

Collaborative Engineering & Project Management (LO-CEP)



HELP.PSCOLL

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Icons

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Collaborative Engineering & Project Management (LO-CEP)

Purpose

Globalization of projects makes an efficient exchange of information between project teams at different locations, with different technical environments, essential.

CEP uses the power of the Internet for business processes that involve your company and external partners (manufacturers, sub-contractors).

The purpose of CEP is to facilitate the exchange of information and knowledge between the person responsible for a project in your company, referred to as the “owner”, and external partners, referred to as “participants”, who are all involved in a common project, for instance planning a new plant. The owner can select documents, projects and product structures in the SAP System and send them using the Internet to chosen participants for further processing. The participants comment on and modify objects that then can be evaluated and if desired, transferred to the SAP System.

Implementation Considerations

The following system requirements exist for the owner:

- The current version of Open PS for Microsoft Project (can be obtained via SAPNet)

The following system requirements exist for the participants:

- Internet Explorer version 4.0 or higher (for Windows 95/98 and NT)
- For editing project structures: Microsoft Project
- For editing documents, Excel spreadsheets etc.: Microsoft Office

Features

The collaboration process in outline:

- For each project task the owner places the relevant objects (project definitions, WBS elements, activities, materials, documents, BOMs) in a folder in the SAP System. Configuration management is used as the editing tool.
See [Creating Folders in Configuration Management \[Page 7\]](#)
- The selected participants are then sent an e-mail that contains an Internet link (URL) to the Internet server, from which they can then download the folder to their PCs.
See [Notifying Participants \[Page 17\]](#)
- The participants process the data locally offline with the programs they have on their PCs (for instance Microsoft Project, Microsoft Office, or CAD systems). As a result, external participants can take part in the processing of projects without having to install an R/3 System or have any SAP experience.
See [External Processing by Participants \[Page 21\]](#)
- After they have finished working on the project, the participants return the modified folders to the owner. For each participant a successor folder is created in the system.

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See [Upload of Folder Objects \[Page 33\]](#)

- The owner is informed automatically by e-mail when changed folders are returned, can check, compare and reconcile the data with the original structure in the SAP System.

See [Monitoring \(Review and Comparison of Returned Folders\) \[Page 34\]](#) and [Transferring Objects to the Original Structure in the SAP System \[Page 40\]](#)

Example

Project manager Silvia Smith needs a list of all the materials required in the current project from the project team and the business partners supplying various parts. She creates a folder in the SAP System in which she places an Excel spreadsheet (with a detailed overview of costs and dates) and the specifications from the customer. She makes this folder available to the project team and the external business partners using the Internet.

These people can then download the folder to their PCs, add data to the Excel spreadsheet, add further documents describing the necessary materials, and return the folder to the *project manager*.

She is automatically informed about the changes and forwards to folders that have been returned to the responsible *Controller* for internal review.

Together with her team Silvia compares the comments from the *Controller* with those of the external partners and transfers the data she considers important to the SAP System.

Creating Folders in Configuration Management

Definition

In Configuration Management you collect the objects that are to be made available to the participants in a CEP process. As the owner of a process you place all the objects (for instance materials, documents, WBS elements) that are relevant to a product or project in a particular [life cycle phase \[Ext.\]](#) in a [configuration folder \[Ext.\]](#).

When the product or project moves to a new life cycle phase, you create a new configuration folder (successor folder) for this phase. You can create several folders for one life cycle phase, each representing a different version.

For detailed information, refer to the documentation for [Configuration Management \(LO-CM\) \[Ext.\]](#)

Process Flow

For the CEP process you must carry out the following steps in the correct order:

1. [Create a configuration folder \[Page 8\]](#)
2. [Assign a controlled object \[Page 10\]](#) A controlled object can be a project definition, a WBS element or a material. In this step you select a controlled object and assign it to the configuration folder.
3. [Select substructures of the controlled object \[Page 12\]](#) Subordinate objects and substructures (for instance documents, BOMs, WBS elements, and activities) describe the controlled object in detail. In this step you specify which objects or substructures are supplied for processing to the participants.
4. [Attach task descriptions \[Page 15\]](#) Here you describe the tasks that you require the participants to carry out.
5. [Publish the folder \[Page 16\]](#) When you publish a folder, it is frozen for changes. At the same time an XML file is generated with which it is possible to send folder objects via the Internet. It is also used to save data on the participant's PC.
6. [Notify participants \[Page 17\]](#) You specify the participants, define certain parameters, and sent the notifications from Configuration Management.

Result

The participants are informed automatically by e-mail that a configuration folder is available for processing on the Internet server, whose address (URL) is included in the e-mail.

Creating Configuration Folders

Creating Configuration Folders

Use

You place objects (for instance documents, materials BOMs) in a configuration folder to make these objects available to participants in the CEP process. This procedure describes how you create a new configuration folder together with a new configuration definition.

For information on how to create a new configuration folder for an existing configuration definition, refer to the Configuration Management documentation.

