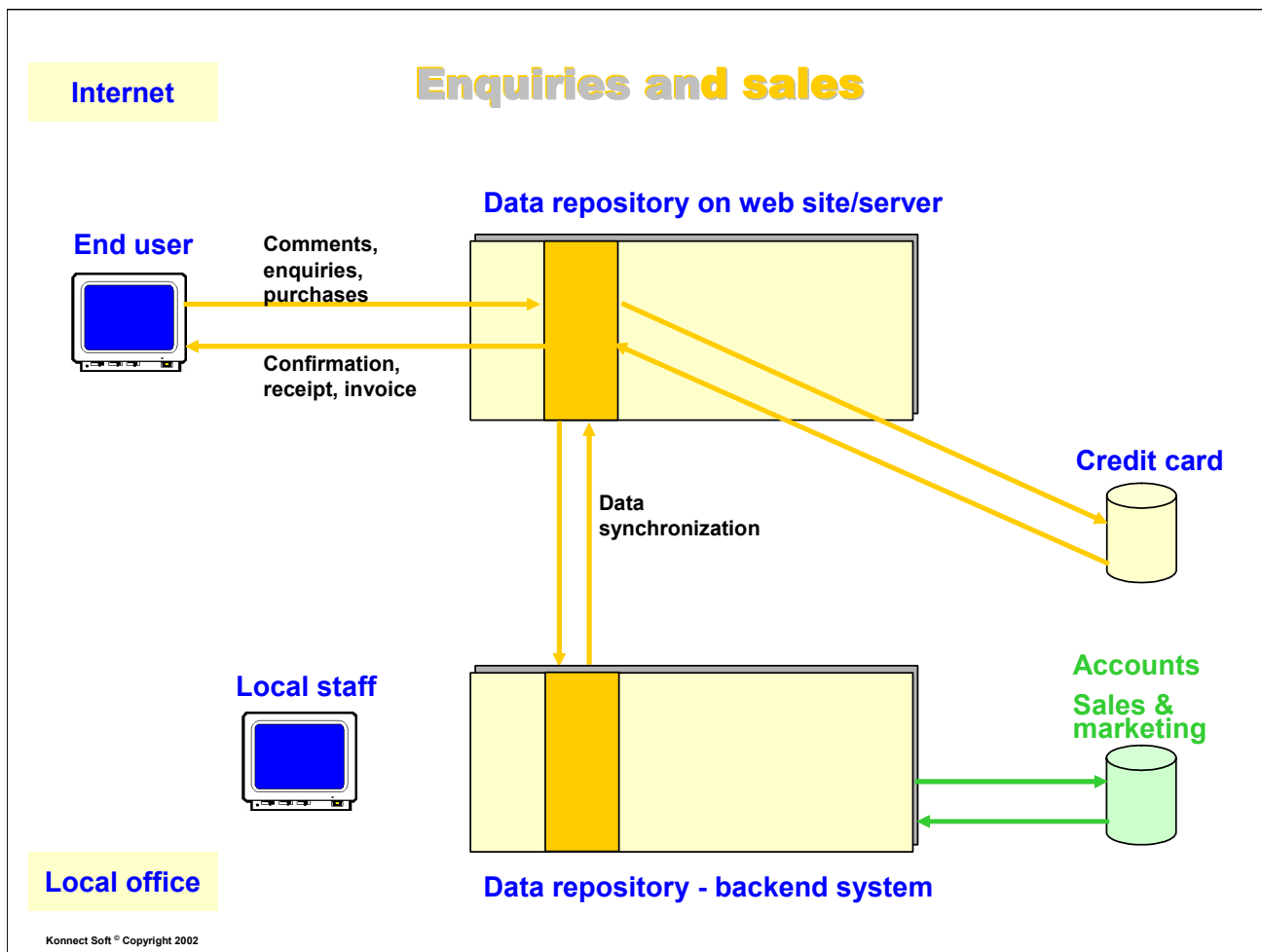
31.1 Electronic content delivery – overview



