competence in engineering

Infoedit
Manual

Version 1.1

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Infoedit
Manual

Contents

How to use the Infoedit Guide

Before using the Infoedit Guide, you should answer one question:

What a kind of user type are you?

Do you prefer to read the guide first and parallel to your work, going on step by step? In this case, you should ignore the chapter Quick Start and go on with the chapter Documentation on Page 11.

Are you a „trial and error type“, just start and only fall back to the documentation if it is necessary?
Then you should read the chapter Quick Start and only take a look at the chapters Index and Definition if necessary.

Conventions used in this documentation

Text in a Border
These steps are essential!

Text at the right margin of the page:
Helpful tips to get an overview

Explanation

Italic
These expressions can also be found in the chapter Index and on other pages of the documentation.

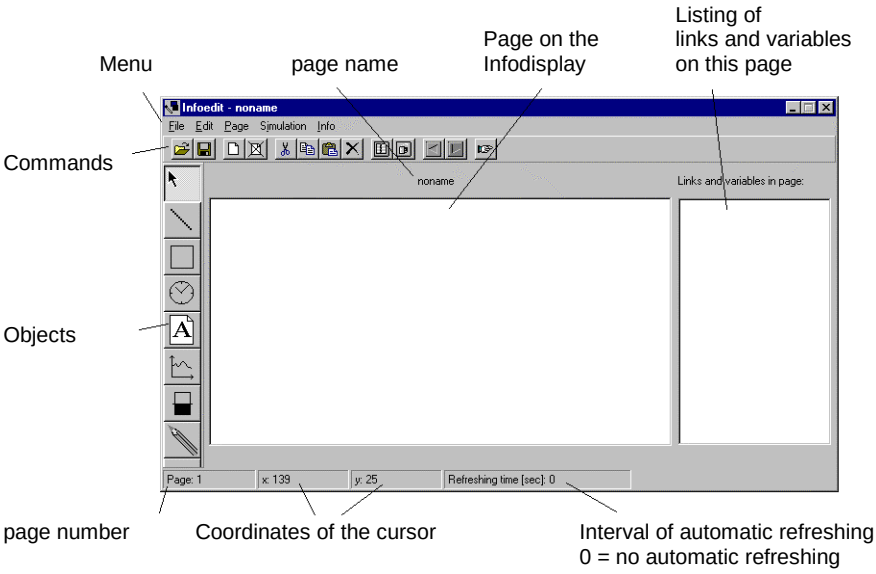
Bold
Expressions that appears in the Infoedit.

Underlined
To stress the expression.

Quick Start

Starting Infoedit

You will reach the standard view by double click on the Infoedit Icon.



New project

With **File**, **Project** and **New** a new project is created.

A project consists of four different file types:

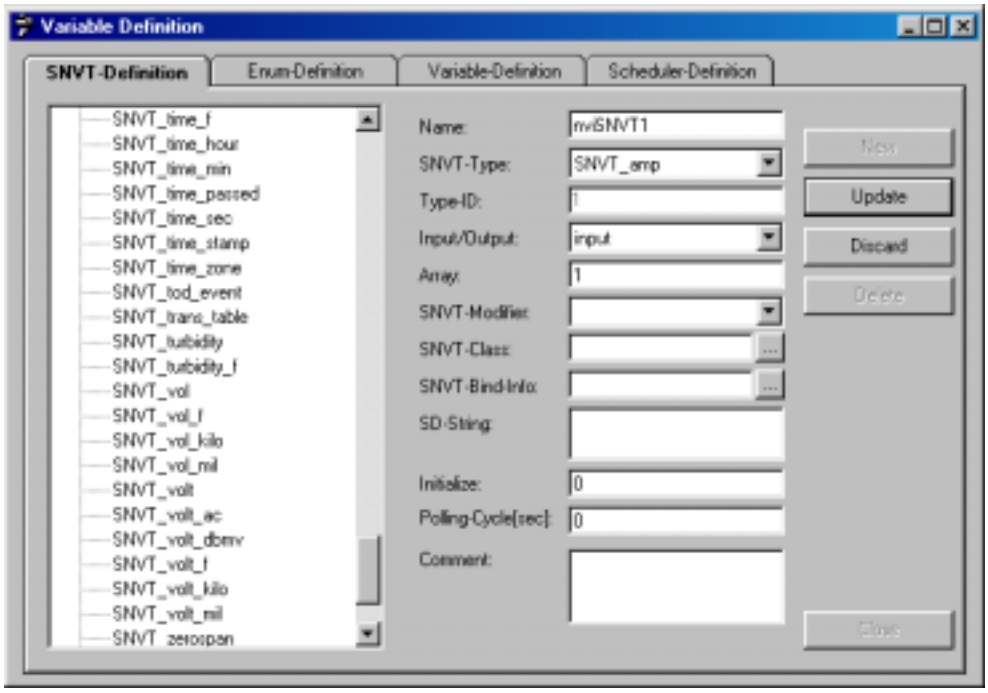
- files containing the **graphical surface** of the Infodisplay ending with **.ife**
- files containing the **bitmap-library**, ending with **.bib**
- files containing the **variable-list**, ending with **.lst**

To **import** files of different projects in your current project click **File** and **Import**.

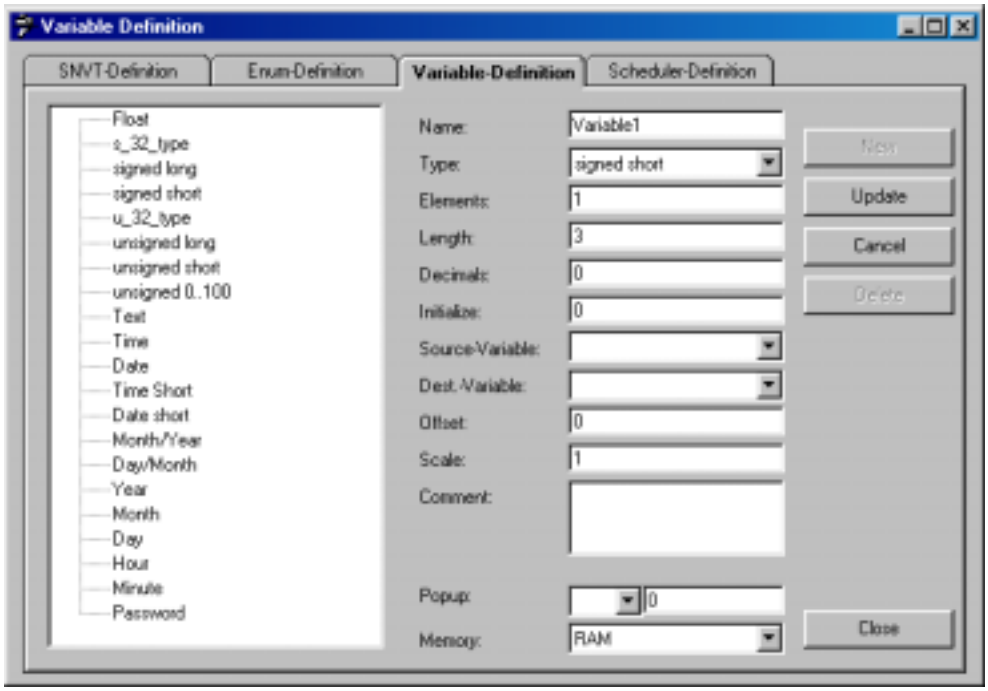
Before creating the graphical surface, it's a good idea to define the SNVTs you want to bind in the network later.

Define Variable

With **Edit** in the menu and **Edit Variables...** you open the window **SNVT-Definition**. Here you have to define the SNVTs that are used in your network.