Structure

A configuration folder is identified by the following attributes:

- [Configuration definition \[Ext.\]](#)
- Configuration folder key
- [Life cycle phase \[Ext.\]](#)
- Folder description

For more detailed information, see Creating Folders [in Configuration Management \(LO-CM \[Page 7\]\)](#) or in the SAP Library *under Logistics -> Configuration Management*.

Prerequisites

You must have previously defined a CEP profile in Customizing (*Project System -> Collaboration -> Define CEP Profile*).

Procedure

1. Choose *Logistics/accounting -> Project System -> Collaboration -> Create and publish folder (Configuration Management)*.

The initial screen for Configuration Management (CM Workbench) appears.

2. To create a new folder, choose  *Config. def* on the right-hand screen area.

The *Create a Configuration Definition* dialog box appears

3. Enter a *Configuration definition* and a *Description of the definition*



A [configuration definition \[Ext.\]](#) contains all the configuration folders for a particular product or project in all life cycle phases under a common name.

4. Use F4 help to select the standard *Life cycle profile CEP*.



You can also define your lifecycle profile for CEP in Customizing under *Project System -> Collaboration -> Define Lifecycle Profile*. For more information, see [Lifecycle Profile \[Ext.\]](#) and in the Implementation Guide.

Creating Configuration Folders

5. In *Configuration folder* enter a name for the new configuration folder or use F4 help to select an existing folder. Enter a *Description* for the folder.
6. Choose  and then .

Result

A new configuration folder is created and saved. You can create successor folders for this folder later. For details on how to create a successor folder, see [Creating Successor Folders](#).

You now assign the configuration folder a *controlled object*. See [Assigning a Controlled Object \[Page 10\]](#)

Assigning a Controlled Object

Assigning a Controlled Object

Use

After you have created a configuration folder, you must assign a so-called controlled object. The controlled object is the object whose configuration or changes are central to the current CEP process.

Subsequently you select any number of subordinate objects for the controlled object. These subordinate objects such as BOMs documents (design drawings, work descriptions), WBS elements, network activities, and similar objects describe the controlled object in more detail. See [Selecting Substructures of the Controlled Object \[Page 12\]](#)

Prerequisites

You are in a configuration folder in Configuration Management.

Procedure

1. In the right-hand screen area, choose the *Con Fold* tab page (configuration folder).
2. Choose an object type from the list box in the *Type of controlled object* field. For instance, project definition or material.



In Release 4.6C you can use materials, project definitions, WBS elements, and dummy materials. Other objects can be used in Configuration Management but not in CEP.

If the object that you want to enter as the controlled object (for instance material master) does not yet exist in the SAP System, you can create a dummy. For more information, see [Dummies for Controlled Objec \[Page 11\]](#)

3. Enter in *Controlled object* the name of the required object.



You have defined Project definition as the type of the controlled object. Now enter the project definition of an existing project, for example T-2000.

4. Choose .

Result

The controlled object is selected and the configuration folder saved. You now use the browser to select in your controlled object the subordinate objects that are to be made available to the participants for further processing.

See [Selecting Substructures of the Controlled Object \[Page 12\]](#)

Dummy for Controlled Objects

Use

You enter a dummy if the object that you want to enter has not yet been created in the SAP System.



For example, you have planned the material number T-30000 for a new turbine. Since the turbine is still in the specification phase, you have not yet created a material master record.

Nevertheless, you can enter the material number T-30000 as a controlled object in the configuration folder if you select the *Dummy material* as the type of controlled object.

At a later date, after you have created the object, change the type of controlled object (such as to *Material*).



As long as the type of controlled object is a dummy the description of the object has no operative meaning.

Activities

If you want to enter a dummy, first select an entry on the *ConfFolder* tab page in the field *Type of controlled object* that starts with *Dummy*.

Selecting Substructures of the Controlled Object

Selecting Substructures of the Controlled Object

Use

You select substructures of your controlled object in the browser. You use the graphic browser to:

- Obtain an overview on the project – or the project structure of the controlled object.
- Select individual objects or substructures from the controlled object. These selected objects or structures are made available to the CEP participants for processing.
- Generate a MPP file for a project structure, if necessary. This makes it possible to edit project structures outside the SAP System using Microsoft Project.



Depending on the type of the selected controlled object the system uses either [the Product Structure Browser \[Ext.\]](#) or the project structure browser. For more information on the functions in the browser, read [Display Browser \[Ext.\]](#) in the *Configuration Management* documentation.

Prerequisites

You have created a configuration folder and assigned it a controlled object. See also [Create Configuration Folder \[Page 8\]](#) and [Assigning Controlled Objects \[Page 10\]](#).

Procedure

1. In the *worklist* select the relevant configuration folder and choose  *Show/hide browser*.

The browser opens in the left-hand screen area and displays the structure of the controlled object. If the structure is not already completely expanded, choose .



