Macrotone Kbase User's Guide

Macrotone Consulting Ltd.

Geoffrey S. Chapman

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Abstract

This book covers the use of the Macrotone Kbase component which allows you to easily organise your information on your Joomla!™-powered web sites.

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Preface

Joomla

Kbase

Component

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DOCUMENT HISTORY

Version	Date	Changed By:	Remarks
1.0.0	23/10/2015	G S Chapman	Initial release
1.1.0	18/11/2015	G S Chapman	Update for release 1.1.0 which introduces a glossary (acronyms) feature.

PURPOSE OF DOCUMENT

This documentation describes the release 1.1.0 version of the Joomla Knowledgebase component by Macrotone Consulting Ltd. known as Kbase

Part I. User's Guide

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Chapter 1. Introduction and installation

Introducing Macrotone Kbase

Macrotone Kbase is a Knowledgebase component which enables one to present support information is a structured manner upon your website. It tries to present a portal for automated support. Kbase is very simply to setup and use. No matter what type of site or business, the support offered to your customers should be of the very best. Automated system are very good, but it is essential to provide answers to questions that are repeatedly asked by your customers. Kbase assists in providing automated support and can help reduce the requests and issue reports (tickets) very significantly. Very similar to article manager in the way in which it is used, it incorporates a full featured Ajax search form and integration with the Joomla tag component.

Key features:

- Joomla Friendly Administrative Interface

- Nested Categories.

- AJAX based search box.

- 100% Responsiveness.

- Clean Layout and Design.

- Support for Joomla tags.

- Categories Module

- Multi-Language Support

- Administration defined number of article attachments

- Glossary (Acronyms) Feature

Please note that Macrotone Kbase was intended originally for our own internal use but we are so pleased with the result that we have made it available to the wider Joomla community.

The component was inspired by a component originally created by Joomdigi [http://joomdigi.com], which never (to our knowledge) ever reached production status. Using the same 'look and feel' approach we decided to create a similar product with a much more ambiguous feature list, which we think we have achieved.

Requirements and compatibility

Kbase requires the following server-side configuration:

- Joomla!™ 3.4.

- PHP 5.5 It may work on later versions but these have not been tested yet.

- MySQL 5.5.44 or later. Earlier database server versions will not be supported. Do note that earlier releases of MySQL are obsolete and not supported any more by Oracle (the company who controls the development of MySQL).

Installation

Installation

Installing the package is the same as with any other Joomla! component. Go to your site's back-end Extensions, Manage and click on Browse. Locate the ZIP package and click on Upload and Install. If the installation fails, please refer to the installation troubleshooting section of this guide.

Updating to the latest release

Macrotone Kbase can be updated with two different methods: installing the new version on top of the old one, or by using the using the extensions update feature in Joomla! 1.6 and later.

Updating directly

This is the failsafe approach, but the least convenient. Download the latest Macrotone Kbase release from http://www.macrotoneconsulting.co.uk/downloads [http://macrotoneconsulting.co.uk/index.php/downloads.html] and save the ZIP file to your hard disk. Log in to your site's backend, click on Extensions Manager. Use the Browse button to locate the ZIP file you downloaded, then click on Upload and Install. All Joomla! versions since 1.5.5 are smart enough to understand that you're doing an upgrade instead of installation and adjust the process accordingly.

Important

Do NOT uninstall Macrotone Kbase before updating it! Uninstalling will remove all of your data!

Using Joomla! extension update

Since Joomla! 1.6, the Joomla! Extensions Manager allows directly updating your extensions. Just log in to the backend of your site and go to Extensions, Extension Manager. Click on the Update link below the toolbar. Then click on the Find Updates button. If there is a new Macrotone Kbase release it will appear in the list shown. Tick the box on the left of the row and then click on the Update button. If your site is compatible with this Joomla! feature, you will see the new version being installed automatically for you.

Something not working right after the update?

Although very rare, sometimes Joomla! "forgets" to copy all updated files. This is something that we has been observed a few times. In this situation, simply follow the instructions in the Updating Directly section above. This will force Joomla! to retry updating the component, copying the missing files and everything should work again.

Uninstallation

You can uninstall the component just like any other Joomla! component. In your site's back-end, just go to Extensions Manager, click on Uninstall, select Macrotone Kbase component and click on Uninstall. This will completely remove Macrotone Kbase including any installed Kbase modules and plugins. It will also remove the underlying database tables and any entries in the Joomla Tag tables.

Chapter 2. Administration Screens

Configuration of the component is performed in the back end of the site. Full control of the component can be performed in the back end of the site. The addition and editing of articles can also be performed in the front end.

Administration Back end

The back end of the site is where the component options are specified and the Kbase entries are defined. It is also possible to create articles and add or remove article attachments in the back end, although this is more commonly performed in the front end of the site.

The sort order of categories is also performed in the back end screens.

Component Parameters

The component parameters are presented in this section. Most of the settings are self explanatory so we will not go into needless details.

Figure 2.1. Parameters (1a)

There are a few specific settings that control the loading of various CSS or Javascript files in the front end. These are included to cover the situation where the front end template may not include them automatically. Specifically the loading of JQuery is often performed in most Bootstrap based templates. Similarly with Font Awesome fonts.

Problems have been known where multiple versions of JQuery have been loaded upon a site, so it is essential to only include it for this component IF it is not loaded by another component on use upon the site or by the site template.

Multiple versions of CSS files can also produce strange formating effects upon a site so although these are not quite so common it is certainly more efficient to only load one version of the Awesome Fonts.

Figure 2.2. Parameters (1b)

Attachments have their own separate settings since it may not be desirable to have attachments associated with your Kbase articles. This does not impact any embedded images that may be present in the article itself. Instead they are means to be files that may be made available for download by the viewer to 'address' a specific need, or supply a convenient piece of code (or CSS file) that may prove useful to address a specific need,

Figure 2.3. Parameters (2)

The standards Joomla ACL component parameters are specified in their own specific tab as is the norm for Joomla components. The component uses these settings to control access particularly in the front end of the site.

Note that there are additional ACL controls settings for the individual category, article and acronym item accessible from each item entry.

Figure 2.4. Parameters (3)

Dashboard

The Dashboard is the main landing place in the back end of the component, It is here that one can see the Changelog, and credits for the component. It is also a place where one may make a donation to encourage further development of the component.

Figure 2.5. Dashboard

At the time of release there are no alternative translations available. This is expected to change as time passes and our volunteer translators decide if they would like to contribute. If you yourself would like to contribute a translation please refer to the pages on our web site detailing how you may participate.

Categories

The categories page presents the category information in the familiar Joomla category style. These are Nested categories with multiple levels of sub categories. It is also making use of the 'Search Tools' filtering, to control which items are displayed.

