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dKart Look 5.2 User's Manual

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dKLook in General

Purpose

The purpose of dKLook software is to combine on one screen the following information:

- Chart from in the local folio
- Databases of dKart Office
- Information from the OGC Servers within a pre-defined area.

Installation of the Program

The section below describes how to install and run dKLook.

System Requirements

dKLook runs on a Microsoft Windows operating system. Before you install the software, make sure your equipment meets the following requirements:

- Microsoft Windows NT 4.0 Service Pack 6, Microsoft Windows 2000, XP;
- 2 GHz CPU at the minimum;
- 256 MB of RAM at the minimum;
- 200 MB of free HDD space;
- 1024x768 resolution, 256 color monitor required

Installing dKLook

Installation Routine

To install dKLook software:

- **1.** Log on with administrative rights.
- **2.** Insert the dKLook installation CD in your CD-ROM drive.
- 3. Double click "dKLook.msi" installer icon in Explorer window the Installation Wizard starts.
- 4. Follow the instructions from the Wizard that will appear on the screen.
- 5. Restart the computer.

The program will be installed into the **Program Files > Jeppesen Marine** directory.

Windows 7 and Windows Vista users

dKLook users running Windows Vista or Windows 7 operating systems <u>must be local (computer) administrator</u> to get full use of the application and its functions.

Here in particular users having an active Catalogue/Archive connection and OGC usage.



Uninstalling dKLook

To remove the program from the hard disk:

- 1. Run Microsoft Windows uninstall utility by selecting its shortcut from Windows "Start" menu. (Start > Settings > Control Panels > Add/Remove Programs) or select the shortcut Start > Programs > Jeppesen Marine > dKart Look 5.2 > Uninstall dKart Look 5,2
- 2. Follow instructions on the screen.

Starting/Exiting dKLook

Start and exit the program using the standard tools of Windows.



User's Interface

Main Window Layout

The main window of the program with its major features is shown in Figure 1.

Figure 1 Main window layout



The key elements of the window are:

• The main menu (1), the "Standard" (2) and other (3 - 4) toolbars.

In the menu and on the toolbars the user gets access to the most frequently used functionalities of the program.

• The Charts panel (5)

Various charts are shown on this panel, which is the key function of the program.

• The Chart Folio panel (6)

On this panel, the user gets access to the electronic chart collection management and chart display control functionalities.

• The Found List panel (7)

On this panel, descriptions are shown of objects located under the cursor right click on the chart



Q

• The OGC Server (8) and OGC Server Layers (9) panels

On these panels functionalities are provided to control display of information received from thr OGC servers.

Much more panels and toolbars can be shown or hidden in the main window of the program as described in "Main Window Customization" on page 11.



Main Window Customization

Showing/ Hiding Panels and Toolbars

Run one of the menu commands to show/ hide a main or a panel/ toolbar in the main window of the program according to **Table 1**.

Command	Panel/ Toolbar	Reference
Window > Catalogue (Read only)	Shows/ Hides the Catalogue panel holding the entire contents of the Catalogue in the form of a tree	"The Catalogue Tree" on page 44
Window > Catalogue record (Read-only)	Shows/ Hides the Catalogue Record panel holding an entry in the Catalogue in a tabular form	"Viewing an Entry in the Catalogue in the Table" on page 47
Window > Chart Folio	Shows/ Hides the Chart Folio panel, on which functionalities are provided for chart folio management	"Opening Chart Folio Panel" on page 19
Window > Found List	Shows/ Hides the Found List panel holding the list of objects under the cursor	"Info on Objects on Charts of the Collection (The Found List Tool)" on page 29
Window > Geo- editor table	Shows/ Hides the coordinate table in a geo-query mode	"Running a Point-Based Geo-Query" on page 54
Window > Measuring tool	Shows/ Hides the Measurements panel	"Measurements on the Chart" on page 27
Window > OGC Sever layers	Opens/ Hides the OGC Server Layers panel	"Viewing OGC Server Information" on
Window OGC Servers	Opens/ Hides the OGC Server panel	page 41
Window > System Messages	Shows/ Hides the system message panel	In this section
Window > User Layer Object	Shows/ Hides the User Object panel	"The User Object Panel" on page 32
Window > User Layer	Shows/ Hides the User Layer panel	"The User Layer Panel" on page 31

Table 1	Showing/	Hiding	panels	and	toolbars
---------	----------	--------	--------	-----	----------

Re-docking Panels

To dock a panel e.g. to the upper edge of the window:

Drag it holding by the title bar with the left-hand mouse button pressed onto the " \land "-wise control the upper part of the window – the blue shaded stripe covers the upper part of the window – and drop, **Figure 2**.



Figure 2 Re-docking a panel: case 1



The panel gets stretched across the whole main window.

To dock a panel e.g. to the upper edge of the Chart panel:

Drag it holding by the title bar with the left-hand mouse button pressed onto the " \land "-wise control in the middle of the Chart panel – the blue shaded stripe covers the upper part of the panel – and drop, **Figure 3**.

Figure 3 Docking a panel: case 2



The panel gets stretched only across the Chart panel now.

To convert an independent panel into a tab on the other panel:

Drag it holding by the title bar with the left-hand mouse button pressed onto the "o"-wise control in the middle of the panel – the panel gets shaded in blue – and drop, **Figure 4**.

Figure 4 Making a tab



Customizing Default Menus and Toolbars

To rearrange the default toolbar button and menu items, use the drag-and-drop technique with the **Customize** window open.

To add a command/button to a default menu/menu item/toolbar:

1. Run the View > Toolbars > Customize menu command to open the Customize window, Figure 5.





Figure 5 Adding a command to a default menu

2. Drag and drop the command/ button from the list in the **Commands** text box on the **Commands** tab in the **Customize** window onto the default menu/menu item/ toolbar as Figure 5 schematically illustrates.

Creating User's Toolbars

- 1. On the **Toolbars** tab in the **Customize** window press the **New** button the **New Toolbar** window opens, **Figure 6**.
- 2. Enter the new toolbar name in this window and press the **OK** the new toolbar appears on the screen.

Figure 6 Creating user's toolbar: step 1.

oolbars: #Editor	Faster
⊗Pands ⊗Standed ⊻StepUpdde	Reset All
	New_
	POPulario
	Calatz
	F (browned) and (
	Close

- **3.** Fill in the new toolbar with buttons and commands using the drag-and-drop technique as shown in **Figure 5**.
- **4.** If necessary, dock the new toolbar properly in the main window of the program using the dragand-drop technique.

To return to the default view of a toolbar/menu, press the **Reset All** button on the **Toolbars** tab. To delete a non-default toolbar, highlight it in the list of toolbars and press the **Delete** button.

Graphic Interface Style

Graphic interface elements can be styled in one of the MS design styles. To do so, run the **View > Application look ...** menu command and select the style from the sub-menu that will then open.



Complete Command and Tool Reference

See the complete list of the main menu commands and tools, brief explanation of effects of each and references to more detailed descriptions in the tables in this section below.

