Macrotone Timesheet User's Guide

Macrotone
Consulting Ltd.

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Abstract

This book covers the use of the Macrotone Timesheet component which allows you to easily create employee timesheets on your Joomla!™-powered web sites.

Table of Contents

List of Figures

List of Tables

Preface

Joomla

Timesheet

Component

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DOCUMENT HISTORY

Version	Date	Changed By:	Remarks
1.0.0	17/02/2016	G S Chapman	Initial public release
1.0.2	24/03/2016	G S Chapman	Update for 1.0.2 release.
1.0.3	19/05/2016	G S Chapman	Update for 1.0.3 release.

PURPOSE OF DOCUMENT
This documentation describes the release 1.0.3 version of the Joomla Timesheet component by Macrotone Consulting Ltd.

Part I. User's Guide

Table of Contents

Chapter 1. Introduction and installation

Introducing Macrotone Timesheet

Macrotone Timesheet is a component which allows employees to enter timesheet information that may later be printed and/or distributed to the company accounts for processing. The idea is that employees have a central mechanism for time entries against specific projects.

Key features:

- Time recording by weekly period.

- 5 or 7 day weeks.

- timesheet approval system.

- Editable grid for data entry and edit. Front End only

- Variable week start day.

- Optional administrator and user comments for each timesheet or individual line item.

Please note that this initial release of Macrotone Timesheet may not be as fully functional in the area of printing timesheets as required and some work may be required by early adopters in this area. We would welcome any possible enhancements, ideas and/or code in this specific area.

Note

Nomenclature: We have used the phrase 'timesheet' throughout this document although one could equally use the phrase 'time sheet'. Which ever is used, the intent is to convey a mechanism to record time in a 'sheet' or 'form' for recording purposes.

Requirements and compatibility

Macrotone Timesheet requires the following server-side configuration:

- Joomla!™ 3.5 or later.

- PHP 5.5, 5.6 and 7.

- MySQL 5.5.3 or later. Earlier database server versions will not be supported, although it may well run upon such version. Do note that earlier releases of MySQL are obsolete and not supported any more by Oracle (the company who controls the development of MySQL).

- Requires Javascript to be running within the client browser.

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 Timesheet can be updated with three different methods: installing the new version on top of the old one, using the integrated Live Update system or using the extensions update feature in Joomla!.

Updating directly

This is the failsafe approach, but the least convenient. Download the latest Macrotone Timesheet release from http://www.macrotoneconsulting.co.uk/downloads 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 Timesheet before updating it! Uninstalling will remove all of your data.

Using Joomla! 1.6 and later's 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 Timesheet release it will appear in the list below. 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?

Sometimes Joomla! "forgets" to copy all updated files. This is something that we have seen a few times. In this case, 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 will 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 Timesheet and click on Uninstall. This will completely remove Macrotone Timesheet. This includes all database tables used by the component and the data contained within.

Credits

Macrotone Timesheet makes us of jqGrid, a popular jQuery Plugin for displaying and editing data in tabular form.

jqGrid was developed mostly by Tony Tomov [https://github.com/tonytomov] in the past and was available under MIT/GPL-licenses till the version 4.7.0 published Dec 8, 2014. Shortly afterwards the license agreement was changed and a new 4.7.1 version was published.

The code we are using from the GitHib repository is the fork of jqGrid 4.7.0 - the last version available under MIT/GPL-licenses. It is still provided under the MIT/GPL-licenses.

The version of free-jqGrid we use is developed by Oleg Kiriljuk [https://github.com/OlegKi], alias Oleg [http://stackoverflow.com/users/315935/oleg] on the stackoverflow and OlegK [http://www.trirand.com/blog/?page_id=393] on trirand forum.

Chapter 2. Initial set-up and usage

Parameter Settings

There are a few basic settings used by the component. Theses are attached over a number of different 'option' tabs. The first is the settings for the loading of the various Javascript files, used specifically by the timesheet grids. These are references to the actual CDN (Content Delivery Network) location of the files but also to the CDN location of the language (See design section later in this guide) and CSS files used by the grids. Optionally one can also choose whether to load the jQuery javascript itself, although this is OFF by default and is unlikely to be required on most current Joomla installations. The use of CDN was chosen to reduce the footprint of the component when installed, and also enable easier movement to later versions of the grid code when it is released. If the component is installed upon a site that has no Internet access then the screens would need modification to load the files from the local server rather than CDN.

Figure 2.1. Parameters (1)

The second tab displays the defaults for the component, such as the number of days in each week used by the grid displays. This is a value of either 5 or 7, since most people usually work a 5 or a 7 day week. There is also a parameter to specify the starting day for each week. This is usually expected to be either the Sunday or the Monday of the week, but it is possible to specify it as Saturday if the need should arise.

Figure 2.2. Parameters (2)

One other option to note is the forcing of there to be a unique timesheet for each time period, and thus a user cannot create a second timesheet for a period where they have already created a timesheet. There is only one reason that we can think of as to why this option should be modified, which is it timesheets were ti be prepared for submission to different clients. So for example on the first three days of the week they are working for client A, and on the other two working days for client B.

The third tab controls the display of the Print, Email icons etc.on the front end displays. The print icon is usually displayed so that the user may print out their timesheet and forward it to where ever they desire. The email icon is not so sure. The email icon displays a small popup window where the user may forward the web link to an other person. However whether the person can actually view the web page is not so certain. Security features mean that only a user and their timesheet approvers may view the timesheet details, so it the recipient of the email link is not the timesheet approver, then they could not use the link anyway.

The create icon is not currently available and is intended for a future enhancement.

Figure 2.3. Parameters (3)

The next tab is used to control the logging options. There are currently only a couple of logging locations in the code but these will increase as the component matures and later releases are made available.

Figure 2.4. Parameters (4)
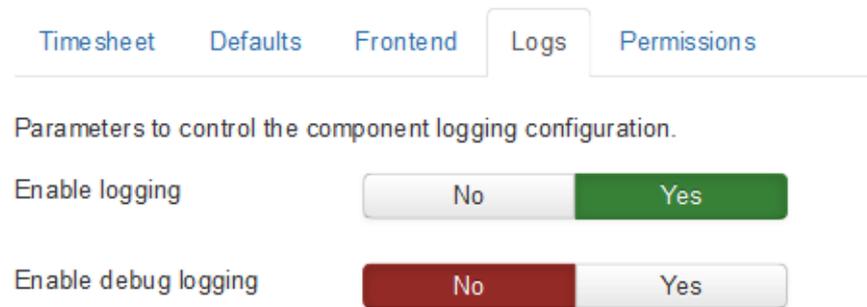
The HTML boxes tab is used to provide some additional formating to the timesheet print output. One can enter some HTML code, such as images, formatted boxes, additional CSS files etc as desired which is applied only to the print output. This is explained in more the advanced configuration chapter. An example of the printed output using some simple HTML is displayed in the Front End chapter..

Figure 2.5. Parameters (5)

The Permissions tab is the standard Joomla settings screen. Although the component does use ACLs to a limited extent in the main it relies upon the checking of users against the various internal tables to determine what they may or may not do. This tab is not illustrated.