Figure 2.6. Categories
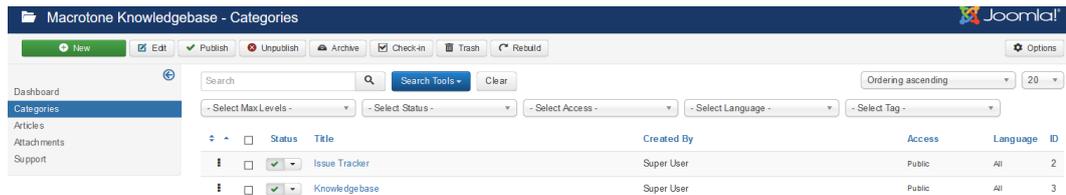
Editing (or creation) of a category follows standard practise and one is presented with a screen similar to that displayed below. One can add specific 'tags', add or remove descriptive text about the category etc. Note that one can specify an image to associate with the category and/or alternatively also specify a Awesome Font Icon'. It is not suggested that both are specified, as one or the other is usually sufficient, to avoid a 'messy' front end display.

Figure 2.7. Category Edit
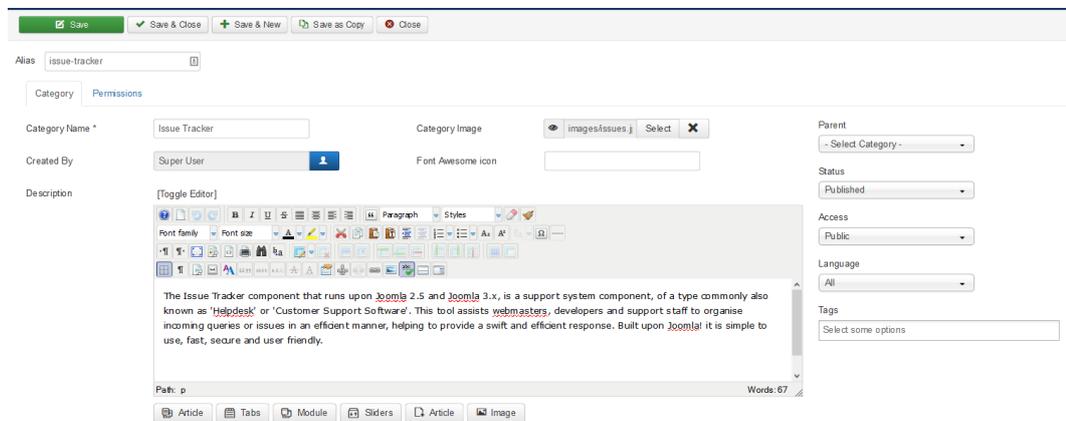
Articles

The articles display as shown below lists the articles stored within the Kbase system. We endeavour to follow the standard Joomla methodology.

Figure 2.8. Articles
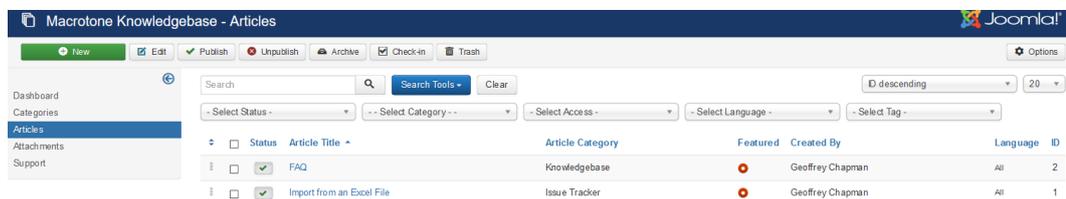
If the site is multilingual, i.e. mutliple languages are installed there will be an additional column displayed which will display the associations made for the items.

Editing (or creating) an article provides the following set of screens.

Figure 2.9. Article Edit (1)

When an article is first created and prior to it being stored in the database, the 'Attachments' tab is not displayed. This is because until the article itself actually exists we would not have anything to attach the file(s) to! So the best practise is to create the basic article and then once saved, the 'attachment' tab will be visible and one can proceed to add as many attachments as configured.

Figure 2.10. Article Edit (2)

The Audit Details display the details of when the article was created and last modified and in addition provides the ability to modify the user who performed these actions. We found that when created (or modified) in the back end it is often the 'Super User' that is creating the article and it may be desired to present a 'real name' (rather than 'Super User') to the front end viewer in the Article Meta data.

Figure 2.11. Article Edit (3)

An additional 'Associations' tab will be presented if multiple languages are installed upon a site. This follows the standard Joomla mechanism for association items in different languages together so that only the appropriate language item is displayed to the viewer in the site front end.

The permissions tab enables one to control the ACL rules for the article being edited/created. As mentioned above these ACL controls are used in the front end to control user access. As a support tool it is expected that a specific ACL group would be created and given the appropriate permissions to control the edit and article creation.

Figure 2.12. Article Edit (4)

Article Attachments

As implied above attachments are stored in a completely separate table, which itself links to the articles to which the attachments are linked.

Figure 2.13. Attachments
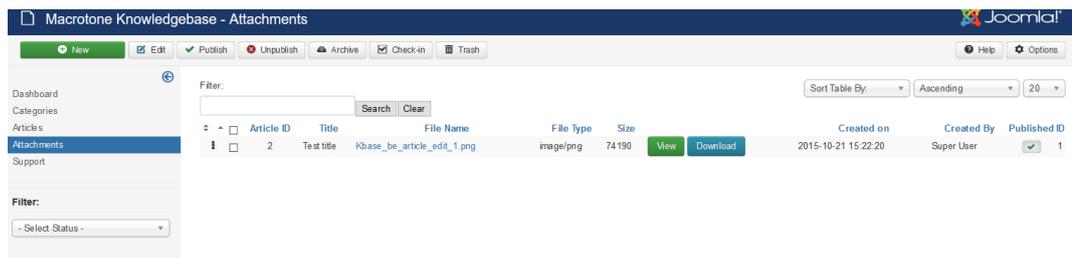
Editing or creating an attachment are very easy with the initial screen providing the basic details and the means to upload or select an item to attach. Some of the fields are not available to the user to fill in, instead they are populated by information extracted from the attached file itself, such as file size, file type etc.