File

Table 2 The File menu

Command	Effect	Reference
Load chart	Loads a locally stored chart into the Chart View	"Opening a Locally Stored Chart" on page 21
Print		
Page Set up	Drinte out a fragmant of a short	"Information Output to a Printer"
Print set up	Prints out a fragment of a chart.	on page 29
Print preview		
Exit	Exits the program	"Starting/Exiting " on page 7

View

Table 3 The View menu

Command	Effect	Reference	
Overview	Overviews the World map	"World Map Overview" on page 23	
Zoom in	Zooms in on an area on the chart		
Zoom out	Zooms out on an area on the chart	"Rescaling a chart" on page 23	
Scale	Sets a user-defined chart presentation scale		
Toolbars >	Shows/ Hides toolbars in the main window of the program	"Showing/ Hiding Panels and Toolbars" on page 11	
Status bar	Shows/ Hides the status bar	In this section	
Application look >	Sets the graphic interface style	"Graphic Interface Style" on page 13	
Dragging mode	Sets the continuous chart dragging mode	"The Pan/ Drag Chart Modes" on	
Panning mode	Sets the "center at cursor" chart panning mode	page 24	

Tools

Table 4 The Tools menu

Command	Effect	Reference
"Toolbar_name" >	Duplicates a button on the "toolbar_name" toolbar	In relevant sections of the Manual



Settings	Opens the program settings window	"Program Settings" on page 15
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The Window Menu

Show/ Hide panels in the main window of the program as listed in **Table 1**.

Program Toolbars

Toolbars of the program will be illustrated below in relevant chapters of the Manual.

Program Settings

Program settings are places on the tabs in the **Settings** window opened by running the **Tools > Settings** menu command.

See the list of setting groups, brief explanations of effects they produce and references to the related topics in the text on this Manual below in **Table 5**.

Tab	Effect	Reference
Presentation	Adjusts chart presentation according to S-52	"Adjusting Chart Presentation" on page 24
Chart Layers	Shows/ Hides chart layers	"Showing/ Hiding Chart Layers" on page 25
DB Connections	Functionalities for building connections to databases of dKart Office	"Building Connections to Databases of dKart Office" on page 15
Catalogue presentation	Catalogue chart frame presentation	"Presentation of the Catalogue in the Chart View" on page 44
Measurements	Defines the electronic ruler colors	"ERBL Tool Colors" on page 17
Draw on chart	Shows/ Hides extra elements in the Chart View	"Presentation of Extra Chart Elements" on page 25

Table 5 Program settings

Building Connections to Databases of dKart Office

dKart Look 5.2 may be setup to connect to existing dKart catalogue and dKart Archive databases.

This will allow for digital catalogue integrated in the viewing experience as well as with an dKart Archive connection active, the operator may load the chart data by selecting proper chart record from the catalogue view.

dKart Look do NOT come with any database setup tools.

Build connection to the databases of dKart Office on the **DB Connections** tab in the program setting window, which opens by running the **Tools > Settings** menu command, **Figure 7**.



Figure 7 The DB Connections tab in the program settings window

1. Click as shown in **Figure 7** to open the database connection window, Figure 8.

Figure 8 The Connect to window

Catalogue	×
Database type	
SQL Server	•
Server Name	
tstsql	
Database	
Catalogue	
User	Password
pod	•••
	Connect

- 1. Set the "SQL Server" option for the database in the list in the **Database type** field more fields appear in this window for entering the SQL Server and Archive database names, login and password.
- 2. Enter these into relevant fields in this window and press **Connect**.



ERBL Tool Colors

The program offers the Electronic Ruler and Bearing Line (ERBL) tool for measurements on the chart. The operator uses it to build auxiliary points and lines on the chart to measure lengths, distances angles, etc. as described in "Measurements on the Chart" on page 27. Colors and widths of these points (markers) and lines can be customized by the user on the **Measurements** tab in the **Options** window, **Figure 9**.

Settings		×
Presentation Catalogue presentatio	Chart's Layers n Measurements	DB Connections Draw on chart
Line Width Color		
Marker Width Color		
Units: Meters	•	
Great Circle F	humb Line	
OK	Отмена Приј	менить Справка

Figure 9 The Measurements tab in the $\,Options$ window

Specify marker and ruler line colors and widths in the respective fields on this tab.



Chart Collection Management

dKLook user can compile the Collection of charts (chart folio) which are permanently on display in the main window of the program. Functionalities are provided on the Chart Folio panel for chart collection management and display control.

A chart once added to the Collection stays in it during all later program sessions until the user explicitly excludes it.

Chart Formats

The list of data formats available for browsing using dKLook includes:

- Encrypted/ Unencrypted dKart Charts (*.dcf)
- S-57 edition 3.x (*.000.)
 - o S-57 AML 1.0 and 2.1
 - o Inland ENC 1.2
- DAF
- dKart Raster (*._bp)
- *.px
- GeoTIFF (*.tif, *.tiff)
- Chart Catalogues (*.030, *.031)
- OZI Explorer (*.map)
- GeoJPEG
- Charts Catalogue (*.030, *.031)
- Multi-level charts (*.mlc)

Opening Chart Folio Panel

To open the Chart Folio panel in the view of **Figure 35** run the **Window > Chart Folio** menu command.

Chart folio				- д X
Add Charts	; Del (Tharts		
Name	Scale	Agency	Issue	Last Update
20100 GB5X015W	2 000 000 25 000	Russian Federation UK	01.12.2000 #1 05.03.1998 #1	15.02.2005 # 7

Figure 10 The Chart Folio panel



Adding a Chart to the Collection

A chart automatically gets added to the Collection at opening it with dKLook.

To open a new chart:

- 1. Press the *is* button on the Standard toolbar or run the **File > Load chart** menu command the standard **Open** window opens.
- 2. In this window, specify the full chart file name and press the **Open** button.

The icon of the new chart appears in the list of charts on the Chart Folio panel and the chart gets shown on the Charts panel.

Excluding a Chart from the Collection

To exclude a chart from the Collection, select its icon on the Chart Folio panel and press the **Del Charts** button on this panel, **Figure 36**.

Chart folio				- 4 ×
Add Charts	Del Charts			
Name			Scale	Agency
🛃 GB100300			500 000	UK
 00000002	Insert chart(s) Unload selection Unload all Overview bound(s) Overview chart Original scale	927157_0^298847_raw_0000000	2 6 494 430	
•				•

Figure 11

Chart Display Control via Dynamic menu

Use commands in the dynamic menu of the icon of a chart on the Chart List panel to adjust display of chart in this or that way as described in **Figure 37**.



Figure 12 Chart display control using dynamic menu command



 Table 6 Chart display control using dynamic menu command

Command	Effect
Insert charts	Displays a new chart "under" the current one
Unload selection	Hides the selected charts
Unload all	Hides all loaded charts
Overview bounds	Overviews the chart frame
Overview chart	Overviews the chart
Or iginal scale	Shows the chart at the compilation scale

Opening a Locally Stored Chart

To open a chart stored locally yet not including it into the collection, run the **File > Load chart** menu command.



Chart Display Control

Use buttons on the "Standard" toolbar and menu commands to control chart display according to **Table 9**.

