EXT: Projectmanager

Extension Key: **projectmanager**

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- a GNU/GPL CMS/Framework available from www.typo3.com

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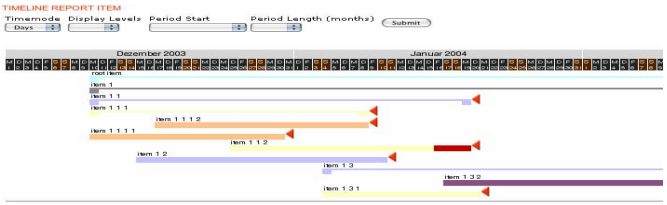
Introduction

What does it do?

The Projectmanager allows online creation and maintenance of project related data. It provides the following modes to view this data via a webbrowser:

- Project Timeline: Gantt-Diagramme
- Reporting: Textdata for all project items in a tablestructure
- Detail View: Single item with all properties



Installation

Just download the extension to your TYPO3 installation via the extension manager and click the install button. The extension will then ask to insert the necessary database tables and to clear the cache of your backend. Fig. 1 shows you the extension manager dialog.

In order to make testing of the plugin easy the extension comes with a .t3d file containing sample project data and a page with a plugin displaying the data. You will find the file in the doc directory of the extension. After you have imported the data you will need to edit the plugin content element found on the page "projectmanager". The import/export module seems to have problems with preserving database relations in flexform fields. Therefore the field Root Item will be set to a false projectmanager item and no timeline will display.

Add tables

```
CREATE TABLE tx_projectmanagerdb_items_dpi_mm (
uid_local int(11) unsigned DEFAULT '0' NOT NULL,
uid_foreign int(11) unsigned DEFAULT '0' NOT NULL,
tablenames varchar(30) DEFAULT '' NOT NULL,
sorting int(11) unsigned DEFAULT '0' NOT NULL,
KEY uid_local (uid_local),
KEY uid_foreign (uid_foreign)
) TYPE=MyISAM;
```

```
CREATE TABLE tx_projectmanagerdb_items_teammembers_mm (
uid_local int(11) unsigned DEFAULT '0' NOT NULL,
uid_foreign int(11) unsigned DEFAULT '0' NOT NULL,
tablenames varchar(30) DEFAULT '' NOT NULL,
sorting int(11) unsigned DEFAULT '0' NOT NULL,
KEY uid_local (uid_local),
KEY uid_foreign (uid_foreign)
) TYPE=MyISAM;
```

```
CREATE TABLE tx_projectmanagerdb_items (
uid int(11) unsigned DEFAULT '0' NOT NULL auto_increment,
pid int(11) unsigned DEFAULT '0' NOT NULL,
tstamp int(11) unsigned DEFAULT '0' NOT NULL,
crdate int(11) unsigned DEFAULT '0' NOT NULL,
cruser_id int(11) unsigned DEFAULT '0' NOT NULL,
sorting int(10) unsigned DEFAULT '0' NOT NULL,
deleted tinyint(4) unsigned DEFAULT '0' NOT NULL,
hidden tinyint(4) unsigned DEFAULT '0' NOT NULL,
starttime int(11) unsigned DEFAULT '0' NOT NULL,
percentagefinished int(11) unsigned DEFAULT '0' NOT NULL,
endtime int(11) unsigned DEFAULT '0' NOT NULL,
fe_group int(11) DEFAULT '0' NOT NULL,
title tinytext NOT NULL,
description text NOT NULL,
plannedstart int(11) DEFAULT '0' NOT NULL,
plannedfinish int(11) DEFAULT '0' NOT NULL,
actualstart int(11) DEFAULT '0' NOT NULL,
actualfinish int(11) DEFAULT '0' NOT NULL,
plannedwork int(11) DEFAULT '0' NOT NULL,
actualwork int(11) DEFAULT '0' NOT NULL,
plannedcost int(11) DEFAULT '0' NOT NULL,
actualcost int(11) DEFAULT '0' NOT NULL,
ppi int(11) unsigned DEFAULT '0' NOT NULL,
dpi int(11) unsigned DEFAULT '0' NOT NULL,
teammembers int(11) unsigned DEFAULT '0' NOT NULL,
color tinytext NOT NULL,
files blob NOT NULL,
PRIMARY KEY (uid),
KEY parent (pid)
) TYPE=MyISAM;
```

Clear cache

This extension requests the cache to be cleared when it is installed/removed.
Clear all cache:

Make updates

Fig. 1

Administration

The is no need for administration after the extension is installed.

