

# Operation PRO.CEED Base

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## About this manual

This PRO.FILE manual uses various signs and icons in order to guarantee a good readability and comfortable handling.

### Step-by-step instructions:

For quicker finding within the manual, step-by-step instructions are marked with a margin heading.

#### Menu sequences and function calls

Menu sequences and function calls explained in this manual are marked in bold and in quotation marks.

Example:

"File" => "New" => "Document description"

#### Buttons and keys

Keys and buttons are highlighted by angle brackets.

Example:

"Confirm with <OK>."

#### Notes and warnings

To highlight special information the following icons are used:



#### Function call:

"PRO.FILE" => "Extras" => "Options" => "Performance"



#### Example:

Boxes marked with this icon give subject-relevant examples for the usage of command lines, configuration strings and other software-relevant entries.



#### Note:

Boxes marked with this icon contain useful hints on the operation, configuration or installation of the PRO.FILE software.



#### Attention:

All information given in these boxes is very important and should be read carefully! Non-observance of these hints may lead to wrong functioning, display problems or other negative consequences.



#### Important notes:

The "stop sign" warns you of possible entry or operation errors, which may lead to loss of data!



#### Attention – Undo not possible:

All entries and configurations described in these boxes have to be made carefully, because they cannot be undone!

# 1 Introduction: What is PRO.CEED?

PRO.CEED enhances PRO.FILE by application-specific processes of the Product Lifecycle Management (PLM). PRO.CEED consists of PRO.CEED Base and the PRO.CEED application packages.



PRO.CEED Base makes the PRO.FILE objects and basic functions for process, project and task management available.

PRO.CEED application packages consist of pre-configured procedures and contents, i.e. process templates, forms, cockpits, reports and menus. With the assistance of the consultant, PRO.CEED customers can either create their own application packages or use the supplied application packages, such as "Change management" or "Engineering projects and documents control" (or customize them). The installation and customization of the application packages requires the purchase of PROCAD services.

PRO.CEED  
consists of...

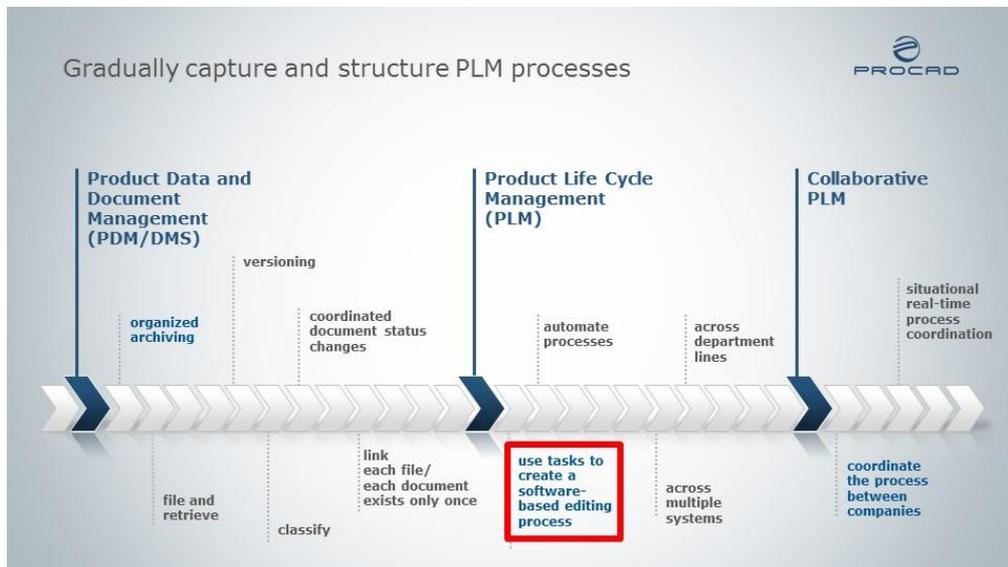
- Functions and data object tasks
- Functions and data object project
- Functions and data object process
- MS Visio interface (PRO.CEED Process Designer)
- Optional (separate price list item): MS Project integration  
(To be used in the context of the supplied application package "Engineering projects and documents control")

To be used in the context of the implementation of application packages:

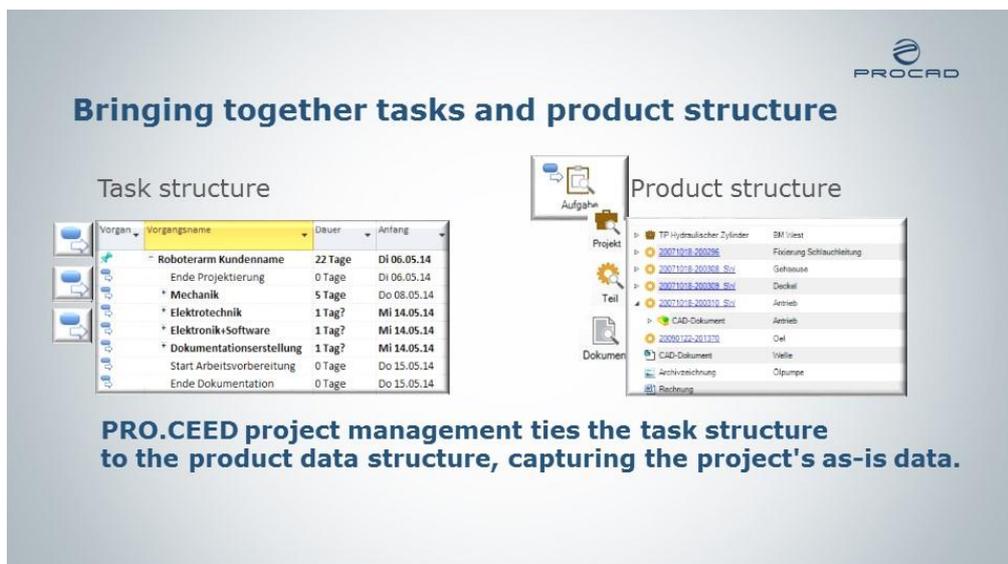
- General PRO.CEED icons/ribbons
- Usage of application-specific icons/ribbons
- Usage of application cockpits and reports
- Form/document automation (inheritance of form contents) in application processes

# 1.1 What does PRO.CEED do?

The most important difference in the usage of PRO.CEED compared to PRO.FILE without PRO.CEED is the usage of **task structures** for the control and automation of procedures in processes or projects.



PRO.CEED thus enhances an editing logic by task structures. This editing logic allows the **automation of sub-tasks** and the enhancement of an overall task structure view via PRO.CEED cockpits.



## 2 The usage of PRO.CEED

PRO.CEED serves for the implementation of PLM processes and projects. The PRO.FILE functions/objects purchased with PRO.CEED – tasks, processes and projects – can:

- either be used via the usual PRO.FILE operation – described in this manual
- or be used via the cockpits and menus specifically designed for the corresponding application package – not described in this manual, since it is customized.

Via PRO.CEED application packages, the software is enhanced by an application-package-specific operation layer of menus, cockpits and forms.

PRO.CEED  
application  
packages  
use/consist of...

- Task structure management/document control in projects and processes
- The possibility to enhance an application-specific operation
- Metadata forms/documents with direct display in the target layout and automated PDF creation
- Form automation, e.g. by the linking of fields
- The possibility to control document status changes via the task start/end and thus to automate procedures and make them more secure.
- Cockpits (display and operation), that offer an additional customized operation/monitoring layer
- Reports for internal or external sending



### Attention: XXX

The usage of certain functions, e.g. PDF creation or the creation of PRO.CEED cockpits, in the context of the implementation of application packages is only possible in combination with the purchase of additional components, e.g. the Generic Job Server.

Prerequisites for  
the  
implementation of  
application  
packages

- PRO.FILE 8.5 or higher with corresponding Full Use licenses
- Microsoft SQL Report Server
- PRO.FILE Report Generator Link
- PRO.FILE Generic Job Server
- PRO.FILE REST API
- available for PRO.FILE Windows Client

**Implementation of  
the application  
packages**

The PRO.CEED application packages are not described in this manual, as they are implemented customer-specifically in the context of consulting services.

For the installation and customization of the supplied application packages and the implementation of customer-specific application packages, PROCAD consulting services are required.

## 3 Working with PRO.CEED tasks, processes and projects in general (without application package)

This manual details the usage and administration of the PRO.CEED objects "Task", "Project" and "Process".

### What is a "Task" in PRO.CEED?

A task describes,

- by whom => (resource)
- what => (task content), and
- until when => (due date)

something has to be done.

Tasks in PRO.CEED can be used in various ways:

- **Tasks as standalone objects**

These tasks resemble the tasks as we know them, e.g. from Outlook. A user can create tasks to create something like a to-do list.

- **Tasks in the context of projects**

Tasks can be used to refine the project structure. A project is thus enhanced by a time component – the project is finished when all its tasks are completed. PRO.CEED thereby develops towards a project management software.

- **Tasks in the context of processes**

Apart from "tasks" there is also the new object type "process". A process describes an activity that is frequently repeated and the structure of which is outlined by a sequence of tasks.

### What are "Processes" and "Projects" in PRO.CEED?

A process describes an activity that always proceeds in the same manner (e.g. order processing). The positions of a process are tasks that are processed in the order defined in the process template. A process can have branches, where the user has to decide how the process is to continue.

### What is the difference between a process and a project?

- A project is a complex, one-time procedure with a defined start and end.
- A process is a recurring sequence of linked tasks.

The next chapters describe the above features in detail.

## 4 Basics of PRO.CEED tasks

Tasks are used to coordinate the works to be done in the future. A task defines the following:

- **Who**

In order for a task to be performed, the resource responsible for the activity has to be defined.

- **What**

A task consists of a name and a description. Apart from that, additional string and float fields are available to describe the task in more detail.

- **When**

Tasks have a planned start and an end date between which the task is to be performed. Apart from that, there are two fields containing the information when the task was actually started and finished.

### 4.1 The connection of documents and parts with tasks

A task can be linked to documents or parts. These documents and parts are usually the material required for the performance of the task.

The link is established by using the "Copy" function of PRO.FILE for the document or part and the "Create link" function for the selected task (see manual "Operation PRO.FILE Advanced").

For the resulting link between tasks, documents and parts in the context of different versions of these documents and parts, you can use the functions for "static" and "dynamic" links, as described in the later chapter "Further functions for PRO.CEED" in the sub-chapter "Dynamic and static: Links of projects and tasks with documents and parts".

### 4.2 The available fields for the object type "Task"

A task consist of the following system fields pre-configured by PRO.CEED:

- **ID number**

As with all other PRO.CEED objects, tasks have a unique ID.

- **Name, description**

This fields contains the name and brief (max. 255 characters) description of the task.

- **Notes**

The field "Notes" is a multi-line filed which may contain a detailed description of the tasks.

- **Task type**  
This field contains the type of the task. When a task is created, this field is pre-filled with "task" and cannot be changed.
- **(Planned) Start, (Planned) End**  
These fields contain the planning dates for the start and the end of the task. The time for these dates results from the working hours defined in the company calendar
- **Actual start, actual end**  
These fields contain the date when the task was actually started and finished.
- **Resource**  
This field contains the user or group that is responsible for the performance of the task. Only the persons entered here are authorized to start the task.
- **Created on, created by**  
These fields contain the date, when the task was created, and the user who created the task.
- **Changed on, changed by**  
These fields contain the date, when the task was modified, and the user who modified the task.

Furthermore, your administrator can define Lookup fields on the task or process form to display additional information.

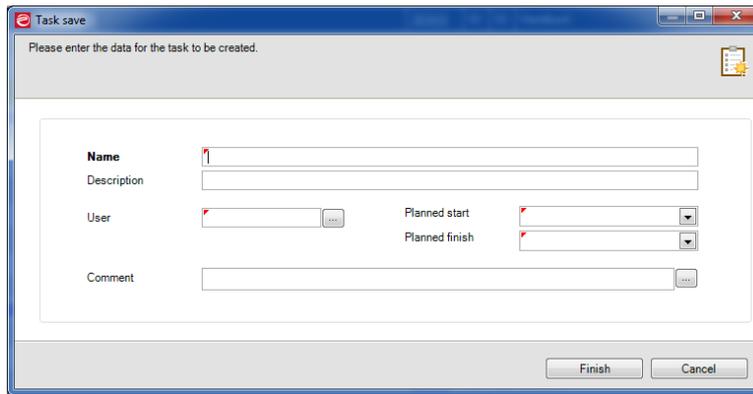
## 4.3 Working with PRO.CEED tasks

All actions with tasks can be started via the PRO.FILE menu "Edit" and/or the icon bar.

The following sub-chapters describe the task actions available in PRO.FILE.

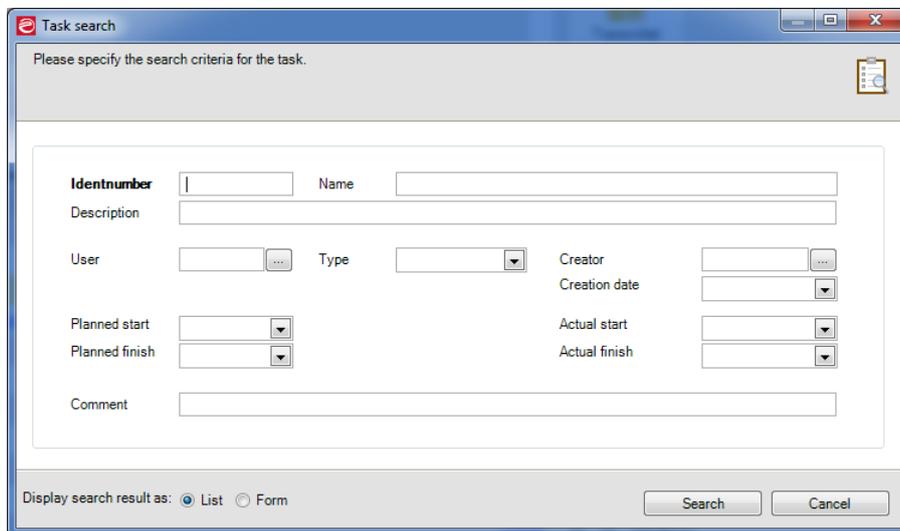
### 4.3.1 Create a task

Each user has the possibility of creating new tasks. The corresponding function can be reached under "Start" => "New objects" => "New task". The creation form for tasks then opens.



