

SMART PANEL EXTENDED MULTIPLE PAGES CONFIGURATION

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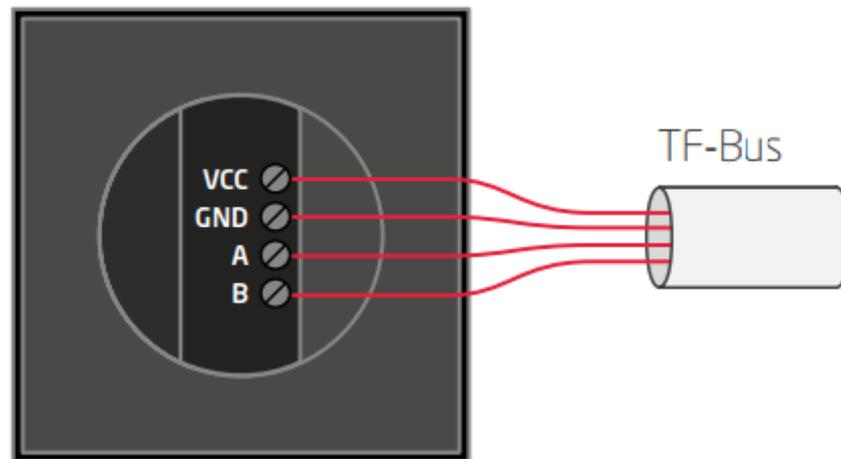
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1. SMART PANEL EQUIPMENT

1. The Smart Panel consist of:
 - a. OLED screen
 - b. 4 touch buttons
 - c. Gestures sensor which recognizes 4 gestures
 - d. Approach / presence sensor
 - e. Temperature sensor
 - f. Light intensity sensor
 - g. Buzzera – sygnalizacji naciśnięcia przycisku dźwiękiem

2. CONNECTING CLU WITH SMART PANEL

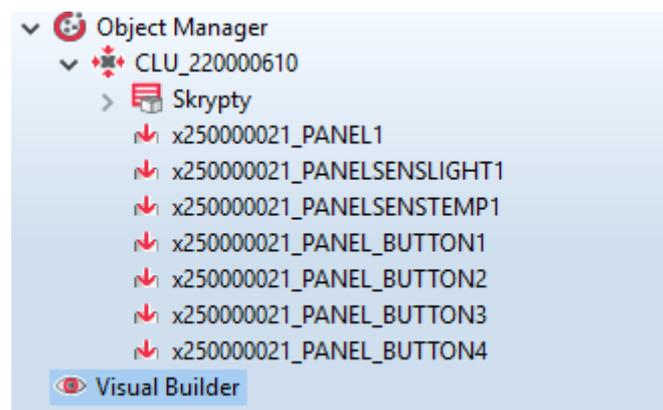
1. In order to connect the panel to modules configuration, connect the last module to the ARK connector, to which the panel with the screen should be connected by means of a twisted pair according to the below description.
 - a. Connect the pair of two twisted cables to the V clamp
 - b. Connect the second pair of twisted cables to the GND clamp
 - c. Connect one of each of the third pair of cables to A and B clamps, respectively.



2. The free ends of the cables connect in the same way to the ARK connector
3. Open Object Manager configuration software
4. Create a new project and execute *CLU Discovery* – with the option of cleaning the CLU configuration

ATTENTION! When creating the extended configuration of the panel, it is important for the panel not to have any configuration already.

5. Make sure that the following objects are on the modules list

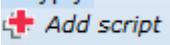


6. If so, proceed to creating configuration, otherwise, contact with the Support section

3. HELPFUL CONFIGURATION INFORMATIONS

1. Configuration of the panel with screen differs from the classic touch panel by Grenton, among other things with the fact that apart from features, methods and events for each individual button and temperature and light intensity sensor it is also equipped in the features, methods and events for the Panel itself- servicing the screen and the gesture sensor.
2. The screen in which the touch panel is equipped has a resolution of 128x64 px
3. The panel may work in two modes- displaying the icons (the screen is divided into 4 fields) or in drawing mode, using entire field of the screen
4. The touch screen is equipped in a slot for microSD card which serves for the storage of default icons displayed on the panel. The files are to be placed in the main catalogue of the card with .bmp extension¹
5. The panel screen is blanked by default. It switches on the moment the proximity sensor is turned on-screen display active time is uploaded from Panel features *ProximityTimeout* - after this time, when the panel does not detect presence, the screen is blanked
6. Presence sensor detects presence depending on the proximity set by means of sensitivity *ProximitySens* - after detecting presence, an event is generated *OnProximityDetect*
7. In order to create a configuration in a easy way, the Smart Panel Components displayed in Object Manager was renamed – their Serial Numbers was changed to 'SMARTPANEL' as show on pictures below

