Recipe Menu Support on UniOP

This technical note describes procedures for adding Recipe Menu to Designer project.
The following description assumes that the reader is familiar with Designer software and usage of Recipes.

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1. General

Recipe Menu is a feature that simplifies recipe parameter set selection on UniOP through a user-friendly interface. It provides a menu like field that contains names instead of only numbers. Each name represents one Recipe Parameter Set.

In order to make usage of Recipe Menu possible, at each Recipe Parameter Set must be given a name. This is achieved by adding a Recipe Data Item field of ASCII display format on the page with recipes and filling the Recipe Item values with a name for each parameter set.
Such field is called **Recipe Name** field.

Note: *This field is not a field type name; it only describes the field's purpose. Recipe Name must also be defined to enable Recipe Menu support.*

There are three specific fields that support the Recipe Menus:
- Recipe Menu field,
- Recipe Page For Selection field and
- Recipe Key field.

The **Recipe Menu** field is the actual field that displays the menu with recipe names. The currently selected recipe parameter set is indicated using user defined attribute combination (blink, highlight, reverse).

The **Recipe Page For Selection** field shows the page number of the page for which a Recipe Menu field will display recipe names. It can be edited to display recipe names for another page with recipes.

The **Recipe Key** field is not directly connected with Recipe Menus. It is a less user-friendly way of selecting a recipe parameter set by name. In order to choose a recipe parameter set, user has to edit the field and type the wanted recipe name. It can be also used to show the currently selected Recipe

Parameter Set name for a specific page. The Recipe Key field must refer to a specific page with defined Recipe Name.

All three of these fields do not depend on each other and can be freely put on any page in the project in any combination.

A set of keyboard macro commands support Recipe Menu:
- Go To Recipe Menu,
- Scroll Recipe Menu and
- Confirm Recipe Menu Selection.

The **Go To Recipe Menu** macro jumps to a specified page and sets the value of the Recipe Page For Selection.

The **Scroll Recipe Menu** macro is used to move the selection in the Recipe Menu field. This is the way with whom a new Recipe Parameter Set name is chosen from the list.

The **Confirm Recipe Menu Selection** macro changes the current recipe parameter set to the one selected in the Recipe Menu field.

2. Define a Recipe Name

The Recipe Name should be defined for all the pages containing recipes that are going to be handled using Recipe Menu. It is also necessary for the pages refereed to by Recipe Key field(s).

The Recipe Name is defined by adding a Recipe Data Item field of ASCII display format on the page with recipes and filling the Recipe Item values with a name for Each Parameter Set.

***Note**: This ASCII field is not an internal variable in the panel memory, but it needs some PLC memory. The amount of memory required depends on the length of the ASCII string: one byte per character.*

Here is the procedure that describes how to add a Recipe Name definition. It assumes that the current page is the page with already defined recipes and that it is the page for which you want to add Recipe Name. Figure 1 shows the Recipe Configure dialog box.
1. Add one Recipe Data Item field.
2. Set the Display format to *ASCII*.
3. Set Data Access to *Read/Write* if you want to make recipe names editable.
4. From the Page menu choose “Recipe Configuration …” to open Recipe Configure dialog box.
5. Fill the new Recipe Item with names for each Recipe Parameter Set.
6. Select this new Recipe Item by clicking on the button with the record number. Note that the entire row highlights.
7. Click on the Set As Recipe Name button to set this Recipe Item to be the Recipe Name. Note that the asterisk (“*”) appears to the right of the Recipe Item name.
8. Click on the OK button to accept the changes.

