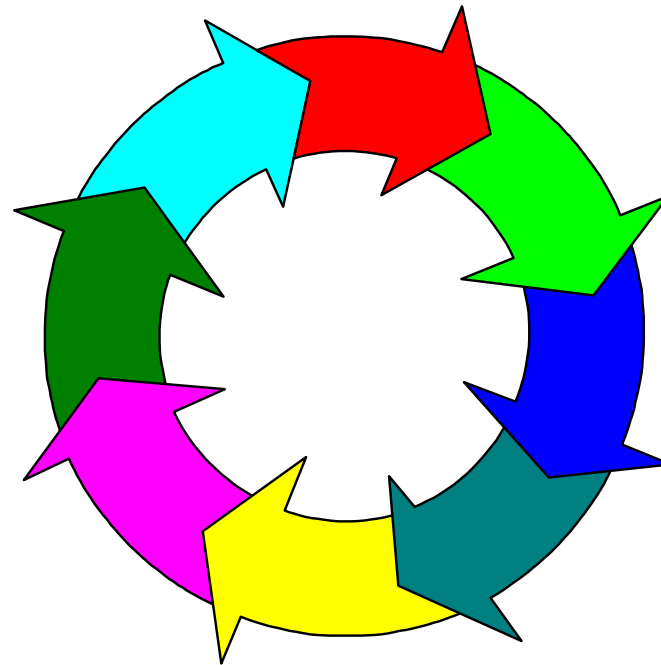
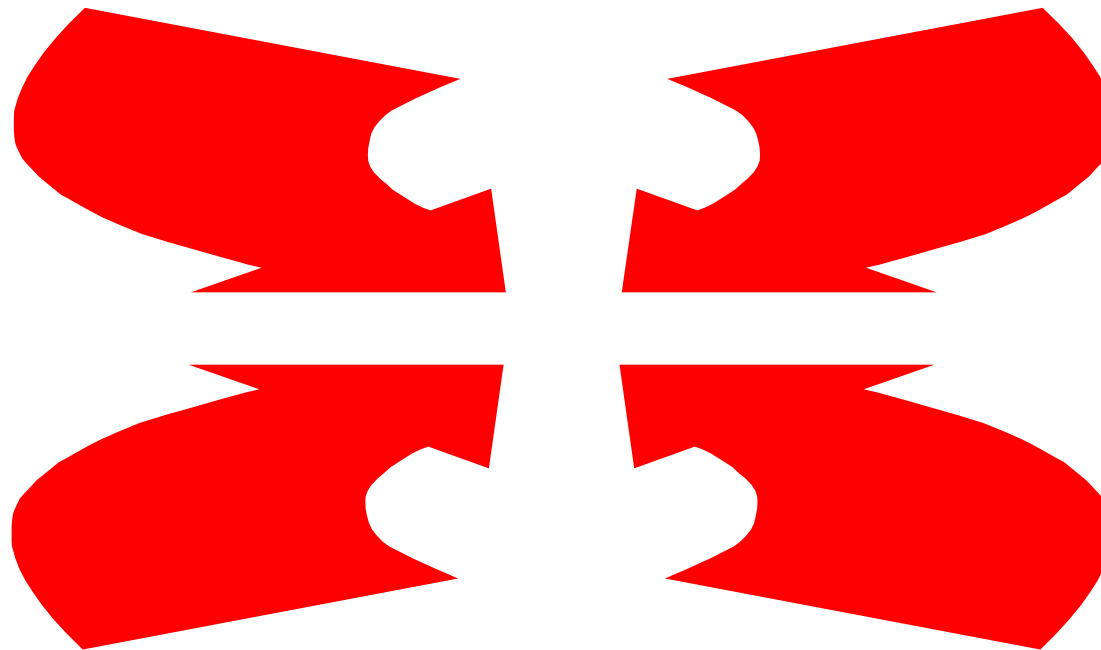


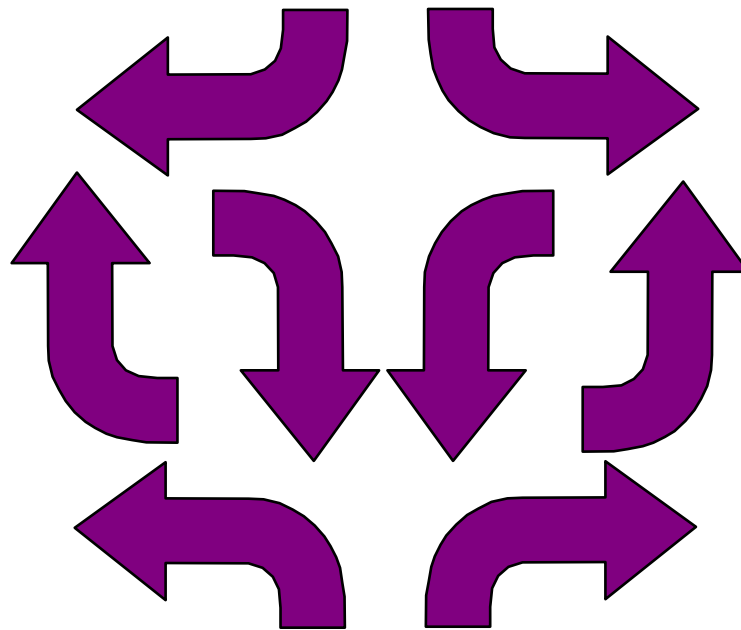
图形屏幕及用户管理器 (1)



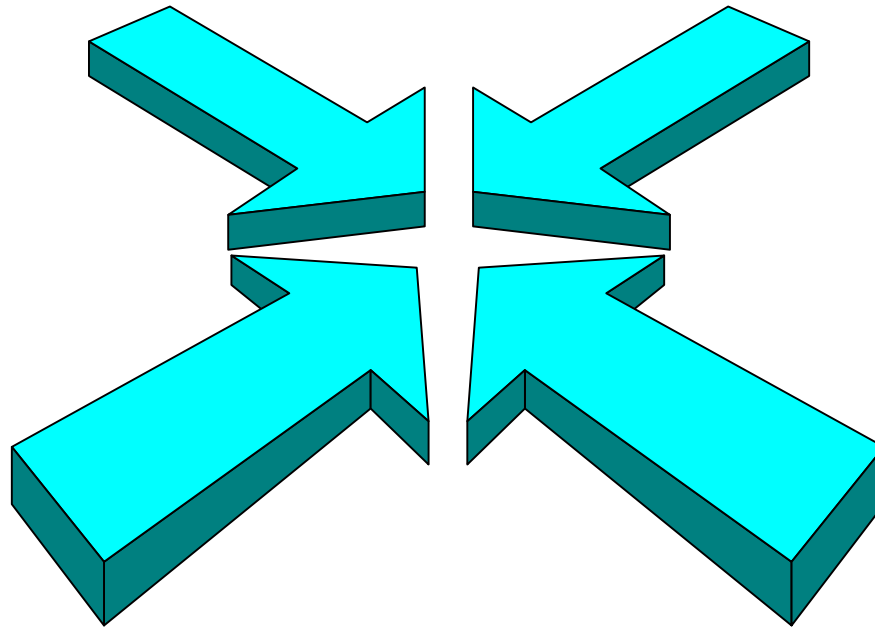
图形屏幕及用户管理器(2)



图形屏幕及用户管理器(3)



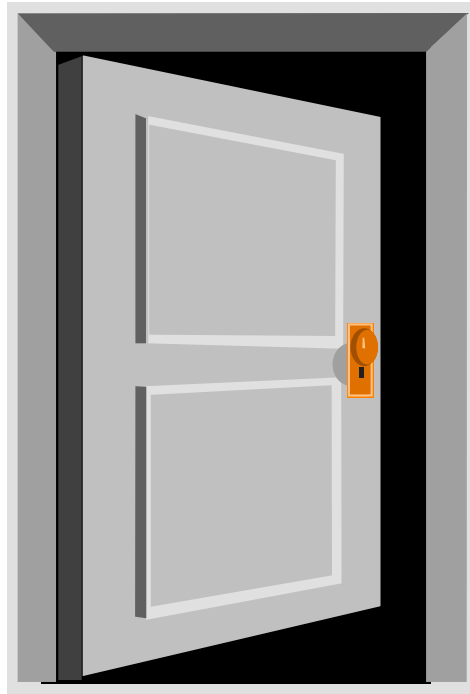
图形屏幕及用户管理器(4)



图形屏幕及用户管理器(5)

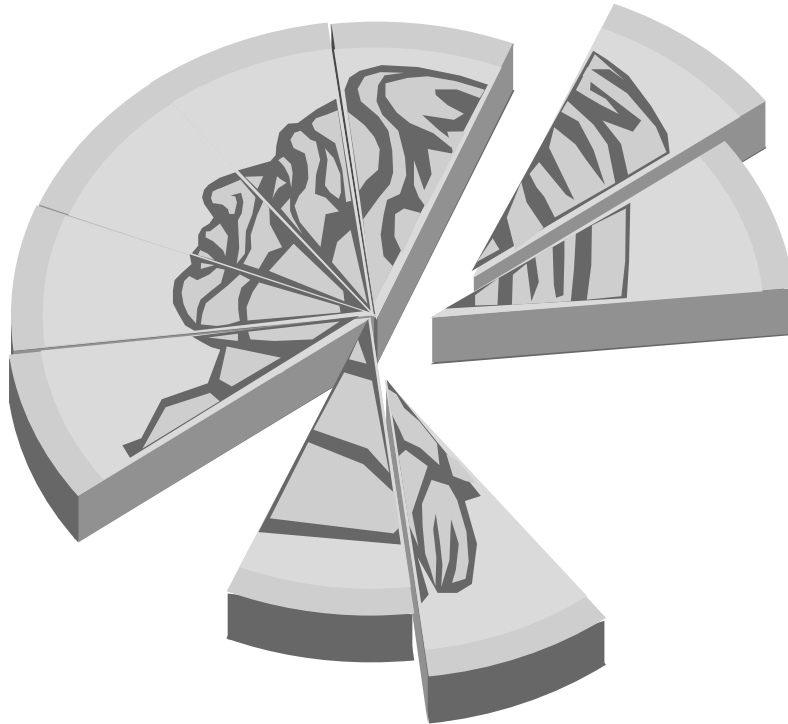


目标



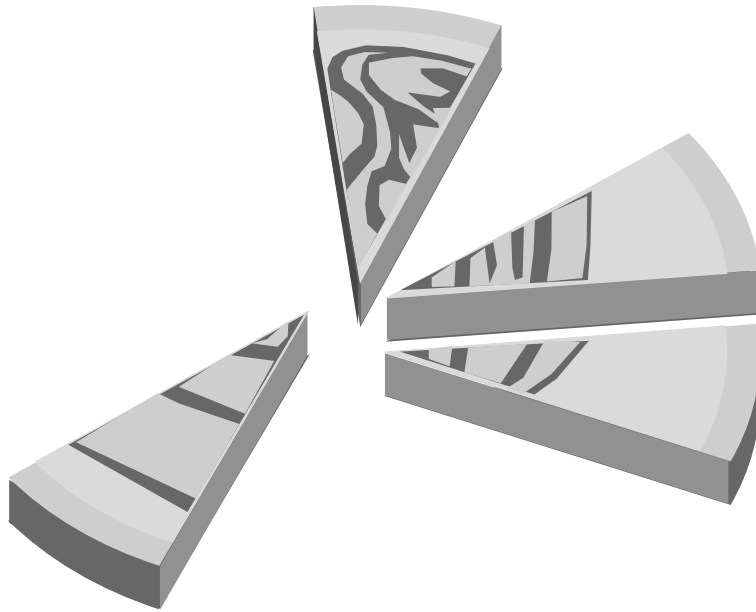
- 组态接口
- 创建画面
- 产生动态
- 库

为组态做准备 (1)




- 过程画面
- 静态部分
- 动态部分
- 动作组态

为组态做准备 (2)

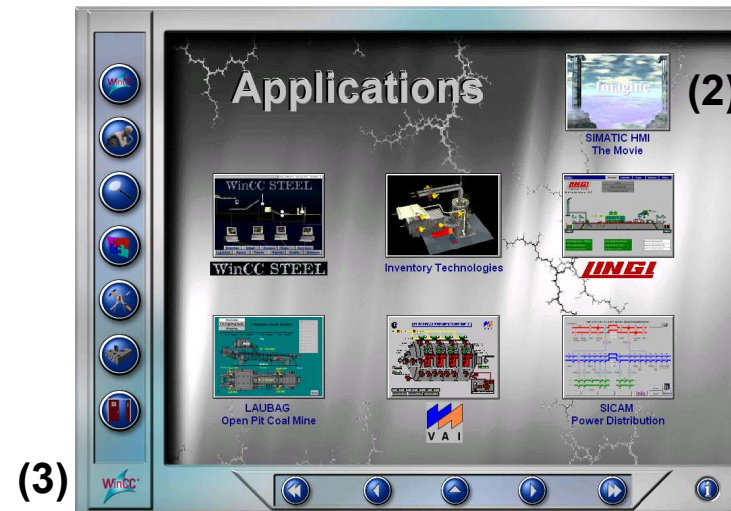
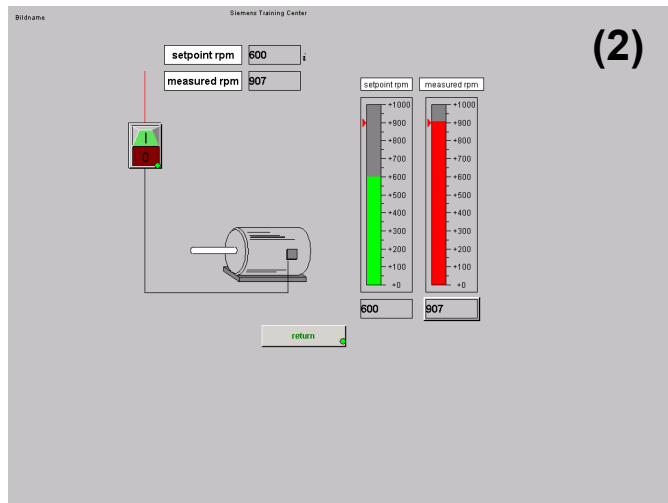
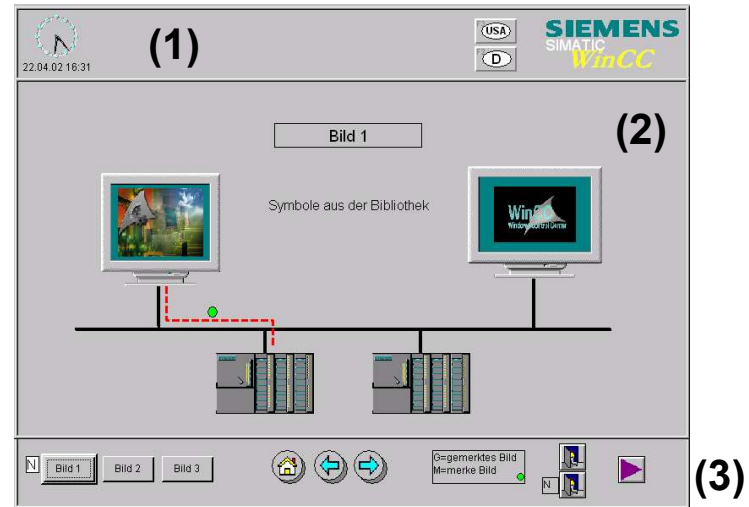
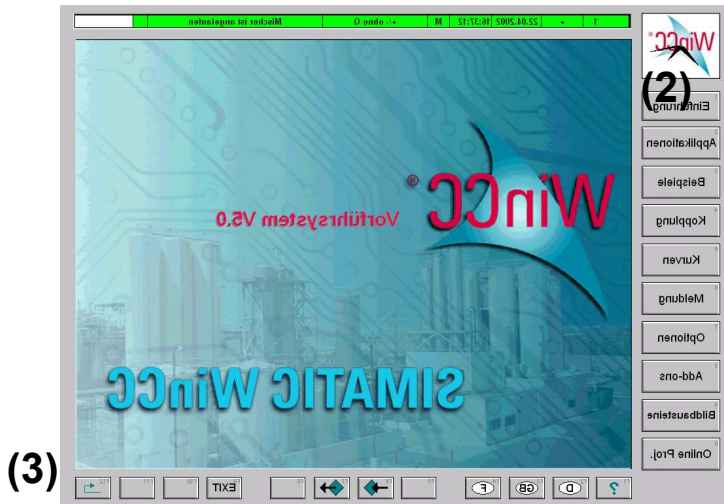


- 消息归档
- 采集测量值
- 报表
- 密码

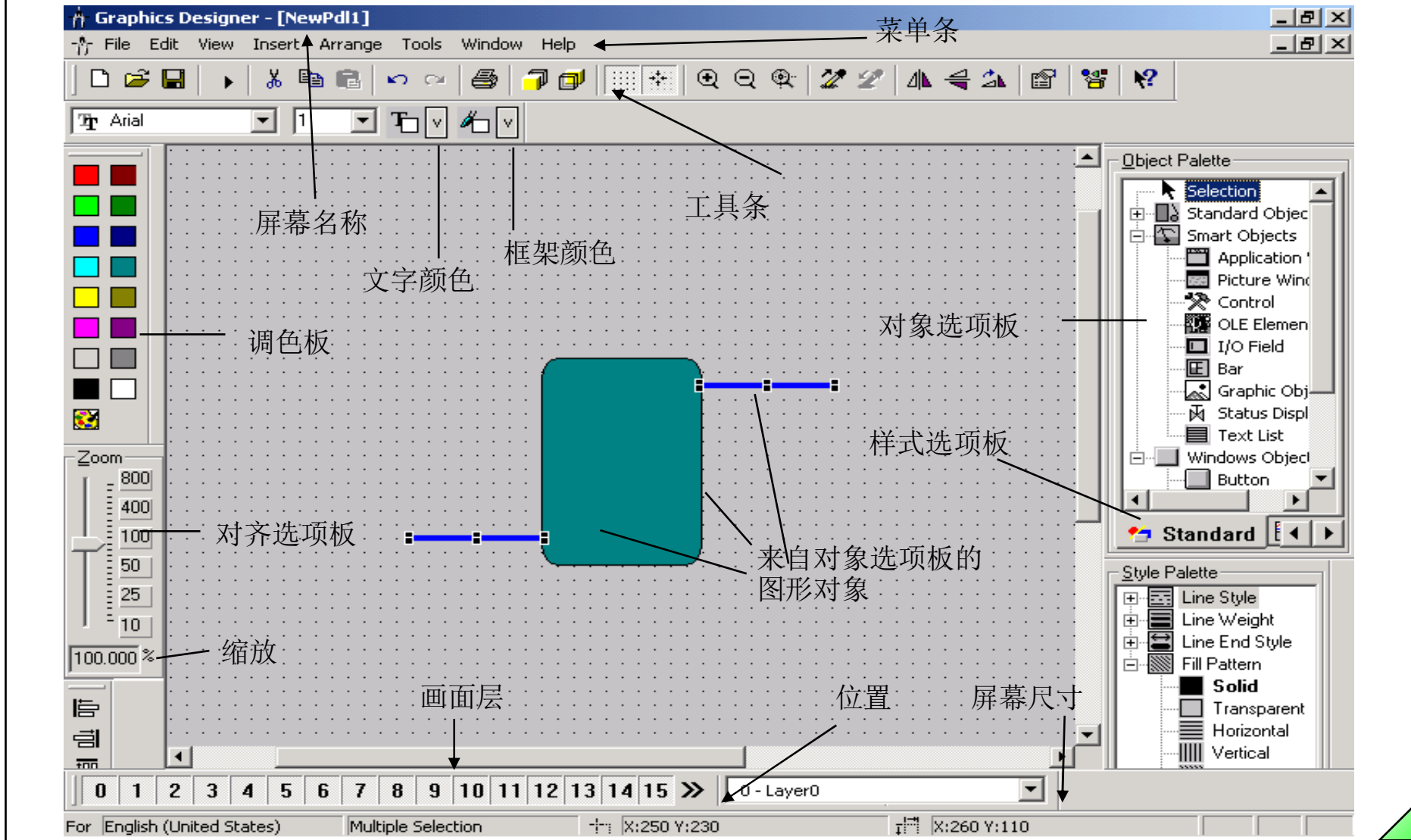
操作和监控术语

- 
- 图形屏幕
 - 创建图形屏幕的注释
 - 图形屏幕中的要素
 - 数字化数值

屏幕划分举例



图形编辑器组态界面



图形对象选项板 (1)

The image displays two instances of the 'Objects' palette in a WinCC environment. The left instance shows a full list of objects categorized into 'Standard Objects' (e.g., Line, Polygon, Circle) and 'Smart Objects' (e.g., Application Window, Picture Window). The right instance shows a filtered view of 'OCX Controls' (e.g., WinCC Alarm Control, WinCC Gauge Control). A callout box labeled '快捷菜单' (Context Menu) points to the top of the right palette, with an arrow pointing to an 'Add/Remove' button. This button opens a 'Select OCX Controls' dialog box, which lists available OCX controls with checkboxes and includes fields for 'Path' and 'ProgID'.

标准元件

智能对象

Windows 元件

快捷菜单

Add/Remove

Select OCX Controls

Available OCX Controls: (226)

- Siemens HMI Symbol Library 1.2
- WinCC Alarm Control
- WinCC Digital/Analog Clock Control
- WinCC DXF Control
- WinCC Gauge Control
- WinCC Online Table Control
- WinCC Online Trend Control
- WinCC Push Button Control
- WinCC Slider Control
- WinCC User Archive - Table Element
- :) VideoSoft FlexGrid Control
- :) VideoSoft FlexString Control
- :) VideoSoft vsDraw Control
- :) VideoSoft vsInForm Control

Details:

Path:

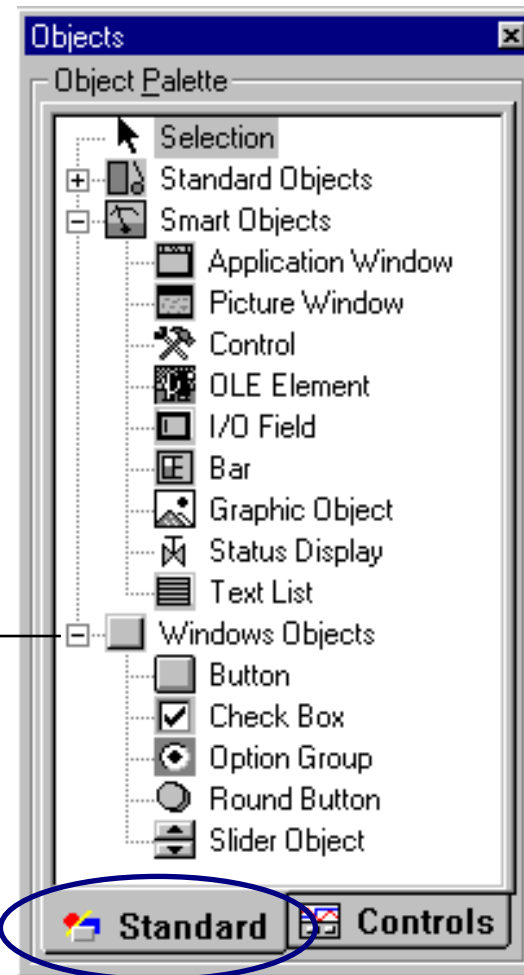
ProgID:

Unregister OCX Register OCX...

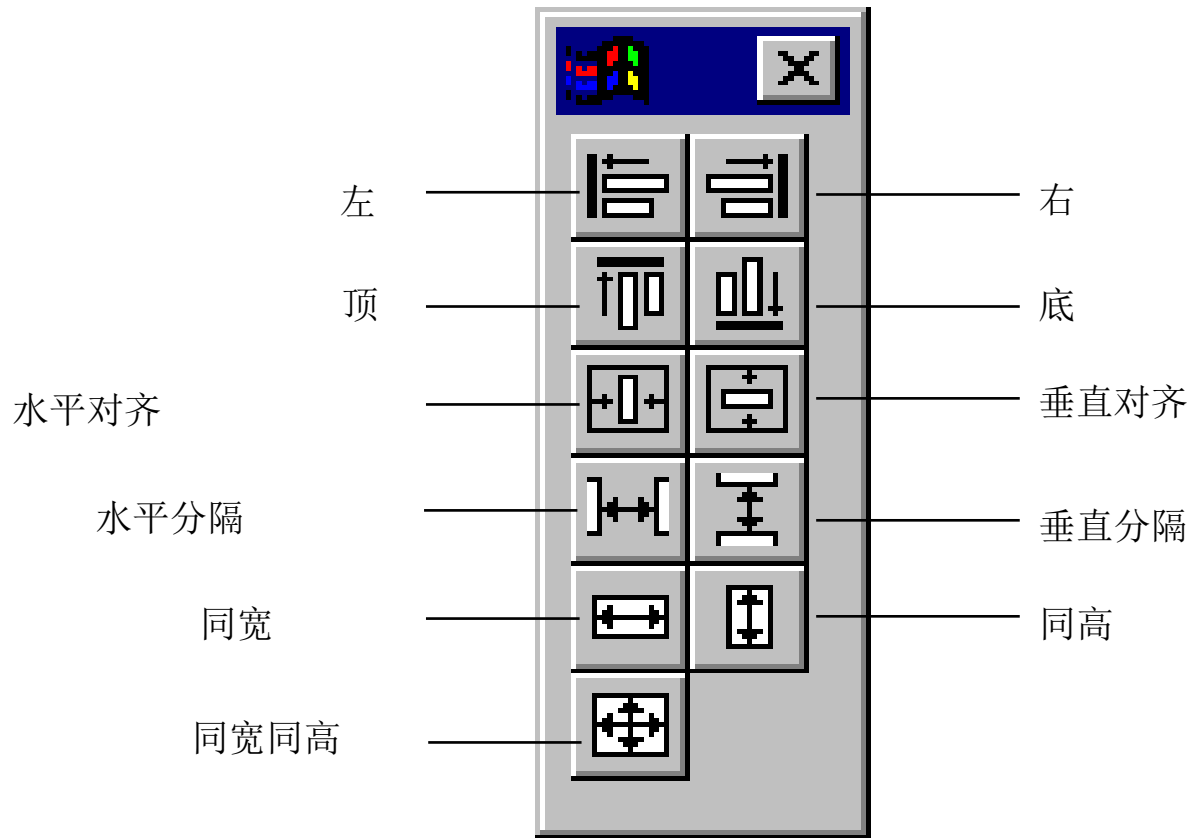
OK Cancel

图形对象选项板 (2)

Windows元件



对齐选项板



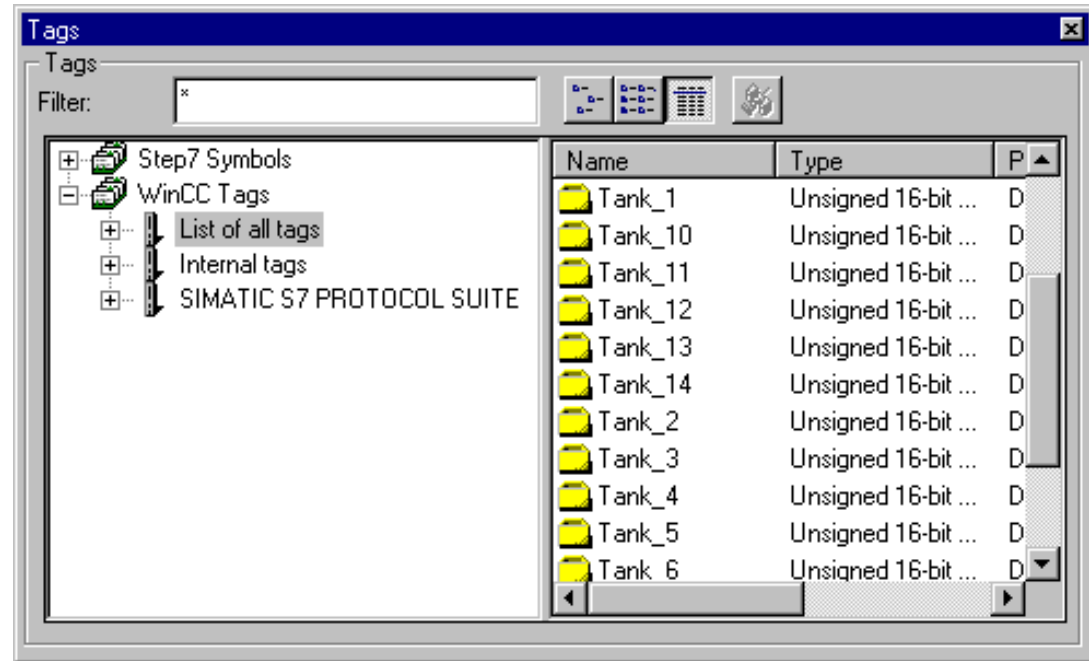
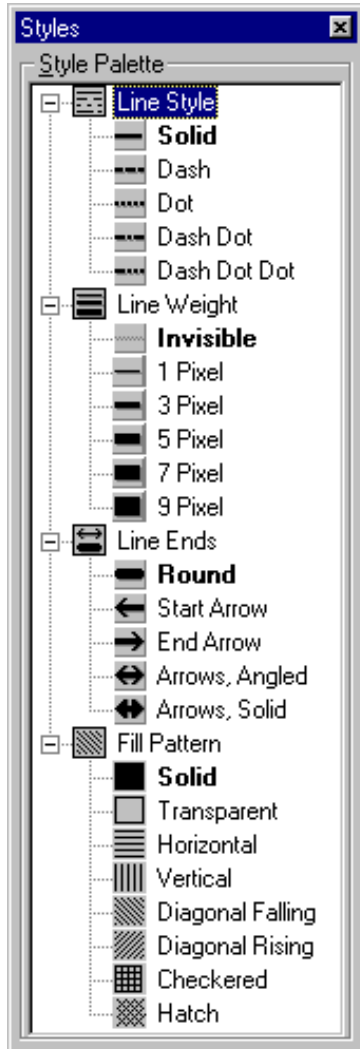
样式和变量选项板

直线样式

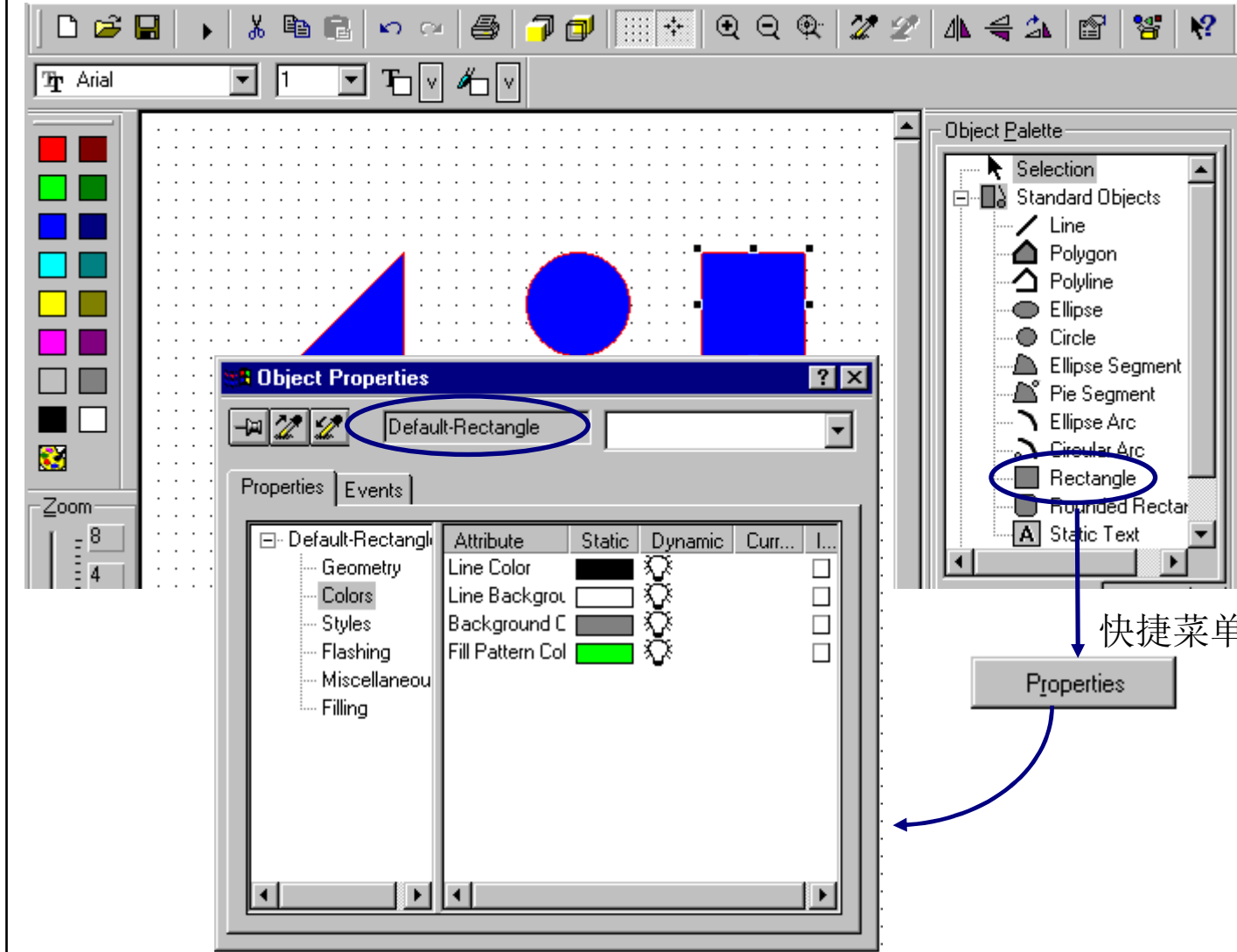
直线宽度

直线末端

填充图样



图形对象 (1)



- 对齐
- 选择
- 更改属性
- 背景网格

快捷菜单

Properties

图形对象 (2)

The screenshot displays the SIMATIC HMI software interface. On the left, there is a color palette and a zoom control set to 100%. The main workspace shows a grid with a graphical object consisting of a circle with a red stem and a blue fill. The 'Object Properties' dialog box is open, showing the 'Circle' object selected. The 'Filling' property is highlighted, and a 'Value Input' dialog box is open, allowing the user to change the 'Fill Level' value from 30. A list of actions is provided on the right side of the image.

