Layout Manager / Chart Manager

Author : Nora Zokaite
Company : EIVA a/s
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Introduction

This document is a user guide for *Layout Manager* and *Chart Manager* in NaviPlot.

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1 Layout Manager

1.1 Intro

NaviPlot reads chart definition file (*.cdf). This is a text file that either can be created manually or can be generated along some runline in the application called Imaging. Load chart definition file (*.cdf) to NaviPlot, then Layout manager allows the user to manipulate the individual charts.

Typically chart definition file is loaded in the top frame along with the runline. Other objects are then KP aligned to the runline.

1.2 Step-by-step

1.2.1 Navigation

There are two ways of loading chart definition file to NaviPlot. One is "drag-n-drop". The other way is using right-click menu on the XY Frame:
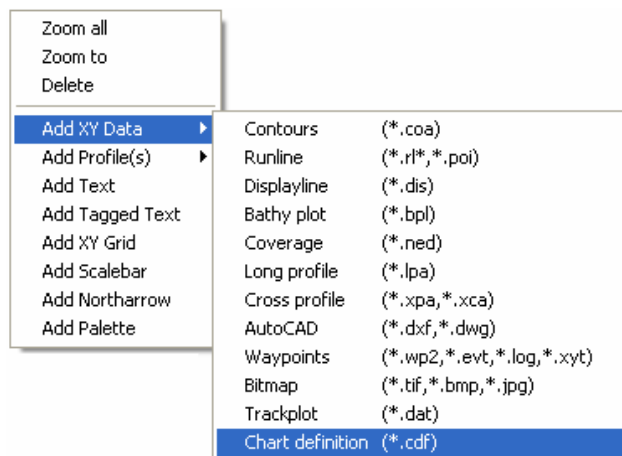

Figure 1: *Loading chart definition file*

The chart definition file is expandable. "1", "2", "3" etc. are its charts. See example below:
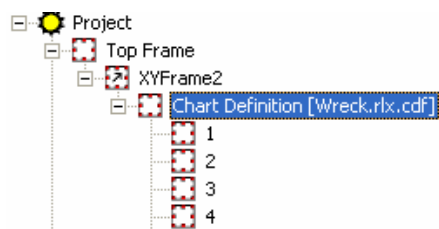
Figure 2: **.cdf file in NaviPlot*

By selecting any of the charts and using right-click menu command "Go To View", the user marks this chart as <u>current chart</u>:
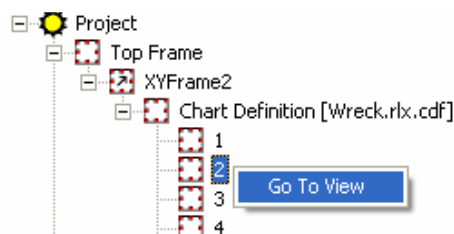

Figure 3: *Select current chart*

The notation "current chart" means that the user had activated additional functionality – navigation menu, chart manager (see Chart Manager), etc.

Once the current chart is selected, it activates a chart navigation menu:

These menus help the user to faster and easier navigate among the charts.

1.2.2 Chart viewing modes

NaviPlot implements two ways of showing charts - "Key Plan Mode" and "Plan View Mode". The charts in "Key Plan Mode" are typically shown all in one frame, where as "Plan View Mode" shows one chart at a time.
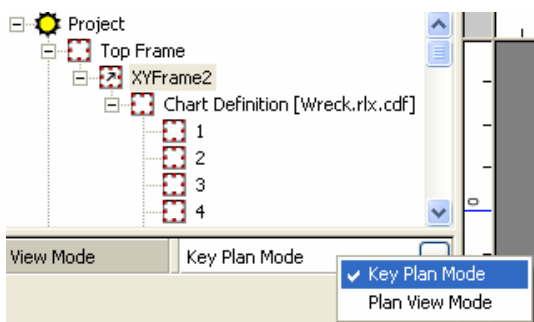The property "View Mode" is on the "Chart Definition" tab of the XY Frame property pane:

Figure 4: *Switching chart viewing mode*
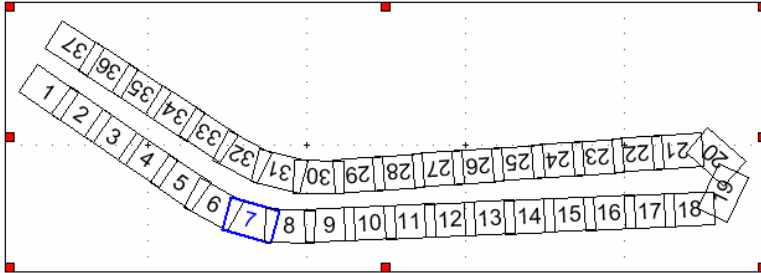
Chart viewing mode examples:
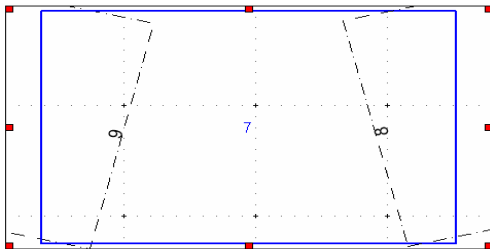

Figure 5: *Key plan view*

Figure 6: *Plan view mode*

Note: it is possible to load 2 (and more) the same *.cdf files to NaviPlot. The application will recognize them by the file name as identical and will synchronize them. Therefore if you select current chart in one of the *.cdf files – the other(s) will also show the same chart as current. This allows the user to have one *.cdf file in the legend in the "Key Plan View" mode and the other *.cdf file use in the "Plan view" mode, in the top frame.

1.2.3 Properties

In this section we look through the different properties that are available for the user both, on the chart definition files and on the individual charts.

Chart definition file properties

When the *.cdf file is selected then the properties shown in Figure 7 are available for the user.

- With the "Font" property the user opens a standard windows dialog for selection of the font. Note: only the selection of different fonts can be used – it is not possible to change the font style or size.
- The property "Digits" is a numeric field, and it is used for defining the way of chart numbering. For example: if charts are numbered like "1", "2", "3" and the user entered number of digits is 3, then the chart numbers will change to "001", "002" and "003". Note: it is used only for adding zeroes in front of the chart number.
- "Chart Properties" is a group of general properties for all the charts in this chart definition file.
- The boolean property "Labels On/Off" enables or disables labels of all the charts.

- "Label Prefix" allows user to append text to existing chart number. For example, chart "1" => "aaa1" with prefix "aaa".
- "Label Height" - straightforward.
- "Label Position" property gives the user 3 possibilities to place the labels of the charts – "Center", "Right/Left" and "Top/Bottom" side of the chart.
- The boolean property "Pen On/Off" enables or disables the pen for drawing the charts. Some of the users do not want to have the frames of the charts shown, especially in the plan view mode.
- "Chart Pen". Whenever *.cdf file is loaded, the new pen is created and added to the list of pens in NaviPlot. This pen is used for drawing all the charts. The user can change the style of this pen or chose some other pen for drawing charts.
- "Current Chart Properties" is a group of properties that only apply when the current chart is selected. Note: these properties only apply for the current chart.

