



Bibliographic browser

# LibNavigator

Version 2.0

Reader Edition

Official registration certificate

for PC programs

№ 2007611926

## User's Guide

Makes it easier to find bibliographical descriptions in the library catalogues. Provides the access to full-text online documents and facilitates your work on bibliography.

Russia, Omsk 2008

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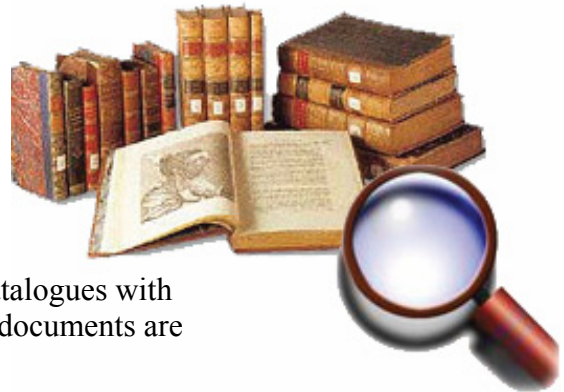
## Estimate LibNavigator advantages!

### ✓ Search in the electronic catalogues

LibNavigator program allows you, being at home or at work, searching for information in the electronic library catalogues in the Internet.

### ✓ Search for full-text documents in the Internet

You can search for full-text editions in the electronic collections. Many libraries provide their electronic catalogues with documents description and links to access them. The documents are accessible by “one click” on the links you found.



### ✓ Handy tool to work with bibliography

Are you working on an article, essay, and thesis? Do you need to compile bibliography or to find an abstract? LibNavigator will help you! The bulk of needed information can be found and used in your work.

### ✓ Works throw the library’s Z39.50-servers

Specialized software (Z39.50-client, which is the bibliographic browser LibNavigator) must be used to access many library catalogues, placed in the Z39.50-servers.

### ✓ Access to hundreds of electronic library catalogues worldwide

You can have access to the great number of electronic library catalogues via Z39.50 protocol. LibNavigator distribution kit contains more than 1000 addresses of electronic catalogues of libraries, museums and on-line collections around the world.

### ✓ Easy bibliography resources listing

Tree-type bibliography resource listing allows sorting them on the basis of their territorial or subject features. The resources you use more frequently can be added to the “Favorites” list.

### ✓ Opportunity to choose a search form

In your work you can use one of three search forms; each has its own functional peculiarities and sphere of application.

### ✓ Ease of bibliographic description representation

Due to LibNavigator you needn’t get used to the specific character of bibliographic formats. Bibliographical records are given in different easy to perceive formats.

### ✓ Bibliography list update via LibNavigator site

LibNavigator Support Service constantly updates the resources list (available on [www.libnavigator.com](http://www.libnavigator.com)). You can easily update your own list of catalogues synchronizing it with the resources list directly at LibNavigator.

### ✓ Unicode universality

There are no language limits with LibNavigator! Unicode allows you searching for the information around the world. LibNavigator supports the great variety of national encoding.

## Welcome!

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### ✓ Easy way to save data

You can save all found and selected bibliographical descriptions to the disk for your future work. It is possible due to own data storage format «LNF». You can extract selected entries to «the basket», which automatically saves the data when you don't work with LibNavigator.

### ✓ Support of most widespread bibliographic formats

LibNavigator supports such widespread bibliographic formats as: UNIMARC, MARC21, RUSMARC, and USMARC.

### ✓ Quick selection of required descriptions

Using different filters, you can quickly sort out all the bibliographical descriptions according to their sources, subject headings etc.

### ✓ Printing support

Bibliographical descriptions can be printed in different formats, for instance as a library requisition for a book.

### ✓ Separate editions for readers and librarians

Each LibNavigator version has two editions: one for a reader, the other for a cataloguer. Each edition is created to meet all users' demands and provide compatibility. The Cataloguer edition has additional tools for editing and exporting the bibliographical records in a communicative format, thus allowing automating cataloguing by borrowing.

### ✓ Try the fully functional version out!

You can take the chance to test a LibNavigator version 2, available on [www.libnavigator.com](http://www.libnavigator.com)

The given version gives an opportunity to work without registration:

- Within 30 calendar days from the moment of installation LibNavigator on your computer.
- Within the limits of 50 hours of operation LibNavigator on your computer by the concrete user.

## Welcome!

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Dear reader!

First of all, let's consider whether LibNavigator program is necessary to you, and if it is necessary, what for?

During already thousand years people have got used to store the saved up knowledge in libraries and the established habits and orders are not going to change. Libraries are irreplaceable in educational process, moreover, without them educational process is simply impossible. Existing Internet means only that there is an opportunity not to go directly to the library (which can be located not only faraway from your home in your city, but also in other city and even in other country), and is possible being at work or at home to replace real visiting library with virtual, using Internet.

We pay your attention to that major fact, that many people buy computers and connect them to the Internet so that their children have an opportunity of fast and operative access to the educational information.

In fact, there are various search systems (machine), such as, for example, Rambler, Yandex, Yahoo, Google, and you have used to search for the information in the Internet with their help. **All these search systems are intended to search in all sites of the Internet, and LibNavigator program is intended to search for information on library sites only.**

It is known, that any specialized system carries out those functions for which it is intended, it is better, more reliable and, the main thing – is more effective, than any general.

Having taken advantage of LibNavigator program, you will get only on sites of libraries, i.e. the very place you aspired to go. Thus, you will save not only much time and personal money (in fact, it is obligatory to pay for searching in the Internet), but also will find concrete information that is necessary for you.

You may say– «And I know addresses of sites of those libraries which are necessary to me. And having come on these sites, I shall directly take the information from these libraries without any LibNavigator program». Here you face following trouble traps- standards of drawing up of book descriptions, articles, essays and other library materials all over the world and in Russia particularly allow making description of stored materials differently. I.e. in each library the same book can be described in own way and it will be all within the limits of existing standards.

When some reader, being in the library, searches for the book, in habitual paper catalogue all these distinctions in the description are insignificant, because he understands that it is one and the same. Any search system of the library, is simply the program that doesn't possess human intelligence, and to take advantage of it to the full searching through the Internet, it is necessary for you to consider these distinctions and the most important, what description is accepted in the given library.

Therefore to one who searches for the information in the electronic catalogue on a site of the library, it is necessary to study this structure. If the reader searches for the concrete edition in several electronic catalogues (in various libraries) he should study internal structure of them all. Now there are more than 2000 similar library catalogues accessible through the Internet in the world, and to know structure of them all for one person becomes simply impossible.

Besides to search for books in an electronic library catalogue, it is necessary to know its language of queries (dialogue language with search system of the given library site). These languages also are various in different libraries as each library creates the search system how it considers. If it is possible somehow to manage knowledge of catalogue structure (though without such knowledge, you certainly can't find a part of the necessary information on a site of this library), it is impossible to manage without knowledge of search language any way – the search system of the library simply won't understand what you want from it.

## **Welcome!**

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So what to you now- to study hundreds and even thousand library data structures and many search languages? Certainly, it would be desirable to have one unified tool with one search language, suitable for search in the majority of available library systems that are accessible through the Internet.

### **Such tool is LibNavigator program.**

At creation of this program it was used, so-called, Z39.50 protocol. The word "protocol" in this case is understood as rules of an exchange by queries between the search program (in this case- LibNavigator program) and places of information storage about electronic catalogues and books (library sites). These rules were specially developed in Library of the Congress of the USA and now recognized all over the world. All libraries of the world which have decided to apply these rules, contain descriptions of the editions (electronic catalogues) in such a manner that access to them can be provided with uniform image (for example, through LibNavigator program). These places of storage refer to Z-servers. And access to this information is carried out through the very Z39.50 protocol.

Let's remind that such way of representation and information storage gives an opportunity to search under all similar library electronic catalogues and electronic editions in the uniform way by means of uniform search language.

### **You will not need to study many search languages!**

### **These opportunities are realized in LibNavigator program.**

Usual ways of access to sites in the Internet- programs named browsers (the most widespread from them is Internet Explorer) established on overwhelming majority of computers do not use report Z39.50, and use other report which refers to HTTP. Therefore these browsers are not intended to search in the electronic library catalogues located on Z-servers according to unified rules (mentioned above). To search in library catalogues some additional search systems that include so-called sluices (the program providing transition from HTTP protocol to Z39.50 protocol and back) are usually used. These search systems are additional intermediate parts in processes of processing of search queries, this leads to essential increase in the traffic and search time and quite often is the reason of the termination of search processing because of long time search (? stop on a time-out).

Therefore there is a need of creation some special software for access to the electronic library catalogues by unified rules.

### **Such software also is LibNavigator program.**

**Welcome!**

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## **How to use this Guide?**

Read this **Guide** before use the **LibNavigator program**.

The guide is divided into two bodies. The first is intended for those users who do not wish to press in superfluous (from their point of view) details, and wish to prospect simply in library catalogues by means of LibNavigator program. In the second part the additional information for those who are interested in additional opportunities and technological features of LibNavigator program.

While reading you will meet various terms that are used in the given area and they may be not clear to you for the first. For the explanation of the semantic content of these terms refer to Appendix 5.Glossary, placed in the end of the guide. We ask you to use this glossary.

# Chapter 1. General information

This chapter presents new features of LibNavigator Version 2 and primary symbols and abbreviations used in this Guide.

The Internet connection (including one via the Z39.50 protocol) is often limited in the local area network. In the situation like this it is necessary to use proxy-service for the Internet access. LibNavigator allows you making connection via Z39.50 proxy service. More in detail about Z39.50 proxy service usage read in Appendix 3. Installing «Z39.50 LibNavigator Proxy».

## **Contents:**

- LibNavigator functional potentialities
- New features of LibNavigator Version 2
- Access to the electronic catalogues from the local network via «Z39.50 LibNavigator Proxy»
- Symbols used in the Guide

### 1.1 Functional potentialities of the LibNavigator bibliographic browser

LibNavigator, a bibliographic browser, is a complex tool for accessing the electronic bibliographic catalogues, working with on-line bibliographical records and full-text documents.

LibNavigator has a very convenient and user-friendly interface. It can provide a comprehensive search for the information in distributed electronic catalogues.

Tree-type bibliography resources (electronic catalogues) listing allows sorting them on the basis of their territorial or subject features.

For making a search request you can use one of three search forms, each of them has its own functional peculiarities and sphere of application.

