Sample Chapter 10: Master Data Editors
10 Master Data Editors

EPLAN includes a range of ready to use system master data such as FORMS or PLOT FRAMES. These are normally sufficient for most applications. However, if special conditions for appearance exist or if particular project data is to appear in the forms and this is not possible with the standard EPLAN forms supplied, then new master data such as (e.g.) a form must be created from scratch.

EPLAN always creates temporary copies of master data for editing, and they can always be edited from within any project. It is always the system master data that is modified. Project master data is never modified by the master data editors, rather the form or plot frame in the system master data directory is modified, or newly created in the master data system directories.

If modified master data is also to be used in the current project, then after modifying the master data, a synchronization of the system master data with the project master data should be performed, i.e., the query asking if the data should be synchronized must be answered with YES.

You access the various editors via the menu UTILITIES / MASTER DATA [TYPE OF MASTER DATA]. [TYPE OF MASTER DATA] can be symbols, plot frames, or forms.

Master data supplied with EPLAN should not be modified. It is possible to modify these but, if EPLAN master data is suitable as the basis of your own master data,
then it is highly recommended that you copy this and provide a new name. You can then modify this copy as you wish.

If you follow this procedure then, when performing updates or similar, the new EPLAN master data supplied can simply replace your own EPLAN master data of the same name.

It should generally be noted that it is easier and faster to base your new edited master data on existing master data. You can, of course, create this from scratch if you wish. However, this is usually very time consuming.

This chapter provides a brief explanation of the basic steps required for editing. Not all the details and possibilities of the form editor, plot frame editor, or symbol editor will be handled here.

10.1 Preparatory Measures

Although it is convenient to edit the system master data of any project, this also carries certain "dangers". The more you use this procedure, the greater the "danger" of losing your perspective at a later stage: What forms/plot frames have I already created, what do they look like, and which ones can I now use as templates for a new form/plot frame?

The "final story" is that you must eventually click through many forms/plot frames, and the small preview does not always provide you with all the information on the form/plot frame that you need. You must then load the form, only to realize it is not the correct one that you used last week in another project.

To reduce this potential "chaos" somewhat, we suggest the following method of structuring forms/plot frames. All forms/plot frames are gathered in a single project and created as their own pages.

10.2 Form Overview Project

A form overview project is a normal schematic project. Depending on your personal wishes and organization, all forms and plot frames are stored as an extra page.

The selected page structure covers all identifiers, which allows deep structuring of the pages by customer and page types (in this case report types). However, this is a matter of personal taste and users can decide for themselves.
Of course, you cannot directly edit the form or plot frame on these pages. We do not want to do this anyway. When the project is always maintained with the master data, you have a good overview of which forms/plot frames have been created over time, and, if needed, you can select a particular form or plot frame for subsequent editing.

The pages are created via the usual steps, the corresponding page types (e.g. here a summarized parts list) are set for the pages, the page descriptions are filled out and the form is selected via the selection in the property <11015 Form name>. This stores it in the page and displays it.
10.3 Forms

Forms are used to graphically insert reported project data into the project documentation. Examples of forms are terminal diagrams, cable diagrams, or a table of contents.

Now the supplied master data does not always exactly match the existing project data. The page/path reference may be too long, or the function text no longer fits in the intended rows.

EPLAN provides a number of different ways of adjusting a form to suit the new layout. Forms can be created from scratch, edited (i.e., existing forms can be modified), or copied and the copied form then adapted. The form structure can be reached via the menu UTILITIES / MASTER DATA / FORMS.

*Note:* The form editor does not have a Save function. If changes are made and the form editor is exited via the CLOSE function in the UTILITIES / MASTER DATA / FORMS menu, then the form is automatically stored with these changes in the SYSTEM MASTER DATA. However, the project master data still contains the previous "old" form.

This means that, as long as no (manual) synchronization of the master data (system master data with the project master data) is performed (e.g., via the UTILITIES / MASTER DATA / SYNCHRONIZE CURRENT PROJECT menu), this method can be used to bring the edited form in the system master data back to the state of the project master data. After starting the function, EPLAN opens the SYNCHRONIZATION OF MASTER DATA [PROJECT NAME] dialog. The form is now selected in the project master data area and the button is used to copy this into the system master data area.
When existing master data is found, EPLAN opens the COMPARE MASTER DATA dialog. A decision must be made here as to whether the system master data should be replaced with the project master data.

If the dialog is confirmed via the Yes button, the system master data is overwritten with the project master data and EPLAN displays a notification message that the system master data was updated.

This method is really only an “emergency plan” for restoring master data that was unintentionally changed. As already mentioned, EPLAN allows automatic synchronization of master data when projects are opened.