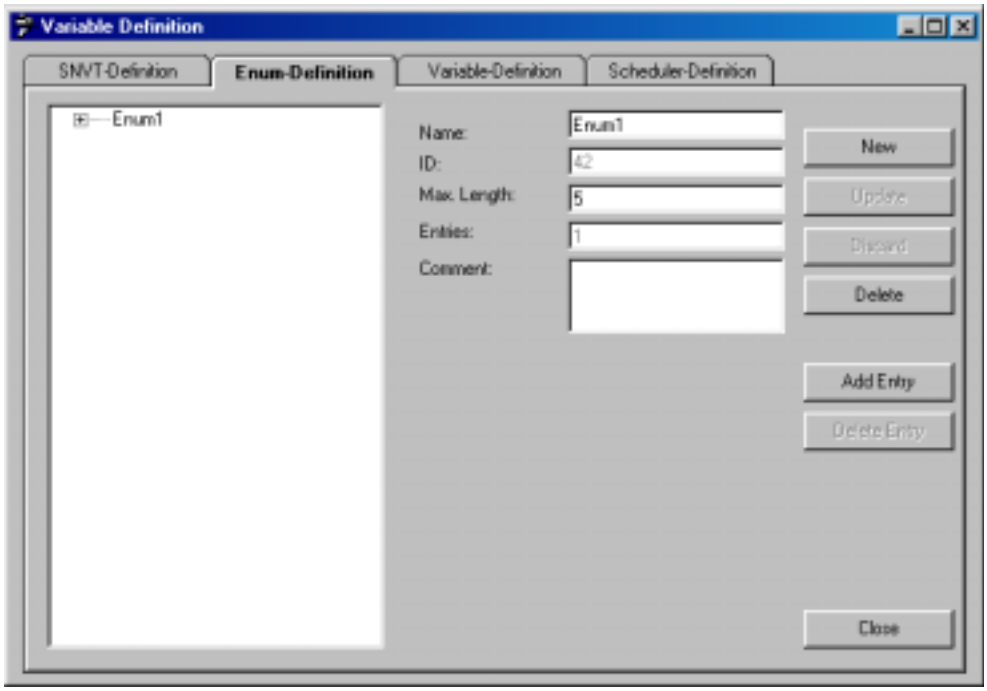


To use the defined SNVT it is necessary to connect it to an *Internal Variable*. If you finish the SNVT-Definition with **Update**, the program asks if the *Internal Variable* should be created automatically. Normally you should answer „yes“. Otherwise you are able to define a internal variable by yourself on the page **Variable-Definition**:



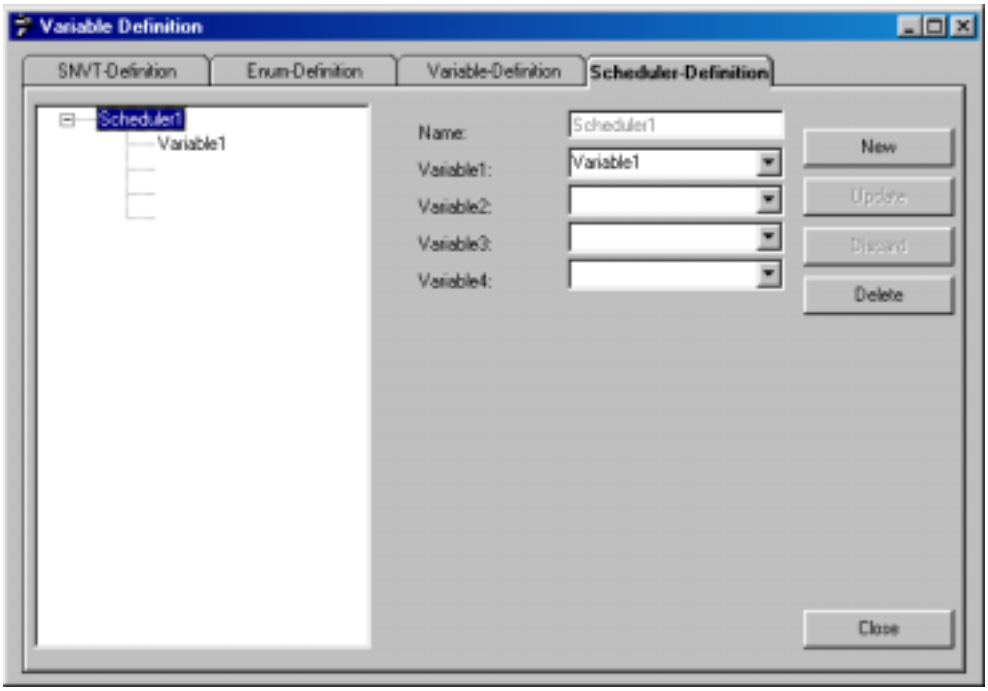
You can also define variables that are used only internal in the Infodisplay e.g. for converting.

To create an Array-Type (e.g. Monday, Tuesday, Wednesday,.. instead of 1, 2, 3,...) you use the page **Enum-Definition**.



Define Scheduler

On the Page **Scheduler-Definition** you can configure scheduler. There are at most 10 program with each 4 internal variables.



This programs contain each 24 points of switch which are changeable. To each point of switch, it is possible to assign a value to each of up to 4 connected variables. And you can decide, if to this point of switch, the variable shall be change.
Each point of switch is able to make repeated changes (e.g. hourly, daily, weekly, monthly, yearly or a combination of it).
All conditions, which are set, have to be fulfilled. The setting of this programs is only possible on the Infodisplay. The making out of a time scheduler results automatically a page in the current project. It will be a good idea to think about this page if you make out the menu structure.

Graphical Forming

Having defined the variables you can start to create the graphical surface of the Infodisplay.

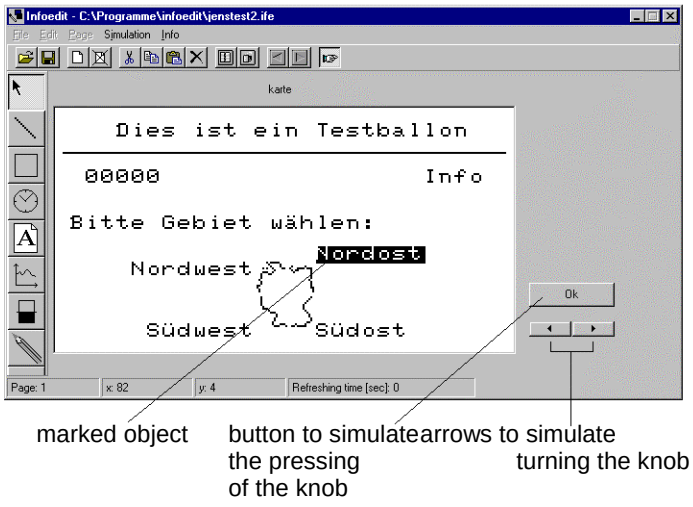
You can put the different objects (e.g. bar charts, lines, bitmaps,...) with the cursor directly on to the page.

By double clicking a marked object you reach the window **Properties...**. Here you can change the properties of the object (e.g. position on the page, size, type).

You can change the page name by double clicking it. With **Page** and **New...** you can add and name a new page.

Simulation

With **Simulation** and **activated** you can do a simulation. So the links you defined, can be checked.
With the **Ok**-Button (press) and the two arrows (turn) the knob of the Infodisplay is simulated.



Make out the application for the Infodisplay

Normally making out the application file (.apb) is done by A3M. Therefore it is necessary to send the files “project name” .lst, “project name” .bib. and project name” .ife, made out by yourself, via Email at infoedit@a3m.com .
After a few days, you’ll receive the files “project name” .apb, “project name” .xfb. and project name” .xif. If you need a different file format, please let us know via Email.

Loading the application into the Infodisplay

You can upload this file into the Infodisplay with any network management tool.

The menu data can be

- send via serial interface (RS232) or
- via file transfer with your network management tool

To send the menu data via serial interface you have to connect the Infodisplay to the serial port of your PC. With **File**, **Options** and **Comm-Port...** you choose the port of your PC. Having done this, you can send the data with **File** and **Send**.

Documentation

How the Infodisplay work

The configured Infodisplay is a LonWorks®-device who gets its information from network variables which have to be bind. While working out the project specific surface, the information that are necessary, are configured with the software Infoedit. The Infodisplay takes the information out of the network variables and copied it in the so called “internal” variables. This step is necessary because network variables are most defined as structure, which are built out of several elements. The Infodisplay can display this elementary data types, but it cannot display complexly structures. When displaying a side, the needed values out of the internal variable are read out and interpreted.

Installation

Put the CD into the drive. The set up program starts automatically, leads you through the installation and creates an icon.

Starting the program

With double-click on the Infoedit Icon you start the program

New Project

Creating a new project

With **File, Project** and **new**, you create a new project

Define a project name with **File**, **Project** and **save as...** If the name is not defined at this time, you will be asked for it automatically after a while.

A project consists of three different file types:

- files containing the graphical surface of the Infodisplay ending with .ife
- files containing the bitmap-library, ending with .bib
- files containing the variable-list, ending with .lst

To **import** files out of different projects to your current project click **File** and **Import**.

Before you create the graphical surface, it’s a good idea to define the SNVTs you want to bind later in the network.

Before creating the graphical surface, define the variables!

Importing files

After the first start of the program you have to import a SNVT list in your new project: with **File**, **Import** and **SNVT-List...**

Together with the Infoedit you get the file snvt.nvt. This file contains all SNVTs from

the SNVT Master List.

If you want to use an existing bitmap library, you can import this list with **File**, **Import** and **Bitmap-Library...**

Together with the Infoedit you get the file bitmap.bib which contains 60 bitmaps. These bitmaps are listed in the appendix.