Access to the plugin and its database records in the backend can be set standardconform in the access schemes for backend usergroups. Every standard TYPO3 installation of version 3.7.0 contains a module Help->Manual which contains information

about how to administrate backend user rights.

Users manual

The projectmanager is a variation of a classical TYPO3 list plugin. The actual data for a project plan is maintained in entries of the table “Project”. Entries of that table are displayed in a website by a content element of the type insert plugin “Project Manager”.

A project plan

it is important to understand the basic structure in which the projectmanager organizes project data. A project plan is a hierarchical tree structure similar to the pagetree in TYPO3. Every project item can have only one parent, but n children. Every project item – be it the root of a project, a subproject or a specific task – has the same basic data structure. Its status as subproject or task is not explicitly defined, but follows implicitly from the item's position within the hierarchical structure of the project tree.

As a consequence the plugin has no restrictions as to how many levels of subprojects a project plan is divided into. However, for reasons of readability there is a practical restraint to a maximum of four levels in the display of the diagramme display.

Inserting the Plugin

To insert the Project Manager plugin on a page add a content element of the type “Insert Plugin” to a page and choose the option “Project Manager”. Fig. 1 shows the resulting backendform. Apart from the TYPO3 standard fields the options are as follows:

Root Item	Every instance of the plugin needs to define one project item as the starting point for the part of the project tree it should display. You can choose any project item from any level of your overall project hierarchy. The plugin will limit display to those project items which come hierarchically underneath the chosen element.
Show header links	Here you can activate the display of the main links accessing the three functions timeline, reporting, item view of the plugin. See section display below.
Show form	Here you can activate the display of the main selection form for limiting display in the various areas. See section display below.
Show levels	Here you can define how many levels down in the hierarchy the display should go. Default and maximum is four levels. See section display below.
Render Links to Project Details	Here you can activate that each project item is linked to its detail view.
Render Links to Change Project Rootline	Here you can activate that each project item in the timeline has a associated link by which the viewer can define this project item as the new root item of the timeline display. See section display below.
Mark item if delayed	Here you can activate that delayed project items are marked. See section display below.
Mark item if delaying	Here you can activate that delaying project items are marked. See section display below.

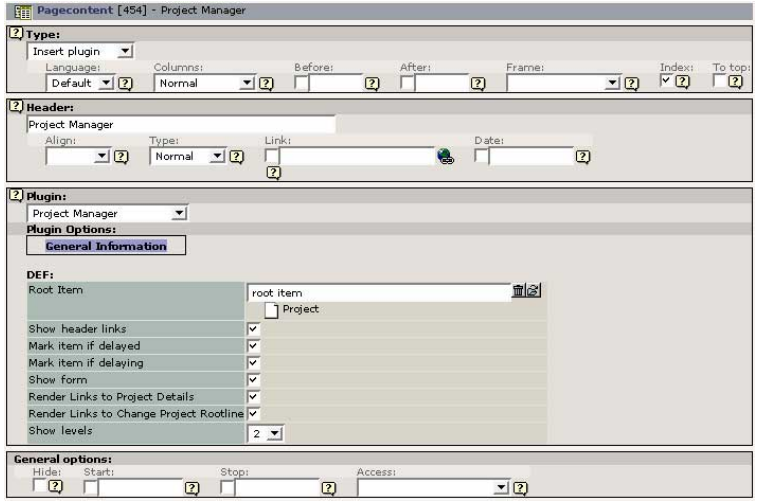


Fig.1

How to add a project item?

Similar to many TYPO3 plugins the Project Manager uses a separate database table to store its records in. In order to create records in this project items table you have to create a or browse to a system folder in the pagetree of your TYPO3 installation. Project items can not be created on standard pages. In a system folder you will find the option “Project” after you have clicked on the “create new record” button in the Web->List or Web->Page modules. Choosing the option Project will lead you to the backendform for a project item described in the next section.