The "Standard" Toolbar

Table 7 The Standard toolbar

Button	Effect	Command
	Overviews the World Map	Tools > Standard > Overview
€	Increase the presentation scale twice (zoom in)	Tools > Standard > Zoom In
Q	Decrease the presentation scale twice (zoom out).	Tools > Standard > Zoom Out
K	Sets the "center-click" chart panning mode	Tools > Standard > Panning mode
37	Sets the continuous chart dragging mode	Tools > Standard > Dragging mode
Ð	Returns to the previous chart position and presentation scale	Tools > Standard > Position back
۲.	Undoes returns to the previous chart position and presentation scale	Tools > Standard > Position forward
and like	Pans the chart to the left/ right/ etc.	Tools > Standard > Move view point left/ right/ etc.
8	Opens the Help window	Help > Help topics

World Map Overview

To overview the World map, press the loobar button or run the View > Overview menu command.

Rescaling a chart

- To scale a chart in/out twice, click the 🖸 or 🤤 toolbar buttons,
- To zoom in on a region of a chart, drag the cursor across it with left hand mouse button pressed.
- To continuously change presentation scale, rotate the mouse wheel.



- To change presentation scale one step back/ forward, press the 🗊 or 🕼 toolbar button, respectively.
- To display a chart in an Overview mode, run the **Overview** command in the dynamic menu of Error! Reference source not found..

If the presentation scale needed to display the chart in an **Overview** mode turns out small enough, only the chart frame will be shown not separate objects on the chart.

• To display a chart at the compilation scale, run the **Original scale** command in the dynamic menu of Error! Reference source not found..

The Pan/ Drag Chart Modes

With the toolbar button pressed click at a point on the chart to see the point of the click in the center of the Chart panel.

With the toolbar button pressed drag the cursor over the chart with left hand mouse button pressed to see the chart continuously following the cursor.

Adjusting Chart Presentation

To adjust presentation of a chart according to S-52 requirements, run the **Tools > Settings** menu command to open the **Options** window and set necessary settings on the **Presentation** tab in this window, **Figure 38**.

Settings	×
Catalogue presentation Me Presentation Chart's La	asurements Draw on chart a ayers DB Connections
Standard	Symbols size
Like paper chart 💌	Symbol — J——— Text J————
Highlight obstructions	
Center symbols Shallow pattern	Depth contours
	Shallow 2.00
Additional	Safety 30.00
 Lights visibility range 	Deep 30.00
Quality symbols	2 shades scheme
Overscale indication	Safety contour only Show safe depths
Plain depth contour	Show safety countour
Important text	Color scheme
 Lights description text Other text 	
National text	Default
Screen size	External presentations
Height 207 mm	Reload
ОК Отмен	а При <u>м</u> енить Справка

Figure 13 The Presentation tab in the Settings window



Showing/ Hiding Chart Layers

Features on a chart can be grouped into "layers", e.g. bathymetric data, natural/ cultural features, etc. Switch on/ off layers to show/ hide on a chart on the **Chart Layers** tab in the program settings window, **Figure 39**.



Figure 14 The Chart Layers tab in the program settings window

Presentation of Extra Chart Elements

Switch on/ off check boxes on the **Draw on chart** tab in the program settings window to show/ hide extra chart display elements (all names are self-explanatory), **Figure 40**.



Figure 15 The Draw on chart tab

Settings		×
Presentation Catalogue presental Image: Coordinate Grid Image: Coordinate Grid <	ol Area Visible	DB Connections
OK	Отмена Пр	рименить Справка



Services for Browsing Charts

Measurements on the Chart

Running the ERBL Tool

Run the **Window > Measuring tool** menu command to show the Measurements panel in the main window of the program, **Figure 41**, or press the button on the "Enable measuring tool" toolbar, or run the **Tools > Enable measuring tool > Measuring tool** menu command.

Measurem	ents	
-Mode		
Sum	ļ	
ОВ:		
D:		
On/Off	Del Last	Del All

Figure 16 The Measurements panel

To show the "Enable measuring tool" toolbar, run the **View > Toolbars > Enable measuring tool** menu command.

Measuring Distance and Bearing

- 1. Switch on the **B**, **D** radio box.
- 2. Click over the first point with left mouse button.
- 3. The marker stays on the chart.

Marker color can be customized as described in "ERBL Tool Colors" on page 17.

4. Move the cursor towards the other point.

See the cursor permanently connected to the maker with the bearing line during the motion and the circle drawn automatically representing all points of the chart equally distant from the marker,

5. Place the cursor exactly over the other point and read the distance from the marker in the **D** field and the bearing in the **B** field.

Measuring Route Length

- 1. Switch on the **Sum** radio box.
- **2.** Place the cursor onto the beginning of the route and click left mouse button. The marker stays at the position of the click.
- **3.** Move cursor to the next waypoint of the route and click again.

Another marker stays there and a leg is built connected these points.

Leg color can be customized as described in "ERBL Tool Colors" on page 17.

4. Continue in the same way at all other waypoints.



5. Once reaching the opposite end of the line/route, read its overall length in the **Sum** field.

Press the **Delete last** button to break off the "rubber string" and bind the cursor to the last but one marker. Further pressing this button will erase the markers one-by-one binding the cursor to the previous marker.

Press the **Delete All** button to erase the entire chain of markers at once.

Using the Geo-Position Tool

Use the Geo-position tool of the program to set a "bookmark" on the chart at a pre-defined point and then to quickly find it.

Setting a "Bookmark" on the Chart

To set a "bookmark" on the chart:

1. Press the button on the "Geo-position" toolbar or run the **Tools > Geo-position > Open** dialogue ... menu command to open the **Positioning** window, **Figure 42**.

Positioning X
Position name
Save Delete
Position & scale
LAT 32°31'30.27"5
LON 60°55'07.99"E
Datum WGS 1984 💌
Scale 1:25 000 💌
Set Close

Figure 17 The Positioning window

To show/ hide the "Geo-position" toolbar run the View > Toolbars > Geo-position menu

command.

- 2. Type the bookmark name in the **Position name** field.
- **3.** In the **Datum** field set the datum which coordinates of the "bookmark" are going to be linked to.
- 4. In the **Scale** field enter the scale value to set after the bookmark is found, see "Finding a "Bookmark" on the Chart" on page 28.
- 5. Enter the coordinates of the bookmark into the LAT and LON fields.
- 6. Press Save.

Finding a "Bookmark" on the Chart

1. Select the name of the bookmark to find from the drop list in the **Position name** field.



2. Press Set.

The bookmark will then be found and shown at the scale value set in the **Scale** field, see step **4** in "Setting a "Bookmark" on the Chart" on page 28

Info on Objects on Charts of the Collection (The Found List Tool)

To open the Found List panel, run the **Window > Found List** menu command.

Right click at a point on a chart or go around an area in the Chart View with the **Shift** button pressed/ not pressed (depending on the registry key value) on the keyboard – the list appears of objects on the charts in the Collection located in a close vicinity of the point of the click or within the area, and their attributes on the Found List panel, **Figure 43**.



Figure 18 The Found List panel

Highlighting of an object in the list makes the object itself highlighted on the chart.

Editing System Registry

To configure the program to open the Found List with or without the **Shift** key pressed, set the following registry key value

HKEY_CURRENT_USER > Software > HydroSERVICE > dKLook 5.2 > PlugIns > FoundListPanel > Usersfit = 0 or 1.