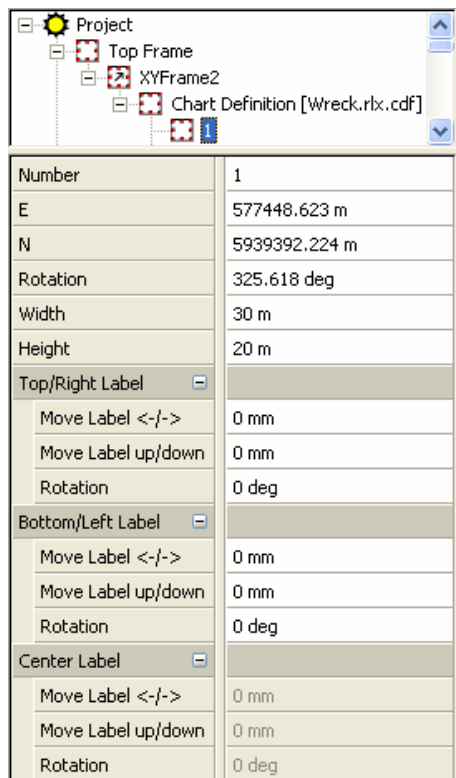| Visible	☑
Font	Arial
Digits	0
Chart Properties ⊟	
Labels On/Off	☑
Label Prefix	
Label Height	4 mm
Label Position	Right/Left
Pen On/Off	☑
Chart Pen	Charts Pen
Current Chart Properties ⊟	
Labels On/Off	☑
Label Prefix	
Label Height	4 mm
Label Position	Right/Left
Pen On/Off	☑
Chart Pen	Current Chart Pen
Chart Definition	

Figure 7: *Chart definition file properties*

Chart properties

When one of the charts is selected, then the properties, shown in Figure 8 are available for the user.

- "Number" is a numeric field that shows the number of the chart. Note: the number of the chart can be changed via this field, but there is no validation, i.e. there can be 2 or more charts that have the same number, let's say "14".
- "E" – easting. Initially information is taken from the *.cdf file. Can be edited.
- "N" – northing. Initially information is taken from the *.cdf file. Can be edited.
- "With" – straightforward.
- "Height" – straightforward.

- "Top/Right Label" groups properties that allow the user to move and rotate chart labels. This gives the flexibility for the user to move every label individually. Initially the labels are placed centered along the edges of the chart frame.
- "Bottom/Left Label" – same as "Top/Right".
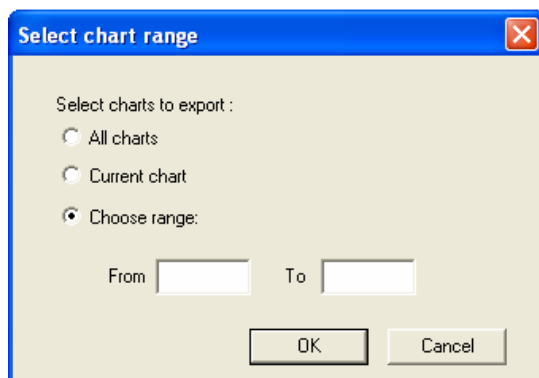- "Center" – allows user to move and rotate center label.

Number	1
E	577448.623 m
N	5939392.224 m
Rotation	325.618 deg
Width	30 m
Height	20 m
Top/Right Label	
Move Label <-/->	0 mm
Move Label up/down	0 mm
Rotation	0 deg
Bottom/Left Label	
Move Label <-/->	0 mm
Move Label up/down	0 mm
Rotation	0 deg
Center Label	
Move Label <-/->	0 mm
Move Label up/down	0 mm
Rotation	0 deg

Figure 8: *Chart properties*

1.2.4 Export to AutoCAD

NaviPlot has now extended functionality for exporting charts to AutoCAD. See Figure 9:

Figure 9: *Chart export to AutoCAD dialog*

File: C:\DATA FOR TRAINING SITE\NAVIPLOT MANUAL\LAYOUT-CHART-MANAGER.DOC   Page 7 of 9
Created by Nora Zokaite   Created on 2/21/2008
09:37:00

If the first option – "All Charts" is selected, then the pop-up window appears for the user. See Figure 10:
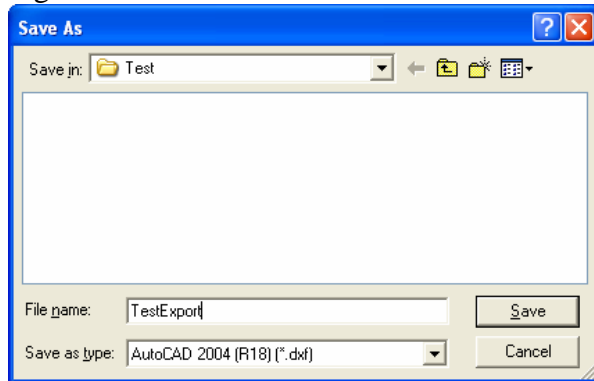
Figure 10: *Export to AutoCAD*