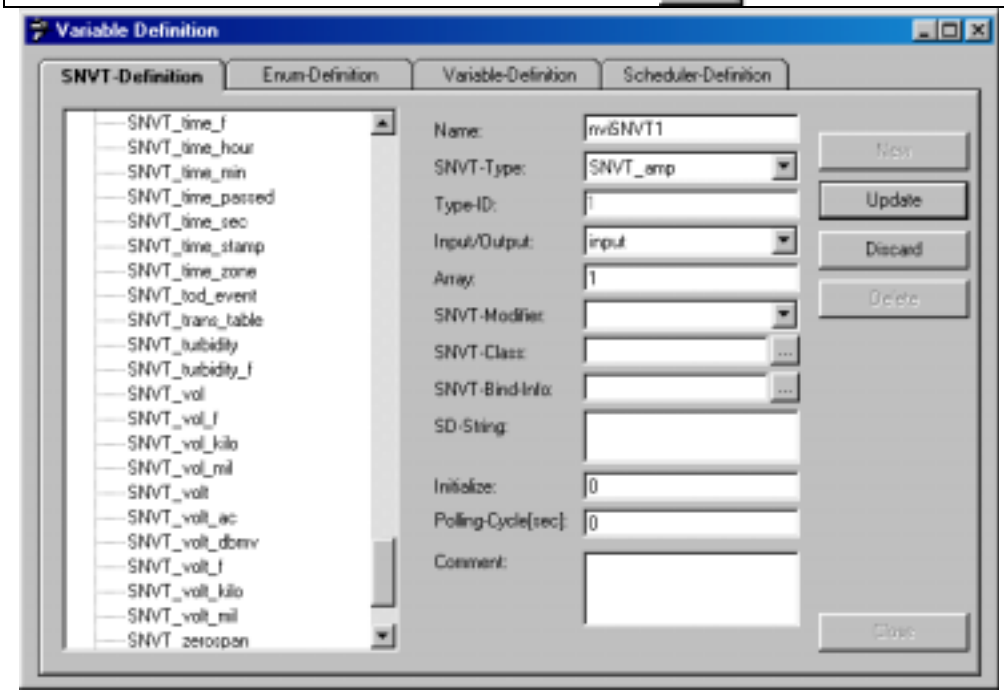
Normally you define new variables for a new project. If you want to use existing variables, you can import variable lists with **File**, **Import** and **Variable-List...**

Defining variables

You have to define network variables to be able to communicate with the LONWORKS© network, and to be able to display them on the Infodisplay. Therefore the „Standard Network Variable Types“ (SNVT) exist, belonging to the LonMark®-Standard.

The network variables (at most 62 are able to be managed by the Infodisplay) can be configured with dialogs to show them on the Infodisplay.

With **Edit** and **Edit Variables...** or by clicking on  you will reach the following window:



The imported SNVT list is shown on the left-hand side. On the right-hand side you have to define the SNVT.

Choose a standard variable type on the left-hand side.
Click **New** to define a new network variable.

- **Name**

the logical, internal name of the current variable you define
This is the name under which the variable is known in the network. The name starts with nvi for an input variable and with nvo for an output variable.

- **SNVT-Type**

the Standard Network Variable Type (SNVT, see „LonMark®-SNVT Masterlist“)

- **Type-ID**

the ID-number of the SNVT (see „LonMark®-SNVT Masterlist“)

- **Input/Output**

the direction of the network variable (input- or output-variable)

- **Array**

allows to define arrays of equal network variables
These variables are provided with indices to access them.

- **SNVT-Modifier, SNVT-Class, SNVT-Bind-Info**

additional variable properties (see „Echelon Neuron C Programmer’s Guide“)

- **SD-String**

self documentation string, a short information about the network variable which can be written by yourself

- **Initialize**

here you can define a standard value belonging to the variable. This value will be shown after the first start of the Infodisplay or after a power outage for a long time. The initializing starts with a checksum-error in the RAM, battery backed-up.

- **Polling-Cycle [sec]**

this is the time-controlled-repeated-read-out-cycle of input variables

- **Comment**

an additionally comment to the network variable

You can **Discard** your changes or **Delete** the current SNVT.

To use a standard network variable in your menus, you have to connect it to an *internal variable*. You finish the SNVT definition with **Update** and will be asked, if you want to create an *internal variable* automatically.

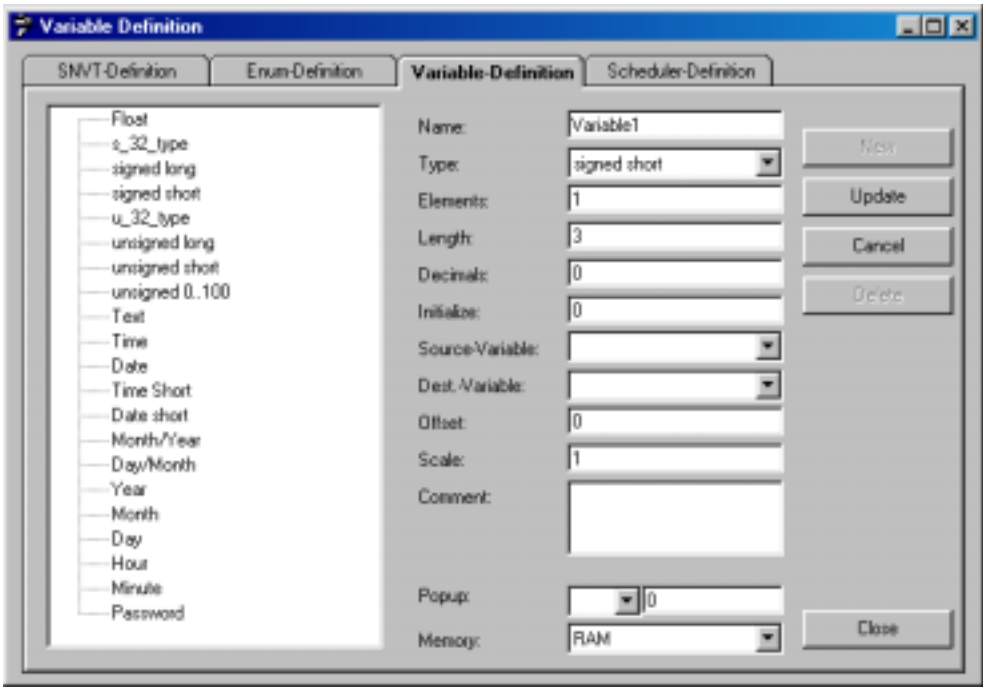
It's a good idea to click **Yes** here. Otherwise you can define the *internal variable* by yourself on the Page **Variable-Definition**.

Define internal variables

Click **Variable-Definition**
On the left-hand side choose the variable type you need
Click **New**

Internal Variable Definition

A special type of *internal variable* are the type „password". To activate it, you have to input a password at **Initialize.** Details are shown in chapter "textbox".
Some *internal variables* (e.g. LED, Real Time Clock, Contrast) already exist to support the hardware.



- **Name**

the logical name of the internal variable.
This is the name to access the variable inside the Infodisplay for communicating with, e.g. to define the graphical surface.

- **Type**

this box contains the variable type you have defined before when you clicked **New**.
These file types are the basic types that the Infodisplay is able to show on its surface.

- **Elements**
  here it is possible, to set the amount of elements of an array. There are three possible functions:

1. An array of SNVTs is connected to an array of *internal variables*.
2. To show a diagram, an array is created to save data time-controlled. Put in here the total amount of storage units you need (e.g. 24*7 storage units, to save data for one week and every hour).
3. An array is created to save data event controlled and to show them with date and time.

If you set more then one element, the input box will change: **Backup-Variable**, **Saving-Cycle**, **Block-Length** and **Differential-Type** will be shown additional. **Dest.-Variable**, **Offset**, **Scale** and **Popup** will not be shown.

- **Length**

in here you can write the standard length in characters of strings to be shown on the Infodisplay. You can also change this value when defining your menus.

- **Decimals**

here you can set the amount of decimals for the number that should be shown on the Infodisplay. The decimals point will be inserted without a conversion.
For example: **Decimals** = 1 ⇒ 12345 changes to 1234.5 You can also change this value when defining your menus.

- **Initialize**

here you can define a standard value belonging to the variable. This value will be shown after the first start of the Infodisplay or after a power outage for a long time. The initializing starts with a checksum-error in the RAM, battery backed-up.

- **Source-Variable**

in here you can write the input variable where you take the data from. It may be a network variable or a local variable to show or save it in a different format.

- **Dest.-Variable**

in here you have to write the output variable (nvo) the internal variable should be bind with. (destination variable)

- **Offset**

in this box you write in a constant value, which shall be added to, or subtracted from the *Source Variable*.

- **Scale**

here you can write in constant factors the *Source Variable* will be multiplied with. If the result is less then one or if the result contains characters behind the decimal point, the variable will be calculated internally as floating point and will be converted into the declared format.

- **Comment**

here you can write in a comment for your own purposes

- **Popup**

here you can put in a condition. If the condition is fulfilled, the popup side will automatically be shown.

- **Memory**

the variables can be saved in the RAM, that is battery buffered, or in the so called dataflash. The data in the dataflash can't be lost. But the dataflash can be overwrite only circa 100.000 times. Normally it's a good idea to save only configuration-variables and values you need for the datalogger in the dataflash. Normal variable may destroy the dataflash component, because of the big amount of there updates.