Back End Screens

The back end screen follow current Joomla standard and will be familiar to Joomla administrator and other users of our components. The back end of the site is where the administrative tasks are performed.

Dashboard

The Control Panel also known as the Dashboard, is the usual starting point and one can navigate to the other screens from this point.

Figure 2.6. Dashboard

The Dashboard, also known as the Control Panel, is the main landing page in the back end for the component. It is illustrated in the image above. It is composed of a few parts, the most obvious being the icons which allow navigation to the users, timesheets, timecodes and support pages. On the right hand side of the page is the 'About' and Credits panels. The About panel is illustrated below. As one can see it provides a link to a display of the component changelog, and a Donate button to permit support for the further development of the component.

Figure 2.7. About Panel

The credits Panel, acknowledges the work of others which we have used in the component and also the translations that are available. Initially this will be a very short list but hopefully the list will grow over time as the component matures. Translations are created upon the Transifex system and we welcome any translations that users might wish to submit.

Figure 2.8. Credits Panel

The credits panel information is obtained from our web site so should always reflect the latest languages available.

Users

The user list displays the users who are permitted to use the timesheet component. Each user has to be by definition a user already registered to Joomla, however an additional step has to be taken to add the Joomla user to the timesheet component, before they can submit timesheets. Each user may also have one or more users who can authorise (or approve) a timesheet. Obviously if there are no users defined to approve a timesheet it would require a back end administrator to perform the approval process.

Figure 2.9. Users List

Clicking upon the 'New' or 'Edit' button will display the following screen. Most of the information will be empty if we are adding a user. If this is an existing user who we are editing, then their details would be shown 'read only'.

Figure 2.10. Add User View

If a new user then we can click upon the small 'user icon' in the middle of the screen which will cause the following popup window to be displayed. It is necessary to select the user, from the supplied list after which their details will be populated back into the main screen, ready for saving.

Figure 2.11. Add Joomla User Popup

The other main use of the Users edit is to provide the identifiers of the users who will approve other users timesheets.

Release 1.0.1 added a plugin to automatically synchronised Joomla users with the Timesheet users. The synchronisation will update the timesheet user table with changes to the Joomla users email, username etc. The plugin has one paameter which is to auomatically add 'new' joomla users to the timesheet users table. By default this parameter is set to off, so it is necessary to manually add new timesheet users as and when they are created. This is a deliberate design decsions since it is expected that there will probably be a lot more registered Joomla users than specific timesheet users.

Logging

The log display comprises a single display as shown bellow. If logging is enabled in the component option then some additional entries will be populated in the underlying table as the component is used. Most of these messages will be warnings, or in some way informative.

Figure 2.12. Log Display
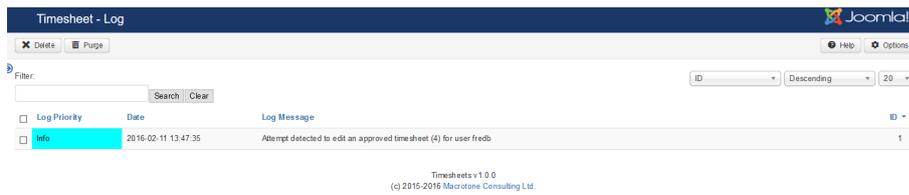
The number of messages that may possibly be generated is very few in the initial release, but it is expected that more will be made available as the component develops and/or as the result of enhancement requests.

Support

The Support display provides some convenient links to view additional information such as the component documentation, FAQ, report problems etc.

Figure 2.13. Support Panel
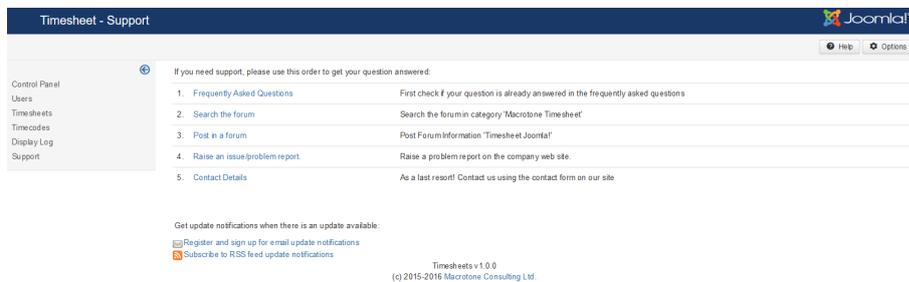
Registration upon our site is necessary before questions can be posted to the site forum.

Timecodes

Time spend upon activities are recorded against a 'time code'. The Timecodes view shows the codes that are known to the component. There are a few sample codes provided when the component is installed, others can be added, or the existing once edited to meet the site requirements.

Figure 2.14. Timecodes List
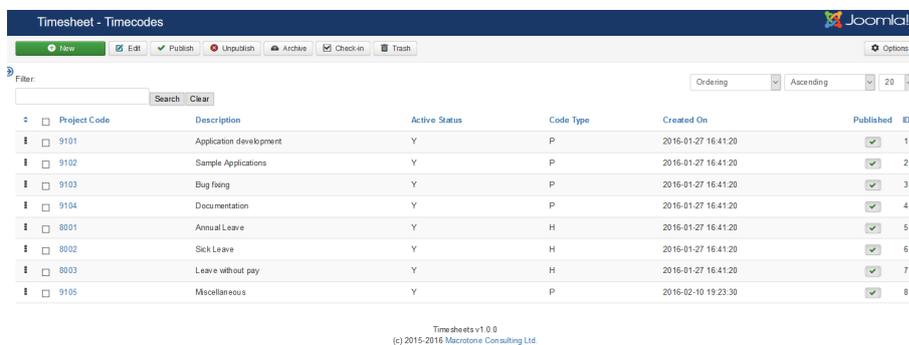
All time codes are added in the back end of the site. The codes comprise (usually) an alphanumerics code and a short description, which aids the user in their recording. Codes can be active or inactive, and may or may not be published, which effectively means they are visible on the site front end. Codes are of one of three specific types: Program, Holiday or Other.

Figure 2.15. Timecode View

The time code types are currently hard coded and they serve as a convenient grouping for the account/ project codes. They do not currently serve any other purpose.

Release 1.0.3 added a new field 'usage' to permt specific usage instructions for the time code to be supplied by the administrators, It will not stop people using the wrong codes but it will at least provide some guidance.

Timesheets

This back end view displays all of the timesheets known to the system.

Figure 2.16. Timesheets List

Restrictive editing of a timesheet is possible in the back end, but changing of the grid data was not a requirement hence it was not implemented. Timesheets would be entered by users who would not usually have access to the back end of the site so there was no need to provide such functionality.

Figure 2.17. Timesheet View/Edit

The back end does permit the editing of any entered user or administrator remarks/comments and can also approve (or lock) a timesheet against any further changes on the front end. If it is desired that

a user 're-edit' their timesheet it is necessary to 'unlock' effectively removing the 'previous' approval for the timesheet.

The detail in the timesheet grid is illustrated in greater detail below. It is the grid that contains the 'time' records. The information is held as a JSON encoded string in a single column within the database. There is no ability provided to edit the grid in the back end of the site by design. The intent is that all grid entry, i.e. Entry of time spent upon activities is performed in the front end of the site. The back end will only provide a view of the grid data.