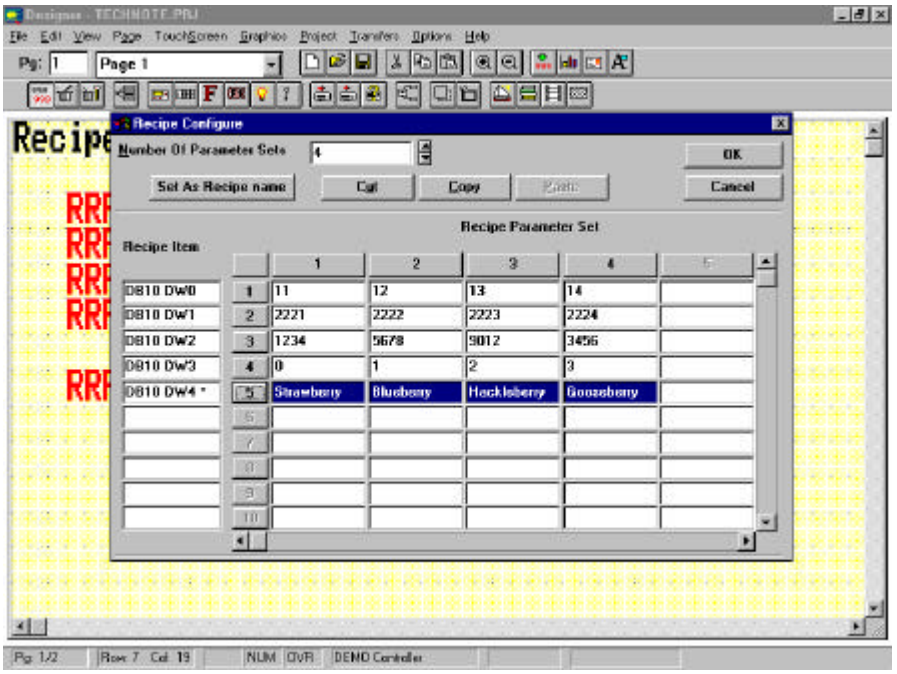

Figure 1. Recipe Configure

3. Creating Recipe Menu Field

The Recipe Menu field is the field that displays the menu with recipe names.

It displays recipe names for the page which number is contained in the Recipe Page For Selection internal UniOP variable. The value of this variable can be displayed and changed using the Recipe Page For Selection field. Also its value can be automatically set by the Go To Recipe Menu macro command.
The currently selected recipe name is indicated with user defined attribute combination (blink, highlight, reverse).

To enable Recipe Menu support at least one page with Recipe Name must be defined.

***Note**: The only field on the page needed for displaying a Recipe Menu is the Recipe Menu field. Other fields can show additional information but are not necessary.*

If Recipe Page For Selection contains the page number of a page without Recipe Name defined, the Recipe Menu field will display asterisks ("*").

The following procedure describes how to add a Recipe Menu field.

1. Select an area on the panel screen by dragging the mouse. This area will contain the Recipe Menu field.
2. From Edit Menu choose Recipe Menu or press Ctrl-R. Click once anywhere on the panel screen to clear the selection; a solid box represents the Recipe Menu field.
3. Double click on the Recipe Menu field to open Recipe Menu dialog box (see Figure 2).
4. Adjust Width and Height if not satisfied.
5. Choose the attribute combination for indicating the selected recipe name.

6. Select *Yes* or *No* for Shown Record Numbers before Record Name, depending on whether you want to show record number (parameter set number) together with the recipe name.
7. Click on OK button to accept changes.