Only with arrays you get access to the following feature:

- **Backup-Variable**

here, a existed variable of the same type and length can be selected. In the named variable, the content of the other variable will be copied, if it is completely filled.

- **Saving-Cycle**

sets the saving-cycle of the variable.

By selecting „when update occurs" the variable will be save with a time stamp. Additional the following variables will automatically be worked out:

type	name	function
Unsigned short	__xxx_in	index of the current entry (don't change!)
Unsigned short	__xxx_out	index of the current entry (to display)
Time	__xxx_Time	table of time stamps to the events

„xxx" is the name of the internal variable

- **Block-Length**

indicates the length of a bloc to display in a diagram. The length is used to display the hole year of monthly diagrams of one data array, for example.

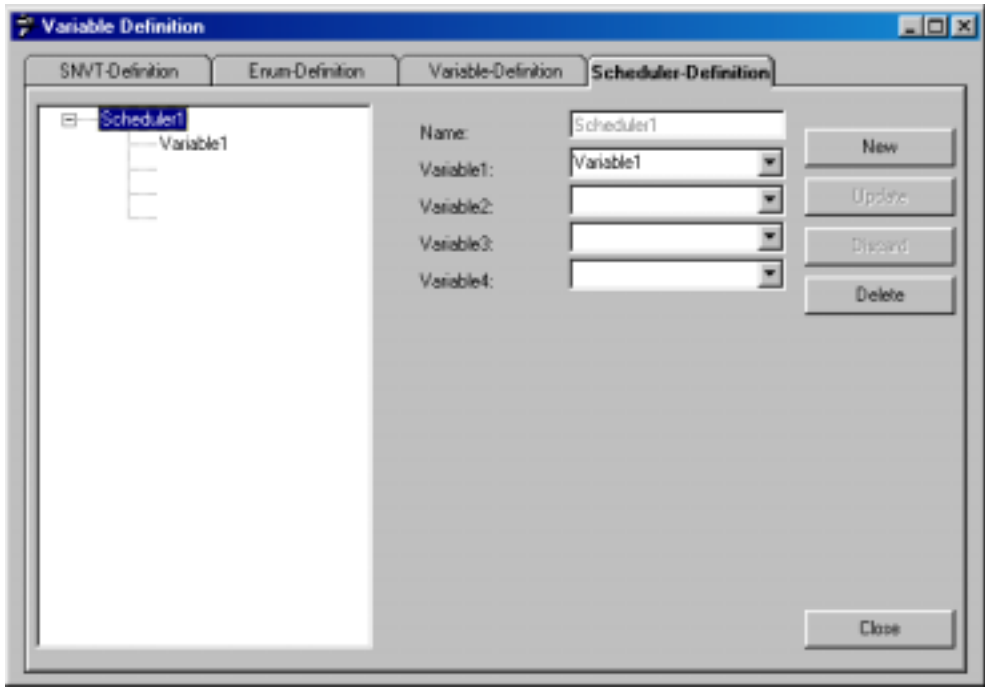
- **Differential-Type**

indicates, if the variable is saved, or before saving, the value before is subtracted from the variable.

Define Scheduler

click on **Scheduler-Definition**
click on **New**

This programs contain each 24 points of switch which are changeable. To each point of switch, it is possible to assign a value to each of up to 4 connected variables. And you can decide, if to this point of switch the variable shall be change.
Each point of switch is able to make repeated changes (e.g. hourly, daily, weekly, monthly, yearly or a combination of it). All conditions, which are set, have to be fulfilled.
The setting of this programs is only possible on the Infodisplay. The making out of a time scheduler results automatically a page in the current project. It will be a good idea to think about this page if you make out the menu structure.



- **Name**

automatically a name for the scheduler will be set.

- **Variable1 .. Variable4**

here you put in the internal variables, on which this scheduler should have an influence.

Enum-Definition

To make out an enumeration type (e.g. Monday, Tuesday, Wednesday,... instead of 1, 2, 3,...) you can use the page *Enum-Definition.*

Click *Enum-Definition*.
Click **New***.*

Enum-Definition

- **Name**

here you can name the new enumeration type.

- **ID**

here you will see an internal control number for extending the source code.

- **Max. Length**

here you can key in the maximal numbers of characters. Designing the surface you can write in a value shorter then the word. The word will then be broken off there.

- **Entries**

here you will see the amount of entries you have done already.

- **Comment**

a comment for your own purposes

Graphical Creating

First you should imagine how the application should look like:

1. What should be shown on the Infodisplay?

   Which information is supplied from the LON network?
   Which additional information should be displayed (e.g. Time, Bus Time Table, Addresses,...)

2. Where should the information appear?

   What kind of information should appear on the *start page*?
   What kind of links should exist and on what page?
   Is there enough space to show all the things you want?
   Is it possible for the user to get an overview?

3. What has to be controlled by the user of the Infodisplay?

   Should it be possible for the user to control the blinds or the lights of the room with the Infodisplay?

4. What order should be used to lead the user trough the menu?

If you got an idea about the menu structure it would be a good idea to take the following order:

1. Start with the *start page*
   At first, name the page. For your later work it is necessary to choose a name that gives you an idea about the content of the page (e.g. „start“ for the first page)

Double click on the page name to name the page or to change the page name (before you name a page the name of the page is „noname“).

Now you can create your page (see **Tools**), insert textboxes, diagrams or bitmaps. Provide the textboxes with links or variables.

2. Continue with the next page in your application:

Click on  . You will be asked if you want to insert a new page.

Answer with „yes“ and name the second page.

Now create this page, too (see **Tools**). Repeat these steps until all pages of your application have been created.

With  and  you can go trough your created pages to check and to change them.

Pages:

insert a page

With  or **Page** and **New...** you can insert a page. This one is inserted behind the current page.

copy a page

With **Page** and **Copy...** you can copy the current page. It will be inserted behind the current page. This may be interesting if you want to use some objects from your current page on other pages, too.

delete a page

With  or **Page** and **Delete** you can delete the current page.

With **Edit** and **Copy Image** it is possible to copy the current page for other usage's in other programs to the clipboard (e.g. for documentation or presentation purposes).

Objects:

objects...

Objects are *bitmaps, diagrams, textboxes, clocks, rectangles* and *lines*. Marked objects can be...

...cut

cut to the clipboard with  or **Edit** and **Cut** or

...copy

copied to the clipboard with  or **Edit** and **Copy**.

...paste

You can paste marked objects out of the clipboard with  or **Edit** and **Paste.**

...delete

You can delete marked objects with  or **Edit** and **Delete.**

Tools

Arrow

With the *arrow* you can mark and move objects.

You can also create a *group* if you drag with the cursor over all objects you want to be enclosed in the *group*.

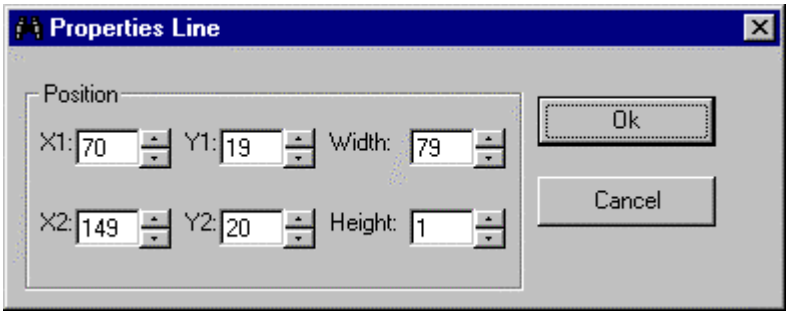
This marked group can be

- moved
- copied to the clipboard 
- cut to the clipboard 
- deleted 

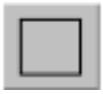
Line

You can draw horizontal, vertical and diagonal lines. The thickness of the line is constant and not changeable. If you need a different thickness you can draw some parallel lines.

With double click on a marked line or **Edit** and **Properties...** you will reach the following window:



Here you can here the position of the line alternatively to move it with the cursor.



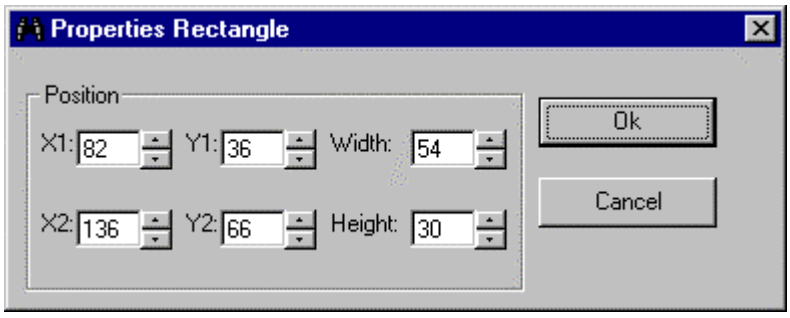
Rectangle

You can draw rectangles in any size. You can't turn or stretch them. The thickness of the lines is not changeable. The rectangles are transparent.