The search can be performed simultaneously in any number of bibliographic resources. There is also an opportunity to scan the search terms glossary.

LibNavigator Software supports most well-known encoding systems, including all Cyrillic encoding and Unicode. The program also supports some bibliographical formats that are widespread in Russia and other countries (UNIMARC, USMARC, MARC21, and RUSMARC). It allows you to make a search nearly in all electronic bibliography catalogues worldwide.

The records can be presented in three formats: description, requisition form and bibliography.

### 1.2 New in LibNavigator Version 2

LibNavigator has become a full Unicode-application, what makes it possible to use Unicode symbols in searching and records representation, e.g. diacritical marks in the European languages and symbols of some other languages (Greek, Finno-Ugric, Hebrew etc.).

«LNF» format (**LibNavigator File**) was developed specially for storing the bibliographic records. LNF format doesn't have such limitations of ISO 2709 format as incorrectness in saving records of different encoding or bibliographical formats to the same file. There are no such problems with LibNavigator due to keeping records metadata (bibliographical format and record sources) and using Unicode. Besides, LNF-format boosts data processing of the records saved as all records are kept as the binary representation of the MARC-record "parsed" structure and not in the "raw" MARC-format.

In this new version all records, found from different sources in one search session, are displayed in the same window. Besides, records can be represented only from selected sources, e.g. you can temporarily hid records from all catalogues but the one or two to make the comparison more obvious. Thus you can faster estimate records from different sources and use the screen space more economically.

The full record description is represented in its individual area. HTML-format, which is used to display records, allows to copy the record description (wholly or in parts) to the clipboard in the structured way.

The "Favorites" element is new in the bibliographic resource tree. To add a resource or the whole branch of resources you just click "Add to Favorites". This list may consist of the catalogues the user work regularly with, so the user will be able to select them faster.

## General information

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There are new services in the resource tree too. It is difficult for a reader to track all new library resources. LibNavigator creators regularly enlarge the number of numerous addresses of library resources and update this list at LibNavigator website [www.libnavigator.com](http://www.libnavigator.com). In the new version every user can import the resources list directly from this website. It is possible to export your own resources “tree” or its parts to the file along with private information coding. So a user can share this information with his or her colleagues.

This version offers an opportunity to scan search terms glossary («scan request» in Z39.50) and select the attributes used in the search forms (for each form individually). The list of available search attributes of usage is also greatly enlarged.

Besides, LibNavigator Version 2.0, Reader edition can boast some additional innovations:

- User “Basket” automatically saves data and restores them at the next session;
- The order and structure of the columns in the data representation can be defined by the user;
- Current information on the connection status and search results is available now;
- Based on LNF-format, the “page file” is used to save the working memory while dealing with huge number of the bibliographical records;
- Net connections are pooled to save the operating system resources.

### **1.3 The access to the electronic catalogues from the local network via «Z39.50 Proxy» service**

Local network computers hardly have direct access to the Internet. It is done for the sake of security, as the local network must be prevented from all possible attacks. So such net is protected by the means of routers and firewalls.

The Internet resources are available from the local network by using the Net-connected computers with special software – the so-called PROXY-SERVERS. This computer acts as intermediary between a client, being in the net, and the server to the Internet resources the client wants to gain access to. Thus proxy-servers are primarily meant to provide access to the Internet resources from the local network. Besides, often proxy performs additional functions, e.g. speeding-up the web-pages or files download by the means of local caching.

Protocol Z39.50, used to gain access to the electronic bibliography catalogues, is not an exception as mostly the direct access to the electronic catalogues in the Internet is not available from the local networks. It means that if you want to have access to resources by protocol Z39.50 you will need Z39.50 proxy server in most cases.

«Z39.50 LibNavigator Proxy» is freely distributed proxy-server software, using protocol Z39.50 for the request transmission to the bibliography resources. It was developed on the Open Source basis of «YAZ Generic Server» project. Currently it is meant to be used in Windows NT operating systems families (starting with Windows NT 4.0), but it can be easily transferred to other operating systems.

«Z39.50 LibNavigator Proxy» offers the advantages of using proxy-server in full measure, but at the same time it is very convenient to operate. It is achieved due the following reasons:

- Minimizing the parameters needed to install a proxy-server, which are set by successive questions with detailed explanation of the purpose of each parameter.

## General information

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- Usage of Windows services, which launch automatically with the system start-up, so there is no need to do it manually.

The instructions for «Z39.50 LibNavigator Proxy» installation and its setting are given in Appendix 3. Installing Z39.50 LibNavigator Proxy.

If the operating system of Unix family is installed on the computer meant to be a proxy-server, you can seize the opportunity of using «YAZ Proxy» software developed by the company «Index Data Aps.». You can get all details at <http://www.indexdata.dk/yazproxy/>. LibNavigator setting while working via this server is the same (refer to Appendix 3. Installing Z39.50 LibNavigator Proxy).

### 1.4 Symbols used in the Guide.

In this guide the following symbols are used:

- The key symbols are always enclosed in the angle brackets, e.g. <Alt>.
- If the keys are united by a plus sign, it means they must be pressed simultaneously, e.g. <Alt+F5> shows that you should press <Alt> key and then holding it to press <F5> key, after that the both keys are let off.
- Some menu point sequences are given in a special font and divided by arrows, e.g. **File⇒ Open**.
- User interface elements (buttons names etc.) are given in bold type, e.g. **Search**.

Two key combinations, that activate menu commands, are *shortcut keys*, e.g. <Ctrl+C> executes the command **Copy** nearly in any Windows application.

## Chapter 2. Installing LibNavigator

This chapter covers in details the process of LibNavigator installation. Following step-by-step instructions you can easily install LibNavigator program and start working.

### **Contents:**

- System requirements
- Step-by-step instructions for LibNavigator installation
- Registration of LibNavigator

### 2.1 System requirements

The computer, which meets all requirements of the program, is necessary for LibNavigator installation and future program usage.

#### Hardware configuration requirements

The hardware configuration of your computer must satisfy the requirements of the exploitable operating system.

#### Free disk space

5 MB for the installation and 100 MB and over for the record download

#### Operating system

Microsoft Windows 2000/XP/Server 2003

#### Internet Browser

Internet Explorer 5.5 or higher (is a part of operating systems of Windows families) or any other

#### The access to the Internet

Is necessary for searching in remote data bases

#### Display

Minimum: screen size – 15", resolution – 800x600 and higher, color depth – at least 256 colors.

Recommended: screen size – 17", resolution – 1024x768, color depth – 32 bits per pixel.

### 2.2 LibNavigator Installation

To install LibNavigator Version 2.0, run LibNavigator\_2RE.exe from the distribution kit, which is enclosed to the program set follow all the instructions of **the Install Shield Wizard**.



**To install LibNavigator on the computer you must be a system administrator!**

#### Step 1. Choosing the wizard's language.

##### *Description:*

Dialog box offers to choose the setup language. The wizard will then present all the information in selected language.

##### *Your actions:*

Select a language and click **OK** to proceed with installation or **Cancel** to exit the wizard.

#### Step 2. The wizard's welcome page.

##### *Description:*

You will be recommended to exit all running applications to proceed with LibNavigator installation.

##### *Your actions:*

Click **Next** to proceed installing or **Cancel** to cancel LibNavigator installation on your computer.

#### Step 3. End-User License Agreement (EULA).

##### *Description:*

You will be recommended to get acquainted with the Licence Agreement. To proceed installing the program you must agree to all the terms.

##### *Your actions:*

Mark the point **I Agree** and click **Next** to proceed installing or **Cancel** to cancel installing LibNavigator on your computer in case you disagree to the terms stated in the Licence Agreement.

## Installing LibNavigator

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### Step 4. Choosing the setup directory.

*Description:*

You will need to choose the directory in one of the computer discs where all necessary files for running the program will be copied. The program requires about 5 MB of free disc space.

*Your actions:*

Choose the directory in the browser window or continue with a default one and click **Next** to proceed installing or **Cancel** to cancel LibNavigator installation.

### Step 5. Choosing a directory in the Start menu.

*Description:*

You will need to choose a group of programs in the Start menu where all shortcuts intended for launching the program, uninstalling and getting help will be copied.

*Your actions:*

Choose the group of programs or leave the default one and click **Next** to proceed installing or **Cancel** to cancel LibNavigator installation.

### Step 6. Additional options after LibNavigator installation.

*Description:*

After LibNavigator installation, you can select additional options. You can put the icons for launching the program at the desktop. The icons can be created for all the users or a particular one, who have installed LibNavigator.

*Your actions:*

To create the LibNavigator launch icon tick “Create desktop icons” and choose the icon creating mode (only for a current user or for all the users). Then select necessary characteristics and click **Next** to proceed installing or **Cancel** to cancel LibNavigator installation.

### Step 7. Everything is ready for installing.

*Description:*

Checking up the correctness of selected setup characteristics.

*Your actions:*

Check the correctness of selected characteristics. Click **Install** for LibNavigator installation on your computer or **Back** for modifying the setup characteristics.

### Step 8. LibNavigator is being installed.

*Description:*

The installation is in process and the setup status is given. If there is any problem an error description will be displayed.

*Your actions:*

You will have to wait until installing is completed.

### Step 9. Installation completion.

*Description:*

The installation is completed. You can read about LibNavigator program or launch it.

*Your actions:*

Choose the corresponding points and click **Ready**.

Now LibNavigator has been installed on your computer and is ready for running. You can launch it by double-left click on the desktop icon or selecting Start ⇒ Programs ⇒ LibNavigator2RE ⇒ LibNavigator2 Reader

## 2.3 Registration of LibNavigator program.

If you have taken the trial-version of LibNavigator program at [www.libnavigator.ru](http://www.libnavigator.ru) it will work after installation in current 50 hours only, then will demand obligatory registration. For this time

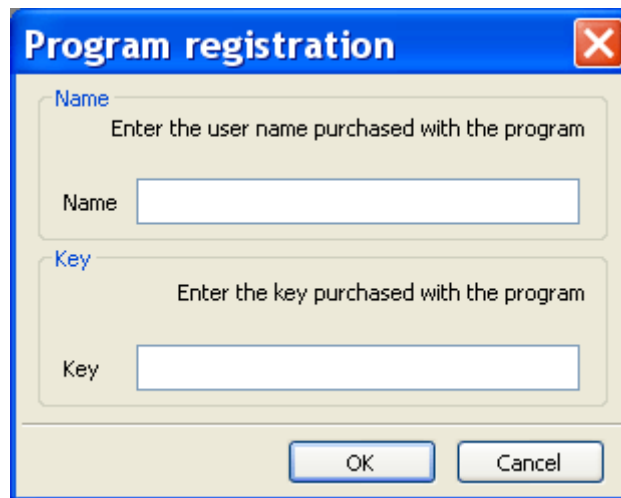
## Installing LibNavigator

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you can familiarize with its opportunities and make a decision on necessity of its further use. If you wish to use it further, it is necessary for you to get a license key at developers and to pass procedure of registration.