Attribute	Static	Dynamic	Curr...	I...
Dynamic Filling	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fill Level	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

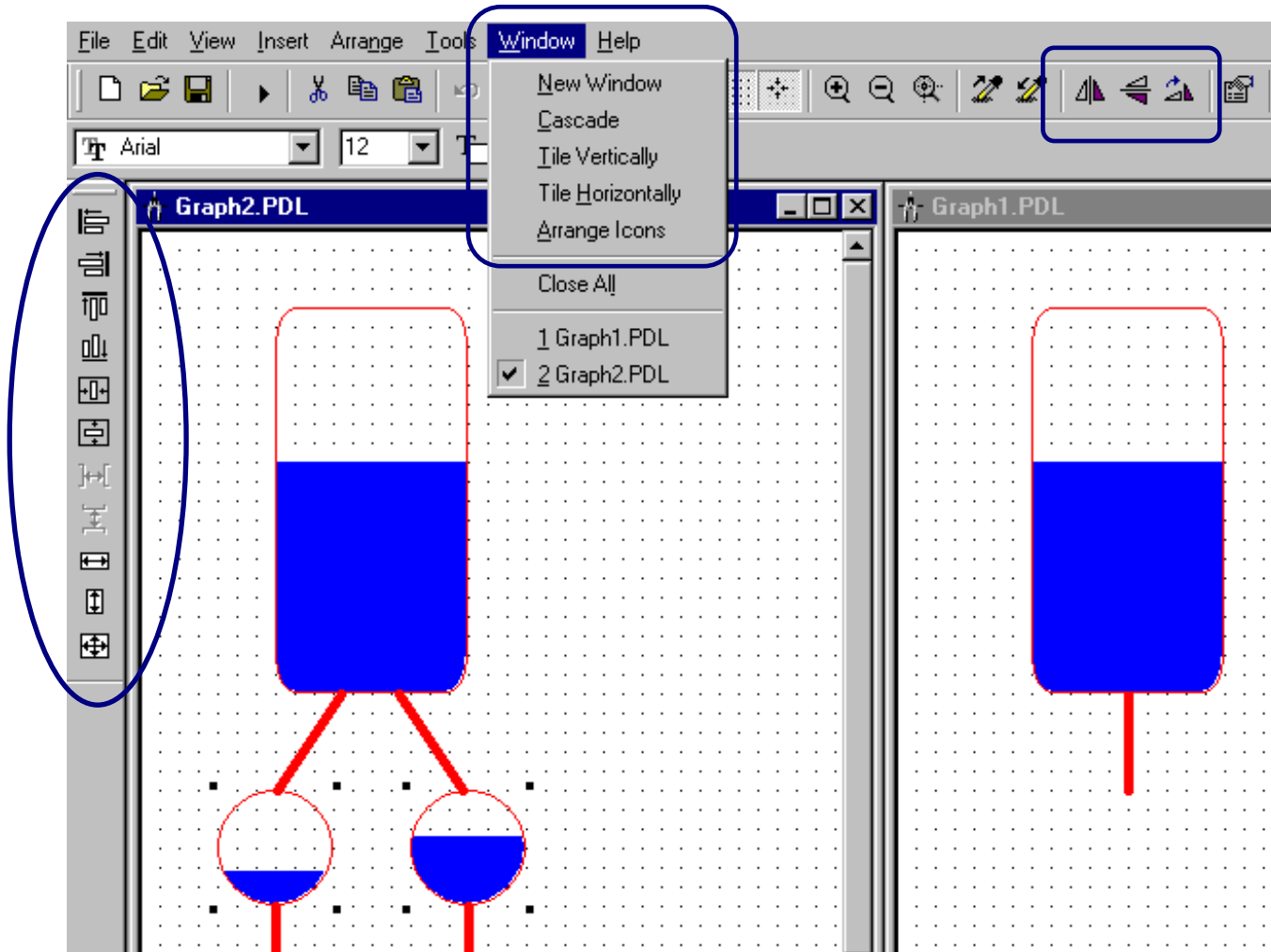
Value Input dialog box:

Fill Level: 30

Buttons: OK, Cancel

- 删除
- 修改
- 移位
- 复制

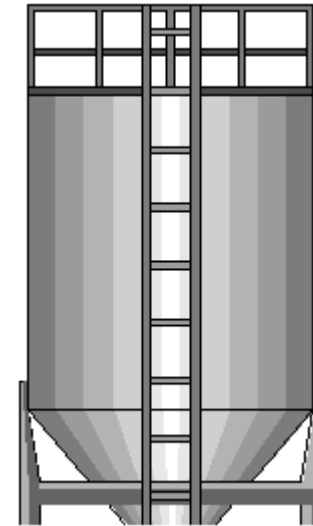
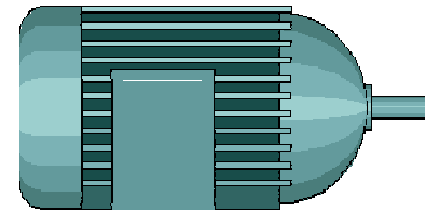
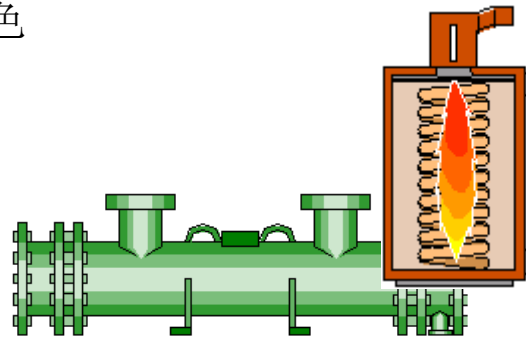
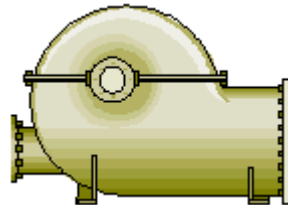
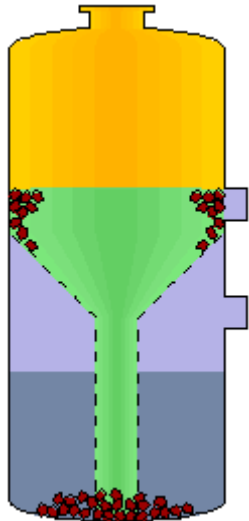
图形对象 (3)



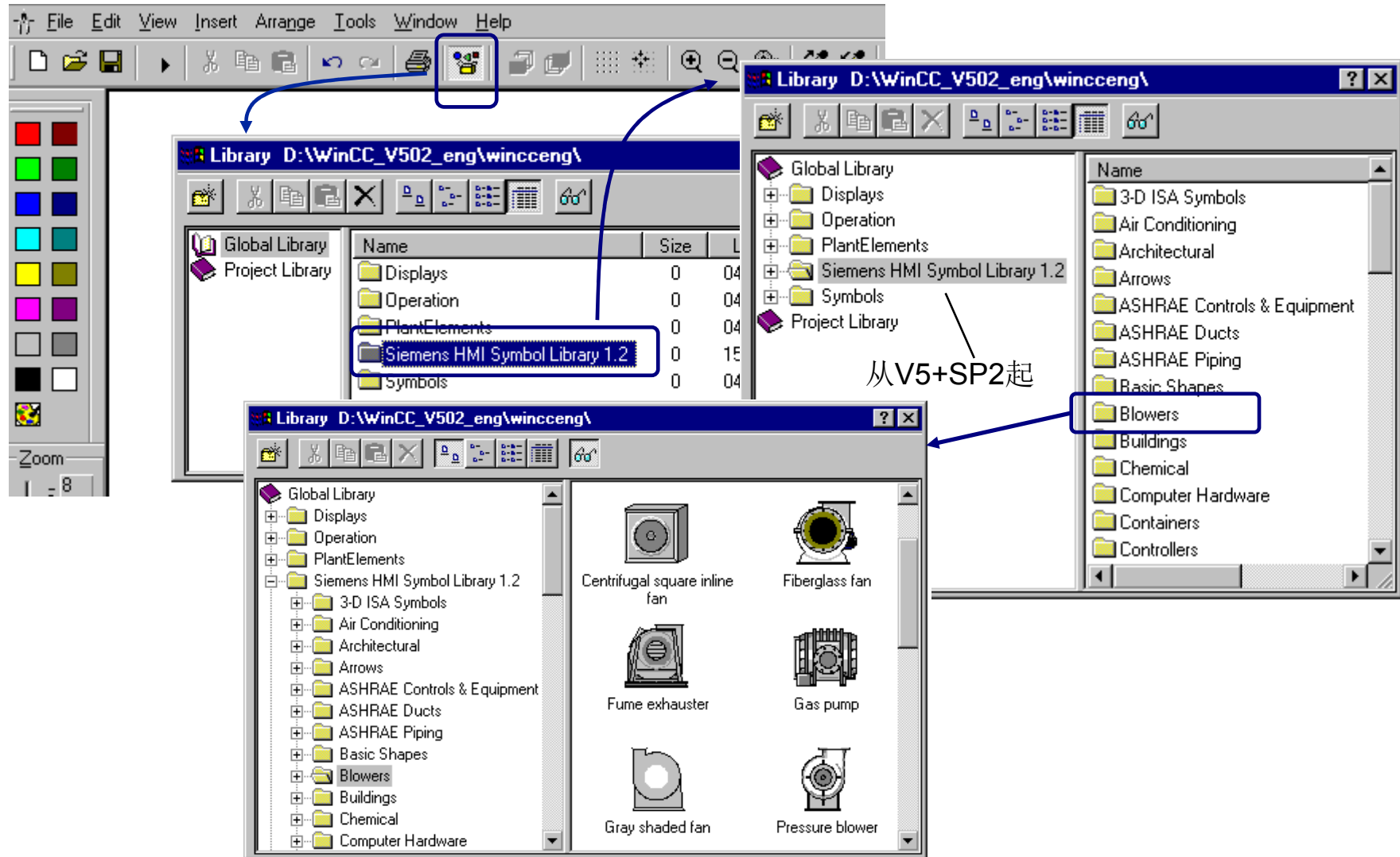
- 旋转
- 镜象
- 阵列

符号库 西门子 HMI 符号库 1.3 1/2

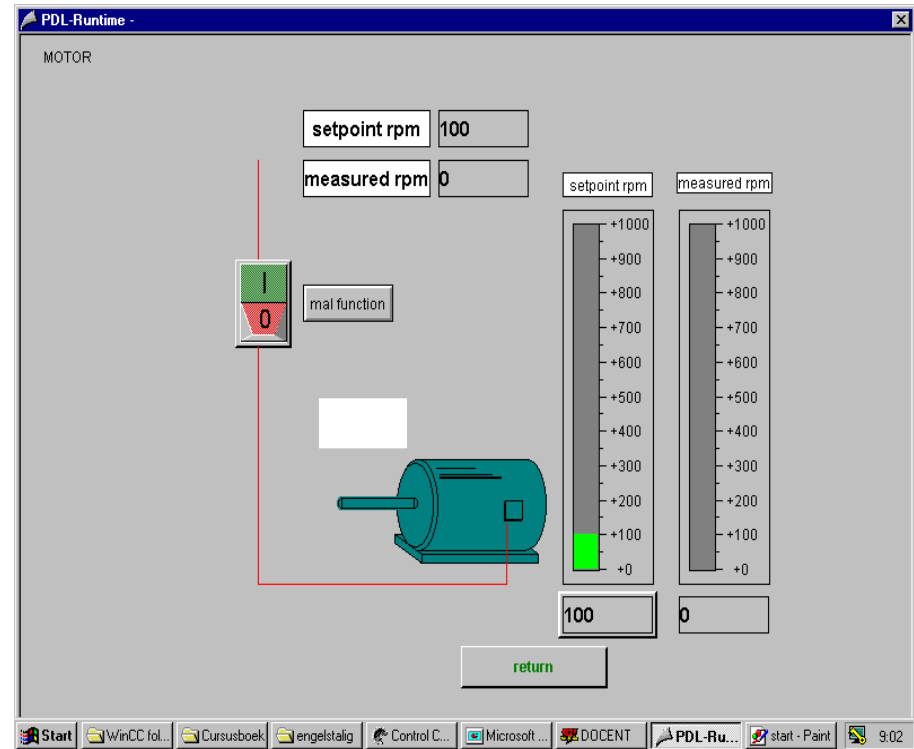
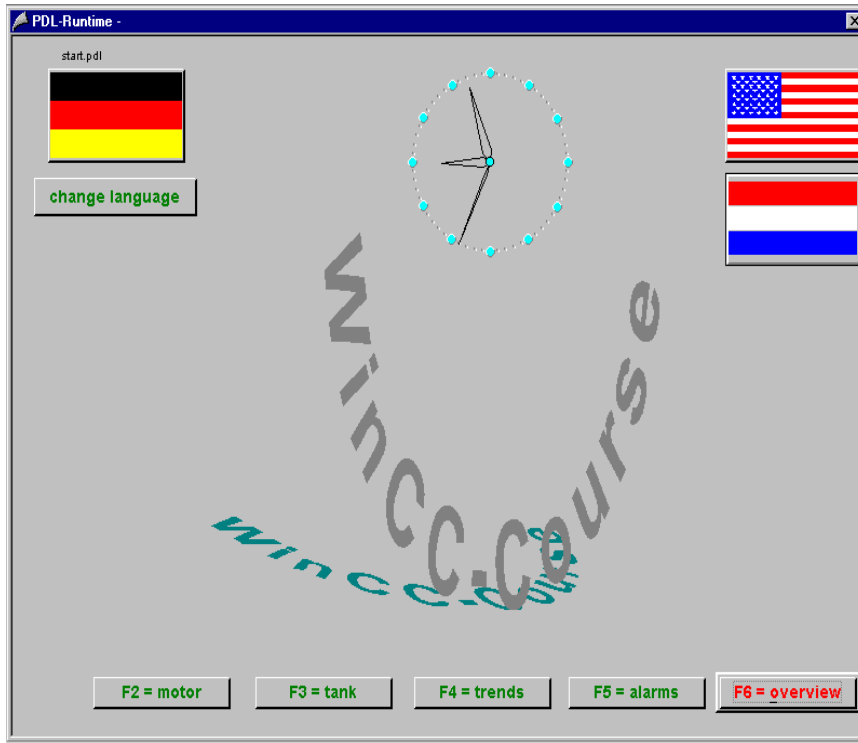
- 新的符号库 西门子 HMI 符号库 1.3
- 它们不是纯粹的图形对象
- 而是具有动态属性的控件：
 - 外观
 - 闪烁模式、速度
 - 位置、颜色



符号库 西门子 HMI 符号库 1.3 2/2

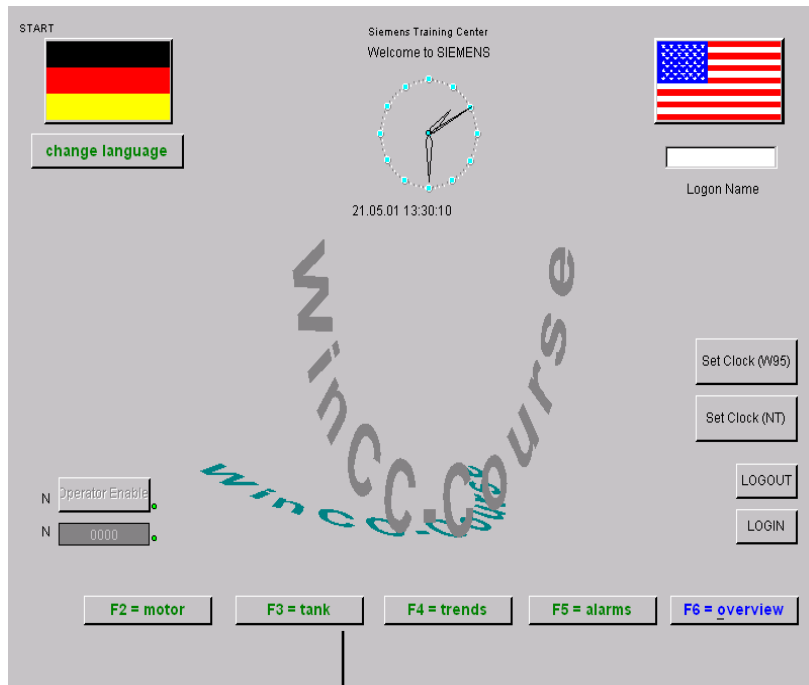


我的第一个工程

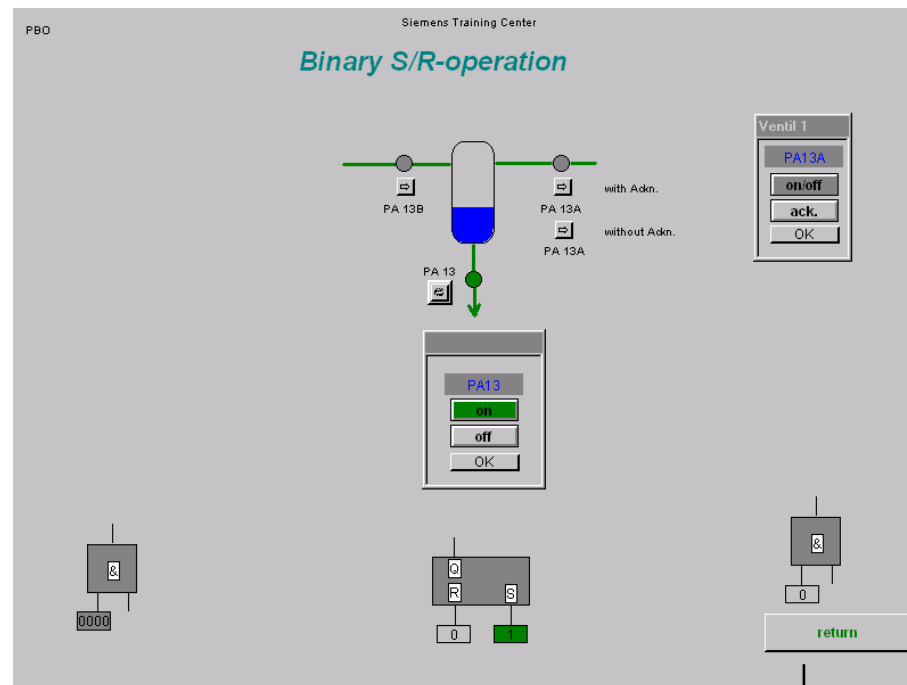


组态画面变化 (组态会话)

start.pdl



schalt.pdl



使用组态会话 (Configuration Dialog) 的组态

组态功能键 (组态会话)

start.pdl

schalt.pdl

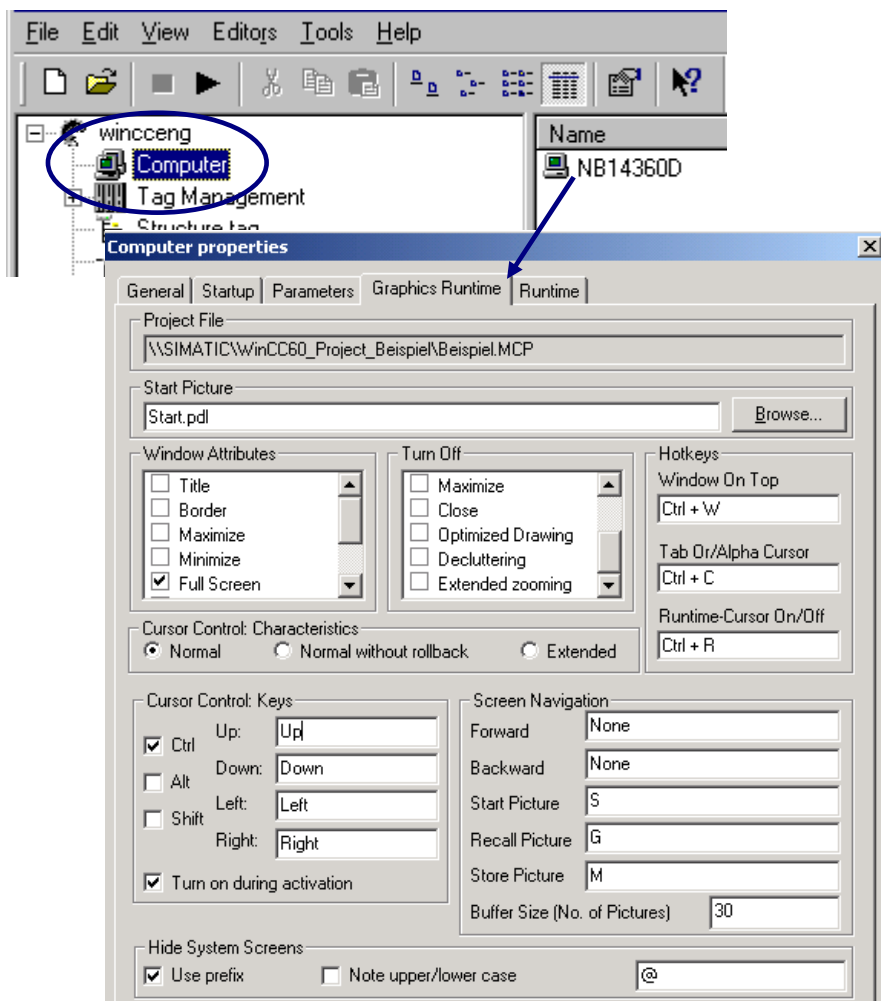
F3

F9

使用组态会话的组态

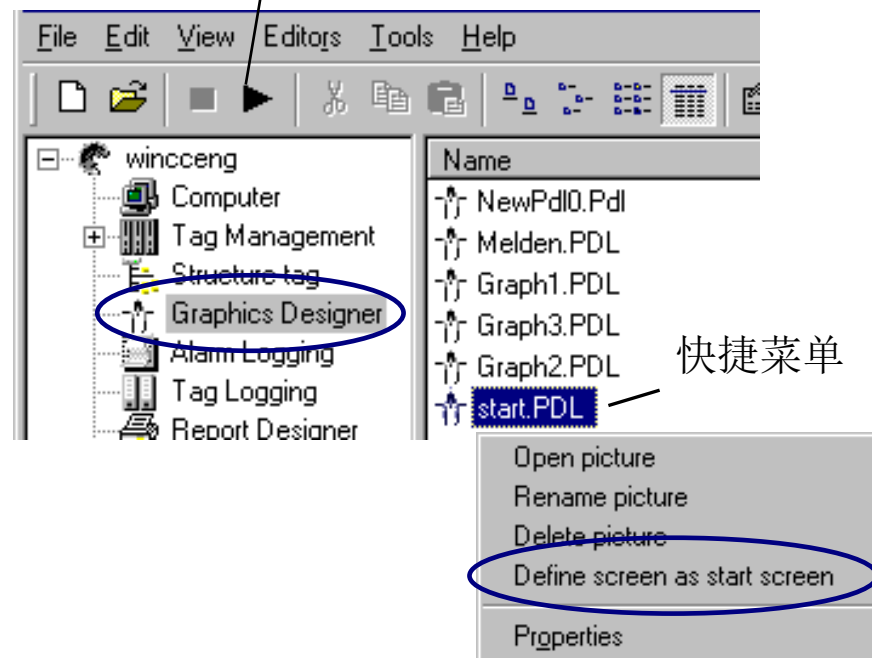
定义起始画面

方法 1



激活运行模式

方法 2



自动启动功能

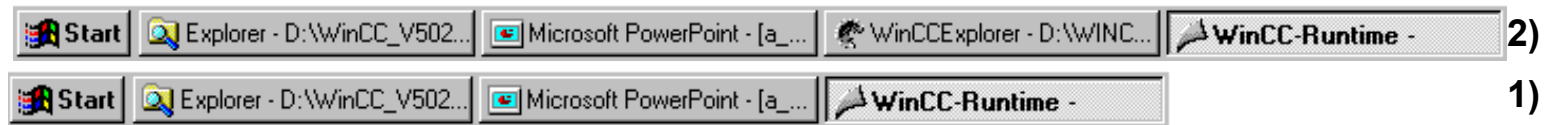
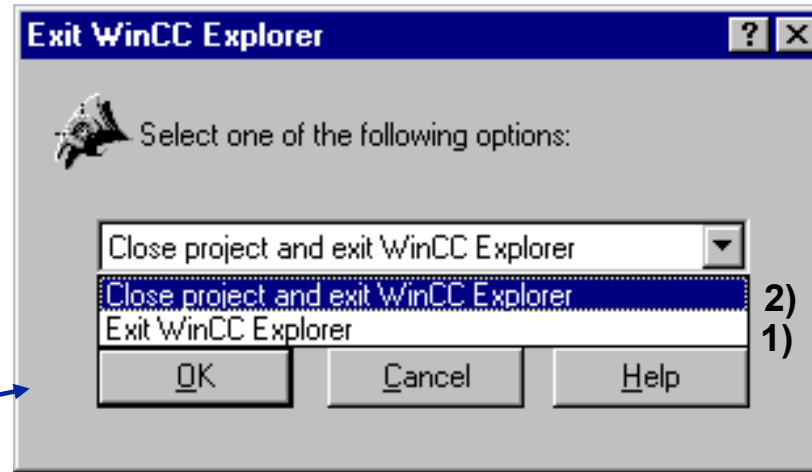
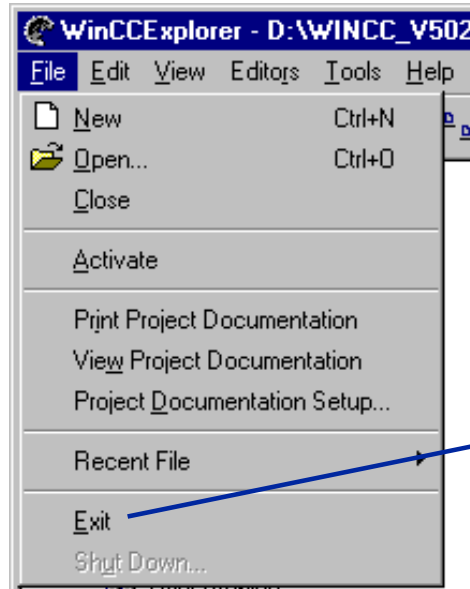
PC的转换



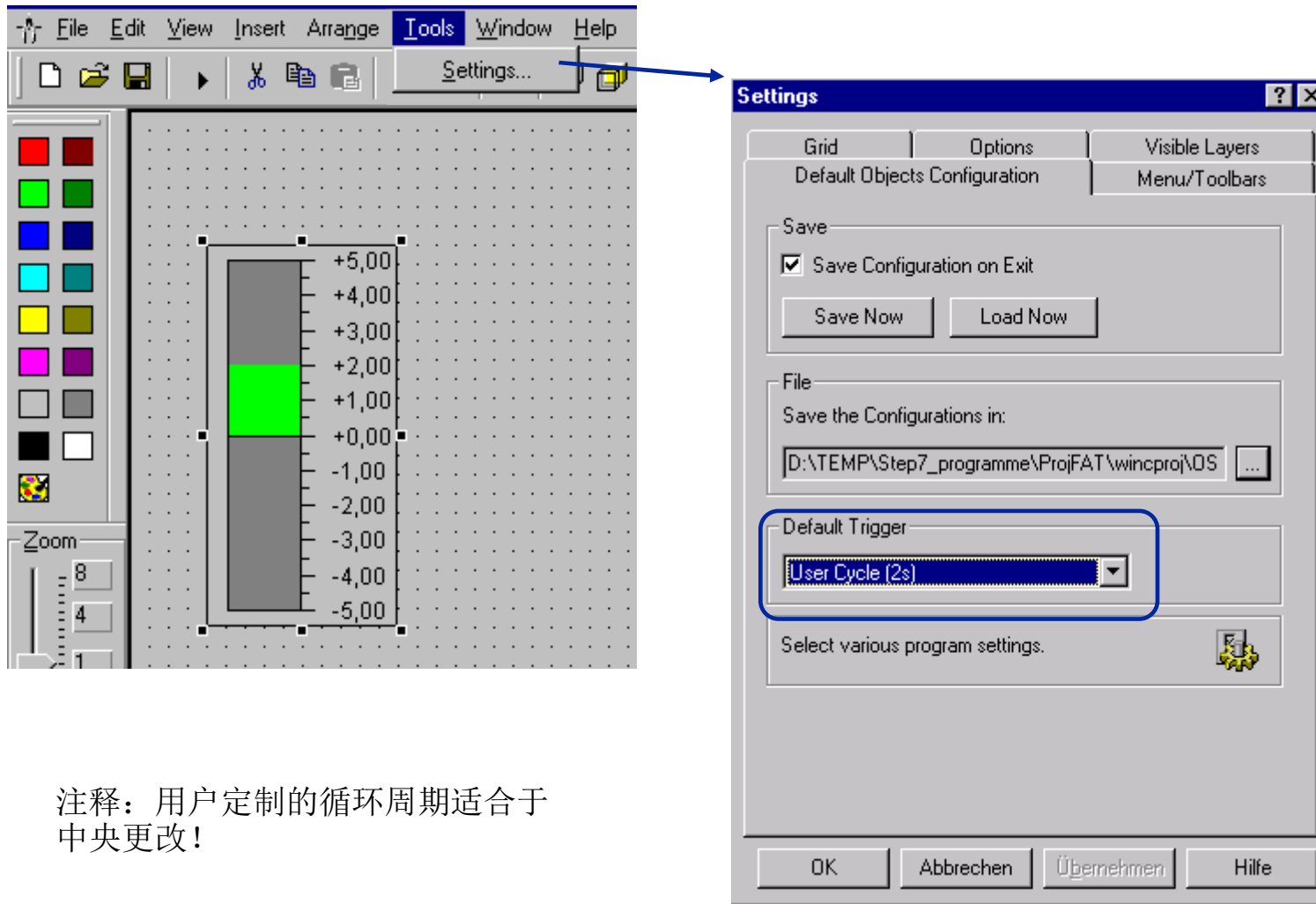
The screenshot shows the Windows XP Start menu. The 'WinCC' folder is selected, and its context menu is open, with 'Autostart' highlighted. The taskbar at the bottom shows the Start button circled in blue, and several application icons including 'Microso...', 'WinCCE...', 'D:_Kur...', and 'Unbena...'.