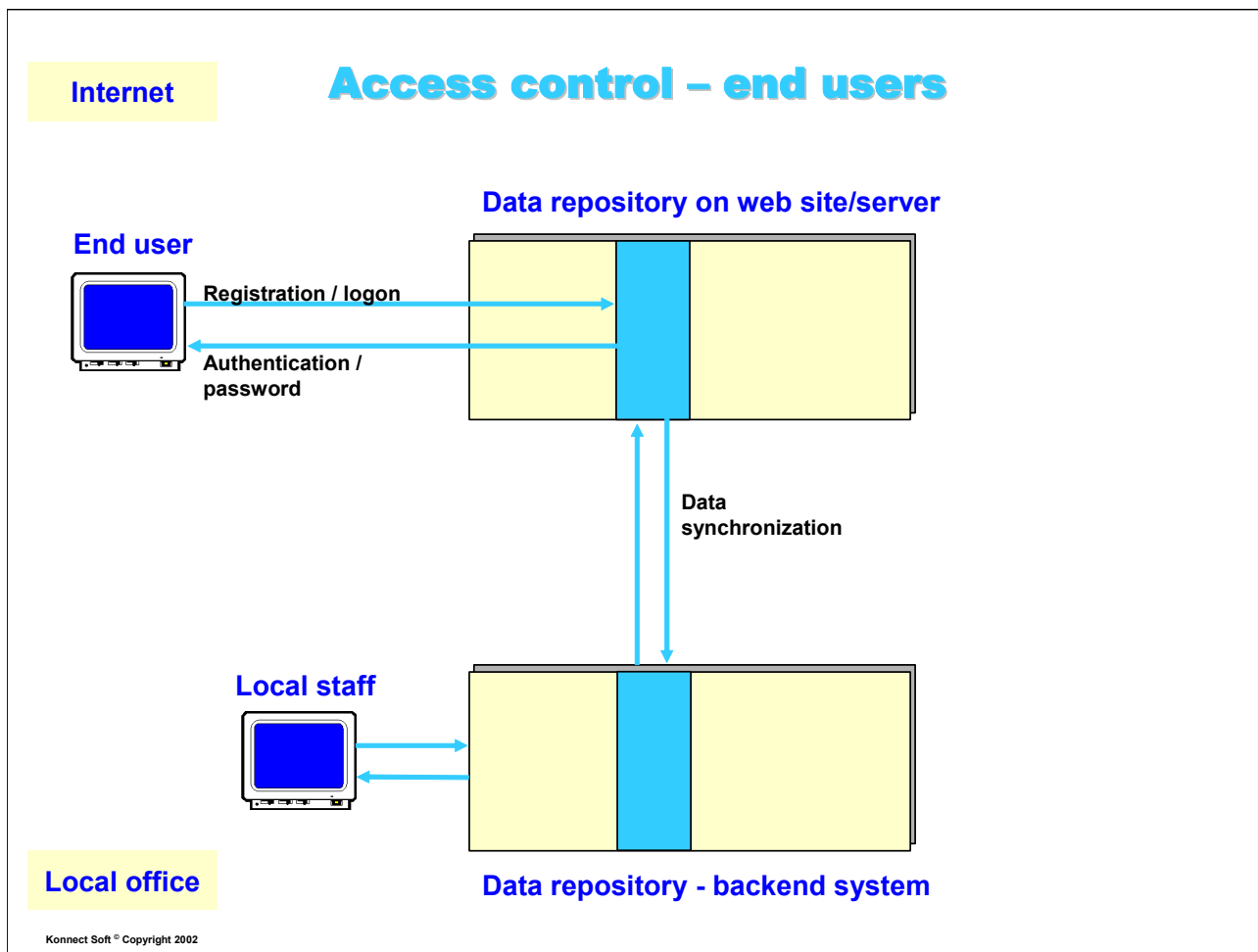
31.2 Web site data "marketing" pages



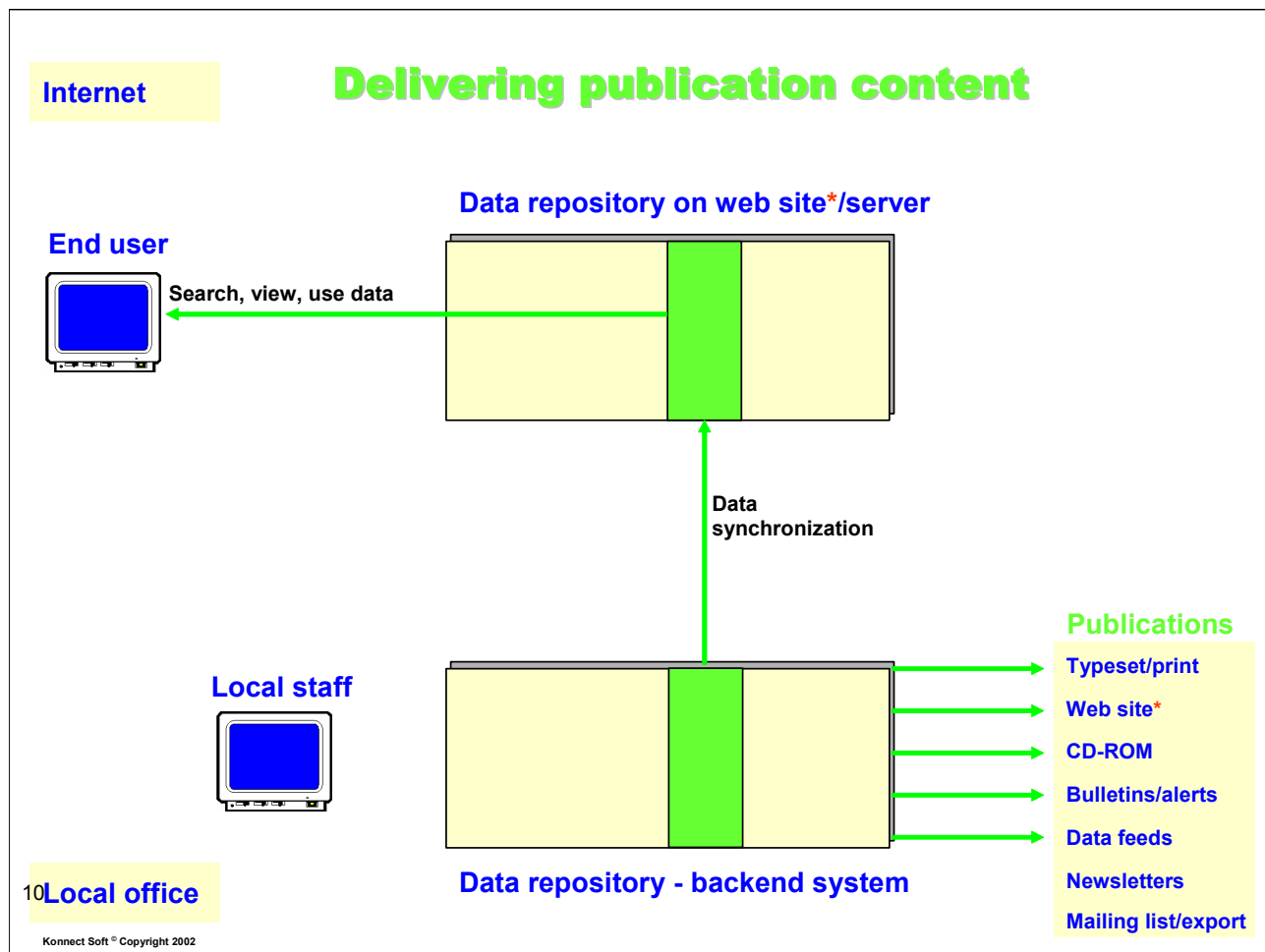