4. MULTIPLE PAGES CONFIGURATION

1. In order to start creating configuration of the panel which services multiple sites, create a feature (type *number*) in CLU with a sample name *site*- to do so, double-click on CLU, proceed to user features tab and select the button 
2. For the panel to display the requested content on the screen, create the script with a sample name *display* - to do this click on the button  in the left edge of the program window

¹ Full list of available icons and the method of placing microSD card is available within the product documentation: <http://www.grenton.com/upload/files/PL/GRENTON SMART PANEL TF-Bus.pdf>

ATTENTION! The name cannot contain foreign letters or spaces

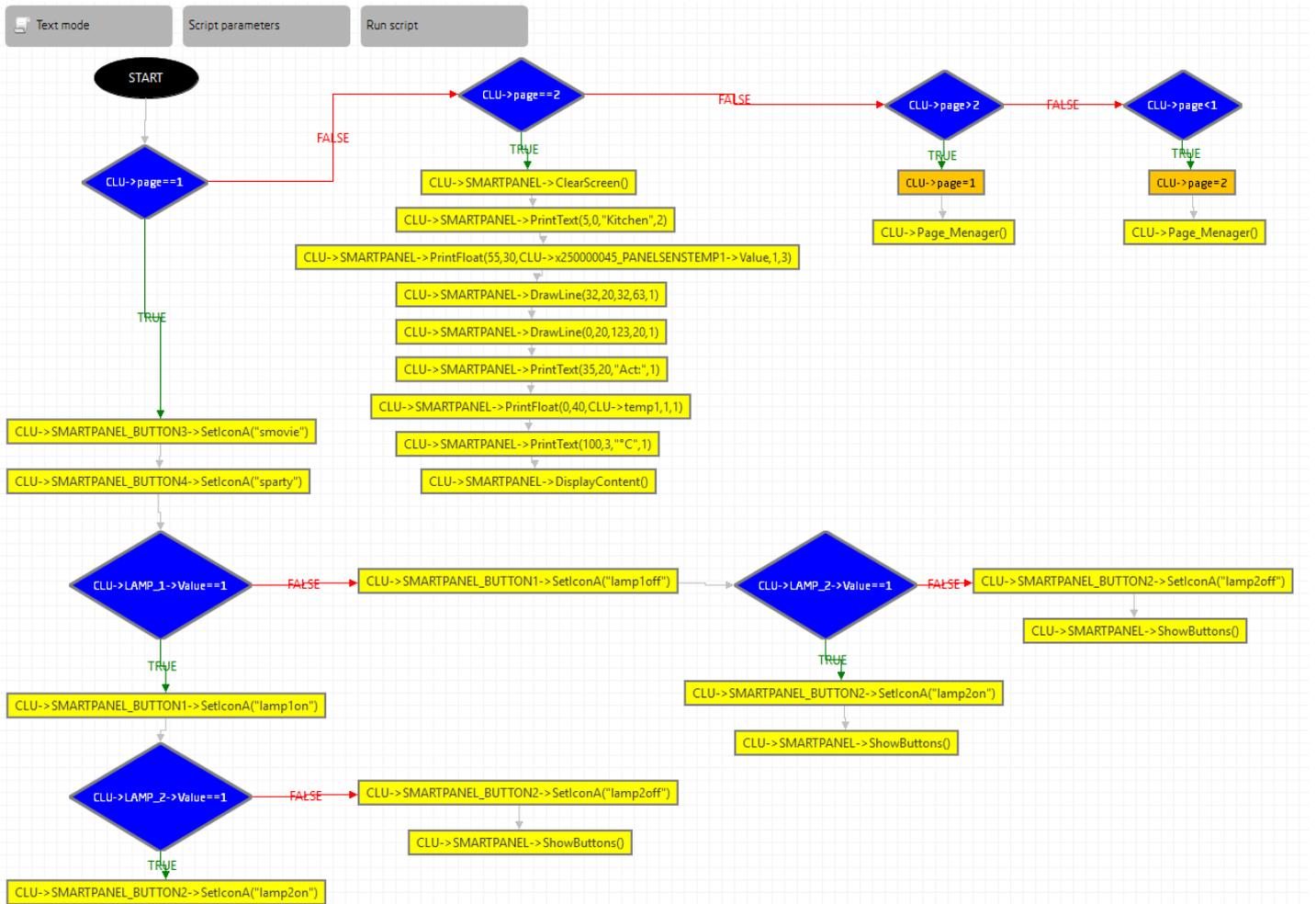
- a. **SITE WITH BUTTONS** - Add verifying condition to the script about the current site number *site*) and to fulfil the condition, add actions of assigning icons to all 4 buttons *SetIconA* to elements PANEL_BUTTON[1-4] and method *PANEL->ShowButtons* which sends the requested icons to the screen.