Figure 2.14. Attachment Edit (1)
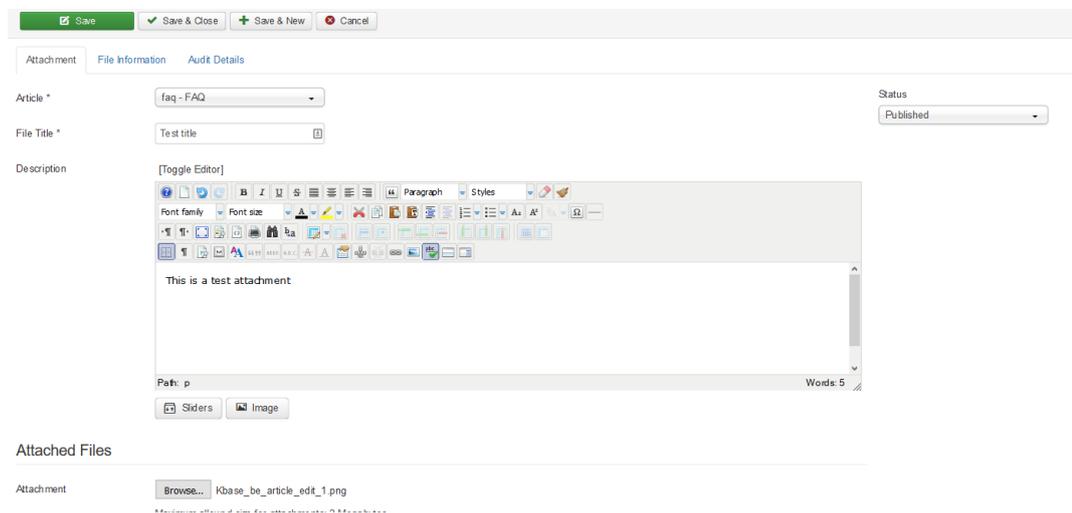
One saved the details of the attachment are provided in a septate tab, showing things such as the file type, size, name as stored in the operating system etc.

Figure 2.15. Attachment Edit (2)

The audit detail record when and by whom the attachment record was made and updated.

Figure 2.16. Attachment Edit (3)

Attachments are automatically removed from the system when an article is deleted. They can also be removed in isolation, leaving the article itself alone from within the back end.

Acronyms

The acronyms (or glossary) items display as shown below controls the items stored within the system. Acronyms (glossary items) are by their very nature comprised of short descriptive terms which may

be Abbreviations, Acronyms or Initialism. We created a specific article upon our web site describing the specific differences in these terms so will not repeat it in this document.

Figure 2.17. Acronyms

Editing (or creating) an acronym provides the following set of screens.

Figure 2.18. Acronym Edit (1)

Figure 2.19. Acronym Edit (2)

The Audit Details display the details of when the acronym was created and last modified and in addition provides the ability to modify the user who performed these actions. We found that when created (or modified) in the back end it is often the 'Super User' that is creating the article and it may be desired to present a 'real name' (rather than 'Super User') to the front end viewer in the Article Meta data.

Figure 2.20. Acronym Edit (3)

The association tab will only be displayed IF there are multiple languages installed upon the site. It permits one to link (associate) the various 'equivalent' items written in the different languages together, so that the appropriate item is displayed in the front end.

There is an additional permissions tab displayed (that is not shown here since it mimics the tab shown in the articles section above) which enables one to control the ACL rules for the acronym being edited/created. As mentioned above these ACL controls are used in the front end to control user access. As a support tool it is expected that a specific ACL group would be created and given the appropriate permissions to control the edit and acronym creation.

In practise we do not anticipate that ACL would be used very often with the acronyms, but the feature is implemented just in case.

Support

The support tab provides details of how to obtain support for problems,. Details of reported problems with the component etc.

Figure 2.21. Support
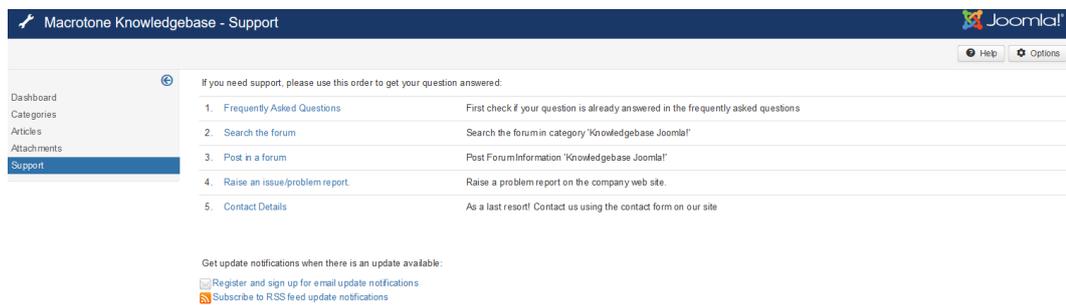
The Help icon in the top right hand side of the page will also display a small popup window with a few useful links to more information about the component and support.

Chapter 3. Web Site Front end

These are the main visual presentation of the component to users.

Front end

Each screen used in the front end is presented with a 'search' block at the top of each page. This enables the user to enter a specific term they may be interested in and to find the relevant information, if it exists very quickly without having to traverse a number of different web pages.

Categories

Categories are one of the main building blocks and are used to separate out different 'sections' of information. The following image shows a typical display of the component categories screen.

This is the main and mot common starting screen for site visitors. It displays the defined categories along with an optional image (or Awesome icon) to the right of each category. The categories are displayed in a to column list to utilise the screen display more efficiently.

The screen below displays the current (at time of writing this guide) page available upon our web site. As can be seen it is being used to display the current component that we produce and uses their commonly used images to assist in identifying them. It would be equally possible to use Awesome Font icons if preferred.

The categories screen is divided into two distinct parts (apart from the search box). The first part, shown below displays the categories.

Figure 3.1. Categories Screen.

Knowledgebase Categories

EU Cookie

EU Cookie is a component to comply with EU regulations. It was primarily intended for our own internal usage, but following popular request we have made it available for the general community.

IP Mapping

The Macrotone Consulting IP Mapping component was created out of a desire to display IP addresses (and their source) on a graphical map to enable easier interpretation of hacking and spamming sources, but extended to a more generic IP mapping usage.

Issue Tracker

The Issue Tracker component is a support system component, of a type commonly also known as 'Helpdesk' or 'Customer Support Software'. This tool assists webmasters, developers and support staff to organise incoming queries or issues in an efficient manner, helping to provide a swift and efficient response. Built upon Joomla! it is simple to use, fast, secure and user friendly.

JAudit

The Joomla Audit component also known as JAudit was developed from a feature within a version of the Issue Tracker component which was specifically tracking changes to Issue Tracker tables. This worked so well whilst being developed that it has been reworked separate component in its own right.

Kbase

Kbase is a the Knowledge base component as illustrated by this particular display. Running under Joomla to provides a convenient way to organise and display information (knowledge) upon the website.

Rialto

The Rialto component is a Classified Advertisements component. Classified advertising is a form of advertising which is particularly common in newspapers, online and other periodicals which may be sold or distributed free of charge. Advertisements in a newspaper are typically short, and generally dealing with offers or requests for jobs, houses, apartments, used cars, etc. The Joomla component permits a site to accept such advertisements from its registered members and acts as a conduit between purchaser and seller.