31.3 Enquiries and sales



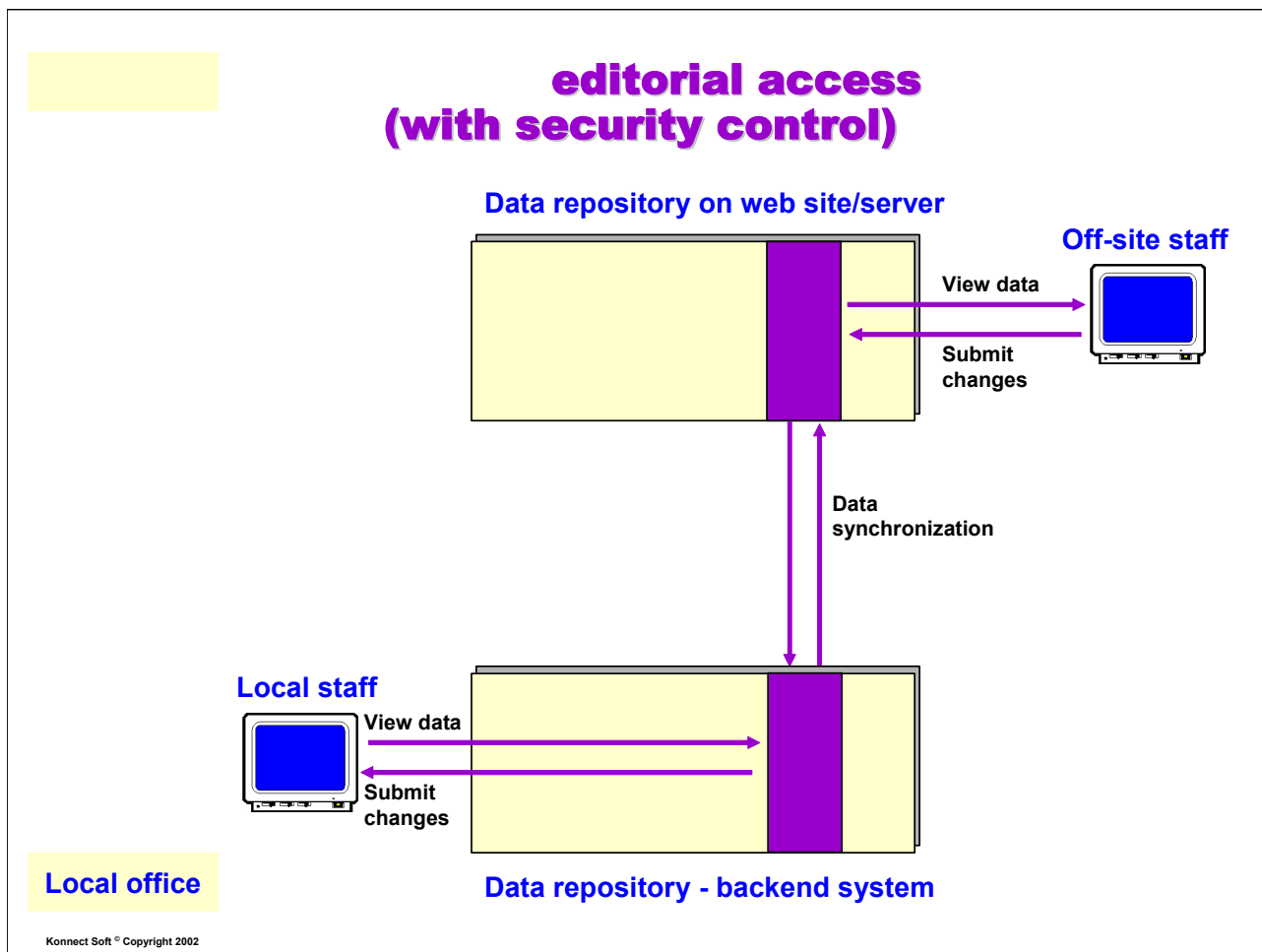
31.4 Access control - end users