Information Output to a Printer

There is a program function to print out the main window of the program in its current view. To do so:

- 1. Run the File > Page set-up menu command and set the required settings as to page orientation, margin width, etc. in a Page Set up window that will then open.
- 2. Run the File > Print menu command the standard Print window opens.
- 3. Set the required print settings in this window, and print.



User Layer Editor

Purpose

dKart Look user can create his "own" objects to be shown on electronic charts. These can be textual comments, unconventional areas, etc. Objects of this kind are grouped and stored in dedicated files, or "layers". When an electronic chart is on display, the program also reads user layer files to display objects in them too located within the chart area.

User's objects/ layers can be created, edited and deleted using the dedicated program module, namely the User's Layer Editor (ULE).

Use layer files reside in the **UserLayer** sub-folder in the program folder with an extension of *.ule.

User's Interface of ULE

Functionalities are provided on the ULE toolbar and panels for work with user's objects.

ULE Toolbar

Buttons on the ULE toolbar produce effects described in Table 11.

Table 8 Buttons on the ULE toolbar

Button	Effect
D	Creates a new layer;
1	Renames an existing layer;
×	Deletes an existing layer;
IM FORT	Imports a user layer from an external file;
EX	Exports a user layer data to an external file;
EX ALL	Exports all existing layers each to its own file
K	Enters geometry editing mode;
	Creates a point user object;
\triangleright	Creates a sector
	Creates a linear user object;
	Creates an area user object;
TEXT	Creates a text
+	Adds a node/ vertex
\ -	Deletes a node/ vertex



•	Moves a vertex, symbol or sector;
*	Inserts a new vertex between existing ones (for lines and areas);
0	Make a broken line closed (i.e. make contour) and start entering another one;
10	Undo last operation;
C!	Redo last operation;
×	Exits ULE

To show/ hide the ULE toolbar run the View > Toolbars > User Layer menu command.

The User Layer Panel

On the User Layer panel, the user views the list of existing layers and gets access to layer management functionalities of the program via the dynamic menu commands as shown in **Figure 44**.



Figure 19 The User Layer panel

Under the root node of a layer, e.g. "Fishery" the list of all its objects stand, Figure 53.

To open the UL panel, run the Window > User Layers Panel menu command.

Layer Status Indicators

Different layer icons perform as visual indicators of layer status according to Table 12.

Table 9

lcon	Status	
Ē	Shown layer icon	
	Hidden layer icon	
Fishery	Active layer name	





Explanations will be given in "Setting the "Active" Status of a Layer" on page 34 below about what active status of a layer means.

The User Object Panel

On the User Object panel, Figure 45, the user can edit attributes of a user object.

User Layer Object, Edit obje	ect (Area)	+ ‡ ×
Attributes Description		
	Colour Bgr Colour Pattern	
OK Can	cel Delete object Geometry	

Figure 20 The User Object panel

To open the UO panel, run the **Window > User Object Panel** menu command.

Information on User Objects on the Chart

User objects are shown "above" electronic charts e.g. as shown in Figure 46.



Figure 21 A user area on the chart

The list of user objects located at the position of a right click on the chart can be viewed on the **User Objects** tab on the Found List panel.



Coordinate Table of a User Object

Like coordinates of a geo-query (see "Coordinate Table of a Geo-query" on page 54), those of a user object are also shown on the Geo-editor panel, **Figure 27**, in an editing mode.

User Layer Management

Right after the start up, the list of existing layers appears on the UL panel, **Figure 44**. Select a layer in this list with a left click and run one of the commands in the dynamic menu of **Figure 44**:

- Show/ Hide Layer to show/ hide all objects of the layer on the chart.
- **Overview Layer** to display the layer in an overview mode.
- **Center Layer** to automatically bring the geometrical center of all objects of the layer into the center of the screen.
- **Start editing** to enter the editing mode of an object of the layer, see "Editing an Existing User Object" on page 38 for how to continue.
- **Delete Layer** to delete the layer, which implies deletion of all its objects.
- **Rename Layer** to rename the layer.
- **Export (All)/ Import layer** to export (all)/ import the layer to/ from an external file as described in "Import/ Export of Layers" on page 34.
- New Layer to create e new empty layer as described in "Creating a New Layer" on page 33.

Creating a New Layer

To create a new user layer:

1. Press the button on the ULE toolbar- the **New User Layer Name** window opens, Figure 47.

Figure 22 Creating a user's layer



- 2. Type in the new layer's name.
- 3. Press the OK button.

Renaming an Existing Layer

To rename an existing layer:

- Select its icon on the UL Panel and run the Rename Layer dynamic menu command, Figure 44 the window of Figure 47 opens.
- 2. Type a new layer name in this window.



Import/ Export of Layers

Layer exchange is possible between different machines if the users provide access to layer data to each other. At export of a layer, layer data are exported to an external file with a *.ule extension on the HDD and then transferred onto the other machine on a media of this or that kind. However, in the course of the export routine layer data are protected from unauthorized access by means of a password. The authorized user on the other machine can "read" the layer data provided he knows the password.

To export a layer:

1. Select the layer icon on the UL panel and run the **Export Layer** dynamic menu command,

Figure 44, or double click the layer icon and press the button on the ULE toolbar – the standard Save as window opens.

2. In this window navigate to the required directory on the HDD and press **Save** – the **Define Password** window opens,

Define a password		
ОК	Cancel	

Figure 23 The Define Password window

3. Enter a password in this window or press cancel to set a password-free access to the layer file.

To import a layer:

- 1. Press the *int* button on the ULE toolbar the standard **Open** window opens.
- In this window navigate to the layer file on the HDD and press Open the window of Figure 48 opens for entering the password, if any.
- 3. Enter the password in this window and press **OK**.

The layer will then be imported into the program and saved to the **UserLayer** sub-folder in the program folder.

Creating a New Object of a Layer

Setting the "Active" Status of a Layer

The "active" status of a layer means that it is the only one that can be edited at the moment, which includes adding new object to it and modifying and deleting existing ones. To set this status, double click the icon of the layer on the UL panel. See the layer name has got typed in bold, **Table 12**, and a prompt has appeared on the title bar of the panel saying what layer is being edited.

Entering the "Add Object" Mode

To enter the "Add Object" mode, press one of the buttons in **Table 11** according to the metrics type of the object you're going to create.



Creation of a New Symbol

Defining Attributes of the Symbol

After you press the 💌 ULE toolbar button, the UO panel takes the view of Figure 49.

Figure 24 The Attributes tab on the ULO panel

User Layer Object, Input object (5ymbol)	≁ ‡ X	
Attributes Description			
Example	Colour 🗨		
0	rientation 0.0		
	Font Size 20		
) i ()		
OK	Cancel		

- 1. On the **Attributes** tab on this panel, **Figure 49**, specify attributes of the new symbol. To do so:
 - **1.1** Select a patter from the list in the lower part of the window.
 - **1.2** Specify symbol color, orientation and font size in the fields of the same names.
 - **1.3** See the preview of the symbol in the **Example** box.
- 2. On the **Description** tab, enter general description of the new symbol

Figure 25 The Description tab on the ULO panel

User Layer Object, Inp	ut object (Symbol)	+ ₽ ×
Attributes Description	n	
Name English Information	Symbol	
National Information		
Dangereous		
ОК	Cancel	

Building Geometry of the New Symbol

- 1. Left click at the location of the new symbol on the chart.
- 2. Click again and again, if several identical symbols are going to be created

See the coordinates of the clicks have appeared on the Geo-editor panel in the form of a table, **Figure 27**.