Figure 2.18. Timesheet Grid Detail

Other options may be added to the grid in later versions of the component.

Front End Screens

The front end of the site is where the majority of the usage of the component will occur. It is where timesheets are created, edited, approved and if necessary printed. For convenience it is possible to print out a list of valid time codes for reference, but the entry of the timesheet data, provides the same information at the time of entry.

Timesheets view

The timesheets that the user is presented with will be a combination of their own timesheets and also the timesheets of any users for whom they are defined as 'approver/managers'. Usually each user will have a single timesheet for each weekly period. The list display also shows the number of hours reported in the individual timesheet and whether they are 'approved' and hence not available for editing or modification.

Figure 2.19. Timesheets View

To view a specific timesheet one clicks on the Time Period for the timesheet once wished to view.

Timesheet view

The time individual display is shown in the section below. Depending upon whether the viewer is the 'owner' of the timesheet or whether they are an 'approver' of a timesheet, will determine whether the option to 'Approve' the sheet and enter 'Administrator comments' are displayed. If the 'owner' of the timesheet then the user will be presented with a field to enter their own comments.

Figure 2.20. Timesheet view

One will notice the small carat icon on the top right hand side of the screen. If the user clicks upon the icon then a number of additional options will be shown as unillustrated below. These will enable the user to either 'Print', 'Edit' or 'Email' the timesheet. The Edit icon will only be presented and permit editing of the timesheet if the viewer is the 'owner' of the timesheet and if the timesheet has not been locked or approved.

Important

If the timesheet is already approved then editing is not possible, either by the user or an 'approver'.

The users timesheet view is shown below.

Figure 2.21. User Timesheet view

If an 'approver' viewing the timesheet and the timesheet is not already 'Approved' then a button will be shown allowing the approver to access the 'form'. [This is really just an alternative means for the approver to access the edit form.]

Figure 2.22. Approvers Timesheet View

See below for more specific detail upon the Print option.

Timesheet edit

The fields displayed in the edit form will depend to a large extent upon the specific user using the screen.

If this is a new timesheet then a selection of possible 'time periods' will be displayed. These will be for a total of the current and last 9 weeks, making a total of 10 possible time periods being possible. This number is currently hard coded and not a configuration option. It is expected that timesheets would be entered on a historic basis, since it is not possible to predict what a person would be spending their time doing in advance.

Figure 2.23. User Timesheet Edit

The approvers edit screen is shown below. Similar to the User screen only we have a data field for the approval date, a field for approvers comments and a button to approve the timesheet.

Note

The approver does have the ability to modify the grid data, although this is not expected to be a common task for an approver. It does however permit them to re-assign time to different tasks, such as when an account code changes but the user has already submitted their timesheet using an 'old' code that is subsequently disabled.

Figure 2.24. Approvers Timesheet Edit Screen

There are two separate parts of the edit screen, the general settings and the 'grid' itself. The 'sheet settings such as username, and user id are obtained from the entering user. The time period is selectable on a new 'timesheet' but is read only upon an edit. Time periods are usually unique although this depend upon the component settings. Some fields will only be displayed depending upon the 'editing user' If a timesheet approver, editing a timesheet of another user is using the system then some additional 'approval' and administrative remarks fields will be displayed.

The grid itself is populated (or filled out) on the users local machine. There is no interaction with the Joomla server at all until the complete Joomla form is submitted. Javascript is used to provide the grid editing, which includes populating the fields, selecting the appropriate code, searching within the grid etc. Totals, for each account code and for each day, are automatically updated as each 'grid row' is completed (or filled in).

The bottom bar of the grid displays buttons to perform the 'common' activities required to edit the grid rows. There are Add, Edit,Cancel and Save button in Bottom left of navigation bar. When a user selects a Row from grid (while selecting the row get highlighted), they may Click the Edit button from the Bottom bar, or if they have performed a double click upon a row, the Row become Editable and the Save and Cancel button in the bottom navigation bar become active. Once editing is complete the user presses the save button in the grid bottom navigation bar.

On the navigation these buttons/icons are on the bottom left hand side. These are used to perform most of the common actions upon the grid. Most icons are self explanatory. The 'dustbin' is for removal of a highlighted line. The 'plus' icon is for adding a new line to the grid, the 'pen' icon is to write the changes to local memory, a restore grid button to reset the users position upon the grid and a search icon to display an additional line at the top of the grid permitting searching in the different grid columns. As mentioned above double clicking on a specific column/row will highlight that specific row and permit a value to be changed. The Tab key can be used to move between columns on the row and pressing the keyboard return key will also save the data to local memory, as an alternative to pressing the navigation bar save key, except on the 'Notes' field where it acts as a carriage return for text within the entered comment.

Timecodes

The time codes are used to differentiate between the time (hours) spent upon the different chargeable activities. The code list display acts as a handy reference list, but as the codes are selectable in the timesheet entry form, it is suspected that it will not be used very often. Note the small cog icon on the top right hand side of the display which is clicked to reveal an email and a print icon, if configured in the component options.

Figure 2.25. Timesheet Codes

Timesheet Codes

Project Code	Description	Status	Code Type	Id
9101	Application development	Y	P	1
9102	Sample Applications	Y	P	2
9103	Bug fixing	Y	P	3
9104	Documentation	Y	P	4
8001	Annual Leave	Y	H	5
8002	Sick Leave	Y	H	6
8003	Leave without pay	Y	H	7
9105	Miscellaneous	Y	P	8

You are here: Home ▸ Timesheets ▸ Timecodes

The amount of information upon an individual time code is limited and hence the list displays the most (all) important information. This tends to mitigate the need to have an individual time code view, and consequently we have not provided a link to the individual code display described below.

Release 1.0.3 provides an optional menu parameter to permit a link to be attached to each timecode permitting the individual timecode details to be shown.

Individual Timecode display

There is also a view to display the individual timesheet code. This is illustrated below. It is not expected that this view will be used very much, if at all, so it is reasonably basic in is construction and display. If our understanding is incorrect please let us know and it may be considered for modification in a later release.

Figure 2.26. Timesheet Code View

Timesheet Time Code

Time code

Project Code:	9101
Description:	Application development
Code Type:	P
Active Status:	Y
Created On:	January 27, 2016
Modified On:	January 29, 2016

You are here: Home ▸ Timesheets ▸ Timecode

There is no current way to edit/create new codes within the front end of the site. It is a function carried out in the back end only.

Release 1.0.3 also includes the 'usage' field details in the display.

Print output

Although not a specific view in the usually Joomla understanding the print popup is worth explaining in a little more detail.

The display below shows the print 'pop up' screen displayed when the 'print' icon was pressed. The example shows the use of a top and bottom HTML box to provide additional information on the printed output, such as the company icon, titles etc.

Figure 2.27. Example Print Output Popup

The use of the HTML boxes is described in the Advanced Configuration chapter, later in this document.