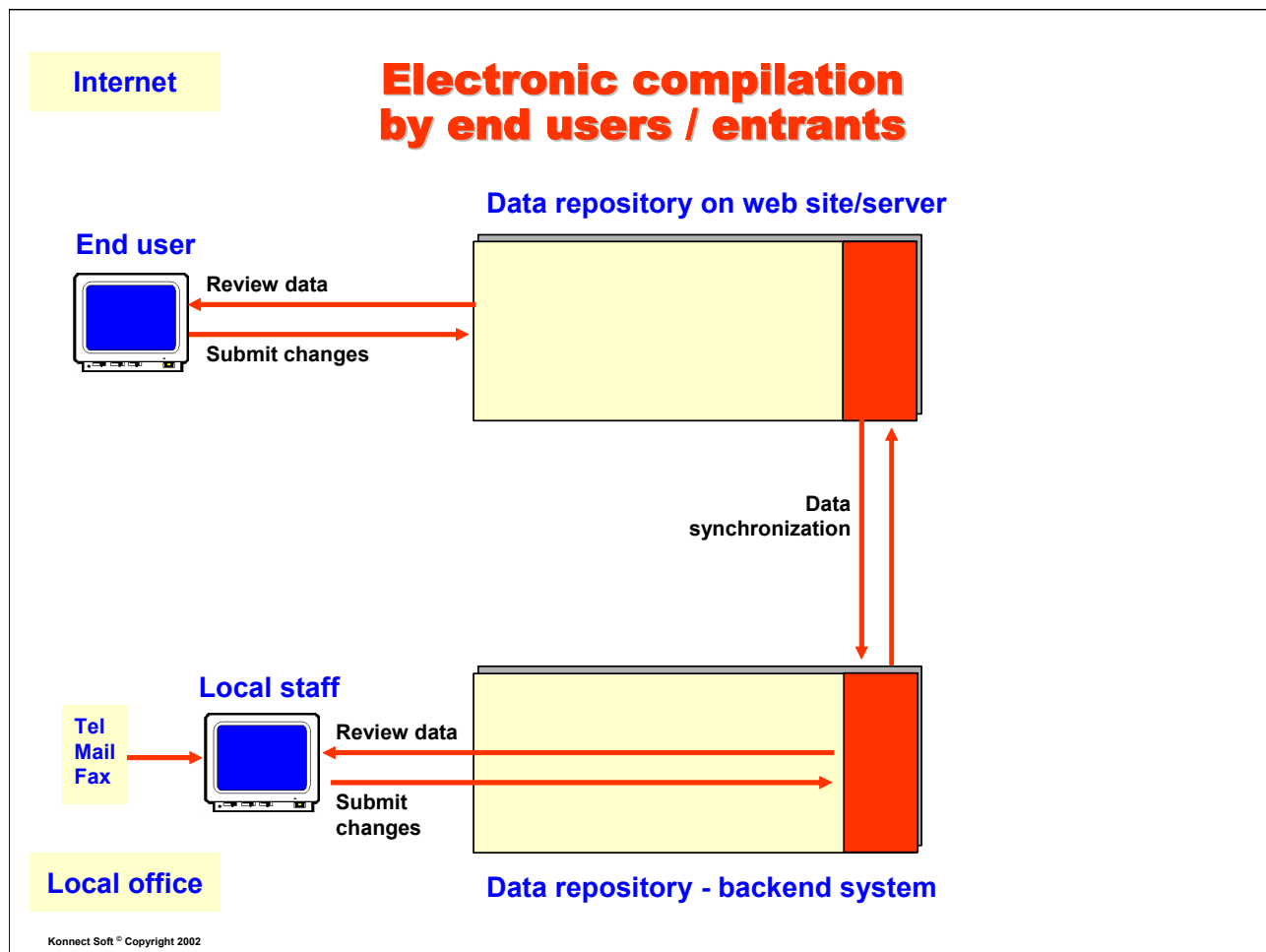
31.5 Delivering publication content