### 4.3.2 Search for a task

The search functions for tasks correspond to the default search functions in PRO.CEED. The corresponding function can be found under "Search" => "Task". The search form for tasks is displayed. The results of the search can be displayed either as list or as form.



**Note:**  
 Tasks of the type "Start" and "End" are filtered from the search, since it is not helpful to work with these types in PRO.FILE.

### 4.3.3 Permissions for the changing of tasks

The following users may change a task:

- The task has not been started yet:  
 The creator may change the task.
- The task has been started:

The assigned resource may change the task (except for the field "Resource"). As soon as the task is started, it can only be transferred to another user via the action "Delegate".

- **Task is finished:**

The task can no longer be changed by anyone.

#### 4.3.4 Permissions for the deleting of tasks

The following users may delete a task

- **The task is part of a process:**  
The task cannot be deleted.
- **The task has not been started:**  
The creator may delete the task.
- **The task has been started:**  
The task can no longer be deleted.

#### 4.3.5 Delegate a task to a different user

The action "Delegate" can be used to assign the task to a different resource.

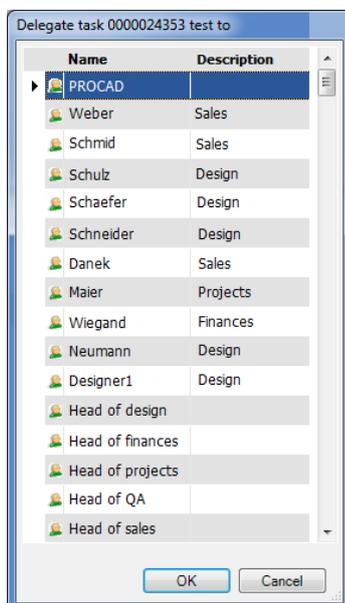
The corresponding function can be found under "Edit" => "Delegate".



##### Note:

To perform this action the user needs the corresponding function access right. This is assigned by the administrator in the PRO.FILE Management Console.

When this command has been selected, a dialog is opened where you have to select the new resource.



Since a task can only be finished by the user who has started it. The "actual start date" is reset to 0 after the task has been delegated. A corresponding entry is then made in the modification log.

A finished task can no longer be delegated.

### 4.3.6 Lock/unlock a task

Tasks can be locked or unlocked. The corresponding function is available via the PRO.FILE menu under "Edit" => "Lock/Unlock".

### 4.3.7 Start a PRO.CEED task

With the action "Start task" the entered resource starts the task. The current date is automatically entered into the field "Actual start date".

- A corresponding entry is made in the modification log of the task. Only the user entered as resource for the task can start the task.
- If a group is entered as resource, any member of the group can start the task.

Once the task has been started, the entered resource is replaced by the user who has started the task.

### 4.3.8 Finish a PRO.CEED task

With the action "Finish task" a started task can be finished. The current date is automatically entered into the field "Actual end date". A corresponding entry is made in the modification log of the task.

A task can only be finished by the entered resource.

### 4.3.9 The function "Mark task as noticed"

With this action, the user signals that he has taken notice of a task. The bold mark of the task in the favorite bar and in the list of current tasks is then removed.



#### Note:

This function is only available in the toolbar of a user's active tasks.

### 4.3.10 "Plan" a task

The function "Plan" from the PRO.FILE tab "Edit" allows the re-planning of selected tasks based on the changed start date of the first task. It is thus possible to move several tasks in your planning, while keeping the same interval between and duration for the tasks.

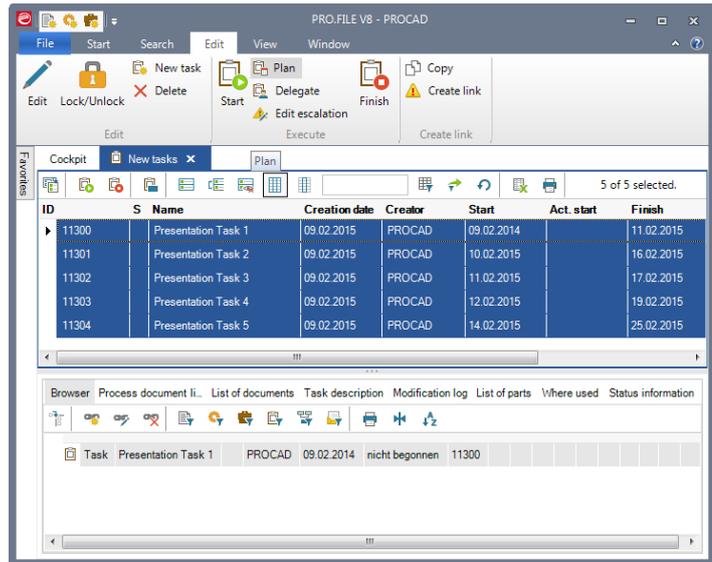


#### Note:

The tasks must not belong to a process and must not be started already.

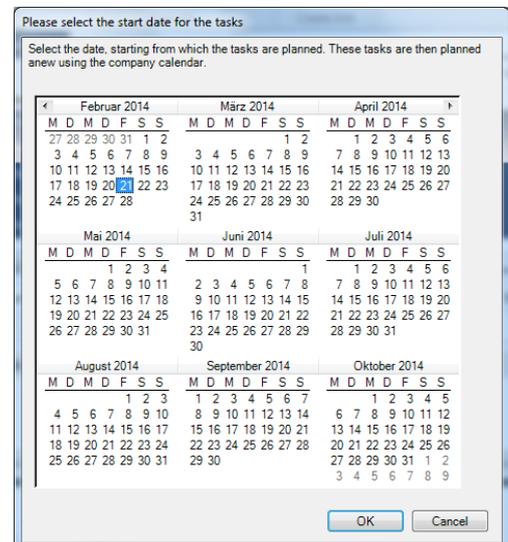
Proceed as follows:

1. Select the PRO.CEED tasks you want to re-plan.
  2. Select the function "Plan" from the "Edit" tab.
- ⇒ PRO.FILE sorts the tasks according to their scheduled start dates.

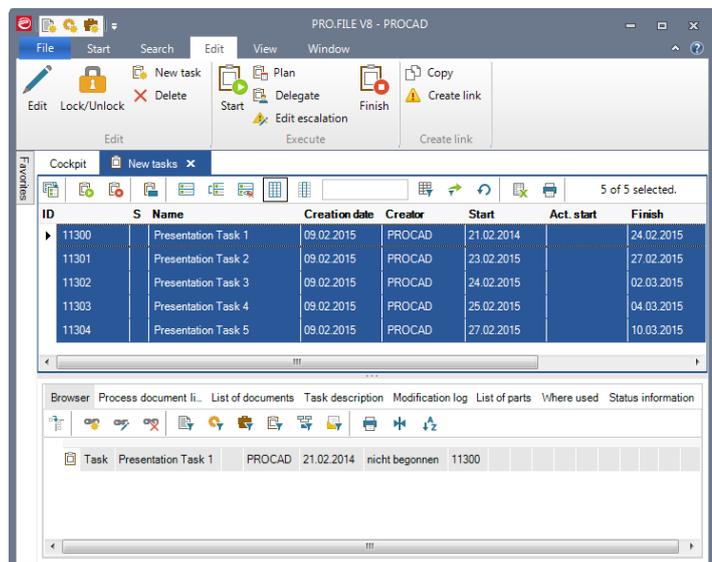


3. A new window is displayed, in which the start date for the first task can be selected.

- ⇒ Based on the new start date of the first task, PRO.CEED plans the start and end dates of the remaining tasks anew. The tasks are rescheduled according to the existing intervals (Example: All tasks are to start 12 days later).
- ⇒ The company calendar from the PRO.FILE Management Console is evaluated during this process.



4. The newly scheduled tasks are then shown in the task list with their new dates.

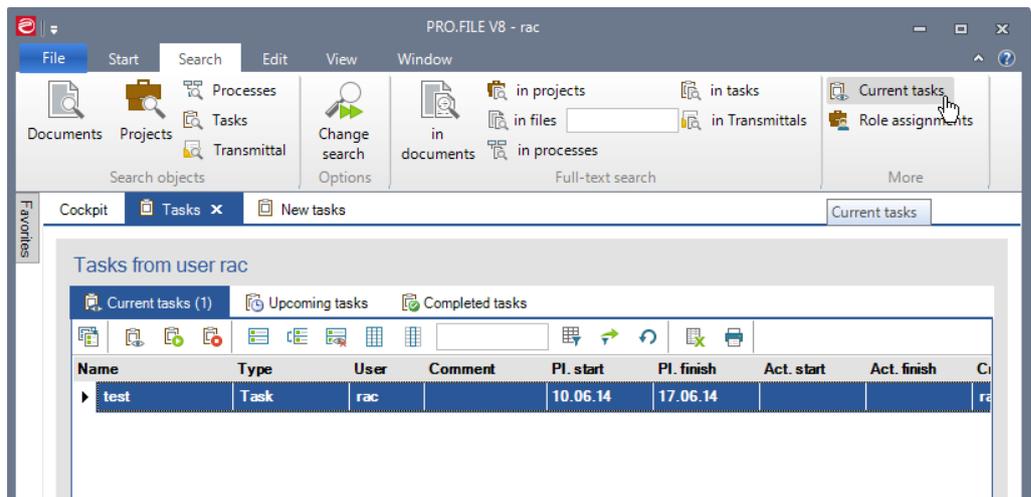


## 4.4 Displaying the tasks of the active user

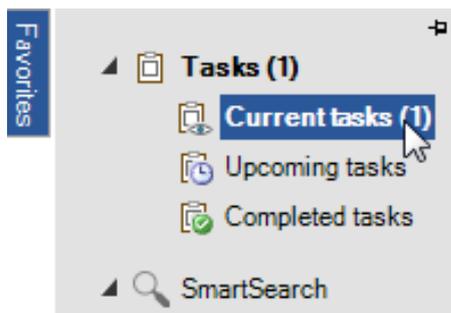
Each PRO.CEED user can search the current tasks for him and display the results in a list. In order not to miss an assigned task the user should perform this search in regular intervals.

In order to make this procedure simpler, the user can display all current tasks for him/her with a simple mouse click. There are two ways of doing this:

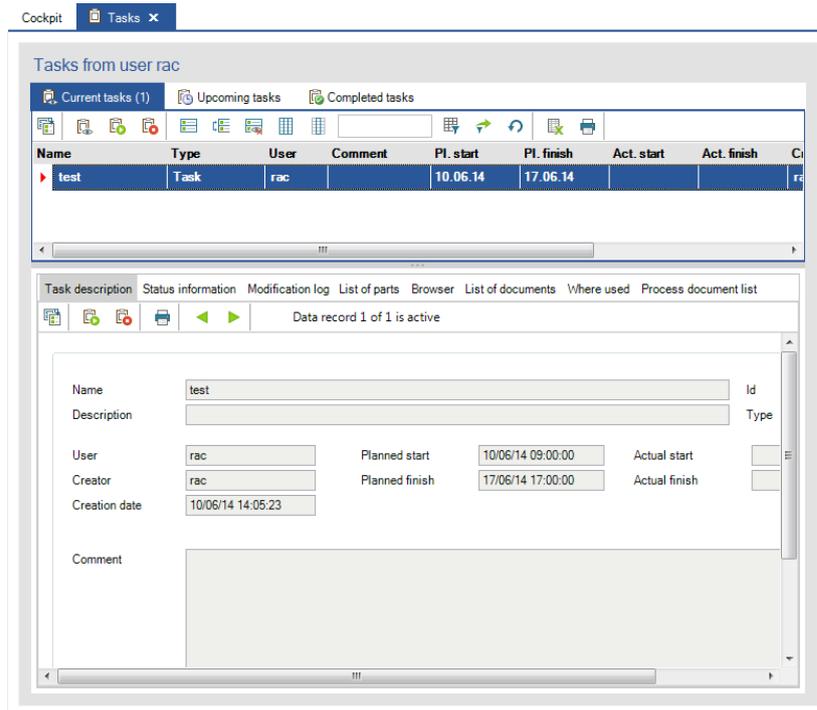
- In the "Search" menu of PRO.FILE there is a function "Current tasks" which will display all current tasks in a separate tab in PRO.FILE.



- In the favorite bar of PRO.FILE there is a new node, via which the **current tasks** can be displayed in a separate tab in PRO.FILE.



- The current tasks of a user are then displayed in a special tab next to the tab "Cockpit":



The tasks are displayed in three groups:

- **Current tasks**  
These are the tasks the planned start date of which has already been reached but which are not finished yet.
- **Upcoming tasks**  
These are the tasks the planned start date of which is within the next seven days. This tab allows the user to look a little bit ahead to see which tasks are coming ahead. These tasks can, of course, already be started now.
- **Completed tasks**  
These are the tasks the user has already finished within the last seven days. This allows the user to quickly look up references from recent work.

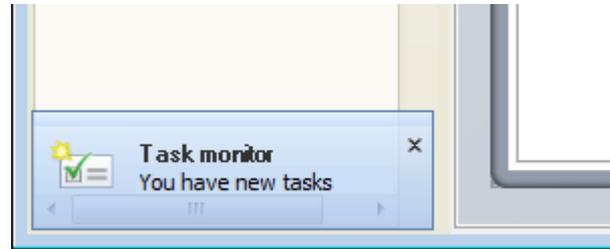
In order for the user to quickly see whether new tasks have been created for him, the number of new tasks is displayed in bold upon start of PRO.FILE in the favorite bar.