3. After the last symbol is built, right click.

Creation of a New Sector

After you press the 🗀 ULE toolbar button, the UO panel takes the view of Figure 51.

Figure 26

Input Object (Sector)		×
Attributes Description C	Coordinates	
Example	Colour Width Radius (Nm) Angle1 Angle2	2 2 20.000 × 0.0 × 0.0 × 0.0 ×
OK		Cancel

On the **Attributes** and **General** tabs on this panel, specify attributes of the new sector and enter its general description, respectively, by analogy with those of a sector.

A sector is considered an object with point geometry, which is the location of its vertex. Other geometry features of a sector (e.g. angular characteristics) are defined as scalar attributes. So, build geometry of the sector by complete analogy with that of a symbol.

Creation of a New Line

After you press the ULE toolbar button, the UO panel takes the view of Figure 52.

 Input Object (Line)
 Attributes

 Attributes
 Description

 Example
 Colour

 Pattern
 Image: Colour

 Width
 3

 OK
 Cancel

Figure 27


On the **Attributes** and **General** tabs on this panel, specify attributes of the new line and enter its general description, respectively, by analogy with those of a sector.

Building Geometry of a New Line

- Go on along the line clicking at its vertices.
 See the coordinates of the vertices appearing on the Geo-editor panel in the form of a table..
- 2. Having reached the end of the line, right click.

Creation of a New Area

After you press the ULE toolbar button, the UO panel takes the view of **Figure 53**.

×
┓
Ī
Ī

Figure 28

On the **Attributes** and **General** tabs on this panel, specify attributes of the new area and enter its general description, respectively, by analogy with those of a sector.

Building Geometry of a New Area

1. Go along the border of the area clicking at its vertices.

In the process of drawing, the program automatically keeps the border contour permanently closed, **Figure 54**.

Figure 29



2. Having reached the last vertex, right click.



Creation of a Text

After you press the \square ULE toolbar button, the UO panel takes the view of **Figure 55**.

Figure 30

Input Object (Text)		×
Attributes Description (Coordinates	
Example	Colour	
	Font Name	Arial Black
	Font Size	10
Text	Font Type	Normal
	Horizontal Align	Center
	Vertical Align	Center
	Text	Text
ОК		Cancel

On the **Attributes** and **General** tabs on this panel, specify attributes of the new area and enter its general description, respectively, by analogy with those of a symbol.

A sector is considered an object with point geometry, which is the location of its vertex. So, build geometry of the sector by complete analogy with that of a symbol too.

Editing an Existing User Object

To edit a user object:

1. Select its icon under the root node of the layer it belongs to and run the **Edit Object** dynamic menu command, **Figure 56**.



The current attributes of the object get shown on the UO panel e.g. in the view of Figure 57.





Fia	ure	32
гіу	ure	JΖ

User Layer Object, Edit ob	ject (Line) 🔹 🕂 🗙
Attributes Description	
Example	Colour Pattern Width 1
OKCa	ncel Delete object Geometry

Figure 57 is obviously much like Figure 49 and Figure 51 - Figure 53 with the only difference for two extra buttons named **Delete Object** and **Geometry**.

Editing Attributes of a User Object

On the UO panel enter new attribute values of a user object as described in "Defining Attributes of the Symbol" on page 35.

Editing Geometry of a User Object

Press the **Geometry** button on the UO panel, Figure 57.

Another technique to enter the geometry editing mode is to left click on the object with the 1990 button pressed on the Geo-Editor toolbar.

The object to be edited gets surrounded with a frame on the chart, Figure 58.

Moving a Node/ Vertex

- 1. Point the cursor onto the node/ vertex to move and left click.
- 2. Move the cursor to the new position of the node/ vertex and click again.
- 3. Press OK on the UO panel, Figure 57

You can also enter the new coordinate values numerically directly into the coordinate table on the Geo-editor panel.

To undo/ redo an action on the chart, use the Undo and Redo buttons, as usual.

Deleting a Node/ Vertex

- 1. Point the cursor onto the node/ vertex to delete and right click.
- 2. Press OK on the UO panel, Figure 57

To undo/ redo an action on the chart, use the Undo and Redo buttons, as usual.



Adding an Extra Vertex onto a Line/ Area Border

1. Point the cursor onto the leg of the line onto which the extra vertex is going to be added, and left click.

The cursor gets bound to the vertices of the leg with a "rubber string", Figure 58.



Figure 33

2. Move the cursor onto the position of the new vertex and left click again.

Moving an Object as a Whole

- 1. Left click within the frame around the object, **Figure 58**.
- Move the cursor to the new position of the object.
 See the frame and the object inside following the cursor while it moves.
- **3.** Left click again.

Deleting an Existing Object

To delete an existing object, press **Delete** on the UO panel, **Figure 57**, or press the 🙆 button.



Viewing OGC Server Information

The program can display information provided by OGC servers.

Tools for Viewing Information from an OGC Server

Buttons on the OGC sever toolbar run the functionalities are required for viewing information provided by OGC servers according to **Figure 30** and **Table 8**.

Figure 34 The OGC toolbar



Table 10 The OGC toolbar

Button	Effect	Reference
1 ⁰ h	Registers an OGC server	"Registering a New OGC Server" on page 41
	Drawing of an area to be overlaid with OGC information	
11	Deletion of an area to be overlaid with OGC information	"Display of Information from a OGC Server within a Pre-defined Area" on page 43
C	Redrawing of an area to be overlaid with OGC information	
	Switching the OGC Server data overview	"Switching On The OGC Information Overview" on page 43

Registering a New OGC Server

Press the OGC toolbar button – the Registered OGC Servers window will open, Figure 31.

Figure 35 The Registered OGC Servers window





2. Press **New** in his window and enter the OGC server address into the URL text box in the next window that will then open, **Figure 32**.

Figure 36 The Add New Server window

Add new Serv	ver					×
URL						-
Server type	WMS	$\overline{\mathbf{v}}$				
				OK	Cancel	

3. Press **OK** in this window to see the new OGC server registered n the panel of the same name as shown in **Figure 33**.

Figure 37



4. Switch on the check box at the left of the server name as shown in **Figure 33**.

Viewing the List of OGC Server Layers

1. Click the OGC server name on the OGC Server panel as shown in **Figure 33** to open the list of its data layers on the OGC Layers panel as shown in **Figure 34**.



Figure 38

OGC	Server Layers	т д X
Γ		Select all / Deselect all 🔺
▼	WMS Global Mosaic, pan sharpened Release 2 of the WMS Global Mosaic, a seamless mosaic of Landsat7 scenes. Spatial resolution is 0.5 second for the pan band, 1 second for the visu	Style (default) Pseudo-color
↓ ↓	WMS Global Mosaic, not pan sharpened Release 2 of the WMS Global Mosaic, a seamless mosaic of Landsat7 scenes. Spatial resolution is 0.5 second for the pan band, 1 second for the visu	Style Pseudo-color image (L No legend
↓ 	CONUS mosaic of 1990 MRLC dataset CONUS seamless mosaic of Landsat5 scenes. Maximum resolution is 1 arc- second. The default styles may have gamma, sharpening and saturation filters	Style Pseudo-color image (L No legend

Display of Information from a OGC Server within a Pre-defined Area

- 1. Press the OGC toolbar button, drag the cursor across the area in the Chart View within which you'd like to the selected OGC server data layer and leave the cursor inside that area.
- 2. Switch on the check box at the left of the server layer name as shown in **Figure 34**.
- **3.** To cancel the display, press the OGC toolbar button.