If the controlled object is a project structure that is to be processed by the participants, you must now generate a MPP file. This allows the participants to edit project structures outside the SAP System using Microsoft Project. For more information, see [Generating Microsoft Project File \[Page 14\]](#)s

2. Drag & drop the objects that are to appear in the configuration folder from the browser to the lower middle screen area. The following alternatives exist:

What do you want to do?	Action in browser
Select individual objects	Select the object and drag it, keeping the mouse button pressed, to the lower middle screen area.
Select a substructure	Select the top object in the substructure and, keeping the mouse button pressed, the object on the lowest level. The substructure to be copied is highlighted. Drag this substructure to the lower middle screen area.

Selecting Substructures of the Controlled Object

Select the complete structure	Select the top object in the complete structure and, keeping the mouse button pressed, the object on the lowest level. The complete structure is highlighted. Drag this structure to the lower middle screen area.
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If you want to send the generated MPP file with the folder, you also have to save it in the configuration folder as described above in *Select individual objects*. See also [Generating Microsoft Project File \[Page 14\]](#)

3. Save the selection by choosing .
4. Close the browser by choosing  *Show/hide browser*.

Result

You have selected subordinate objects and/or substructures of a controlled object and saved them in a configuration folder. The state of the folder and the assigned controlled object are recorded for this point in time. The next step is to [attach a task description \[Page 15\]](#).

Generating Microsoft Project Files

Generating Microsoft Project Files

Use

If you want participants to edit the project structure outside the SAP System using Microsoft Project, you must generate a Microsoft Project file (MPP file) before you publish the folder. CEP uses Open PS for Microsoft Project to convert a SAP project structure to Microsoft Project format.

Prerequisites

You have opened a configuration folder in Configuration Management and assigned the folder a controlled object. See also [Create Configuration Folder \[Page 8\]](#), [Assigning a Controlled Object \[Page 10\]](#), and [Selecting Substructures of the Controlled Objec \[Page 12\]](#)t.

You have opened the project structure browser by choosing .

Procedure

1. In the project structure browser select the project definition. If you want to generate a MPP file for a substructure only, select the corresponding WBS element.

2. Choose .

The *R/3 PS Logon* dialog box appears. Here you have to log on to the current R/3 System again. This is necessary for technical reasons.

3. Enter your user name and password for the R/3 System. In the next dialog box, be sure to select the current system. Confirm by choosing *OK*.



If this is the first time you have used Open PS for Microsoft Project, you have to enter your user and system data. A wizard helps you do this.

For more information about the initial settings for Open PS, refer to the Open PS for Microsoft Project documentation that you downloaded with Open PS.

4. The first time you generate a MPP file in CEP, a dialog box appears asking you to specify where the file is to be stored in the document management system.

For more information, see [Storing Data in the Storage System of the Knowledge Provider \[Ext.\]](#).

5. Save the MPP file.

Result

The system generates a MPP file that is displayed in the browser as an extra object. This MPP must be included in the selection when [Selecting Substructures of the Controlled Object \[Page 12\]](#).

Attaching a Task Description

Use

Use this procedure to attach task descriptions to configuration folders. These can be detailed processing instructions, notes, or suggestions.

Prerequisites

You have opened the folder in Configuration Management.

Procedure

1. Choose the *Text* tab page.
2. Enter your task description for all participants.
3. Save the task description by choosing .



You can also attach other documents that are importing for processing by the participant. Choose the *Accompanying doc* tab page and enter the necessary data.

Result

The task description is saved and made available with the configuration folder to the participants. You now publish the configuration folder. See [Publishing a Configuration Folder \[Page 16\]](#)

Publishing a Configuration Folder

Publishing a Configuration Folder

Use

When you publish a folder, it is frozen for changes. At the same time an XML file is generated with which it is possible to send folder objects via the Internet. It is also used to save data on the participant's PC. All the participants, who have been notified, can then access the published folder (at the same time if necessary) and download it to their PCs.

Prerequisites

You have [created a new configuration folder \[Page 8\]](#), [assigned it a controlled object \[Page 10\]](#), and [selected substructures of the controlled object \[Page 12\]](#).

Procedure

1. Choose .

The *Effectivity* dialog box appears.

3. Enter a validity date and select a CEP scenario. Choose .

The system generates your controlled object as an XML file.

4. If documents exist, the *Select Original Application Files* dialog box appears.

You can select which of the original application files attached to documents should be saved with XML file. If necessary, a  signifies that an original application file does not exist in document storage (KPRO). These original application files are not taken into account when the XML file is generated.

After you have selected all the required files, choose  *Continue*.

Result

The folder is published and is now displayed in the *Object* screen area as *XML configuration folder* with all the assigned objects. The next step is to notify the participants by e-mail. The participants can then download the published folder from the server specified by the URL in the e-mail. See [Notifying Participants \[Page 17\]](#)

Notification of Participants

Use

You must notify every participant in the CEP process by e-mail that a folder is available to be downloaded. This e-mail automatically contains a link to the Internet server where the participants can access the data.