The new tasks are also listed in bold in the list of new tasks. In the corresponding tabs (current tasks and upcoming tasks) the number of new tasks is indicated in brackets.

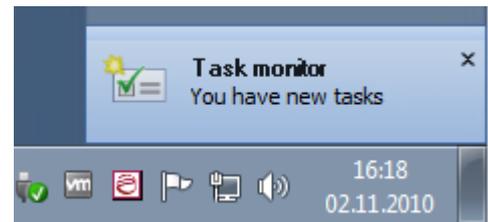
#### 4.4.1 The Notification Service informs about new tasks

In order for the PRO.CEED user to be informed about new tasks during the day, the "Notification Service" was developed.

The NotificationService displays new tasks for a user in small message box. If PRO.FILE is currently opened, the notification box is displayed at the bottom left corner:



If the PRO.FILE window is minimized, the notification box is displayed at the bottom right corner of the screen:



If PRO.FILE is not started, the NotificationService sends an e-mail to the user(s) the task has been assigned to. Such an e-mail can also be sent when a task escalates (see chapter "The escalation management for PRO.CEED tasks").

This e-mail contains the following information:

- The title and description of the task
- The task ID and creator of the task
- The planned start and end of the task

Furthermore, the e-mail contains a p2m file, which allows direct access to the task in PRO.FILE (by double-clicking the file).

If the resource is a group, the e-mail will be sent to the e-mail address of the group. The group itself is not dissolved.

## 4.5 The escalation management for PRO.CEED tasks

An important aspect of a task is the due date. For this reason, the task in PRO.CEED has a field "End date".

In order for the end date not to be exceeded without consequence, an escalation can be set for the task:

- The due date of all tasks is monitored by a central service, the "Escalation Manager".
- If the due date of a task is exceeded, the Escalation Manager triggers the escalations defined for the task.

The screenshot shows the 'Escalation' dialog box with the following configuration:

- Name:** test
- Description:** (empty)
- Escalation Level 1:**
  - Activated
  - Start After: 1 Day(s)
  - Type: Email
  - Recipient: rac
  - Subject: The task is overdue.
  - Mail body: The task is overdue and should be processed asap.
- Escalation Level 2:**
  - Activated
  - Start After: 4 Day(s)
  - Type: Back to initiator
  - Recipient: (empty)
  - Subject: (empty)
  - Mail body: (empty)

A task can have up to two escalation levels to be triggered at different times. An escalation is described by the following fields:

- **Activated**  
With this checkbox an escalation level is activated.
- **Start after**  
Here you can enter the number of days to pass after the due date until the escalation is triggered.
- **Type**  
This field contains the action to be triggered for the escalation. The following actions are available:
  - **Email**  
An e-mail is sent to a PRO.CEED user to be defined.

- **Delegate to user/group**

The task is delegated to another user or group. The actual start date is set back to 0.

- **Back to initiator**

The task is handed back to its creator, so that adequate measures can be taken manually. The actual start date is set back to 0. Depending on the task type the initiator is defined as follows:

**Task is part of a process:** The initiator is the creator of the process

**Task is part of a project:** The initiator is the creator of the project

**Task is used standalone:** The initiator is the creator of the task

- **Subject / Mail body**

These fields are used for the sending of e-mails.

The triggering of an escalation level is logged in the modification log of the task. Only the creator of a task can change the escalation(s).

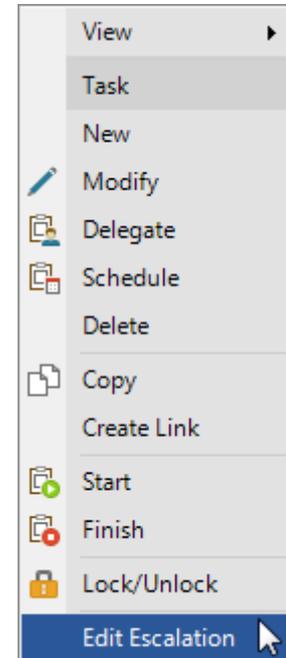
The escalation of a task is monitored by the Escalation Manager.

#### 4.5.1

#### Edit escalation

The creator of a task can edit the escalation levels of a task also at a later point in time.

1. Select the task in PRO.FILE.
  2. Via the context menu (right mouse button) or via the ribbon "Edit" => Group "Execute" you can start the function "Edit escalation".
- ⇒ The options to be set in the "Escalation" window are described in the previous chapter "The escalation management for PRO.CEED tasks".



## 5 PRO.FILE process management

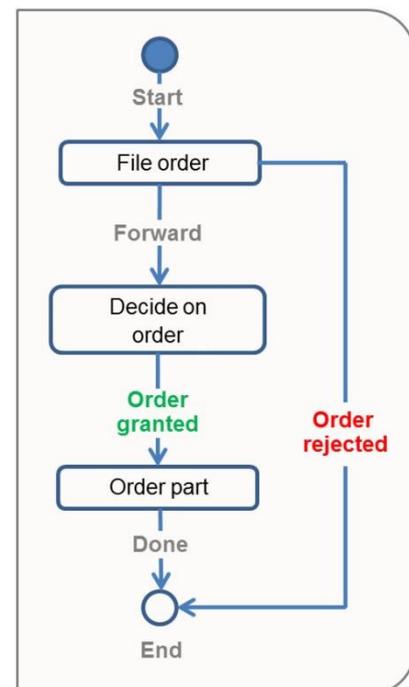
Apart from the object "Task", PRO.CEED also uses the object "Process". A process describes a procedure that always is executed in the same way (e.g. service request, material ordering).

The positions of a process are tasks that are performed in the order defined in the process. A process can have branches, where the user has to decide how to proceed.

### Example "Order part"

In the PRO.CEED process management you always have to differentiate between the process template and a process instance running in PRO.FILE:

- A **process template** describes the structure of a process (what are the tasks, how are they connected). An example of a process template is the depicted ordering process for a part. A process template is usually created by an administrator via the Process Designer.
- A **process instance** is an actual process based on a process template. A typical example is the process instance "Order machine part 1234 of the user Smith" based on the process template "Order part". A process instance can be started by any PRO.FILE user. In the following chapters the term "process" is used for "process instance".



Since, after a certain while, a lot of process templates may exist, these can be categorized. The desired categories can be created in the PRO.FILE Management Console.

### Definition of process templates with the Process Designer

Process templates can be defined using the Process Designer. The Process Designer is integrated in Visio via an AddIn and can be activated via a special template.

Administrators please see the manual "Configuration PRO.CEED processes and tasks"

## 5.1 Available fields for the description of processes

A process has the following fields already pre-configured:

- **ID number**  
As with all other PRO.CEED objects, a process has a unique ID.
- **Name, description**  
These fields contain the name of the process and a brief description (max. 255 characters).
- **Status**  
The status field is used to distinguish the different process types:
  - **Released process template**  
a process template that has been released by the administrator and that can be used to create new processes
  - **Non-released process template**  
a process template that is still under construction and that has therefore not yet been released by the administrator
  - **Invalid**  
process template that may no longer be used for new processes
  - **Started**  
a process that has already been started in PRO.CEED
  - **Finished**  
A process that has already been completed entirely in PRO.CEED
- **Process template**  
This field is only used for processes. It contains the name of the process template to be used for the process. In order for the process categories to be displayed on the left-hand side of the forms, this field has to be configured on the forms.
- **Actual start, actual end**  
This field contains the date when a process actually has been started and finished.
- **Created on, created by**  
Date when the process was created
- **Changed on, changed by**  
Date when the process was changed.

## 5.2 Working with processes in PRO.CEED

After a template has been defined in the Process Designer, published and released, it can be used in PRO.CEED to start a process.

The following sub-chapters describe the work with processes in PRO.CEED.

All process actions described herein are logged in the modification log of the process.



### Note:

Contrary to process templates it is possible to link process and task instances not only with documents but also with parts. This is to make sure that materials required for the performance of tasks can be accessed comfortably.

### 5.2.1 Working with tasks in the context of processes

Processes are built from a sequence of PRO.CEED tasks. These tasks are used for the time control of the process on the one hand. On the other hand, they form a structure and can thus be used for the integration of product data and document control along with the task control.

#### Start a new process with PRO.CEED

To start a process in PRO.CEED proceed as follows:

1. Create a new process
2. Start the first task

#### Create a new process

A new process is created via the command "File" => "New" => "Process".

A wizard is then started where you have to select the process template on which the new process is based. The available templates are listed in a tree structure on the left-hand side of the window.

The actual process templates are marked with the icon . The nodes with the icon  are only process categories.

In this step you can also enter the meta data for the new process. Some fields are already pre-filled with values from the process template.

#### Start the first task

Once the data for the process has been entered, the first task is created.

The fields already pre-filled from the task template are offered for modification.



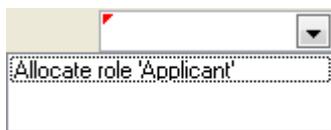
**Note:**

- The fields "(Planned) **start**" and "(Planned) **End**" are deactivated, since they are calculated from the defined task duration and the current date.
- The fields "Actual start" and "Actual end" are deactivated, since a task is started by the actions "**Start task**" and finished by the action "**Finish task**".

The field "**User**" is a special field. Since a task always has to be performed by someone, it is a required field.

For the contents of the field "**User**" several options are available:

- If a user or group has been entered for this task in the process template, this user or group is now suggested in the field.
- If a process role has been entered as a resource in the process template, no user is assigned yet, so this has to be done now



By clicking the list entry "**Allocate role...**", a dialog is opened, in which you can select the desired user or group as resource.

- If a role has been specified as resource in the task template, and the role had already been previously allocated to a user, this allocation can be used again or made differently.



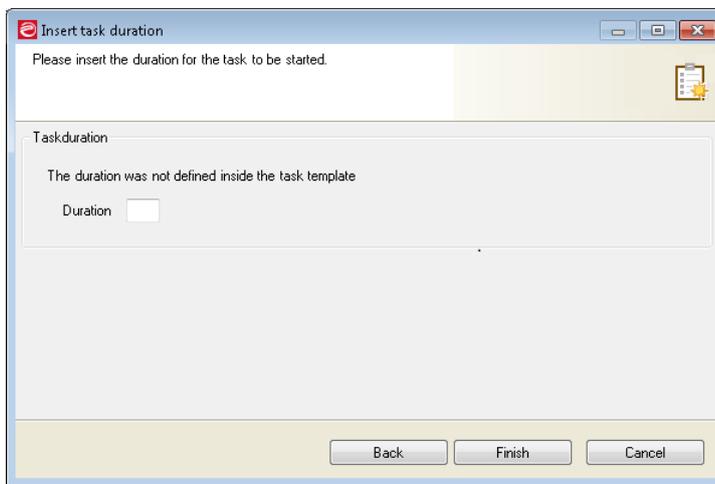
**Note:**  
 The process role can only be assigned anew if the task is not started automatically within a process. This setting is made during the configuration of the process steps. Further information on the creation of process roles can be found in the manual "Configuration PRO.CEED processes and tasks".

**Special aspects for tasks without defined duration**

Within a process template, the duration of a task can be defined as '0'.

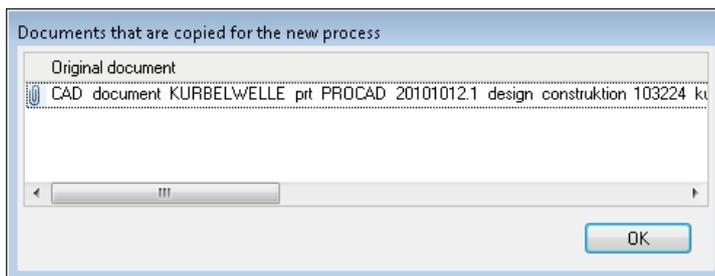
This means that at the moment the process template is defined, the duration of the task cannot be determined because it depends on the actual process.

For this reason, when such a task is then created during a running process, the duration has to be defined.

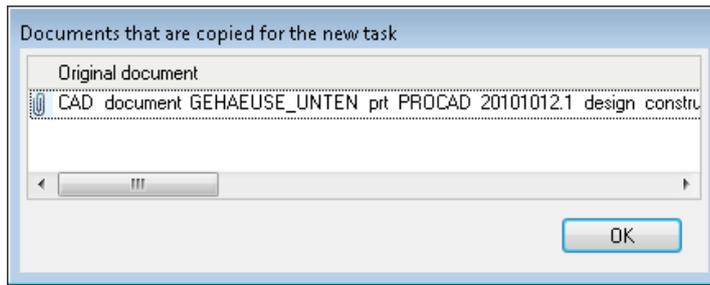


**Copying linked documents**

If documents are linked to the process template, these documents are duplicated. The documents to be duplicated are displayed in a dialog.



If the documents are linked to the first task, they are duplicated. The documents to be duplicated are also shown in a dialog.

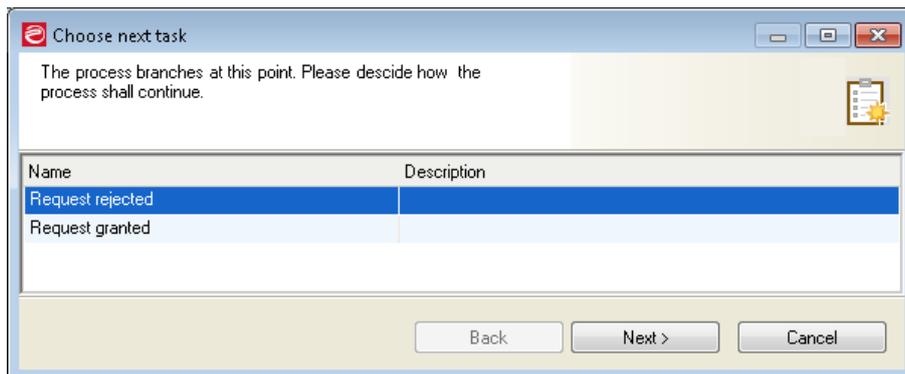


If the wizard is interrupted at any point before the first task has been created, all previous steps are undone. It is not possible to start 'half a process'.