Password Control

The Password Control extension improves the security of Joomla users password access. Includes password generator and complexity settings.

General Joomla

This category contains articles upon various Joomla features, hints and interesting matters that may impact one or more of our components.

The descriptive text shown in the categories display above is the 'first' paragraph provided in the category description field. The 'full' description is provided in the individual category display. For this reason the first paragraph of the category descriptive text should be as informative as possible..

The second part of the screen displays a specified number of recently created articles in each tab There are three possible tabs displayable. (Configuration option) The 'Latest Articles' is perhaps the most useful. The 'featured' tab will display articles marked as of being of greater interest will be presented. The 'Popular' article tabs will display the most frequently viewed Kbase articles upon the site. We illustrate all three tabs below:

Figure 3.2. Categories Screen (2).
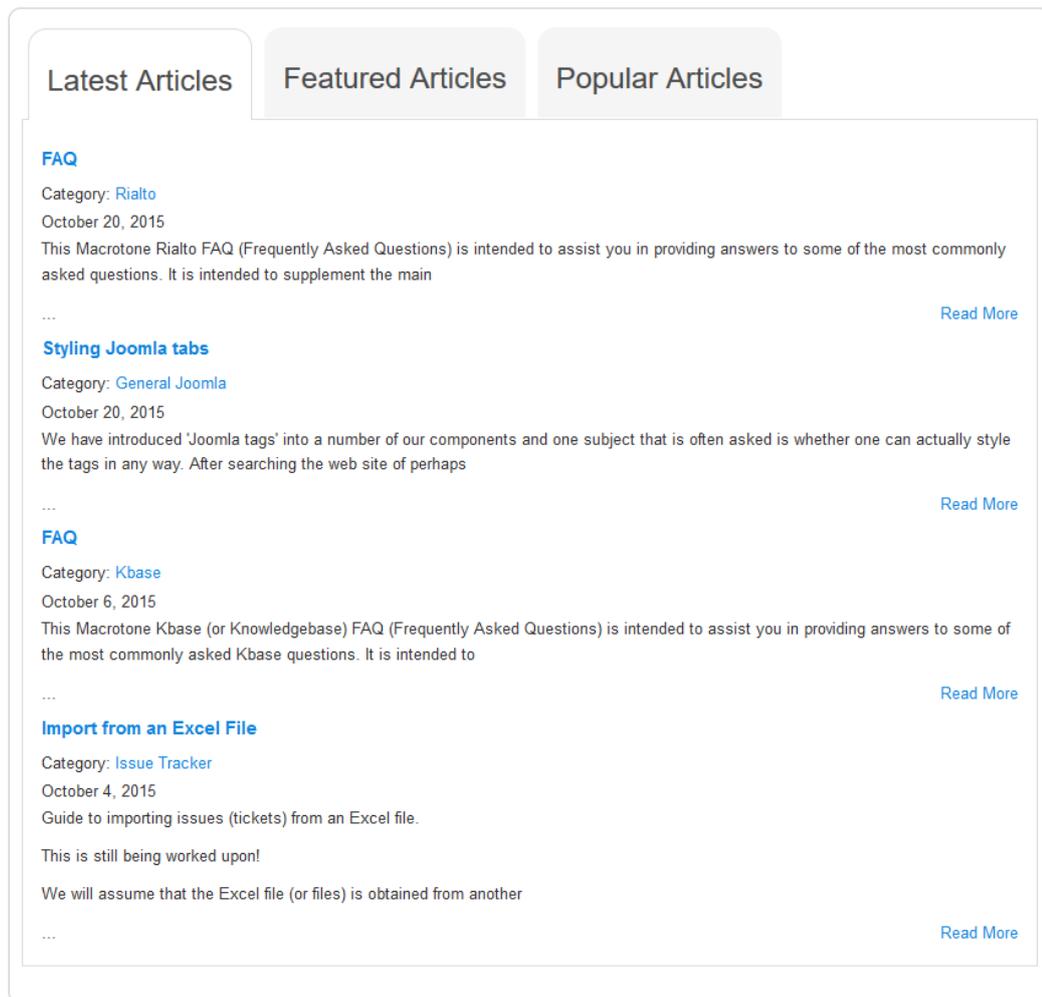
Clicking upon any of the 'category' images/cons or category tile will navigate to the Category Screen illustrated below. The display of any sub-categories display is also shown if they exist. The first screen shown below has no specified sub-categories.

Each article can be viewed completely by clicking the 'Read More' link. The 'Read More' is a component setting, otherwise the entire article would be shown in the display.

Figure 3.3. Category Screen.
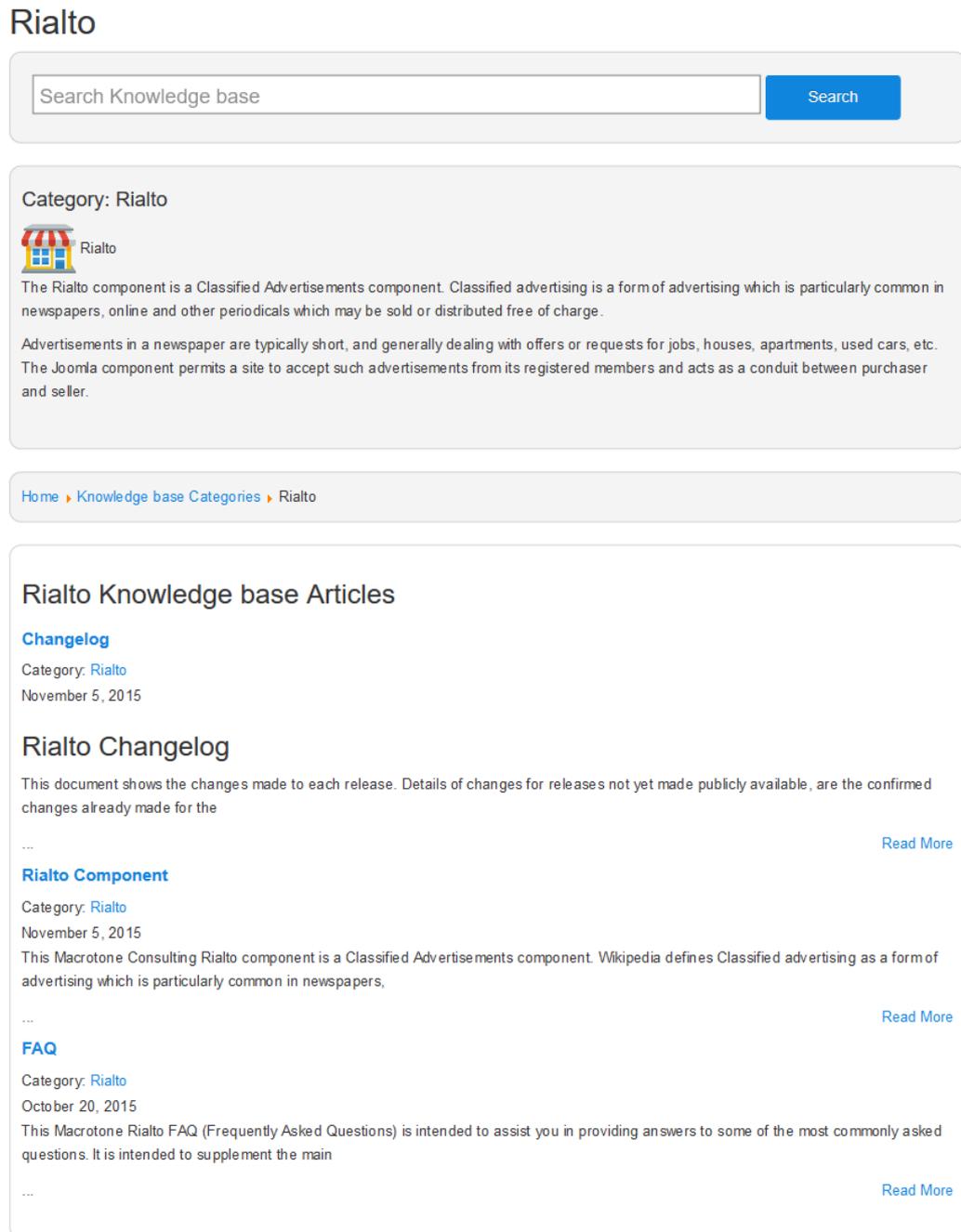
Pagination control will be displayed if the number of articles for the category exceeds to number specified in the component options.