To mark the rectangle, click on one of its four corners.

To move it, go with the cursor on one of the four sides of the marked rectangle and keep the left mouse button pressed, while dragging the rectangle.

With double click on the marked rectangle or with **Edit** and **Properties...** you will reach the following window::

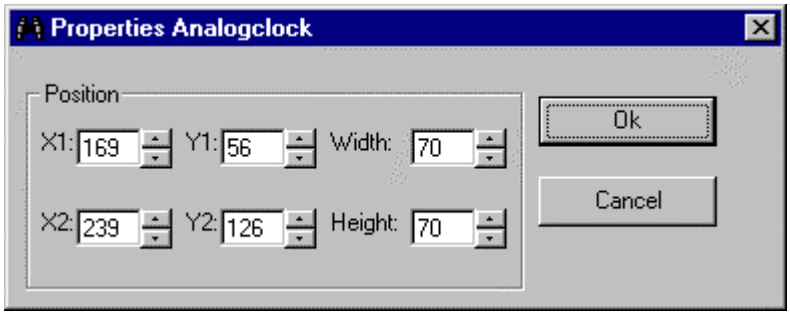


Here you can set the position of the rectangle alternatively to move it with the cursor.

Clock

Here you can insert the object *analogue clock*. The size of the clock is constant and can not be changed.

With double click on the marked clock or with **Edit** and **Properties...** you will reach the following window:



Here you can set the position of the clock, alternatively to move it with the cursor. The values **Height** and **Width** are constant 70 and not changeable.

System clock

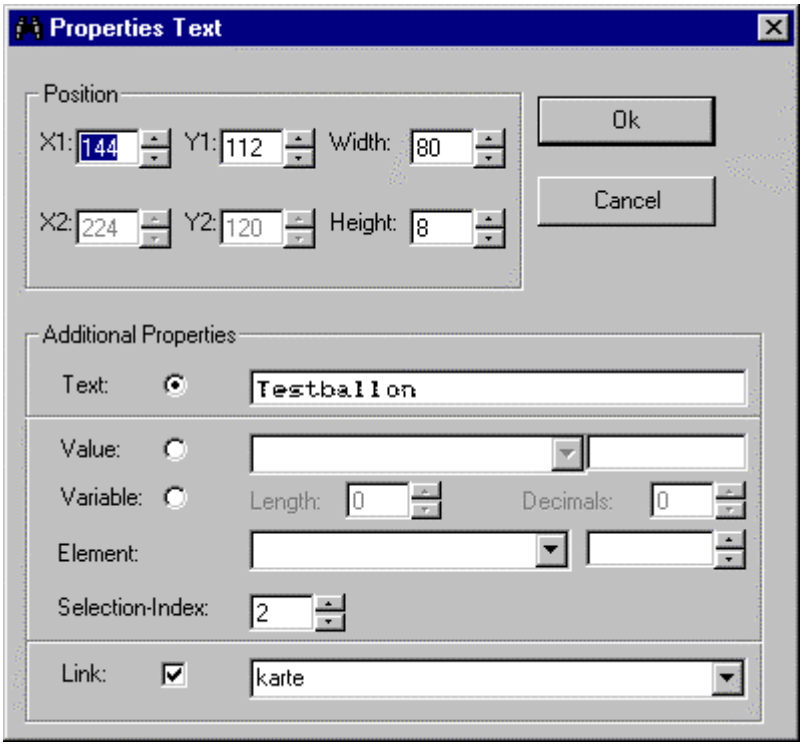
If you don't make any further variable definition, the clock is a system clock. That means, if you put the Infodisplay in operation, the clock has to be set and than it runs independently from the net.
There are some internal variable types, e.g. „internal time" to define the time. If this time should be used, it is the internal real time cock of the Infodisplay.

If you want to get the time out of the LON, you have to define a variable for it (see variable definition).
You can connect the variable „internal time" with a network variable type „time_stamp". Then the real time clock of the Infodisplay will be synchronized with the time from the net.

Textbox

Here you can insert a *Textbox*. The font and the size of the characters is constant and can not be changed. The direction of the text is horizontal.

By double clicking on the marked *textbox* or with **Edit** and **Properties...** you will reach the following window:



Position

Here you can set the position of the textbox by changing **X1** and **Y1**, alternatively to move the box with the cursor. All other values can not be changed.

Additional Properties

text properties...

You can set several properties of the textbox:

- **Text**
  If you only want to write a text that will be shown on the display and which won't be changeable you have to choose **Text**. Now you can write the text in the box. You can set a **Link** to the textbox (see **Link**)
- **Value** ...value
  Here you can connect your textbox with a variable, that should be shown in the textbox. The box in the right shows the variable type. You can set a **Link** to the textbox (see **Link**).
  With **Length** and **Decimal** you can set the length and the decimals of the text in this box. Your changes will be shown in the box **Text**.
  In the box **Selection-Index** you have to set the sequence of the textbox. For example, if you choose „2" this box is the second box on the page that will be chosen from the user by turning the knob.

  If the type of the internal variable is "Password" there will be shown stars "*". By put in the right password, the **Link** (see **Link**) will be execute.

- **Variable** ...variable
  If the user should be allowed to change the text in the box, you have to choose **Variable**. The user can choose the box with the knob. If he presses the knob while the textbox is marked, he will be able to change the text by turning the knob.
  With **Length** and **Decimal** you can set the length and the decimals of the text in this box. Your changes will be shown in the box **Text**.
  In the box **Selection-Index** you have to set the sequence of the textbox. For example, if you choose „2" this box is the second box on the page that will be chosen from the user by turning the knob.

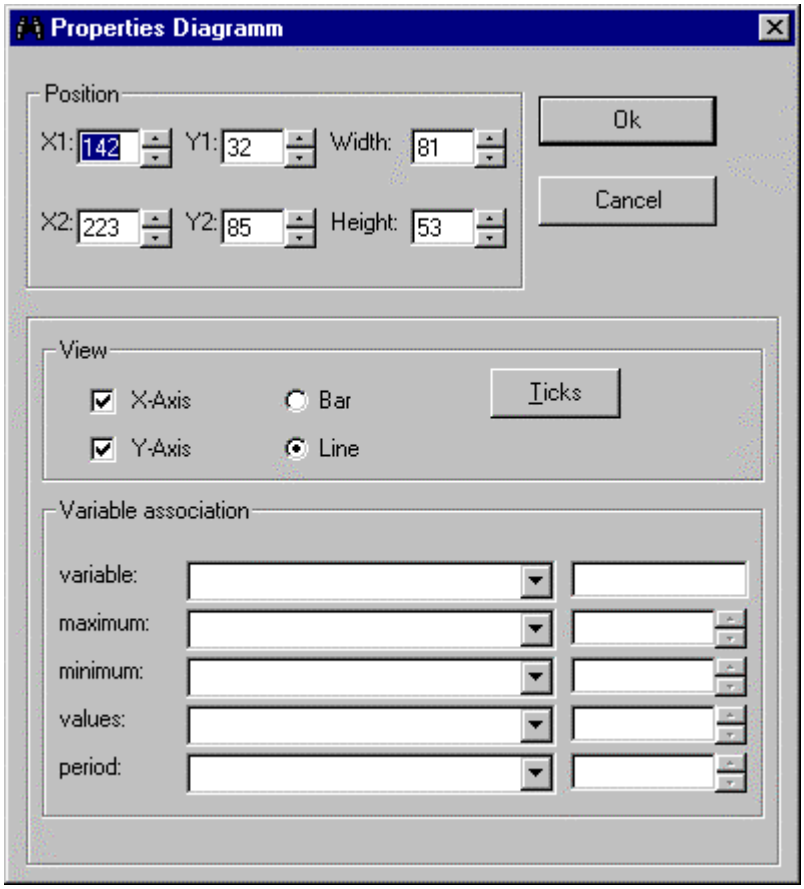
  If the type of the internal variable is "Password", you can change here the password.

- **Element** ...element
  If an array is insert in the box *variable,* you can write in here what value out of the array should be shown. Therefore you have to define a variable in **Variable definition**.
- **Selection-Index**
  Here you have to set the sequence of the textbox. For example, if you choose „2" this box is the second box on the page that will be chosen from the user by turning the knob.
- **Link** ...link
  Here you can set a link to the textbox. If you want to set a link, you have to write in the page name, to which the user will be lead if he chooses this textbox and then presses the knob

Diagram

Here you can insert diagrams. If you mark the diagram you can change the size of it by dragging the diagram.
The inscribing of the *diagram* has to be done by inserting textboxes after the configuration of the diagram has been finished.

By double clicking the marked diagram or with **Edit** and **Properties...** you will reach the following window:

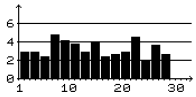


Position

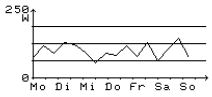
Here you can set and change the position and the size of the diagram, alternatively to move or drag it with the cursor. The size can only be changed here and not by using the mouse.