## 5.2.2 Running processes

A process is run by starting a newly created task, processing it and finishing it. When the task is finished, the next task in the process chain is automatically created according to the procedure described above. If the creation of the new task is aborted, the previous task is not set to 'finished'.

If a task has several possible following tasks, the options are displayed in a list, and the user has to decide how to proceed.



## 5.2.3 Process finish

A process is finished when the last task of the process has been finished. The status of the process then has the value 'Finished'.

## 5.2.4 Cancel a process

If a running process cannot be finished for whatever reason, the process can be cancelled via the function "Edit" => "Cancel".

The status of the process is then also set to "Finished".

## 5.2.5 Calculation of the start and end dates of processes

During the definition of the process template the tasks and their duration are defined in the Process Designer. Each task has a defined maximum duration. The durations of all tasks make up the maximum duration of the process.

In order to calculate more exactly with these durations, the durations are broken down from days to minutes.



#### Note for administrators:

In the company calendar in the PRO.FILE Management Console you can define the amount of working hours per day.

For the calculation of the end date, the minutes from the start of the task on are distributed on the defined working hours. If there is a non-working day in-between (as can be configured in the company calendar in the PRO.FILE Management Console), this day is skipped for the calculation

#### Sample scenarios

The following assumptions are made for the following scenarios:

- Duration of the task: 2 days
- Working hours:
  - Monday 8-12, 13-17
  - Tuesday 8-12, 13-17
  - Wednesday 8-12, 13-17
  - Thursday 8-12, 13-17
  - Friday 8-12



#### Scenario 1:

Start of the task: Friday 10:00

- Friday: 10:00 – 12:00 → 120 minutes
- Monday: 8:00 – 12:00 and 13:00 – 17:00 → 480 minutes
- Tuesday: 8:00 – 12:00 and 13:00 – 15:00 → 360 minutes

This means that the end date of the task is Tuesday at 15:00.



#### Scenario 2:

Start of the task: Friday 15:00

- Friday: no working hours after 12:00 → 0 minutes
- Monday: 8:00 – 12:00 and 13:00 – 17:00 → 480 minutes
- Tuesday: 8:00 – 12:00 and 13:00 – 17:00 → 480 minutes

This means that the end date of the task is Tuesday at 17:00.

**Scenario 3:**

Start of the task: Friday 6:00

- Friday: 8:00 – 12:00 → 240 minutes
- Monday: 8:00 – 12:00 and 13:00 – 17:00 → 480 minutes
- Tuesday: 8:00 – 12:00 → 240 minutes

This means that the end date of the task is Tuesday at 12:00.

## 6 PRO.CEED Projects for project and task management

This chapter describes the possibilities and proceedings for the usage of PRO.CEED projects, as well as the flexible user administration for projects via role concept and the usage of tasks in the context of projects.

The creation and management of projects is the basis for project-oriented work with PRO.CEED.

The work with projects can be made independently from project role assignments. The usage of tasks in the context of projects is another additional option.

Consequently, these options are treated separately in the following chapters.

Basic information can be found in the following sub-chapters:

- Basic information: What is what?
- Working with Projects
- Simply flexible: Using Roles with Status and Access Management
- Using tasks in the context of projects

### 6.1 Basic information: What is what?

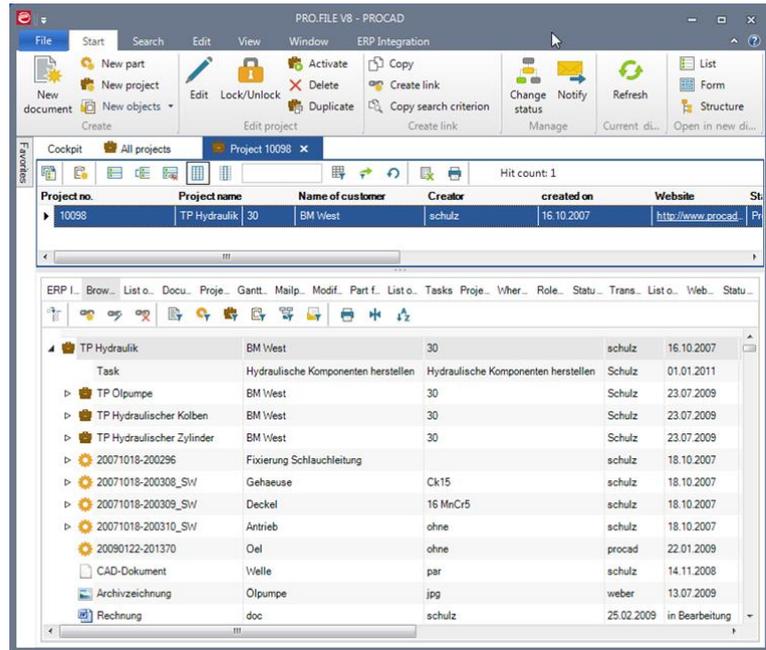
#### Working with projects:

Projects are used to describe a substantial task or goal seeking accomplishment within an organization. Over the lifetime of a project, users will create and manage documents and parts that directly relate to it.

PRO.CEED offers in addition to the already existing data objects an object type called "Project" that allows for the mapping of these requirements. A project object allows for a task-oriented or project-based document management, enabling users to create actual projects and assign documents and parts to them.

This approach allows directly assigning all data objects to a specific project. All objects can then be accessed and managed by referring to the project.

Projects can be hierarchically structured.



This allows for a combination of several sub-projects into a major project.

**Working with tasks in the context of projects**

There is the possibility of enhancing the structure of PRO.CEED projects by PRO.CEED tasks. This adds a time component to the project – the project is finished when all tasks are completed. PRO.FILE this develops towards a project management software.

**Project-related access rights via the project role concept**

The project management is accompanied by the concept of roles. Projects and project roles together make up a globally linkable object for project realization featuring project-specific user rights.

The concept of project roles allows defining distinct roles that assign project-based access rights that are user-independent. Reassignment of existing roles to other users is easy, if responsibilities or users currently working with the project change. The role defines how a user can interact with an object inside a project or with the project itself

Applying the concept of roles to a project means that a unique and project-specific project role can be assigned to each user. The project role describes for which actions a user is authorized within a particular project, regardless of what his/her rights are in other projects.

With this project role concept, as a first step, access rights are defined, regardless of the user, and assigned to specific project roles. As a second step, specific users within a project are assigned to these project roles, in order to quickly determine the project-specific access rights.

The respective project role is simply assigned again to a different user in case of changing competencies and users in order to manage responsibilities and authorizations. This allows users to assume different project roles with different authorizations for different projects.

**Note:**

In order to perform the actions described in this manual at your workstation, you need the corresponding functions access rights or status permissions. If required, contact your system administrator.

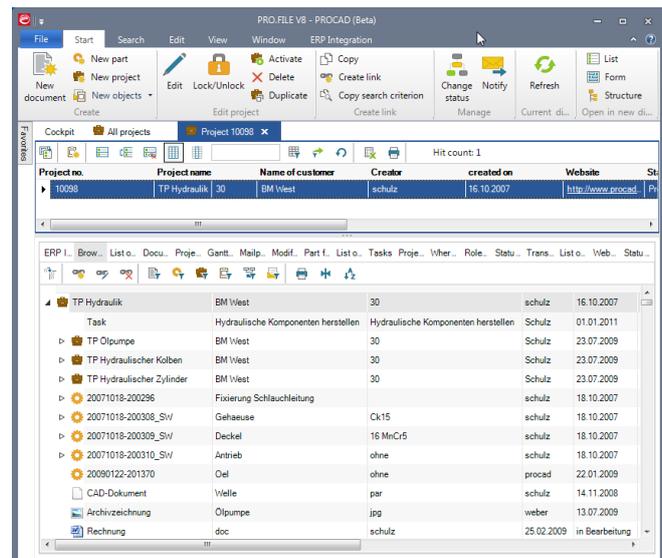
## 6.2 Working with Projects

PRO.CEED projects are basically used to collect information, data, part and document descriptions and to structure them project-specifically.

For this, document and part descriptions can be linked to the project.

It is also possible to link other projects as "sub-projects" to a project.

Furthermore, tasks can be used in the context of projects Using tasks in the context of projects.



The PRO.FILE status administration also applies for projects: After a project has been created it is in a specified start status and can be transferred from there into other statuses.

As long as the role concept is not used, the defined status-dependent permissions and function access rights apply for the project and attached objects.

Only by the assignment of project roles it is possible to specify individual rights for projects. See chapter "Simply flexible: Using Roles with Status and Access Management".

**Note: Project assignment**

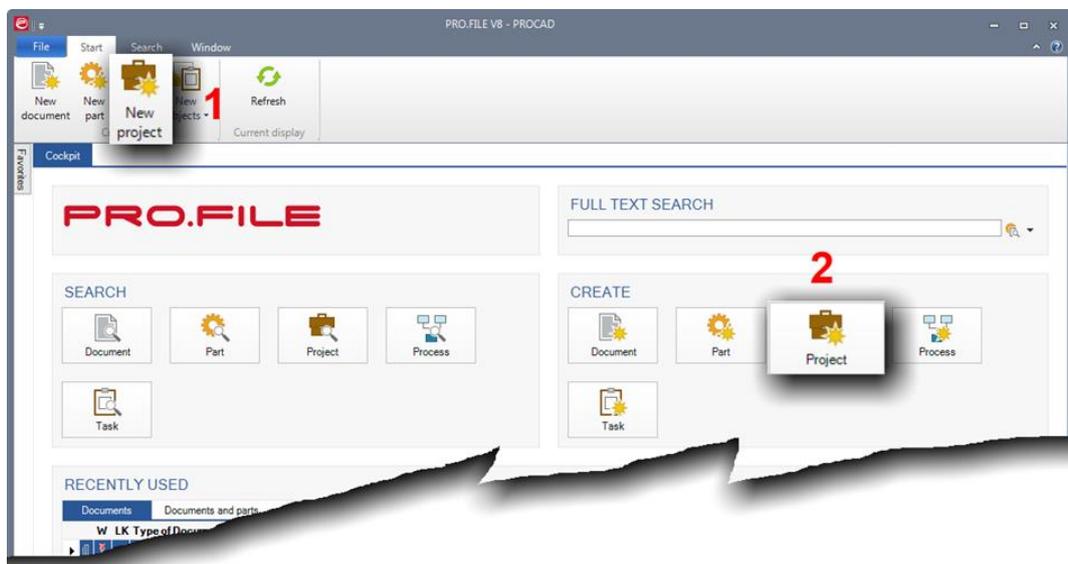
All document, part and project descriptions directly linked to a projects are considered as belonging to this project. Objects linked on the second structure level do not have a direct project assignment.

For the work with projects see the following sub-chapters:

- Create a new project
- Project management functions
- Linking PRO.FILE objects to a project
- Automatic link: Activate a project
- Strong and weak links: Linking of objects with several Projects

## 6.2.1 Create a new project

To create a new project you can use two methods:



1. The function of the PRO.FILE ribbon: "Start" => "New project".
2. The icon  in the PRO.FILE Cockpit.

## Create a project

Proceed as follows:

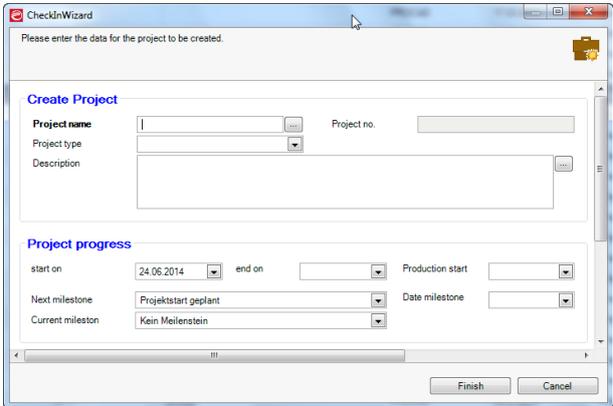
1. Select one of the above mentioned methods.

⇒ The wizard for the creation of a new project is displayed.

2. Enter the information to sufficiently classify your project.

3. Click <Finish>.

⇒ The new project is displayed on a new tab in PRO.FILE.



The screenshot shows a 'CheckInWizard' dialog box with the title 'Please enter the data for the project to be created.' The dialog is divided into two main sections: 'Create Project' and 'Project progress'.  
**Create Project section:**  
- 'Project name': A text input field with a small '...' button to its right.  
- 'Project type': A dropdown menu.  
- 'Project no.': A text input field.  
- 'Description': A large text area with a small '...' button to its right.  
**Project progress section:**  
- 'start on': A date dropdown menu showing '24.06.2014'.  
- 'end on': A date dropdown menu.  
- 'Production start': A date dropdown menu.  
- 'Next milestone': A dropdown menu showing 'Projektstart geplant'.  
- 'Current milestone': A dropdown menu showing 'Kein Meilenstein'.  
- 'Date milestone': A date dropdown menu.  
At the bottom right of the dialog, there are two buttons: 'Finish' and 'Cancel'.