Switching On the OGC Information Overview

To switch on display of the entire OGC information of the selected layer press the DGC toolbar button.



Viewing Catalogue

The Catalogue Tree

At regular start-up, contents of the catalogue database is shown on the Catalogue panel as a tree of sub-catalogues of national hydrographic agencies, **Figure 10**.

Figure 39

Catalogue (Read Only)	🝷 📮 🗙 Chart folio
E KM, Comoros, "Comoros"	Unload
 W KW, Kuwait, 'Ministry of Co W LR, Liberia, 'Ministry of La ZX, Russian Federation, 'N 	Query Cancel Query
	Export contents of Catalogue Database to File Refresh

To load a national catalogue into the program, run the **Load Database** dynamic menu command, **Figure 10** or click at the "+" sign at the left. Then expand the lower levels of the tree as shown in **Figure 11**.





Presentation of the Catalogue in the Chart View

1. Set the settings related to presentation of chart frames in the Chart View on the Catalogue Presentation tab in the program settings window, Figure 12





Figure 41 The Catalogue presentation	tab
--------------------------------------	-----

ings				
Presentation	ի 🗍 Շի	art's Layers	DB Cor	nections
Catalogue pre	esentation	Measuremer	nts Dra	w on chart
General				
Draw method	Using border:			
Diawinction	Tooling pordor			
Catalogue ch	arts frames			
Туре	Paper charts	•	Defa	ult
Color by	Navigational	purpose 💌	Undefined	•
Width	Color		Transparenc	y 95 %
	Color	🔽 Fill		<u></u>
	-			

- 2. Select the "Using borders" or "Using coverage" option from the **Draw method** list.
- 3. Select other chart frames drawing options in the **Catalogue charts frame** options group.

Viewing the Catalogue in a Tabular Form

All entries of a type in the Catalogue, e.g. ENC cell or paper chart entries, etc., can be viewed in the form of a table. To do so, run the **Open as Table** dynamic menu command, **Figure 13** – the table of the view of **Figure 14** automatically opens on the Catalogue Table panel holding all entries of the type.

Figure 42

Catalogue (Read Only)	✓ ₽ × Chart folio
È <mark>⊖a</mark> Paper Charts [all, 1] È (a) 13245 (î) Number13	Query • Cancel Query
(i) Scale 1 : 1	Open as Table
····(i) Projection ····(i) Units of Coor ·⊡ Coordinates	Export contents of Catalogue Database to File Refresh



Figure 43

Catalo	atalogue table														
Attributes Sort Print Find Open Show															
	Number	Scale	Navigationa	Vertucal Datum	Sounding Datum	Date of Issue	Editio	Upda	Date of	Last	Last Checked	South	West	North	East
1	11117	1:500.000	General	Local datum	Local datum	14.12.2002	4	3	31.01.2004	06.03.2004	31.01.2004	72°49'59.82"N	24"59'43.63"E	76°00'01.33"N	40°59'50.16"E
2	11118	1:500.000	Approach	Local datum	Local datum	30.12.2002	4	6	31.01.2004	31.01.2004	13.12.2003	75°30'00.40"N	31°59'39.97"E	79°00'01.66"N	43°59'43.20"E
3	1132	1:10:000	Harbour	Local datum	Mean sea level	24.11.2001	7	2	13.12.2003	14.12.2002	31.01.2004	60°28'39.83"N	28°08'15.06"E	60°32'51.82"N	28°14'01.07"E
4	12008	1:200.000	Coastal	Mean sea level	Mean sea level	13.12.2003	4	0	13.12.2003	24.05.2003	31.01.2004	65°06'00.65"N	34°05'50.60"E	66°21'00.47"N	38°09'50.15"E
	12008	1:200.000	Coastal	Mean sea level	Mean sea level	01.01.1999	1	10	27.09.2003			65°06'00.65"N	34°05'50.60"E	66°21'00.47"N	38°09'50.15"E
6	12011	1:200.000	Coastal	Local datum	Approximate	24.11.2001	4	2	31.01.2004	31.01.2004	31.01.2004	67°49'01.16"N	43°57'50.33"E	69°03'01.15"N	48°36'51.44"E
7	12013	1:200.000	Coastal	Local datum	Approximate	24.11.2001	6	0	14.12.2002	14.12.2002	31.01.2004	68°55'31.39"N	49°05'50.36"E	70°17'01.51"N	53°49'50.20"E
8	12015	1:200.000	Coastal	Mean sea level	Mean sea level	24.11.2001	4	0	14.12.2002	14.12.2002	31.01.2004	68°07'01.88"N	52°07'51.17"E	69°21'01.62"N	56°44'51.72"E
9	12017	1:200.000	Coastal	Local datum	Approximate	24.11.2001	6	0	14.12.2002	14.12.2002	31.01.2004	68°58'37.38"N	44"46'49.90"E	70°11'01.27"N	49°26'50.40"E
10	12042	1:200.000	Coastal	Local datum	Lowest	29.06.2000	2	24	13.12.2003	15.11.2003	31.01.2004	66°01'00.30"N	32"09'50.15"E	67°12'00.36"N	36°14'49.92"E

To manually open the Catalogue Table panel, run the **Window > Catalogue Table** panel menu command.

In this table press:

• **Attributes** - to specify which of the table columns to show in an extra dialogue window that will then open, **Figure 15**.

S	how columns	×
	✓ Number ▲ ✓ Scale ✓ ✓ Projection	OK Cancel
	 ✓ Units of Coordinates ✓ Chart Type ✓ Navigational Purpose ✓ Name 	
	 ✓ Name in National Language ✓ Region ✓ Region in National Language 	
	 ✓ Agency Code ✓ Secret ✓ Horizontal Geodetic Datum 	Select all Deselect all

Figure 44

- **Sort** to sort entries by the attribute in the selected column (scale, navigational purpose, etc.)
- **Print** to print out the table.
- **Find** to run the ID-based search for an entry in the Catalogue as described in "ID-based Search for an Entry in the Catalogue" on page 56.
- Open to open the selected entry in the form of a table, **Figure 16**.
- Show to automatically locate and overview the selected entry on the chart, **Figure 16.**

Viewing an Entry in the Catalogue

Viewing an Entry in the Catalogue on the Chart

On expanding e.g. the "ENC Cells" root node in the tree, all ENC frames appear on the chart, **Figure 16**.

Select an ENC entry in the tree to make its frame color-shaded on the chart, Figure 16.