If you have already got a license key you should have unique name of the user and a key of a kind `****_****_****_****` in which on a place of asterisks there can be figures or Latin capital letters.

To begin procedure of registration choose item of the menu *Help* ⇒ *Registration*. You will see a window (fig. 1) in which fields it is necessary to enter a name of the user and a key then to press **OK**. If all has passed successfully you will see the message «*the Program it is registered!*».



The image shows a standard Windows-style dialog box titled "Program registration". It features a blue title bar with a close button (an 'X' in a red square) on the right. The main content area is light beige and is divided into two sections. The first section is labeled "Name" in blue text, followed by the instruction "Enter the user name purchased with the program" in black. Below this is a white text input field with the label "Name" to its left. The second section is labeled "Key" in blue text, followed by the instruction "Enter the key purchased with the program" in black. Below this is another white text input field with the label "Key" to its left. At the bottom right of the dialog box, there are two buttons: "OK" and "Cancel".

Fig. 1. Registration form

## Chapter 3. LibNavigator User interface

This chapter presents LibNavigator interface and its tools. Studying this chapter will enable you to control the program easily (bibliographical resources bar, search, menu and tools bars etc.). If you have experience in using Windows, many things will be clear and familiar to you.

### Contents:

- Interface commands
- Bibliographic resources bar
- Search forms bar
- Search session window
- Record view window

### 3.1 Standard interface elements

#### 3.1.1 The menu of the program

At the first stage (step) of work when search was not made yet in one of libraries (no record found), the menu of the program looks as follow (fig. 2):

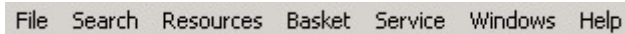


Fig. 2. Menu

After search in one or several libraries (some records found) the menu will change and look as follow (fig. 3):

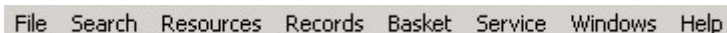


Fig. 3. Menu

The difference is that there is an item "Record". This item gives an additional set of functions intended to work with records. All other items of the menu keep former functional purpose (except that in some of them the lines connected with processing of records become more active).

The combination of keys is applied to fast access to items of the menu <Alt+...>, for example, after pressing keys <Alt+F> there will be a File menu.

Here the list of all items of the program menu is resulted with short comments describing applicability of corresponding ones.

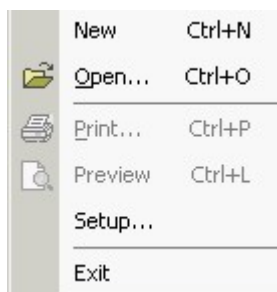


Fig. 4. File menu

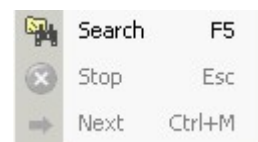


Fig. 5. Search menu

The File menu (fig. 4) is used to perform following functions of the program: opening and closing files, printing, previewing and printer setup, exiting the program.

The Search menu (fig. 5) is used to start and stop search and deliver next record package.

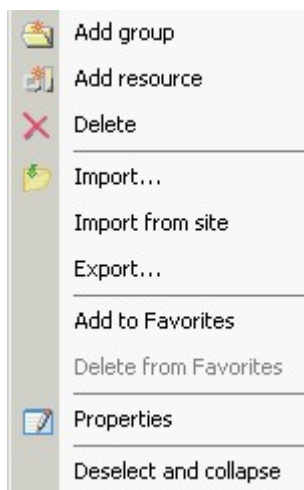


Fig. 6. Resources menu

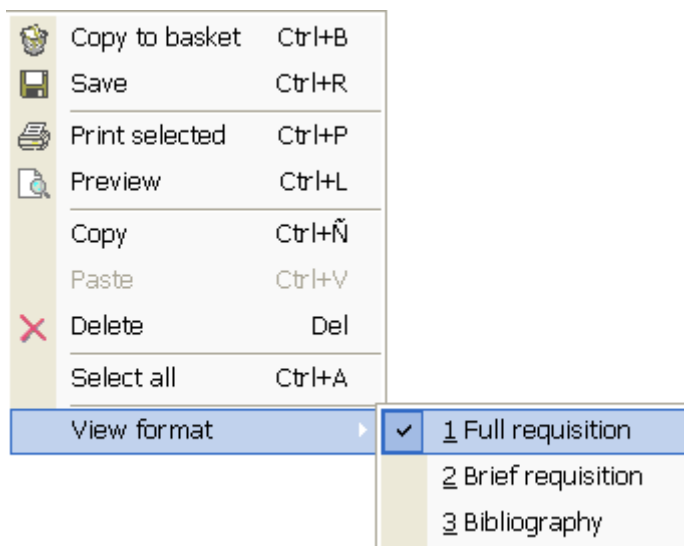


Fig. 7. Records menu

The **Resources** menu (fig. 6) is meant for editing the resources list: to add and delete groups and resources, export and import resources from the files and LibNavigator website, modify the properties (characteristics) of selected resources or groups.

The **Records** menu (fig. 7) is meant for working with the bibliographic records: to save records to the basket or file, print them, copy to the buffer, etc.

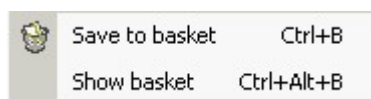


Fig. 8. Basket menu



Fig. 9. Service menu

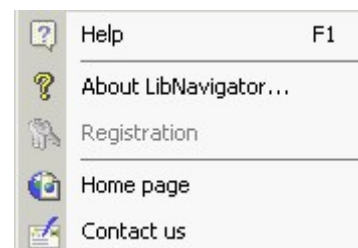


Fig. 10. Help menu

The **Basket** menu (fig. 8) is meant for operations with the basket: to save records to the basket and browse records saved to the basket.

The **Service** menu (fig. 9) is meant for LibNavigator characteristics setting and viewing connection register.

The **Help** menu (fig. 10) is meant for getting the program information, for program registration by a login and key, sending an e-mail to the program creators, fast access to the LibNavigator website, where you can find the latest news about the program.

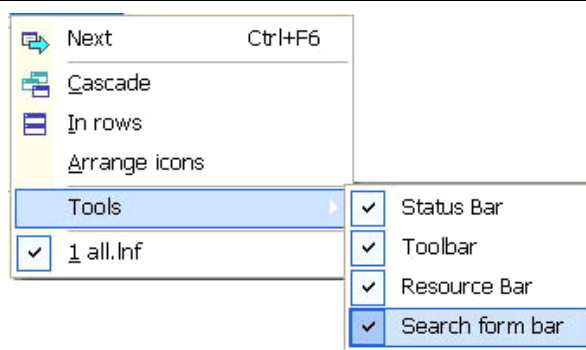


Fig. 11. Windows menu

The Windows menu (fig. 11) is meant for working with some affiliated windows: you can sort them, adjust the position and arrange the order. One of the windows listed below can be activated. You can also select the program tool bars.

### 3.1.2 Toolbar

The toolbar is used to a quickly access to options you use frequently. In the toolbar (fig. 12) shown below, the number of the button corresponds to the number in the table (Tab.1).



Fig. 12. Toolbar

№	Item	Description
1	Search	Start searching
2	Stop	Stop searching
3	Next records package	Deliver next records package from the active bibliographic resource
4	Open	Open the record file in MARC-format
5	Save	Save selected records in one of supported formats
6	Copy to basket	Save selected records to the Basket
7	Print	Print selected records on the printer
8	Preview	Views how records will be printed
9	Copy	Copies selected records to buffer
10	Paste	Paste records from to the other file
11	Delete	Delete selected records
12	Record format	Modify record view format

Tab. 1. Toolbar shortcuts

## LibNavigator User interface

The Toolbar may be settled vertically (fig. 13)