If a specific category contain sub-categories then the screen will display a section detailing the sub-categories immediately prior to the abbreviated display of articles within the category. See the image below.

Figure 3.4. Category Screen (2)
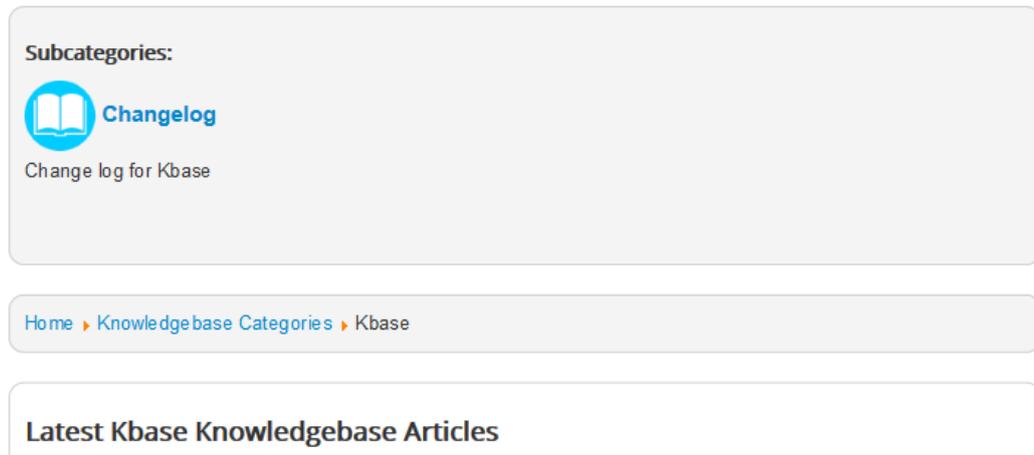
Articles

The articles contain the information of most interest to site visitors. There is a screen display which can show all the articles upon the site irrespective of which category they belong too. This screen is often used by administrators to control the various articles in a convenient place. If the user (administrator) is viewing the screen some additional buttons will be displayed below each abbreviated article to permit them to unpublish or even delete the article completely. The screen (shown below) is a separately configured menu item and is not reachable via any of the other displays.

Figure 3.5. All Articles Screen.
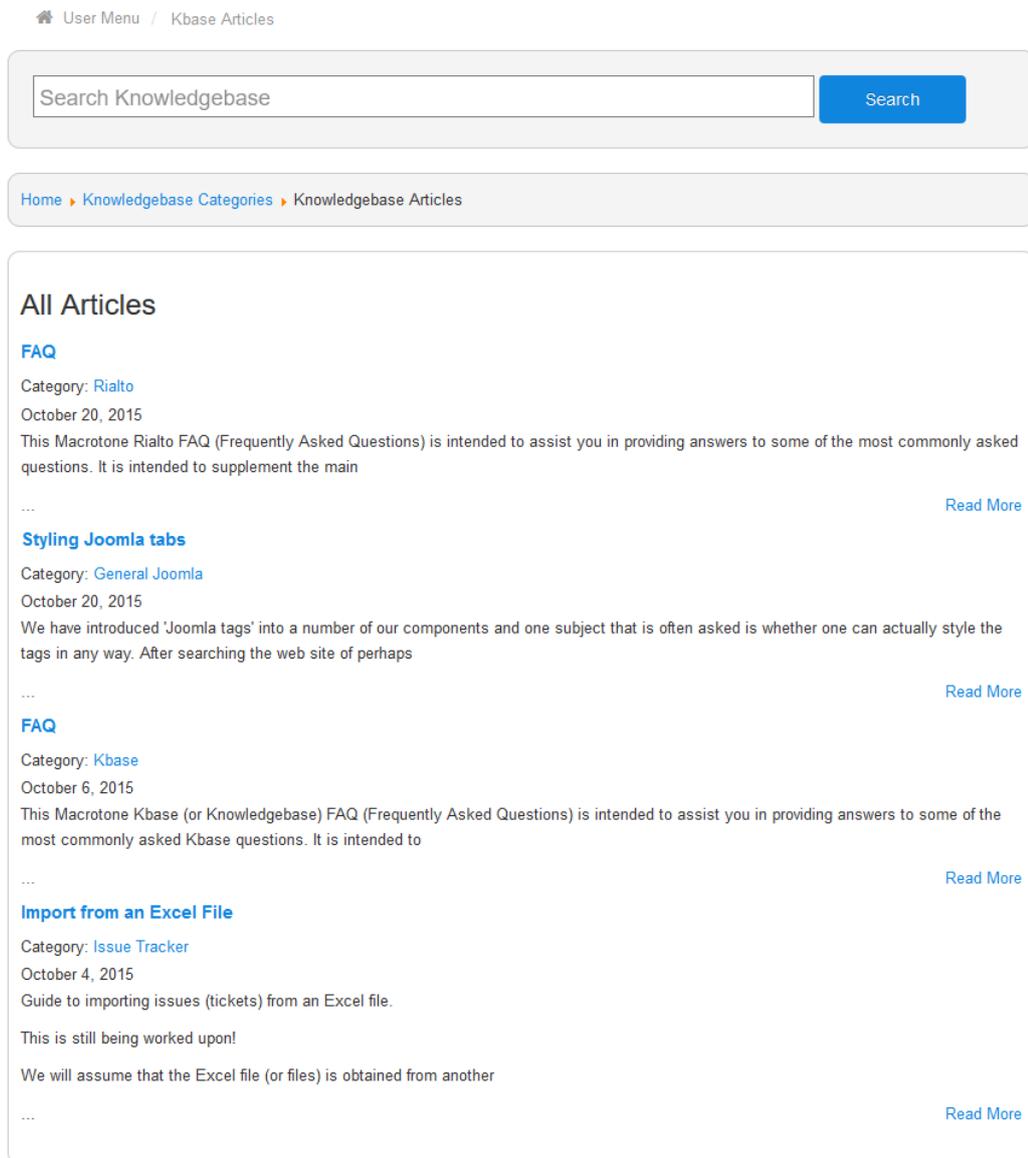
The button to add additional articles may or may not be shown depending upon the ACL permissions provided to the logged in user. A guest viewer would not see the button.