View

You can decide, which axis should be shown and if you want a *bar chart diagram* or a *line diagram*



bar chart diagram

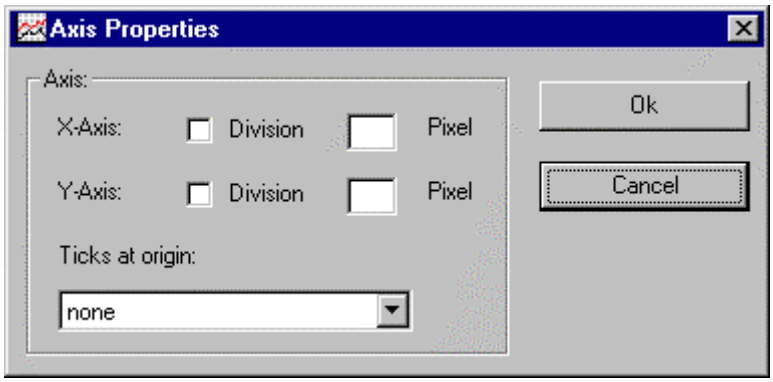


line diagram

If you click on **Ticks** you will reach the following window:

Here you can set secondary graduation lines for the axis.

With **Ticks at origin** you can decide whether there should be any secondary graduation line in the origin and on which axis.



Variable Association

Here it is possible to configure the diagram:

- **variable**
  You have to choose the *array* from the defined variables which should be shown in the diagram. In the right box the *type* of the variable is shown.

- **maximum**
  In the right box the maximum value that should be shown in the diagram can be set. It is normally constant and is set as value in the right box. It is possible to connect this value to a variable. In the left box you assign the variable.

- **minimum**
  In the right box the minimal value that should be shown in the diagram can be set. It is normally constant and is set as value in the right box. It is possible to connect this value to a variable. In the left box you assign the variable.

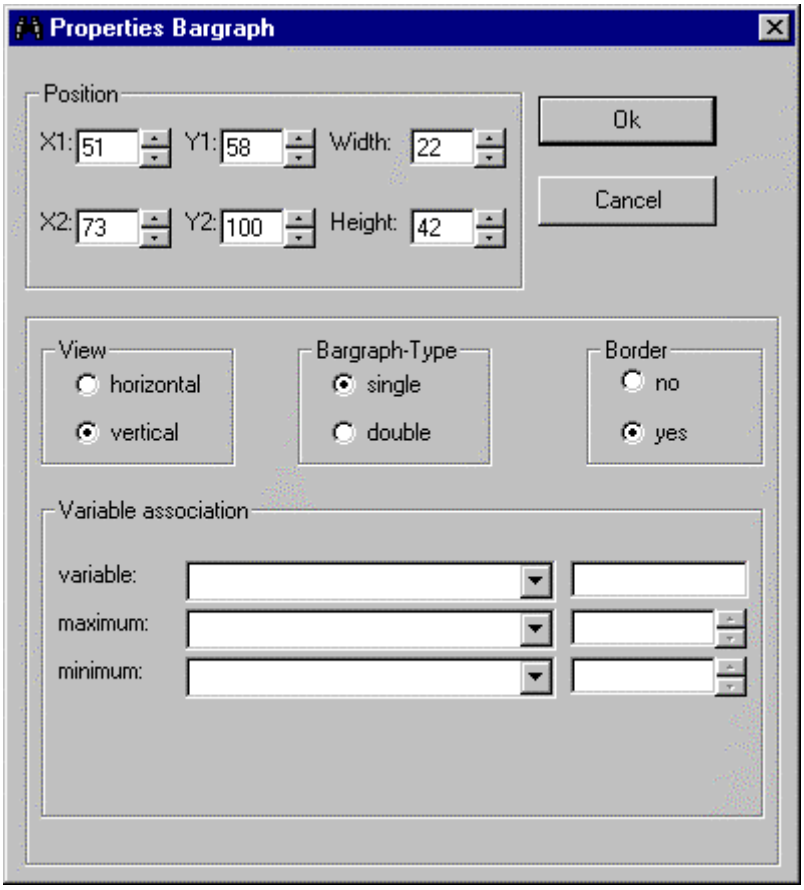
- **values**
  In the left box you choose the variable that should be shown in the diagram as measured data. In the right box you set the amount of data that should be shown in the diagram

- **period**
  The section of the *array* that should be shown can be chosen here.

Bar chart

Here you can insert a *bar chart.* If you mark the *bar chart,* you can change its size by dragging it.
The inscribing of the *bar chart* has to be done by inserting textboxes after the configuration of the bar chart has been finished.

By double clicking the marked *bar chart* or with **Edit** and **Properties...** you will reach the following window:



Position

The position and the size of the bar can be set and changed here, alternatively by using the mouse. The expansion of the *bar chart* you can only change here, not by cursor.

View

Here you have to decide if you want to have a **vertical**  or a **horizonta** 
Bar chart.

Bargraph-Type

single  **double** 

Border

yes: 

no: 

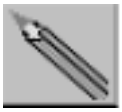
Variable association

values in the bar chart

Here you can configure the bar chart:

- **variable**
  You have to choose the *array* of the defined variables which should be shown in the bar chart. In the right box the variable type is shown.
- **maximum**
  In the right box the maximum value that should be shown in the diagram can be set. It is normally constant and is set as value in the right box. It is possible to connect this value to a variable. In the left box you assign the variable.
- **minimum**
  In the right box the minimal value that should be shown in the diagram can be set. It is normally constant and is set as value in the right box. It is possible to connect this value to a variable. In the left box you assign the variable.

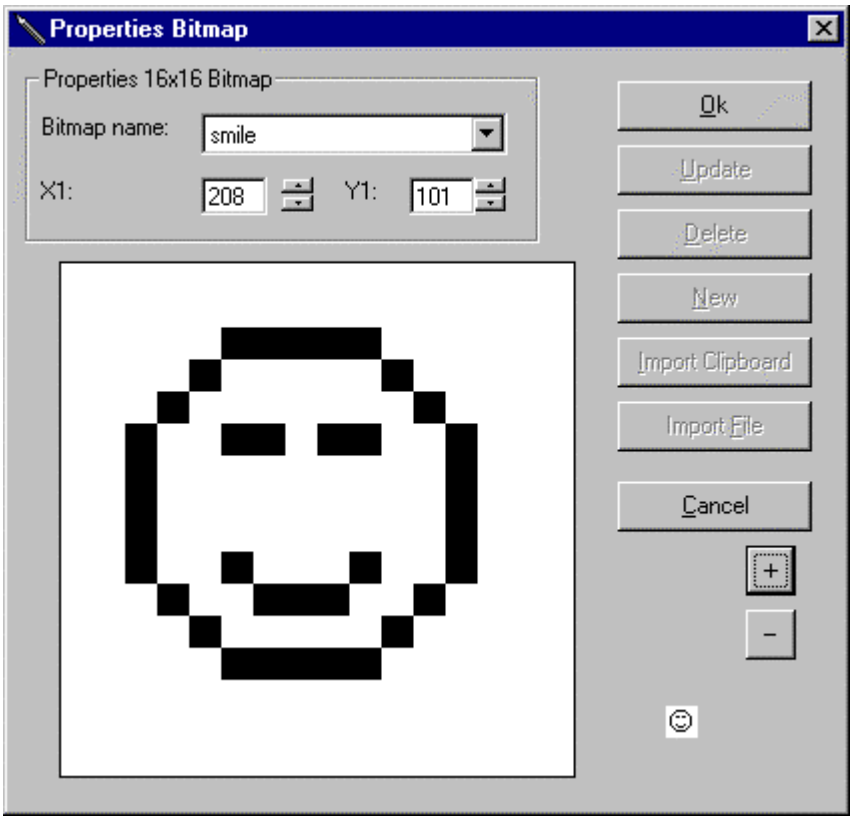
Bitmaps



Insert Bitmaps

Here you can insert bitmaps (16x16) with the cursor. At first it will insert an arbitrary bitmap out of the library.

By double clicking on this marked bitmap or with **Edit** and **Properties...** you will reach the following window:



You can choose the bitmap that you want to insert in the field **Bitmap name**.