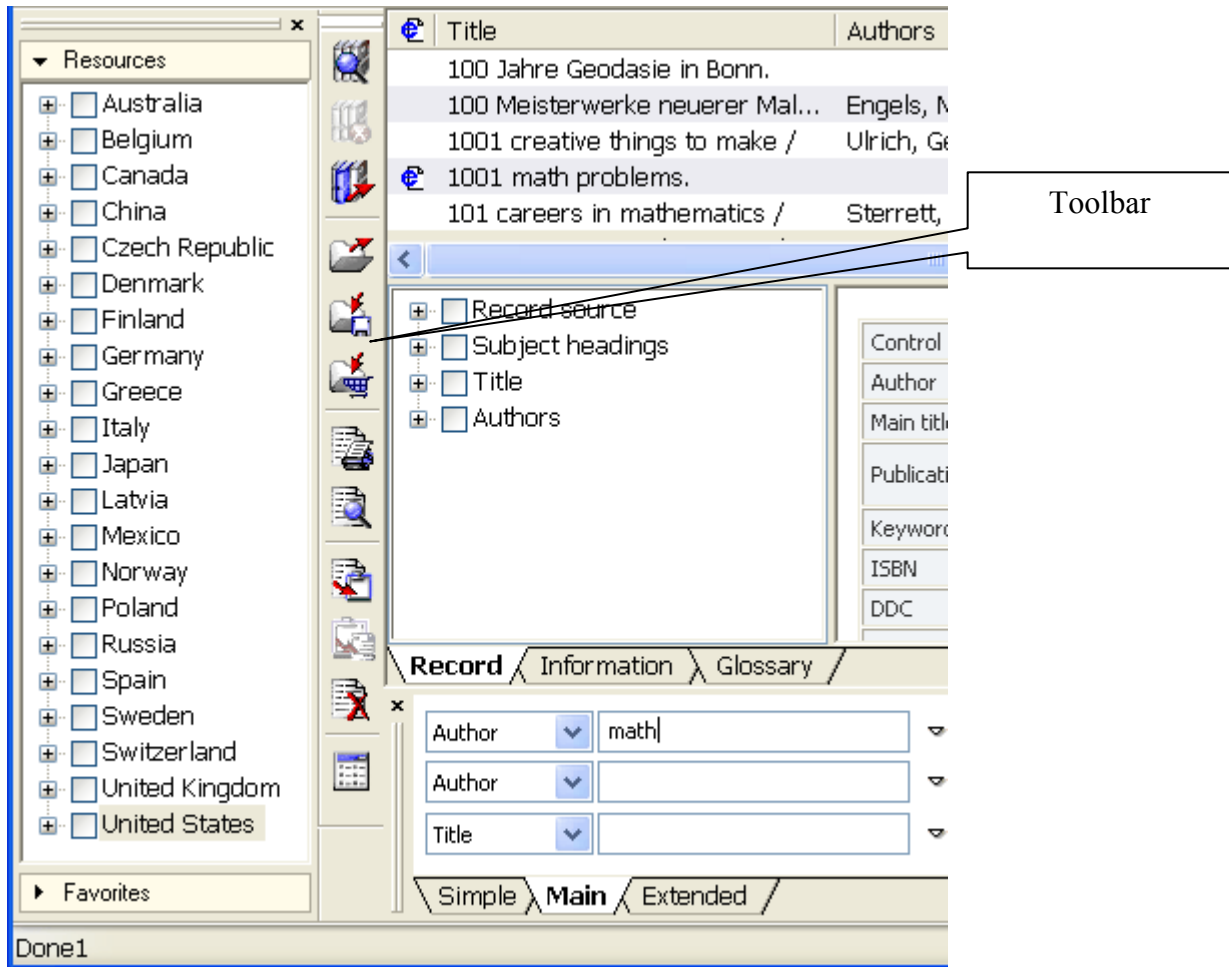


Fig. 13. Toolbar

### 3.1.3 Status bar

The status bar (fig. 14) is located at the bottom of the main window. The status bar displays supporting information: current search status, help with the menu items and shortcuts (area 1).

Besides, the status bar displays search progress (area 2), the number of selected bibliographic resources and those connected (area 3), the number of found and received records (area 4), the number of records in the basket (area 5).

The Register window automatically appears when you make a double-click in the areas 3, 4 and the Basket window appears by clicking in the area 5.

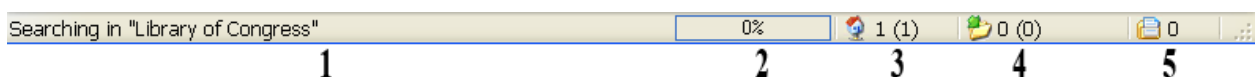


Fig. 14. Status bar

### 3.2 Bibliographic resources bar

The bibliographic resources bar (fig. 15) is used to select resources you will be searching in. It consists of two scrolls: “Resources” and “Favorites”. The first contains bibliographic resources grouped in a tree type. The second has a part of a full resources list to boost access to them.

The bibliographic resources bar presents a window with an opportunity of docking to the sides of the main window. (Refer to Appendix 6. Additional information)

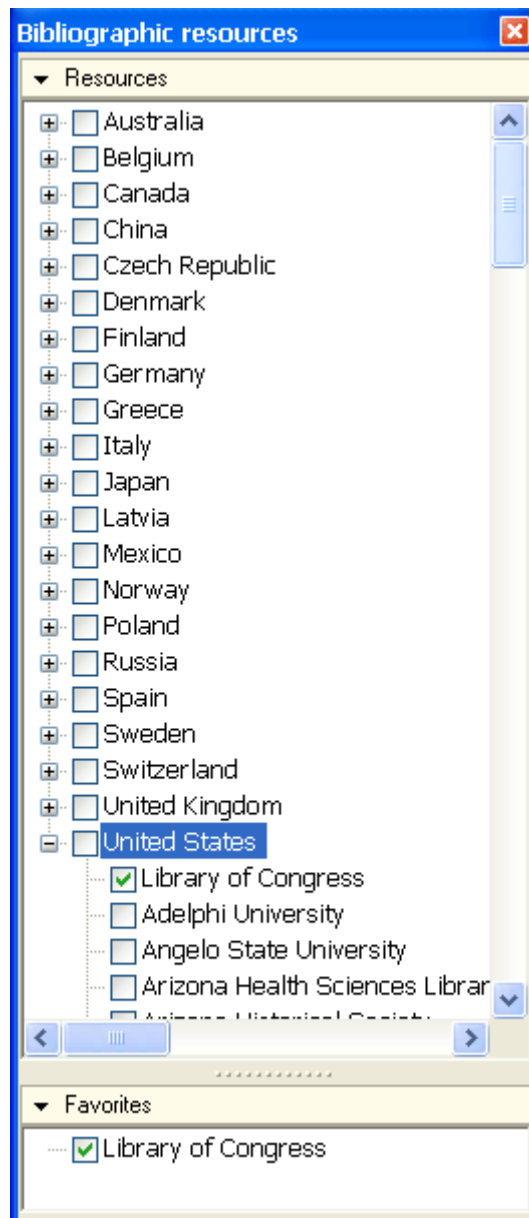


Fig. 15. Bibliographic resources bar

#### 3.2.1 Resources scroll

The bibliographic resources (electronic catalogues) are presented in a tree type, which enables to sort them on the basis of their territorial and subject features. To select a resource (for a search) tick the corresponding field. If you select the parental element- all its affiliated ones of all the levels are selected on default.

### 3.2.2 Favorites scroll

The Favorites scroll displays resources selected as *Favorites*. This list presents a part of the resources tree and serves for a quick selection of frequently used resources. Selecting or deselecting any resource in the list means the same process of the corresponding resource in the full resources tree.



#### How to work with the bibliographic resources bar?

- To expand/collapse use symbols or in the tree node or double-click on its name.
- To select (or deselect) the resource, tick  in the empty box on the left of the corresponding resource. If you select a tree node with affiliated elements, they will be selected on all nesting layers.
- To hide/ show catalogues use symbol on the left of the catalogue heading.
- If the resource name is not shown in full, point an arrow at the title area. The pop-up window with a resource full name will appear.
- For minimizing all tree elements and deselecting use Resources ⇨ Deselect and collapse.
- To change resources list use Resources or contextual menu of the Resources scroll.

### 3.3 Search forms bar

Fig. 16. Search forms bar

The search forms bar (fig. 16) is used for creation of search request. You can use one of three search forms; each has its own functional peculiarities and sphere of application.

To change a search form, use the inset (“Simple”, “Main”, “Extended”). The form currently in use is highlighted by color. The search forms bar presents a window with an opportunity of docking to the sides of the main window (Refer to Appendix 6. Additional information).

#### 3.3.1 Simple search form

Fig. 17. Simple search form

## LibNavigator User interface

The simple search form (fig. 17) is meant for making a request by one of the edition characteristics (e.g. author, title, place of publication). Besides, you can search in the found for the full-text documents, i.e. the documents the bibliographic records have links to.



### How to work with the simple search form?

- Enter search expression in the search phrase field (e.g. *Shaw B.*).
- Select the attribute of usage (author, title, keyword, ISBN etc.) from the pull-down menu.
- If necessary (you enter more than one word) specify the structure: **Phrase** – the strict word order, **Word list** – the words can be rearranged.
- For more careful search, select **No truncation**. Only results with a strict concordance of words will be found, e.g. if you enter *Ivan*, other variants, like *Ivanov*, will not be found.
- To specify results of last request select **in found** item.
- To search for records with links to the full-text documents, select **with full-text item**.
- To start search click **Start**.

### 3.3.2 Main search form

The main search form (fig. 18) is meant for a search employing three expressions united by the logical operators, as maximum. For example, you can search by several edition characteristics, e.g. by author, title and key word.

The screenshot displays the 'Main' search form interface. It features three search input fields: 'Author' with the value 'aronova', 'Title' with 'physic', and 'Title' with 'quantum mechanics'. Each field has a dropdown arrow for attribute selection. Between the fields are dropdown menus for logical operators, currently set to 'and'. A 'Search' button is located below the second dropdown. To the right is a panel with four checkboxes: 'Document language', 'With fulltext documents', 'Bibliographic level', and 'Contents form'. At the bottom, there are three tabs: 'Simple', 'Main' (which is selected), and 'Extended'.

Fig. 18. Main search form

In the main search form you may use some additional attributes for every of three search expressions. You can do this pressing sign (▼). You may use following three optional attributes: “Relation”, “Structure”, “Truncation”.

Standard set of attributes “Structure” (refer to Appendix 1. BIB-1 attributes) contains three elements (Word, Phrase, Word list). For convenient work we added such attributes as: “Year” and “Date”. The attribute “Year” allows searching for the book according to the year of publication, and the attribute “Date”-according to the date of cataloguing. Date/time of cataloguing should have the very form YYYYMMDD.

Here is the example of using of attribute «Right truncation» for the third search expression. Instead of words *quantum mechanics* reduction *quantum mech* is used. (fig. 19).

## LibNavigator User interface

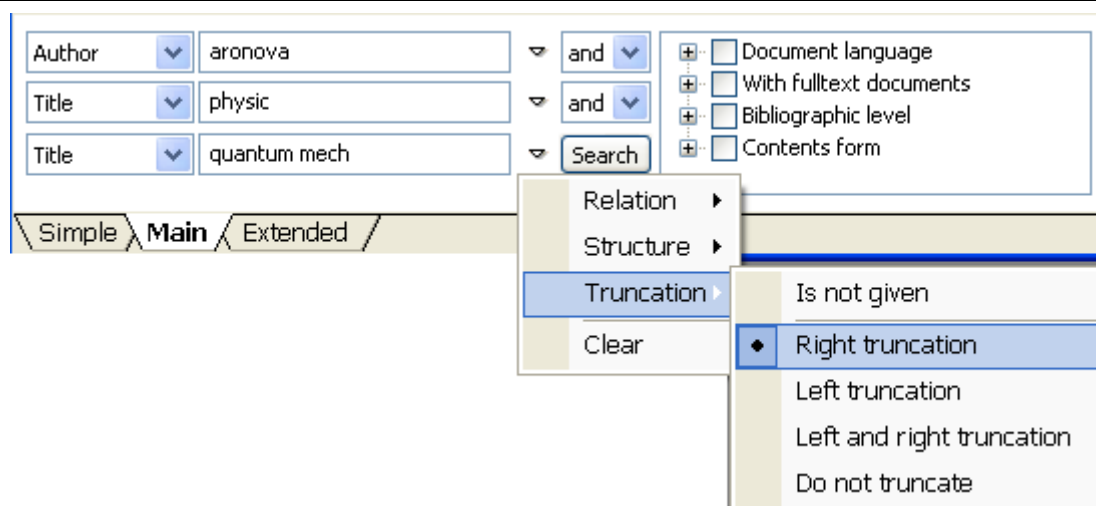


Fig. 19. Main search form, optional attributes

Besides, the main search form provides for search request specifying with the help of different filters, e.g. the document language, full-text document and its type (all types of documents, archives (rar, zip, arj), documents (pdf, djvu), documents Word, pictures (jpg, bmp, png) and contents (catalogue, essay, dictionary, textbook) etc.