The display of any specific article is shown in the image below. There is a second section of the display (often known as Metadata) which show the details of the article such as its creation data, last modified data, Language etc. Some fields are only displayed in this section if suitably configured, such as the language and tag values.

Figure 3.6. Article Display Screen.
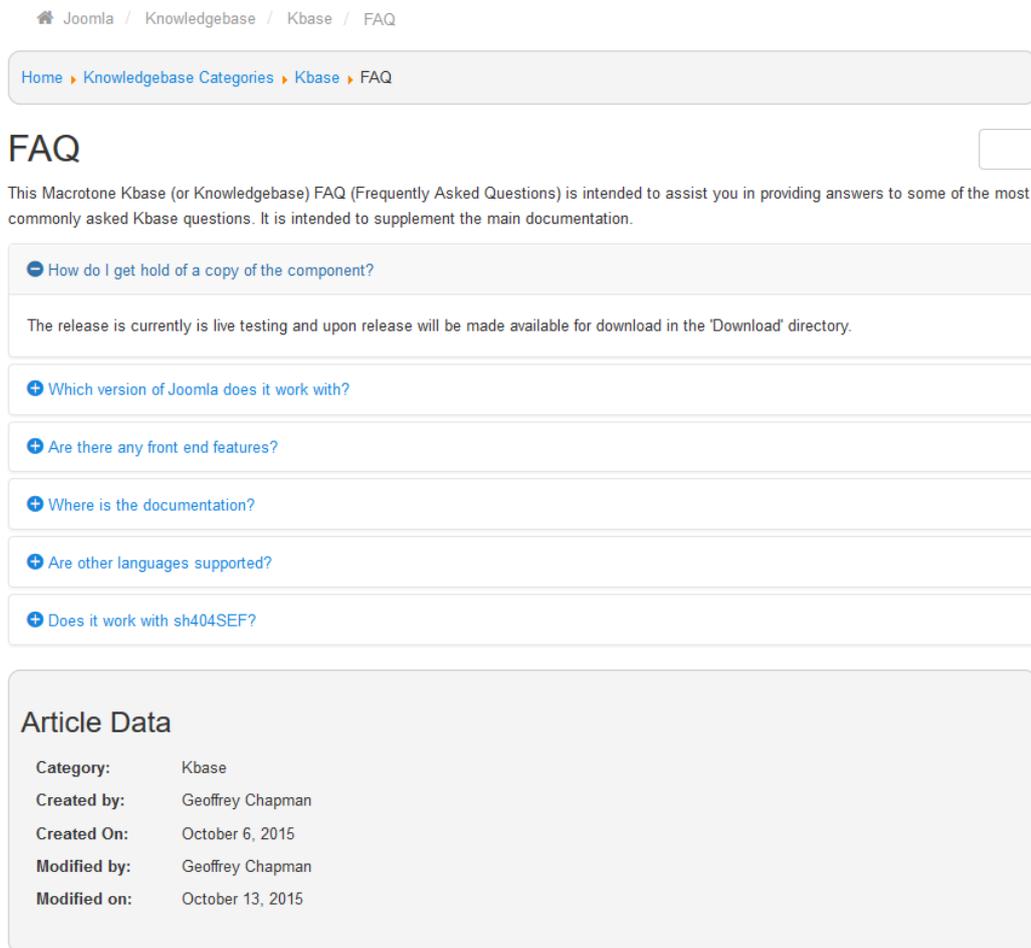
The above display is also illustrating the use of other 'third' party plugins to create a 'visually' pleasing display. In this example we are using the 'sliders' plugin by NoNumber [https://www.nonumber.nl/] available from the Joomla Extensions Directory.

Article Editor

It is possible to create (or submit) articles to the component from the form as displayed below. There are a number of individual tabs presented. The first displayed immediately below enables the entering of the main article criteria. We show the screen for the creation of a 'new' article below, if it were and edit the current text would be present.

Figure 3.7. Article Edit (1) Screen.

The second tab named 'Publishing' contains the setting for the 'published' state of the article. This is only a changeable field if the user performing the edit is permitted to change the state of the article, otherwise a component defined default state will be used.

If it is permitted to make the article a 'featured' article there will also be a field to enable this.

It the component is configured to accept 'Joomla tags' then there will be a displayed field to permit the selected and creation of tags to be associated with the article. The tags displayed will use the default formating (CSS) as specified by the site template. This may be changed by specifying additional CSS rules. These is an article upon our site explaining which CSS needs to be provided.

Figure 3.8. Article Edit (2) Screen.

If the component is configured to permit the addition of file attachment to articles, an 'Attachments' tab will be presented.

Figure 3.9. Article Edit (3) Screen.

Additional tabs may be presented depending upon how the component is configured.

A language tab is presented if the user submitting (or editing) the article is configured to specify a specific language for the article. If suitably configured the choice of languages will be dependant upon the languages installed upon the site.

If the user is configured to be able to specify ACL rules for the article a Permission/Rules tab will also be presented. Normally only site administrators would see this particular tab.

Acronyms

The acronyms (or glossary) contain the specific acronyms, abbreviation or initialsm to be described. The information is usually displayed as a tabular list and is implemented as a separate and separate display although it uses the same formating and style as the article and categories.

Figure 3.10. Acronyms Screen.