Once the user selected format, location and the name of the file, the NaviPlot generates as many export files as there are charts in the *.cdf file, appending the chart number to export file name. In the case, shown in Figure 10, it would be: *TestExport1.dxf*, *TestExport2.dxf, TestExpor3.dxf* etc. Note: NaviPlot will select the first chart, mark it as current and will export it AutoCAD, then it will select the next chart, mark it as current and etc.

If the user chooses to print "Current chart", then the current plot that the user is working on in NaviPlot at the moment will be exported. Note: in this case the number of the chart will not be appended to the export file name.

If the user selects the option "Choose range" then the 2 numeric fields are activated. The user is asked to enter chart numbers into "From" and "To" fields (in Figure 10), then NaviPlot marks the chart (pointed out by the "From" field) as current and exports it to AutoCAD, appending the chart number to the export file name. NaviPlot continues exporting until the number of the chart is equal to the number in the "To" field.

1.2.5 Printing

NaviPlot implements printing of individual charts, also printing of series of charts. The process is similar to exporting of charts to AutoCAD. See section 1.2.4.

2 Chart Manager

2.1 Intro

Chart manager is used to record/store/set the changes made to individual charts. The chart manager is activated when the user selects one of the charts as current chart.

2.2 Step-by-step

When the chart manager is activated it records the changes made to the current chart. The chart manager creates one record per one change. All the changes can be found in the NaviPlot tree structure. See Figure 11:
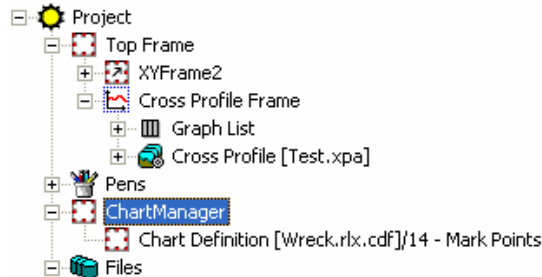
Figure 11: *Chart manger record*

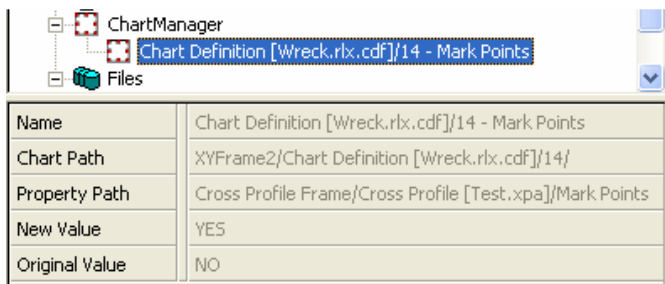Each chart manager record has five properties. See Figure 12.

Figure 12: *Chart manager record properties*

- The property "Name" holds the name of the record. The name is auto generated by the application to insure that it is unique.
- "Chart Path" is the path to the chart. At some point this chart was selected as current and chart manager fixed and recorded changes made to it.
- "Property Path" holds the path to that property which value has been changed. It can be any kind of property – boolean, numeric, etc.
- The property "New Value" shows the new value for that property.
- "Original Value" – this property field holds the value of the property before any changes were made.

The property fields of the chart manager record are not editable – they are for the user info only.

Note: the chart manager not only records the changes made to the current chart – it also "remembers" to set them back. For example: in Figure 12 the chart manager recorded that when the chart number 14 was set as current, the user changed the cross profile property "Mark Points" from "NO" to "YES". It means that this change only applies to chart number 14. If the user has selected chart number 15 as current, then this change is ignored and original value of the property "Mark Points" is used. The next time user selects chart number 14 as current – the change recorded by the chart manager will be applied.

All the chart manager records can be deleted by selecting the record and pressing "Delete" key on the keyboard.