As a convenience only the code we used in the HTML boxes to create the above display is shown below:

Top box: We have only modified the logo location in the following code sample.
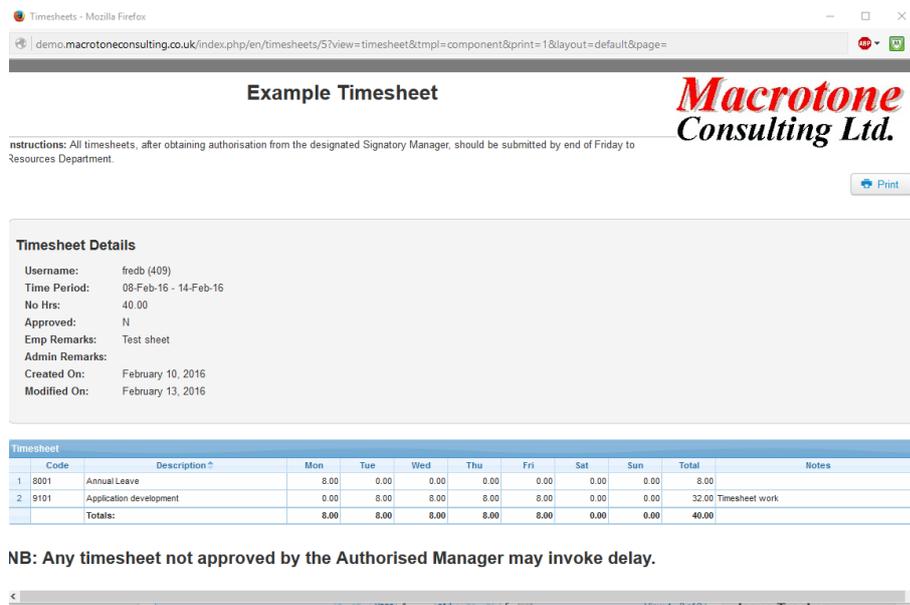
```
<div style="height:98px;width:100%;border:1px solid #b1b1b1; ">
<div
 style="background:#7c7c7c;height:16px;width:100%;display:block;"></
div>
<img style="float:right;" src="http://xxxx.yoursite.com/images/
logo.png" alt="Logo" />
<h1 style="text-align:center;">Example Timesheet</h1>
</div>
<strong>Instructions:</strong> All timesheets, after obtaining
 authorisation from the designated Signatory Manager, should be
 submitted by end of Friday to Resources Department.
```

Bottom box

```
<h2>NB: Any timesheet not approved by the Authorised Manager may
 invoke delay.</h2>
```

Modules and Plugins

There are no additional Modules required by the component.

Release 1.0.1 added a plugin to automatically synchronised Joomla users with the Timesheet users. The synchronisation will update the timesheet user table with changes to the Joomla users email, username etc. The plugin has one paameter which is to auomatically add 'new' joomla users to the timesheet users table. By default this parameter is set to off, so it is necessary to manually add new timesheet users, via teh back end, as and when they are created. This is a deliberate design decsions since it is expected that there will probably be a lot more registered Joomla users than specific timesheet users.

Removal of a user will also automatically remove any associated user Timesheets.

Chapter 3. Version Changes

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

Release Versions

Timesheet 1.0.3

~ Correct edit string in front end.

Change to use release 4.13.3 of free-jqGrid.

Change to use getCol method to determine total hours instead of footerData which stopped working in free-jqGrid 4.13.2.

~ Modify front end CSS for form labels.

Rewrite front end router to use Router class.

+ Add menu link option to display timecode detail from timecodes display.

+ New column usage in timesheet_codes to provide user details of when to use the time code.

+ New string for entering introductory text in the front end timecodes view.

Timesheet 1.0.2

Change table character collation set to utf8mb4_unicode_ci as used by J3.5 RC (Beta 2 used utf8mb4_general_ci).

+ Add username change to system plugin for sheet table.

- Remove username foreign keys on user and sheet table.

~ Correct a few strings.

+ Add Live Update view.

Timesheet 1.0.1

+ Add system plugin to handle user changes in Joomla.

Correct the JedChecker PH1 and PH2 errors ready for JED submission.

Correct problem when deleting a timesheet user.

+ Add additional processing when removing user approval privilege.

- Remove a few redundant files.

~ Change seterror calls to throw exceptions.

Correct minor errors preventing back end lists sorting upon all fields.

Correct front end directional sorting of timesheets.

Timesheet 1.0.0

+ Initial Release

Part II. Advanced Configuration

Table of Contents

Chapter 4. Print Configuration

This chapter goes into some of the more advanced configurations for changing the print output.

Methods of modifying print output

There are several ways in which Joomla itself prepares the print output of a page and these methods will of course apply to all printed output from the system, not specifically from the Timesheet component. This information is provided for user reference, since we have implements a more specific method to 'design' the Timesheet output very specifically.

HTML Boxes

The method that we have used to enable the site administrator to add custom HTML Codie to their print out is using what we have called HTML boxes. Effectively these are configuration parameters for the component that the site administrator can define. The next step is that we have modified our display template so that if the page is called with the parameters 'tmpl=component' then we know that the view is for the 'Print' popup window and can thus add conditional code into the template on that assumption. This works very well in practise and makes if very specific to any print changes required for our specific Timesheet component.

Common usages for the HTML box include presenting the company logo upon the output pages, and providing information upon the printed output for any intended recipient of the hard copy. Any valid HTML is acceptable.

Standard Joomla method

The following are copies of articles/information currently available on the web which are reproduced for the readers convenience. We take no credit for the works and although we believe the information to be correct can not be responsible for any inaccuracies contained therein.

Modifying the print output.

There is a reasonable article upon the Joomla website that covers the basics of how one may modify the 'print popup' window. https://docs.joomla.org/Customizing_the_print_pop-up.

The reader is recommended to read the article to get a better understanding if the uses of the component.php file.

It is very likely that the actual contents of the componnet.php file used on a site is very probably extensively different from the simple example given, but the structure will be consistent with the documentation.

Add logo to Joomla print popup

Several of the displays on the front end provide a small print icon so that the displayed information may be easily printed. It is an easy change to ensure that the company (or web site) logo is displayed upon all print output.

The instructions are modified from an original article in Joomla Magazine September 2011. [http://magazine.joomla.org/issues/Issue-Sept-2011/item/548-logo-on-print-pdf] It is included here so that others may make use of it. It describes how a company logo can be inserted into any printed document from the print icon on the site.

- Copy the file "component.php" from the folder Joomla-installation/templates/system to the root of the template folder of your template that you are using: (for example: joomla-installation/templates/rhuk_milkyway/component.php).

- If you need to overwrite some component.php in your new placed template folder, don't do it, as it may include code that the template needs to use (I don't know, but it's safer if you don't do this action in this case).

- Now open the component.php file in your template folder (you can use wordpad)

- Search for the line that states: <body class="contentpane"> around lines 47 on beez_20 template.

- Now, copy and place this code right under it: To use a relative URL use it relative to the httd directory. i.e. src="<?php echo $this->baseurl ?>/templates/your-template-folder/your-image-map/logo.png" where you use the appropriate folder and logo name for your site.

- Just change the source of the image so it matches exactly the image that you want included, and that's it!

Another alternative article http://www.voodish.co.uk/articles/add-logo-to-print-popup-in-joomla/ also goes into a little more details and we reproduce it below for reader convenience.