ATTENTION! After assigning icons to specific buttons, it is necessary to appoint method *ShowButtons*, since the sole assigning does not cause their appearance on the screen
ATTENTION! In case of creating multiple sites, the setup of button in bistable mode by means of feature/method will not correctly read the status of the transmitter due to various functionalities of buttons during changes to the sites

- b. **THE SITE WITH GRAPHICS AND TEXT** - While designing the site which contains graphics and texts, add another image which verifies the site number, action *PANEL->ClearScreen()*, actions of setting up the text and the lines (described above) and action *PANEL->DisplayContent()*

Actions of setting up the text and the lines:

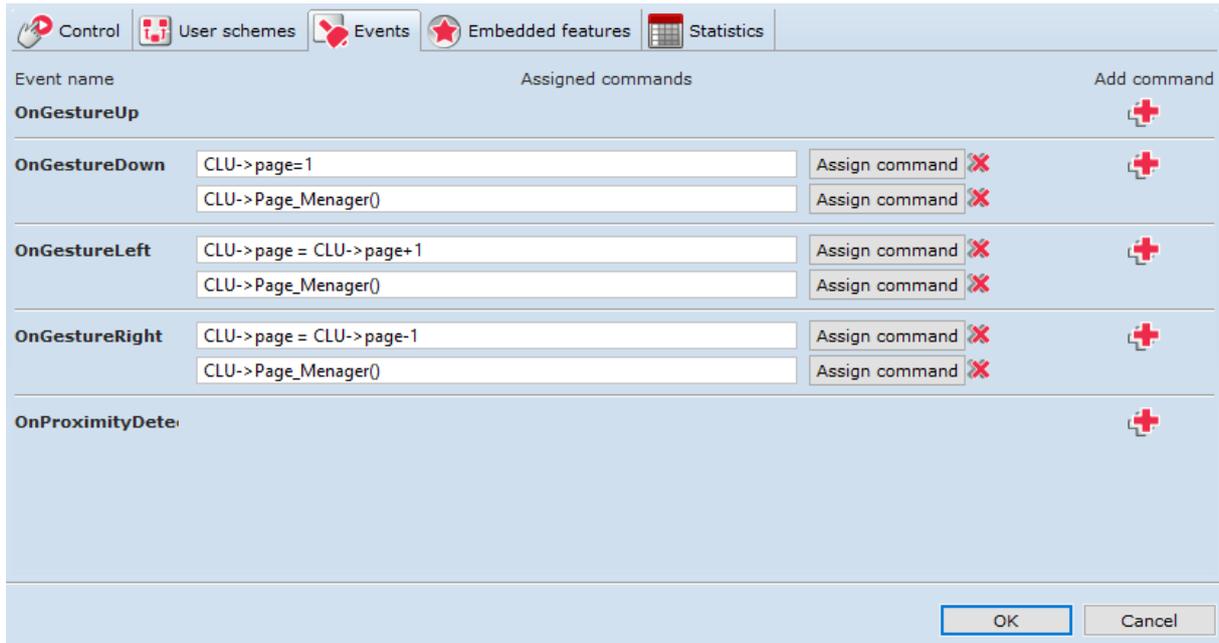
- *PANEL->PrintText* - method which triggers entry of text or feature-for its evoking, indicate 4 parameters- entry coordinates x, y on the screen, text and size of font (where 1 - 10 pt, 2 - 14 pt, 3 - 28 pt)
 - *PANEL->PrintFloat* - method operating in the same way as *PrintText*, but with an additional parameter precision responsible for the number of decimal places of values indicated in the parameter number
 - *PANEL->DrawLine* - method drawing a line - to evoke it indicate 5 parameters-entry coordinates x, y and end coordinates xe, ye and line colour (where 0-black, 1- white)
 - *PANEL->DrawPoint* - method drawing a point-to evoke it indicate 3 parameters-coordinates x,y and colour (this parameter works as in case of evoking the method *DrawLine*)
 - *PANEL->DrawIcon* - method drawing an icon in drawing mode-to evoke it indicate 3 parameters-entry coordinates x, y and name of icon from the transmitter
- c. **SCRIPT LOOPING** - Add conditions to the script which will trigger upon generation of gesture to the right on the last site that the panel returns to the initial site and the other way around, so that a loop occurs-sample realization has been shown on the print screen above
 - d. The realization of methods above has been presented on the sample script screen