Integration

Prerequisites

You have published the folder that the participants should access. See [Publishing a Configuration Folder \[Page 16\]](#)

Features

Notification of the participants consists of two steps:

- [Select the participants and define authorizations \[Page 18\]](#) You enter the names of the participants and define user-dependent authorizations and general attributes.
- [Send notification \(e-mail\) to the participants \[Page 20\]](#) You send a notification e-mail with a reference line and comments.

Selecting Participants and Defining Authorizations

Selecting Participants and Defining Authorizations

Use

To select participants you need access to the e-mail and storage system in the SAP system. External recipient addresses are also allowed.

CEP supports the following types of recipients:

- SAP users
- External addresses
- Personal distribution lists
- Public distribution lists
- Internet addresses
- Fax addresses

During selection of the participants you also stipulate the following parameters:

- The due date
- The CEP profile that has been saved for this process
- Whether a participant has change authorization or can only view the folder
- Whether a participant is working cooperatively, that is whether participants can see the changes of other participants

Prerequisites

You have defined a CEP profile in Customizing.

Procedure

1. In Configuration Management choose the *Recipient* tab page on the right-hand screen area.
2. Enter the recipient's SAP user name or an external Internet address and choose *Enter*.



If you enter an incomplete or an incorrect SAP user name, the system goes to the internal address administration. Here you can select the relevant user.

3. You can also specify additional authorization parameters for each participant:

Function/Indicator	Effect
<i>Read only</i>	If this indicator is set, the participant can read the downloaded folder, but cannot make any changes.

Selecting Participants and Defining Authorizations

<i>Cooperation</i>	<p>If you have defined a competitive scenario in Customizing for the current profile, you overwrite the Customizing setting by setting this indicator. The participant can now see the changes that other participants have made.</p> <p>If you have defined a cooperative scenario in Customizing, you can remove the indicator for individual participants. These participants can no longer see the changes that other participants have made.</p>
<i>Due:</i>	Enter the date here before which the participants are to return the folders.

Result

The participants and their authorizations are defined. You can now [send notifications \(e-mail\) to the participants \[Page 20\]](#)

Sending Notifications (E-Mail) to the Participants

Sending Notifications (E-Mail) to the Participants

Use

As well as the detailed task description in the configuration folder you write an e-mail telling the participants that a folder exists and giving them a summary of the task to be performed. Use the reference line and description to describe the task clearly.

Prerequisites

You have entered participants in the list of recipients and entered a detailed task description.

Procedure

1. In Configuration Management choose the *Recipient* tab page.
2. Enter a reference line (*Re:*) and a *description*.



For the description you can also data saved on your PC such as word processing files. To do this, choose . To save a description on your PC for further use later, choose .

3. Save your data.
4. Choose  *Send*

Result

The e-mail is sent to the selected participants.

External Processing by Participants

Purpose

The owner of the CEP process has provided you with one or more folders for processing and informed you by e-mail. After you have logged on to the Internet server for the SAP System as a participant in the CEP process you can now download the available folder objects (project structures, documents, material) to your local PC. You can edit these objects locally offline and then return them to the owner.

Prerequisites

The following system requirements must be met:

- Internet Explorer version 4.0 or higher (for Windows 95/98 and NT)
- For editing project structures: Microsoft Project
- For editing documents, Excel spreadsheets etc.: Microsoft Office

Process Flow

On the participant side the process is as follows:

- After you have logged on to the Internet server using the supplied URL, you see an overview of all the folders that you can edit or view. You select a folder and download it to your local PC. See [Downloading Folders \[Ext.\]](#)
- You can now log off from the Internet Server and [start local processing \[Page 23\]](#).

You change documents in the following ways:

[Creating/Deleting Documents \[Page 26\]](#)

[Assigning Original Application Files / Deleting Assignments \[Page 27\]](#)

[Assigning Documents to an Object \[Page 28\]](#)

[Redlining Functions \[Page 29\]](#)

You [edit project structures \[Page 32\]](#) using Microsoft Project.

- To [return \[Page 33\]](#) the changed folder to the owner, you must log on to the Internet server again.

Result

The owner is automatically informed by e-mail when you return changed folder objects. In the case of a cooperation scenario, the other participants are also informed.

Downloading a Folder to a Local PC

Downloading a Folder to a Local PC

Use

After you have successfully logged on to the ITS server, an overview of your folders appears. Here you can see all folders that you are to process or have processed. Folders that have been closed by the owner are no longer displayed.

In the folder overview you can download new folders to your PC or return folders that you processed to the owner.

For information on how to return processed folders, see [Returning Folder Objects \[Page 33\]](#).

Procedure

1. On the *Overview* screen in the *Folders* box select the folder to download by clicking on it.

On the right-hand side of the screen you can now see more information about the selected object:

- Sender (owner)
- The date it was sent and the date it is due
- The other participants that are involved with the processing the same folder (only in case of cooperation)

The status icon for a folder tells you whether it is new, has already been downloaded or returned to the owner.