So you would like to add a logo and perhaps some other bits to the Joomla print popup page?

Easy, you will need to open your template component.php file and make some changes, shown after the break.

Make sure to backup your component.php first.

Begin editing component.php

Found in: yoursite.com/templates/your-template/component.php

Around line 26 (just after : body class="contentpane")

Insert the following code (Do not forget to edit all domain names - file names and folder names to what reflect your situation)

```
if($_GET['print'] == "1")
{
echo "<style type=\"text/css\">
table.pagenav{display:none;}
p.buttonheading{position:absolute;top:1px;right:0;}
p.buttonheading a {background:url(http://www.YOURDOMAIN.COM/
templates/your-template/images/print.gif) no-repeat top
 left;height:16px;width:120px;display:block;}
</style>

<div style=\"height:98px;width:100%;border:1px solid #b1b1b1;
\">

<div style=
\"background:#7c7c7c;height:16px;width:100%;display:block;\"></div>

<img style=\"float:left;\" src='http://www.YOURDOMAIN.COM/
templatesyour-template/images/logo.gif' />

<h4 style=\"float:left;margin-left:50px;color:#b1b1b1;font-
weight:normal;margin-top:45px;\">SITENAME GOES HERE ::
 www.DOMAINNAME.COM ::</h4>
</div> ";
}
```

Save, upload and test.

Change size of print popup window

The size of the popup print window seems to impact the size of the resultant grid displayed in the printed output. Until such time as this can be more easily resolved, one simple fix is to increase the size of the popup window. This is done by modifying the size specified in the front end file: components/com_timesheet/helpers/icon.php line 2xxx.

The current default is set to 800x320px

Part III. Design

Table of Contents

Chapter 5. Design Criteria

This section describes the design criteria used for the component. It provides the rationale behind the design and helps to understand how the component works.

One of the criteria in the design is to make use of as much of the supplied Joomla functionality and provide familiarity of use with the standard Joomla components.

Nomenclature: We have used the phrase 'timesheet' throughout this document although one could equally use the phrase 'time sheet'. Which ever is used, the intent is to convey a mechanism to record time in a 'sheet' or 'form' for recording purposes.

Planning and Analysis

Effective project and program management is the key to completing on time and within budget. Within every project or program there are always multiple issues that need to be tracked, prioritised, and managed. Additionally there are often additions and improvements made as the project goes through its life cycle.

A company, whatever its size, will have a requirement to record the time spent upon various activities so that they may obtain a reasonable estimate of how much time, effort and ultimately cost is involved with the activities. These all impact the bottom line and hence profitability of the company. Most companies therefore have a form of time reporting where the employee enters a 'timesheet' recording the time spent against the various activities. The activities usually have a specific 'project code' associated with then to enable accounts to derive their figures.

Such submitted 'timesheet' usually need to be approved by a more senior member of staff to that of the submitter, before accounts accepts the report.

By using a Joomla component it is possible to easily record the time based activity in one central location. This approach offers each project/program lead access to just the data they need and makes it easier for management to determine the time resources being spent upon each activity.

Planning and Project Analysis

The first action is to define the application requirements. These are then used to design a database and an outline that describes how the user interface accepts and presents data.

The accounts department and the project/activity leads establish requirements that define the codes to be used to track time ensuring security for the data and any possible usage of the data, The design criteria is enclosed below for completeness; note however that the current implementation upon Joomla does not provide all of these facilities at present.

Gather the Necessary Data

To track and record the time information it is agreed that the application should include the following information:

- Each activity to be tracked requires a unique 'cost/account' code.

- Each account/cost code will have a description to make selection easier by the user.

- All time recorded must be against a given code. No 'invented' codes are permitted.

- All time recorded is for a given period such as weekly or monthly.

- Weekly periods may be for a 5 day or a 7 day week.

- Ideally it should be possible to specify the starting day for a week. Usually this will be a Sunday or a Monday.

- Only the given user and their supervisor will have visibility of any given timesheet.

- A timesheet has to have the ability be approved by a users supervisor.

- Once approved the user should be unable to modify the already entered data under any circumstances.

- Optionally once the user has submitted their timesheet, their supervisor should be an email notification informing them of the submission.

- Optionally it would be nice to notify the user of the need to complete their timesheet if not submitted by a certain time/date.

   ### Note

   Not all of these requirements are met with the current release. As demand and circumstances permit, the missing requirements will be added with later releases.

Define Security Requirements

There is a need to control access to the information, they agree upon the following access rules:

- Only the user and their superiors should be able to view the submitted data.

- Each timesheet needs to be approved by a superior.

- Once approved no further modification should be possible upon the data.

Joomla ACL permissions can be configured to achieve a number of these requirements. Others will be implemented as time permits.

Select Data Management Functions

The users must be able to:

- Access the current and previous timesheets

- Add new time against any given code.

- Edit any given entry to modify the time or code if the sheet has not been approved.

Certain of these aspects need to be under control.

Select Data Presentation Functions

Once the data is entered, users need to view the data. The team decides that users must be able to view the following:

- All time must be entered against a specific code.

- Summaries by day.

- Codes for items such as Vacation, Illness etc.

- Ability to print out individual timesheets.

A spreadsheet or tabular form is considered best for recording and displaying the basic time information. Around this time data would be fields for comments/remarks.

Define Special Function Requirements

The following requirements would also be useful:

• Notify users when timesheet are overdue.

• Notify the supervisors when a timesheet is available for approval.

Some of these have not yet been implemented.

Handling of date fields.

Record hours are to be entered in decimals to two places. Hence half an hour would be 0.50 and a quarter of an hour would be recorded as 0.25.

Cron tasks

The topic of implementing a scheduled activity with Joomla is achieved usually by the use of a daemon named 'cron'. This is primarily due to most(?) Joomla systems running upon a UNIX based operating system. This is not always the situation and there are a number of Windows based systems available, but there is adequate documentation about Windows systems created by Microsoft and it is not necessary to repeat that information. With UNIX systems being so common we have included this section because an understanding of 'cron' is important in its implementation and also in the design of specific activities that leverage its facilities.

This topic has been extensively documented in another document for another one of our Joomla components and is therefore not repeated in this document. Some of this information is also included in the Users Guide but is also included here for completeness.

Multi-Lingual support

Important

This feature is unlikely to be fully implemented in the initial release, but there is the basis for further implementation, possibly in release 2.0, for which no release date has been specified.

Likely changes include:

• An extra language field on the subsidiary tables and then in the drop down picker, filter out the strings we do not need.

• Modification of all list views to add a language column, plus sort and filter abilities.

• Each table to have an additional identifier so that the same 'type' is any language is connected. i.e A defect in one language is the same type as a defect in another language.

• Need to decide what language back end displays in (en-GB) ?

• Modify select to include language selection for site. Need to consider how to make the upgrade easy as well.

Chapter 6. Database Design

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

Designing the Database Objects

Once the database requirements are defined, the next step is to turn these into a database design and an outline that describes how the user interface accepts and presents data. Given the requirements described above the three main tables can be created:

- **TimeCodes** provides all the valid codes and their descriptions which are valid to which the user can allocate time.

- **Users** contains information about the users who can be create (or approve) Timesheet entries

- **timesheets** contain the weekly entries for the user.