Figure 45 Catalogue entry on the chart and as a table

Catalogue record					
ZX, Russian Federation, "Morintech 🔽 ENC Cells 📃 Locate					
Description Coordinates Source references Report					
Attribute	Value				
Number	12011				
Scale	1 : 200 000				
Navigational Purpose	Coastal				
Agency Code	ZX, Russian Federation, "Morintech Ltd."				
Horizontal Geodetic Datum	WGS 84				
Vertucal Datum	Local datum				
Sounding Datum	Approximate lowest astronomical tide				
Units of Height Measurement	Metres				
Units of Depth Measurement	Metres				
Product Specification	S57 edition 3.1				
Date of Issue	24.11.2001				
Edition Number	4				
Update Number	2				
Date of Updating	31.01.2004				
Last Processed NtM Date	31.01.2004				
Last Checked NtM Date	31.01.2004				

Viewing the Related Chart in the Archive

If an entry in the Catalogue describes a chart in the Archive, there is a function to load the chart itself into the program and show it on the Chart panel. To do so, run the **Load from Archive** dynamic menu command, **Figure 11**.

Viewing an Entry in the Catalogue in the Table

To view an entry in the Catalogue in the form of a table, run the **Open** dynamic menu command – the Catalogue Record panel automatically opens holding the entry description table, **Figure 16**.

To open the panel manually, run the **Window > Catalogue Record** menu command.

Queries to the Catalogue

Entering Query Mode

To enter the query mode:

1. Run the **Tools > Catalogue > Query Catalogue DB** menu command – the first page of the query wizard opens, **Figure 17**.



Figure 46 The Query Wizard: page	Figure	46	The	Query	Wizard:	page	1
----------------------------------	--------	----	-----	-------	---------	------	---

A.	Database Record Type	
	Filter J User Defined Query	V
	Load from File	¥

2. In the **Database** field select a sub-catalogue from the list to which the query is addressed, e.g. "ZX, Russian Federation, Morintech Ltd" or select the "All databases" option to address the query to all sub-catalogues at a time.

Figure 47

2atabase
All databases 🔹 🔺
RU, Russian Federation, "Head Department of Navigation & Oceanography" 🥅
8Q, Zimbabwe, "Surveyor-General, Government of Zimbabwe"
GR, Greece, "Hellenic Navy Hydrographic Service"
SE, Sweden, "Sjofartsverket, Swedish Maritime Administration"
US, USA, "Office of Coast Survey National Ocean Service, NDAA" 👘 👘
ZX, Russian Federation, "Morintech Ltd."
🗙, "OEF - Open ECDIS Forum" 📃 🗾

If a query is addressed to a particular sub-catalogue, there is another query technique to obtain the same result, **Figure 19** (right part), that is to run the **Query** dynamic menu command as shown in **Figure 19** (left part).

Figure 48

 W XX, "OEF - Open ECDIS Forum" W ZX, Russian Federation, "Morintech Ltd." 	Query Cancel Query	Database ZX, Russian Federation, "Morintech Ltd."
	Properties Refresh tree	

3. In the **Record Type** field, select the type of the entries you're going to query for, e.g. "ENC Cells".

Setting Search Criterion

1. In the **Filter** field on the first page of the query wizard, **Figure 17**, select a search criterion from the list, e.g. "By Scale", **Figure 20**.



Fig	ure	49
3		

<u>D</u> atabase	
ZX, Russian Federation, "Morintech Ltd."	•
<u>R</u> ecord Type	
ENC Cells	-
<u>F</u> ilter	
By Scale	•

Other options in this list are, Table 6:

 Table 11
 Search options

Search Option	Reference
By Scale	"Scale-Based Query" on page 49
By Coordinates	"Coordinate-Based Query" on page 50
Custom	"Custom Query" on page 50
Load from file	

2. Press **Next** on the first page of the query wizard, **Figure 17**.

Scale-Based Query

On the second page of a scaled-based query wizard, Figure 21:

Figure 50 The scale-based query wizard: page 2

Define Scales	×
	 By Scale Pange From Include To Include By Scale Equal To Y
	< <u>B</u> ack <u>N</u> ext > Cancel

- 1. Switch on the **By Scale Range** or **By Scale Equal to** radio box to query for entries with a scale within a predefined range or an exact value, respectively.
- 2. With the **By Scale Range** option switched on, press/ release **Include** buttons to include or not include range limits into the search results.
- 3. Press **Next** on the second page of the query wizard.



Custom Query

A custom query means a query based on queried entry attributes, e.g. chart datum, navigational purpose, etc.

On the second page of a custom query wizard:

1. On the **Attributes** tab specify attributes of the queried entries.

Define Conditions			×
Attributes Source references			1
<u>Add</u> <u>D</u> elete			
Attribute	???	Valu	e
< <u>B</u> ack	<u>N</u> ext >	Cancel	Help

Figure 51

- 2. Repeat the same routine on the **Source Reference** tab to specify attributes of the parent chart.
- 3. Press **Next** on the second page of the query wizard.

Coordinate-Based Query

A coordinate-based query to the catalogue returns entries in it overlapping at least partly, a pre-defined figure, which the user draws manually on the chart. This can be a set of isolated points, a broken line (a route) or an area.

On the second page of a coordinate-based query wizard, Figure 23:

Define Coordinates					×
Personal States	Erom chart				
	On Point	•	<u>A</u> dd	<u>I</u> nsert	Delete
The state		Latitu	ide	Longi	tude
	1				
	2				
7.4					
		< <u>B</u> acł	< <u>N</u>	ext >	Cancel

Figure 52 The coordinate-based query wizard: page 2

1. In the drop list at the left, select:



- **On Point** to treat coordinates you're going to enter as those of isolated points.
- **On Area** to treat coordinates you're going to enter as those of vertices of an area.
- **On Route** the same for a route (broken line).
- 2. Press Add to open the first line in the coordinate table.
- **3.** Enter coordinates of a point/area/route into this line.

Enter coordinates keeping to the rules formulated in "Coordinate Input Rules" on page 51.

Keep in mind the following restrictions.

- You cannot combine different classes of geometrical primitives in one query. Use query-combining tool described in "Error! Reference source not found." on page Error! Bookmark not defined. for this purpose.
- If your choice was the **On Area**, you cannot define more than one area in one query. Use query-combining tool described in "**Error! Reference source not found.**" on page **Error! Bookmark not defined.** for this purpose.
- 4. Press **Next** on the second page of the query wizard.

The program offers another technique to enter the coordinates for a query, specifically to draw/select a geometrical primitive directly on a chart and take the coordinates from there. This is the issue to be discussed in "Geo-Queries to the Catalogue" on page 54.

Coordinate Input Rules

In these fields, always enter coordinates as pairs of digits separated by spaces, followed by a hemispheric sign.

For instance, the entered string of the view

10 00 00

will be treated by the program as

10°00'00" N

Other Query Options

On the third page of the query wizard, Figure 24:



Figure 53 The Query Wizard: page 3

Finish Query	×	
	Frames <u>C</u> olor Save as User Defined	
	Save to File	
	< Back Finish Cancel	

- 1. Left click in the **Frames color** field to select entry frame color on the chart on the standard palette that will then open.
- 2. Switch on the Add to previous query check box to summarize the results of the new query to those of the latest one, see more in "Error! Reference source not found." on page Error! Bookmark not defined..

Saving and Reusing Queries

The conditions of a query can be saved to an external file or as "ser-defined". The later means that the query conditions are saved and stored in the catalogue itself thus being directly available to the program user, see the list of user-defined queries in the drop list of the same name on the first page of the query wizard, **Figure 17**.