2. In the right-hand screen section, choose *Download folder*. Confirm the security warning.



The first time you download a folder, the *Choose local CEP directory* dialog box appears. This is where CEP saves the data locally on your PC. You can overwrite the proposed standard directory. Confirm by choosing *OK*.

The *Download files* dialog box appears.

3. Select the files that you want to download. You can only process files that are available locally. Choose *Continue*.

An overview of the folder objects appears.

Result

You can now process individual folder objects from the overview. It is always possible to download more folder objects. To do so, you must reconnect to the Internet server using the URL.

Starting Local Processing

Use

Since the folder has now been saved on your PC, you can log off the Internet server and process the folder locally.

Prerequisites

It is only possible to process a folder locally if you have [downloaded the folder \[Page 22\]](#).

Procedure

You are in the processing overview for a folder (*Overview [Folder]*).

1. Choose *Log off* in the menu bar of the Internet server.
 - Information about the Internet server appears. No entries are necessary.
2. There are two ways of starting local processing:
 - Double-click on the *Start local CEP* shortcut on your desktop or
 - Choose *Start local CEP* in the favorites of your Internet Explorer.



The first time you download a folder, a new directory is created on your PC automatically where all the data from the Internet server is saved. A shortcut on your desktop and an entry in the favorites of your Internet Explorer are also created at this stage.

Result

The *CEP Overview [Offline]* appears in the Internet Explorer. Click on the folder name to access the processing overview for the folder. The following icons are used for the individual project objects:

Icon	Description
	Project definition
	WBS element
	Network headers
	Activity
	Material

Starting Local Processing

	Documents
-----------------------------------------------------------------------------------	-----------

Editing Documents

Use

As a participant you can make changes to documents or change the assignment of documents to WBS elements, activities, and materials.

Features

The following changes are supported:

Function	What You Should Know
Creating/Deleting Documents [Page 26]	A document always consists of a document info record (administrative information) and the assigned original application files.
Assigning Original Application Files / Deleting Assignments [Page 27]	You can assign a document new original application files or delete the assignments (Word, Excel, GIF files).
Create document version	The version number documents the change or delivery status of a document. It is part of the document that identifies a document.
Assigning Documents to an Object [Page 28]	You can assign a document to a WBS element, activity, or material.
Redlining [Page 29]	You can enter comments as texts or graphic elements to a 2-D original application file.



You can enter a comment for every change that you make to an object. This is the purpose of the *Comments on object* tab page for each object. Here you can enter your comments in *Own comments*.

Creating/Deleting Documents

Creating/Deleting Documents

Use

You want to create a new document for a WBS element, activity, or material. Alternatively you want to delete an existing document.

Procedure

Create a document

You are in the local processing overview for a folder (*Overview [Folder]*).

1. In the left screen area select a WBS element, activity, or material.

Detail information for the selected object appears in the right-hand screen.



You can use the  function on the left-hand screen area to open a search screen for finding folder objects.

2. Choose .

The *Create document* overview appears in the right-hand screen area.

3. Enter the necessary data:

- Document name
- Document type
- Document part (three characters)
- Version (two characters)
- Description (optional)

4. Choose *Continue*.

The new document appears in the overview.

Deleting Documents

1. In the left-hand screen area select a document.
2. On the *Document* tab page in the right-hand screen area click *Delete* in *Document administration*.
3. Confirm the warning with *OK*.

The document is deleted. A deletion cannot be undone. If the document has been assigned original application files, the assignments are also deleted.

Assigning Original Application Files / Deleting Assignments

Use

Use this procedure to assign an existing document original application files or to delete these assignments.

Procedure

Assigning Original Application Files

You are in the local processing overview for a folder (*Overview [Folder]*).

1. In the left-hand screen area select a document.

In the right-hand screen area detailed information about the selected document appears.



You can use the  function on the right-hand screen area to open a search screen for finding documents.

2. On the *Document* tab page in the right-hand screen area click *Add* in *Administration of original application files*.
3. Select a file that exists locally.
4. A dialog box appears in which you can enter an additional description.

The select original application file is assigned to the document in the overview.

Deleting Assignments of Original Application Files

1. In the left-hand screen area select a document.
2. On the *Document* tab page in the right-hand screen area click *Delete* in *Administration of original application files*.
3. Confirm the warning with *OK*.

The assignment of the original application files to the document is deleted. Such a deletion cannot be undone.

Assigning Documents to an Object

Assigning Documents to an Object

Use

You can assign a document to a WBS element, activity, or material. You can also change existing assignments.

Procedure

1. Select a document in the overview
2. On the *Document* tab page in the right-hand screen area click *Assign in Document administration*.

A dialog box appears in which you can change the existing assignments to objects and create new ones.

In the overview you can see the assignments of the selected documents to one or more objects.

Redlining Functions

Use

Use redlining functions to add comments to an original application file that is being displayed. In the case of 2-D original application files this information is saved in a layer.

The general redlining functions are intended exclusively for editing 2-D files.