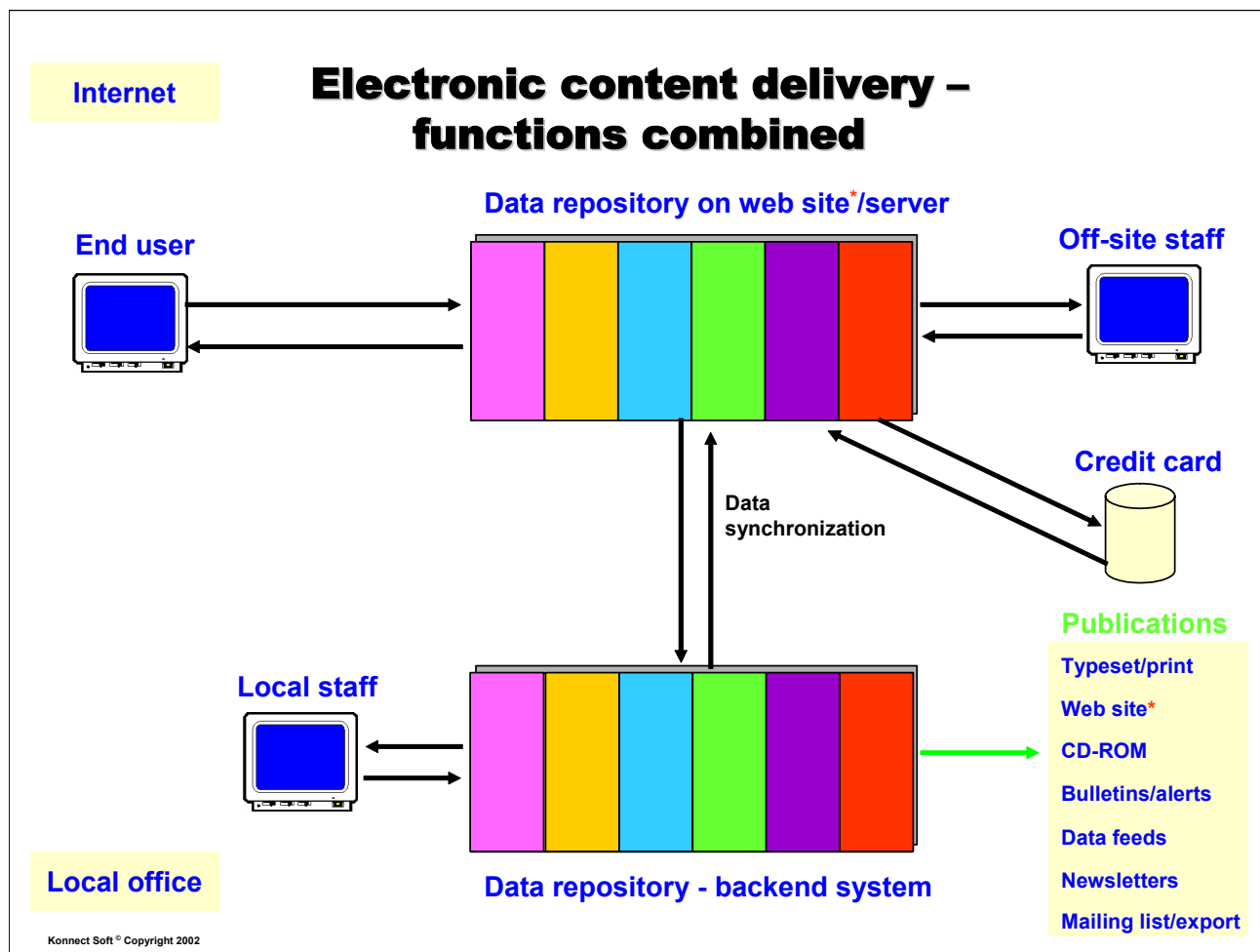
31.6 Remote editorial access



31.7 Electronic compilation by end users / entrants



31.8 Electronic content delivery - functions combined



31.9 Flow of information