The 'AutoStart Configuration' dialog box is shown. The 'Project' field contains the path 'D:\va_wincc_kurs_prj_5_00\ab_graf\Beispiel.MC'. The checkbox 'Activate Project at Startup' is checked and circled in blue. Below the checkbox are buttons for 'Add to AutoStart' and 'Remove from AutoStart'. At the bottom are 'OK' and 'Cancel' buttons.

退出 WinCC Explorer



对象的默认触发器



The image shows the SIMATIC HMI software interface. The main window has a menu bar with File, Edit, View, Insert, Arrange, Tools, Window, and Help. Below the menu bar is a toolbar with icons for file operations and a 'Settings...' button. A blue arrow points from the 'Settings...' button to the 'Settings' dialog box. The dialog box has tabs for Grid, Options, Visible Layers, and Menu/Toolbars. The 'Default Objects Configuration' tab is selected. In the 'Default Trigger' section, a dropdown menu is open, showing 'User Cycle (2s)'. Below the dialog box, there is a note in Chinese.

注释：用户定制的循环周期适合于中央更改！

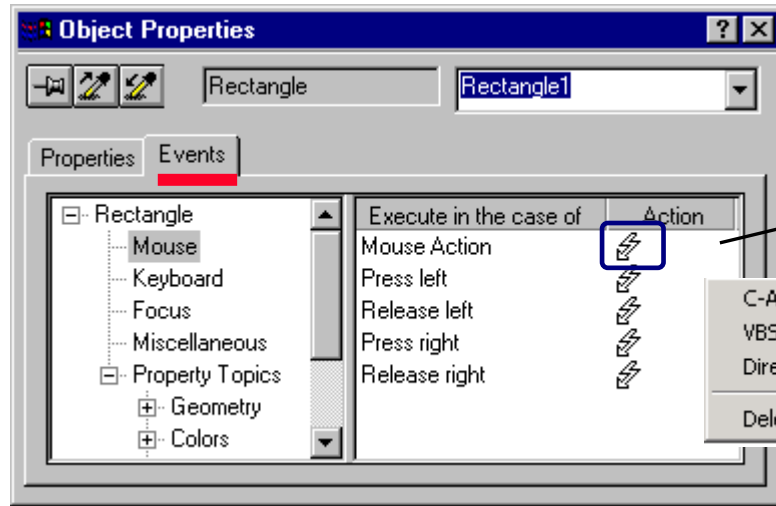
图形屏幕动态变化可能性概述 附加示例 1/2

- | | |
|--|--------|
| □ 组态会话 Configuration Dialog (快速组态) | 类型 I/O |
| □ 动态向导 Dynamic Wizard (组态助手) | 类型 I/O |
| □ 变量连接 Tag Connection | 类型 O |
| □ 动态会话 Dynamic Dialog | 类型 O |
| □ 直接连接 Direct Connection | 类型 I |
| □ 与 ANSI C 语法对应的对象的属性动作 | 类型 O |
| □ 与 ANSI C 语法对应的对象的事件动作 | 类型 I |
| □ VBS <u>V</u> isual <u>B</u> asic <u>S</u> cript 属性 | 类型 O |
| □ VBS <u>V</u> isual <u>B</u> asic <u>S</u> cript 事件 | 类型 I/O |

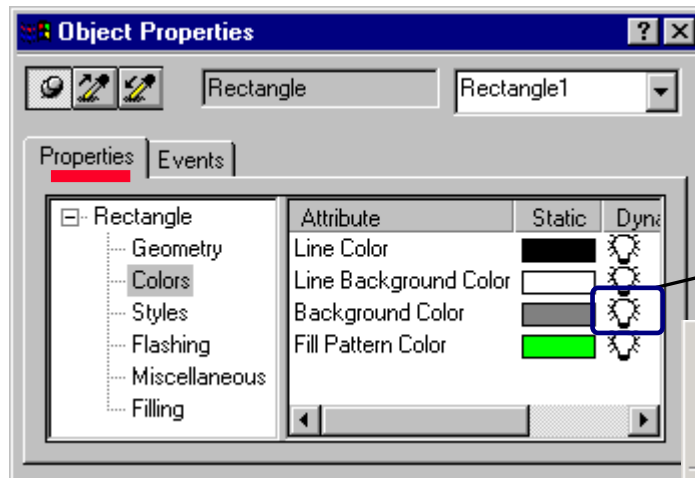
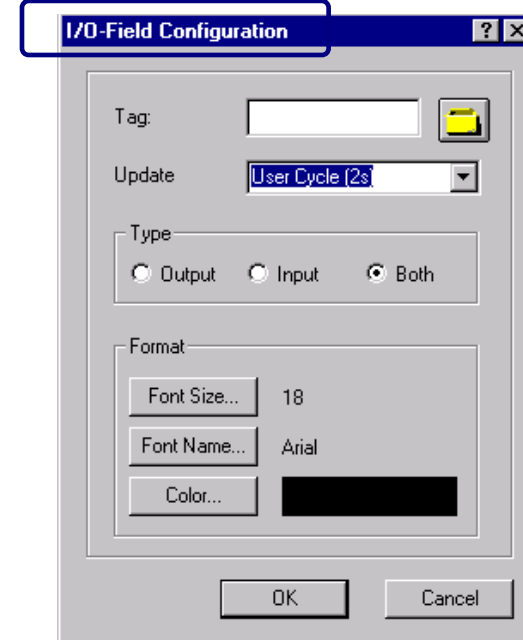
图形屏幕动态变化可能性概述 附加示例 2/2

- | | |
|-------------------------------------|--------|
| □ 组态会话 Configuration Dialog (快速组态) | 类型 I/O |
| □ 动态向导 Dynamic Wizard (组态助手) | 类型 I/O |
| □ 变量连接 Tag Connection | 类型 O |
| □ 动态会话 Dynamic Dialog | 类型 O |
| □ 直接连接 Direct Connection | 类型 I |
| □ 与 ANSI C 语法对应的对象的属性动作 | 类型 O |
| □ 与 ANSI C 语法对应的对象的事件动作 | 类型 I |
| □ VBS Visual Basic Script 属性 | 类型 O |
| □ VBS Visual Basic Script 事件 | 类型 I/O |

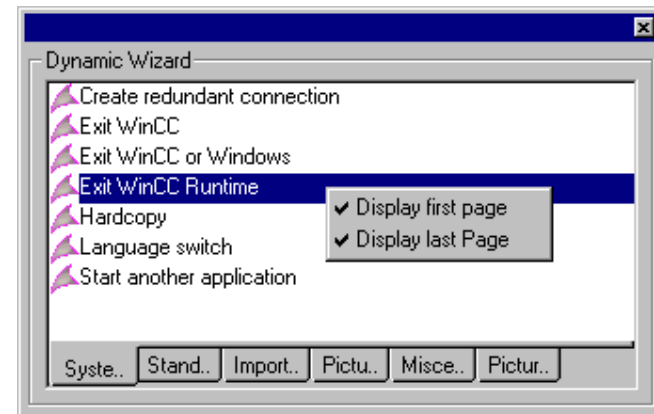
动态变化的会话调用1/2



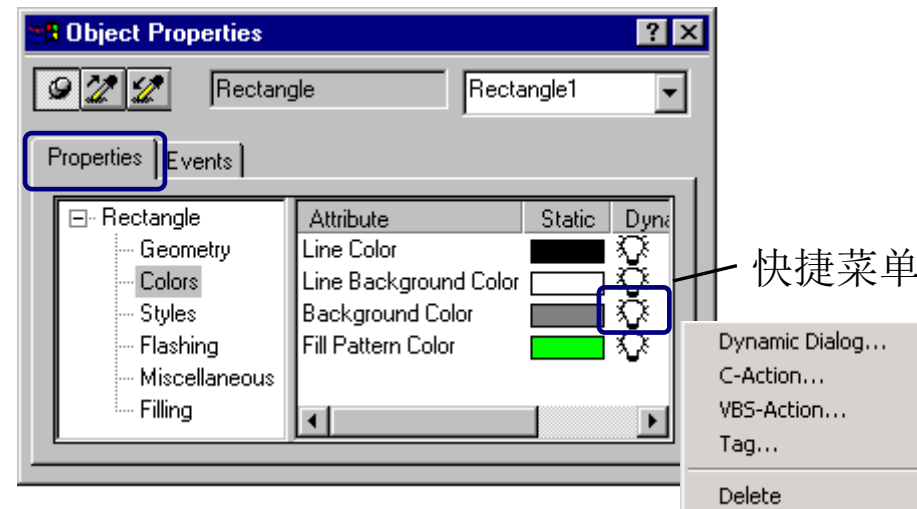
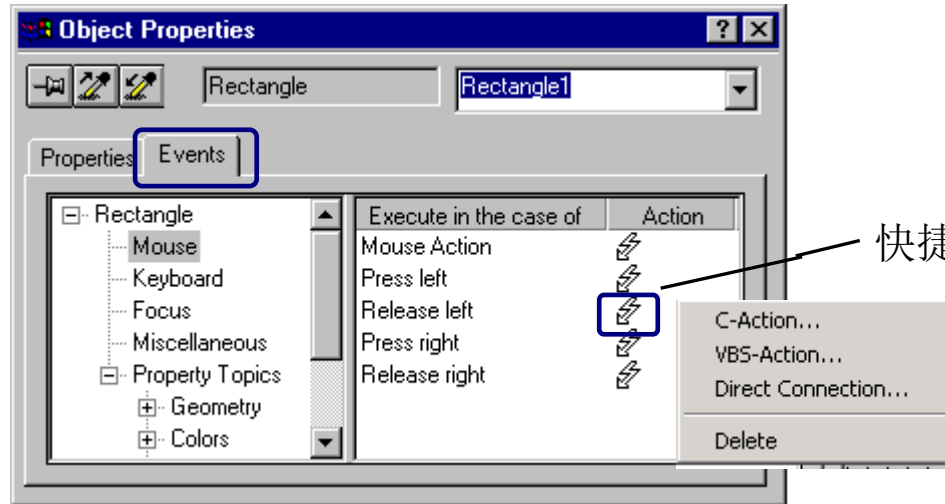
快捷菜单



快捷菜单

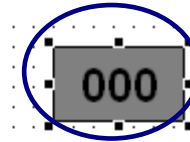
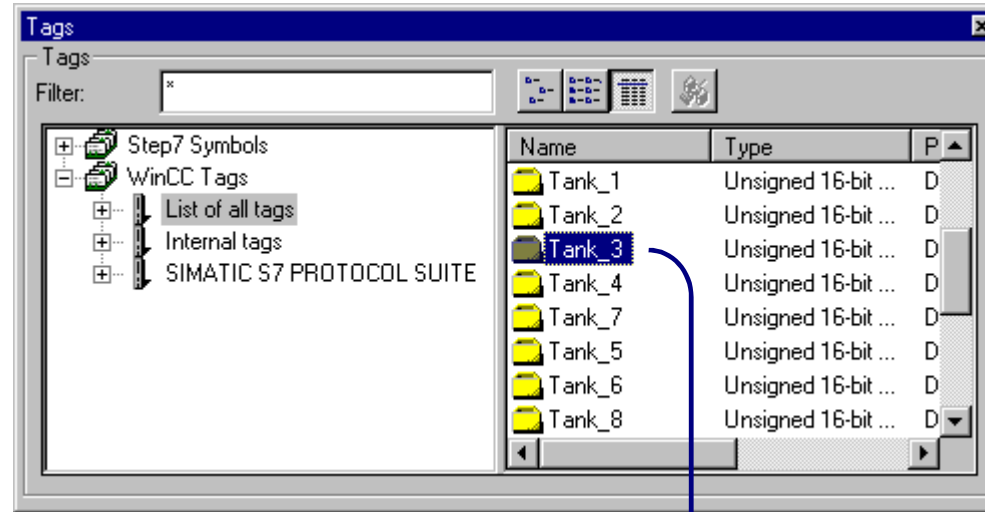


动态变化的会话调用2/2

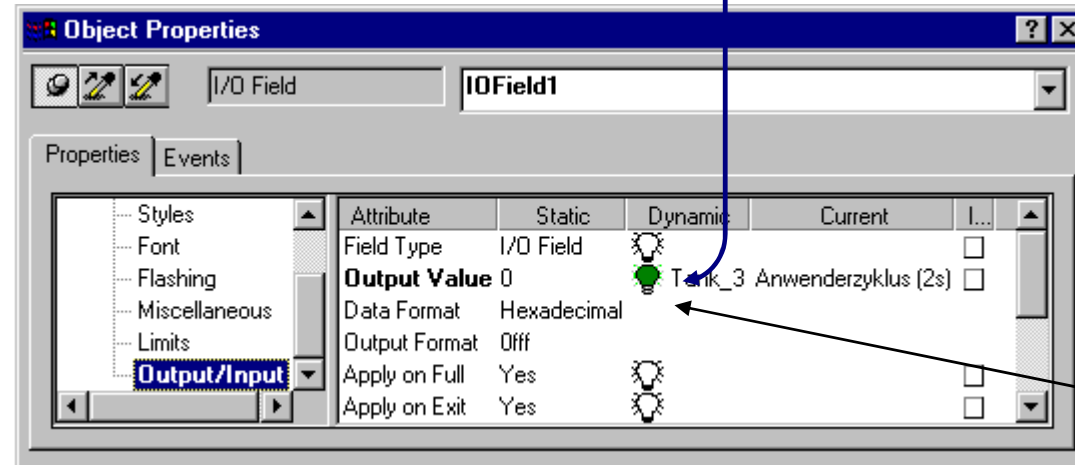


变量连接概述 十进制显示

菜单条 > 视图,
下拉菜单 > 工具条
-> 变量

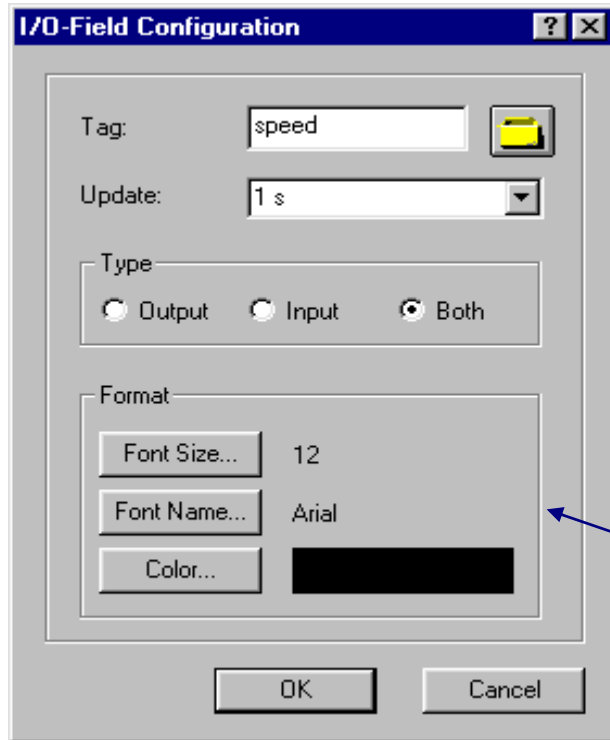


从版本5以上
支持拖放
的方式



绿色

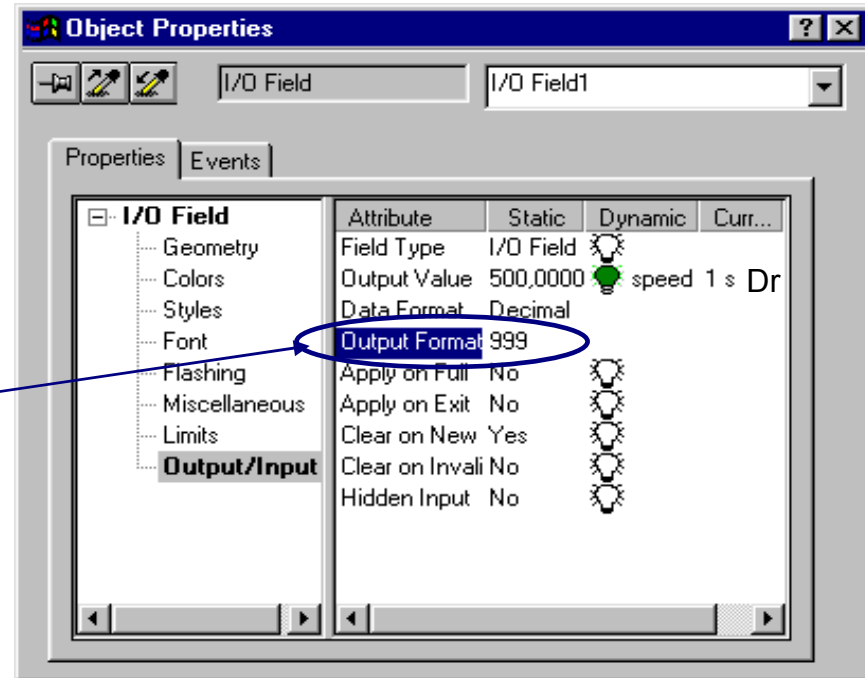
数字式输入/输出 (组态会话)



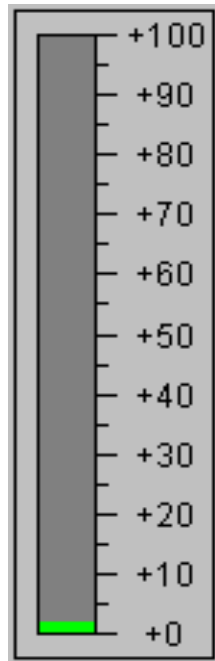
Setpoint
kg 20
类型 I

Actual value
kg 128
类型 O

Speed
rpm 500
类型 I/O



棒图输出 (组态会话)



Bar Configuration [?] [X]

Tag: [Folder Icon]

Update: [Dropdown Arrow]

Limits

Maximum:

Minimum:

Bar Graph Alignment

top left

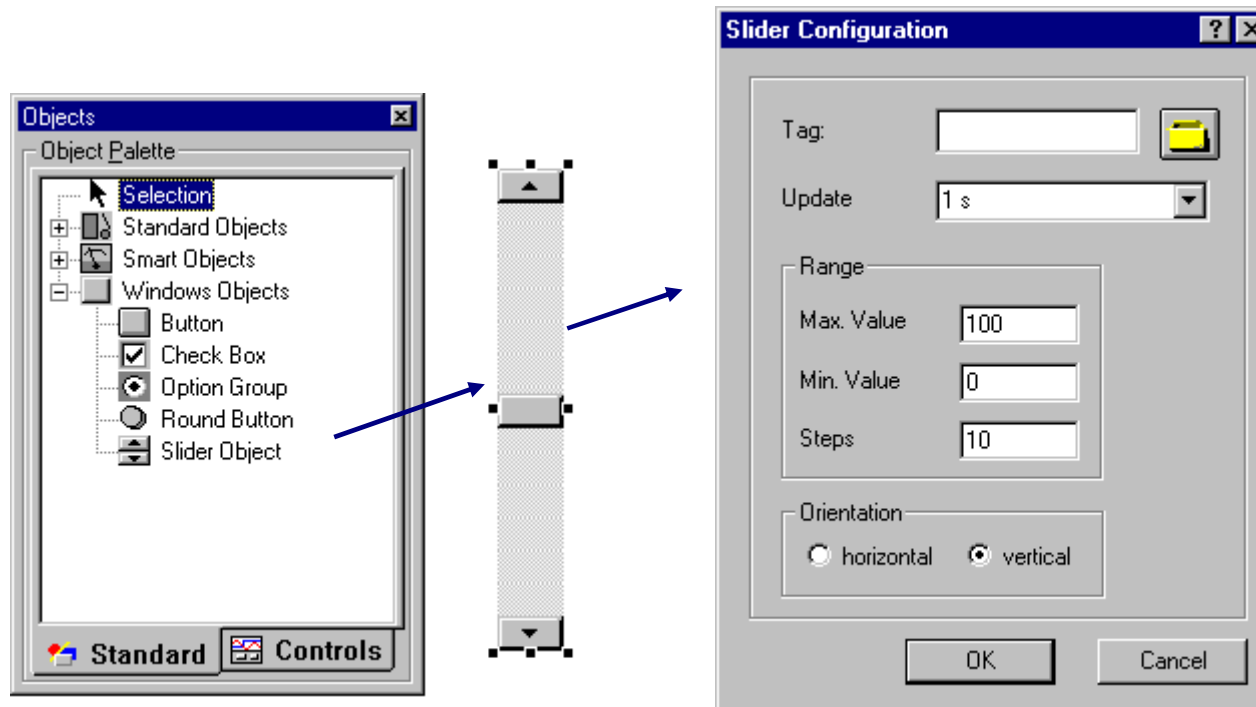
bottom right

[OK] [Cancel]

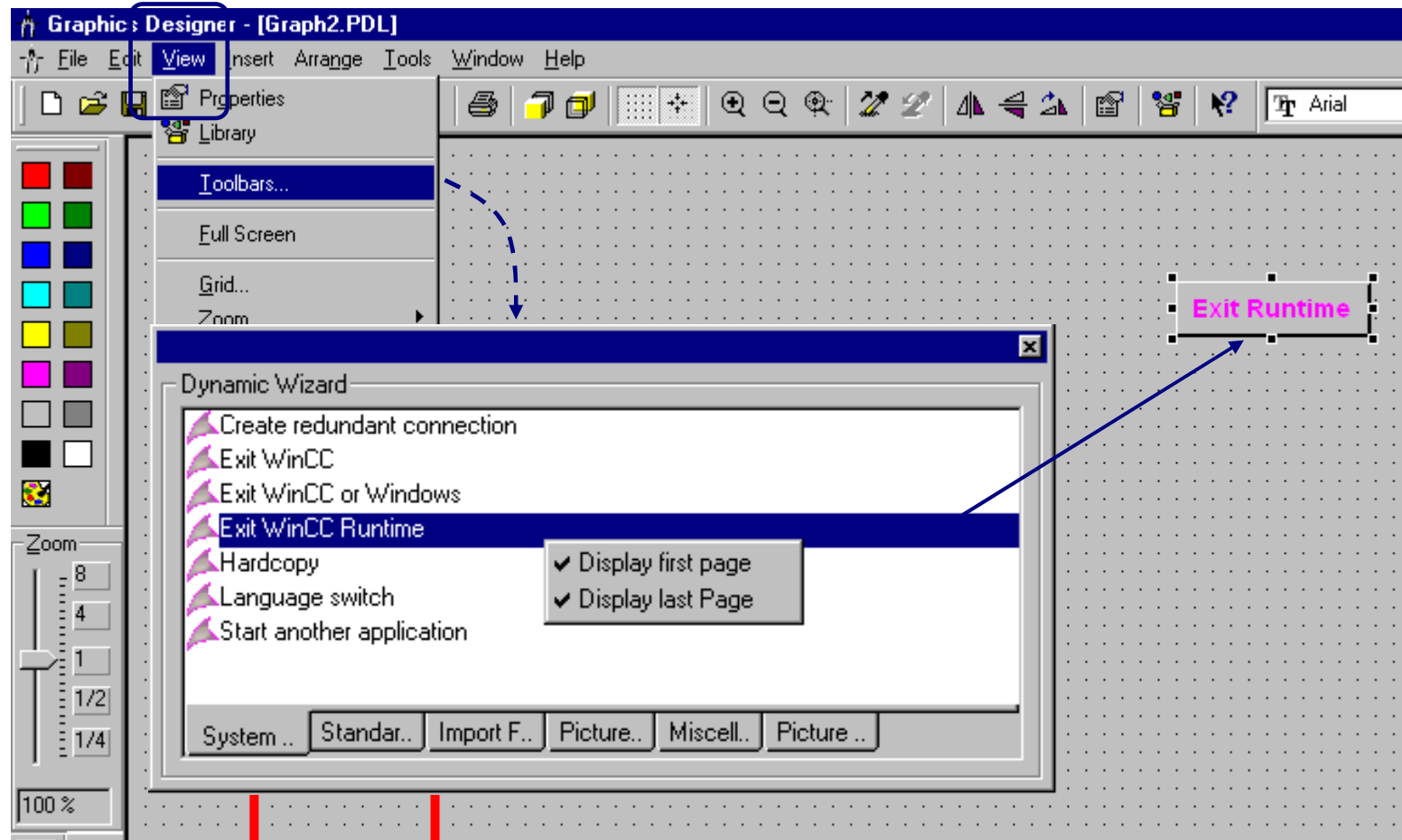
组态 其他 属性

- Properties/Miscellaneous/Process Driver Connection: **temp1**
/ Maximum Value: **100**
/ Minimum Value: **0**
/ Trend: **no**
- Properties / Color / Bar Background Color: **green**
/ Trend Color: **yellow**
- Properties / Font / Font: **Arial**
/ Font Size: **12**
- Properties / Axis / Alignment: **right**
/ Bar Scaling: **linear**
/ Digits Left of Decimal Point: **3**
/ Digits Right of Decimal Point: **0**

调整用滚动条对象



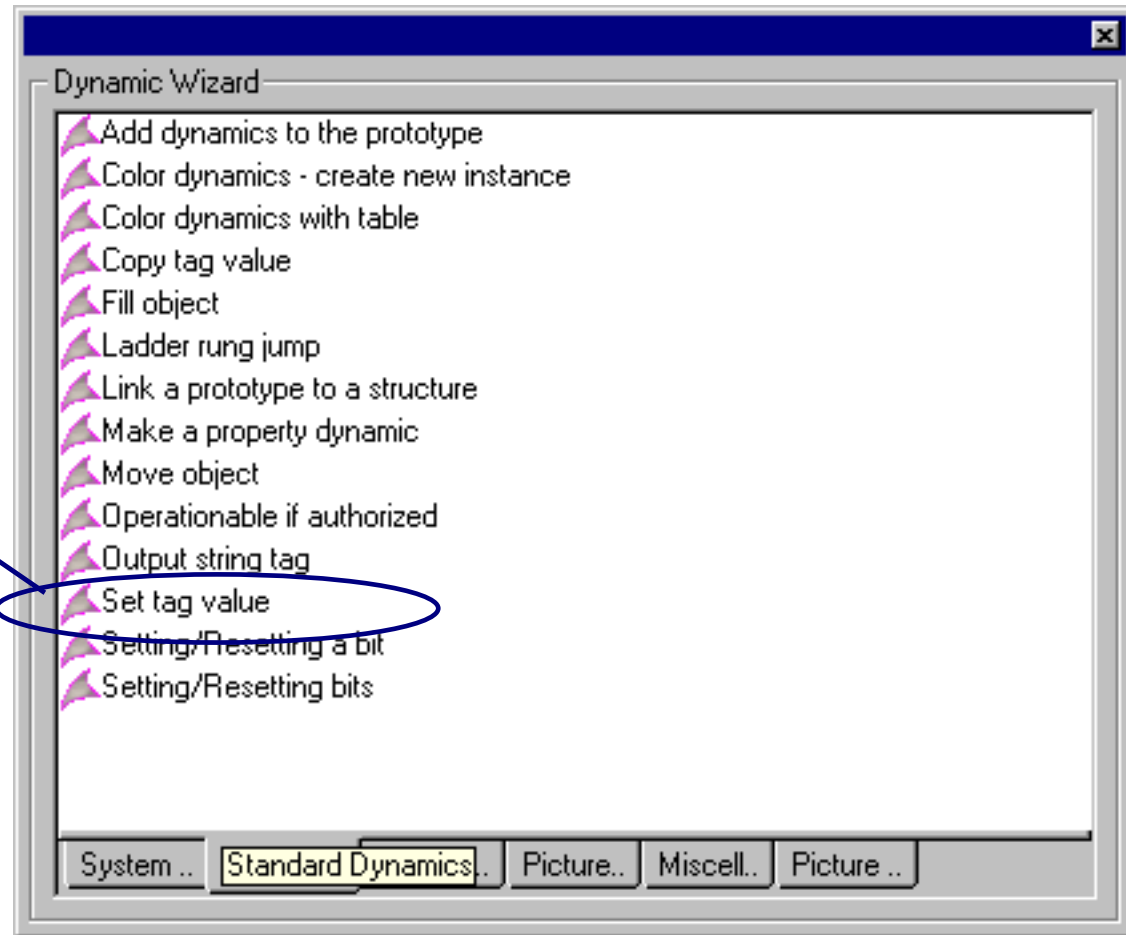
动态向导概述 1/2



动态向导概述 2/2

Valve Line 1 Open

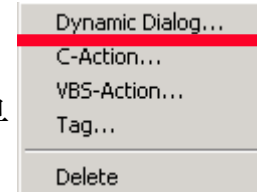
Valve Line 1 Closed



向导在后台生成一个C脚本，可用于更进一步的应用。

SIEMENS

动态会话概述 修改颜色属性



快捷菜单

Object Properties

I/O Field: IOField1

Properties | Events

I/O Field		Static	Dynamic
Geometry	Border Color	Black	Lightbulb icon
Colors	Border Background Color	White	Lightbulb icon
Styles	Background Color	Grey	Lightbulb icon (circled in blue)
Font	Fill Pattern Color	Green	Lightbulb icon
Flashing	Font Color	Black	Lightbulb icon
Miscellaneous			
Limits			
Output/Input			

Dynamic value ranges

Event name: Tag

Expression/Formula: 'Tank_3'

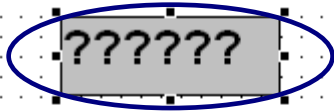
Result Of The Expression/Formula

Valid range	Up to	Back...
Value Range1	100	Green
Value Range2	200	Blue
Other		Red

Data Type: Analog, Bool, Bit, Direct

Evaluate Status of Tags

动态会话概述 过程变量的状态测定



Object Properties

Static Text StaticText1

Properties Events

Attribute	Static	Dyna
Text	???????	
Font	Arial	
Font Size	24	
Bold	Yes	
Italic	No	
Underline	No	
Text Orientation	Horizontal	
X-Alignment	Left	

Dynamic Dialog...
C-Action...
VBS-Action...
Tag...
Delete

Dynamic value ranges

Event name: Tag

Expression/Formula: 'Motor_1'

Result Of The Expression/Formula

Valid range	Text
Yes / TRUE	Motor On
No / FALSE	Motor Off

Data Type:
 Analog
 Bool
 Bit
 Direct

Evaluate Status of Tags

Status	Valid range	Text
Motor_1	Server not available.	???????
	No network module	???????
	No connection	No PLC Connection
	No check-back mess:	???????
	Handshake-Error	???????
	Addressing error	???????
	Tag not found	???????
	Access to tag not perr	???????