Further detail notes upon the main tables is provided later in this document.

System generated primary keys will be used for all tables so that all the data can be edited without executing a cascade update.

Database Objects - Procedures, Views, Triggers

Our experience tends to indicate that very few (if any) Joomla components make use of the underlying database to its full advantage, preferring instead to implement features at the application layer. This is in our opinion missing a very important 'trick', since the database is 'closest' to the data itself.

Database Triggers

The component uses basic triggers on the tables to record insert, update and delete information which is store in the audit records.

The following description is taken from Wikipedia:

A database trigger is procedural code that is automatically executed in response to certain events on a particular table or view in a database. The trigger is mostly used for maintaining the integrity of the information on the database. For example, when a new record (representing a new worker) is added to the employees table, new records should also be created in the tables of the taxes, vacations and salaries.

Triggers are commonly used to:

- audit changes (e.g. keep a log of the users and roles involved in changes)

- enhance changes (e.g. ensure that every change to a record is time-stamped by the server's clock)

- enforce business rules (e.g. require that every invoice have at least one line item)

- execute business rules (e.g. notify a manager every time an employee's bank account number changes)

- replicate data (e.g. store a record of every change, to be shipped to another database later)

- enhance performance (e.g. update the account balance after every detail transaction, for faster queries)

The examples above are called Data Manipulation Language (DML) triggers because the triggers are defined as part of the Data Manipulation Language and are executed at the time the data is manipulated.

Some systems also support non-data triggers, which fire in response to Data Definition Language (DDL) events such as creating tables, or runtime or and events such as logon, commit and rollback. Such DDL triggers can be used for database auditing purposes.

The following are major features of database triggers and their effects:

• triggers do not accept parameters or arguments (but may store affected-data in temporary tables)

• triggers cannot perform commit or rollback operations because they are part of the triggering SQL statement (only through autonomous transactions)

MySQL

MySQL 5.0.2 introduced support for triggers. MySQL supports these trigger types:

• Insert Trigger

• Update Trigger

• Delete Trigger

Note

MySQL allows only one trigger of each type on each table (i.e. one before insert, one after insert, one before update, one after update, one before delete and one after delete).

Note

MySQL does NOT fire triggers outside of a statement (i.e. API's, foreign key cascades)

Whether a specific database user can create these triggers will depend upon the permissions granted to the database user. The database user that has to have the correct permission in the Joomla environment is the user that is used to perform all database connects as defined in the Joomla installation itself.

Note

Different databases implement database features such as database triggers in different way, and often with slightly different syntax. For that reason the current version only supports MySQL databases, the most commonly used database for Joomla systems.

Database Routines (Procedures)

A stored procedure is a subroutine available to applications that access a relational database system. A stored procedure is actually stored in the database data dictionary.

The component does not use database routines in the initial release.

Typical use for stored procedures include data validation (integrated into the database) or access control mechanisms. Furthermore, stored procedures can consolidate and centralise logic that was originally implemented in applications. Extensive or complex processing that requires execution of several SQL statements is moved into stored procedures, and all applications call the procedures. One can use nested stored procedures by executing one stored procedure from within another. This is more efficient that handling the actions at the application layer, since the database is 'closer' to the actual data being manipulated.

Stored procedures are similar to database functions. The major difference is that functions can be used like any other expression within SQL statements, whereas stored procedures must be invoked using the CALL statement.

The component in the initial release does not make use of any database procedures.

Database Views

A view is the result set of a stored query on the data, which the database users can query just as they would in a persistent database collection object. This pre-established query command is kept in the database dictionary. Unlike ordinary base tables in a relational database, a view does not form part of the physical schema: as a result set, it is a virtual table computed or collated from data within the database, dynamically when access to that view is requested. Changes applied to the data in a relevant underlying table are reflected in the data shown in subsequent invocations of the view.

Views can provide advantages over tables:

• Views can represent a subset of the data contained in a table; consequently, a view can limit the degree of exposure of the underlying tables to the outer world: a given user may have permission to query the view, while denied access to the rest of the base table.

• Views can join and simplify multiple tables into a single virtual table

• Views can act as aggregated tables, where the database engine aggregates data (sum, average etc.) and presents the calculated results as part of the data

• Views can hide the complexity of data; for example a view could appear as Sales2000 or Sales2001, transparently partitioning the actual underlying table

• Views take very little space to store; the database contains only the definition of a view, not a copy of all the data which it presents

• Depending on the SQL engine used, views can provide extra security

Timesheet does not in its initial release make use of any database views.

Data Model

The data model designed is graphically shown in Figure 6.1, "Data model for Timesheet 1.0".

Figure 6.1. Data model for Timesheet 1.0
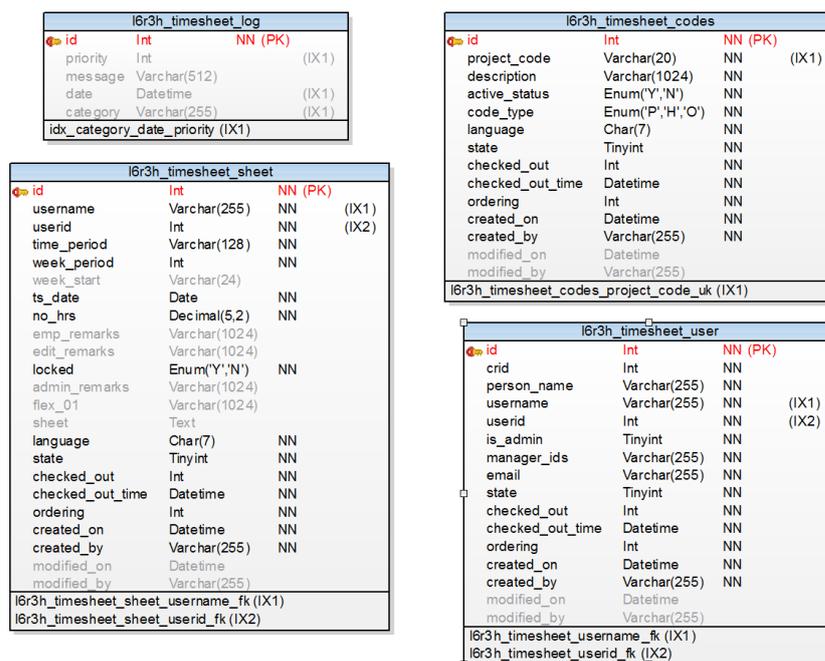
Timecodes Table

Each entry belongs to a specific category.

Table 6.1. Timecodes table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	n/a	Yes	Primary key	A unique numeric identification for each timesheet code. Populated by an auto-sequence.
project_code	Varchar	20	No	None	Short Code or Cost code for Project.
description	Varchar	1024	Yes		Description of Project Code.
active_status	Enum	n/a	Yes	N	Displays the flag status whether the project is active or inactive. Values Y or N
usage	Varchar	2048	No		Optional text providing the user with instructions (if neccessary) as to when the time code should be used.
code_type	Enum	n/a	Yes	P	Displays the code type whether the timesheet code is project (P), holiday (H) or other (O).
state	TinyInt	4	No	None	State of the specific record. i.e. Published, archived, trashed etc.
checked_out	Number	11	Yes	None	Joomla field record locking
checked_out_time	Date	n/a	Yes	None	Joomla field record locking
ordering	Int	11	No	None	the column used for ordering records. Not used.
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.
language	Character	7	No	None	Language code.