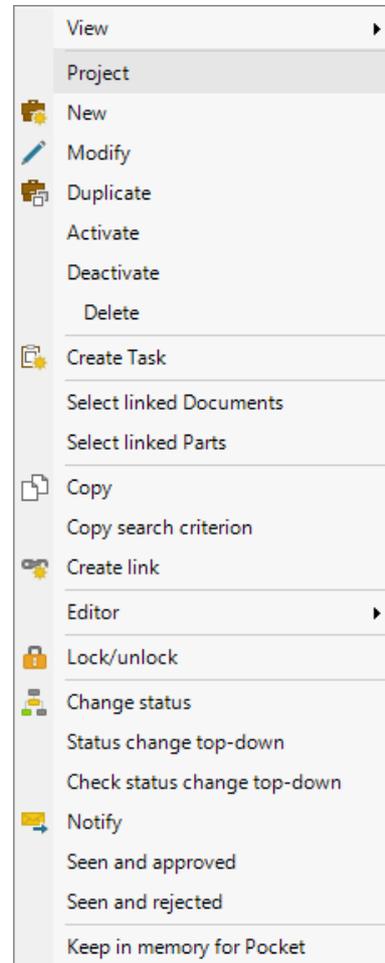
Information on the administration of projects can be found in the following chapter "Project management functions".

### 6.2.2 Project management functions

Functions for interacting with projects can be found in the "Edit" ribbon tab. This tab is available when viewing a project in form view. The functions are also available when right-clicking the project with the mouse.

The specific project functions include:

- "New", see chapter "Create a new project".
- "Modify", see chapter "[Changing the project description](#)".
- "Duplicate", see chapter "[Duplication of projects and project structures](#)".
- "Activate" and "Deactivate", see chapter "Automatic link: Activate a project".
- "Delete", see chapter "[Deleting a project](#)".
- "Select linked documents" and "Select linked parts", see chapter "[Searching for linked documents or parts of a project](#)".
- "Copy" and "Create link", see chapter "Linking PRO.FILE objects to a project".



All other function of the menu correspond to the PRO.FILE default functions and are described in the manual "Operation PRO.FILE advanced".

#### Functions for status administration

The PRO.FILE status administration also applies for projects. Accordingly, the defined statuses and status changes also apply for each project.

#### Changing the project description

The modify function enables you to update existing project data and to add new attributes.

The function to modify a project description depends on the status of the project and the permissions of the user and the project roles. Projects that are e.g. in a status "Released" or "Finished" can usually no longer be changed.

Furthermore, specific fields that are automatically filled by the system (e.g. project number, creation date, date of last modification, etc.) cannot be changed.

## Duplication of projects and project structures

For the creation of a project, the user can choose between two ways of proceeding with the functions "New project" and "Duplicate":

- The user can either create a new project and enter all desired classification criteria and make all project role assignments.
- It is also possible to duplicate an existing project and thus create a new identical project with a new project record.

When a project is duplicated, the following applies:

- Existing characteristics are duplicated immediately and without additional configuration required into the new project.
- Role assignments are copied as well when a project is duplicated and do not need to be made again.
- When a project is duplicated, the project manager is not copied as well. Instead, the creator (i.e. the user who copied the project) is entered as project manager. It is not possible to make user groups project manager – only single users can be made project manager.

When a project is duplicated, objects in the structure are handled as follows:

- The function "Duplicate" copies sub-projects and documents/parts directly linked to the project into the new project.

If an object is not to be duplicated, the corresponding form can be left via the <Cancel> button.



### Attention: Duplication without transmittals

When projects are duplicated, attached transmittals are ignored!

## Deleting a project

The delete command removes a project from the database. However, attached parts, documents and sub-projects will not be deleted. They only will lose their assignment to the project.

The ability to delete depends on the project role assigned to the user within the project and the function access rights of the user.



### Attention: Undo not possible

The deletion of a project cannot be undone. If you have the right to delete a project you should use it with caution.

### Searching for linked documents or parts of a project

Via the functions "Select linked documents" and "Select linked parts" the general search for documents or parts can be limited to those documents or parts that are linked to the selected project. These functions for projects are available via the context menu (right mouse button).

When one of these functions is selected, the search form is displayed for you to enter your search criteria.

The list of hits, however, is limited to documents/parts linked to this project.

## 6.2.3

### Linking PRO.FILE objects to a project

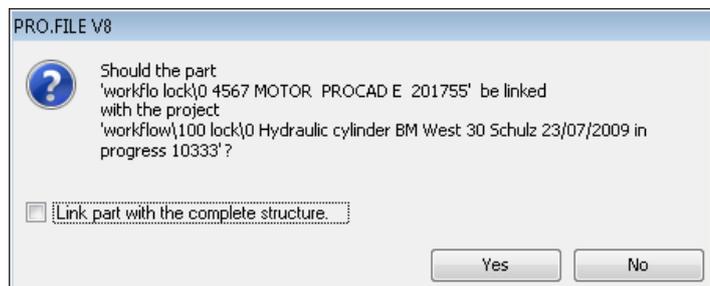
Via the structure overview you can view and manage the connections between projects and other data objects.

- The function "Copy" puts the selected project into the PRO.FILE clipboard.
- In order to link this project to a different project you can then select the other project and select the function "Create link".

Using this command will result in existing relations within the project to be carried over into the new link. You can view any already existing links using the browser. You can use the same commands for linking documents or parts with projects.

### Linking structured objects

If a structured object is to be linked to a project, a user request will appear, asking whether the complete structure should be linked to the project.



The following options are available:

- **<Yes>**: Only the topobject of the structure will be linked to the project. The lower objects are not linked with the project, and therefore have no relationship with it.
- **Link object with the complete structure**: If you do set the checkmark for "Link object with the complete structure", all objects of the structure are linked to the project.
- **<No>**: The action "Create link" is cancelled. No changes are made.

### Delete Link

The "Delete Link" command allows deleting an object relation. Use of this command will only delete a relationship between two objects, but not the objects themselves.

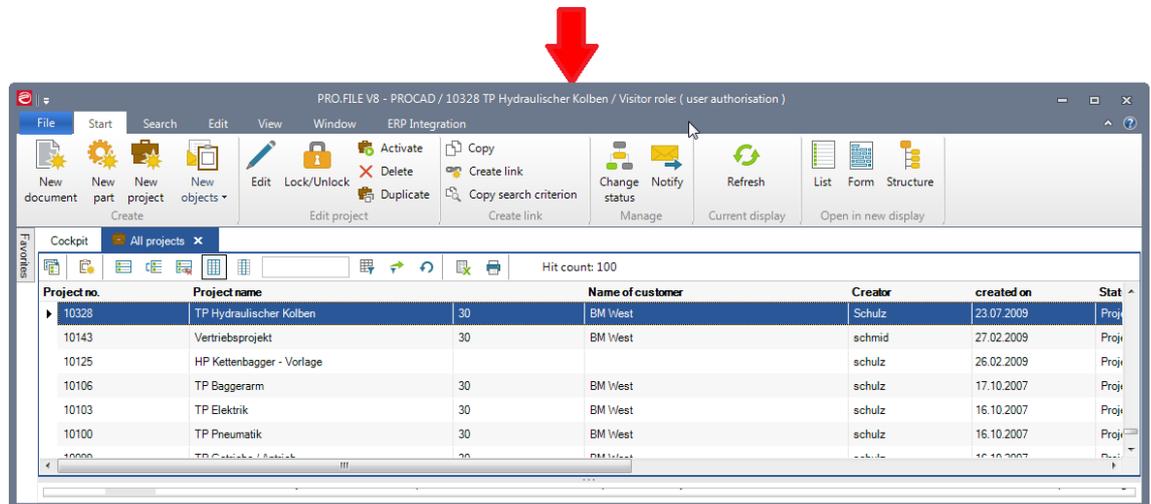
## 6.2.4

### Automatic link: Activate a project

To make the assignment of documents and parts to a project easier and to automate this process, a project in PRO.FILE can be "activated".

If a project is activated, every part or document is assigned to the project upon its creation.

The currently activated project can be seen in the PRO.FILE title bar.



When a project is activated by a user, this is logged by PRO.FILE and permanently saved. This way, work on the recently activated project can be continued after the next login to PRO.FILE.

The activation of a project remains until a different project is activated or the project is deactivated.

## Deactivate a project

When a project is activated, every part or document is assigned to the project upon its creation. To stop this automatic assignment, the active project needs to be deactivated.

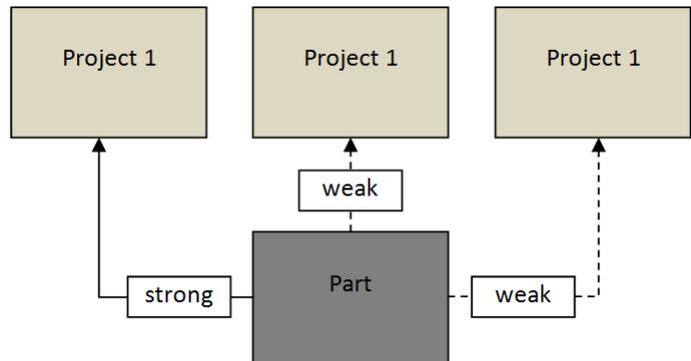
A project can be deactivated by one of the following functions:

- At any time via "File" => "Deactivate project".
- When the project is selected via the tab "Edit" => Group "Edit" => "Deactivate project".

### 6.2.5 Strong and weak links: Linking of objects with several Projects

The project management of PRO.FILE allows assigning a document or part to several projects. The process of linking PRO.FILE objects to projects is the same as the linking of documents and parts.

PRO.FILE distinguishes two types of links: primary and secondary link. The type of link determines access rights to the document.



- **The strong link:**

The primary link describes the first assignment of a document or part to a project. Access rights to the document or part are determined by roles assigned to this project "1". A user can only access the part or document according to the access rights assigned to him via the project role. If the same part or document is then linked to another project, a message informs you that the object is already linked to another project.

- **The weak link:**

If the part/document is linked to another project "2", the access rights assigned via the role assignment for project "1" still apply. Even if a user has a role with corresponding access rights in project "2", he only can access the part/document in such way as defined for the project role in project "1". If those access rights are not sufficient for the work in project "2" the user need the corresponding role assigned to them in project "1".

Even projects that are linked as sub-projects to superior projects can have strong and weak links in the case of multiple linking.

If a document, part or project is linked to a project via a weak link, this additional link is indicated by a corresponding icon in the structure browser:



The document is linked to the project via a weak link.



The part is linked to the project via a weak link.



The project is linked to another project via a weak link.

If the display in the structure browser is configured in such way that explorer icons are displayed, the icon for the display of the document changes. The explorer icon is then displayed in a shade of gray to illustrate the weak link.

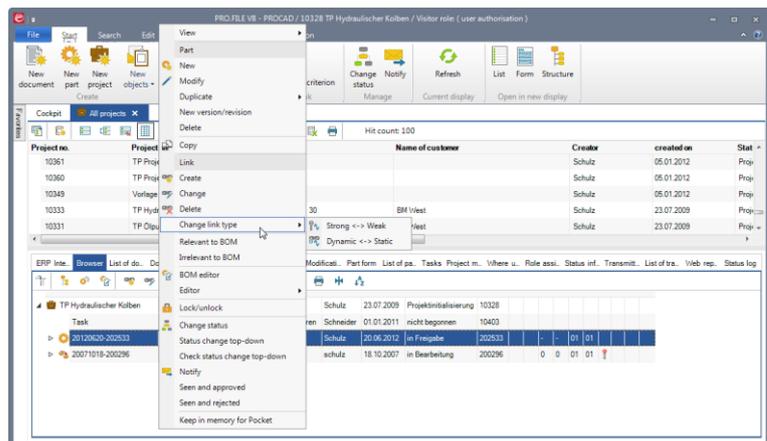
 A document is linked to a project via a weak link. There is no file attached to the document record.

 A document is linked to a project via a weak link. A file (in this example a PowerPoint file) is attached to the document record. The file icon is then displayed in a shade of gray to illustrate the weak link.

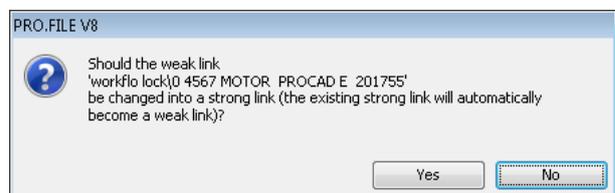
**Change the link type "strong" – "weak"**

The link type of documents/parts/projects to the superior project can be edited in the browser displays, in the editor and in the structure display. With the command "Change link type", a strong link is changed into a weak link, and a weak link is changed into a strong link. To change the link type proceed as follows:

1. Open the document, part or sub-project, the link type of which you want to change, in a structural display.
2. Select the object.
3. Select the command "Change link type" either from the context menu.



4. If the document versioning or the bill of materials versioning is activated, you also have to select "Strong <-> Weak" from the sub-menu. (The reason is that when the versioning is activated, the link type can also be changed from "Static" to "Dynamic".)
5. Confirm the change of the link type with <OK>.



⇒ The link type is now changed. The change is visible in the changed icon in the structure display.

A change of the link type is automatically entered in the change log of the project.

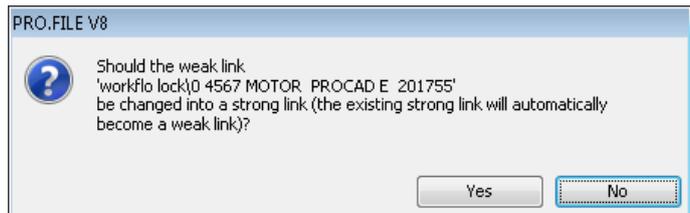
Browser					List of docume...	Document desc...	Project descrip...	Gantt chart	Mailprotocol	Modification log	Part form	List of parts	Tasks	Project manager	Where used	Role as
Revision	Modifier	Modification da	Change	Change (Cont.)												
▶	PROCAD	24/06/14	Changed link type from strong into weak!	20120620-202533 Hydraulischer Kolben in Freigabe												

### Change weak link to a strong link

What happens when the link type "strong" <-> "weak" is changed?