Let's explain it on examples:

- Having chosen values «Document language» *Russian* and *English* you will search for editions both in Russian and in English languages (fig. 20).



Fig. 20. «Document language» filter

- There is the filter to search for “With fulltext documents” (fig. 21)

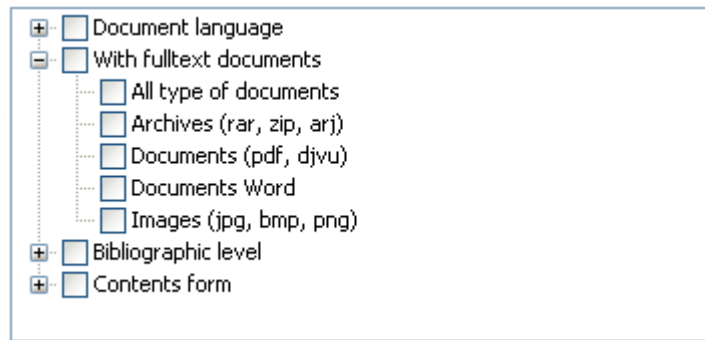


Fig. 21. «With fulltext documents» filter

- Having chosen the filter «All types documents» (fig. 22), you set search for fulltext documents presented in all formats.

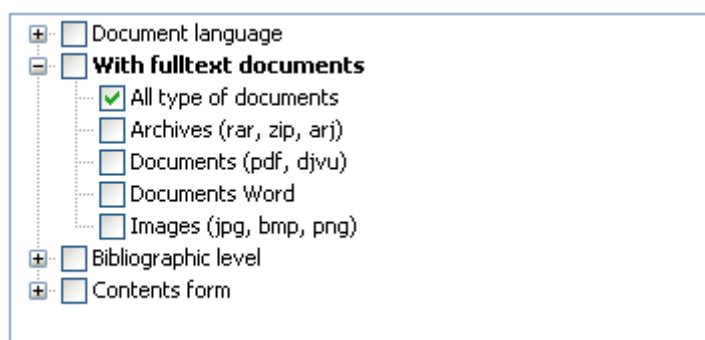


Fig. 22. «With fulltext documents» filter

- It is possible to narrow search area, having chosen not «All types documents » but any other filter, e.g.«Documents Word» (fig. 23). In this case there will be a search for those full text documents that are presented in a format of text editor Word.

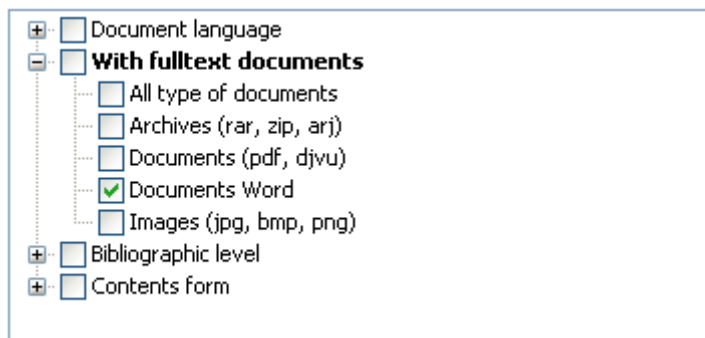


Fig. 23. Search for Documents Word

- So, having chosen value «With fulltext documents» *Documents Word* and values «Contents form» *the Textbook*, you will search for all textbooks which have the electronic variant of the full text issued in text editor Word.
- Having chosen the filter «Bibliographic level» (fig. 24) you can specify what to search for: articles ("Analytical"), monographs ("Monographic"), magazine ("Serial"), brochures ("Selection").

Here are some explanations:

**Analytical** – article in the magazine, a proceeding column or a note inside the magazine, the separate report in the collection of works of conference. That is all that describes any part of the whole edition.

**Monographic** – the monograph, the multi volume edition, the book in the series, separately catalogued special release of the newspaper. This is an edition consisting of one part or of precisely certain quantity of parts.

**Serial** – magazine that continues to be published; the complete set of magazine, which edition is stopped; the complete set of newspapers; a monographic series. The edition let out by parts and calculated on the edition during the uncertain period of time.

**Selection** – assembly of brochures in a box; a booklet set; all manuscripts of one author. This edition completed from various parts.

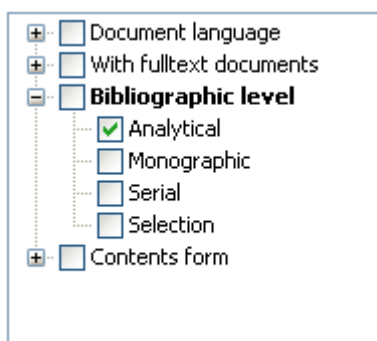


Fig. 24. “Bibliographic level” filter- “Analytical” value

- So, carrying out search on a keyword *Physics* and having chosen «Bibliographic level» value *Analytical*, you will search for articles published in magazines and collections, instead of all editions on the physics.
- Having chosen the filter «Contents form» (fig. 25) you set search for the edition of the certain contents type, for example, essay.

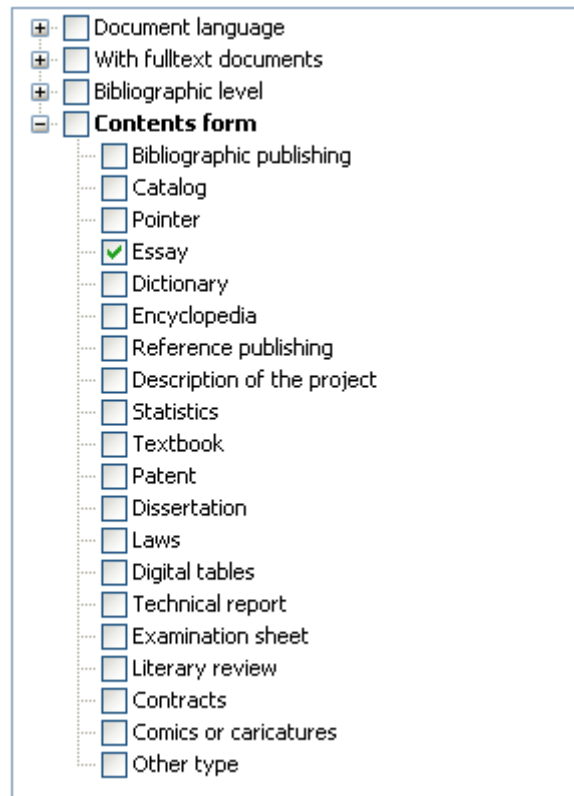


Fig. 25. «Contents form» filter – Essay



### How to work with the main search form?

- To make a search request you can enter three search expressions connected by the logical operators (and, or, not). The search expressions are entered in a strict order, i.e. the first, the second and then the third.
- Select the search attribute from the pull down list.
- Then enter the request line in the text-entering field.
- If necessary, specify optional attributes (of relation, truncation, structure) by selecting values in the menu, which appears after clicking **Optional attributes** (▼) in the corresponding line.
- If you point an arrow at **Optional attributes** (▼), the pop-up menu will display all current attribute values.
- Repeat the steps for creating the second and the third expressions.
- To specify the logical operators, uniting the search expressions, select their values from the pull down menu. The first expression operator connects the first and the second expressions. The second expression operator connects the third expression with the merge – sort of the first and the second expressions.
- To specify additional characteristics use filters, for their activation select the corresponding values.
- To start search click **Search**.

### 3.3.3 Extended search form

Logic	Use	The search expression	Attitude	Structure	Cutting off	
	Author	Crosland				
and	Title	women			Right	

Add                  Delete                  Clear                  Search

Fig. 26. Extended search form

The extended search form (fig. 26) is used for requesting by any number of search expressions. It enables to control creation of search request, for all search attributes values are explicit.



#### How to work with the extended search form?

- To add or remove the search directions use **Add** and **Delete**.
- To clear forms use **Clear**.
- To start specifying the search directions elements (attributes, search expressions, logic) make a left-click in the corresponding direction field.
- A necessary attribute or logic, while being modified, can be selected from the pull down values menu.
- To modify the search expression, enter it from the keyboard or paste it from the buffer as you usually do with the text-entering field.
- To start search click **Search**.

### 3.4 Search session window

The search session window consists of the record view window, information and glossary windows. To switch to different windows use insets at the bottom left.

The information window presents the information concerning the search process and its results for all selected resources (electronic catalogues). This information includes search status, the number of found and received records, diagnostic information (an error number and description).

For example, in Records received (found): 10(1000) 10 records received from 1000 found. How to receive a following package of records is described in chapter 4.2 Viewing bibliographic records.