直接连接概述

The image illustrates the configuration of a direct connection in SIMATIC Manager. It shows three main windows:

- Object Properties:** The 'Events' tab is active, showing a tree view of 'Button' properties. 'Mouse Action' is selected in the 'Execute in the case of' list.
- Direct Connection:** A dialog box where the 'Source' is set to 'Constant' with the value '1000'. The 'Target' is set to 'Variable' with the name 'Tank_1'. The 'direct' radio button is selected.
- Setpoint rpm:** A separate box with the text 'Setpoint rpm' and an arrow pointing towards the 'Direct Connection' dialog.

状态显示，文件

Status Display Configuration

Tag: R_Ventil

Update: User Cycle (2s)

State	Basic Picture	Flash Picture	Flash
0	v1open.emf		no flashing

拖放

Selection of Picture

- v1.close.emf
- v1open.emf

Bit position: [] Add

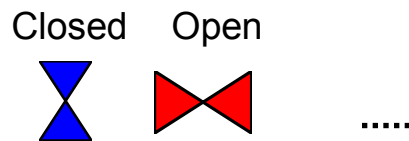
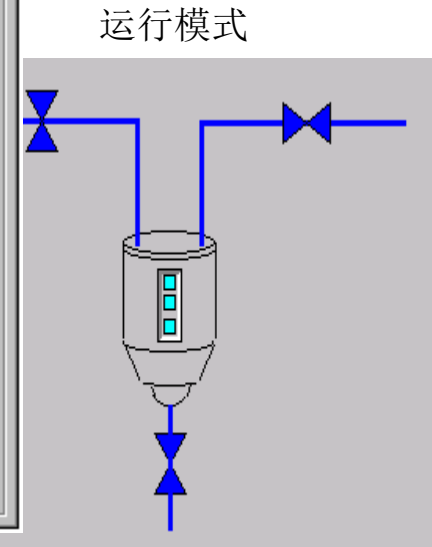
OK Cancel

Objects

Object Palette

- Selection
- Standard Objects
- Smart Objects
 - Application Window
 - Picture Window
 - Control
 - OLE Element
 - I/O Field
 - Bar
 - Graphic Object
 - Status Display
 - Text List
- Windows Objects

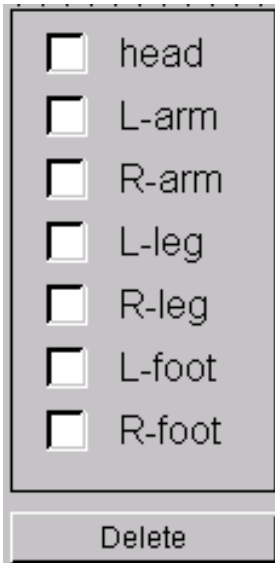
Standard Controls



菜单 -> File 文件,
 下拉菜单 -> Export 导出

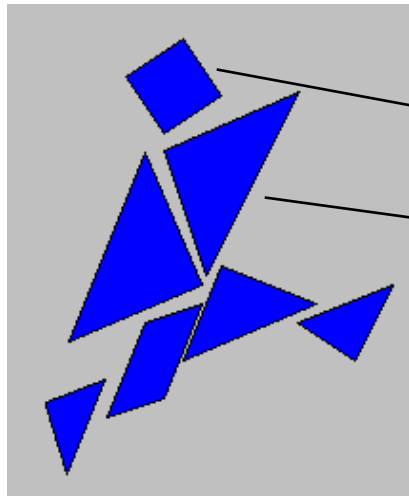
SIEMENS

复选框 Check Box



用变量连接组态:
 -Properties/ Output-input/ Selected Fields/ Dynamics:
Tangram(signed 32-bit value)

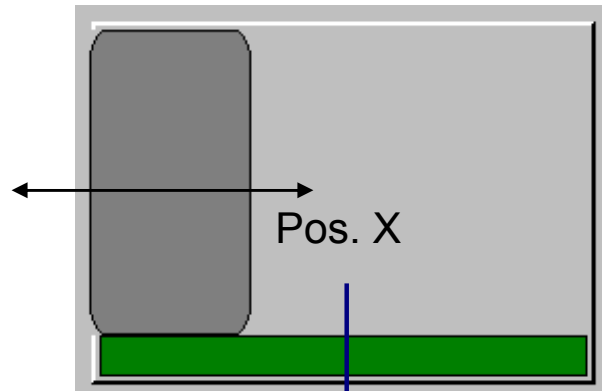
用直接连接删除显示
 -Source: Constant 0
 -Target: Tag *Tangram*



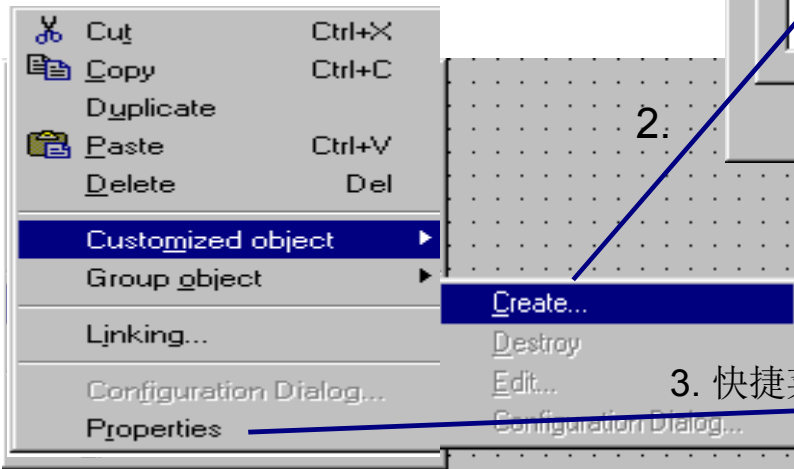
用动态会话使显示成为动态的

- | 位地址 | |
|-----|------|
| 0 | //头 |
| 1 | //左臂 |
| 2 | //右臂 |
| 3 | //左腿 |
| 4 | //右腿 |
| 5 | //左脚 |
| 6 | //右脚 |

定制的对象

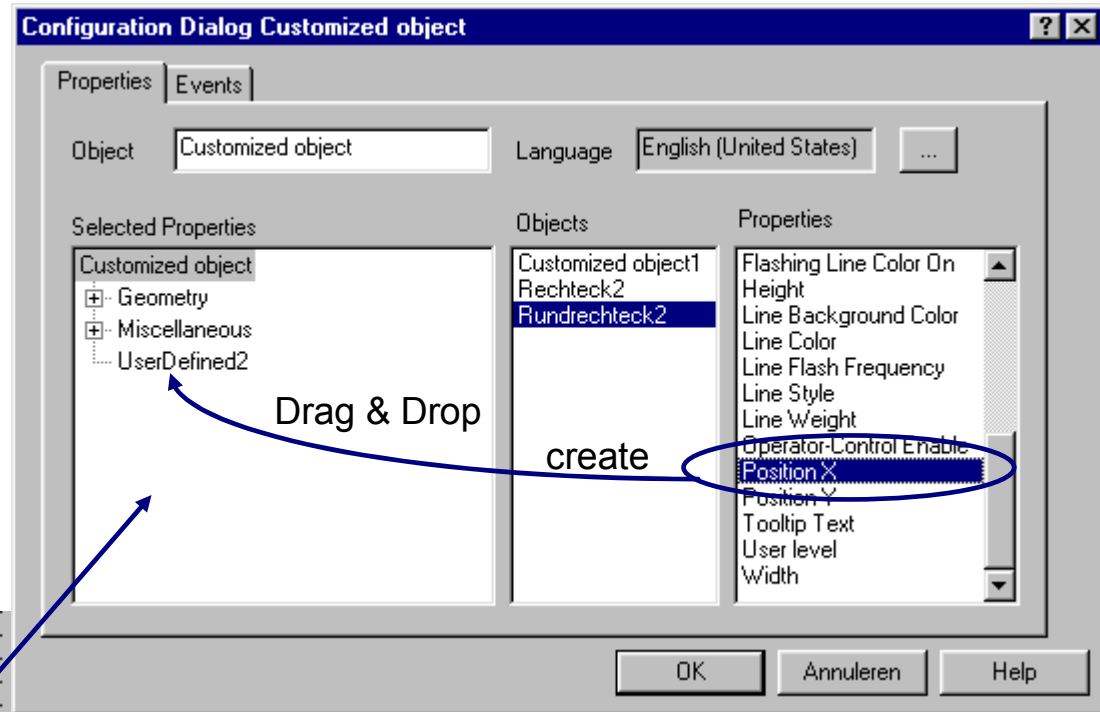


1. 快捷菜单



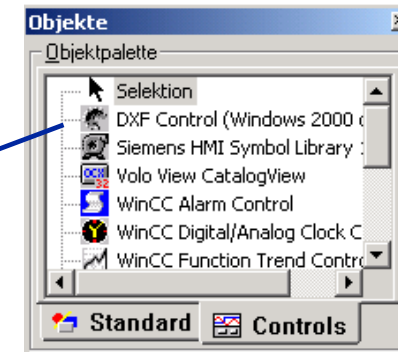
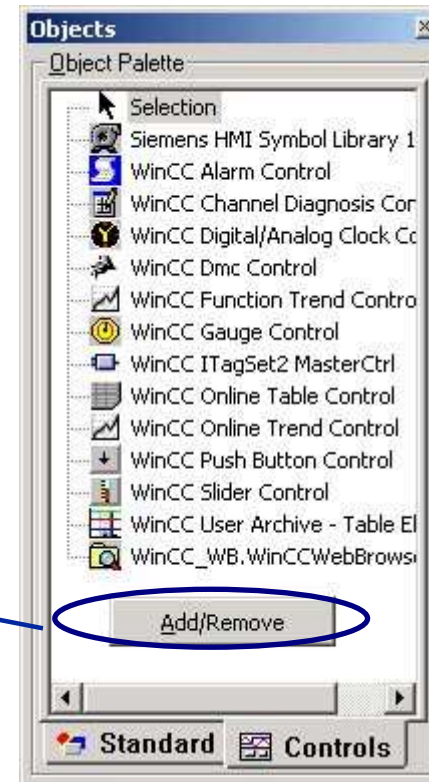
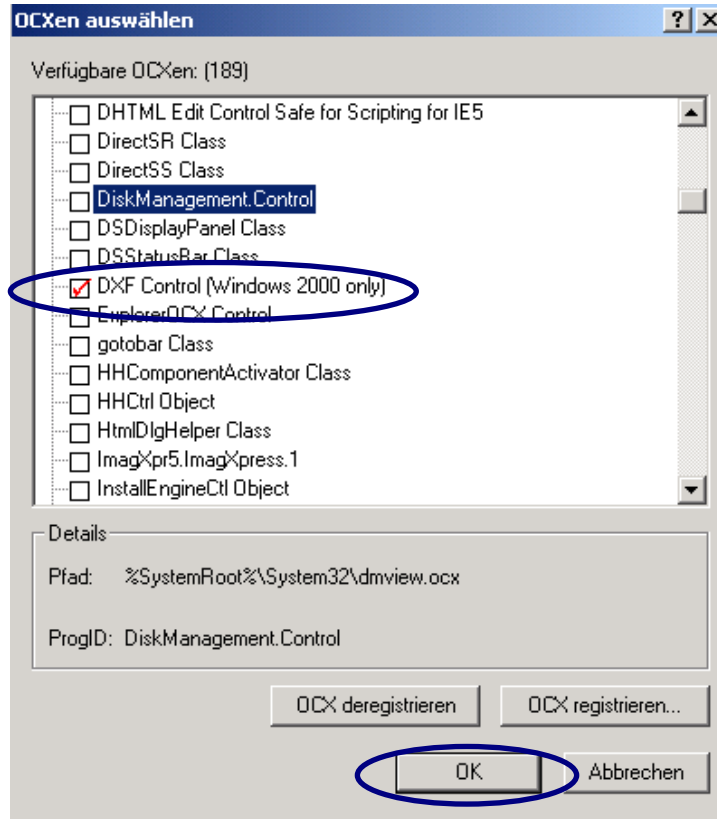
2.

3. 快捷菜单



结果

AutoCAD和EPLAN



编程语言 C

从程序文本到可执行的程序

源文件



- 编辑 (使用包含文本编辑器的编译器。)
- 编译 **Compiling** (C编译器生成具有机器代码的目标文件。)
- 连接 (连接器将几个目标连接到一个可执行程序中。)
- 执行 (编译过的、完全连接过的程序就可以执行了。)

C脚本中的组态规则

CrossRef - [CrossRef1]									
File Edit View Tools Window Help									
[Icons]									
	Used	ll.us.	ll.ex.	Type	Element Contained +	Type	Containing element	Object	Property / Action
9			X	Tag	Ereignis1	Property	Melden	EA-Feld2	OutputValue
10			X	Tag	Ereignis1	Property	Melden	EA-Feld1	OutputValue
11	X			Tag	Motor_1	Property	start	StaticText1	Text
12	X			Tag	Setpoint1	Property	start	IOField3	OutputValue

```

// WINCC:TAGNAME_SECTION_START
// syntax: #define TagNameInAction "DMTagName"
// next TagID : 1
#define TAG_I_Setpoint1 "Setpoint1 "
// WINCC:TAGNAME_SECTION_END

// WINCC:PICNAME_SECTION_START
// syntax: #define PicNameInAction "PictureName"
// next PicID : 1
// WINCC:PICNAME_SECTION_END
:
:
SetTagDWord(TAG_I_Setpoint1 ,100);

```

C语法的属性动作概述 输出值的计算

创建动作

导入动作 *.act

导出 *.act

Event Name : Tag

```

#include "apdefap.h"
double main(char* lpszPictureName, char* lpszObjectName, char* lpszPropert
int back;
// WINCC:TAGNAME_SECTION_START
// syntax: #define TagNameInAction "DMTagName"
// next TagID : 1
#define Tag1 "Tank_1"
// WINCC:TAGNAME_SECTION_END

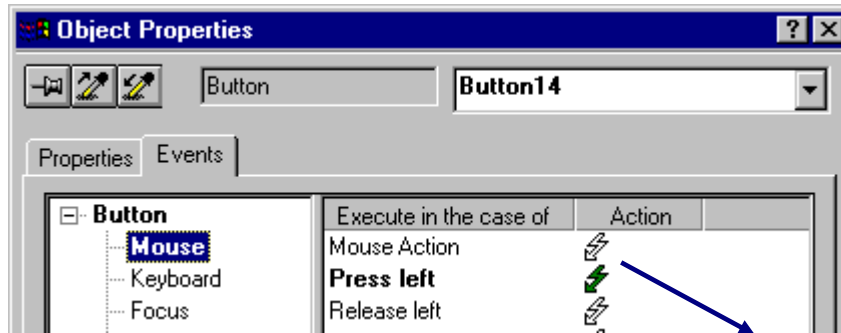
// WINCC:PICNAME_SECTION_START
// syntax: #define PicNameInAction "PictureName"
// next PicID : 1
// WINCC:PICNAME_SECTION_END
back=GetTagWord(Tag1);
back=back+100;
return (back); //Rückgabe-Typ:WORD
    
```

Attribute	Static	Dynamic
Field Type	I/O Field	
Output Value	0	
Data Format	Hexadecimal	
Output Format	Off	
Apply on Full	Yes	
Apply on Exit	Yes	
Clear on New Input	Yes	
Clear on Invalid Input	No	
Hidden Input	No	

green or yellow lightning bolt

C语法的事件动作概述 加1/减1

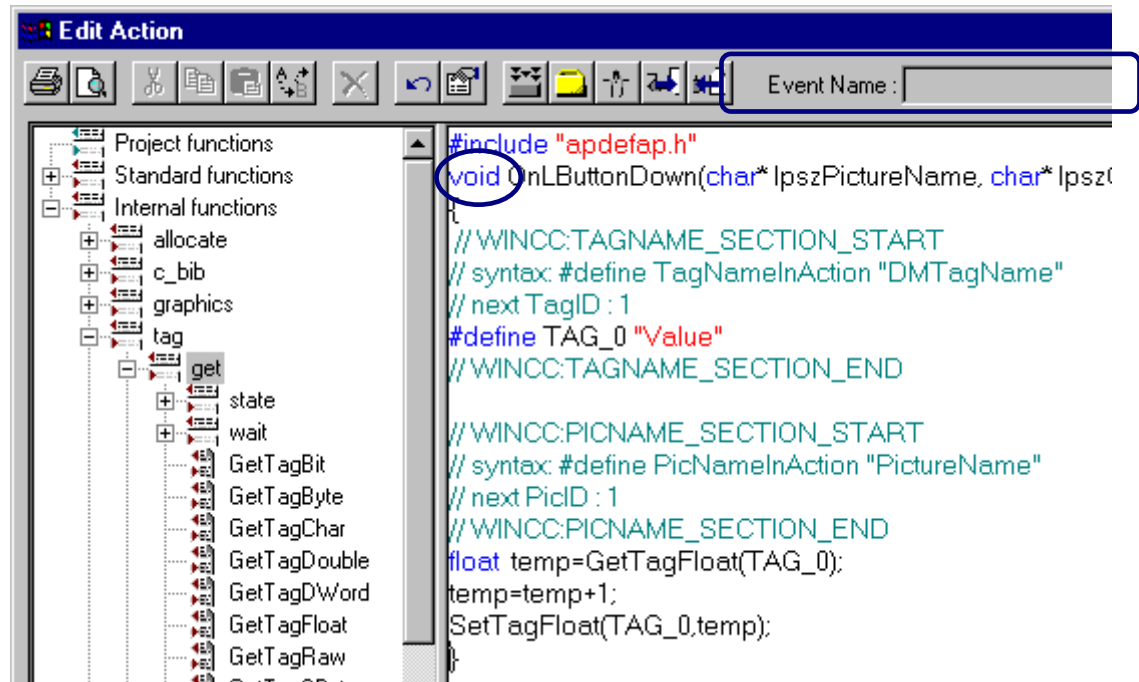
+1











-1

```
float Temp = GetTagFloat(Tag_wert);
Temp =Temp-1;
SetTagFloat(Tag_wert,Temp);
```

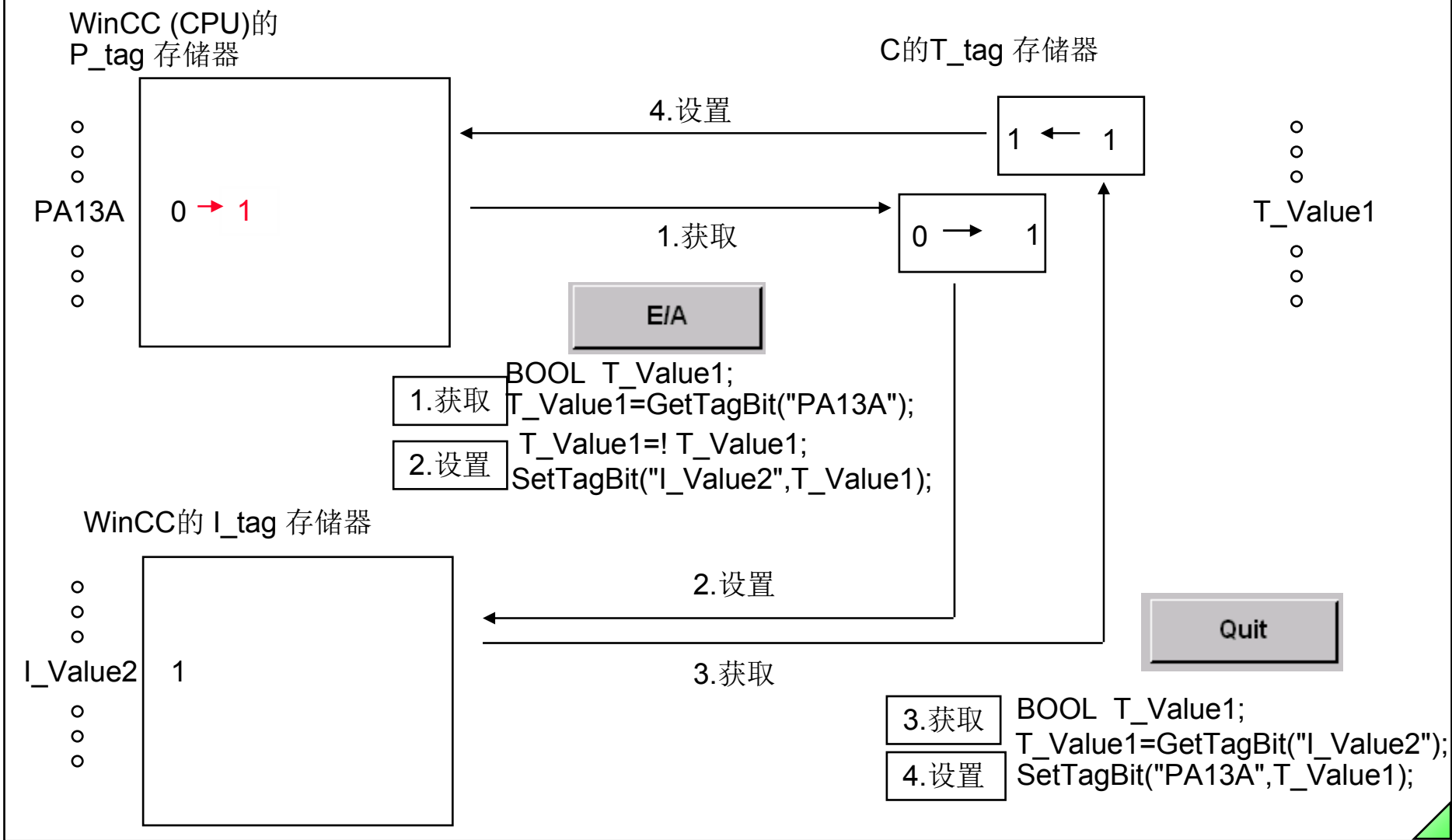
注释：符号库中现成的对象也可用于这些功能。



On/Off 操作基本原理

任务	解决方案
  <p>开关功能，使用鼠标单击 有确认</p>	<p>C-动作</p> <p>直接连接 动态向导 C-动作</p>
 <p>开关功能，使用鼠标单击 没有确认</p>	<p>C-动作</p>
 <p>在var1中置位 在var2复位</p>	<p>C-动作</p>
 <p>在 var2中置位 在var1中复位</p>	<p>C-动作</p>
  <p>单击On置位开关 单击Off复位开关</p>	<p>直接连接 动态向导 C-动作</p>
 <p>鼠标左键 / 右键 用于开关</p>	<p>直接连接 动态向导 C-动作</p>

过程值调整，在C例程中变量的输入和输出



1. 二元开关操作 (两步操作) 有确认

用C动作组态

Events/Mouse/Press Left/Action

```

BOOL T_value1;
T_value1=GetTagBit("PA13A");
T_value1=!T_value1;
SetTagBit("I_value2",T_value1);

```

直接连接组态:

```

Source: Tag I_Value2
Target: Tag PA13A

```

直接连接组态 **Configuration with Direct Connection:**

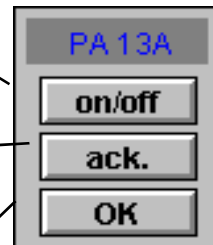
```

Source: Constant 0
Target: Current Window -> Display

```

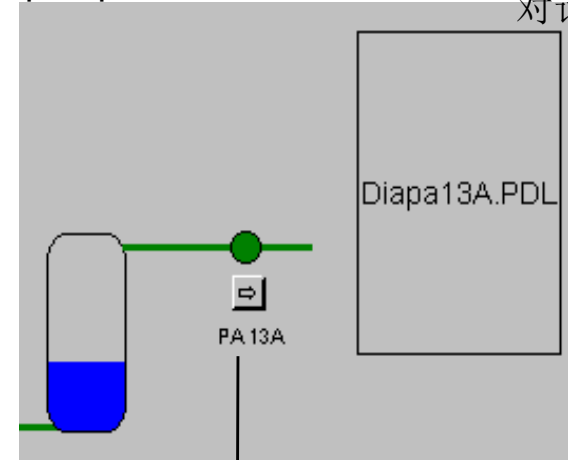
操作画面

Diapa13A.pdl



pbo.pdl

对话框2



用动态向导组态:

画面功能

用 *Diapa13A.PDL* 显示 WCC对话框

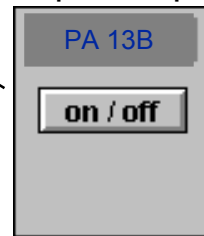
3. 二元开关操作，没有确认 (两步操作) 画面在窗口中变化

用C动作组态:

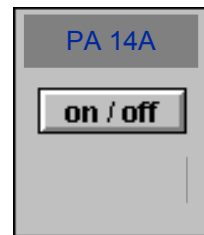
```
Events/Mouse/Press Left/Action
BOOL T_Value1;
T_Value1=GetTagBit("PA13B");
T_Value1= !T_Value1;
SetTagBit("PA13A",T_Value1);
```

操作画面

Diapa13B.pdl

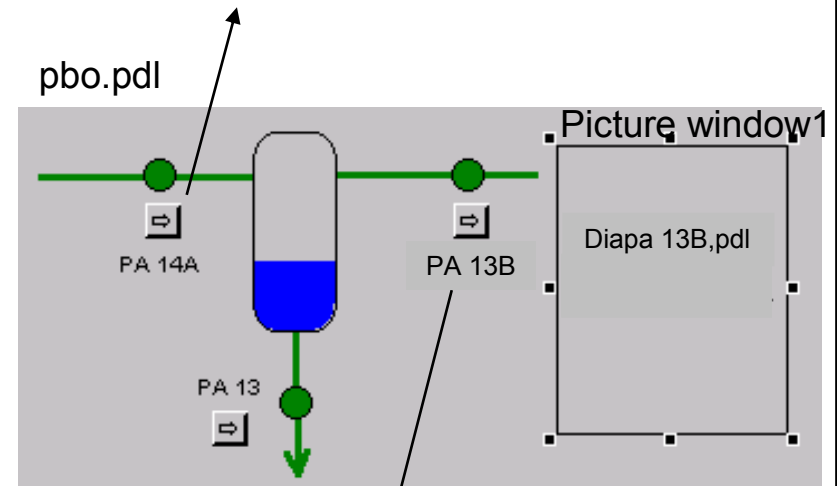


Diapa14A.pdl



用动态向导组态:

- 画面功能
- 画面在窗口中变化，使用 *Diapa14A.pdl*



用动态向导组态:

- 画面功能
- 画面在窗口中变化，使用 *Diapa13B.pdl*

Object Properties

Picture Window: PictureWindow1

Attribute	Static	Dyn
Display	Yes	
Update Cycle	Upon change	
Sizeable	No	
Movable	No	
Border	No	
Title	No	
Can Be Maximized	No	
Can Be Closed	No	
Foreground	No	
Scroll Bar	No	
Adapt Size	No	
Adapt Picture	No	
Picture Name	Diapa13B.PDL	

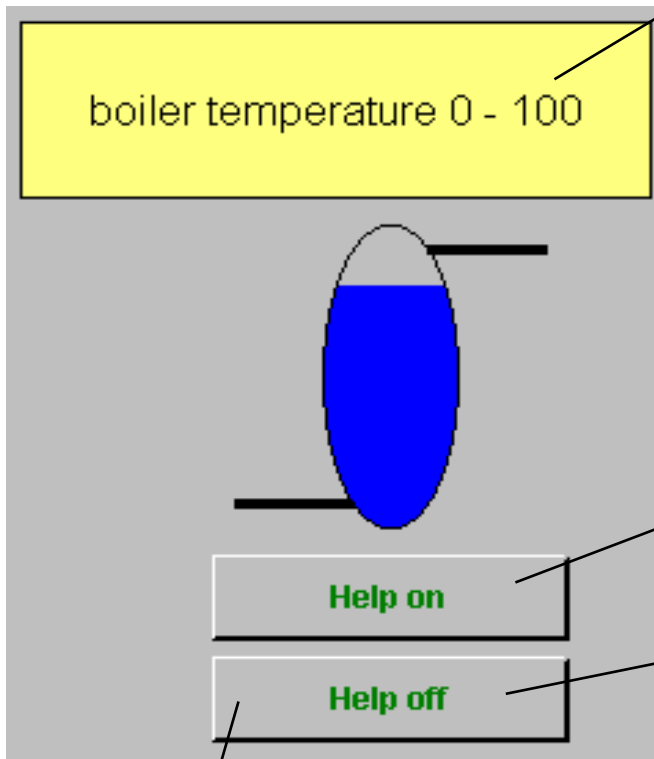
画面窗口1属性

SIEMENS

1. 每个操作的操作帮助

2. 工具提示文字

help.pdl



组态

-Properties/Static Text/ Object Name: **helpText1**/ Layer: **2**/ Font/ Text: **boiler temperature
0 to 100**/ Font/ X Alignment: **centered**/ Font/ Y Alignment: **centered**/ Miscellaneous/Display: **no**

用直接连接组态:

- Source: Constant 1

- Target: Object in Picture, *helpText1, Display*

用直接连接组态:

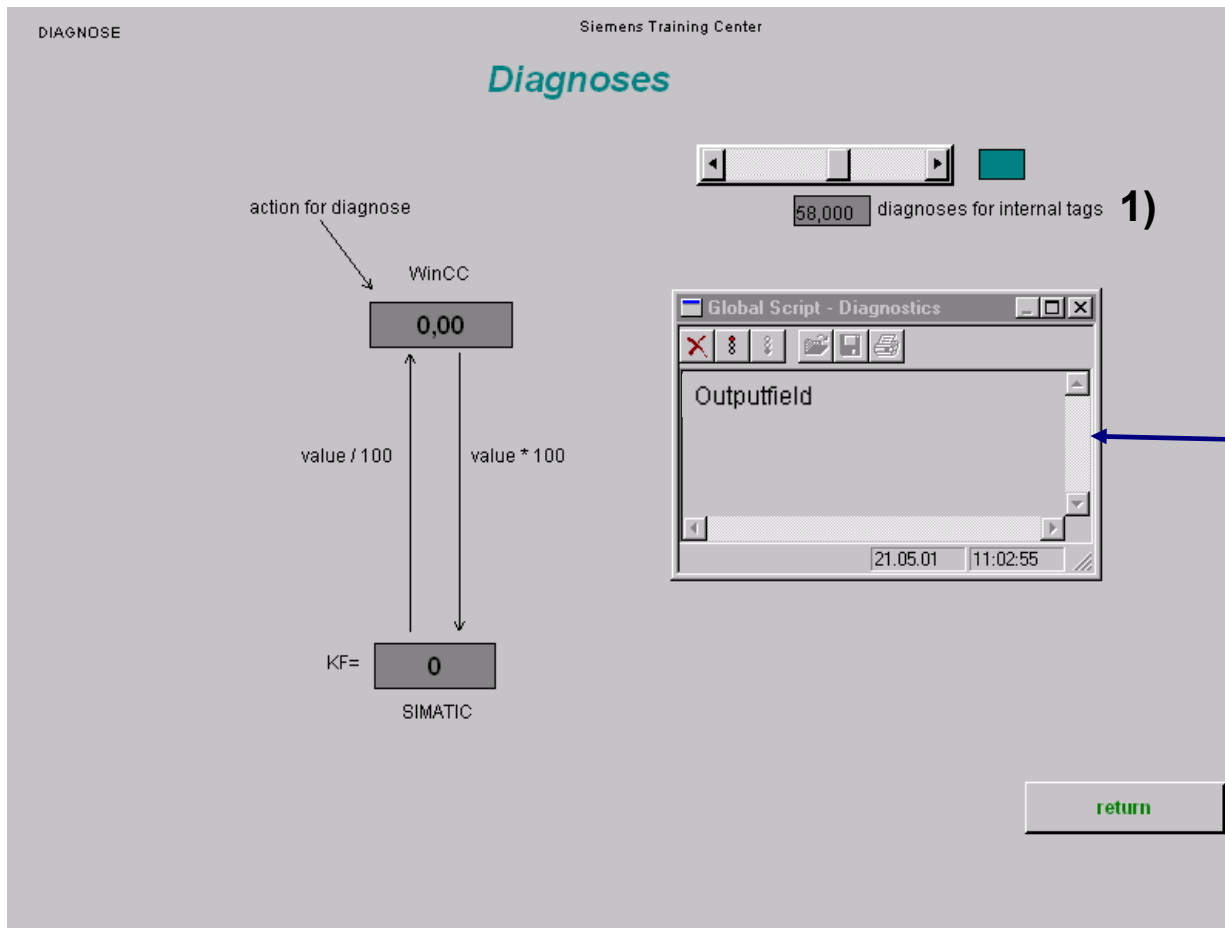
- Source: Constant 0

- Target: Object in Picture, *helpText1, Display*

组态工具提示文字:

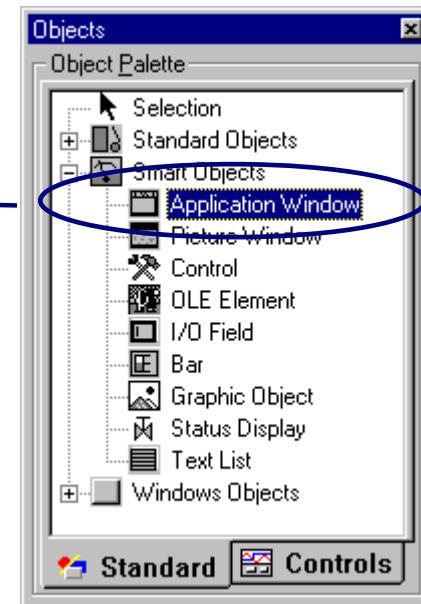
- Properties / Miscs/ ToolTip text: **Boiler 10**

C脚本的诊断方法



```

1) {
WORD back;
back=GetTagWord("wert");
printf("Outputfield \r\n");
return back;
}
    
```



SIEMENS

Visual Basic



注: 可在WinCC V6 CD中的“额外软件”, 安装Microsoft脚本调试器

VBS, VBA 数据类型

VBS 数据类型: VBS使用 Variant 数据类型 Variant数据类型自动适应所赋数值的类型

VBA 数据类型

名称	类型	数值范围	存储区
Byte	整数	0-255	1 字节
Boolean	整数	0,1	2字节
Integer	整数	-32,768 到 32767	2字节
Long	整数	-2,147,483,648 到 2,147,483,647	2字节
Single	浮点数	-3,37E38, 到 3,37E38 (7 位数)	4字节
Double	浮点数	-1.7...E308, 1.7...E308 (15位数)	8字节
Date	日期	1.1.1000 (-657434) 到 31.12.9999 (+2958465)	8字节
String	字符串	0 到 65535个字符	若干字符
Variant	任意	取决于赋值	至少16个字节

例如: Dim Setpoint As Integer

VBS Actions的组态原则

```
Sub OnClick(Byval Item)
'-----
'Sollwert in eine Variable setzen
'Ersteller: W.Meissner
'-----

Dim my_Soll1

Set my_Soll1=HMIruntime.Tags("Soll1")

my_Soll1.Value = 50
my_Soll1.Write

End Sub
```

'set a tag with the setpoint

'creator: W.Meissner

变量 Soll1 自动加入到交叉参考表中。

在WinCC 中的VBScript元件模型

WinCC Information System

Hide Back Forward

Contents Index Search F4

Type in the keyword to find:
VBS, object model

VBS
action
application
application examples
basic principles
CrossReference
diagnostic
editors
examples
Global Script
lists
methods
module
object model
object types
objects
Performance
procedure
properties
reference
standard functions
tools
using global tags
VBS action
creating
Edit VBS action
trigger
VBS editor
project documentation
vbsaturday
VBScript
activate in runtime

Display

In section Instructions Examples Basics Options

VBS Reference

VBS Object Model in WinCC

```

graph TD
    HMIRuntime[HMIRuntime] --> Tags[Tags]
    HMIRuntime --> Screens[Screens]
    Tags --> Tag[Tag]
    Screens --> ScreenItems[ScreenItems]
    Screens --> Layers[Layers]
    ScreenItems --> ScreenItem[ScreenItem]
    Layers --> Layer[Layer]
  
```

Legend:
 Object and Collection
 Object

The WinCC object model of the graphic runtime system enables access to the graphic objects and tags in runtime:

Objects

Objects and lists are provided for access to all the objects in the graphic runtime systems: Graphic objects, pictures, layers and tags.

Example: `Set my_Soll1=HMIRuntime.Tags("Soll1")`

Example: `Set Rect = ScreenItems("RoundedRectangle1")`

VBS Action属性概述

隐藏/显示声明区
+创建画面相关过程
+生成画面相关变量

语法检查(F7)

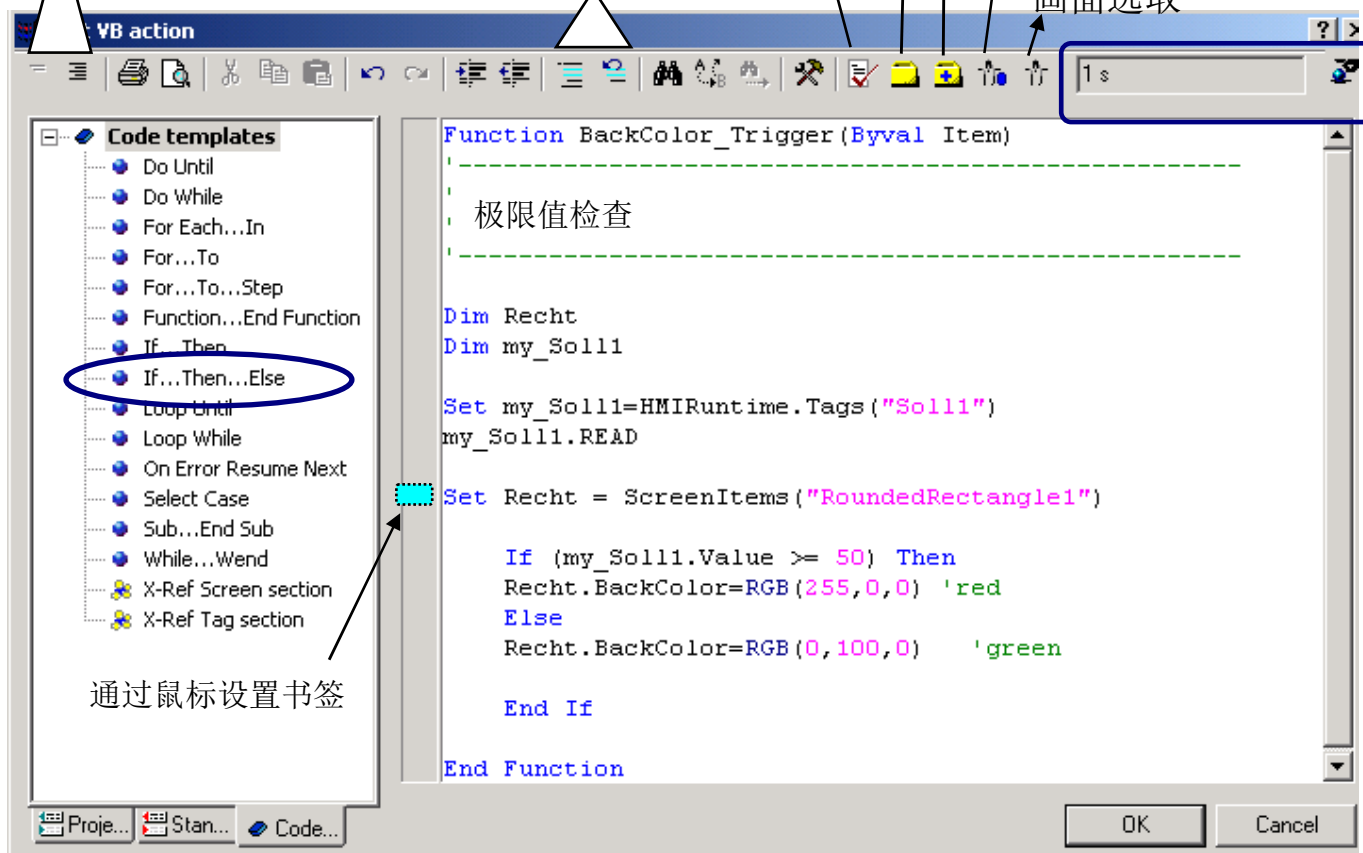
变量选取

扩展变量选取
返回参数

元件选取

画面选取

注释/无注释



这些有:
+语法高亮提示
+智能支持
+代码模板
+调试

注: 仅当无语法错误时代码可以应用-> 摒弃错误行

VBS Actions中的故障处理 1/3

```

Sub OnClick(Byval Item)

-----
' Increment
' Ersteller: W.Meissner
-----

Dim Recht
Dim my_Soll1

Set my_Soll1=HMIRuntime.Tags("Soll1")
my_Soll1.Read

HMIRuntime.Trace "Soll1 before " & my_Soll1.Value & vbNewLine

my_Soll1.Value=my_Soll1.Value + 1
my_Soll1.Write
my_Soll1.Writeee

HMIRuntime.Trace "Soll1 afterwards " & my_Soll1.Value & vbNewLine
End Sub
    
```

+1

Objects

Object Palette

- Selection
- Standard Objects
- Smart Objects
 - Application Window
 - Picture Window
 - Control
 - OLE Element
 - I/O Field
 - Bar
 - Graphic Object
 - Status Display
 - Text List
- Windows Objects

Standard Control

Global Script - Diagnose

Runtime

Soll1 before 9

-----Microsoft VBScript runtime error-----

Application	: PDLRT
Picture	: VBS.pdl_Events
Function	: Sub Button14_OnClick(Byval Item)
Line	: 19
Error	: Object doesn't support this property or method: 'my_Soll1.Writeee'

-----Microsoft VBScript runtime error-----

错误发生

10.07.03 15:43:51

VBS Actions中的故障处理 2/3

断点处 →

菜单: Debug
下拉菜单: Step Into F(8)

测试单个变量 →

```

Sub Button25_OnClick(ByVal Item)
    '-----
    'Inkrementieren
    'Ersteller: W.Meissner
    '-----

    Dim Recht
    Dim my_Soll1

    Set my_Soll1=HMIRuntime.Tags("Soll1")

    my_Soll1.Read

    my_Soll1.Value=my_Soll1.Value + 1
    my_Soll1.Writ
End Sub
    
```

Running Documents: F:\Siemens\WinCC\bin\GRAFXE.EXE, PDLRT, VBS.pdl_Events, VBS.pdl_Triggers

Command Window: ? my_Soll1.value, 1

Call Stack: Running thread (00000B88), <VBScript> - Button25_OnClick

VBS Actions中的故障处理 3/3

运行时

The screenshot shows the SIMATIC Manager interface with a VBS script editor and a runtime error dialog. The script editor contains the following code:

```

'visible/unvisible (Layer+1)
'Ersteller: W.Meissner

If Layers (3).Visible=vbFalse Then
    Layers (3).Visible=vbTrue
Else
    Layers (3).Visible=vbFals
End If

End Sub

Sub Button12_OnClick(ByVal Item)
If Layers (2).Visible=vbFalse Then
    Layers (2).Visible=vbTrue
Else
    Layers (2).Visible=vbFalse

```

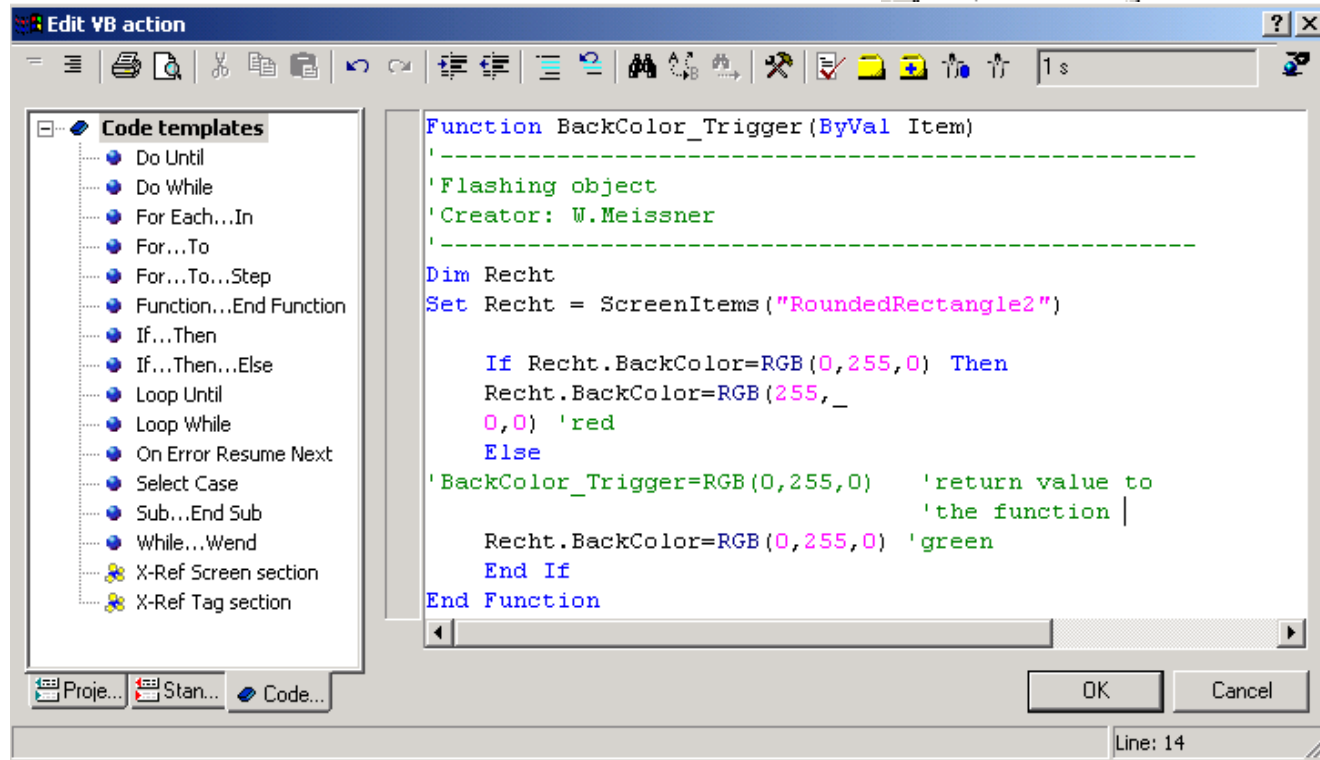
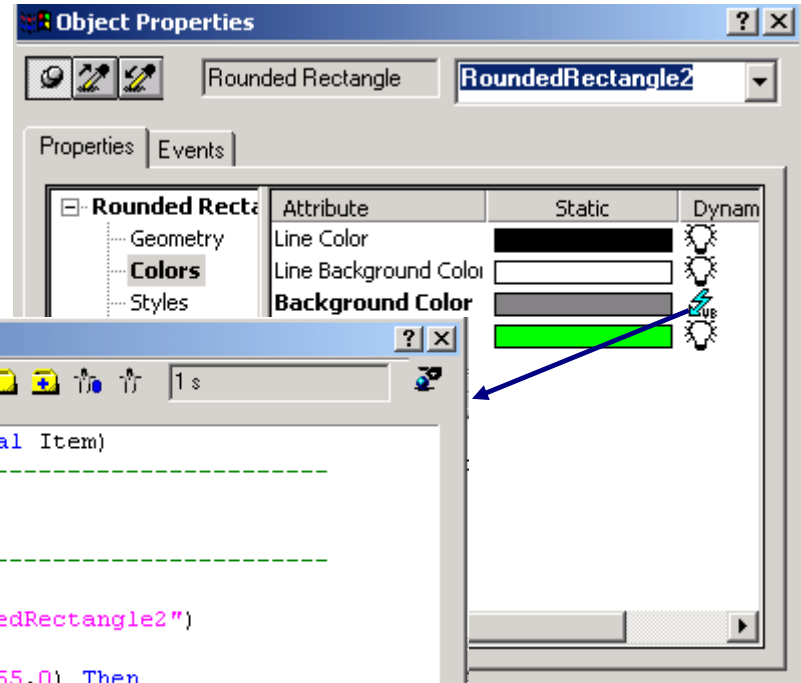
The error dialog box displays the following information:

- Title:** PDLRT: Microsoft VBScript runtime error
- Icon:** Red X (Error)
- Picture:** VBS.pdl_Events
- Function:** Sub Button9_OnClick(Byval Item)
- Line:** 12
- Error:** Variable is undefined: 'vbFals'
- Options:** Show Source in Debugger? (checked), Press cancel to suppress any further messages.
- Buttons:** Yes, No, Cancel

Arrows indicate the flow of information: one arrow points from the 'Display error dialog' checkbox in the 'Computer properties' window to the error dialog, and another points from the error message back to the 'vbFals' line in the script.

VBS动作属性概述

矩形圆框



SIEMENS

VBS动作事件概述

setpoint=100

setpoint=50

Object Properties

Button Button23

Properties Events

Execute in the case of	Action
Mouse	Mouse Action
Keyboard	Press left

Edit VB action

Code templates

- Do Until
- Do While
- For Each...In
- For...To
- For...To...Step
- Function...End Function
- If...Then
- If...Then...Else
- Loop Until
- Loop While
- On Error Resume Next
- Select Case
- Sub...End Sub
- While...Wend
- X-Ref Screen section

```

Sub OnClick(Byval Item)
'-----
'   set a setpoint
'Creator: W.Meissner
'-----

Dim my_Sol11

Set my_Sol11=HMIRuntime.Tags ("Sol11")

my_Sol11.Value = 50
my_Sol11.Write

End Sub
    
```

OK Cancel

Line: 10

VBS Actions应用举例

例子：退出运行系统

```
Dim my_Soll1
Set my_Soll1=HMIRuntime.Tags("Soll1")
my_Soll1.READ
If (my_Soll1.Value >= 50) Then
    HMIRuntime.Stop
End If
End Sub
```

按钮

例子：显示一个帮助信息

```
Dim Recht
Set Recht = ScreenItems("StaticText2")
If Recht.Visible=0 Then
    Recht.Visible=1 'Visibile
Else
    Recht.Visible=0 'Invisible
End if
End Sub
```

按钮

例子：采集变量Istwert_1的状态

```
Dim myTag,last_err
Set myTag = HMIRuntime.Tags("Istwert_1")
last_err = myTag.LastError
If (last_err > 0) Then
    MsgBox myTag.QualityCode
End If
```

例子：读取过程映像的变量值

```
Dim myTag
Set myTag = HMIRuntime.Tags("Istwert")
value = myTag.Read
```

```
write
myTag.Write
```

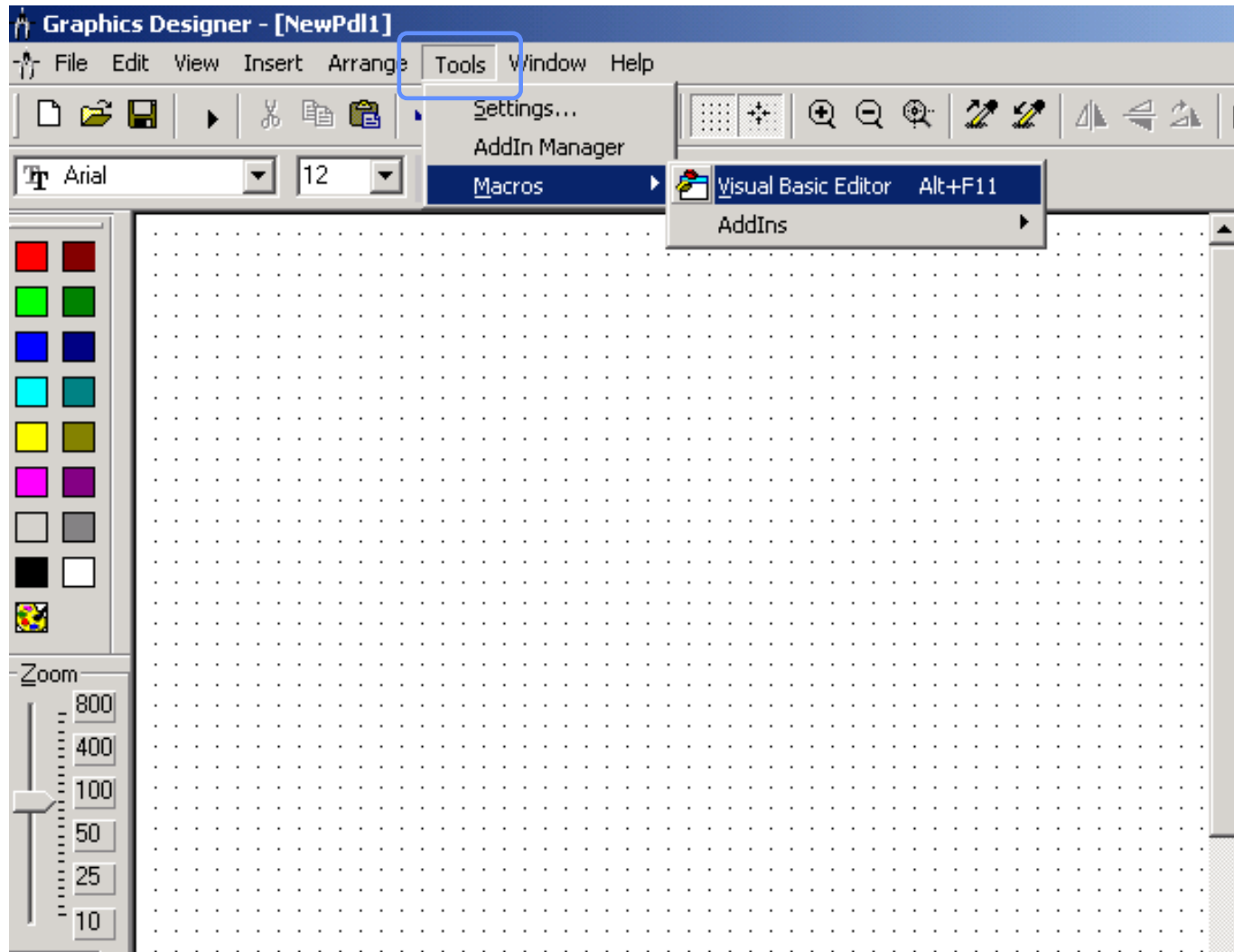
例子：写一个值到变量Soll1中

```
Dim my_Soll1
Set my_Soll1=HMIRuntime.Tags("Soll1")
my_Soll1.Value = 0
my_Soll1.Write (vbFalse)
```

or

```
Dim my_Soll1
my_Soll1.Write (5, vbFalse)
参数“vbFalse”意味着变量是被同步的写入,也就是直接
写到过程映像去.
```

VBA 编辑器的激活 (开发环境)



VBA概述

‘在本例子中一个段消息在画面开启时会显示出来。为此要用到“Opened”事件, 然后出现一个圆:

```
Private Sub Document_Opened(CancelForwarding As Boolean)
```

```
Dim objVariableTrigger As HMIVariableTrigger
```

```
Dim objCircle As HMICircle
```

```
MsgBox ("Bild wurde geöffnet!")
```

```
Set objCircle = ActiveDocument.HMIObjects.AddHMIObject("Circle1", "HMICircle")
```

‘通过“direct Variableconnection”类型创建动态

‘在“Radius”属性中:

```
Set objVariableTrigger =
```

```
objCircle.Radius.CreateDynamic(hmiDynamicCreationTypeVariableDirect, "Soll1")
```

‘动态完成, 例如定义个圆:

```
With objVariableTrigger
```

```
.CycleType = hmiVariableCycleType_2s
```

```
End With
```

```
End Sub
```

VBA和VBS的比较

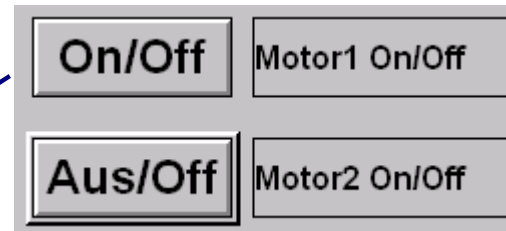
	VBA	VBScripting
语法是否基于VB	Yes	Yes
是否支持调试	Yes	Yes
能否访问第三方的应用	Yes	Yes
是否具备完整的组件	Yes	Yes
运行期环境	WinCC CS: 图形编辑器	WinCC RT: 图形编辑器 全局脚本
COM组件模型	WinCC CS: 图形编辑器、变量、消息、归档、文本	WinCC RT: 图形编辑器、变量
替换方案	动态向导和ODK	C脚本和ODK

-使用标准的Microsoft VBA 6.3开发环境
-VBScript是Visual Basic for Applications (VBA)的一个应用分支

几种组态颜色更改的可能性概述及示例

- 向导，颜色动态变化表
- 动态会话
- **C-动作**
- **VBS**
- 变量连接至相应的颜色属性

颜色变化概述（使用动态会话）



Object Properties

Button Button20

Properties Events

Button	Attribute	Static	Dynamic
<ul style="list-style-type: none"> Geometry Colors Styles Font Flashing Miscellaneous Filling 	Line Color	Black	Lightbulb
	Line Background Color	White	Lightbulb
	Background Color	Yellow	Lightning bolt
	Fill Pattern Color	Green	Lightbulb
	Font Color	Black	Lightbulb
	3D Border Color	White	Lightbulb
	3D Shadow Color	Grey	Lightbulb

Dynamic value ranges

Event name: Tag

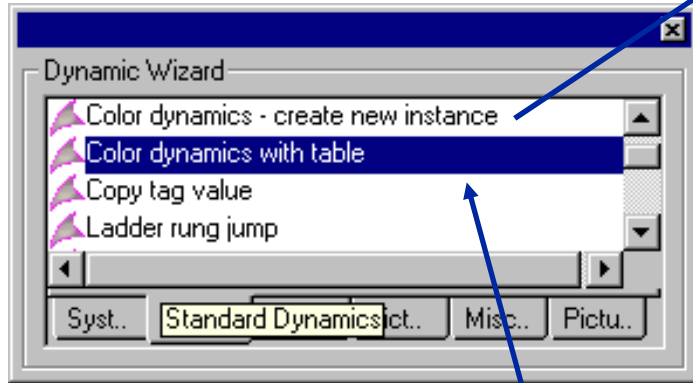
Expression/Formula: 'Motor_1'

Result Of The Expression/Formula:

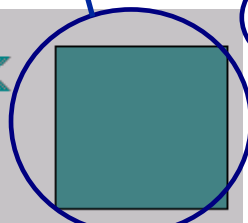
Valid range	Back...
Yes / TRUE	Green
No / FALSE	Grey

Data Type: Bool

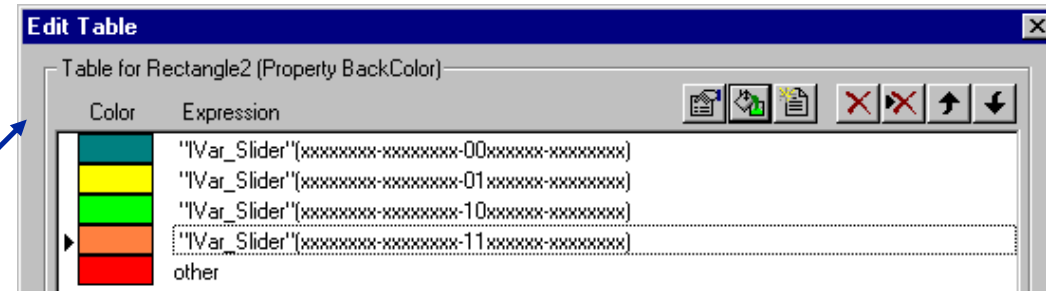
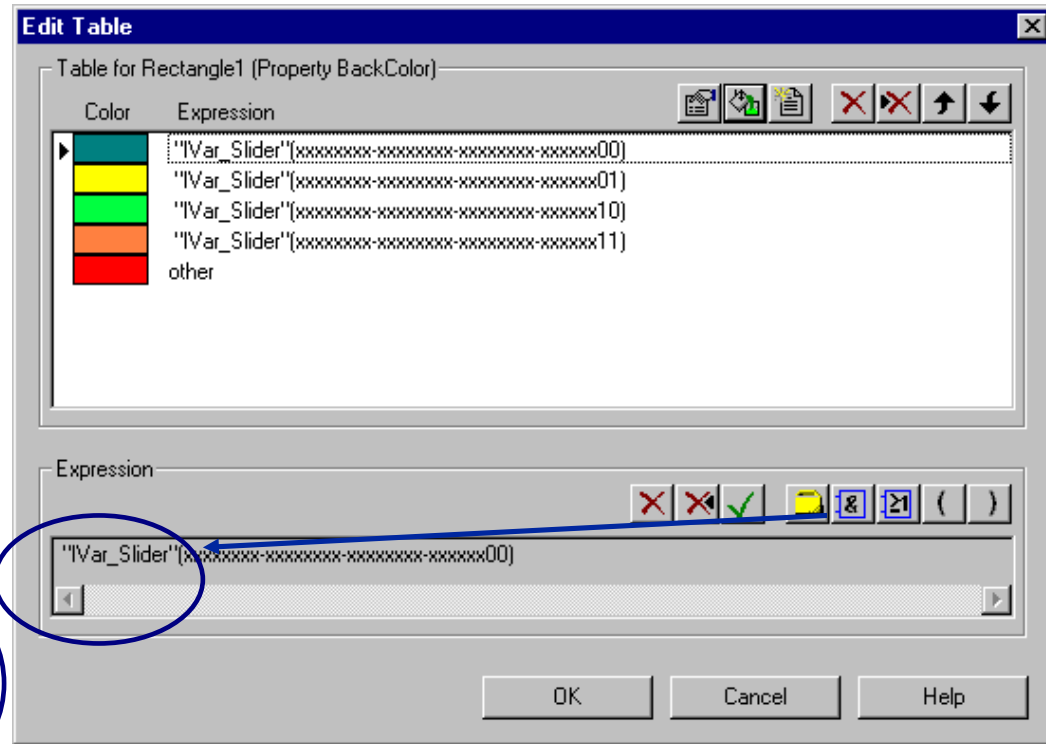
向导概述，颜色动态变化表



Bit address: ... 1,0
 00=Cyan
 01=Yellow
 10=Green
 11=Orange



Bit address: ... 15,14
 00=Cyan
 01=Yellow
 10=Green
 11=Orange



颜色更改概述 (C动作)

+0

类型 I/O

Object Properties

I/O Field | IField1

Attribute	Static	Dynamic	Color
Border Color	<input type="checkbox"/>	<input type="checkbox"/>	Black
Border Background Lo	<input type="checkbox"/>	<input type="checkbox"/>	White
Background Color	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Grey
Fill Pattern Color	<input type="checkbox"/>	<input type="checkbox"/>	Green
Font Color	<input type="checkbox"/>	<input type="checkbox"/>	Black