Data of a single project item

Fig. 2 shows the full backendform for a single project item. Apart from the TYPO3 standard fields the options are as follows:

Project Name	Name of the project item displayed in various places of the diagramme, reporting and detail view.
Description	RTE textfield displayed in the detailview
Color	Every project item is displayed with a default color in the diagramme according to the level of the project tree it is currently part of. Entering a HTML-color here overrides the default color display.
Planned Start	Date of the planned start of the project item. As long as no actual start (see below) is given this value will be used for display.
Planned Finish	Date of the planned finish of the project item. As long as no actual finish (see below) is given this value will be used for display.
Planned Work and Planned Cost	Those fields can be used to add further information about the economics of the task. In the current version this data is not processed anywhere by the plugin. The four fields labelled “Actual ...” correspond with their “Planned ...” equvalents. The Actual Start and Actual Finish values are used for display once they are entered for an item.
Percentage Finished	For a item which has been started but is not finished yet you can define how far it is advanced. The corresponding bar of a project item will then look as shown in Fig. 2
Parent Project	Here you define the parent of a given project item.
Dependency	It is possible to select one or more project items on which the item depends. This information will surface in the timeline display in the follow fashion: Item A depends on Item B. Item B is not marked finished after its planned finish date Item A's planned startdate is after the current date. => Item A will be marked as being delayed in the timeline. Item B will be marked as overdue in the timeline and be marked as delaying another item.

Project Name	Name of the project item displayed in various places of the diagramme, reporting and detail view.
Team Members	Here you can select one or more Persons from the FE-User table which should be associated with the project item.
Files	Here you can upload files for the item which will be downloadable in the detail view.