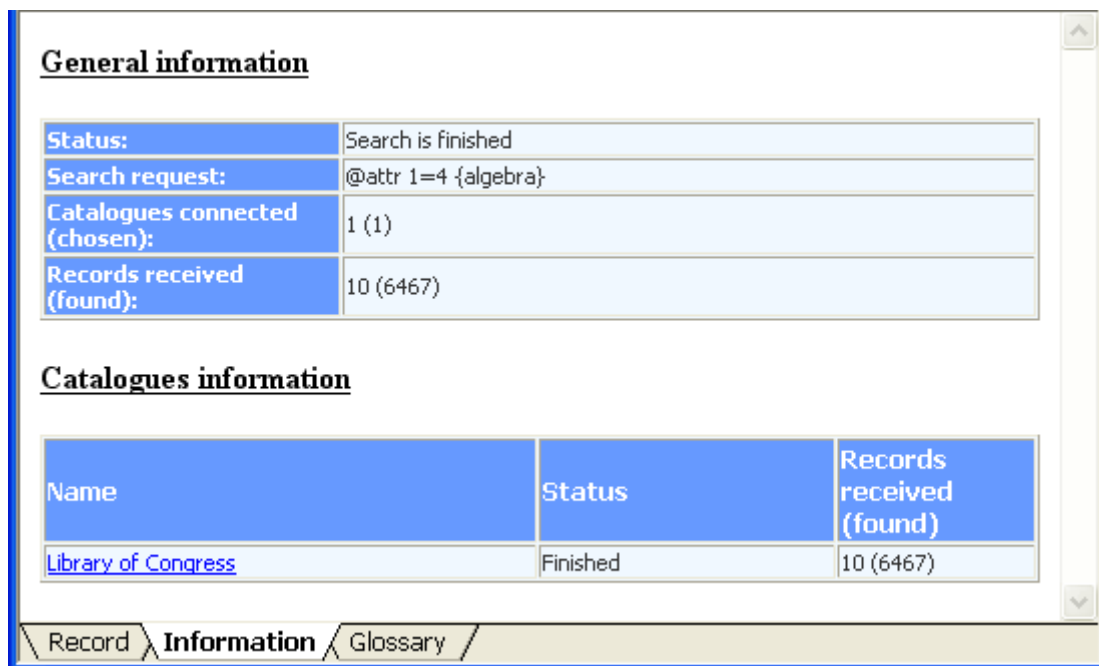


Fig. 27. Search session window

The glossary scan window allows getting a list of an electronic catalogue search terms. *The glossary of search terms (words)*. This glossary can be considered as the help which is given to you with program LibNavigator. This help can be demanded, when you, typing search request, were mistaken in any word. Another case is possible – the word used in search request does not lead to result, but any close to it on value (that you will see in this glossary) can help you find the necessary information (fig. 28).

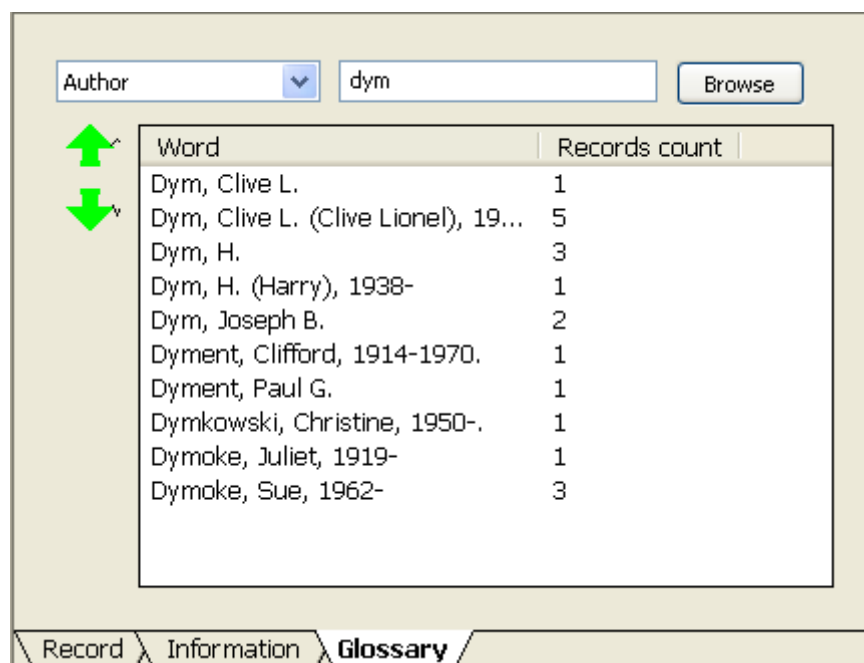


Fig. 28. Glossary

Glossaries are stored in the library catalogues and every search attribute has glossaries where search will be carried out. Having chosen search attribute, having typed and having pressed button "Search" you will see its value a little close (alphabetically) to entered words from the glossary. Having pressed the button (up) or (down) you can see the previous or following words from the same glossary.

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Having pressed any of the found words with the left button of the mouse and having chosen from the pull down menu item «Search» you will begin a new session of search, but already for the chosen word. The list of the library catalogues in the new search session will coincide with previous one.

### 3.5 Record view window

The record view window (fig.29) consists of several areas: brief and full view areas and filter area. The brief view area contains table, its lines present brief descriptions of bibliographic records in the Author – Title – Date of publishing format.

The filter area consists of one or several filters (you can customize their list in the *Interface* inset of the *Settings* window in *Service* menu) and it is meant for a quick selection of records on the basis of some features.

If you use filters:

- At a choice of one element of the filter in the field of representation you will see only those records that satisfy to this element of the filter.
- At a choice of two or more elements of the filter, you will see records that satisfy even to one of the chosen elements.
- If you use several filters, you see records that satisfy to all filters simultaneously.

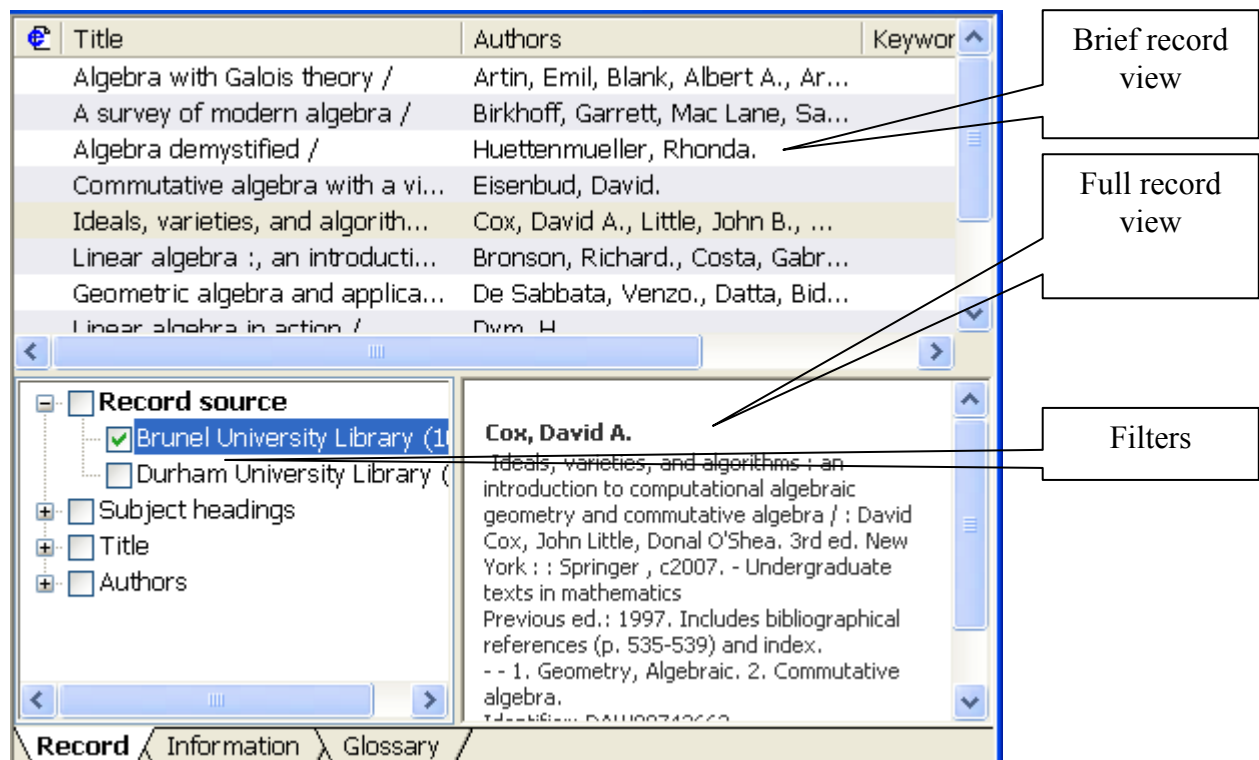


Fig. 29. Record view window





#### How to work with the record view window?

- To select records use the keyboard or the mouse.

## LibNavigator User interface

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- To browse full description make a left-click in any column of the corresponding line (author, title etc.)
- If in a brief record view window there is the reference to the full text (in the beginning of record there is a badge ) it is necessary to press this badge in a line of corresponding record to view the full text of the found document.
- The table columns can be swapped by mouse dragging (holding the left mouse button in pushed position), the new column location is shown by two red arrows.
- To sort records by the contents of a particular column make a left-click on the column heading. To sort back click one more time on the column heading.
- If the contents of the corresponding column are beyond its width, direct the pointer at this cell. The full contents will be displayed in the pop-up window.
- Automatic adjustment of the column width to its contents, can be enabled by a left double-click on the separator between column headings (when the pointer is like )

## Chapter 4. Using LibNavigator

This chapter covers LibNavigator application. You will know how to retrieve documents, view bibliographic records, save them for further use and conduct other operations. The chapter also presents the examples of search queries and LibNavigator application.

### Contents:

- Bibliographic records search
- Viewing Bibliographic records
- Operations with bibliographic records
- Working with files
- Typical models of LibNavigator usage
- Fulltext documents search

### 4.1 Bibliographic records search

As bibliographic records search will take most of your time while working with the program, an efficient usage of the information retrieval tools is of exceptional importance for a correct question is said to contain a half-ready answer!

#### 4.1.1 Resources selection for searching

LibNavigator provides the chance of concurrent search in several electronic bibliographical resources, thus saving your time.

Bibliographic information retrieval starts with its localization determination. To start search begin with selection of the electronic catalogues you are going to search in.

In the LibNavigator program an electronic catalogue stands for a “resource”. The resource is characterized with the Internet address and database name. It also includes encoding and bibliographic record format, used in the catalogue. For resources that require authorization a password and user name can be preset.

You can modify the resources list in the **Resources** menu and contextual menu of the **Resources** scroll.

#### 4.1.2 Search request

For a start you must know what you want to find and how to do it most efficiently. The details of ways to make queries are given in the 4.5 “Typical usage of the LibNavigator program” chapter. After some practice, you will be able to make quick and efficient queries using program terms.

Three search forms (simple, main and extended) are on the **Search forms** bar and can be used for making queries. Each of these forms has its own sphere of application: a simple form is used if only one of the search object’s characteristic (e.g. only the author) is known. Main search form (the most frequently used) allows pointing up to 3 different characteristics. An extended one allows making a search request specifying with more than 3 characteristics (e.g. the author and title of the book, a place and date of publication).