Edit Action

Event Name: Tag

```

#include "apdefap.h"
long _main(char* lpszPictureName, char* lpszObjectName, char* lpszPro
{
int currentvalue, colorvalue;
currentvalue=GetTagDWord("event1");

if (currentvalue > 900) {
    colorvalue=CO_RED;}           // color change to red
else if (currentvalue > 800) {
    colorvalue=CO_YELLOW;}       // color change to yellow
else {
    colorvalue=CO_DKGREEN;}     // color change to dark green
return colorvalue;
}
    
```

为了强调新的函数，我们没有使用注释和定义行。

利用VBS Action实现颜色变化概述

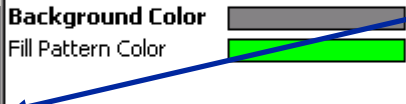


Object Properties

Rounded Rectangle **RoundedRectangle2**

Properties Events

Attribute	Static	Dynam
Line Color		
Line Background Color		
Background Color		
Fill Pattern Color		



Edit VBS action

Code templates

- Do Until
- Do While
- For Each...In
- For...To
- For...To...Step
- Function...End Function
- If...Then
- If...Then...Else
- Loop Until
- Loop While
- On Error Resume Next
- Select Case
- Sub...End Sub
- While...Wend
- X-Ref Screen section
- X-Ref Tag section

```

Function BackColor_Trigger(ByVal Item)
'-----
'check limit with color change
'Creator: W.Meissner
'-----

Dim Recht
Dim my_Soll1

Set my_Soll1=HMIRuntime.Tags("Soll1")
my_Soll1.READ

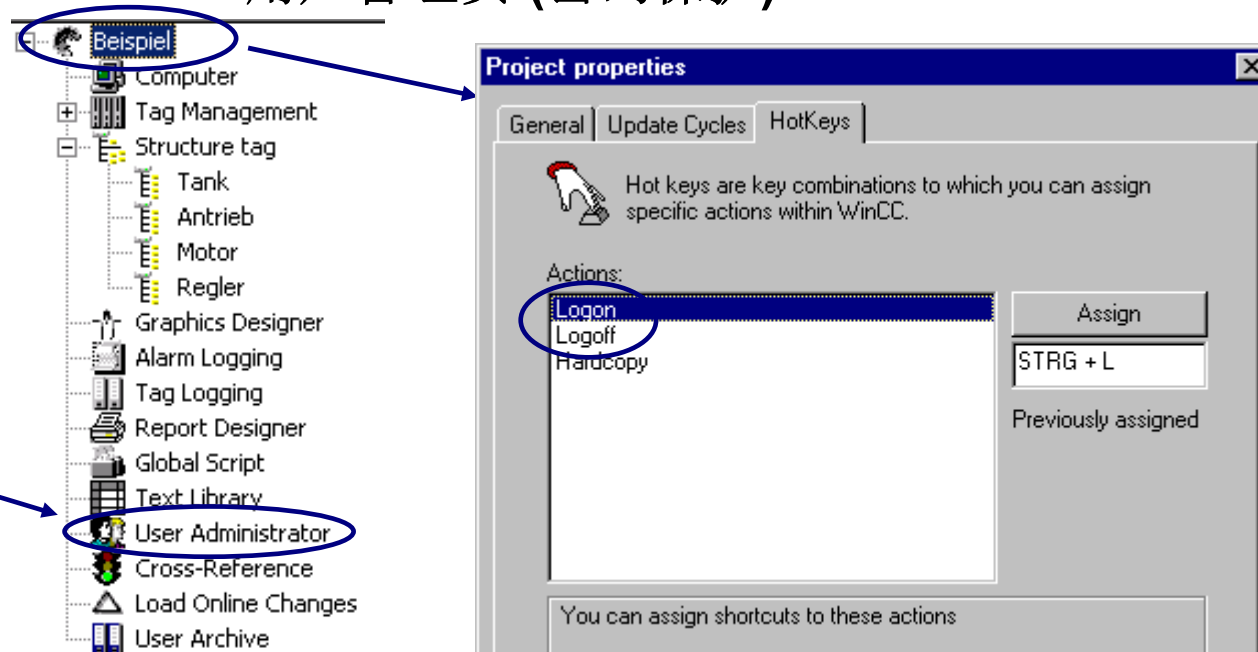
Set Recht = ScreenItems("RoundedRectangle3")

If (my_Soll1.Value >= 90) Then
Recht.BackColor=RGB(255,0,0) 'red
Elseif (my_Soll1.Value >= 70) Then
Recht.BackColor=RGB(255,255,0) 'yellow
else
Recht.BackColor=RGB(0,100,0) 'green
End If
End Function
    
```

Line: 12

用户管理员 (密码保护) 1/3

快捷菜单:
打开



Group		电工			钳工		
User	Login Password	Otto Otto_WB			Willi Willi_B		
	序号	功能	启用	序号	功能	启用	
	1	Value input	<input checked="" type="radio"/>	1	Value input	-	
	2	Picture change	<input checked="" type="radio"/>	2	Picture change	<input checked="" type="radio"/>	

用户管理员 (密码保护) 2/3

组

为一个组或者用户创建一个窗口

鼠标双击

No.	Function	thorization
1	User Administration	<input type="radio"/>
2	Tag entering	<input checked="" type="radio"/>
3	Process controlling	<input type="radio"/>

Establish new user

Login: John Krens

Password: [masked]

Verify password: [masked]

Copy group settings also

OK

Cancel

用户管理员 (密码保护) 3/3



快捷菜单:
属性

调整点



Object Properties

I/O Field | I/OField

Properties | Events

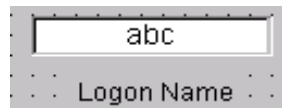
Attribute	Static	Dynam
Operator Control Enable	Yes	
Authorization	<No access-protection>	
Display	Yes	
Tooltip Text		

Authorizations

Tag entering

<No access-protection>
User Administration
Tag entering
Process controlling
Picture Editing
Change picture

OK
Cancel



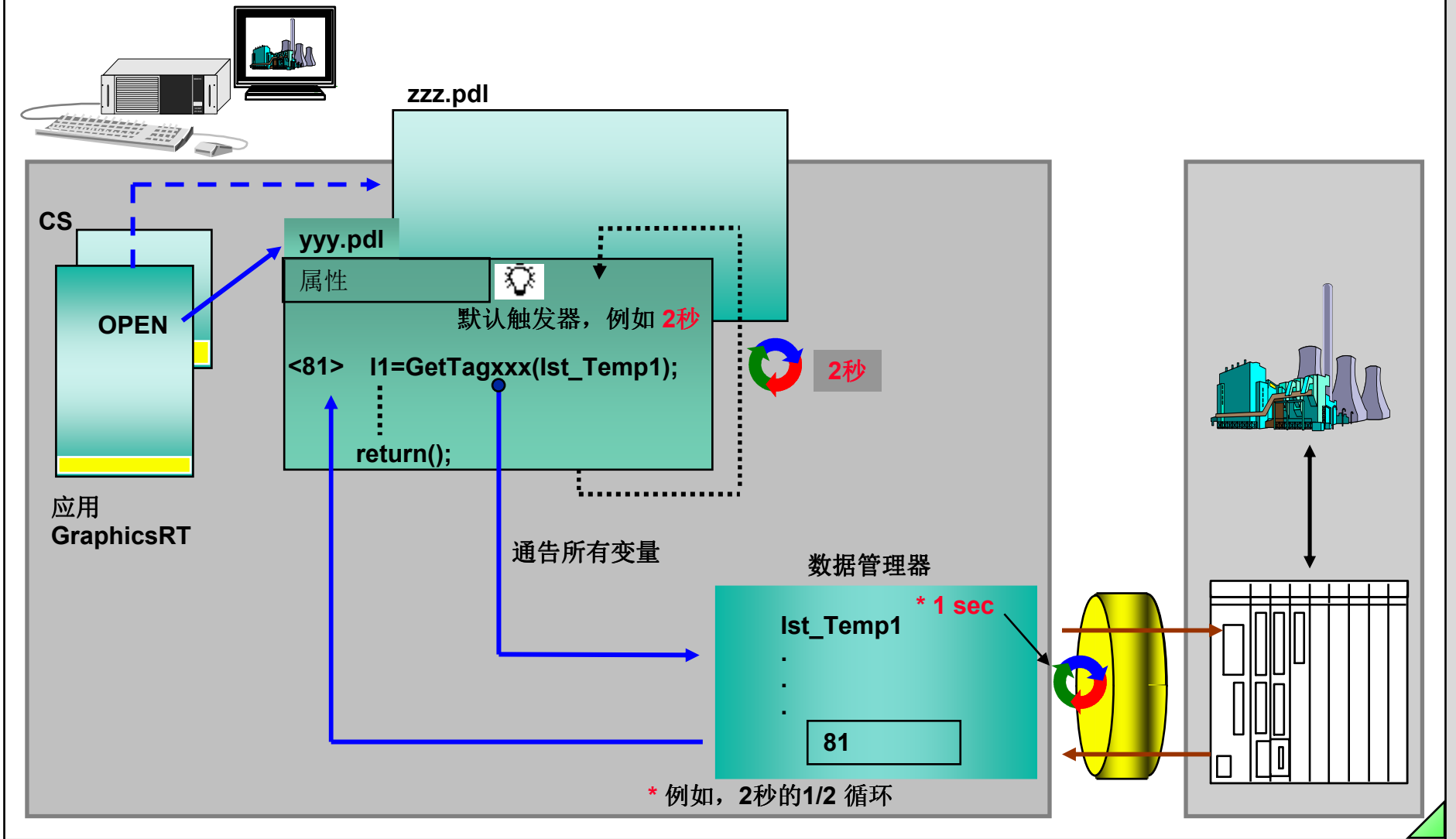
Object Properties

Static Text | StaticText2

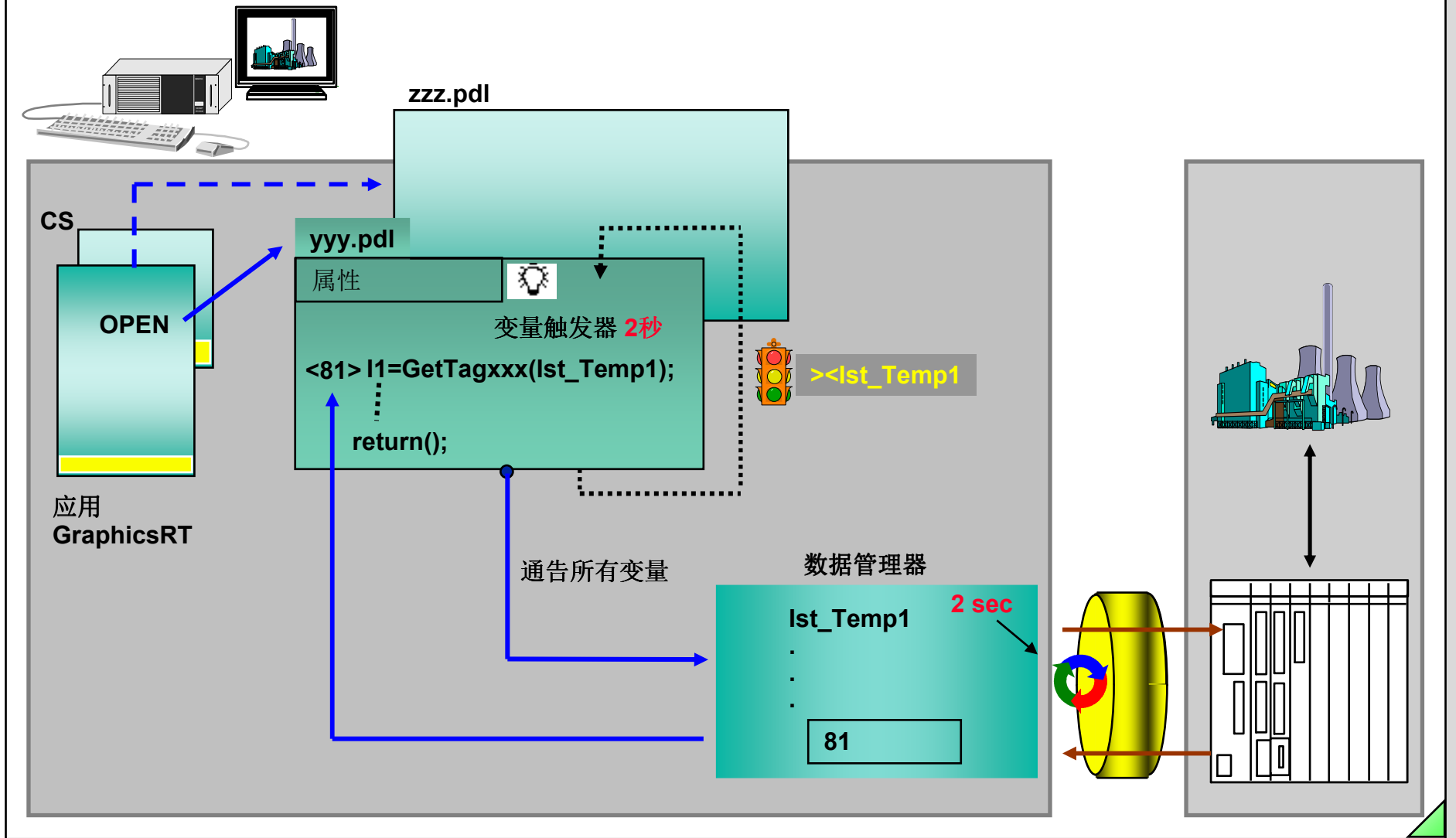
Properties | Events

Attribute	Static	Dynamic	Curr..
Text	??????	@CurrentUser	2
Font	Arial		

在默认触发器下GetTagxxx 与事件名称一道工作的方式



在变量触发器下GetTagxxx与事件名称一道工作的方式



组态注释

通过下面的方式产生动态

效率高

数)

效率低

-属性

>变量连接

>快速的动态会话，具有变量触发器和赋予了参数的变量

>慢速的动态会话，具有变量触发器和几个赋予了参数的变量或者调用的C动作(全局脚本函

>C-动作 VBS动作

-事件

>鼠标单击或者对象变化 (C-动作或者直接连接)对画面选择时间没有影响。

更新类型

-变量触发器 (对所有的变量使用相同的循环)

-选择画面的统一的更新

-避免使用更改

函数

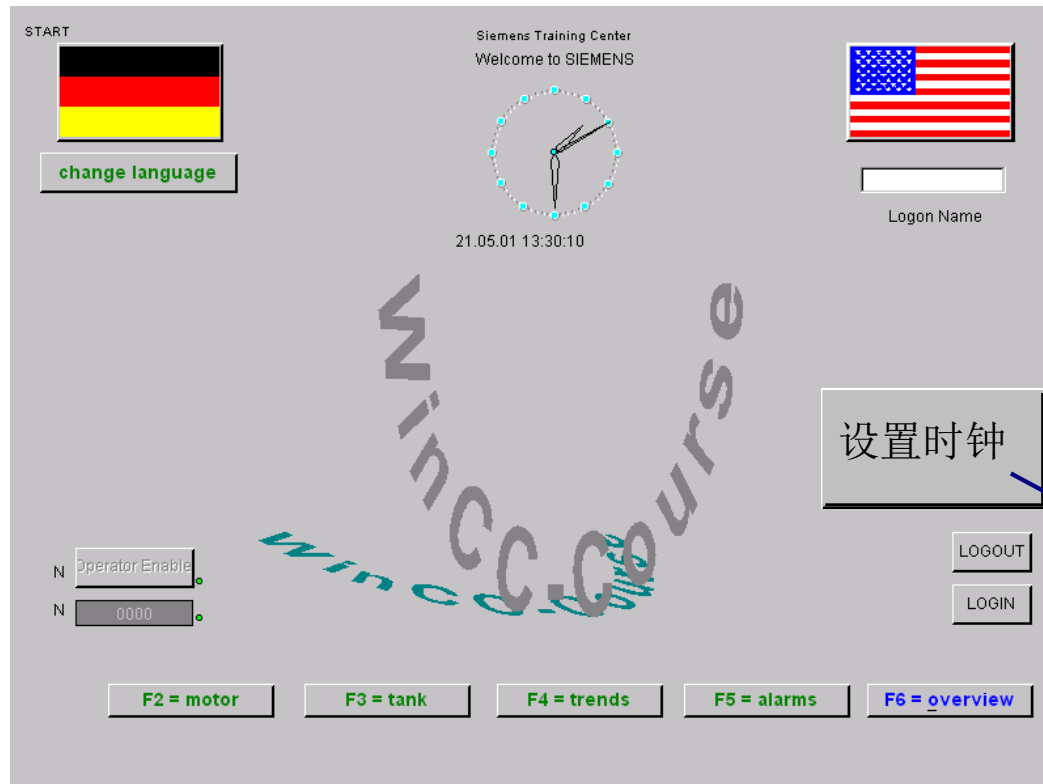
-SetTagMultiWait 适合于几个变量，比许多 SetTagxxx要好

-GetTagxxx (变量被周期地引入数据管理器) ,SetTagxxx

提供PLC数据

-对于优化过的通讯，为特殊的画面提供PLC的数据区域。

设置和显示日期和时间



使用动态向导、系统函数、调用创建程序执行函数：
启动另一个应用

```
ProgramExecute("C:\\WINNT\\System32\\Control.exe timedate.cpl");
```

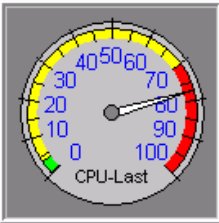
注释： Control.exe 所在的目录取决于Windows的不同操作系统的安装。

系统信息 (System-info) -通道概述 1/3

SYSTEMINFO Siemens Training Center

System-info channel

Date	Mo 21.05.2001	} and other formats
Time	13:57:11	
CPU-load	034,98	%
free memory	2,94e+004	KB
free drivespace C:	2,05e+003	MB
free drivespace D:	1,30e+004	MB
Timer	013	0-20
Counte	004	0-10 parametrize



PC Auslastung / Load

Trend in the ForegroundCPU_

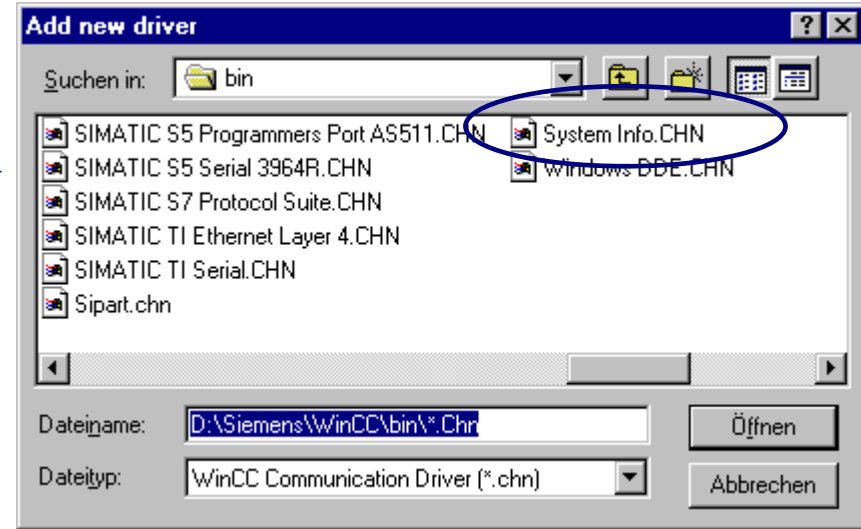
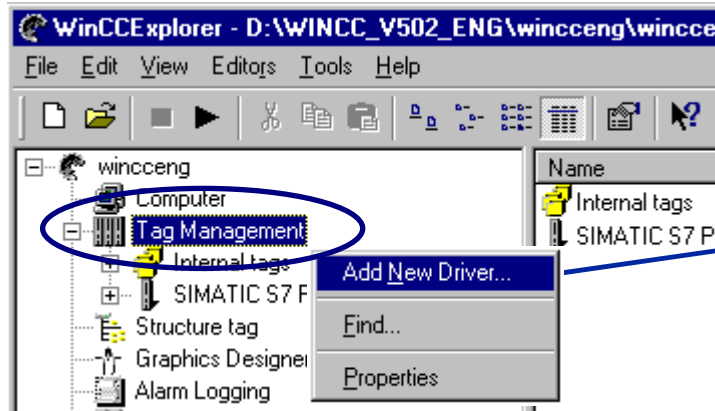
PC Auslastung / Load

Trend in the ForegroundHSP

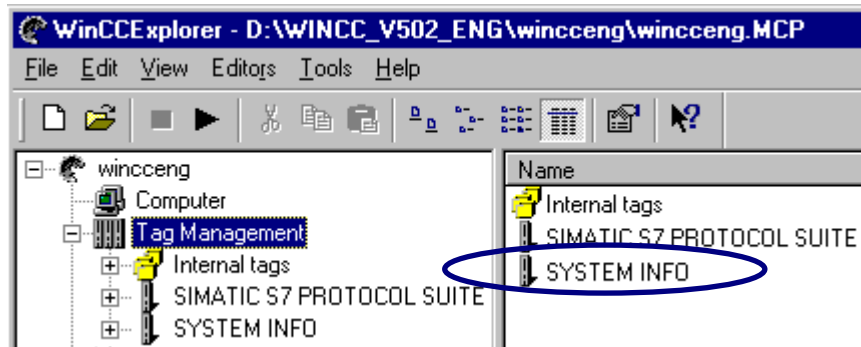
return

系统信息(System-info) –调用通道 2/3

A)



B)



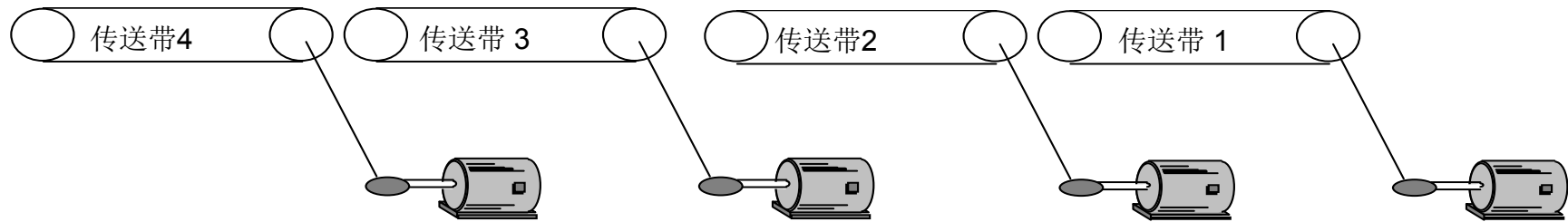
系统信息(System-info) -编辑变量 3/3

The screenshot illustrates the configuration of a system variable in SIMATIC Manager. The main interface shows the project tree with 'System Info' selected. A context menu is open over it, with 'New Tag...' highlighted. The 'Tag properties' dialog is open, showing the following configuration for a new tag:

- Name: NewTag
- Datatype: Signed 32-bit value
- Length: 4
- Address: (empty)
- Adapt format: LongToSignedDword
- Update options: Project-wide update (selected), Computer-local update

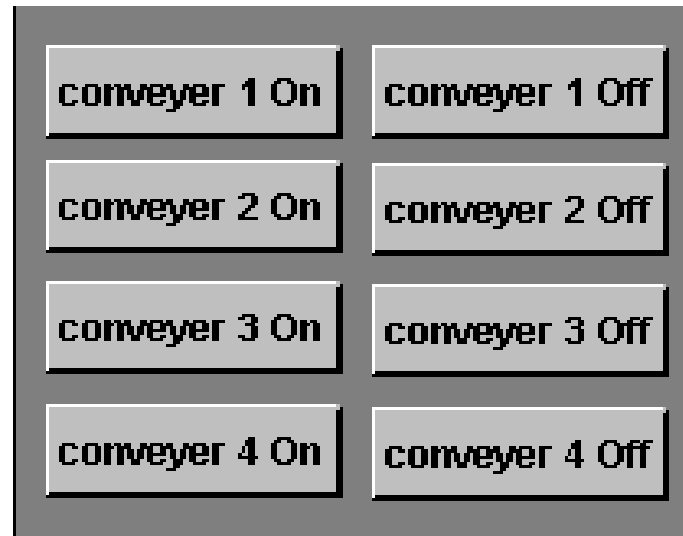
The 'System Info' dialog shows the 'System Tag' list with 'Date' selected. The 'Preview' field shows '15.05.2001' and the 'Data Type' field shows 'Text tag 8-bit character set'.

用动态向导在字中设置位



开关操作，
用动态向导组态：
-标准动态
-置位/复位

颜色变化，
用动态会话组态：
-数据类型 *Bit*



块技巧概述

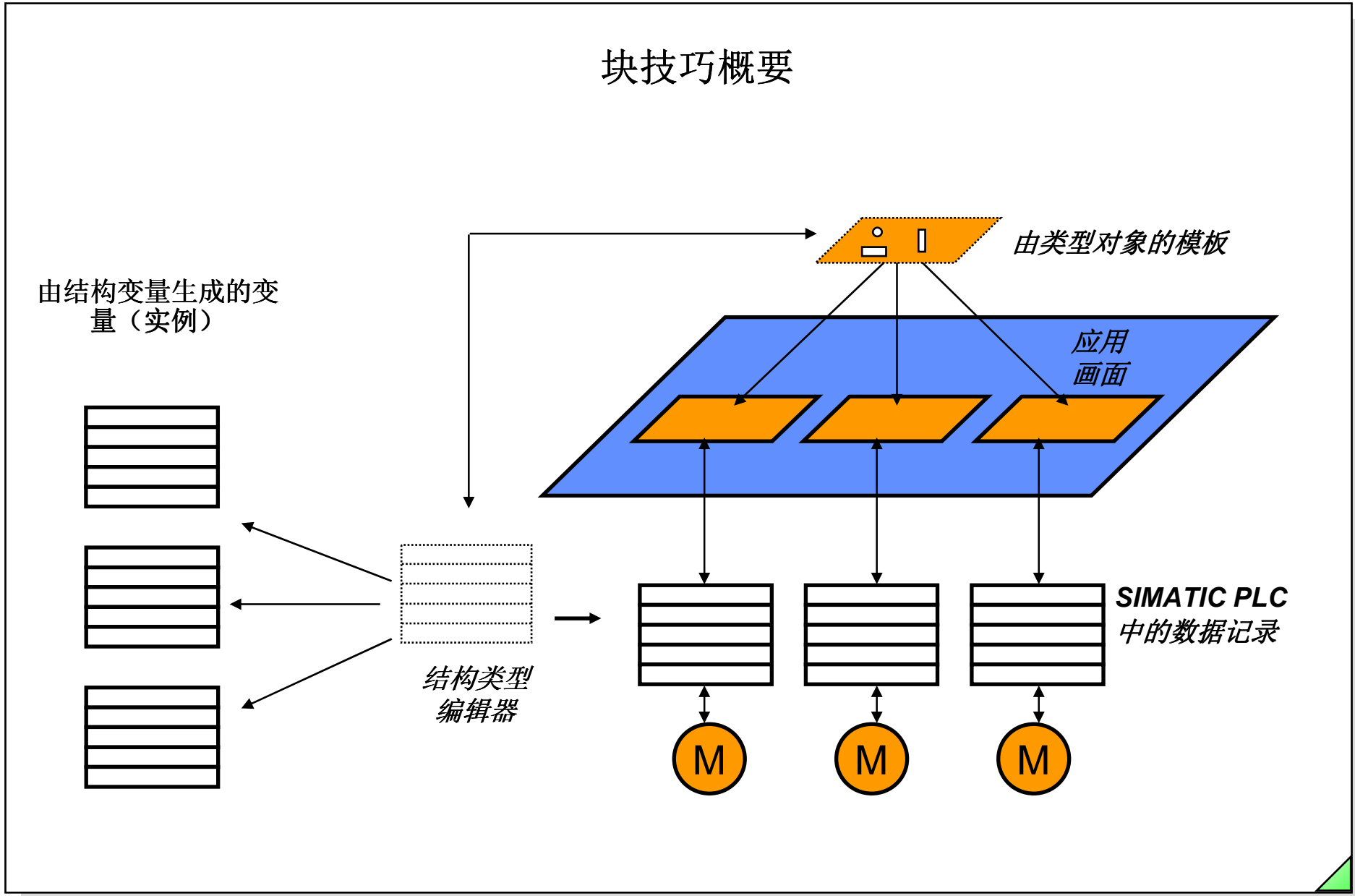
-变量前缀 **Tag Prefix**
(>=V5.0)

-间接寻址
(无论哪个版本)

-使用动态向导的画中画技巧
(画面块: 1. 类型向导, 2. 实例向导, >=V4.02)

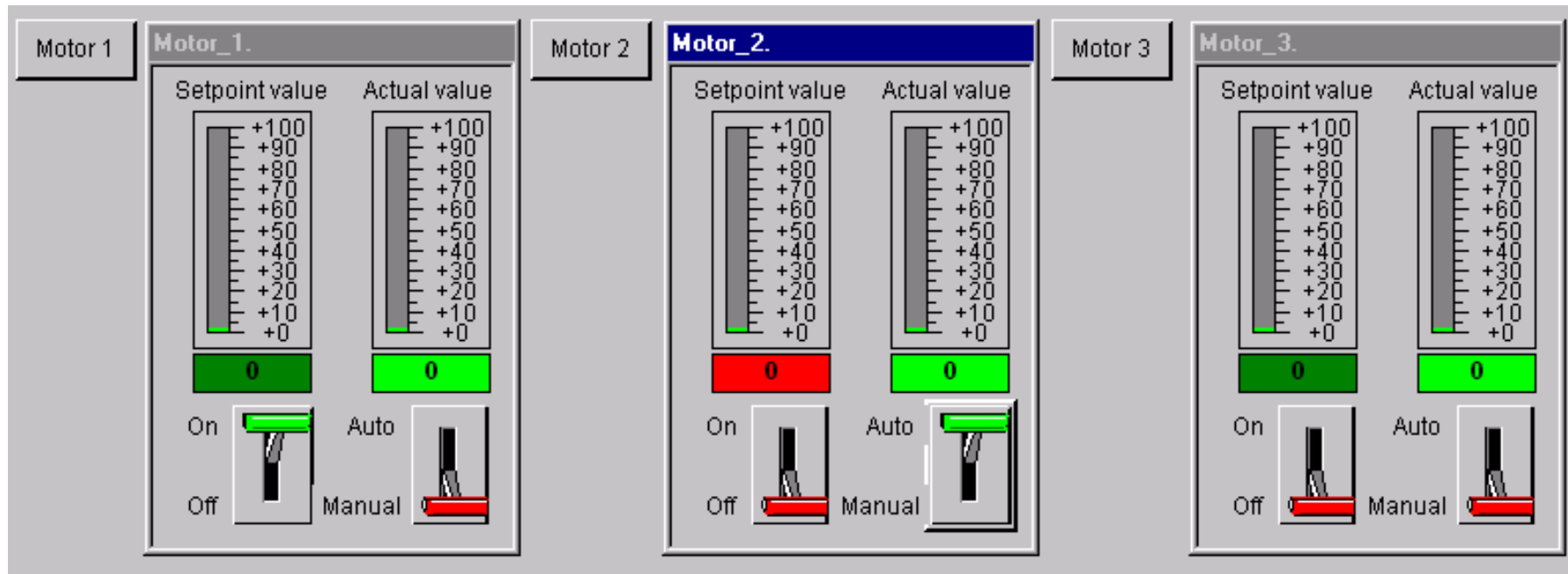
-**ActiveX 控件 (SIMATIC HMI 可选,
IndustrialX)**
(附加 VB 5 组态工具)

块技巧概要



SIEMENS

任务：运行模式工程，一个用于每个按钮调用变量前缀的画面窗口



在工程中创建结构变量

The screenshot illustrates the process of creating a structure variable in a SIMATIC Manager project. On the left, the project tree shows the following structure:

- Beispiel
 - Computer
 - Tag Management
 - Structure tag (circled in blue)
 - Tank
 - Antrieb
 - Motor (selected)
 - Regler
 - Graphics Designer
 - Alarm Logging
 - Tag Logging
 - Report Designer
 - Global Script
 - Text Library
 - User Administrator
 - CrossReference
 - User Archive

The 'Structure properties (Instances exist! Read only.)' dialog box is open, showing the following details:

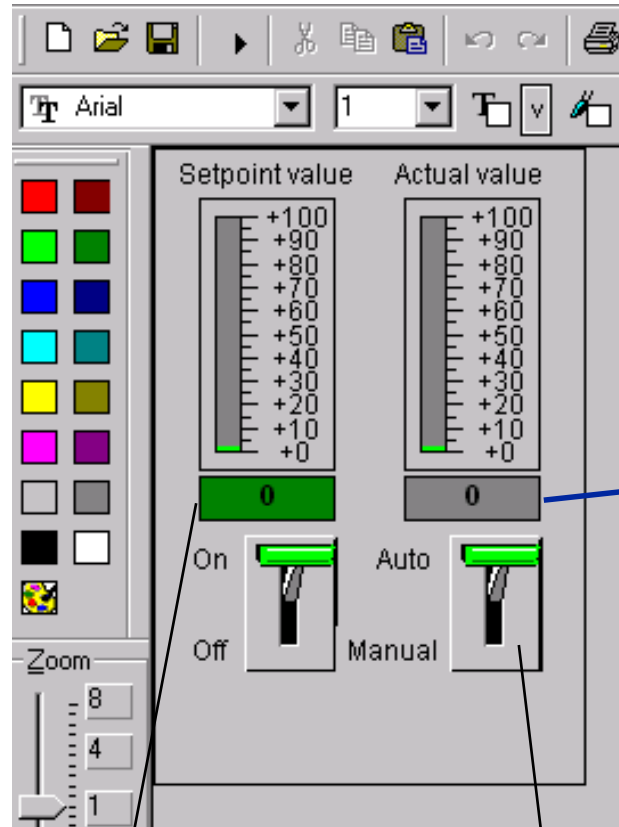
- Name:** Motor
- Type:** OS
- Use additional Format Adaptations from:** No unit
- Structure Elements:**
 - SHORT Soll Dreh (circled in blue)
 - SHORT Ist Dreh
 - SHORT Schlupf
 - BIT EinAus
 - BIT HandAuto
- Internal Tag:** Selected
- Buttons:** New Element, Delete Element, OK (circled in blue), Abbrechen, Hilfe

创建适合结构的内部变量和/或过程变量

The screenshot illustrates the process of creating internal variables and/or process variables in SIMATIC Manager. It shows the project tree on the left, a list of tags in the middle, and the 'Tag properties' dialog box on the right. The 'MotorPrefix' tag is highlighted in the project tree. The tag list includes various motor-related tags such as 'Motor_1.Solidreh', 'Motor_1.Schlupf', 'Motor_1.HandAuto', 'Motor_1.Istdreh', 'Motor_1.EinAus', 'Motor_2.Solidreh', 'Motor_2.Istdreh', 'Motor_2.Schlupf', 'Motor_2.EinAus', 'Motor_2.HandAuto', 'Motor_3.Solidreh', 'Motor_3.Istdreh', 'Motor_3.Schlupf', 'Motor_3.EinAus', and 'Motor_3.HandAuto'. The 'Tag properties' dialog box shows the 'Name' field set to 'NewTag' and the 'Datatype' dropdown set to 'Motor'. The 'OK' button is circled in blue. A blue arrow points from the 'MotorPrefix' tag in the project tree to the 'NewTag' field in the dialog. A blue box highlights the tag list, and a blue circle highlights the 'OK' button. The text 'Motor_4' is written next to the 'NewTag' field.