Functions in Viewing Mode

How do you call up redlining in viewing mode?

- In the editing overview for the folder select an original application file in the left-hand screen area.

The original application file is displayed in the right-hand screen area. The editing functions for the viewing mode are available.

Icon	Function
<i>Fit</i>	Displays the complete view
<i>Zoom Area</i>	Determines the visible area and zooms
<i>Pan</i>	Moves visible area
<i>Zoom</i>	Zoom
<i>Black-white</i>	Switches black-white view on/off
<i>Seek</i>	Determines the center of the screen section
<i>Copyright</i>	Displays copyright information

General Redlining Functions

How do you call up redlining in editing mode?

- In the editing overview for the folder select an original application file (2-D) in the left-hand screen area.

The original application file is displayed in the right-hand screen area.

- Choose  *To redlining*

The *Working on 2-D screen (view mode)* appears. Here you can carry out functions in view mode.

- Select an active layer from the list box or create a new one by selecting  *New layer*.

You are now in redlining editing mode. You can switch between redlining and view mode at any time by clicking on the relevant button.

Icon	Function
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Redlining Functions

	Select redlining object You must select a mark-up object before you can cut it out using 
	Cut Cuts out the mark-up object that you previously selected with 
	Undo
	Redo
 <i>New layer</i>	Creates a new layer
	Saves a layer
 <i>Delete layer</i>	Deletes the current layer
	Print
	Save the view locally (as TIFF, JPG etc.)

Mark-up functions

Icon	Function
	Draw freehand line
	Draw arrow You can define the settings on the lower right-hand side of screen.
	Draw line
	Draw polyline
	Draw ellipse
	Draw polygon
	Draw rectangle
T	Enter text: Place the cursor where the test is to be inserted

Special Redlining Functions for 2-D Files

Dimensioning functions

Icon	Dimensioning function
	Dimensioning angle
	Dimensioning distance
	Dimensioning radius
Calibrate	This function is only suitable for files in grid format (for instance *.BMP or *.TIF) as files in vector format (for *.DWG for AutoCAD) are already calibrated.

Processing of Project Structures

Processing of Project Structures

Use

You edit project structures using Microsoft Project.

Prerequisites

You must have installed Microsoft Project on your PC.

If the owner wants you to edit the project structure, he/she must have previously generated a Microsoft project file (MPP file) for the folder. This makes it possible to edit the data in Microsoft Project. If a MPP file does not exist in your folder and you are expected to edit the structure, contact the owner.

Features

In Microsoft Project you can change object structures and dates. Although costs can be entered in Microsoft Project, it is not possible to transfer them to the SAP System.

Activities

Select the MPP file in the overview under *All objects*. In the right-hand screen area you can see the *File attributes*.

- If you want to **display** the project structure in Microsoft Project, choose *View*.
- If you want to **change** the project structure in Microsoft Project, choose *Change*.

If you have made any changes, this is noted in the *File attributes* under *Status*.

Upload of Folder Objects

Use

After you have finished processing the folder you want to return it to the owner, that is upload it.

Prerequisites

If you are [working offline \[Page 23\]](#), you must first log on to the Internet server again. Choose *Log on* in the local CEP overview, accessed using the Internet Explorer, and enter you user name and password.

Features

After you have logged on to the Internet server, you click on the folder that you want to return in the overview.



You can only return a folder, if it has the status *In process*, that is if you have downloaded and changed the folder.

In the right-hand screen area more detail information on the folder is displayed. Choose *Upload folder*.

The *Send data to server* dialog box appears informing you about the changes that you have made and that are to be returned to the server. Choose *Continue*

The system confirms that the upload has been carried out successfully. If errors occur, you must repeat the process.



If you have already logged on to the Internet server, you can upload the folder directly by choosing *Upload* on the *Overview* screen.

If you upload the same folder again, the system overwrites the data that you returned previously.

Monitoring

Monitoring

Use

As owner of a CEP process you can check up at any time in the SAP System on the current state of your folders or returned successor folders.

In Monitoring you have an overview of all the folders that you have created or published. You can also use filter functions to display other owners' folders.

In the left-hand screen area you see an overview of all folders and their successor folders (arranged hierarchically). You double-click on a folder in the overview to display the detail information for a folder/participant in the right-hand screen area.

Features

Monitoring has the following features:

- Status display that shows you whether a folder has been sent to the participants, downloaded, returned, or is in review.
- For each folder or successor folder you can display additional information (for instance folder and participant data, comments).
- You can compare the structure of a successor folder from a participant with the original structure in the SAP System. The system displays all the changes that a participant has made. Alternatively you can compare two successor folders.

For more information, see [Comparison of Two Folders \[Page 39\]](#)

- You can revise the successor folders from participants yourself or send them to other users for internal review. You can also send a successor folder back to a participant for further work.

For more information, see [Review \[Page 35\]](#).

- From Monitoring you go directly to reconciliation. Here you adapt the changes made by the participant to fit the original data structure and then transfer the data.