Users Table

The users table is used to provide information for their timesheet. It also provides additional checks to ensure that only users specified in this table can enter or view their own timesheet information. The only exception to this is the authorisation for the 'approver' of the submitted information is also defined in the user entry. The entry is created by the back end administrator, selected from the users registered upon the site.

Table 6.2. Timesheet Users table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Integer	11	Yes	Primary key	The system generated unique identifier for the user. From the Joomla users table.
crid	Int	11	Yes	1	Current Role. Not currently used.
person_name	Varchar	255	Yes	None	The unique name of the person. From the Joomla Users table.

Column Name	Type	Size	Not Null?	Constraints	Description
username	Varchar	255	Yes	None	User name in the timesheet application. From the Joomla users table.
userid	Int	11	Yes	None	Association id from Joomla #__users table.
is_admin	TinyInt	0	No	None	Indicates that the user is a timesheet administrator. Not currently used.
manager_ids	Varchar	255	No	None	The ids of the people who can approve this users timesheet.
email	Varchar	255	No	None	An email address for the user. From Joomla #__users table.
state	TinyInt	4	No	None	State of the specific record. i.e. Published, archived, trashed etc.
checked_out	Number	11	Yes	None	Joomla field record locking
checked_out_time	Date	n/a	Yes	None	Joomla field record locking
ordering	Int	11	No	None	the column used for ordering records. Not used.
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.
language	Character	7	No	None	Language code.

Note:

The minimum amount of information is required about the user, sufficient only to be able to control Timesheet entry/viewing.

The foreign key on the username field to the #__users table was removed in release 1.0.2.

Note

The design deliberately makes the adding of Timesheet users a back end administrative step. The reason is that not all users registered upon a site may be required to create timesheets, and given that there may be a lot of registered users, the administrator can select the desired users that are deemed applicable..

Timesheet Table

This is the main table containing the time records for a specific time period, usually for a weekly period.

Table 6.3. timesheet table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	n/a	Yes	primary key	A unique numeric ID that identifies a record. Populated by an auto sequence.
username	Varchar	255	No	-	Employee whose timesheet is entered.
userid	Int	11	No	-	User id as specified in Joomla user table.
time_period	Varchar	128	Yes	-	Time period for the given timesheet.
week_period	Int	11	Yes	-	The number of days in a working Usually either 5 or 7.

Column Name	Type	Size	Not Null?	Constraints	Description
week_start	Varchar	24	Yes	-	The starting week day for the grid display. i.e MON, SUN, etc. Future expansion.
ts_date	Date	n/a	No	None	Approved Date for the timesheet.
no_hrs	Decimal(5,2)	-	No	None	Number of hours worked on a project by the employee for a particular date.
emp_remarks	Varchar	1024	No	None	Remarks entered by the employee as additional notes for admin.
edit_remarks	Varchar	1024	No	None	Remarks upon the reason for the edit of the record. Future expansion.
locked	ENUM	255	No	N	Whether the sheet is locked/approved to prevent further updates by the user. Values Y or N
admin_remarks	Varchar	1024	No	None	Remarks entered by the admin.
flex_01	Text	-	No	None	Flex field 1 for extensibility and future use.
sheet	Text	-	No	None	Field for storage of sheet data in JSON format.
language	Character	7	No	None	Language code.
state	TinyInt	4	No	None	State of the specific record. i.e. Published, archived, trashed etc.
checked_out	Number	11	Yes	None	Joomla field record locking
checked_out_time	Date	n/a	Yes	None	Joomla field record locking
ordering	Int	11	No	None	the column used for ordering records. Not used.
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.

Timesheet Log Table

The Timesheet Log table is used by the logging routines to store information, of different priorities that are used to provide additional information upon the operation of the component. It is built on top of the standard Joomla JLog libraries.

Table 6.4. Log table description

Column Name	Type	Size	Not Null?	Constraints	Description
id	Number	n/a	Yes	primary key	A unique numeric ID that identifies a record. Populated by an auto sequence.
priority	Number	11	Yes	n/a	The priority of the message. i.e. Alert, Info, Notice, Warning etc.
message	Varchar	512	No	n/a	The text message to store.
date	Date		No	n/a	The date the message was generated.
category	Varchar	255	No	n/a	The message category. Default 'com_timesheet'

There is a compound index upon the category, date and priority columns in that order.

Implementing Database Objects

This first step in building an application was to create the database objects. The tables have been defined above but there are a few other database objects we require.

Additional Database Objects Needed

To populate the primary key values of the tables needed for this application, an auto incrementing sequence is used in the MySQL implementation.

About Building Database Objects

There are several tools for creating objects in MySQL. You can:

- Use phpAdmin to create tables, views, indexes, procedures, functions, triggers etc.

- Use a product such as Toad, which provides the same abilities as phpAdmin with a cleaner interface. This is downloadable from the Quest website.

- Create a script in a standard text editor and then upload the script and use the MySQL command interface, Toad, or phpAdmin to execute it.

Default Base Data

There are a few provided records inserted into the tables upon installation.

The timecodes table has a few sample codes created with an id value of below 11. Any site entered code will have an id of 11 or greater. This is done so that there is no possibility of any codes being overridden on an update.

Chapter 7. HTML Table grid

The display data in the table is one of the most common ways to be found in commercial systems, regardless of the market segment. The tables or grids possess a fundamental role in applications that need an organised list of data (rows and columns). The user is probably very familiar with information displayed in such tables although nowadays the use of div's is becoming more common.

The development of JQuery provides the ability to use it on one (or more) table (s) to display the search result for the user, where it can sometimes select rows records and perform operations such as editing and deleting records.

This is very useful in situations where there is the need to allow the user to edit data directly in the table by changing the value of each cell without having to use another page or a separate form. In order to satisfy such situations. There are several possible ways in which one could implement this ability which includes using available commercial or public domain 'grid' software or even rolling our own.

However there is also a need to consider the use of CSS to control the display of the table data, which serve to complicate any work which one might encounter in developing our own solution.

We looked extensively around to see what was freely available on the web and tried using a few. One we particularly liked was named jsgrid [http://js-grid.com/]. This was very easy to use but unfortunately was not really suitable for our editing purpose. Whilst investigating we also found another also named jsgrid [http://openpsa.github.io/jsgrid/index.html], This confused us for a while until we realised that this was a name clash and it was a fork of a product named Guriddo jsGrid (http://guriddo.net/) [http://guriddo.net/]. This is currently a commercial component which although it has a 'free' version, did not have a free license that we felt we could use. Prior to becoming commercial it was distributed under the MIT (GPL) licence and hence the forked version that we discovered. There was also another fork of the product at the same time named https://www.nuget.org/packages/free-jqGrid and this version appears to be more actively being developed hence we have decided to use this for our timesheet component.