Abbildung 1Fig. 2

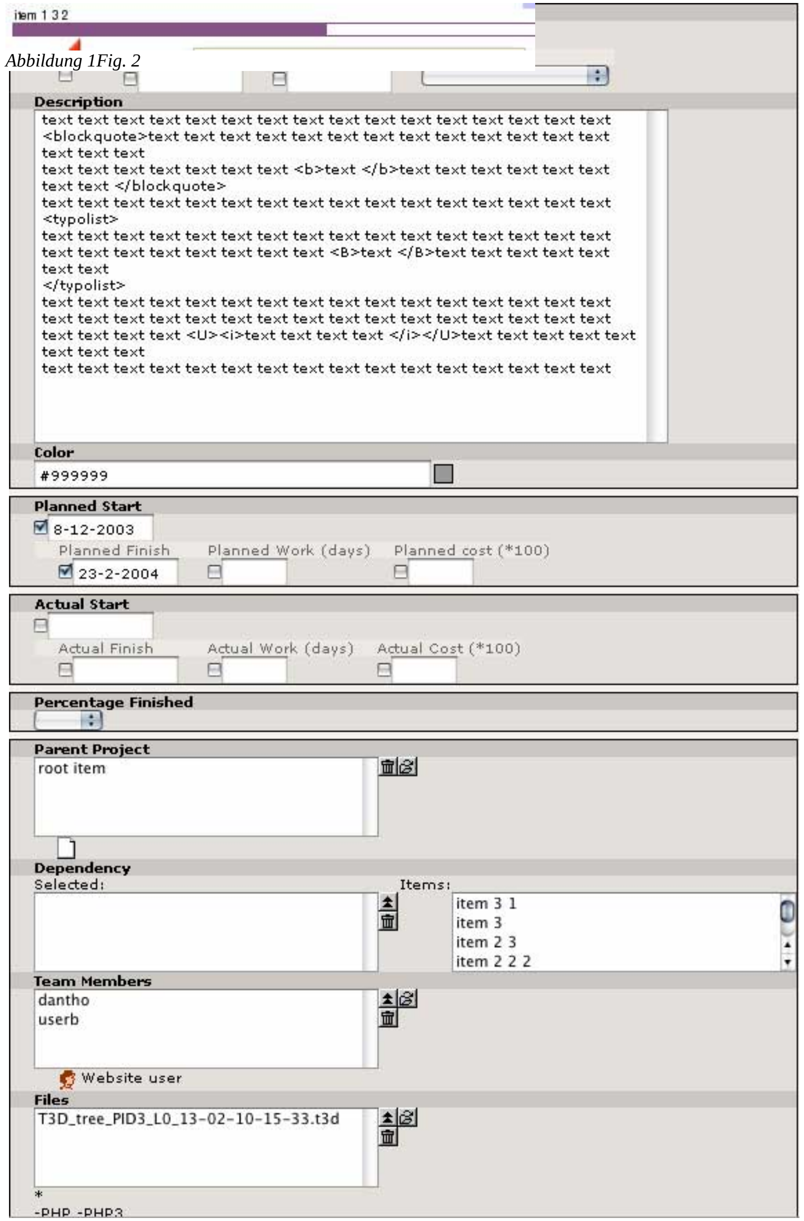


Fig. 2

Display

Fig. 3 shows the standard view of a timeline. The first element is the header with three links to the timeline, the reporting and the item detail view. Underneath the header is the main form by which the display of the three sections can be controlled. Underneath is the actual timeline diagramme with a calendar bar and the Gantt representation of the project data.

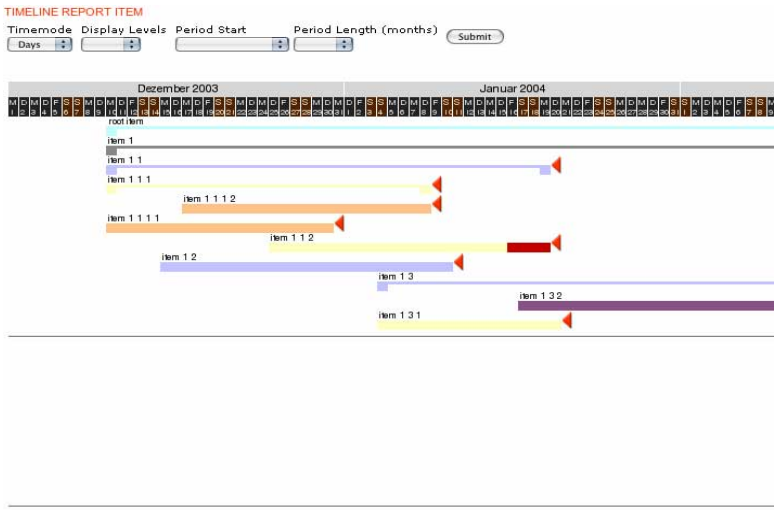


Fig. 3

Functionality of the Form in the Timeline

Timemode: The timemode selection has the options days and weeks. Abb. 4 shows the standard view where every day is represented individually. Fig. 4 shows a similar timeline in weeks mode. The weeks mode represents the same data only less finegrained on a calendar week basis.

Display Levels: The viewer can limit how many levels should be displayed in the timeline. Abb. 6 shows an example how the same data as in Abb. 4 is displayed with only two visible level.

Period Start: The viewer can decide from which date onwards the timeline should be displayed.

Period Length: The viewer can limit the display of the timeline to a certain period length from the display start. Abb. 7