It is necessary to enter closely symbols at search request creation. If inputting the search request you admitted a mistake (e.g. you were mistaken, typing a surname of the author, the title of the book or ISBN, etc.) naturally you do not receive demanded results. Therefore, if results are not you expected, first of all, check up correctness of search request creation.



#### **How to make a search request if only one text characteristic (author, title, ISBN etc.) is known?**

- Use the simple search form.
- Select required attribute (author, title etc.) from the pull down list. If you have troubles in selecting the attribute or want to find as many queries as possible, use “Anywhere” attribute value.
- To find the Shakespeare’s sonnets, enter “Shakespeare” in the search phrase field and select “Author” attribute.
- If you want to specify the previous search request (**search in the found**), perform two previous operations for a new search request and tick in found item.
- If optional search attributes value (of truncation and structure; their description and patterns of usage are given in the Appendix1. BIB-1 attributes) must be modified, tick corresponding value. On default the right truncation is used in searching.

- To start session push **Search**.



### How to make a search request if all the details of the edition are known?

- If number of characteristics is three and less (e.g. author, title, date of publication) use main search form, otherwise the extended one.
- While using the main form, you can modify additional attributes for corresponding request lines by means of menu. It will appear after clicking on the corresponding button.
- Using the main form:
  - to modify optional attributes in the corresponding line push **optional attributes**(fig.19)
  - select the optional attribute value in the pull down menu,
  - to specify search request use filters “Document language”, “With full text documents”, “Bibliographic level”, “Contents form”, value marking activates the corresponding filter.
- Using the extended form:
  - add needed number of lines clicking **Add**;
  - delete unnecessary lines highlighting them and clicking **Delete**;
  - to clear the entire form click **Clear**;
  - to modify logical operator and attribute value click on the corresponding item and select a value from suggested lists;
- Edit the contents of the lines, containing certain edition characteristics.
- More details on searching attributes in the Appendix 1.BIB-1 Attributes.
- To start search click **Search**.



### How to make a request to search for the fulltext documents?

- Using simple search form:
  - make a search request;
  - mark “with full text” item in Search;
  - to start search click **Search**.
- Using main search form:
  - make a search request;
  - mark “with fulltext documents” filter;
  - to start search click **Search**

#### 4.1.3 Start and stop searching



### How to start searching?

- First, select search resources and make a search request (see the "Search request" section).
- To start click **Search**.
- With the search completed, view received results or a diagnostic message. The diagnostic message means that there is an error (see further the list of possible errors).
- If you notice that the search request or selected resources are wrong, stop searching. To do this, click **Stop** in the menu **Search**. The search may not stop immediately, for the program waits for the electronic catalogue answer to disconnect.

## Using LibNavigator

### 4.1.4 Diagnostic message

In case of a connection error or resources failure to treat the search request correctly, a diagnostic message with error description is sent. BIB-1 diagnostic messages set is used for this.

The most frequent cases of such messages with a short description are given below.

Message text	Possible causes
Connection error	The server is disabled, invalid address or port number, the Internet doesn't work
Connection lost	Unexpected server failure, exceed of hold time
Unsupported attribute	The resource doesn't support the attribute
Non-existing database	Invalid database name, it may be removed or temporarily unavailable
Database unavailable	Invalid database name or it is currently inaccessible
The record is unavailable in requested format	The resource doesn't support record retrieve in requested format

Tab.2 Diagnostic messages

The details can be found at the site by Z39.50 protocol Supporting Agency of The Us Congress Library <http://lcweb.loc.gov/z3950/agency/defs/bib1diag.html> (in English).

### 4.2 Viewing bibliographic records

If some bibliographic records are found while searching in any resource, the program will automatically run the first record packet and open the window (a separate one for each resource) to view them.

If the number of found records exceed the record package size, you can get the rest records using **Next** in the menu **Search**. The record package size is from 10 to 100, depending on the settings. (See section 5.1 Connection and delivery characteristics).

To swap windows around and to select their arrangement, use the **Windows** menu.

#### 4.2.1 Full and brief record view

The content of records is summarized in a table, where each line corresponds to one record. The cell of a table contains: a box for record marking, reference to an external document, brief contents such as the author, title, place of publication etc.

To facilitate table usage, the following functions are provided:


- To sort records in a certain order (by alphabetical order, marking or external document reference) make a left click on the corresponding table cell heading. To reverse, click again.
- If the contents of the corresponding column is beyond its width direct the pointer at this cell. The full contents will be displayed in the pop-up window.
- Automatically adjustment of the column width to its contents, can be enabled by a left double-click on the separator between column headings (when the pointer is like .
- The table columns are interchangeable by dragging. Unnecessary columns can be removed by dragging beyond headings space.

Table lines contain the primary information on the bibliographic record (the author, title etc.). The program also provides more details of a record with a full record view, which is displayed in its own area (at the right bottom).



### How to get a full record view?

- Make a left click on any corresponding record line area (but the cell responsible for work with external documents).
- To change the view format click **Record** ⇒ **View format** and select one from the list.
- To get the primary information on the record use **Requisition** format (full or brief).
- If you prefer working with paper catalogues, use **Bibliography** format, where the records are displayed as usual library cards.

#### 4.2.2 Full record view formats

LibNavigator provides several formats of a full record view:

- Requisition (full and brief)
- Bibliography

To modify a full record view format use **Format** button (tools fig. 12, fig. 13) or contextual menu of a full record view.

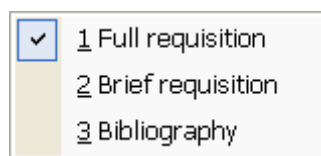


Fig. 30. Record view format

**Requisition** is a two-column table. This form is oriented primarily on the reader, as printed requisition is close to a requisition form used in libraries.

Identifier:	RU/Omsk/LibraryOmSU/omsu/000216
Author:	Baburin Sergey Nikolaevich
Corporate author:	RU.Omsk State University
Primary title:	State area and territorial claims
Information on the title:	School-book for a special course (for law department students): [for high schools]
Publication information:	Omsk: OmSU,2001
ISBN:	5-7779-0263-4
BBC:	X620.42я73 + X912я73
Subject heading:	1. State area.
Location:	OmSU Library X620 XP

Tab. 3. Requisition pattern

**Bibliography** is a library card analogue, close to ISO 690—87 (GOST 7.1—84) standard. The record identifier and document location are given as complementary.

#### **Baburin, Sergey Nikolaevich**

State area and territorial claims: School-book for a special course (for law department students): [for high schools] / S.N. Baburin; Omsk State University . Law School. Omsk: OmSU, 2001 p.164 + 21 see ISBN 5-7779-0263-4: p30.00, 500

- - 1. State area

Location:


Tab. 4. Bibliography pattern

### 4.2.3 Working with the external documents

The external document is the one the record doesn't contain. If a record has a link to the external document (full text, pictures, audio and video records etc.), LibNavigator can open it or save following a link.



#### How to read the full text by a link in the record?

- If the record has  symbol in the corresponding line, it means there is a link to the external document.
- The e-address of the external document will be displayed if to direct a pointer at this symbol.
- Make a left-click on symbol to open (like in usual browsers, e.g. Internet Explorer).
- Whether the web-page with the document will be open or it will be suggested to open or save the file depends on the type of the external documents. The requested document may be unavailable. If it is inaccessible it's not a mistake of LibNavigator program. The real reasons can be various, for example, at the moment the server where the document is placed, is in a non-working condition, or connection channel is out of work, or the external document is lost but the reference to it has remained in the bibliographic record, etc.

**Important!** Be careful while working with such files as they may contain viruses or other potentially dangerous information. This is the problem of all known browsers. Use anti-virus software!

### 4.2.4 Filter usage

You can use filters to hide records that do not meet some criteria, e.g. if there are records from several resources, you can hide the records, received from all resources but one.

Filter customizing window is in the left bottom of the records viewing area (fig.29). You can use simultaneously several filters, e.g. by the record resources and their subject headings. To select a filter, tick a necessary item.

## 4.3 Operations with bibliographic records

LibNavigator provides the opportunity to conduct some operations on the bibliographic records (saving, printing, copying etc.). To operate with records you must mark records you are interested in tick Select line field.

There are several ways of records marking:

- *By means of keys on the keyboard*
  - To mark some records it is necessary keeping key Ctrl to click on record;
  - To note a range of records it is necessary keeping key Shift to click on the first and the last record of a range;
  - To cancel records marking it is enough to click on any record.
- *By means of the contextual menu (it is caused by pressing the right key of the mouse)*
  - To mark all records choose item of the contextual menu **Select all**;

## Using LibNavigator

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- To cancel records marking it is enough to click on any record.
- *By means of a command of the **Records** menu*
  - Choose item of the menu **Records** ⇒ **Select all**;
  - To cancel records marking it is enough to click on any record.

### 4.3.1 Copying/saving records to the basket

The basket is intended for storing records received from different resources in the same place.



#### How to use basket?

- Select records you need.
- To save them to the basket, push **Save to basket** on a toolbar or select in the menu **Records** ⇒ **Copy to basket**.
- To view the basket contents select **Basket** ⇒ **Show basket** in the menu.
- When you quit the program, the basket automatically keeps the data and restores it at the next session with LibNavigator.

### 4.3.2 Full record representation printing

LibNavigator supports printing and preview options. The text equivalent of a full record view can be printed.



#### How to print records?

- Select records you need.
- Select required format of a full record view.
- Set up page parameters you need (if necessary) and adjust a printer. See **File** ⇒ **Printer**.
- To look how it will appear on paper, select **File** ⇒ **Preview**.
- To print selected records click **Print** or select **Records** ⇒ **Print selected** in the menu.

### 4.3.3 Full record representation copying to the clipboard(buffer)

If you will need to paste record text (fig. 31) to the external programs (text editor etc.), use copy to the clipboard option. The text format is defined with the type of a full record view (a requisition, bibliography etc.).