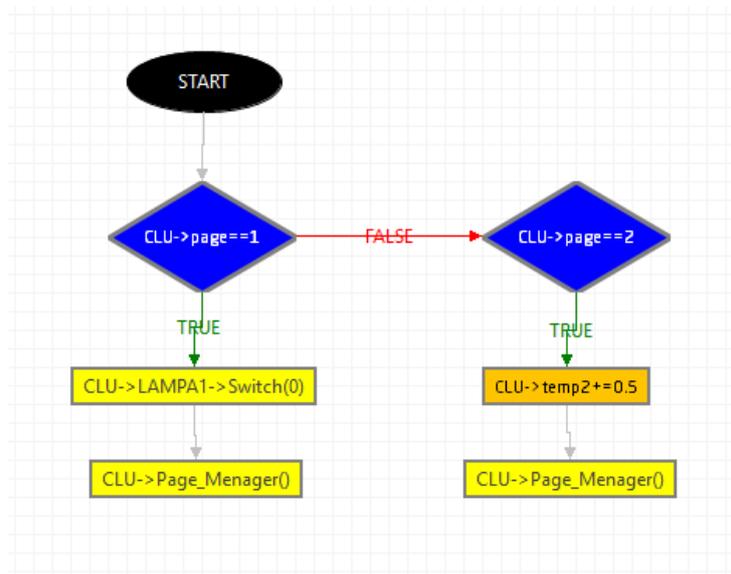
- e. The above script has been placed at the end of the document in the text version (point 7)
- f. The second site programmed in the script will look as follows:



2. In the subsequent step assign to gestures on the left and right the operations of increasing user variable and launching the script *screen* as shown on the picture below;



3. Assign to event *CLU->OnInit* announcing THE script *screen*
4. Create the script with the name, i.e. *ClickButton1* to service the event *OnClick* for each button separately (the same ought to be done if we wish to use other events on the panel buttons)
 - a. Add verifying condition for site number
 - b. If you wish to realize the function of bistable mode of a button, add another condition verifying the current state of icons and depending on this, one adding or removing illumination
 - c. Add subsequent conditions which verify the number of sites
 - d. The realization was shown on the below print screen



ATTENTION! The action on variables used in graphic mode of the panel does not trigger refreshing, thus the action of re-generating the site was applied to the above script.

e. Powyższy skrypt zamieszczono na końcu dokumentu w wersji tekstowej (punkt 8.)

5. Add subsequent scripts to all buttons and used events adequately: script *ClickButton1* for event *PANEL_BUTTON1->OnClick*



6. Script *Page_Menager()* in text version:

```

if(CLU->page==1) then
if(CLU->LAMP_1->Value==1) then
CLU->SMARTPANEL_BUTTON1->SetIconA("lamp1on")
else
CLU->SMARTPANEL_BUTTON1->SetIconA("lamp1off")
end
if(CLU->LAMP_2->Value==1) then
CLU->SMARTPANEL_BUTTON2->SetIconA("lamp2on")
else
CLU->SMARTPANEL_BUTTON2->SetIconA("lamp2off")
end
CLU->SMARTPANEL_BUTTON3->SetIconA("smovie")
CLU->SMARTPANEL_BUTTON4->SetIconA("sparty")
CLU->SMARTPANEL->ShowButtons()
elseif(CLU->page==2) then
CLU->SMARTPANEL->ClearScreen()
CLU->SMARTPANEL->PrintText(5,0,"Kitchen",2)
CLU->SMARTPANEL->PrintFloat(55,30,CLU->x250000045_PANELSENSTEMP1-
>Value,1,3)
CLU->SMARTPANEL->DrawLine(32,20,32,63,1)
CLU->SMARTPANEL->DrawLine(0,20,123,20,1)
CLU->SMARTPANEL->PrintText(35,20,"Act:",1)
CLU->SMARTPANEL->PrintFloat(0,40,CLU->temp1,1,1)
CLU->SMARTPANEL->PrintText(100,3,"°C",1)
CLU->SMARTPANEL->DisplayContent()
elseif(CLU->page>2) then
CLU->page=1
CLU->Page_Menager()
elseif(CLU->page<1) then
CLU->page=2
CLU->Page_Menager()
end

```

7. Script *Click_Button1()* in text version:

```

if(CLU->page==1) then
CLU->LAMP1->Switch(0)
CLU->Page_Menager()
elseif(CLU->page==2) then
CLU->temp2=CLU->temp2+0.5
CLU->Page_Menager()

```

end