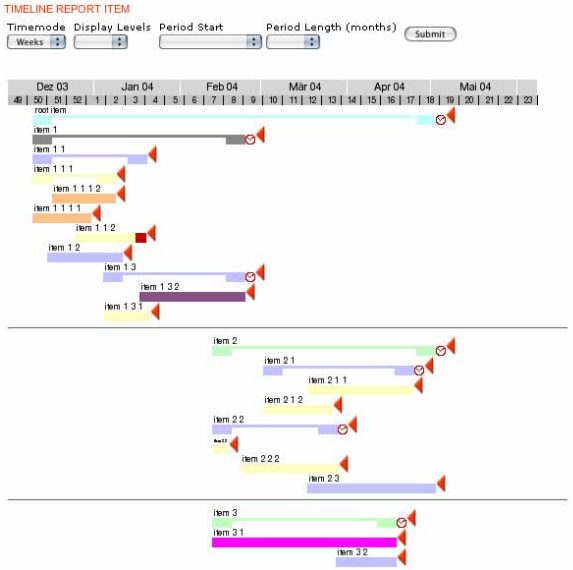


Fig. 4

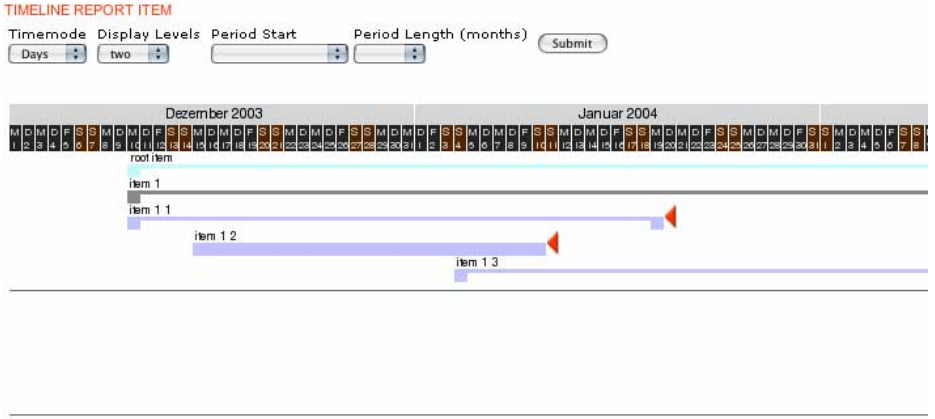


Abbildung 2

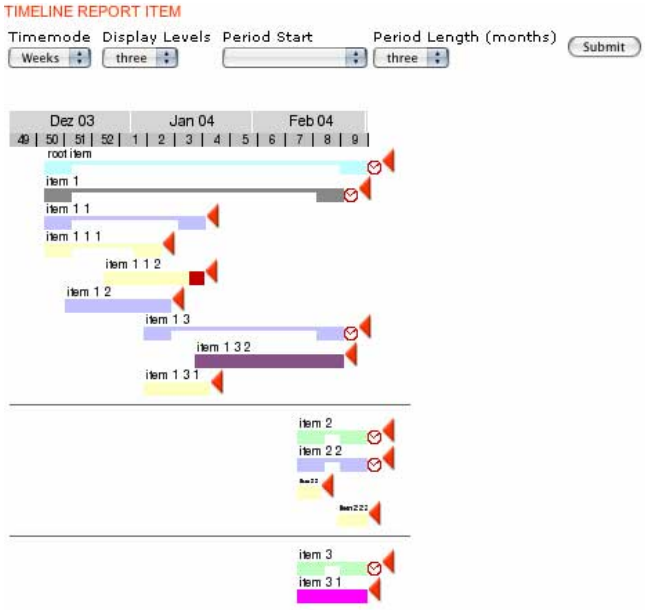


Abbildung 3

The change root function

Abb. 8 shows a timeline in weeks mode with a project item “item 1” as root item. Underneath the timeline there is an additional link labelled “Root item” which indicates that in the plugin itself the parent of “item 1” is the original Root item. The current display of the timeline was triggered by a click on the red triangle right of the project item “item 1”. This link renders the timeline from the chosen project item downwards. The Link “Root Item” links back to the standard display where the parent of “item 1” is the root item.

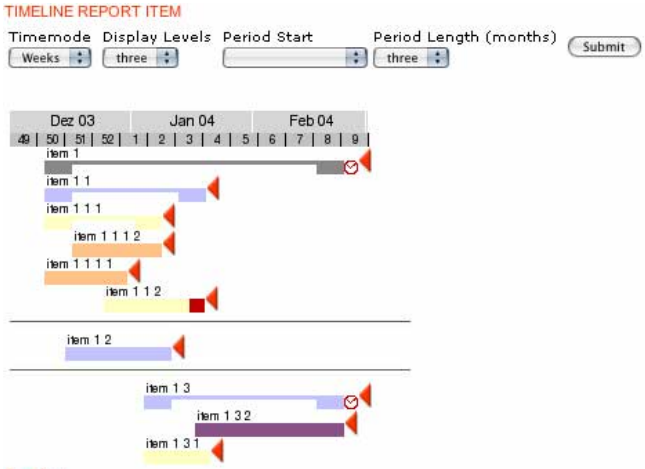


Abbildung 4

Reporting Display

In the report display the plugin shows project data in a table. With the form above the viewer can select a project item as starting point – if it should not be the original root item of the plugin, then she can decide how many levels downward to display and which fields should be displayed in the table. Abb. 9, Abb. 10