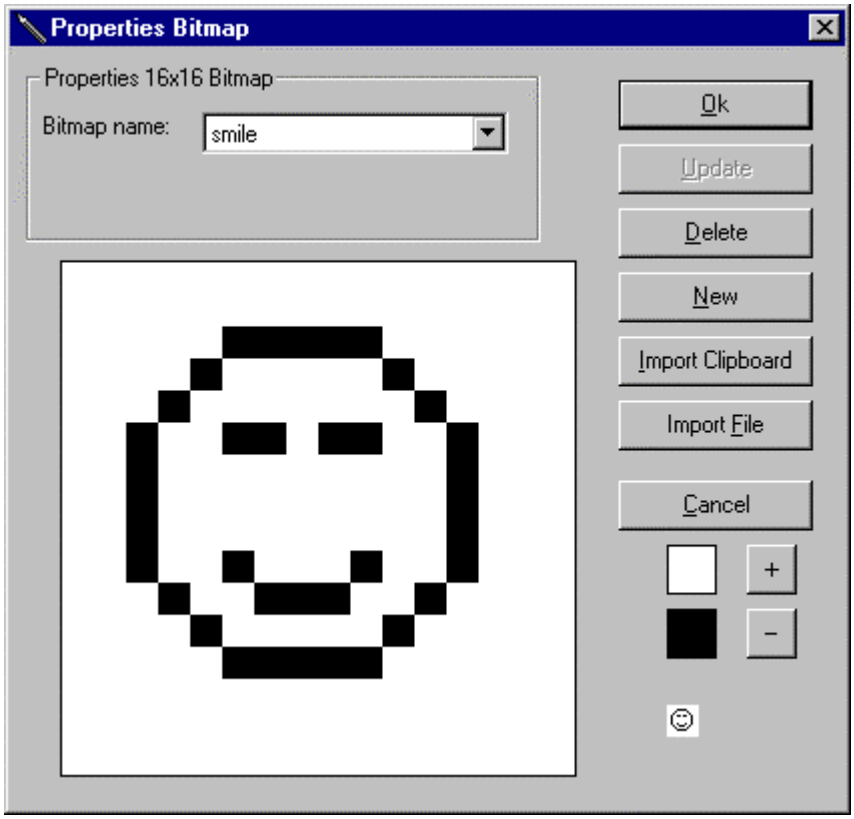
The position can be changed with **X1** and **Y1**, alternatively by using the mouse.

With  and  you can zoom in and out.

With **Cancel** your choice is not valid and you'll get back to the menu.
With **Ok** you paste the chosen bitmap.

Create bitmaps

You can create a new bitmap with **Edit** and **Edit Bitmaps...** You will reach the following window:



At first a bitmap out of the library appears. Choose **New** to start creating a new bitmap.

You have to name the new bitmap. Then you create the new bitmap by editing the bitmap that appeared first.

Choose the field  with the cursor. Now you can paint over the bitmap pixel by pixel with the cursor

To create a new bitmap , choose  with the cursor. Now you can paint a new bitmap pixel by pixel.

paint bitmap

By changing between  and  you can change your bitmap at any time.

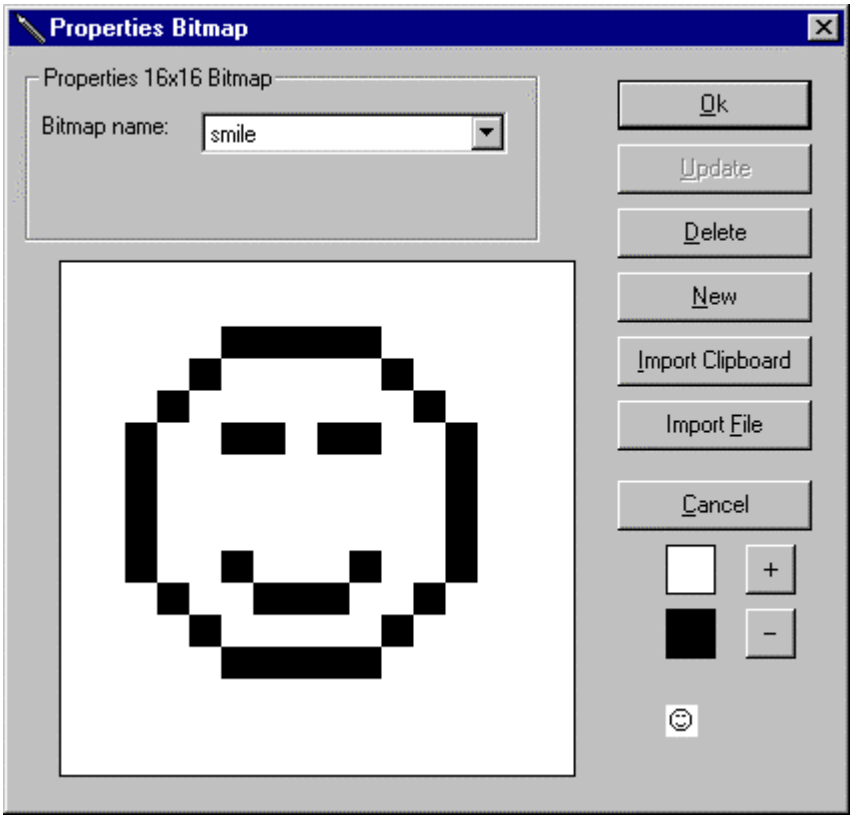
With  and  you can change the view of the bitmap to get an impression of the result. Right below in the window **Properties Bitmap** the smallest view of the bitmap is shown all the time.

Click **Update** if you finished the new bitmap. Then the bitmap will be saved in the bitmap library.

Click **Ok** to close the window **Properties Bitmap**.

Edit bitmap

You can edit a bitmap with **Edit** and **Edit Bitmap...** and you will reach the following window:



At first a bitmap out of the existing library appears. You can choose the bitmap you want to edit with **Bitmap name**.

To change the bitmap choose  or  with the cursor. Now you will be able to paint your changes with the cursor.

With  and  you can change the view of the bitmap to get an impression of the result. Right below in the window **Properties Bitmap** the smallest view of the bitmap is shown all the time.

To finish your changes click **Update**. The changes of your bitmap will then be saved in your library.

Click **Ok** to close the window **Properties Bitmap**.

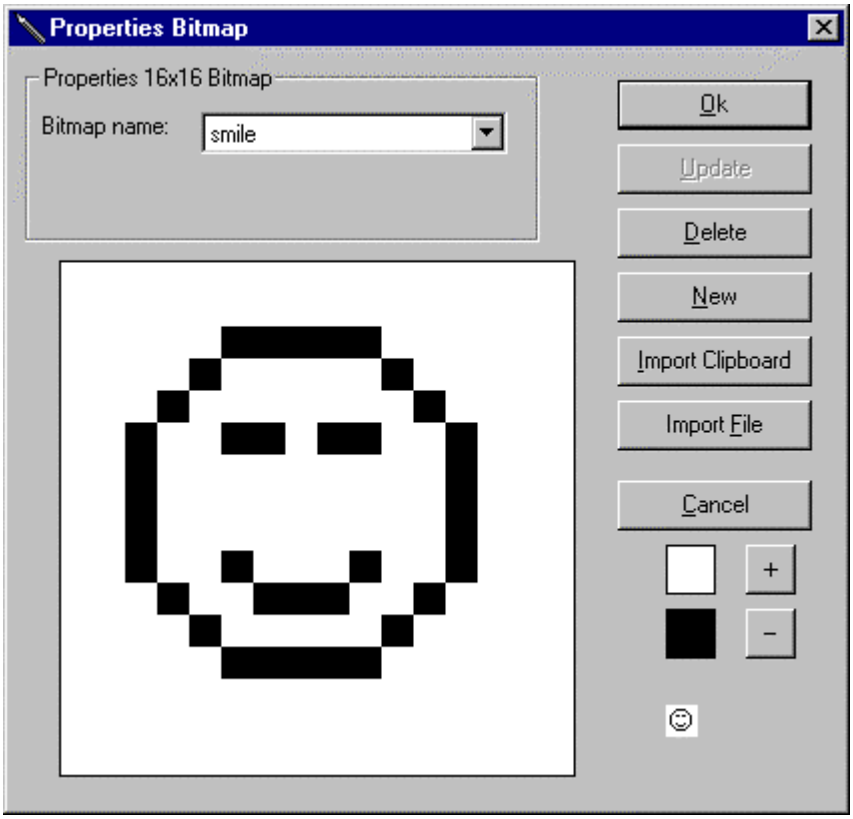
Delete bitmap

- *bitmap* on the current page:

  Mark the bitmap. You can now delete the bitmap by pressing the delete key or clicking on 

- out of the *bitmap library:*

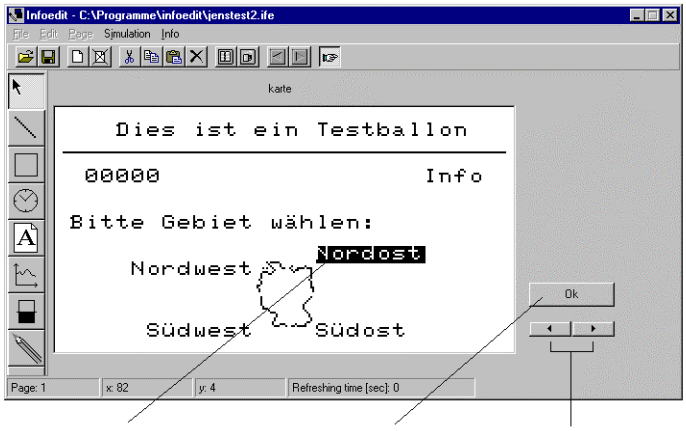
  With **Edit** and **Edit Bitmaps...** you will reach the following window:



An arbitrary bitmap out of the bitmap library will appear. Choose in **Bitmap name** the bitmap you want to delete. Afterwards click on **Cancel**. Now the bitmap is deleted out of the library.