SIEMENS

组态模板，输出值 1/4

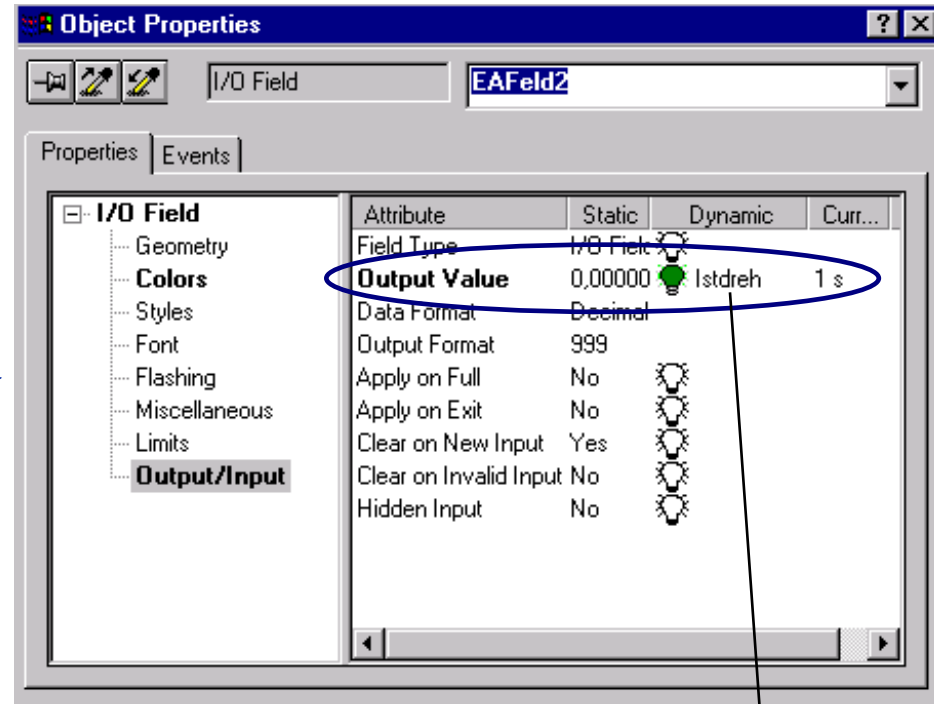


x:190

y:280

limits:0 -100

from library



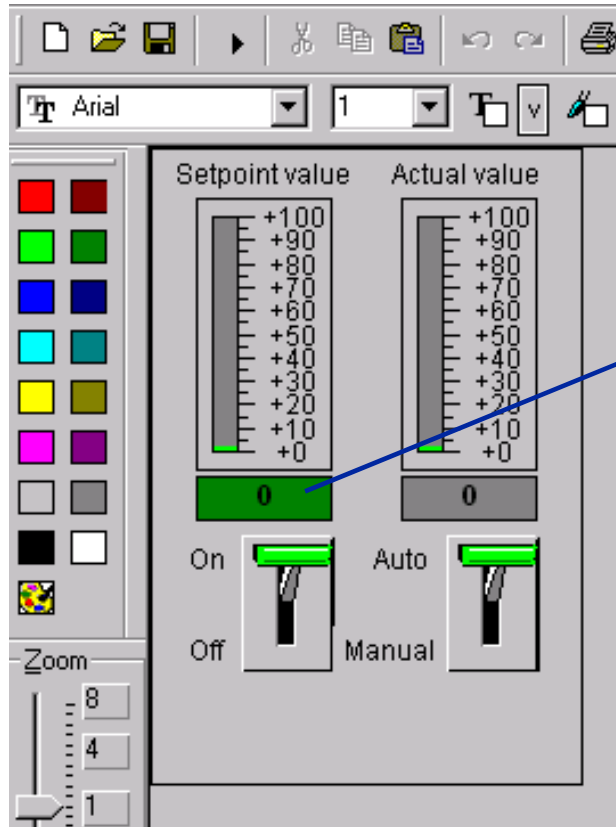
member name

组态模板,极限值的背景颜色 2/4

The image shows the configuration of an HMI template for limit values. On the left is a control panel with two gauges: 'Setpoint value' and 'Actual value', both ranging from 0 to 100. Below the gauges are four buttons: 'On', 'Auto', 'Off', and 'Manual'. The 'On' and 'Auto' buttons have green backgrounds, while 'Off' and 'Manual' have grey backgrounds. A color palette is visible on the far left. In the center-right, the 'Object Properties' dialog for 'I/O Field' (EAFeld2) is open. The 'Background Color' property is set to a dynamic value, indicated by a lightning bolt icon. Below it, the 'Dynamic value ranges' dialog is open, showing an event named 'Istdreh' with a 'Value Range1' of 90, which is associated with a green background color. A red background color is also shown for the 'Other' range. A blue arrow points from the 'Background Color' property in the 'Object Properties' dialog to the 'Dynamic value ranges' dialog. Another blue arrow points from the 'Actual value' gauge in the control panel to the 'Dynamic value ranges' dialog.

另外生成的内部变量

组态模板，域类型 3/4



Object Properties [?] [X]

I/O Field EAFeld1

Properties | Events

Attribute	Static	Dynamic	Curr...
Field Type	I/O Field		
Output Value	0,000000e+000	Solldre 1 s	<input type="checkbox"/>
Data Format	Decimal		
Output Format	999		

Dynamic value ranges [?] [X]

Event name: _____

Tag: _____

Expression/Formula: 'HandAuto' ...

Result Of The Expression/Formula

Valid range	Field ...
Yes / TRUE	Output
No / FALSE	I/O Field

Data Type

Analog

Bool

Bit

Direct

Add... Remove

Evaluate Status of Tags

组态模板,开关条件的背景颜色 4/4

The image displays the configuration process for a switch condition's background color in SIMATIC Manager. It includes a control panel with gauges and switches, and two configuration dialog boxes: 'Object Properties' and 'Dynamic value ranges'.

Object Properties Dialog:

Attribute	Static	Dynamic	Curr..
Border Color	Black	Lightbulb	
Border Background Color		Lightbulb	
Background Color	Green	Lightbulb	Lightbulb
Fill Pattern Color	Green	Lightbulb	
Font Color	Black	Lightbulb	

Dynamic value ranges Dialog:

Event name: Tag

Expression/Formula: 'HandAuto'

Result Of The Expression/Formula:

Valid range	Back...
Yes / TRUE	Red
No / FALSE	Green

Data Type: Bool

组态电机画面,画面窗口的属性 1/4

The screenshot shows the 'Object Properties' dialog for a 'Picture Window' in SIMATIC Manager. The dialog is divided into 'Properties' and 'Events' tabs. The 'Properties' tab is active, showing a list of attributes for the 'Picture Window' object. The attributes are categorized into 'Static' and 'Dynamic'. Several attributes are circled in different colors: 'Display' (cyan), 'Title' (green), 'Picture Name' (blue), 'Tag prefix' (red), and 'Heading' (green). The 'Picture Name' attribute is set to 'Motor_Box.PDL', 'Tag prefix' is set to 'Motor_1', and 'Heading' is set to 'Heading'. The 'Picture Window' object is highlighted in the main workspace, and a blue arrow points to it from the 'Miscellaneous' section of the properties dialog.

Attribute	Static	Dynamic
Display	No	
Update Cycle	Upon change	
Sizeable	No	
Movable	No	
Border	Yes	
Title	Yes	
Can Be Maximized	No	
Can Be Closed	No	
Foreground	No	
Scroll Bar	No	
Adapt Size	No	
Adapt Picture	No	
Picture Name	Motor_Box.PDL	
Picture Offset X	0	
Picture Offset Y	0	
Scaling Factor	100	
Tag prefix	Motor_1	
Server prefix		
Heading		

组态电机画面, 画面窗口的标题 2/4

The screenshot shows the SIMATIC Manager interface for configuring a picture window. The main window is titled 'Bildfenster'. The 'Object Properties' dialog is open, showing the 'Events' tab. The 'Change' event is selected, and the 'Direct Connection' dialog is also open. The 'Direct Connection' dialog shows the following configuration:

- Execute in the case of:** Change
- Source:** Property
- Target:** Object in Picture
- Object:** this object
- Property:** Tag prefix

The 'Direct Connection' dialog also shows a list of objects and properties for both the source and target. The source object is 'this object' and the source property is 'Tag prefix'. The target object is 'this object' and the target property is 'Display'.

组态电机，调用画面窗口 3/4

The screenshot shows the SIMATIC Manager interface. The main workspace displays a motor symbol labeled 'Motor1'. The 'Object Properties' window is open for the selected 'Button1' object. The 'Events' tab is active, showing a list of events under the 'Mouse' category. The 'Edit Action' window is open, displaying the code for the 'Mouse Action'.

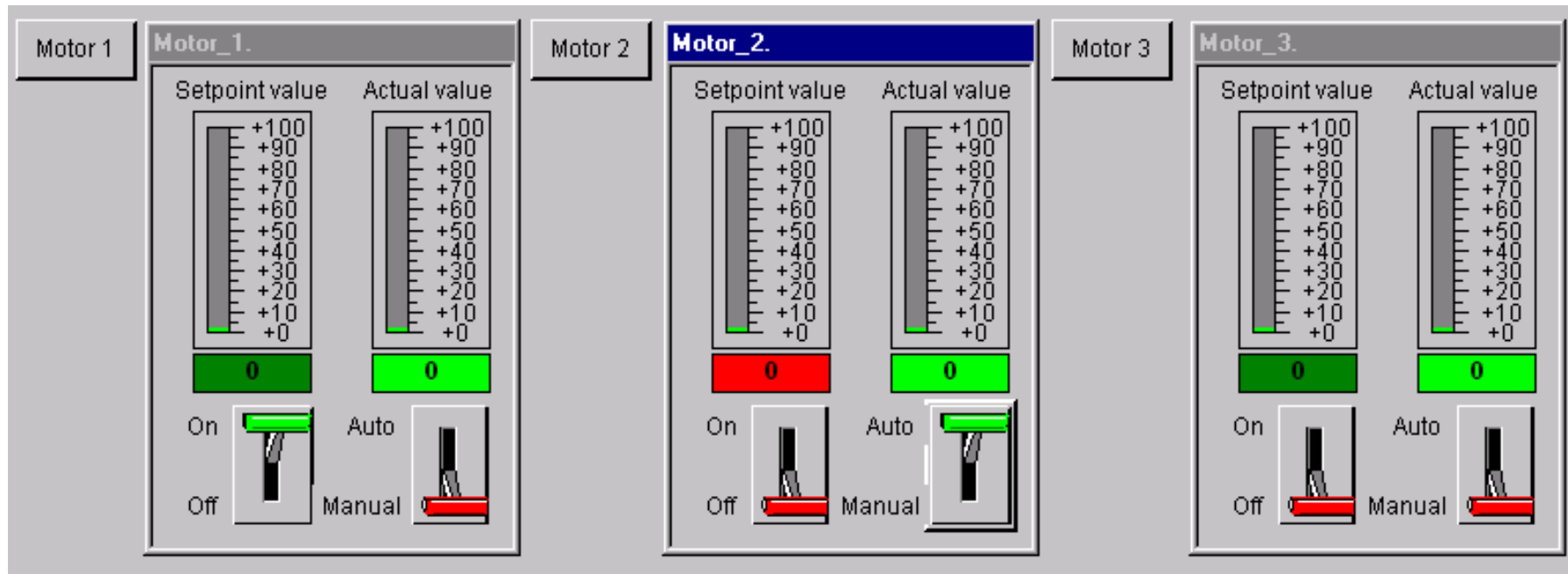
Execute in the case of	Action
Mouse Action	
Press left	⚡
Release left	⚡
Press right	⚡
Release right	⚡

```

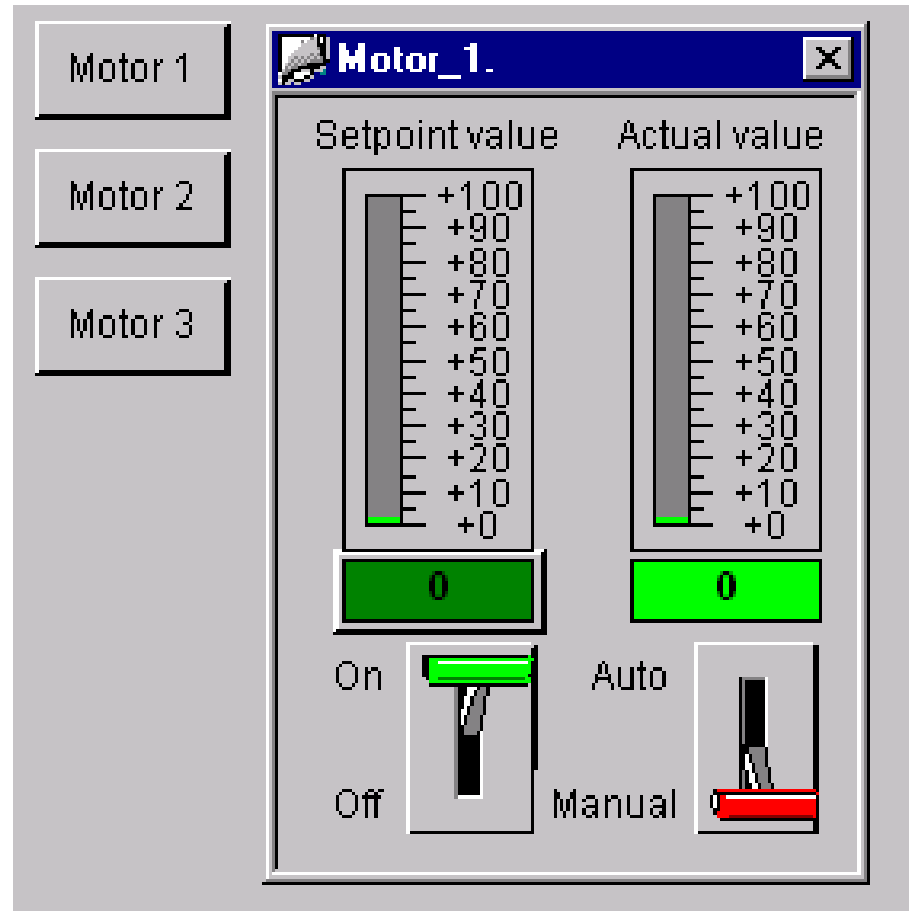
// WINCC:TAGNAME_SECTION_START
// syntax: #define TagNameInAction "DMTagName"
// next TagID : 1
// WINCC:TAGNAME_SECTION_END

// WINCC:PICNAME_SECTION_START
// syntax: #define PicNameInAction "PictureName"
// next PicID : 1
// WINCC:PICNAME_SECTION_END
int a;
a=GetVisible(IpszPictureName,"Bildfenster1"); //Rückgabe-Typ :BOOL
a=!a;
SetVisible(IpszPictureName,"Bildfenster1",a); //Rückgabe-Typ :BOOL
    
```

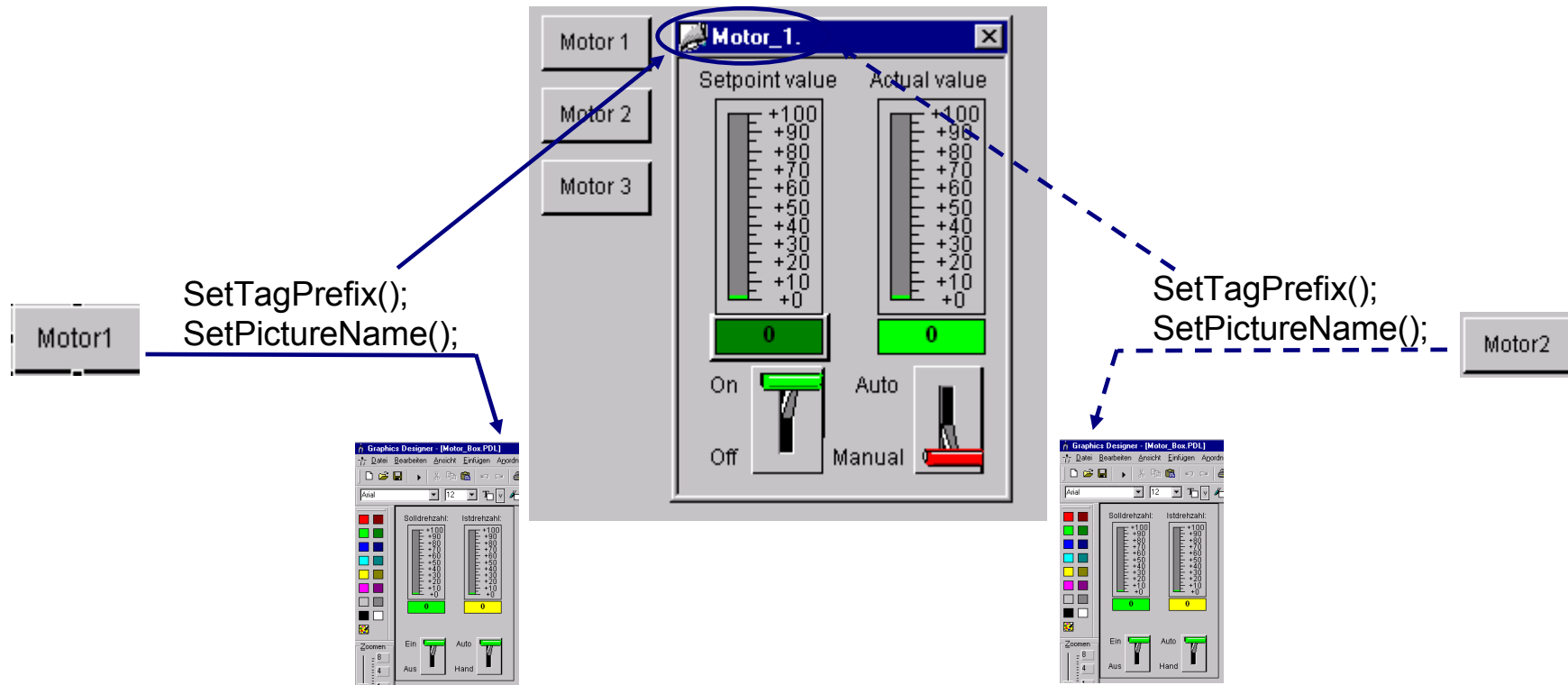

结果：运行模式的工程 4/4



任务：运行模式工程,一个画面窗口中有多个电机



实例形成的顺序



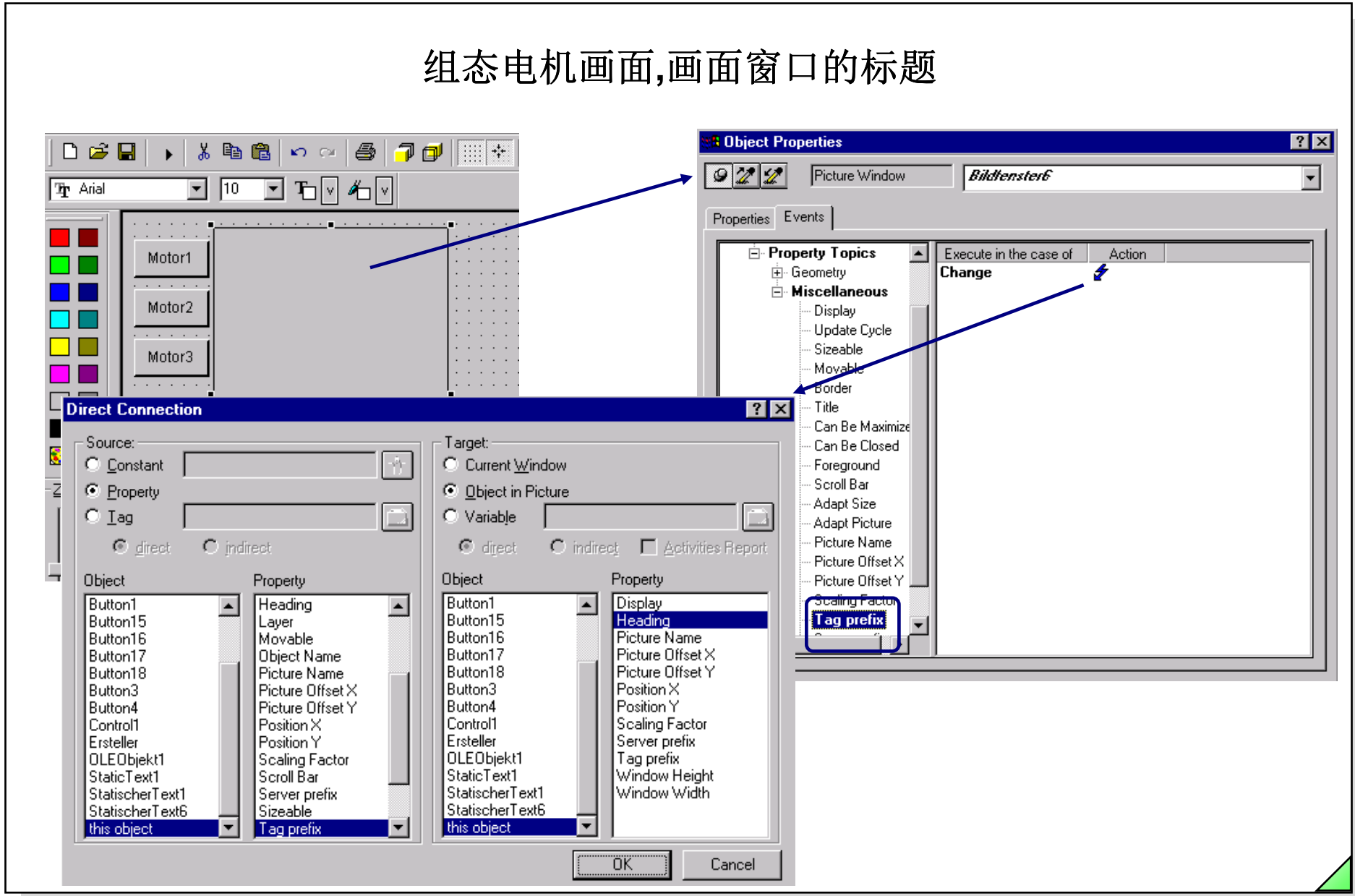
注释：
 SetTagPrefix(); “Tag Prefix” 属性可用 “TagPrefix” 名称变成动态的。
 SetPictureName(); “Picture Name” 属性可用 “PictureName” 名称变成动态的。

组态电机画面,画面窗口的属性

The screenshot shows the 'Object Properties' dialog for a 'Picture Window' (Bildfenster) in SIMATIC Manager. The 'Miscellaneous' section is expanded, displaying a table of attributes. A blue arrow points from the 'Picture Window' in the main workspace to the 'Picture Window' entry in the properties table.

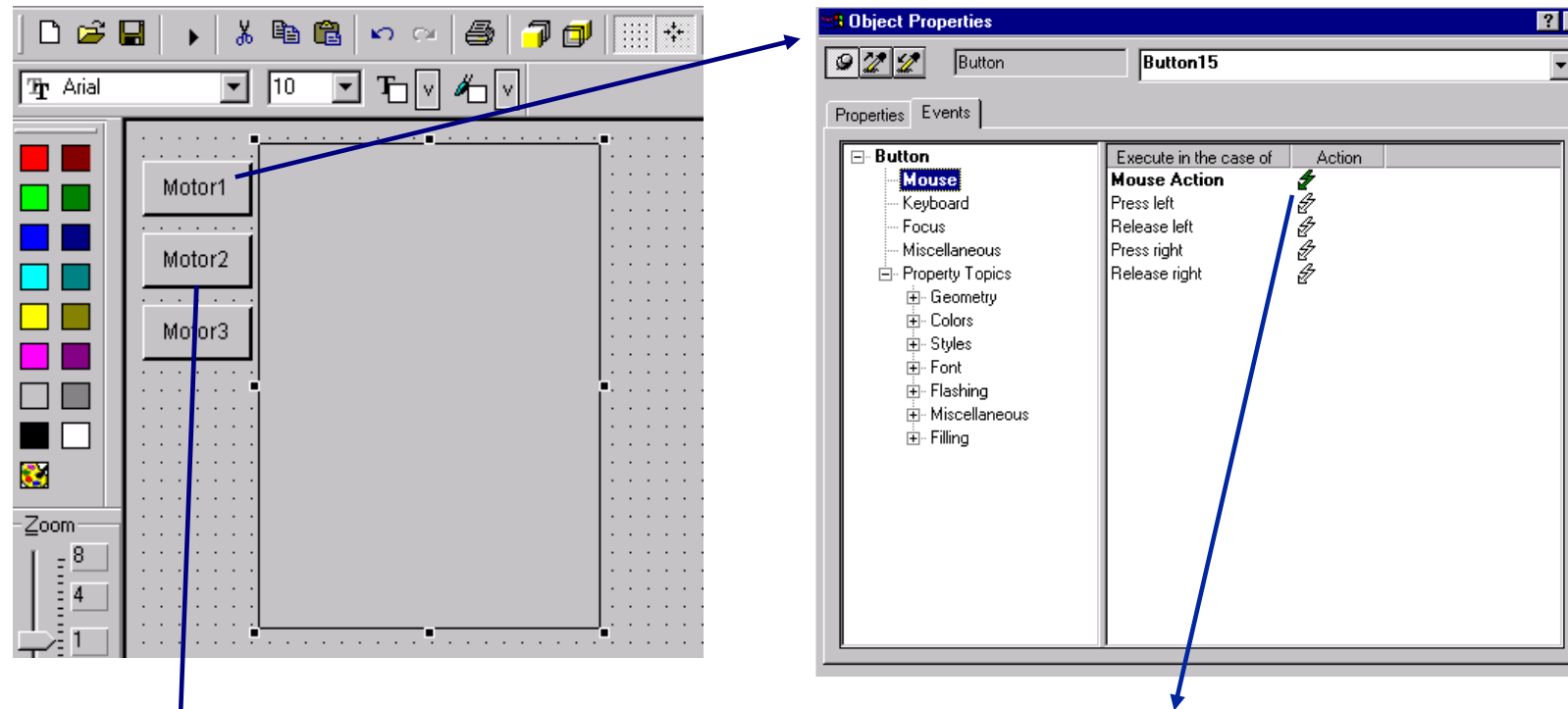
Attribute	Static	Dynamic	Curr...
Display	No	<input checked="" type="checkbox"/>	
Update Cycle	Upon change		
Sizeable	No		
Movable	Yes		
Border	Yes		
Title	Yes		
Can Be Maximized	No		
Can Be Closed	Yes		
Foreground	No		
Scroll Bar	No		
Adapt Size	No		
Adapt Picture	No		
Picture Name		<input checked="" type="checkbox"/>	
Picture Offset X	0		<input checked="" type="checkbox"/>
Picture Offset Y	0		<input checked="" type="checkbox"/>
Scaling Factor	100		<input checked="" type="checkbox"/>
Tag prefix			<input checked="" type="checkbox"/>
Server prefix			<input checked="" type="checkbox"/>
Heading			<input checked="" type="checkbox"/>

组态电机画面,画面窗口的标题



SIEMENS

组态电机画面,连接变量前缀的按钮



```
SetTagPrefix(IpszPictureName,"Bildfenster6","Motor_1.");
SetPictureName(IpszPictureName,"Bildfenster6","Motor_Box.pdl");
```

```
SetTagPrefix(IpszPictureName,"Bildfenster6","Motor_2.");
SetPictureName(IpszPictureName,"Bildfenster6","Motor_Box.pdl");
```

间接寻址

The top-left window shows two 'select address' buttons. The first is labeled 'I_Wert_1' and 'indirect addresses'. The second is labeled 'variable value' and has '20,000' entered. The top-right window is 'Object Properties' for 'IOField6'. The 'Output/Value' section has a table:

Attribute	Static	Dynamic	Cur...	I...
Field Type	I/O Field	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Output Value	0,000000e+000	<input checked="" type="checkbox"/> namevariable 2 s	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Data Format	Decimal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Output Format	999,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apply on Full	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apply on Exit	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear on New Input	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear on Invalid Input	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hidden Input	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

启用

The 'Direct Connection' dialog box has the following settings:

- Source: Constant Property Tag
- Value: I_Value_1
- Target: Current Window Object in Picture Variable
- Value: namevariable
- Mode: direct indirect Activities Report

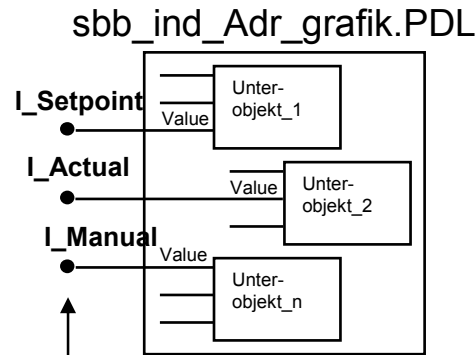
变量“namevariable”必需作为“Text tag 8-bit character set”数据类型的一个内部变量来创建。

间接寻址概述

2)

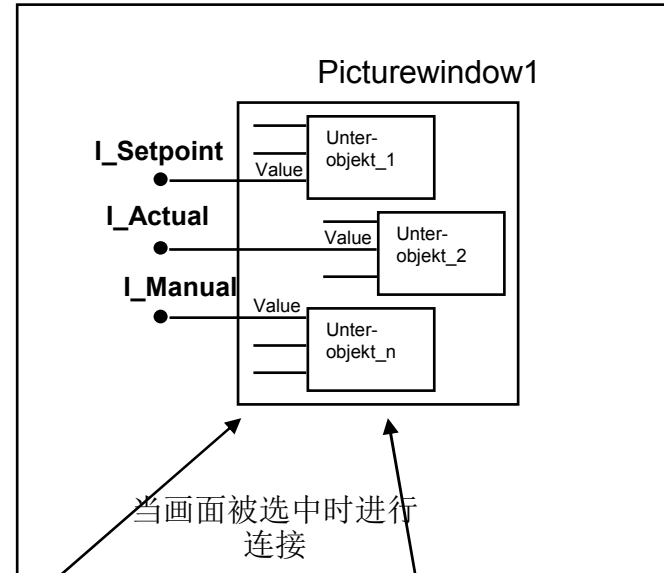
Internal tags
 I_Setpoint Value
 I_Actual Value
 ...
 Process tags
 (Structure tag)
 Drive1.Setpoint v.
 Drive1.Actual val.
 ...
 Drive2.Setpoint
 Drive2.Actual
 ...