When a **weak link is changed to a strong link**, the following steps take place:

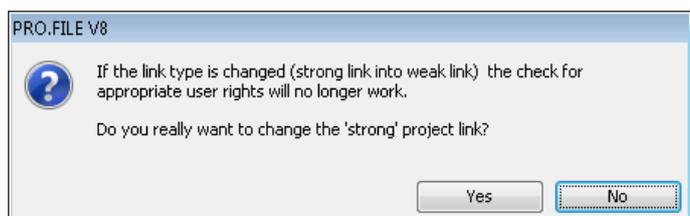
- A check is made whether the user is authorized to change the selected weak link to a strong link.  
=> If the user is not authorized, a corresponding message is displayed and the change action is aborted.
- A check is made whether the user is authorized to change the existing strong link into a weak link (there can be only one strong link!). A strong link, however, does not have to exist.  
=> If the user is not authorized, a corresponding message is displayed and the change action is aborted.
- If both checks are successful and the message shown here is confirmed, the link type is changed.



### Change strong link to a weak link

When a **strong link is changed to a weak link**, the following steps take place:

- A check is made whether the user is authorized to change the selected strong link to a weak link.  
=> If the user is not authorized, a corresponding message is displayed and the change action is aborted.
- If the check was successful, the strong link is changed to a weak link. After this, there is no strong link anymore.
- The user gets a warning message that the access rights are no longer controlled by the role concept.



**Change link type  
in multi-selection  
mode**

The link type can also be changed from weak to strong or vice versa when the project structure is displayed in multi-selection mode.

1. In the dependent "Browser", click the  icon to enter the multi-selection mode.
  2. Via the checkboxes, select the objects you want to change the link type of.
  3. From the context menu, select the desired link type, either weak or strong.
  4. Confirm in the dialog that you want to change the link type.
- ⇒ The link type is now changed for all selected objects (the icons of the affected objects change accordingly).

## 6.3 Simply flexible: Using Roles with Status and Access Management

The project role concept and the project role assignment are additional options to assign and manage project-specific permissions directly in PRO.FILE.

This chapter details the basics, possibilities and proceedings for the usage of project roles in the following sub-chapters:

- Introduction: The project role concept
- The elements of the project role concept: Project manager, role assignments, guest role
- Step 1: Assign the project manager
- Step 2: Assigning project roles
- Step 3: The guest role for users without a project role
- Evaluation of the Access Rights



### Note: Creation of project roles and their permissions

In order to work with project roles, the roles need to be created first by the PRO.FILE administrator via the PRO.FILE Management Console. The creation of new roles and the assignment of status-dependent permissions for roles is described in the manual "Configuration PRO.FILE users, rights, status administration".

### 6.3.1 Introduction: The project role concept

The concept of projects and roles in PRO.CEED allows for a task-oriented and project-related, structured document management by implementing actual projects and assign data objects directly to a particular project. This data can then be referenced and managed by directly accessing the project.

Within PRO.CEEDs project management, a user utilizes the project role concept for accessing information. The concept of roles and definitions therein assigns access rights to distinguished roles based on a specific project.

- With assigning a role to a user, all access permissions defined for the role become applicable to the user, but only for the specific project in which the role is defined.
- Therefore, within a project, a user always has access permissions defined by the role that is assigned to her/him. These access rights may even be independent from commonly assigned user access permissions.

Simply reassigning roles to users facilitates changes in responsibilities or users currently involved in a project, all without modifying commonly assigned user access rights.

The screenshot shows a software interface with two main tables. The top table lists projects with columns for Project no., Project name, and Name of customer. The bottom table shows role assignments with columns for Project, User, and Role.

Project no.	Project name	Name of customer
10349	Vorlage für Projektduplikat	
10333	TP Hydraulischer Zylinder	BM West
10331	TP Ölpumpe	BM West
10328	TP Hydraulischer Kolben	BM West
10143	Vertriebsprojekt	BM West

Project	User	Role
TP Ölpumpe	Schulz	R_Projektleiter
TP Ölpumpe	Schneider	R_ProjectMember
TP Ölpumpe	Weber	R_ProjectAssistent
TP Ölpumpe	Schaefer	R_ProjectMember
TP Ölpumpe	Maier	R_ProjectMember
TP Ölpumpe	Wiegand	R_ProjectControlling
TP Ölpumpe	Neumann	R_ProjectMember

### 6.3.2

## The elements of the project role concept: Project manager, role assignments, guest role

The main question relevant to the project role concept is: Who is allowed to do what in a specific project?

To implement the role concept, 3 basic elements are employed to set the access rights:

### The project manager

Different users can be responsible for different projects. It is their responsibility to select the members of the project team.

- For this reason, every project must have a project manager of its own.
- Only the project manager is allowed to determine the project members, i.e. assign the roles.
- A user who creates a project is automatically entered as project manager,
- A project manager may assign other project managers or delete them.
- All project managers within a project are allowed to assign roles for this project.



#### Note:

Only the project manager can make role assignments. The creator of a project is the first project manager. A project manager may assign other project managers.

### The project roles

Via project roles the project-specific access rights are transferred to project members:

- Project roles are defined for the use in project management and equipped with specific access rights.
- If a PRO.FILE user is assigned to a role within a project, this user has the access rights of the project role within the project.
- In this way, different access rights can be assigned to different users, according to project requirements. These project-specific rights may differ from their access rights out of the project.

The current project role of a user in an activated project is displayed in the title bar of the PRO.FILE window.

**The guest role**

If a user does not have a role within a project, he is only a guest within the project. The guest role regulates the access rights of a guest.

**6.3.3**

**Step 1: Assign the project manager**

Only a project manager can assign roles within a project.

The user who creates a project is automatically made project manager. He/she can assign further project managers.



**Attention: A project manager needs corresponding rights**

In order for a project manager to make role assignments, he/she requires the access right "Manager role assignments".

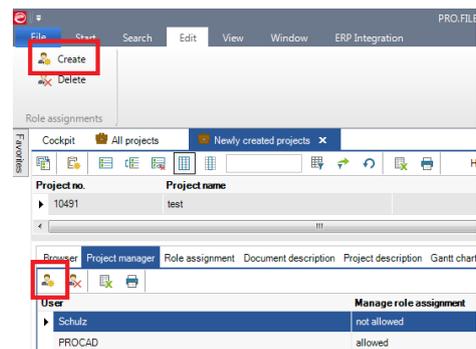
The column "Manage role assignments" in the dependent tab "Project manager" shows whether the set project manager has this access right or not.

User	Manage role assignment
Schulz	not allowed
PROCAD	allowed

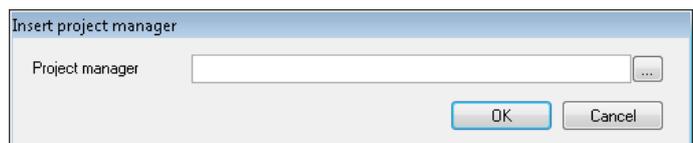
**Assign a project manager**

Proceed as follows:

1. Select the project in PRO.FILE for which you want to assign a project manager.
2. Go to the dependent tab "Project manager".
3. Click on the icon "Create new project manager" or select "Create" from the "Edit" tab.



4. In the selection window that is now displayed you can select the user who you want to make project manager.



5. Confirm your selection with <OK>.
- ⇒ The selected user is now listed as project manager.



**Note: Project managers can delete other project managers**

A project manager may not only make role assignments but may also assign/delete other project managers.

### 6.3.4

#### Step 2: Assigning project roles

The role assignments within a project regulate the access rights of users within the project.

The information and steps for the assignment of roles within a project are explained in the following sections:

- [Open the role assignment window](#)
- The structure of the role assignment window
- Assign a role to a user or group
- [Assign several roles to a user](#)
- [The option "Dissolve group": Project roles for user groups](#)
- Delete role assignments

#### Open the role assignment window

In order to assign a role to a user or group the role assignment window has to be opened.

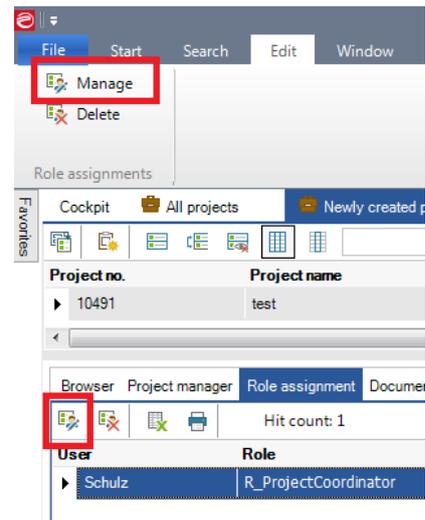


**Note:**

The role assignment is always made for the project that is selected in the PRO.FILE list or form view.

The role assignment can only be made by a project manager.

1. Select the project in PRO.FILE for which you want to make role assignments.
  2. Check whether you are entered as project manager for this project. Only project managers can make role assignments.
  3. Go to the dependent tab "Role assignment".
  4. Click on the icon  "Manage the role references" or select "Manage" from the "Edit" menu.
- ⇒ The role assignment window is displayed. You can now make role assignments.

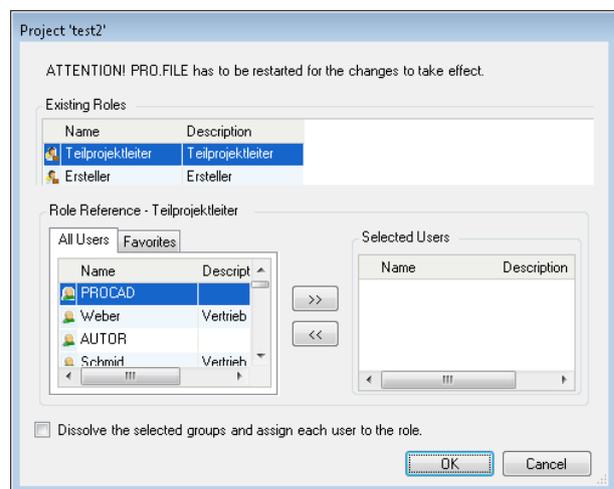


The structure of the role assignment window

The role assignment window displays all settings that can be made for the assignment of roles to users and user groups within the selected project.

The role assignment window is divided in the following areas:

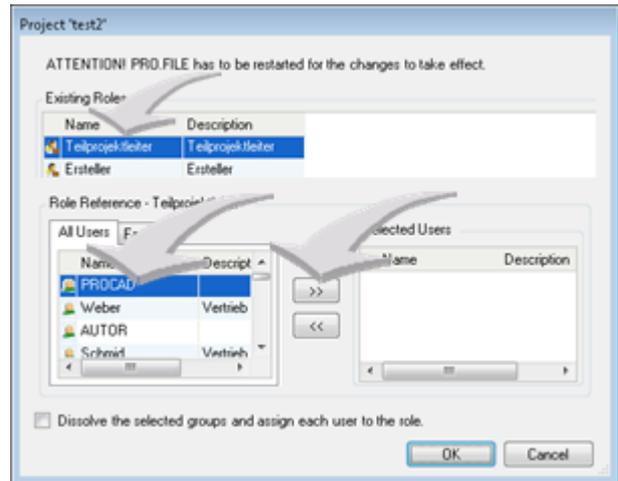
- Area "Existing roles":  
This list contains all roles available in PRO.FILE. The selected line indicates the role that is to be assigned to a user.
- Area "Role Reference":  
In this are the actual assignment is made. The area title therefore also contains the name of the selected role.
- Tab "Favorites":  
This list contains all users and groups that are usually planned for the selected role.
- Tab "All users":  
This list contains all users and groups defined in PRO.FILE. All those users and groups can be used for role assignments.
- Area "Selected users":  
This list contains all users and groups to which the selected role has already been assigned.



**Assign a role to a user or group**

To assign a role to a user or group proceed as follows:

1. Select the role that you want to assign to a user or group from the upper area.
2. Select the user or group which you want to assign the role to from the lower area. Multiple selections can be made with the <CTRL> key.
3. Click on .



⇒ The selected users/groups are now assigned to the role.

Additional role assignments can now be made in the same way.



**Note:**

- When assigning roles to groups you can use the option **"Dissolve the selected groups and assign each user to the role"**. Detailed information can be found in the chapter "The option "Dissolve group": Project roles for user groups".
- If several roles are assigned to several user groups and a user is member in several of those groups he gets the sum of all rights from the different roles!
- The assignment of the users/groups can also be made with a double click.

**Assign several roles to a user**

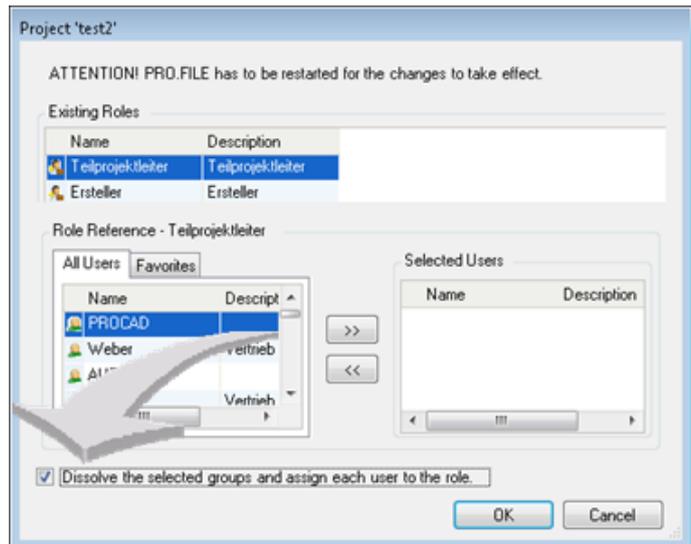
A user can be assigned to several roles within a project, either directly or via a group. The user then gets the sum of all rights from the different roles.