If master data is incorrectly reset to an old state, an unwanted master data synchronization may take place in existing projects (if the automatic master data synchronization has been activated)! You should therefore be extremely careful when using this feature!

### 10.3.1 Creating a new form (from a copy)

The easiest method is to create a form based on an existing one. It makes no difference what type of page is currently open in the project. You use the menu UTILITIES / MASTER DATA / FORMS / COPY for this. EPLAN opens the SELECT / COPY FORM dialog.

In this dialog, you select the form to be copied. In our example this is the form F13_004.f13.

You confirm the selection by clicking the Open button. EPLAN then opens the CREATE FORM dialog. The new form name is entered into the FILE NAME field of this dialog.
The form can now be saved via the SAVE button. EPLAN closes the dialog, opens a temporary page with a CABLE DIAGRAM PAGE TYPE, and displays the copied form on this page for editing.

The form can now be edited. In the form editor, all graphical functions such as INSERT LINE or INSERT CIRCLE (via the menu INSERT / GRAPHIC) are available, as well as functions for inserting normal text.
The INSERT menu contains a number of other functions relating only to the form editor. The graphical functions have already been explained or are well-known functions.

Special texts such as PROJECT, PAGE, or FORM PROPERTIES can be placed in forms. In EPLAN, the actual form text is called PLACEHOLDER TEXT.

In contrast to project and page special texts or form properties, these placeholder texts are only filled with project data after reports are graphically generated.

To use a placeholder text, proceed as follows: Select the menu item INSERT / PLACEHOLDER TEXT to open the PLACEHOLDER TEXT dialog. On the PLACEMENT tab, click the button and the subsequent PLACEHOLDER TEXTS – TERMINAL DIAGRAM dialog appears (the terminal diagram is only for this example - other placeholder texts apply to other forms).

In our example, we select the TERMINAL PROPERTIES ELEMENT (left selection area in the dialog) and then select the <20030 TERMINAL/PIN DESIGNATION> property in the right area. You can now confirm this selection by clicking OK.

EPLAN closes the dialog and transfers the selected placeholder text into the dialog of the same name. Now confirm the PLACEHOLDER TEXT dialog by clicking OK; the placeholder text then hangs on the cursor and can be placed at any (sensible) position.

As with any other (free) text, placeholder text can be freely formatted. The other FORMAT, LANGUAGE, and BORDER tabs with the familiar settings are used for this, either before or after placing the placeholder text. The sequence
is not important.

This allows the form to be appropriately "constructed". It is also possible to subsequently modify placeholder text and select a different one. To do this, select the placeholder text and display its properties by double-clicking or via the popup menu.

Then proceed as described above. You use the button to call up the subsequent dialogs and select other properties in the usual manner.

When finished, the form can be checked for errors via the CHECK FORM function in the UTILITIES menu. If the form is OK, the following message is displayed: The form is OK.

If the form has errors, EPLAN indicates this and writes the errors in the system messages. These should be corrected to avoid faulty system master data.

When handling forms EPLAN distinguishes between dynamic forms, where only certain areas exist (e.g., a data area), and static forms, where the amount of data is permanently "wired" into the form. Dynamic forms expand their graphical display area depending on the amount of project data. The maximum amount of data that the dynamic form should display is defined in the form properties. In our TERMINAL DIAGRAM example (the procedure is the same for all forms) you can access the form properties via the key combination CTRL+M+D or in the PAGE NAVIGATOR via the PROPERTIES item in the popup menu.
EPLAN then opens the Form Properties dialog. All the relevant form data is defined here.

How should the form be handled, DYNAMICALLY or STATICALLY, which entries in the automatic page description property should be written when project data is reported, or what is the maximum amount of data (NUMBER OF ROWS) that the form should display before a page break or new report page is created?

A sample dynamic form then appears as follows. The rows are dynamically extended depending on the volume of data. If a terminal strip has five terminals, then the form will contain five rows with data. A terminal strip with twelve terminals will show twelve (data) rows in a report.

In principle, static forms have the same properties as dynamic forms.

In static forms, the data areas are fixed, i.e., permanently defined and the maximum number of data rows is entered in the form properties - in the same way that the graphic for the form was created with the maximum number of data records.

The following image shows an example of a static form. The difference can be clearly seen. Whereas a dynamic form has a data row that is dynamically expanded,
a static form already has all data rows as a finished graphic. The data is written to these graphical rows when generating a report.

If the form is ok, you can close it via the menu UTILITIES / MASTER DATA / FORMS / CLOSE. This is then finally "saved".

**Note:** After the **very first** editing, a copied form is automatically stored in the system master data and (when used) also stored in the project master data. At this point, synchronization of the master data (system and project) **does not** need to be performed.