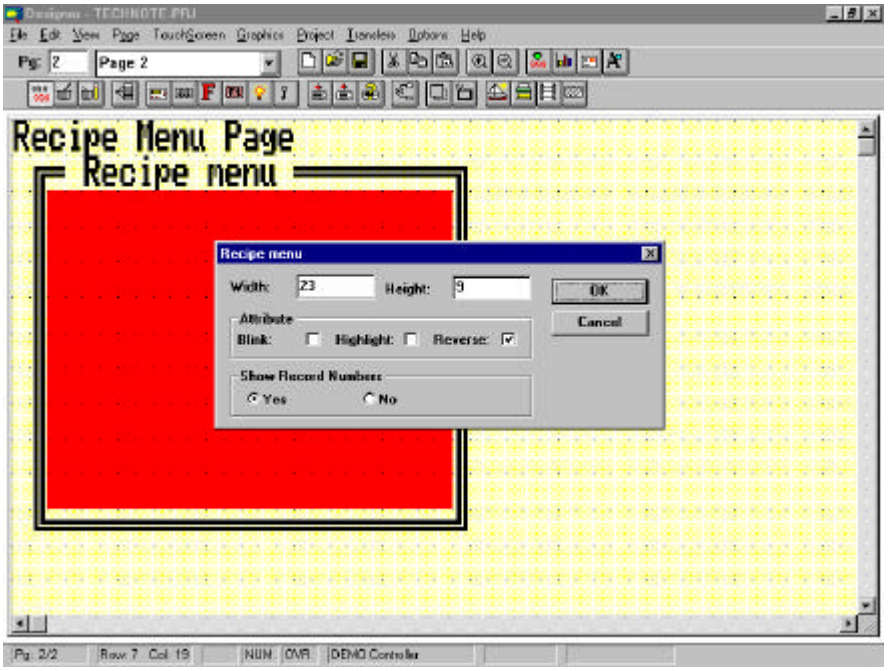

Figure 2. Recipe Menu Configuration

4. Recipe Page for Selection Filed

The Recipe Page For Selection is a numeric field of type Control Variable.
The Recipe Page For Selection field's purpose is to show the page number of the page for which a Recipe Menu field will display recipe names.
It can be placed on the same page with Recipe Menu field to show the “recipe page number”. It can be edited to change the page for which Recipe Menu field displays information.
If Recipe Page For Selection contains the page number of a page without Recipe Name defined, the Recipe Menu field will display asterisks (“*”). After startup of UniOP the Recipe Page For Selection is set to zero.

5. Recipe Key Field

The Recipe Key field is an ASCII field of type Control Variable.
The Recipe Key field displays currently selected Recipe Parameter Set name for referred page.
Like Recipe Menu field, it can be used to change the selected recipe parameter set by name but in a less user-friendly way. User has to edit the field and type the wanted recipe name.
The page to which a Recipe Key field refers must have defined Recipe Name.
If the referred page has no Recipe Name defined, the Recipe Key field will display asterisks (“*”).

6. Recipe Menu Keyboard Macros

Three special keyboard macros support Recipe Menus (see Figure 3).

They are:
- Go To Recipe Menu,
- Scroll Recipe Menu and
- Confirm Recipe Menu Selection.

The **Go To Recipe Menu** macro sets the Recipe Page For Selection and jumps to the specified page. This is the preferred way of going to a Recipe Menu page (page with Recipe Menu field).
The other way is to set the page number in the Recipe Page For Selection field and then go to the Recipe Menu page using any other page changing macros (Go To Page, Next Page, etc.).

The **Scroll Recipe Menu** macro is used to move the selection in the Recipe Menu field.
With this macro command you can chose a new Recipe Parameter Set from the list.
Positive values for the scroll step move selection down and negative values move the selection up.
If there are many recipe parameter sets, more than one keys can be assigned to Scroll Recipe Menu macros: two keys with step of 1 (-1) for “fine” scrolling and two other keys with step greater than 1 for “fast” scrolling.

The **Confirm Recipe Menu Selection** macro accepts the selected parameter set name and sets the current recipe parameter set to the new value.
It can be assigned to a key together with Return To Initial Page macro to “close” the Recipe Menu page and return to the page jumped from with the Go To Recipe Menu macro.

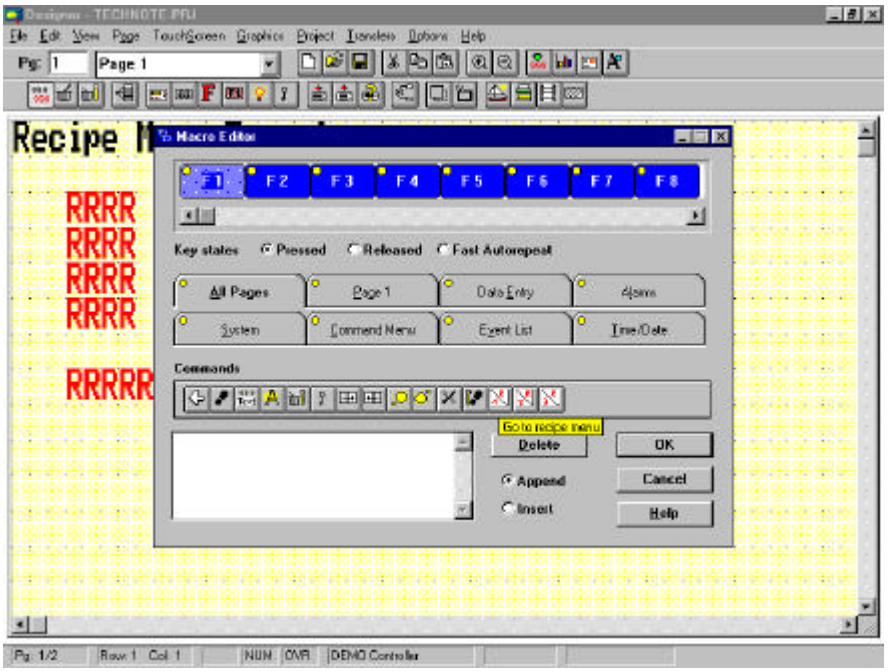

Figure 3. Recipe Menu Macro Commands