**The option "Dissolve group": Project roles for user groups**

The assignment of a project role to a user group is made according to the description in the chapter "Assign a role to a user or group". Furthermore, there are additional options that are explained in this chapter.

You can assign a role to a group or to each user of the group individually.

If you want to assign the role to the members of a group individually instead of the group as such, select the option "Dissolve the selected groups and assign each user to the role".



- **Assign the role to a group**

The project role is assigned directly to the group. The access rights of the role are transferred to the group members.

- **Advantage:** Changes in the group structure are directly applied to the role assignments. If users are added to the group later on, they also get the access rights of the role.
- **Disadvantage:** If a user is member of several groups and gets several sets of access rights via different role assignments. This may lead to undesired status constellations.

- **Dissolving the group**

During the assignment a check is made which users are in the selected group. The role is then assigned to each user individually.

- **Advantage:** Each user only has one role in the project without the undesired accumulation of access rights.
- **Disadvantage:** Changes in the group structure are not applied to the role assignments. If a user is added to the group later on, he/she not automatically assigned the role.

### Delete role assignments

To delete an existing entry from the project role assignment, two ways of proceeding are available:

- **In the role assignment window:**

You can remove a user or group from the list of "Selected users" by clicking . The role assignment is then deleted.

- **In the dependent tab "Role assignment":**

If a project is selected in PRO.FILE, all existing role assignments for the project are listed in the dependent tab "Role assignments".

- Select the role assignment to be deleted

- Click on  in the icon bar of the dependent tab. The role assignment is then deleted.

If a role assignment is **deleted**, the corresponding user then either needs a new project role or is only a guest in the project from then on.

### 6.3.5 Step 3: The guest role for users without a project role

The role assignments regulate the access permissions within projects.

The question that remains is:

- What about PRO.CEED users that do not have a role within the project?
- What access rights do they have?

This question is answered by the guest role. The guest role regulates what access rights a user has who has no active role, i.e who is only a "guest" in the project.

The guest role can only be set when the project is changed. More information in the following chapter:

- [How to set the guest role](#)

The settings for the guest role are explained in the following chapter:

- Select settings for the guest role

#### How to set the guest role

When a project is created (or duplicated), the project has no role assignments. This is made in the second step. At the beginning, the project creator also has the guest role.

For this reason, the guest role is always set to "user rights". This value cannot be changed when the project is created.

This is to make sure that the project creator does not select a guest role that would exclude him, and thus all other users, from the project. Otherwise, the project might become permanently invisible for everyone.

The following way of proceeding is recommended:

- **Step 1:** Create a project
- **Step 2:** Make role assignments
- **Step 3:** Set the guest role based on the role assignments

**Only when a project is changed**, the field "Guest role" can be set to a different value, as described in the following chapter "Select settings for the guest role". The following check is then made:

- If the value "**No user rights**" is selected in the field "Guest role", a check is made whether at least one role assignment exists for this project. If this is not the case, this value cannot be selected (error message), since the project would otherwise become invisible for every user.
- If the value "**user rights of the superior project**" or "**user rights of all superior project (cumulative)**" is selected in the field "Guest role", a check is made whether the project is linked to a superior project. If this is not the case, this value cannot be selected (error message), since the project would otherwise become invisible for every user.



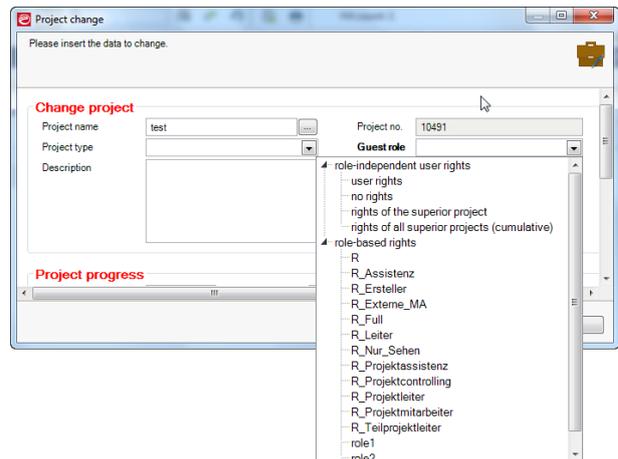
**Note:**

When a project is duplicated, the user can decide whether the existing role assignments are to be duplicated as well or not.

**Select settings for the guest role**

When a project has been created, the guest role can be set by selecting the function "Modify". Proceed as follows:

1. Select the project in PRO.FILE
2. Select "Modify" from the "Edit" menu or from the context menu.
3. Select the field "Guest role".



An existing role assignment always has priority before the guest role.

The following table shows the values allowed for the field "Guest role" and the possible consequences for a user who has no role assignment so far.

Setting "Guest role"	The user has a role in the project	The user does not have a role in the project
User rights	Corresponding role assignments are applied.	Within the project the user works with the access rights he/she has as a PRO.CEED user.
No user rights	Corresponding role assignments are applied.	The user has no access rights in this project.
User rights of the superior project	Corresponding role assignments are applied, no additional access rights from the superior project.	A check is made whether the user has a role in the superior project which is then applied to the current project.
User rights of all superior projects (cumulative)	Corresponding role assignments are applied and the assignments of the superior project.	A check is made whether the PRO.CEED user has roles in the superior projects which are then applied to the current project with the sum of all rights from the roles.

Role-based user rights

Corresponding role assignments are applied.

All users who do not have a specific role are assigned the selected fixed role.



#### Note: Accumulated rights

When the value "User rights of all superior projects (cumulative)" is selected, the system makes no distinction between the project level on which a right has been granted. If the user has the right from a lower project level, it cannot be withdrawn from him on a higher level and vice versa.

If the value "User rights of all superior projects (cumulative)" is selected and in the superior project a role is entered in the field "Guest role", this role and the roles of the role assignment are treated equally.

### 6.3.6

#### Evaluation of the Access Rights

If within a project, a user gets assigned with a role, all access rights for the role will be applicable to the user. Role access rights are always higher than user access rights, meaning that you can limit access rights of a user by assigning her/him to a role with limited access rights. The following example illustrates possibilities and consequences based on access rights and workflow-related definitions for a role.

**Example:** A user initiates a command for viewing an object (part, CAD file, document) stored in PRO.FILE.

The system starts verifying the user's access rights (Browse/View Object) to the object acted upon by determining the project that is associated with the object.

↘ If the object is not associated with any project, the system will verify the user's access rights based on the currently active project.

If the object is associated with a project, the system will determine the role that is associated to the user for this project.

↘ If the user is associated with a role, the system will verify access rights based on the role that is associated with the selected object.

↘ If the user is not associated with a role, the entry in the "Guest role" field of the project will be evaluated. There are several possibilities for the actual value of the guest role.

↘ No guest role: the user has no access rights in this project. This setting is displayed in the title bar as follows: "Guest role (no authorization)". The user thus cannot access objects within this project.

➤ Guest role "User": the user has those rights in the active project that are assigned to him/her according to the function access rights and the workflow authorization. If the guest role has this value, the authorizations and access rights defined in the project are overridden for all users without a project role.

➤ Explicit role as a guest role: each guest user is assigned an explicit role that is defined within the project. The evaluation of rights is carried out according to the specifications in the project. This setting is displayed in the title bar as follows: "Guest role (Authorization of the role)".

➤ Guest role "superior project": because a guest user does not have an explicit role in the active project, his authorizations for a possible super ordinate project are determined. The evaluation for the super ordinate project is carried out the same way: Does the user have a role or not? How is the guest role defined? The authorizations for the guest user that result from the settings for the super ordinate project are then adopted for the current project. (If the guest role "sup. project" was also defined for the super ordinate project, the evaluation is carried out on the higher level.)

➤ Guest role "superior project (cumulative)": The access rights for the PRO.CEED users are cumulated in such way that the user inherits the sum of all rights from the corresponding roles in the superior projects. The following examples show how this can be handled:



**Example: Project structure 1**

- Project 3                      Contents field "guest role": Role-based user rights
- Project 2                    Contents field "guest role": Superior projects "cumulative)
- Project 1                Contents field "guest role": Superior project

Evaluation of the filed "Guest role in project structure 1

If a role is found for the user in project 1, no further check is made in the superior projects. If no role is found, a check is made in the superior project, i.e. project 2. If a role is found there or no role is found, due to the entry "superior projects (cumulative)", a check is also made in project 3. Once a role is found that allows the user to perform the desired action, no further check us made in superior projects.

The field "Guest role" always has to be evaluated in the current project, regardless of whether a role has already been found or not to decide how to proceed.



**Example: Project structure 2**

- Project 3                      Contents field "guest role": Role
- Project 2                      Contents field "guest role": Superior project
  - Project 1                      Contents field "guest role": Superior projects "cumulative)

Evaluation of the filed "Guest role in project structure 2

If a role is found in project 1 that allows the user to perform the desired action, no further check is made in superior projects. If no role or a role without the necessary rights is found, a search is made in the superior project 2. If no role is found in project 2, a search is made in project 3. If a role is found in project 2, the search is finished.

**Specific aspects in the acces rights administration when assigning roles to user groups**

There are certain specific features that should be considered if roles are to be assigned to user groups:

- If several user groups are to be assigned roles within a project, and there are users who are members of more than one user group, these users will be given the combined access rights of all of the groups they are in!
- It is possible for a user to have several different roles within a project when he is a member of several different groups. If this user creates a new object, a query will be given out asking the user in which of his roles this creation of the object should be carried out. This depends also on the start status and the access rights.

## 6.4 Using tasks in the context of projects

The PRO.CEED object type task can be used to refine the project structure. Tasks can be linked to project so that a mixed project-task structure is created.

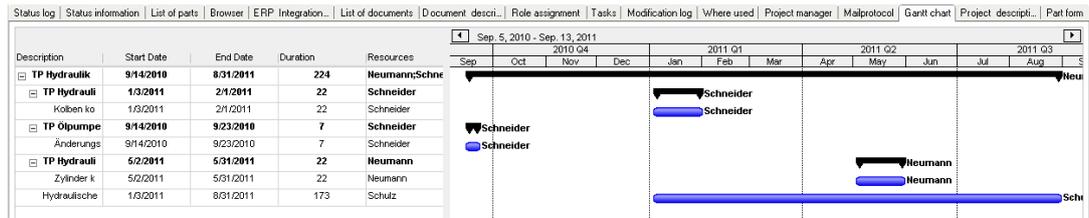
When this is done, tasks can be linked to projects, but it is not possible to link projects to tasks.

Projekt-Nr.	Projekt-Name	Kunden-Name	Ort	Ansprechpartn
10393	md pro01			
10125	HP Kettenbagger - Vorlage			
▶ 10095	HP Bagger BM West	BM West	Birkenfeld	Huber
10401	Dampfmaschine	PROCAD GmbH & Co.KG	Karlsruhe	
10377	BA 8888 Huber	Huber GmbH	Karlsruhe	Huber

Strukt...	Rolle...	Doku...	Doku...	Proje...	Ander...	Teilef...	Teileli...	Aufga...	Verwe...	Status...	Status...	Proje...
▲ HP Bagger BM West				BM West				30		schulz		16.10.200
Aufgabe				Bagger konstruieren				Bagger konstruieren		Schulz		30.09.201
▲ TP Motor				BM West				30		schulz		16.10.200
Aufgabe				Motor konstruieren				Motor konstruieren		Neumann		01.10.201
Aufgabe				Motor prüfen				Motor prüfen		Schulz		31.12.201

A schedule for the tasks and sub-projects linked to the project is available via the dependent tab "Gantt chart".

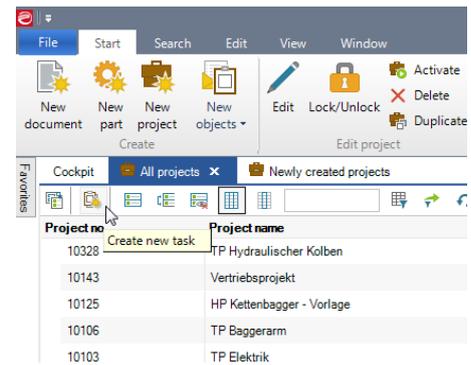


**Note:**  
When projects and tasks are combined, the task is always linked to the project. It is not possible to link a project to a task.

The creation of tasks in the context of projects is described in the following chapter:  
Create a task for a project

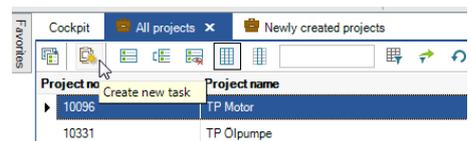
### 6.4.1 Create a task for a project

To make the creation of tasks and the link to projects as comfortable as possible, the two functions were combined and made available via an icon in the toolbar for projects:

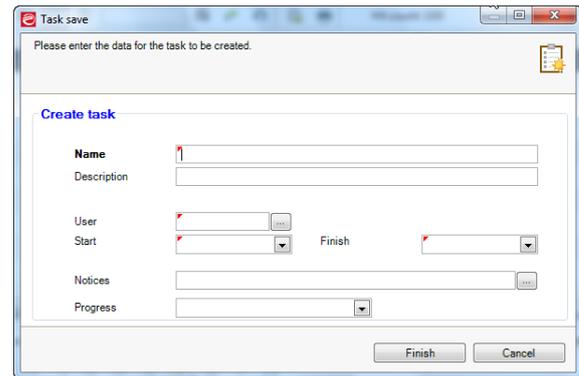


#### Creation of a task in the context of a project

1. Select the project the task is to be assigned to. Go to the tab "Search" and select => "Projects".
  2. Enter the search criteria for the desired project and start the search.
  3. If the desired project is displayed in the hit list, select it.
  4. Select the icon  "Create new task" from the icon bar on the tab of the project form/list.
- ⇒ The wizard for the creation of a new task is displayed



5. Enter all required information for the new task.
  6. Confirm your entries with <Finish>.
- ⇒ The new task is created and linked to the new project.
- ⇒ The task is now displayed in the dependent project tabs "Structure", "Gantt chart", "Tasks", etc.