The display above shown how the screen would be presented to most viewers of the menu item and comprised the tabular list. Item descriptions are usually short one (or two) paragraph(s) long which makes the tabular display the most useful.

Note

The leading text short in the above display is optional and is controlled by a component option. The text supplied is defined in the (back end) language file. If it is desired to change (or alter) the supplied text, then the suggested method is to create a language override for the COM_KBASE_ACRONYM_INTRO_TEXT string. This means that any local changes are preserved over a component upgrade and also permits different text to be presented for different languages supported upon the site.

If a registered user is logged in and has the required ACL permissions to manage/edit/delete/create items, then the modified display as short below is presented with two additional tabular columns, the first providing an easy visual indicator of the 'publishing state' of the acronym, and the second providing buttons to perform additional actions upon the acronym item..

Figure 3.11. Acronyms Screen (manager).

The additional buttons displayed permit the manager to possibly edit, delete and publish/unpublish an item with a single action. Editing the item will present an edit screen where the item may be archived and placed in the trash if preferred.

The create button at the end of the display will itself display the entry form to submit a new Acronym item.

Note the use of Joomla Search Tools to aid in the viewer finding a specific term and/or restricting the type of glossary items displayed in the list.

Single Acronym Display

There is a single acronym display screen that can be used, but has not been found to be very useful in practise. Consequently it has not been described in this document. One future development of this would be to embed a link to generate a 'popup' window with the acronym details within the Kbase articles.

Acronym Editor

It is possible to create (or submit) articles to the component from the form as displayed below. There are a number of individual tabs presented. The first displayed immediately below enables the entering of the main article criteria. We show the screen for the creation of a 'new' acronym below. If it were an existing item the existing item details would be present.

Figure 3.12. Acronym Edit Screen.

All the required input parameters are presented in a simple form as shown above.

The acronym (or glossary) items are not required (currently) to require any additional information and thus is not as fully featured as the Kbase articles.

Chapter 4. Modules

Categories Module

There is one supplied module which is the Categories Module, which can be used to display a list of categories (and possibly sub-categories, depending upon configured options) in a convenient side panel. The display of the icon or image is also shown. Module parameters control the number of sub-categories displayed. Clicking on the category title redirects the view to the appropriate Kbase category page.

The module is installed at the same time as the component itself, and will also be removed if the component is uninstalled.

Module Parameters

Figure 4.1. Categories Module Parameters.

Most of the module display criteria are taken from those of the site template.

Module Display

Figure 4.2. Categories Module Display.

As released the module display will look similar to the above dependant upon the template settings. It can obviously be modified by editing the CSS file to create a form that one desires. Clicking upon the icon/image or the category name will display the category display shown earlier in this document.

Chapter 5. Version Changes

The following is a list of the principle changes that have occurred during each release.

Release Versions

Kbase 1.1.0

+ New acronym (Abbreviation) feature.

Add a few missing strings.

~ Rationalise string usage.

Correct second or subsequent display of changelog from displaying an error.

Kbase 1.0.0

+ Initial Release

Part II. Component Design

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Chapter 6. Joomla Component Design

Where ever possible we have tried to make use of the 'standard' Joomla supplied methods to make support and ongoing improvements more efficient. Where this has not proved possible we have written our own methods.

The back end screens will be familiar to Joomla administrators making use of the familiar 'look and feel' present in Joomla 3.4. Kbase makes use of the Joomla Tag component, and 'Sort Tools' Layouts. Using the standard Joomla methods means that the component is likely to be more stable, since there are likely to be more uses of the supplied Joomla code than anything that we might produce ourselves.

Note that the name of the component is 'Kbase' but we have used the term 'Knowledge Base' in the front end displays, as this has a more generic general understanding.

Chapter 7. Database Design

In this section we specifically concentrate upon the underlying database objects.

Data Model

The data model design for the 1.1.0l release is shown in the diagram below. Figure 7.1, "Data model for Kbase 1.1.0".

Figure 7.1. Data model for Kbase 1.1.0
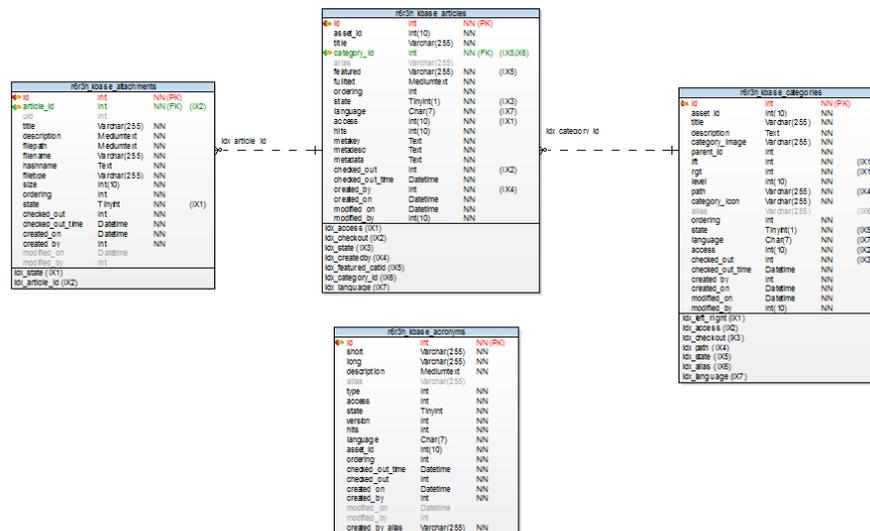
Categories Table

Each article belongs to a specific category.

Table 7.1. Categories table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	11	Yes	Primary key	A unique numeric identification for each category (or sub-category). Populated by an auto-sequence.
asset_id	Int	10	Yes	None	FK to the #__assets table.
title	Varchar	255	Yes	Unique key	A unique alphanumeric name for the category.
description	Text	64K	No	None	Description of the category.
category_image	Varchar	255	No	None	Name of the category image if required.
parent_id	Int	n/a	No	None	Key to parent category.
lft	Integer	11	Yes	None	Nested table left.
rgt	Integer	11	Yes	None	Nested table right.
level	Integer	10	Yes	None	Nested table level.
path	Varchar	255	Yes	None	Required for nested table.

Column Name	Type	Size	Not Null?	Constraints	Description
category_icon	Varchar	255	Yes	None	Font Awesome icon.
alias	Varchar	255	Yes	None	Category Alias.
ordering	Int	11	No	None	The column used for ordering records. Not used. lft is used instead.
state	TinyInt	1	No	None	State of the specific record. i.e. Published, archived, trashed etc.
language	Character	7	No	None	Language code.
access	Int	10	Yes	None	Access levels required to view the category. [ACL]
checked_out	Int	11	Yes	None	Checked out indicator. User id of user editing the record.
checked_out_time	Datetime	na	Yes	None	When the record was checked out for editing.
created_by	Int	-	No	None	The userid of the person who created the record.
created_on	Timestamp	-	No	None	The date and time the record was created. Default NULL.
modified_by	Int	-	No	None	The userid of the person who last modified the record. Default NULL.
modified_on	Timestamp	-	No	None	The date and time the record was last modified. Default NULL.