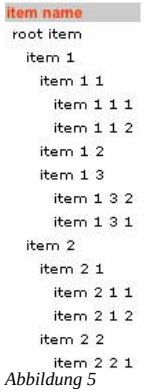


Abbildung 5

item name	Planned Start	Planned Finish	Planned Cost
item 1	08.12.2003	23.02.2004	0
item 1 1	10.12.2003	10.01.2004	0
item 1 1 1	10.12.2003	08.01.2004	0
item 1 1 1 2	17.12.2003	08.01.2004	0
item 1 1 1 1	10.12.2003	30.12.2003	0
item 1 1 2	25.12.2003	15.01.2004	0
item 1 2	15.12.2003	10.01.2004	0
item 1 3	16.01.2004	15.02.2004	0
item 1 3 2	17.01.2004	23.02.2004	0
item 1 3 1	04.01.2004	20.01.2004	0

Abbildung 6

FAQ

Q: When I insert the plugin I get the message “No Root Item defined”. Why?

A: The minimum requirement for the plugin is that you insert a projectmanager item in the field Root Item of the insert plugin element. With this you define the entry point for the hierarchical structure displayed by the plugin.

Q: Why are some project items displayed as a solid bar and others as “brackets”?

A: Project items without children are displayed as solid bars. In a project plan those are the actual tasks someone has to perform. Project items with children are displayed as brackets. In a project plan they are used to group corresponding tasks into subprojects. This behaviour of the plugin is automatic. You do not have to define a project item specifically as a subproject. Adding children to it defines it automatically as a subproject. Take away its children and the item will be displayed as task again.

Q: Often project items displayed as brackets are not displayed with the start and end dates defined for this item. Why?

A: Once a project item functions as a subproject the individual data of that item like startdate or enddate is ignored by the plugin. Its duration is defined by its children. A subproject starts on the first day of one of its children and ends with the last day of one of its children. Practically you need not enter anything apart from the parent project and a title for a project item which should form as a subproject.

Q: Project items displayed as brackets are not linked to their detailview. Why?

A: As they are strucutral entities and no tasks for themselves we see no need to display detailed information about them.

Configuration

Reference

General Configuration

Property:	Data type:	Description:	Default:
currency	string	Currency Symbol used in display	€
locale	string	See PHP-function setlocale();	de_DE
dateformat	string	See PHP-function strftime();	
template	string	Relative path to a template resource	Typo3conf/ext/projectmanager/pi1/template.tmpl
header.objects.timeline header.objects.item header.objects.report	->cObj	Defines the object which will be linked to either the timeline, report or item display in the header section. The object will be wrapped with the link. The linked object will then be send to stdWrap definable below.	
header.links.timeline.std header.links.item.std header.links.report.std	->stdWrap	See above	
form.month	string	See PHP-function strftime(); This defines how the month are formatted in the selector box of the form.	
editPanel	Boolean / cObj->EDITPANEL	If you set this to 1 an editPanel will be shown next to every item in timeline display.	1
parseFunc	->parseFunc	In the standard setup the definition of parseFunc is used for display of the description field.	

Properties for output data used in the setup-subpart timeline:

Property:	Data type:	Description:	Default:
spacer	string	Relative path to an image file which will be displayed between timeline levels.	
daywidth	int	How many pixels width has one day in day-view of timeline	10
dayheight	int	How many pixels heigh has one day in day-view of timeline	10
weekwidth	int	How many pixels width has one week in week-view of timeline	20
weekheight	int	How many pixels height has one week in week-view of timeline	10
pixelOffSetRight	int	??	30