The screenshot shows a 'Task save' dialog box with the following fields and controls:

- Name:** A text input field.
- Description:** A text input field.
- User:** A dropdown menu.
- Start:** A date/time selection control.
- Finish:** A date/time selection control.
- Notices:** A text input field.
- Progress:** A dropdown menu.
- Buttons:** 'Finish' and 'Cancel' buttons at the bottom right.

- ⇒ The creation of a new project task is thus finished.

Further information on tasks in PRO.FILE can be found in the manual "Operation PRO.CEED Processes and Tasks".

## 7 Further functions for PRO.CEED

Apart from the above functions of the various PRO.CEED objects, you can use further functions for projects, processes and tasks.

- Dynamic and static: Links of projects and tasks with documents and parts
- PRO.CEED Application packages with optional MS Project integration for enhanced project planning

### 7.1 Dynamic and static: Links of projects and tasks with documents and parts

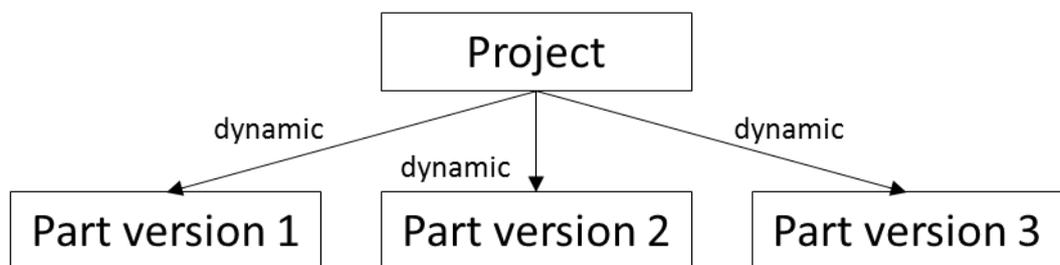
For the link of versioned documents or parts to a project, you can choose between two link types: dynamic and static.

#### Default: Dynamic links

If the current version of a document or part is linked to a project or a task, all subsequent versions of this document/part will be linked to this project/task.

In the structure of the project/the task, the most recent version of the document/part is displayed. This is called a "dynamic link".

Example:



- A part is linked to a project.
- Of this part, three versions have been created. The new versions keep the link to the project. All versions of the part are dynamically linked to the project.
- The structure display of the project shows the newest version 3 of the part.

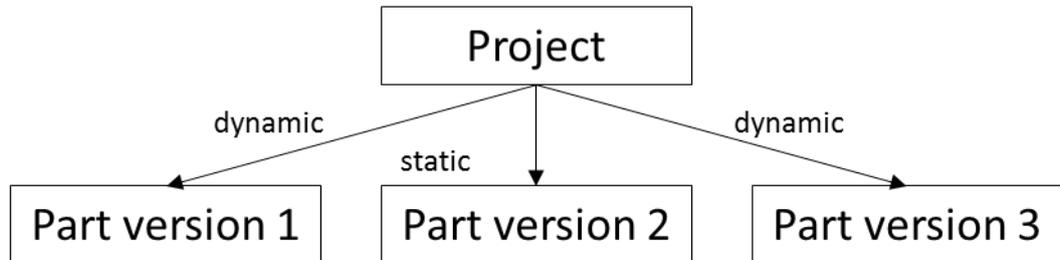
New links of a document/part to a project/task are always created as "dynamic" by PRO.FILE.

**For a fixed allocation of a specific version: static links**

If you do not want to automatically link the newest version of a document/part to a project/task, but a specific version, you can define the link to this version as static.

If a link between a project/task and the version of a document/part is defined as static, the structure display of the project/task will always display this specific version of the document/part, even if there are newer versions of the document/part.

Example:



- A part is linked to a project.
- A version is created off the part. The link of this version 2 to the project is defined as static.
- Then a new version of the part is created. The new version 3 is still linked to the project.
- The structure display of the project shows version 2 of the part, because this link has been defined as static.



**Note:**

The versions 1 and 3 of the part are still linked to the project. Since only one link can be static, the links of versions 1 and 3 are dynamic. The link of these versions to the project are visible in the usage browser of the respective part version.



**Note:**

The display of the most recent version of a statically or dynamically linked object within a project structure also depends on the status permissions of the user. When the role concept is used, the user needs a role with adequate permissions.

## 7.1.1

## Dynamic to static: Automatic change of the link types when a task or process is finished

- When a task is finished, a dynamic link between the task and a document is automatically set to "static".
- When a process is finished, a dynamic link between the process and a document is automatically set to "static".

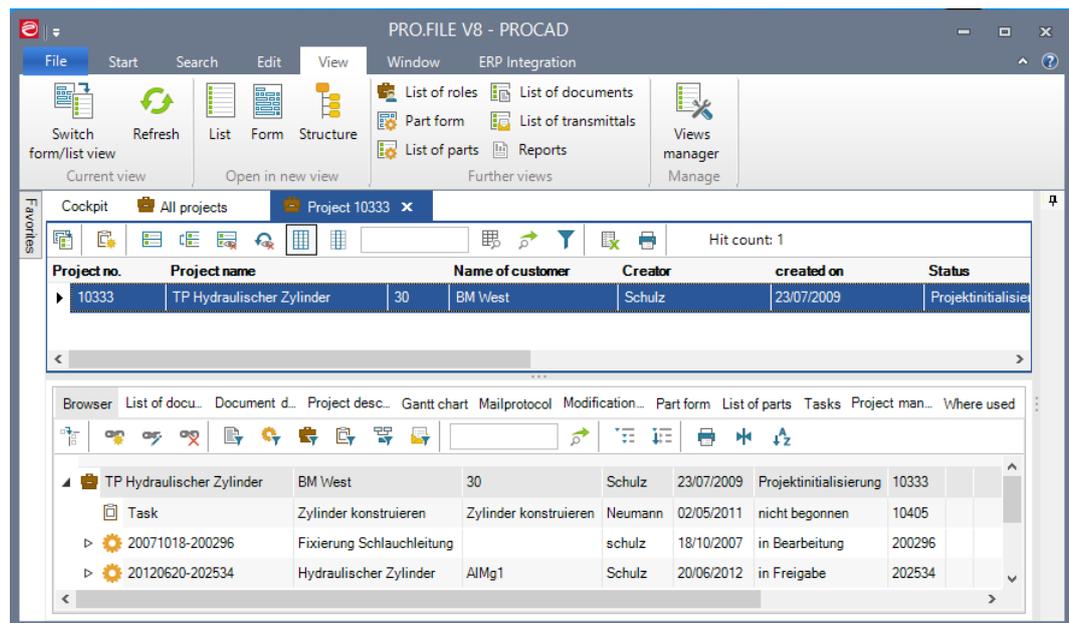
Background of this functionality: A finished task or process explicitly references the version status of a linked document that was valid at the time the task/process was finished.

## 7.1.2

## The procedure for changing a link type

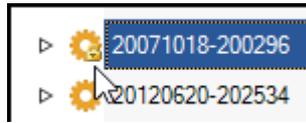
To change the type of link from dynamic to static or vice versa, proceed as follows:

1. Select the project in PRO.FILE, for which you want to change the link type of the linked documents/parts.
2. Click on the dependent tab "Browser". The objects linked to the project are displayed:



3. Select the document or part, for which you want to change the link type.
  4. Open the context menu (right mouse button) and select the function "Change link type" => "Dynamic <-> static".
- ⇒ A message displays the link type to be changed.
5. Confirm this change with <YES>.
- ⇒ The link type of the selected link is changed.

⇒ The new, static link is indicated in the structure browser by a "lock" icon over the object icon:



### Change link type in multi-selection mode

The link type can also be changed from static to dynamic or vice versa when the structure is displayed in multi-selection mode.

1. In the dependent "Browser", click the  icon to enter the multi-selection mode.
  2. Via the checkboxes, select the objects you want to change the link type of.
  3. From the context menu, select the desired link type, either static or dynamic.
  4. Confirm in the dialog that you want to change the link type.
- ⇒ The link type is now changed for all selected objects (the icons of the affected objects change accordingly).

### 7.1.3

#### An example: icons in the structure views

The positions in a structure are characterized by different icons. These icons have the following meanings:

-  Row 1: The project P2
-  Row 2: The task A1 below the project P2
-  Row 3: The project P22 below P2 with a weak project link.

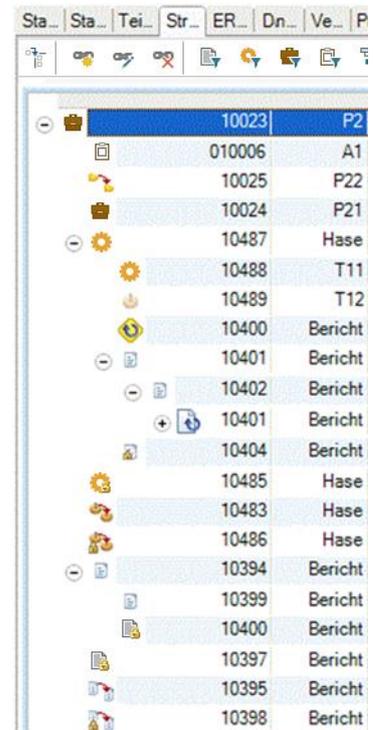
This is important when dealing with parts and documents that are linked to P22 and also have to be considered in P2 for the evaluation of permissions regarding the visibility due to the guest role in P22.

-  Row 4: A strong project-project link between P2 and P21.

This is important when dealing with permissions to projects, parts and documents that are strongly linked to P2 and the evaluation of the guest role in P21 also requires the evaluation of roles in P2.

-  Row 5: A strong, dynamic project-part link between project P2 and part 10487.

For the evaluation of permissions for the part 10487 the roles in P2 are of major significance.



If the part 10487 is versioned, a new version of the part is displayed at this position.

-  Row 6: A bill of materials position. Zeile 6: Eine Stücklistenposition. Part 10488 is used in part 10487.
-  Row 7: An irrelevant bill of materials position. This is a link between part 10487 and part 10489 that has been set as irrelevant to the bill of materials.
-  Row 8: The document 10400 is linked to the predecessor version of part 10487.

This is a hint that the predecessor version of part 10487 has a document version but that a new version of the document 10409 is required so that each version of the part has a document version of its own.

-  -  Rows 9-11: The document 10401 is linked to part 10487. It contains the document 10402. The document 10402 in turn contains the document 10401. This is a cycle in the document structure. However, such a cycle may be designed in a CAD system under certain conditions.
-  Row 12: A static part-document link between part 10487 and document 10404.

If the document 10404 is versioned in the future, the link to the old version will remain, provided that there is no newer version of part 10487.

-  Row 13: A strong, static project-part link between project P2 and part 10485. If part 10485 is versioned in the future, the newer version of the part will be linked to project P2, but the structure of P2 will still display 10485. With regard to permissions to part 10485, the roles in project P2 have to be evaluated.
-  Row 14: A strong, dynamic project-part link between project P2 and part 10483. This is important with regard to the visibility of part 10483. In this case, the roles in project P2 have to be evaluated. If part 10483 is versioned in the future, the new version of the part will be displayed at this place.
-  Row 15: A weak, static project-part link between project P2 and part 10486. This is important with regard to the visibility of part 10486. In this case, the roles in project P2 have to be evaluated.

Sta...	Sta...	Tei...	Str...	ER...	Dn...	Ve...	P
-		10023					P2
		010006					A1
		10025					P22
		10024					P21
-		10487					Hase
		10488					T11
		10489					T12
		10400					Bericht
-		10401					Bericht
		10402					Bericht
		10401					Bericht
		10404					Bericht
		10485					Hase
		10483					Hase
		10486					Hase
-		10394					Bericht
		10399					Bericht
		10400					Bericht
		10397					Bericht
		10395					Bericht
		10398					Bericht

If part 10486 is versioned in the future, the same version of part 10486 will still be displayed at this place. The new version of the part will then also have a link to project P2.

-  Row 16: A strong, dynamic project-document link. The same rules as for a strong, dynamic project-part link apply.
-  Row 17: A dynamic document-document link between documents 10394 and 10399. In case that 10399 is not a CAD document: If document 10399 is versioned in the future, this link will be updated.
-  Row 18: A static document-document link between documents 10394 and 10400. This link to this version of the document 10400 will remain, even if document 10400 is versioned in the future. This link to this version of the document 10400 will remain, even if document 10400 is versioned in the future.
-  Row 19: A static, strong project-document link between project P2 and document 10397. The same rules as for a strong, static project-part link apply.
-  Row 20: A strong, dynamic project-document link. The same rules as for a weak, dynamic project-part link apply.
-  Row 21: A weak, static project-document link. The same rules as for a weak, static project-part link apply.

## 7.2 PRO.CEED Application packages with optional MS Project integration for enhanced project planning

Project planning can be made directly in PRO.CEED. If the projects are large or very specific, you may want to use MS Project for the project planning, which is then exported to PRO.FILE.

For this purpose, PRO.CEED offers an MS Project integration that can be used in the context of the PRO.CEED application package "Engineering projects and documents control". In the context of this application package, the integration offers various functions for an integrated planning and control of projects.

The usage of the integration in the context of the PRO.CEED application package is described in the documentation of the application package.

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