Simulation

With **Simulation** and **activated** you can do a simulation. So the links you defined can be checked.
With the **Ok**-Button (press) and the two arrows (turn) the knob of the Infodisplay is simulated.



marked object — button to simulate the pressing of the knob — arrows to simulate turning the knob

Make out the application for the Infodisplay

Normally making out the application file (.apb) is done by A3M. Therefore it is necessary to send the files “project name” .lst, “project name” .bib. and project name” .ife, made out by yourself, via Email at infoedit@a3m.com .
After a few days, you’ll receive the files “project name” .apb, “project name” .xfb. and project name” .xif. If you need a different file format, please let us know via Email.

Loading the application into the Infodisplay

You can upload this file into the Infodisplay with any network management tool.

The menu data can be

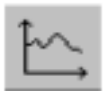
- send via serial interface (RS232) or
- via file transfer with your network management tool

To send the menu data via serial interface you have to connect the Infodisplay to the serial port of your PC. With **File**, **Options** and **Comm-Port...** you choose the port of your PC. Having done this, you can send the data with **File** and **Send**.

Appendix 1: Bitmaps

	Infodisplay		Meter		Heat
	Clock		Blind		Water
	Alarm Clock		Room		Work
	Smile		Window		Power
	No Smile		Rain		Consumption Water
	Neutral Smile		Wind		Diagram
	News		Moon		Phone
	Question Mark		Sun		Temperature
	Contrast		Star		Plug
	Overview		Pollen		Traffic Light Green
	Back		Ozone		
	Go on		Info		
	Configuration		Calendar		
	Adjustment		Average		
	Copyright		Voltage		
	Computer		Current		
	Building		Costs		
	Pyramid		Address		
	Boiler		People		
	Tank		Bus		
	Power Plant Station		Car		
	Solar Plant		Traffic Light Red		
	Heating System		Traffic Light Top		
	Water		Traffic Light Middle		
	Light		Traffic Light Bottom		

Appendix 2: Icons

	Draw a line		Delete the current page
	Draw a rectangle		Cut marked objects
	Insert the clock		Copy marked objects
	Insert a textbox		Paste copied objects
	Insert a diagram		Delete marked objects
	Insert a bar chart		Edit the variable list
	Insert a bitmap		Edit the bitmap list
	Open a new project		Previous page
	Save the current project		Next page
	Insert new page		Simulation

Appendix 3, Pixel-Font

TYPETOOL FONT PRINTOUT

PixelPoint

06/02/00 02:40:39 PM

24	25	26	27	28	29	30	31	32 space	33 exclam	34 quotedbl	35 numbersign
36 dollar	37 percent	38 ampersand	39 quoteright	40 parenleft	41 parenright	42 asterisk	43 plus	44 comma	45 hyphen	46 period	47 slash
48 zero	49 one	50 two	51 three	52 four	53 five	54 six	55 seven	56 eight	57 nine	58 colon	59 semicolon
60 less	61 equal	62 greater	63 question	64 at	65 A	66 B	67 C	68 D	69 E	70 F	71 G
72 H	73 I	74 J	75 K	76 L	77 M	78 N	79 O	80 P	81 Q	82 R	83 S
84 T	85 U	86 V	87 W	88 X	89 Y	90 Z	91 bracketleft	92 backslash	93 bracketright	94 asciicircum	95 underscore
96 quoteleft	97 a	98 b	99 c	100 d	101 e	102 f	103 g	104 h	105 i	106 j	107 k
108 l	109 m	110 n	111 o	112 p	113 q	114 r	115 s	116 t	117 u	118 v	119 w
120 x	121 y	122 z	123 braceleft	124 bar	125 braceright	126 asciitilde	127	128 .0128	129 .0129	130 quotesinglba	131
132 quotedblbas	133 ellipsis	134 dagger	135	136 .0136	137 perthousand	138 Scaron	139	140 OE	141 .0141	142 .0142	143 .0143
144 .0144	145 .0145	146 .0146	147 quotedblleft	148 quotedblright	149 bullet	150 endash	151 emdash	152 .0152	153 trademark	154 scaron	155

TYPETOOL FONT PRINTOUT

PixelPoint

06/02/00 02:40:41 PM

156 oe	157 .0157	158 .0158	159 Ydieresis	160 .0160	161	162 cent	163 sterling	164	165 yen	166	167
168 .0168	169 copyright	170 ordfeminine	171 guillemotleft	172 logicalnot	173 .0173	174 registered	175	176 degree	177 plusminus	178 twosuperior	179 threesuperio
180 .0180	181 mu	182 paragraph	183 periodcenter	184 .0184	185 onesuperior	186 ordmasculine	187 guillemotrigh	188 onequarter	189 onehalf	190 threequarter	191 questiondow
192 Agrave	193 Aacute	194 Acircumflex	195 Atilde	196 Adieresis	197 Aring	198 AE	199	200	201 Eacute	202	203 Edieresis
204 Igrave	205 Iacute	206 Icircumflex	207 Idieresis	208 Eth	209 Ntilde	210 Ograve	211 Oacute	212 Ocircumflex	213 Otilde	214 Odieresis	215 multiply
216 Oslash	217 Ugrave	218 Uacute	219 Ucircumflex	220 Udieresis	221 Yacute	222 Thorn	223 germandbls	224 agrave	225 aacute	226 acircumflex	227 atilde
228 adieresis	229 aring	230 ae	231 ccedilla	232 egrave	233 eacute	234 ecircumflex	235 edieresis	236 igrave	237 iacute	238 icircumflex	239 idieresis
240 eth	241 ntilde	242 ograve	243 oacute	244 ocircumflex	245 otilde	246 odieresis	247 divide	248 oslash	249 ugrave	250 uacute	251 ucircumflex
252 udieresis	253	254 thorn	255 ydieresis	256 .notdef	257 .null	258 CR					

Appendix 4: Definitions

Array

Allows to define arrays of equal network variables. These variables are provided with an index to access them.

Bitmap Library

A file which is needed for a project (*.bib). It contains all bitmaps created or imported in your project. Together with the Infoedit you got a bitmap library containing 60 bitmaps for your own use. These bitmaps are listed in the appendix.

Destination Variable

Variable where the data will be written in. This may be a network variable or a local variable.

Differential Type

If you want to save the difference between two values measured one after an other, for example in a diagram, instead of the origin value, you have to choose „Yes“.

Enum Definition

To create an enumeration type (e.g. Monday, Tuesday, Wednesday,....; instead of 1, 2, 3,...) you can use the page *Enum-Definition*.

Initialize

Here you can define a standard value belonging to the variable. This value will be shown after the first start of the Infodisplay or after a power outage for a long time. The initializing starts with a checksum-error in the RAM, battery backed-up.

Internal Variable

In order to use the SNVTs in your menus, you have to connect it to an *internal variable.* Some *internal variables* like LED, Real Time Clock, Contrast, are already defined to support the Hardware..

Offset

In this box you have to write in a constant value, which shall be added to, or subtracted from the *source variable*.

Polling Cycle

This is the time-controlled-repeated-read-out-cycle from input variables

Project

A project consists of three different file types:

- files containing the graphical surface of the Infodisplay ending with .ife
- files containing the bitmap-library, ending with .bib
- files containing the variable-list, ending with .lst

To **import** files of different projects in your current project click **File** and **Import**.

SD String

Self documentation string, a short information about the network variable, which can be written by yourself.

SNVT

To communicate with the LONWORKS© network you have to define network variables, that are in the network and that shall be shown on the Infodisplay. Therefore the LonMark®-Standard has defined „standard network variable types“ (SNVT).

This network variables are able to be configured with dialogues to create them and to visualize them on the Infodisplay (62 SNVT per Infodisplay are able to being created with the Infoedit)

SNVT Bind Info

Additional variable properties (see „Echelon Neuron C Programmer’s Guide“)

SNVT Class

Additional variable properties (see „Echelon Neuron C Programmer’s Guide“)

SNVT List

List which contains all SNVTs out of the LONMARK SNVT Master List.

SNVT Modifier

Additional variable properties (see „Echelon Neuron C Programmer’s Guide“)

System clock

There are some *internal variables* in the Infodisplay. For example the definition time. If you use this time, you use the internal Real Time Clock of the Infodisplay. To set the clock, you have to layout it editable in the menus.

Source Variable

This is the variable where you take the data from. It may be a network variable or a local variable to show or save it in a different format.

Variable List

A file which is needed for a project (*.lst). It contains all created or imported variables of your project.