When the form is edited a **second time**, then it is only updated in the system master data. The master data synchronization **must** now be performed/confirmed in order to update/synchronize the project master data with the system master data!

### 10.3.2 Editing an existing form

An existing form is selected for editing via the UTILITIES / MASTER DATA / FORMS / OPEN menu in the OPEN FORM dialog. EPLAN then opens a temporary page once more, which contains the form that was selected for editing.

Explanation of editing a form is not provided here because this was described in detail in the previous chapter and the process is the same.
10.4 Plot frame

10.3.3 Creating a new form

You create a new form via the menu UTILITIES / MASTER DATA / FORMS / NEW. EPLAN then opens the CREATE FORM dialog. The new FORM NAME must be entered in the FILE NAME field.

The CREATE FORM dialog can now be exited via the SAVE button. EPLAN opens a temporary page in the background and the FORM PROPERTIES dialog is displayed in the foreground. You can already begin making the first entries here. However, this is not absolutely necessary at this time and you can enter this data later.

As described in the previous sections, form editing is done using the various different editing functions such as inserting graphical elements or texts. The procedure is the same as when editing existing or copied forms and will not be further explained here.

10.4 Plot frame

Plot frames are a sort of frame around the actual project pages. Editing plot frames in the plot frame editor is very similar to editing forms in the form editor. It is accessed via the menu UTILITIES / MASTER DATA / PLOT FRAME.
As with the form editor, this menu has the items NEW, OPEN, CLOSE, and COPY. This menu functions in a similar way to the menu used when editing forms. We will therefore only deal with the features that are special to the plot frame editor.

The plot frame editor also has no Save function. To restore plot frames that were accidentally modified (and plot frames that have already been closed), you should therefore use the Undo function in the plot frame editor or consider using the process of synchronizing existing project master data with the system master data.

### 10.4.1 Creating a new plot frame (from a copy)

To copy and then edit a plot frame, in the **Utilities / Master Data / Plot Frame** menu, select the **Copy** function. EPLAN opens the **Copy Plot Frame** dialog.

In this dialog, you select a suitable plot frame and confirm your selection by clicking the **Open** button. EPLAN closes the **Copy Plot Frame** dialog and opens the **Create Plot Frame** dialog.
You enter the new name of the plot frame into the FILE NAME field. You then close the dialog via the SAVE button, and EPLAN temporarily opens a page of the PLOT FRAME PAGE TYPE.

The plot frame can now be edited. You use the same functions as already described in the form editing section. Graphical elements and texts can also be placed in the plot frame editor.

In contrast to forms, it is possible (and for project planning necessary) to specify column text (paths) and row texts for the plot frame. You can also embed a special watermark text in the plot frame. This special text is then automatically filled out by the revision management.

Row and column texts are placed and formatted in the same way as normal text. These are placeholder texts, defined by entries in the PLOT FRAME PROPERTIES dialog (via the key combination CTRL + M + D, or in the PAGE NAVIGATOR by selecting the temporary page, opening the POPUP MENU and selecting the PROPERTIES item), and which are later automatically filled out when in the project.
Once all entries have been made or the plot frame has been graphically edited to suit, it can be "saved" by selecting the UTILITIES / MASTER DATA / PLOT FRAME menu and then selecting the CLOSE function.

EPLAN closes and "saves" the plot frame finally in the master data and it is then stored in the project master data when it is edited for the first time. This process is identical to that which occurs when working with forms. The synchronization on later changes to the plot frame is also the same.

10.4.2 Editing an existing plot frame

In addition to copying plot frames, existing plot frames can also be edited. To do this, select the menu item UTILITIES / MASTER DATA / PLOT FRAME and then select the OPEN function.

EPLAN opens the SELECT PLOT FRAME dialog.
Here you select the plot frame you wish to edit and open it via the OPEN button. EPLAN closes the dialog and opens the plot frame as a temporary page. It can now be edited using the familiar functions (graphics, text, etc.) and the plot frame properties can also be edited.

You close (finally save) the plot frame via the menu item UTILITIES / MASTER DATA / PLOT FRAME / CLOSE and this stores it in the system master data.

### 10.4.3 Creating a new plot frame

Instead of copying or editing existing plot frames, you can create a completely new plot frame via the NEW function in the UTILITIES / MASTER DATA / PLOT FRAME menu. After selecting the NEW menu item, EPLAN displays the CREATE PLOT FRAME dialog.

You enter the new name of the plot frame into the FILE NAME field of the CREATE PLOT FRAME dialog.

Clicking the SAVE button creates the plot frame and EPLAN then opens the plot frame properties of the plot frame and also displays an empty temporary page.
The plot frame can now be edited.
This is done in the same way as editing an existing plot frame and will not be discussed further here.