- 1. To save the conditions of the query as user-defined, type the user-defined query name in the **Save as use-defined** field, **Figure 24**.
- 2. To save the conditions of the query to an external file, press **Save to File**, **Figure 24**, and specify the full query file name in a standard **Save as** window that will then open.

To reuse a query previously saved to an external file:

- 1. Press Load from file on the first page of the query wizard, Figure 17, and specify the full query file name in a standard **Open** window that will then open.
- 2. Press **Next** on the next pages of the wizard and eventually **Finish** on the last page to re-run the query exactly in its original view, or change the query conditions and then re-run.

To reuse a user-defined query:

- 1. Select its name from the list of user-defined queries in the User-defined query drop list on the first page of the query wizard, **Figure 17.**
- 2. Press **Next** on the next pages of the wizard and eventually **Finish** on the last page to re-run the query exactly in its original view, or change the query conditions and then re-run.

Running a Query to the Catalogue

1. Press **Finish** on the third page of the query wizard, **Figure 24**, thus running the query.



Simplified Query Routine

If a query for e.g. ENC Cells is addressed to a particular sub-catalogue, e.g. "ZK, Russian Federation, Morintech Ltd." with a "By scale" criterion, and you don't need extra query options described in "Other Query Options" on page 51 and "Saving and Reusing Queries" on page 52, follow the simplified query routine. Specifically:

1. Run the Query > By Scale dynamic menu command as shown in Figure 25 – the second page of the scale-based query wizard will open right away, Figure 21.



Figure 54

However, the Finish button replaces Next in this case.

2. Set scale conditions on this page as described in "Scale-Based Query" on page 49 and press **Finish**.

By analogy, run e.g. **Query > Custom** dynamic menu command, **Figure 25** to open the second page of the custom query wizard, **Figure 22**, etc.

Viewing Query Results

The results of a query are shown on the Catalogue panel in the view of Figure 26.

Figure 55



Note, that the program will automatically expand only those sub-catalogue root nodes in which the query has returned non-zero results, and mark them with a "query" indicator as shown in **Figure 26**. For instance, this figure illustrates that the latest query has returned the only paper chart entry in a Russian catalogue.

Study the results of a query in the same way as the entire catalogue, see "The Catalogue Tree" on page 44 and subsequent sections.



Geo-Queries to the Catalogue

Functionalities are provided to run a query to the Catalogue for entries in it overlapping, at least partly, a pre-defined figure, which the user draws manually on the chart. This can be a set of isolated points, a broken line (a route) or an area.

The "Geo-Query" Toolbar

Use buttons on the "Geo-query" toolbar to enter one of the drawing modes according to **Table 7**.

Button	Equivalent command	Effect	Reference
40- 10-	Tools > Geo-query manager > Insert points to geo-editor	Enters point drawing mode	"Running a Point-Based Geo- Query" on page 54
	Tools > Geo-query manager > Insert region to geo-editor	Enters arbitrary region drawing mode	
0	Tools > Geo-query manager > Insert circles to geo-editor	Enters circle drawing mode	
	Tools > Geo-query manager > Insert areas to geo-editor	Enters rectangle drawing mode	"Rectangular Area-Based Query" on page 56
<	Tools > Geo-query manager > Add line to geo-editor	Enters broken line drawing mode	"Running a Route-Based Query" on page 55
>	Tools > Geo-query > Accept changes	Confirms drawing results	
×	Tools > Geo-query > Discard changes	Cancels drawing results	

Table 12 The "Geo-query" toolbar

Coordinate Table of a Geo-query

Coordinates of a geo-query are shown in a tabular form on the Geo-editor panel in the view of e.g. Figure 27.

Figure 56 The Geo-editor table panel

Geo Query			÷ џ)
#	Point	Latitude	Longitude
1	1	62°30'46.54"N	43°19'15.06"E
1	2	63°00'12.82"N	44°26'50.05"E
1	3	62°51'04.33"N	45°45'47.56"E
1	4	62°21'28.37"N	46°01'10.98"E
1	5	62°03'21.00"N	47°42'53.54"E



To show the Geo-Query panel, run the **Window > Geo-editor table** menu command or press the button on the toolbar.

Running a Point-Based Geo-Query

- 1. Press the button on the "Geo-query" toolbar or run the **Tools > Geo-query >** Insert points to geo-editor menu command.
- 2. Left click at the first point on the chart.

A colored cross stays on the chart.

3. Left click at other points.

See coordinates of the points appearing in the coordinate table on the Geo-Query panel in the view of **Figure 27**.

- 4. Follow the query making routine until you reach the second page of the coordinatebased query wizard, **Figure 23**.
- 5. On this page, switch on the **From chart** option the coordinate table gets filled with coordinates of the points.
- 6. Complete the query routine and run the query.

Running a Route-Based Query

- 1. Press the button on the "Geo-query" toolbar or run the **Tools > Geo-query >** Insert line to geo-editor menu command.
- 2. Move the cursor along the route on the chart clicking at its waypoints, **Figure 28**.

Figure 57 Drawing a route



At the same time, see coordinates of the points appearing in the coordinate table on the Geo-Query panel in the view of **Figure 27**.

- **3.** Having set the ending waypoint of the route, right click.
- **4.** Press to \checkmark confirm the configuration on the chart or \checkmark to erase it.
- 5. Follow the query making routine until you reach the second page of the coordinatebased query wizard, **Figure 23**.
- 6. On this page, switch on the **From chart** option the coordinate table gets filled with coordinates of the waypoints of the route.
- 7. Complete the query routine and run the query.



Rectangular Area-Based Query

- 1. Press the button on the "Geo-query" toolbar or run the **Tools > Geo-query >** Insert area to geo-editor menu command.
- 2. Click at a corner of the rectangle on the chart.
- **3.** Click at the opposite corner.

See coordinates of the corners have appeared in the coordinate table on the Geo-Query panel in the view of **Figure 27**.

- **4.** Press to \checkmark confirm the configuration on the chart or \checkmark to erase it.
- 5. Follow the query making routine until you reach the second page of the coordinatebased query wizard, **Figure 23**.
- 6. On this page, switch on the **From chart** option the coordinate table gets filled with coordinates of the corners of the rectangle.
- 7. Complete the query routine and run the query.

ID-based Search for an Entry in the Catalogue

You can find and view an entry in the Catalogue without making a query if you know its ID.

1. Press Find on the Catalogue Table panel, Figure 14 - the Find Record window opens, Figure 29.

Figure 58 The $\mbox{ Find record }\mbox{window}$

Find record	×		
<u>C</u> atalogue Data Base			
RU, Russian Federation, "Head Departmer 💌			
Type of record			
Paper Charts	7		
Number			
11	🔲 Show all		
717 (1989)	<u>O</u> pen		
717-A (1989) —	Select		
1062 (1984)	<u>s</u> elect		
1063 (1989)			
1078 (1989)			
1078-A (1989)			
1132-INT1256 (1994) 🚽	<u>C</u> lose		

- 2. Type the entry ID in the **Number** field the list below will automatically be scrolled down to the this ID.
- 3. Left click at the ID in the list the **Open** and **Show** buttons get enabled.
- 4. Press
 - **Select** to overview the frame of the entry on the chart.
 - **Open** to open the entry in a tabular form, **Figure 16**