3)



间接寻址

sbb_ind_Adr.PDL

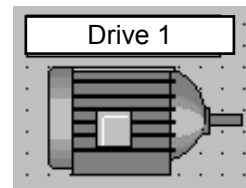


当画面被选中时进行连接

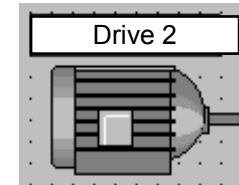
1) 创建结构类型，例如 Drive.

```
Drive
├── SHORT Setpoint
├── SHORT Actual
└── BIT Manual
```

5)



5)



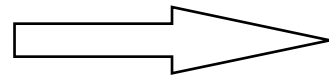
```
SetPictureName(IpszPictureName,"PictureWindow1","sbb_ind_Adr_grafik.PDL");
SetVisible(IpszPictureName,"PictureWindow1",1);
SetTagMultiWait("%s%s%s",
    "I_Setpoint","Drive1.Setpoint",
    "I_Actual","Drive1.Actual",
    "I_Manual","Drive1.Manual");
```


动态向导的画中画技巧概述 1/2

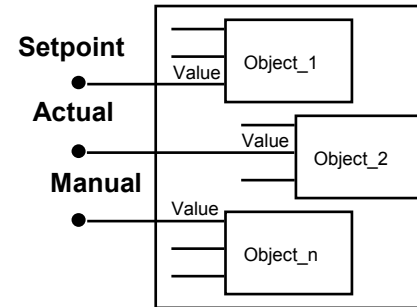
- 1) 创建结构类型，例如 Antrieb (drive)。
- 创建过程变量
 Drive1.Setpoint
 Drive1.Actual
 ...
 Drive2.Setpoint
 Drive2.Actual
 ...

2) 模板 (LC.PDL)

带有 @TYPE_LC.pdl



3) 模板向导



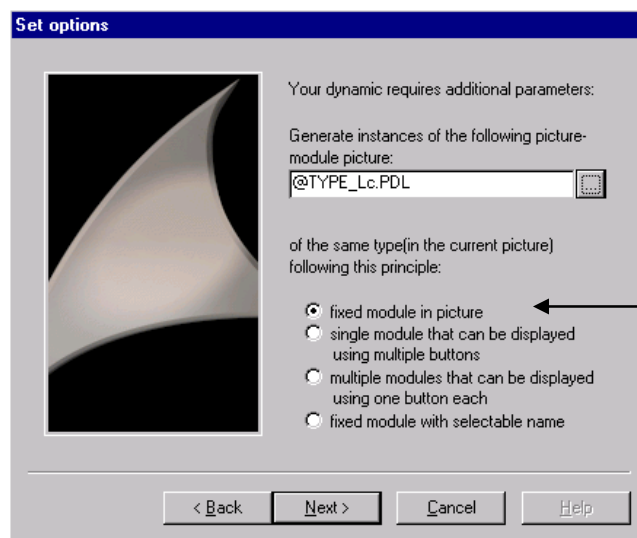
4) 调用图形画面 xyz.PDL

5) 实例向导

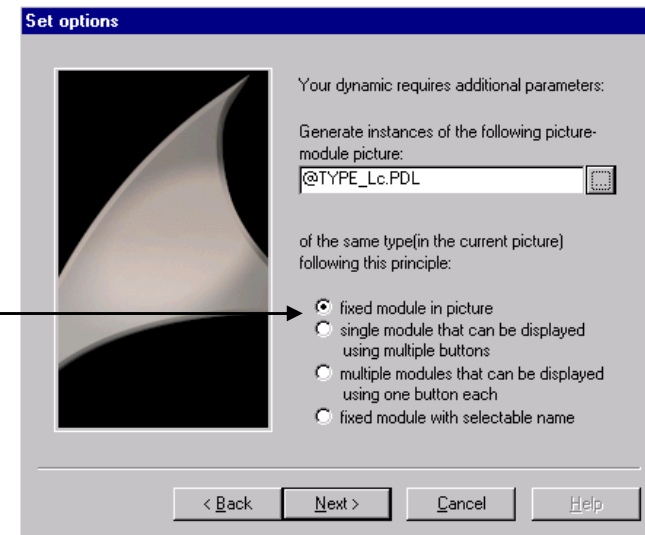
Drive 1

Drive 2

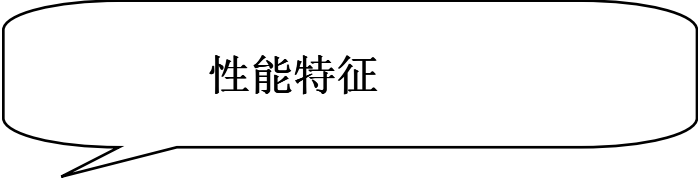
5)



画面中的固定模块



动态向导的画中画技巧概述 2/2

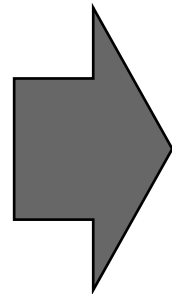
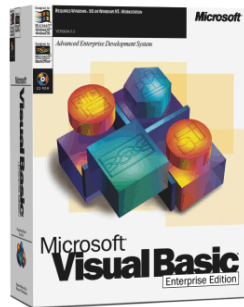


性能特征

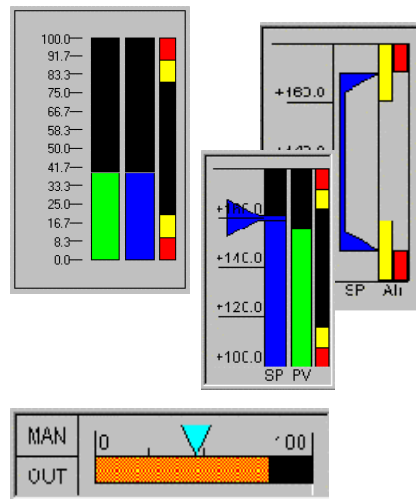
- 实例类型 1: 画面中的固定(画面)模块
- 实例类型 2: 可以显示一个模块, 可用一个按钮 (每个变量) 调用
- 实例类型 3: 可以显示多个模块, 每个可用一个按钮 (变量) 调用
- 实例类型 4: 有可选名称的固定模块

ActiveX控件的 块技巧 (IndustrialX的可选项)

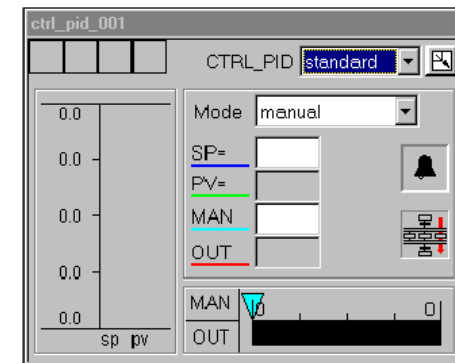
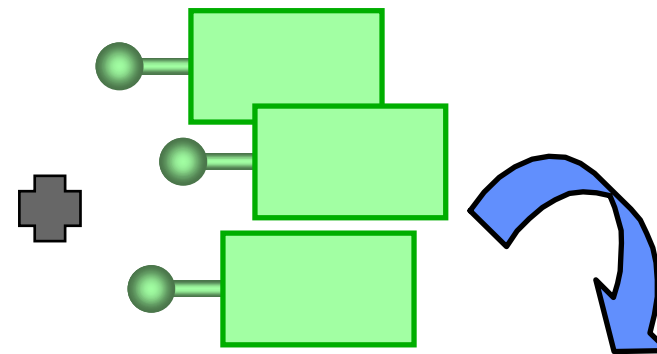
IndustrialX



基本的以及WinCC的控件



服务控件



在任何画面中显示画面名称

-使用组合键 **Shift+Ctrl+Alt**

(在运行模式，用鼠标指向画面中的一个对象。一会儿工具提示文字就显示出来。)

-在底部显示状态行

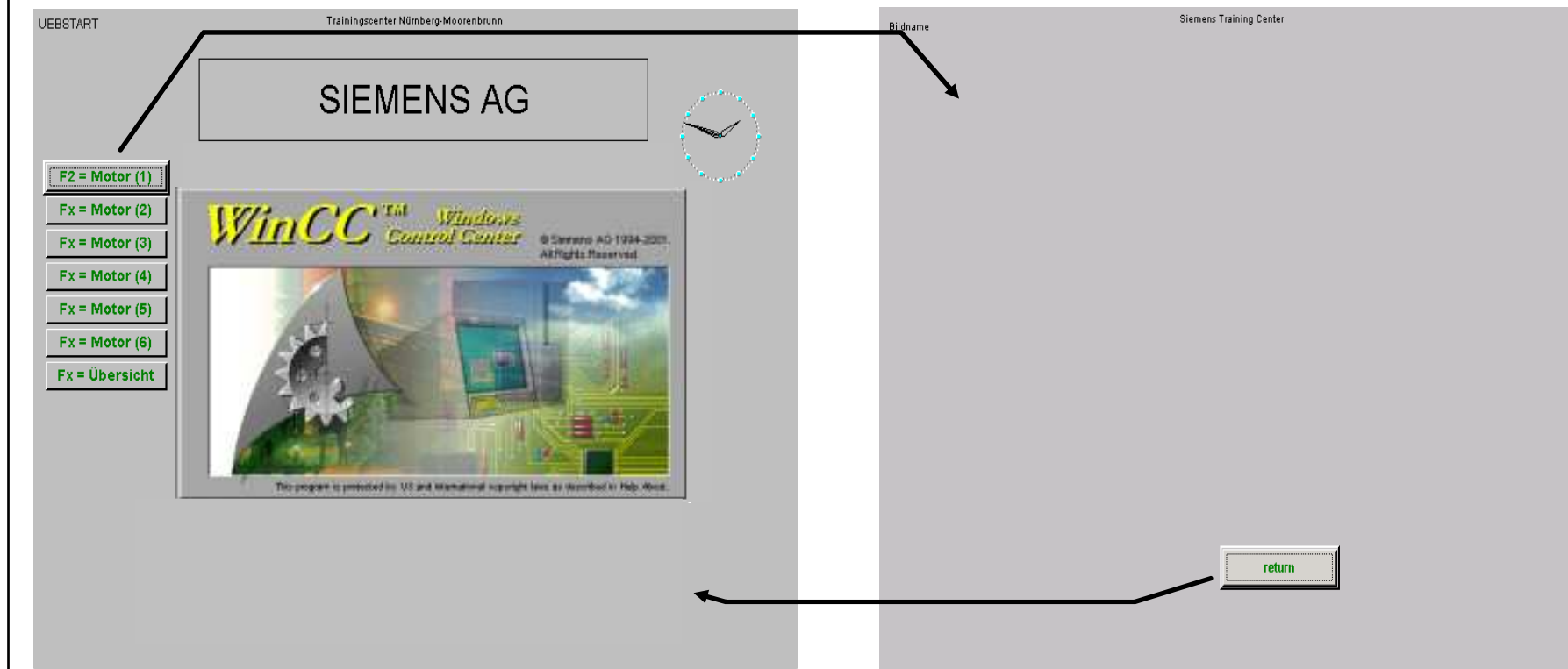
(在 **WinCC Explorer**中，使用计算机属性，选择窗口属性“**Status-Line**”。在取消-激活运行模式后每个画面的画面名称显示在底部的状态行中。)

-由**C**脚本更新静态文本

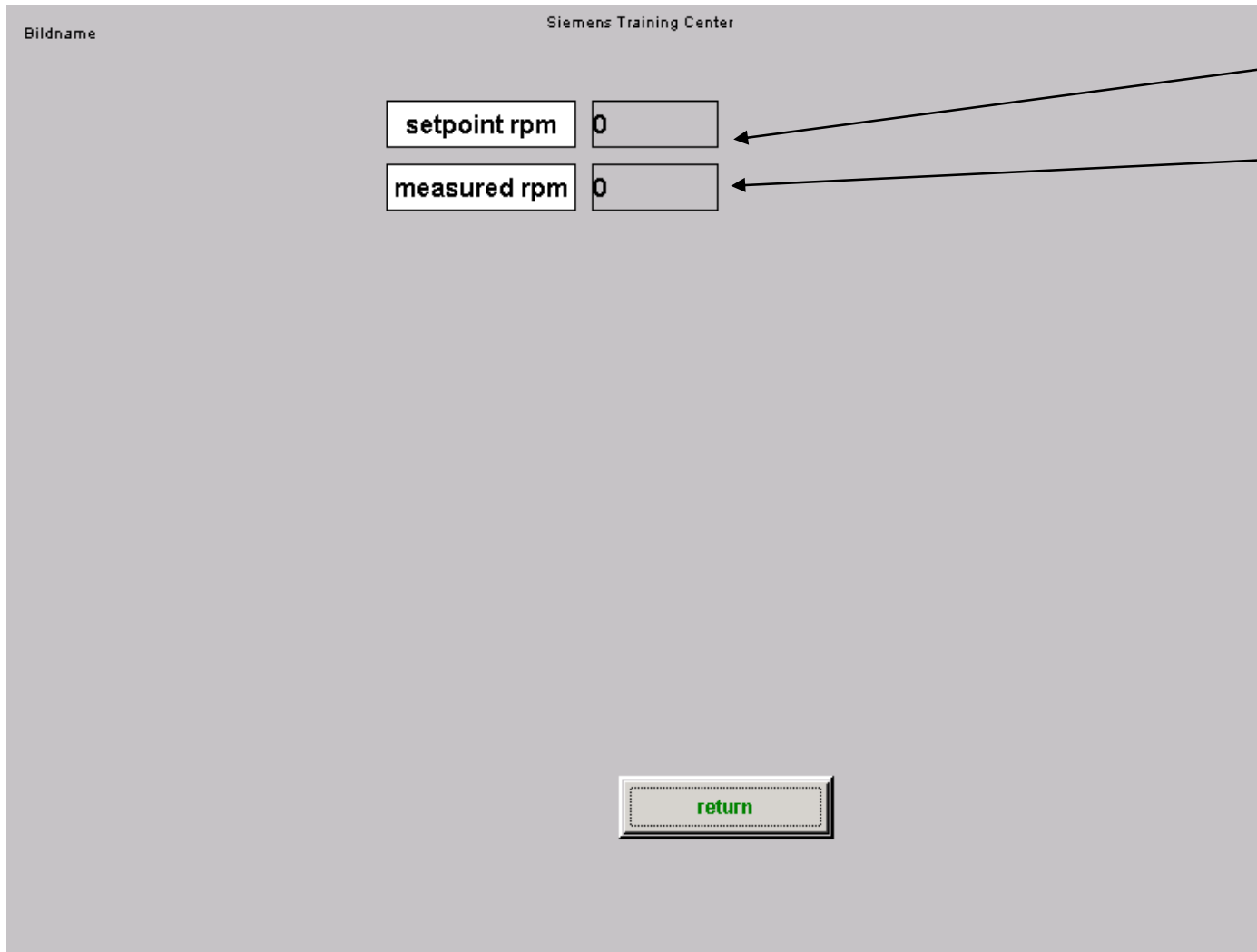
(解决方案显示在下面的文字中。)

SIEMENS

练习 1: 创建一个画面



练习 2: 用于设定点和实际值的I/O域



用来设定速度的I/O域

显示实际值的输出域

练习 3: 电机操作及电机颜色变化

The screenshot displays the SIMATIC Manager interface for a motor control application. On the left, the HMI screen shows a speed indicator with a green-to-red gradient and a '0' value. Above it are two input fields: 'setpoint rpm' and 'measured rpm', both containing '0'. To the right of the indicator are three buttons labeled 'Setpoint=800', 'Setpoint=400', and 'Setpoint=0'. Below these is a motor symbol and a 'return' button. On the right side of the screenshot, a 'Library' window is open, showing a tree view of symbol libraries. The 'Toggle Buttons' folder is circled in blue. The right pane of the library window shows several motor-related symbols, including a speed indicator, a 'STOP' button, a 'RUN' button, and a motor symbol.

电机操作

设定速度操作

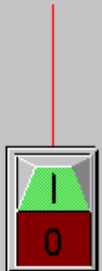
电机符号颜色变化

练习 4：调整点和实际值的棒图

Picturename Siemens Training Center

setpoint rpm **890**

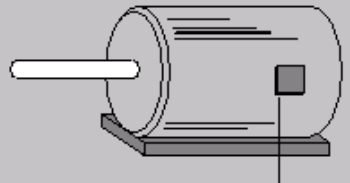
measured rpm **960**



Setpoint=800

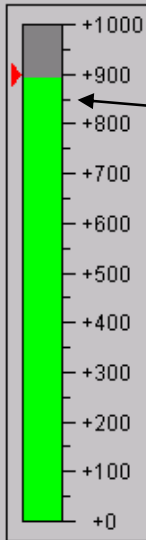
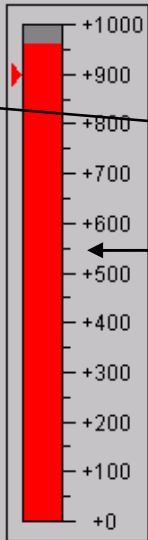
Setpoint=400

Setpoint=0



setpoint rpm **890**

measured rpm **960**

return

调整点速度的棒图

实际速度的棒图


练习 5: 状态显示

Zustandsanzeige.pdl

PictureName

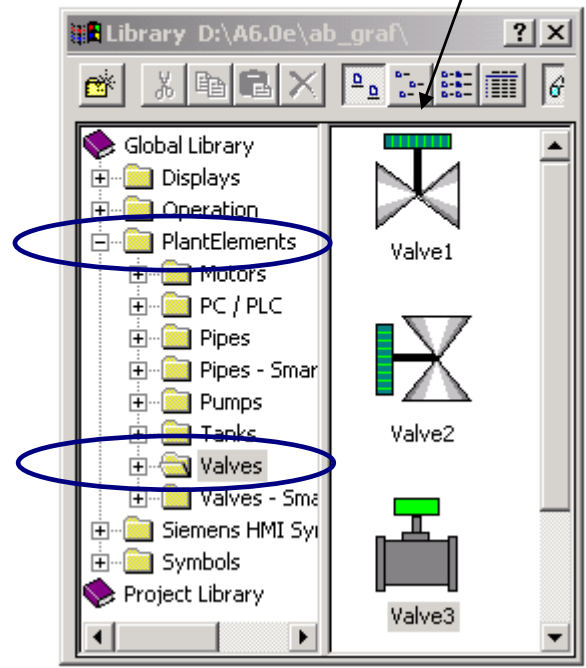
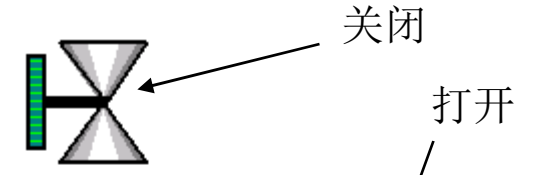
Siemens Training Center

statusindicator with alternative 0 and 1



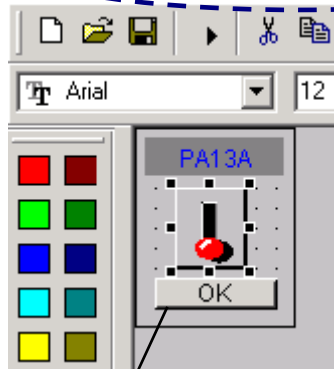
Status 0-->state 1-->closed-->	ven_zu.emf
Status 1-->state 2-->opened-->	ven_auf.emf

return



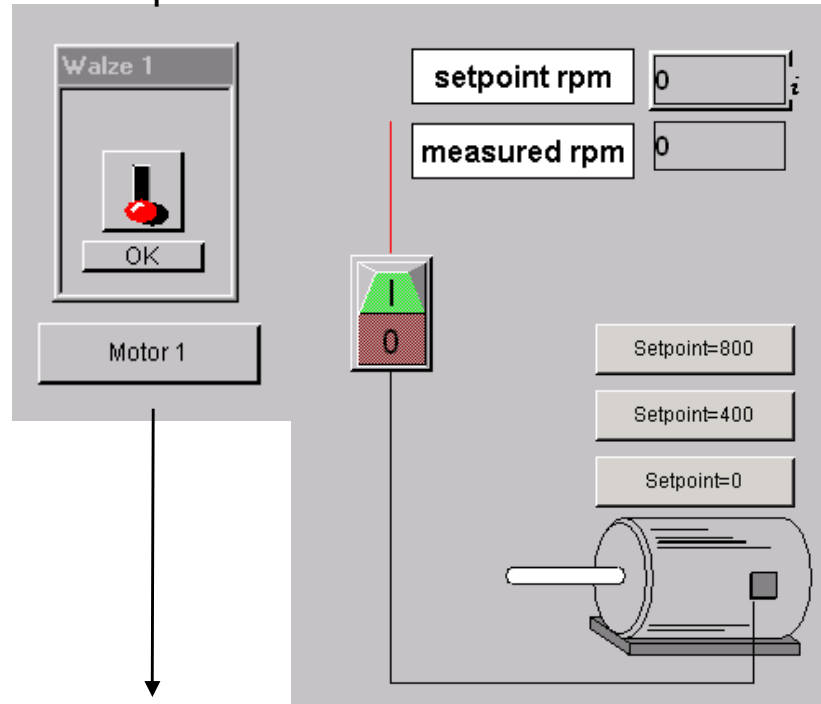
练习 6: 带有两步操作的子控制框

操作画面: Mot1.pdl



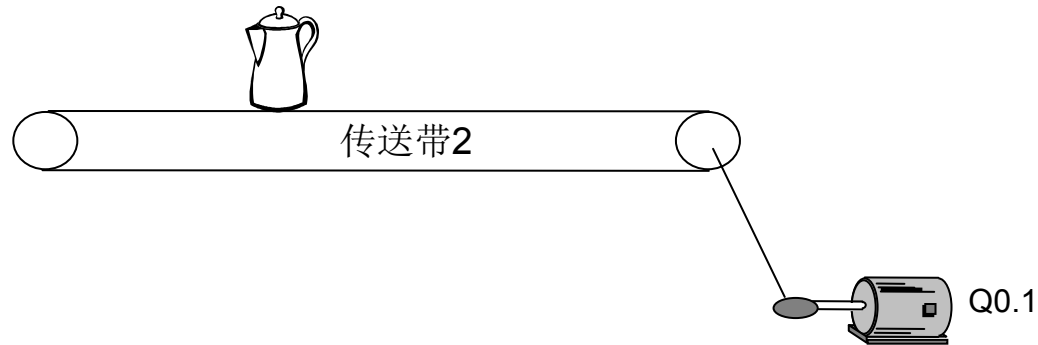
组态直接连接:
 -源: Constant 0
 -目的: Current Window-> Display

Motor.pdl

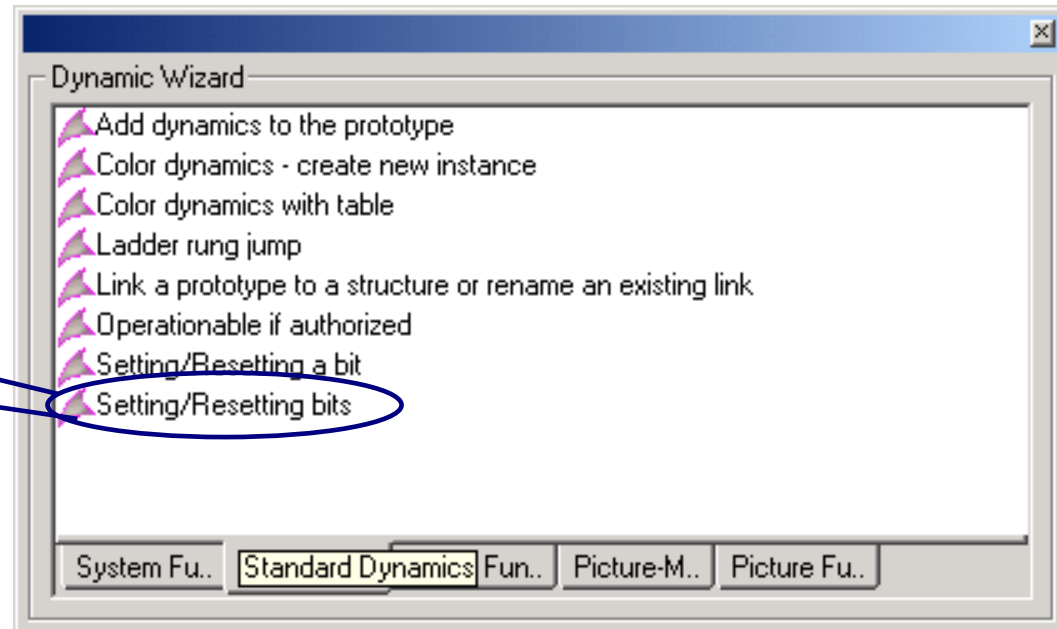
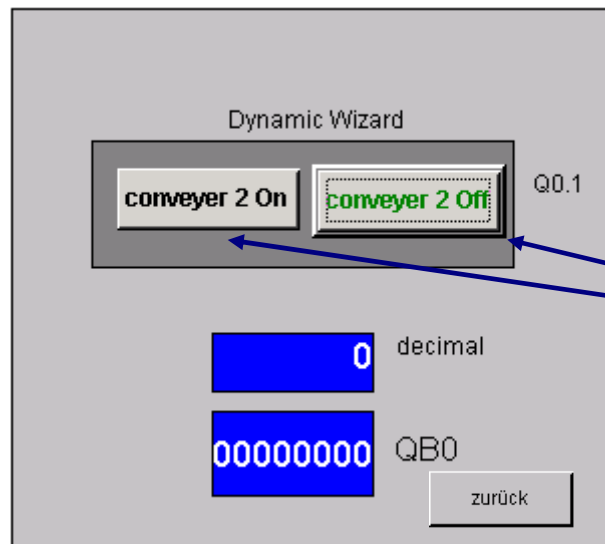


组态动态向导:
 -Picture Function
 -Display WinCC Dialog Box with *Mot1.pdl*

练习 7: 在字节中对一个位进行设定



Bandanlage.pdl



练习 8: 帮助功能

Picturename

Siemens Training Center

setpoint rpm 890 H

measured rpm 960

Setpoint input for Speed Value between 0-1000

对象名称: *Help Text*

按住鼠标右键显示帮助信息

释放鼠标右键信息消失

setpoint rpm measured rpm

+1000 +1000

+900 +900

+800 +800

+700 +700

+600 +600

+500 +500

+400 +400

+300 +300

+200 +200

+100 +100

+0 +0

Setpoint=800

Setpoint=400

Setpoint=0

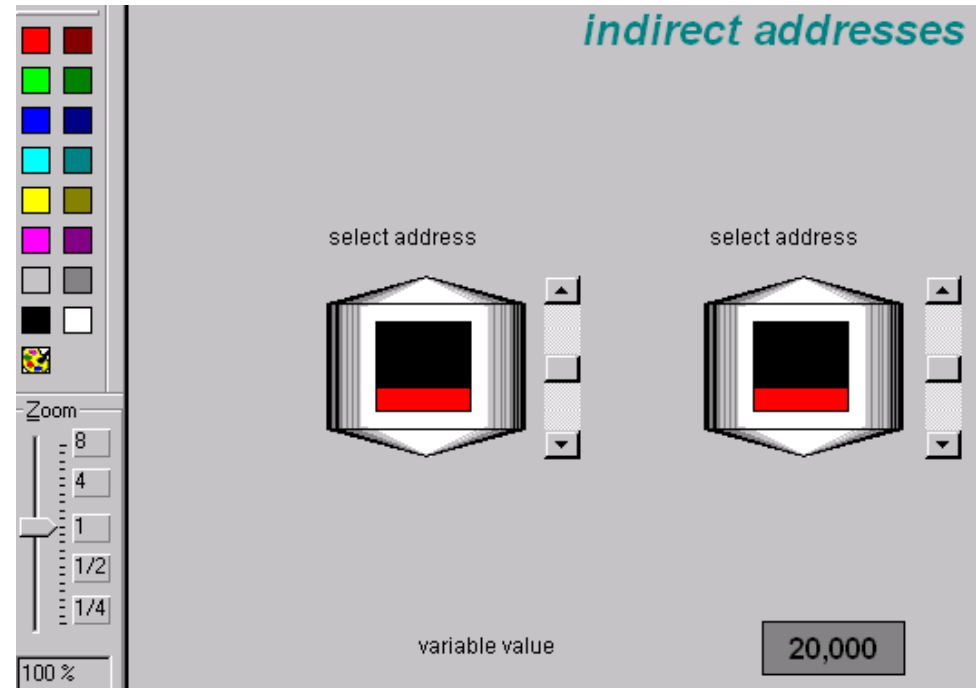
890 960

return

overview

Tooltip 信息

练习 9: 间接寻址



使用间接寻址
的变量textvariable