Note

1) It is possible to define sub-categories as well. Each sub-category is linked through the parent_id field. In some of the Joomla displays the full category name is displayed for every sub-category. i.e. For a category with three levels of sub-category the category name is displayed as:

Category Name Level 1 - Level 2 - Level 3

Where 'Level 1', 'Level 2' and 'Level 3' are the defined category name values for the sub categories. This means that the displayed 'combined category name may become quite long, and for that reason it is suggested that the 'category name' is kept to a minimum length sufficient to uniquely identify it.

2) There is a 'Root ' category that is never displayed, but acts as the base of the category tree.

Articles Table

The table that holds details of each article.

Table 7.2. Articles table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	11	Yes	Primary key	A unique numeric identification for each article. Populated by an auto-sequence.
asset_id	Int	10	No	None	FK to the #__assets table.
title	Varchar	255	Yes	Unique key	The unique title of the article.

Column Name	Type	Size	Not Null?	Constraints	Description
category_id	Int	na	No	None	The FK to the category table. The category to which the article belongs.
alias	Varchar	255	Yes	None	Article Alias.
featured	Varchar	255	Yes	None	Indicates whether the article is a 'featured' article.
hits	Int	10	Yes	None	The number of times the article has been viewed.
full_text	Text	64K	No	None	The article text.
ordering	Int	11	No	None	The column used for ordering records.
state	TinyInt	1	No	None	State of the specific record. i.e. Published, archived, trashed etc.
language	Character	7	No	None	Language code.
access	TinyInt	3	Yes	None	Access levels required to view the article. [ACL]
checked_out	Integer	11	Yes	None	The id of the Joomla user editing the record.
checked_out_time	Datetime	na	Yes	None	The date/time the record was checked out for editing.
metakey	Text	-	Yes	None	Metadata keys. Not fully implemented.
metadesc	Text	-	Yes	None	Meta description of the article. Not fully implemented.
metadata	Text	-	Yes	None	Metadata for the article. (Not fully implemented.)
created_by	Int	11	Yes	None	The id of the Joomla user who created the article.
created_at	Timestamp	-	No	None	The date and time the record was created. Default NULL.
modified_by	Int	11	Yes	None	The id of the Joomla user who last modified the article.
modified_on	Timestamp	-	No	None	If populated the date and time the record was last modified.

Note

1) Articles are always assigned to a specific category.

2) Article attachment details are stored in a separate table. See below.

Attachments Table

The attachments table contains the details of all attachments (images or files) associated with raised issues.

Table 7.3. Attachments table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	n/a	Yes	primary key	A unique numeric ID that identifies an attachment. Populated by an auto sequence.

Column Name	Type	Size	Not Null?	Constraints	Description
article_id	Varchar	10	Yes	Foreign key to associated issue.	Associated kbase article.
uid	Int	11	No	None	User id of the user attaching the file.
title	Varchar	255	Yes	None	Title for attachment.
description	Mediumtext	-	Yes	None	Description of the file attachment.
filepath	Mediumtext	1024	Yes	None	Path to the file in the system.
filename	Varchar	255	No	None	Original name of the file attachment.
hashname	text	-	No	None	Hash of file name and date string.
filetype	Varchar	255	No	None	Type of file attachment. Default `application/octet-stream`
size	Integer	10	Yes	None	Size of file attachment.
state	Number	4	No	None	Indicates issue is visible in front end.
ordering	Number	11	No	None	Specifies ordering of issues.
checked_out	Number	11	Yes	None	Joomla field record locking
checked_out_time	Date	n/a	Yes	None	Joomla field record locking
created_on	Date	n/a	Yes	None	Date the record was created.
created_by	Varchar	255	Yes	None	The user who created the record.
modified_on	Date	n/a	Yes	None	The date the record was last modified.
modified_by	Varchar	255	Yes	None	The user who last modified the record.

The design of using a separate table to store details of attachments has a few pros and cons associated. The pros include the minimising of the amount of information stored about attachments as opposed to storing the information within the article table directly. One of the downsides is that it is necessary to have details of the item to which the attachment is connected. This means that articles have to exist as records within the database prior to the attachments being made.

Our experience seems to indicate that attachments are not the norm with Joomla components and tend to be very few, hence saving database space by saving the details separately is very beneficial.

Acronyms Table

The table that holds details of each acronym (or glossary) item.

Table 7.4. Acronyms table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	11	Yes	Primary key	A unique numeric identification for each acronym. Populated by an auto-sequence.
asset_id	Int	10	No	None	FK to the #__assets table.
short	Varchar	255	Yes	-	This field contains the specific acronym, abbreviation, or Initialism to be described.
long	Varchar	255	Yes	-	The expanded term for the acronym, abbreviation or Initialism item.
alias	Varchar	255	Yes	None	AcronymAlias.
description	MediumText	1024t	No	None	The description or meaning of the acronym, Initialism or Abbreviation term. Not

Column Name	Type	Size	Not Null?	Constraints	Description
					mandatory, but suspected will always be populated with details.
hits	Int	10	Yes	None	The number of times the acronym has been viewed (individually not as part of the list).
type	Int	11	Yes	1	The type of glossary item. i.e. Acronym (1), Abbreviation (2) or Initialism (3)
ordering	Int	11	No	None	The column used for ordering records.
state	TinyInt	1	No	None	State of the specific record. i.e. Published, archived, trashed etc.
language	Character	7	No	None	Language code.
access	TinyInt	3	Yes	None	Access levels required to view the acronym [ACL]
checked_out	Integer	11	Yes	None	The id of the Joomla user editing the record.
checked_out_time	Datetime	na	Yes	None	The date/time the record was checked out for editing.
created_by	Int	11	Yes	None	The id of the Joomla user who created the article.
created_at	Timestamp	-	No	None	The date and time the record was created. Default NULL.
modified_by	Int	11	Yes	None	The id of the Joomla user who last modified the article.
modified_on	Timestamp	-	No	None	If populated the date and time the record was last modified.
created_by_alias	Varchar	255	No	None	The name of the user who created the item. Not yet fully implemented.

Note

Acronym (or Glossary) items are effectively a separate and isolated part of the component. It used the same styling and is included since a Glossary or acronym list is a stable part of Knowledgebase components.

Part III. Appendices

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Appendix A. GNU General Public License version 3

Version 3, 29 June 2007

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