This 'free-jqgrid' has extensive documentation, mainly the same documentation as for the commercial 'jqGrid' but also a lot of examples and a lot of active articles on the web, which are applicable to both the commercial and forked version.

jqGrid language files

There are a number of different language files available for jqGrid and these are specified using the i18n format, which basically means they use a two character code for the language rather than the tradition double code as used by Joomla.

i.e. Joomla default code: en-GB i18n code: en

There are a few double codes for languages such as Portuguese Brazilian. i.e. pt_br

At the time of writing this document the following language files for jqgrid exist. Note that this list is not necessarily definitive, just the best that we have currently determined. Hence it may be subject to change and/or correction.

Table 7.1. Table of available jqgrid languages

Nearest Joomla equivalent	Language	Filename
ar-AA (?)	Arabic	free-jqgrid/4.12.3/js/i18n/grid.locale-ar.min.js
bg-BG	Bulgarian	free-jqgrid/4.12.3/js/i18n/grid.locale-bg.min.js

Nearest Joomla equivalent	Language	Filename
ca-ES	Catalan	free-jqgrid/4.12.3/js/i18n/grid.locale-ca.min.js
zh-CN (?)	China	free-jqgrid/4.12.3/js/i18n/grid.locale-cn.min.js
cs-CZ	Czech	free-jqgrid/4.12.3/js/i18n/grid.locale-cs.min.js
da-DK	Danish	free-jqgrid/4.12.3/js/i18n/grid.locale-da.min.js
de-DE	German	free-jqgrid/4.12.3/js/i18n/grid.locale-de.min.js
el-GR	Greek	free-jqgrid/4.12.3/js/i18n/grid.locale-el.min.js
en-GB	English	free-jqgrid/4.12.3/js/i18n/grid.locale-en.min.js
es-ES	Spanish	free-jqgrid/4.12.3/js/i18n/grid.locale-es.min.js
fa-IR (?)	Persian (?)	free-jqgrid/4.12.3/js/i18n/grid.locale-fa.min.js
fi-FI	Finnish	free-jqgrid/4.12.3/js/i18n/grid.locale-fi.min.js
fr-FR	French	free-jqgrid/4.12.3/js/i18n/grid.locale-fr.min.js
gl-ES	Galacian	free-jqgrid/4.12.3/js/i18n/grid.locale-gl.min.js
he-IL	Hebrew (?)	free-jqgrid/4.12.3/js/i18n/grid.locale-he.min.js
hr-HR	Croatian	free-jqgrid/4.12.3/js/i18n/grid.locale-hr.min.js
hu-HU	Hungarian	free-jqgrid/4.12.3/js/i18n/grid.locale-hu.min.js
id-ID	Indonesia	free-jqgrid/4.12.3/js/i18n/grid.locale-id.min.js
(?)	Icelandic	free-jqgrid/4.12.3/js/i18n/grid.locale-is.min.js
it-IT	Italian	free-jqgrid/4.12.3/js/i18n/grid.locale-it.min.js
ja-JP	Japanese	free-jqgrid/4.12.3/js/i18n/grid.locale-ja.min.js
ko-KR	Korea	free-jqgrid/4.12.3/js/i18n/grid.locale-kr.min.js
(?)	Lithuanian	free-jqgrid/4.12.3/js/i18n/grid.locale-lt.min.js
srp-ME (?)	Montenegro (?)	free-jqgrid/4.12.3/js/i18n/grid.locale-me.min.js
nl-NL	Dutch (Netherlands)	free-jqgrid/4.12.3/js/i18n/grid.locale-nl.min.js

Nearest Joomla equivalent	Language	Filename
nb-NO (?)	Norwegian	free-jqgrid/4.12.3/js/i18n/grid.locale-no.min.js
pl-PL	Polish	free-jqgrid/4.12.3/js/i18n/grid.locale-pl.min.js
pt-BR	Portuguese Brazilian	free-jqgrid/4.12.3/js/i18n/grid.locale-pt-br.min.js
pt-PT	Portuguese	free-jqgrid/4.12.3/js/i18n/grid.locale-pt.min.js
ro-RO	Romanian	free-jqgrid/4.12.3/js/i18n/grid.locale-ro.min.js
ru-RU	Russian	free-jqgrid/4.12.3/js/i18n/grid.locale-ru.min.js
sk-SK	Slovak	free-jqgrid/4.12.3/js/i18n/grid.locale-sk.min.js
sr-YU (?)	Serbian	free-jqgrid/4.12.3/js/i18n/grid.locale-sr.min.js
sv-SE	Swedish	free-jqgrid/4.12.3/js/i18n/grid.locale-sv.min.js
th-TH	Thailand	free-jqgrid/4.12.3/js/i18n/grid.locale-th.min.js
tr-TR	Turkish	free-jqgrid/4.12.3/js/i18n/grid.locale-tr.min.js
(?)	Taiwan	free-jqgrid/4.12.3/js/i18n/grid.locale-tw.min.js
en-US (?)	United States	free-jqgrid/4.12.3/js/i18n/grid.locale-ua.min.js
vi-VN	Virgin Islands	free-jqgrid/4.12.3/js/i18n/grid.locale-vi.min.js

Precede each entry with the name of the desired CDN site that you are using. Several are available.

One thing worthy of note is that the grid is entirely responsive.

Chapter 8. CSS Styling

This section describes some of the possible configuration that can be performed to change the 'look and feel' of the front end of the site. It is not the purpose of this document to describe all of the possible CSS configuration options that can be used, but instead to describe a few of the more commonly used options.

Note

It is beyond the scope of this document to go into the details of CSS styling as there are a number of resources available on the web providing details.

It is possible to change the CSS styling used on your site by using a media override. When installed the CSS stylesheets for the Timesheet Component are installed in the 'media/com_timesheet' directory. The site administrator can create a site override by creating a directory named media/com_timesheet under the site template directory. One then copies the folders and files that it is desired to override in this location. Then almost like magic, Timesheet will now load which ever files are under the template instead of that contained in the media directory under the site's root directory.

The name of the CSS style sheet file used in the front end of your site is named 'timesheet.css'.

Note

There are a few additional defined classes used in the views which have not been configured in the CSS file. This is deliberate and provides some additional display options for those sites that desire them. Please see the code for the specific class details.

Back End styling

The styling sheet for the back end is named 'administrator.css'. It contains all of the colour coding, and table style specific to the administrator forms. Where a class is not specified within this file, the details of the style are obtained from the site administration template (default Isis).

Chapter 9. Helper Classes

General Helper

The general Timesheet helper is used to present display list options, and also is called for the generation of any notification messages.

Logging Helper

There is a logging mechanism so that messages may be logged to a database table. A database table was chosen as the location since it is easier to monitor from within the application.

The logging mechanism is built upon the Joomla Jlog libraries and implements all the current logging priorities.

The implementation implements colour coding of the messages depending upon their priority. The figure below shows an example of the type of messages displayed, but obviously the specific messages will depend upon the steps being performed.

Figure 9.1. Log Entry Display

The logging is controlled by a component option. Entries logged will be dependant upon the version of the code installed.

In addition to being able to store simple text strings, there is also a routine to store an array using JSON encoding.

Part IV. Appendices

Table of Contents

Appendix A. GNU General Public License version 3

Version 3, 29 June 2007

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