Property:	Data type:	Description:	Default:
bgcolorMonth colorMonth bgcolorWeek colorWeek bgcolorDay colorDay bgcolorToday colorToday bgcolorWeekend colorWeekend colorBorders colorDelayedStart colorDelayedEnd bgcolorItem colorItem bgcolorIllegal colorIllegal	string	Various color definitions used in the timeline display. Names indicate usage.	
weekFont. weekdayNumFont. weekdayFont. monthFont. illegalItemErrorFont. illegalItemTitleFont. parentItemFont. childItemFont.	->GIFBUILDER.(GBObj).TEXT	Fontproperties in various places of the timeline	
colorLevel.0 colorLevel.1 colorLevel.2 colorLevel.3 colorLevel.4 colorLevel.5	string	Default colors used for display of the project items in timeline if no individual color is chosen for an item.	
rootlink	->cObj	This object will be linked to the root item of the current timeline display if the root item is not the current base of the timeline.	
parentlink	->cObj	This object will be linked to the parent item of the current base item in a timeline.	
entryPointImage	string <img />	Image tag which will be displayed behind every project item and linked to a timeline display with this item as base.	
delayImage	string <img />	Image tag which will be displayed behind every project item if the status of this item delays other items.	
delayedImage	string <img />	Image tag which will be displayed behind every project item if the item is delayed by another item.	

Properties for output data used in the setup-subpart singleDisplay:

Property:	Data type:	Description:	Default:
title_stdWrap plannedstart_stdWrap plannedfinish_stdWrap actualstart_stdWrap actualfinish_stdWrap plannedcost_stdWrap actualwork_stdWrap plannedword_stdWrap percentagefinished_stdWrap files_stdWrap description_stdWrap teammember_stdWrap	stdWrap	StdWrap for each of the datafields of a project item	

Properties for output data used in the setup-subpart reportDisplay:

Property:	Data type:	Description:	Default:
title_stdWrap plannedstart_stdWrap plannedfinish_stdWrap actualstart_stdWrap actualfinish_stdWrap plannedcost_stdWrap actualwork_stdWrap plannedword_stdWrap percentagefinished_stdWrap files_stdWrap description_stdWrap teammember_stdWrap	stdWrap	StdWrap for each of the datafields of a project item	

HTML-Templates – Subpart ###MAIN###:

Marker:	Description
###LINK_TIMELINE###	See header.objects.timeline and header.links.timeline for the content of this marker
###LINK_REPORT###	See header.objects.report and header.links.report for the content of this marker
###LINK_ITEM###	See header.objects.item and header.links.item for the content of this marker
###FORM###	See subparts ###FORM_timeline###, ###FORM_report### and ###FORM_item###
###CONTENT###	See subpart ###TIMELINE###, ###ITEM_NOID###, ###ITEM###

HTML-Templates – Subpart ###FORM_*###:

Marker:	Description
	Each of the three versions of the form (timeline, report and item) has its own set of controls. Every control (the selector box) has its own label, which is defined over a key in the LL-array.
###FORM_ENTRYITEM_LABEL###	
###FORM_ENTRYITEM_SELECT###	Usage: report and Item
###FORM_THRESHOLD_LABEL###	
###FORM_THRESHOLD_SELECT###	Usage: timeline and report display
###FORM_FIELDS_LABEL###	
###FORM_FIELDS_SELECT###	Usage: report
###FORM_TIMEMODE_LABEL###	
###FORM_TIMEMODE_SELECT###	Usage: timeline
###FORM_DURATION_LABEL###	
###FORM_DURATION_SELECT###	Usage: timeline
###FORM_ENTRY_LABEL###	
###FORM_ENTRY_SELECT###	Usage: timeline

HTML-Templates – Subpart ###ITEM###:

Marker:	Description
###TITLE###	
###PLANNEDSTART###	
###PLANNEDFINISH###	
###ACTUALSTART###	
###ACTUALFINISH###	
###PLANNEDCOST###	
###ACTUALCOST###	
###PLANNEDWORK###	
###ACTUALWORK###	
###PERCENTAGEFINISHED###	
###TEAMMEMBERS###	
###DESCRIPTION###	
###FILES###	

HTML-Templates – Subpart ###TIMELINE###:

Marker:	Description
###TIMELINECONTENT###	
###ROOTLINK###	
###PARENTLINK###	

Tutorial

Known problems

To-Do list

Changelog

1.0.2	first public version.
1.0.3	added checking of root item existance in function tx_projectmanager_pi1->main_getRootItem()
1.0.5	Added icons. htmlspecialchars() check in reportoutput changed names of database tables from tx_projectmanagerdb* to tx_projectmanager* added function documentation