See also [Transferring Objects to the Original Structure in the SAP System \[Page 40\]](#)

Review

Use

In Monitoring you can review folders that you have received back from participants. Here the changes to a folder can be displayed, checked and if necessary be changed again.

Prerequisites

The original folders cannot be reviewed using this function. The successor folders from the participants that you want to review must have status .

Features

A number of review options are available:

- As the owner you can make changes to a successor folder that you have received back from a participant.
See [Folder Review by Owner \[Page 36\]](#)
- You can forward a successor folder to others (for instance the project manager or a controller) for internal review.
See [Forwarding Folders for Internal Review \[Page 37\]](#)
- You can return a successor folder to the participant with a suitable comment requesting that the folder be processed further or revised.
See [Returning Folders to Participants \[Page 38\]](#)

Folder Review by the Owner

Folder Review by the Owner

Use

As the owner you can check and make changes to a successor folder that you have received back from a participant. Your changes are stored in another successor folder.

Prerequisites

The successor folder for which the review is to be carried out must have the status  *Folder returned*.

Features

In the overview you select the successor folder that you want to edit.

You choose  *Review* to call up the review transaction. Here you can execute the following functions:

Function	Action
Display object in SAP structure	Select an object and choose  . The SAP structure appears in the right-hand screen area.
Change original application file	Double-click on an original application file. The file is opened in the right-hand screen area using the relevant application program. If it is a 2-D original application file, you can use redlining.
Change assignments	Using drag & drop you can assign documents to other WBS elements, activities, or materials.
Change document status	Select a document and in the context menu choose <i>Change status</i> . A dialog box appears in which you can select the relevant status. The status appears as an icon in the overview.
Delete object assignments	Select a document and choose <i>Delete object assignments</i> in the context menu. A dialog box in which the objects are listed to which the document is assigned. Choose the assignment(s) that you want to delete.

Sending Folders for Internal Review

Use

You can forward a successor folder from Monitoring to others (for instance the project manager or a controller) for internal review.

Prerequisites

The successor folder must have the status  *Folder returned* or  *In review*

Procedure

You are in the Monitoring transaction.

1. In the *Folder/recipient* overview double-click on the folder that you want to send.
All the detail information for this folder and the name of the recipient who returned it appears in the right-hand screen area.
2. Click on  *Services for object*, above the toolbar. In the box that appears choose *Workflow* → *Start workflow*.

The *Start Workflow* dialog box appears.

3. Specify whether you want to send the selected successor folder
 - With change authorization (*TCE: Review – Distribute a configuration folder (R)*)
 - With read-only authorization (*TCE: Review – Distribute a configuration folder (V)*)
 - With authorization to transfer the folder to the SAP System (*TCE: Review – Distribute a configuration folder (T)*)

Choose .

4. A dialog box appears in which you enter the recipient of the workflow.

Result

The folder is sent to the selected internal recipient.

For more information refer to the Workflow documentation in the SAP Library.

Returning a Folder to a Participant

Returning a Folder to a Participant

Use

You can return a successor folder to the participant with a suitable comment requesting that the folder be processed further or revised.

In the case you create a further successor folder based on the successor folder you received from the participant. This guarantees that the original status of the successor folder is preserved after the participant returns the folder again.

Prerequisites

The successor folder must have  *In Review* status.

Procedure

You are in the Monitoring transaction.

1. In the *Folder/recipient* overview double-click on the folder that you want to send.
All the detail information for this folder and the name of the recipient who returned it appears in the right-hand screen area.
2. Choose  *Return folder to participant*.
You go to Configuration Management (CM Workbench)
The system automatically displays the selected folder as the configuration object.
3. You now create a new successor folder. Choose .
A dialog box appears in which you create the new configuration folder. You must set the life cycle phase to *In process*.
5. Choose . The successor folder is created.
6. Enter the participant to whom you want to return the folder on the *Recipient* tab page. Here you also add the reason for returning the folder.
5. Choose  *Send*

Result

The participant receives an e-mail informing him/her that the new successor folder is ready for processing.

Comparison of Two Folders

Use

After the participants have returned modified successor folders, you can compare the changes with the original data (the project/product structure of the published folder).

You can

- Compare a published folder with the corresponding successor folder from a participant or
- Compare two successor folders from different participants, but based on the same published folder

The system displays all the difference between the two folders in a separate window. You can then select individual changes and reconcile them with the original data structure in the SAP System.

Prerequisites

It is only possible to compare a successor folder, if it has status  *Folder returned*.

Features

First you specify in Monitoring which data structures you want to compare. In the Folder/participant overview you select at least two folder or successor folders and choose  *Compare and reconcile*

On the *Comparison and Reconciliation* screen that appears you select from the *object selection* a folder as a reference object and a folder for comparison using drag & drop.

When both folders are open, you can choose whether all objects in both folders or only selected objects/substructure are compared.

The results are displayed in the *Comparison* screen area on various tab pages:

- *Additional Objects* Which object are new in the comparison folder
- *Changed Objects* Which objects have been changed in the comparison folder
- *Objs that do not exist* Which objects have been deleted from the comparison folder
- *Hierarchy position changed* Which object shave been moved within the hierarchy

To reconcile objects, you select them in the *Comparison* screen and choose  to copy to the *Objects for Reconciliation* screen area. When you have collected all the objects that you want to reconcile, choose  *Go to data transfer*.

Transferring Objects to the Original Structure in the SAP System

Transferring Objects to the Original Structure in the SAP System

Use

You can transfer changes that a participant has made to the original structure to the SAP System. You can transfer documents, original application files, modified assignments, and Microsoft Project files (MPP files).

Features

In Monitoring you have selected a file to transfer. You call up the transfer function by choosing  *Transfer*.

The following functions are available:

Function	What You Should Know
Transfer documents without making any changes	If you want to transfer a new/changed document directly, select it in the left-hand screen area and choose  . A dialog box appears in which you enter or create a change number. Choose <i>Enter</i> .
Transfer documents making changes	If you want to change a document before transferring it (for instance the document type or description), select it in the left-hand screen area and choose  . The document appears in the lower screen area. Here you can change the parameters and determine whether attached original application files and assignments are also transferred. You can go to the document info record by choosing  -> <i>DMS</i> To finally transfer the document, choose either  <i>Create</i> (document does not yet exist) or  <i>Change</i> (document already exists).
Transferring MPP files (Microsoft Project file)	Select the MPP file in the overview. To check whether the transfer to the SAP System using Open PS can run without errors, choose  <i>Open PS Log</i> . To then transfer a MPP file, choose  <i>Open PS Transfer</i> .
Sending objects to transfer	Using  <i>Services for object</i> you can send an object internally to another user. The receiver can then transfer the data. In the list field choose <i>Workflow → Start workflow</i> . The <i>Start Workflow</i> dialog box appears. Choose the option <i>Send with authorization to transfer data to the R/3 system (TCE: Transfer – Distribute a configuration folder (T))</i> .



After the object has been transferred to the SAP System, the object receives the status  in the overview.

System Settings

System Settings

The following system requirements exist for the **owner**:

General Prerequisites

- If participants are to process project structures using Microsoft Project, you must have installed Open PS for Microsoft Project (Version 1.3 or higher). You can download Open PS from SAPNet.

Customizing

There are the following activities in Customizing that you can find under *Project System -> Collaboration*:

Customizing Activity	Use
<i>Define CEP Profile</i>	obligatory
<i>Define Lifecycle Profile</i>	optional
<i>Define Field Selection</i>	optional
<i>Define Workflow</i>	obligatory
<i>Administration of CEP Document</i>	obligatory

For detailed information, refer to the Implementation Guide.

The following settings **must** also be made in Customizing:

- In *Cross-Application Components -> Document Management System -> Control Data -> Define Document Types*, you must defined for CEP
 - a document type for the published folder, for instance **B2X** . On the detail screen check the following parameters for this document type:
 - The *Status change* indicator is not set
 - Internal numbers should be activated.
 - a document type for linking Microsoft Project Files to WBS elements, for instance MSP
- In *Cross-Application Components -> Document Management System -> General Data -> Define Workstation Application*, you must have defined XML, MPP, and TXT as application formats.

Registration/Authorization for External Participants

- All external participants must have been entered in the SAP System as SAP users. You must have informed the external participants of their usernames and initial passwords before the start of the CEP process.
- A valid e-mail address must have been entered for every external participant in their user master.
- Every external participant must have been assigned the role SAP_CA_PLM_BUSINESS_PARTNER by choosing *Tools -> Administration -> User Maintenance -> Roles*.

System Settings

If you enter * for all values of the authorization objects, the participants are given all the authorizations that are assigned to this role.

If you want to limit the authorization of a participant to that necessary for the CEP process, enter the following values for the individual authorization objects for the transaction code CEP_IAC_PO:

Authorization Object	Field	Values
C_DRAW_TCD Authorization activities for documents	Activity	01, 02 ,03 , 06, 17, 49, 59
	Document type	(Document type for published folder)
C_DRAW_DOK Authorization for document access	Activity	52, 53
	Document type	(Document type for published folder)
C_LO_CM Authorization object for Configuration Management	Activity	01, 02, 03, DL
	Authorization management/object for activity	CD, CM, NF
I_TCODE Check transaction code at strt of transaction	Transaction code	CEP_IAC_PO, CV01N, CV02N, CV03N (CVSE_SEARCH, QISR)
S_OC_SEND	COM_MODE	INT, OFF, RML
	Number	*



The assigned are only valid for transaction code CEP_IAC_PO and role SAP_CA_PLM_BUSINESS_PARTNER. For the use of other transactions more values must be added.

Workflow

If you are creating several internal distribution workflows, you must assign them to BUSTYP 3052004.

Note

- Document Management System: Only save your documents in the Knowledge Provider.