## Using LibNavigator

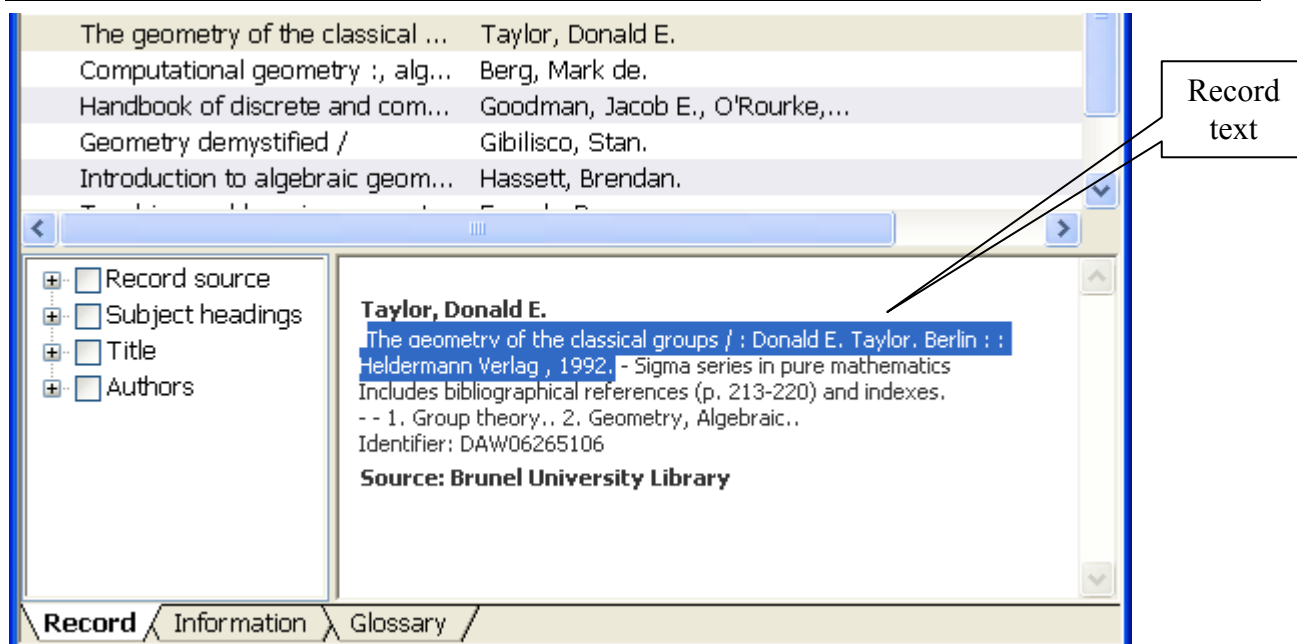


Fig. 31. Record text

To copy text to the clipboard, select necessary records and click **Copy to clipboard** or select in the menu **Records** ⇒ **Copy** and from the buffer you can insert the text into the file necessary to you.

### 4.4 Working with files

#### 4.4.1 How to save records to the disc file

LibNavigator program provides the opportunity of saving received records to the disc file in the LNF format, which allows to save bibliographic records received from different resources to the same file. The records may have different encoding and syntax.



#### How to save bibliographic records?

- Select records you need.
- Use **Records** ⇒ **Save**.
- Save bibliographic records to file dialog will be displayed to define the name and location of a file being saved. You must choose file location and enter a path or select its name. You don't have to specify file extension, as the program will give it automatically.

#### 4.4.2 How to open file with the bibliographic records

LibNavigator allows viewing bibliographic records, saved as files to the disk or the net in the LNF format.



### How to open file with bibliographic records?

- While working with the Windows Browser make a double-click (as you usually do to open file) on the records containing file with «lnf» extension. To view the records you need to return to LibNavigator program.
- To open file in the LibNavigator program, select **File** ⇒ **Open**, then choose a path to the file in the dialog Open file with bibliographic records.

#### 4.4.3 Records export to a text file

LibNavigator allows saving textual record view. The records are saved to the usual text file you can work with in any text editor (e.g. Pad or Microsoft Word).



### How to save bibliographic records to a text file?

- Select records you need.
- Use **Records** ⇒ **Save**
- Save bibliographic records to file dialog will be displayed to define the name and location of the file. You must choose the file location and enter a path or select its name. You have to specify the file extension from the list (\*.txt).

#### 4.5 Typical models of LibNavigator usage



### Useful tips

- Retrieve documents in the electronic catalogue (found in the program resource list) of a library you are interested in. If no records are found, try the electronic catalogues of other resources, and if you succeed you can apply with ILE(inter-library exchange) for an edition.
- You'd better search first in the libraries of your area, then in other libraries of your city and if search fails try to search in the catalogues of other cities.
- If you search for the edition with one characteristic (a topic, author etc.), use a simple search form. Enter a search phrase (keyword, author's last name, title etc.) and select corresponding attribute (for wider search use "Anywhere" attribute value).
- To specify further queries use *Search in found*.
- Place useful bibliographic records to the basket, so you can choose those that suit you most. For a full record view use format you are accustomed to.

### EXAMPLES

#### Example 1.

You want to find "Aging in America" by Bill Golphus in Library of Congress USA.

1. Use the main search form.
2. In the first line select *Author* attribute of **Usage**, enter *Golphus*.
3. In the line 2 select *Title* attribute of **Usage**, enter *Aging*.
4. Tick Library of Congress in resources tree.
5. Press **Search**.
6. 13 records are found.

It means that in Library of the Congress there are 13 books of this author with such name.

## Using LibNavigator

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### Example 2.

You want to find “Life history and the historical moment” by Erik H. Erikson, in the library of California Institute of Technology.

1. Use the main search form.
2. In the first line select *Author* attribute of **Usage**, enter *Erikson*.
3. In the line 2 select *Title* attribute of **Usage**, enter *Life history*.
4. Tick *California Institute of Technology* in resources tree.
5. Press **Search**.
6. 1 record is found.

It means that in the library of California Institute of Technology there is 1 book of this author with such name.

### Example 3.

You want to find “Biologie generale” by Maxime Lamotte in the library of University College in United Kingdom.

1. Use the main search form.
2. In the first line select *Author* attribute of **Usage**, enter *Lamotte*.
3. In the line 2 select *Title* attribute of **Usage**, enter *biologie*.
4. Tick *University College* in resources tree.
5. Press **Search**.
6. 1 record is found.

It means that in the library of University College in United Kingdom there is 1 book of this author with such name.

### Example 4.

To find editions by Ojemann, published in the University of Iowa.

1. Use the simple search form.
2. Select the *Author* attribute of **Usage**, where enter Ojemann in the search phrase field.
3. Search in the electronic catalogue of *United States* → *Boston University*.
4. Press **Search**.
5. 8 records are found.
6. Tick the *University of Iowa* in the *Place of publication* filter. 5 records are displayed.
7. Make a requisition for a book.

### We recommend use reductions.

1. If you are not sure of correct writing of an author’s surname and certain name of the book, write the beginning of the name or the surname and choose attribute «Right truncation».

## 4.6 Search for fulltext documents

LibNavigator program gives an opportunity to spend search for full text documents in electronic catalogues of libraries worldwide.

Fulltext documents can be materials:

- the educational contents (dissertations, methodical grants, manuals, virtual textbooks, scientific articles);
- works of art;

## Using LibNavigator

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- images;
- audio and video files.



**Be careful, working with full text documents don't start suspicious programs and use anti-virus software**


### Example 5.

You want to find “A framework for exploring the macroeconomic determinants of systematic risk” by Andersen, Torben G. in Library of Congress USA.

1. Use the main search form.
2. In the first line select *Author* attribute of **Usage**, enter *Andersen*.
3. In the line 2 select *Title* attribute of **Usage**, enter *A framework*.
4. Tick Library of Congress in resources tree.
5. Press **Search**.
6. 1 record is found.
7. Icon  in begin of record means, that you can see the full text of this material.
8. To look the full text, press this icon.

### Example 6.

You want to find “Applied Stratigraphy” by Eduardo A. M. Koutsoukos, in library of University of Ballarat in Australia.

1. Use the main search form.
2. In the first line select *Author* attribute of **Usage**, enter *Koutsoukos*.
3. In the line 2 select *Title* attribute of **Usage**, enter *Applied Stratigraphy*.
4. Tick Australia → *University of Ballarat* in resources tree.
5. Press **Search**.
6. 1 record is found.
7. Icon  in begin of record means, that you can look full text of this material.

Note: But you can get full text of materials only after registration on library site.

**Example 7.** You want to find the electronic journal «Current Research in Social Psychology».

1. Use the simple search form.
2. Select the *Title* attribute of **Usage**; enter *Current research in Social Psychology* in the search phrase field.
3. Search in the electronic catalogue of *Canada* → *Acadia University*.
4. Press **Search**.
5. 3 records are found.
6. Only one record has a link to the full-text document.
7. Follow the link

**Example 8.** If you are interested in questions of a wood and want to read that is issued International Union of Forest Research Organizations (IUFRO) and in particular to familiarize with releases IUFRO occasional paper, it is necessary for you to make the following:

1. Use the simple search form.
2. Select the *Key word* attribute of **Usage**; enter *IUFRO* in the search phrase field.
3. Search in the electronic catalogue of Switzerland → *Network of Libraries and Information Centers of Switzerland*.
4. Press **Search**.
5. 21 records are found.

## Using LibNavigator

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6. In the **Title** filter, tick the *IUFRO occasional paper*. Only one record out of the 21 will be displayed. It has a link to the full-text document.
7. Follow the link.

**Example 9.** For acquaintance with works on economy of China it is necessary to make the following:

1. Use the main search form.
2. In the first line select *Key word* attribute of **Usage**, enter *Economy* as the search phrase.
3. In the line 2 select *Title* attribute of **Usage**, enter *China* in the search phrase field.
4. Search in the electronic catalogue of Belgium → *University Libre de Bruxelles Online Catalog*.
5. Press **Search**.
6. 2 records are found.
7. There is 1 record with a link to the full-text document.
8. Follow the link.

## Chapter 5. LibNavigator customizing

LibNavigator provides a great customizing opportunity. This chapter shows how to customize connection characteristics and user interface.

Additional opportunities: work with a resources tree, addition and removal of resources and groups, import of resources list from files and site LibNavigator are described in Appendix 4. Resources list and characteristics modification

### Contents:

- Connection and delivery characteristics settings
- Search form characteristics modification
- Other user interface characteristics

### 5.1 Connection and delivery characteristics setting

For modification of connection and delivery characteristics serves an inset **Connection** of **Settings** dialogue (fig. 32) (the menu **Service** ⇒ **Settings**).

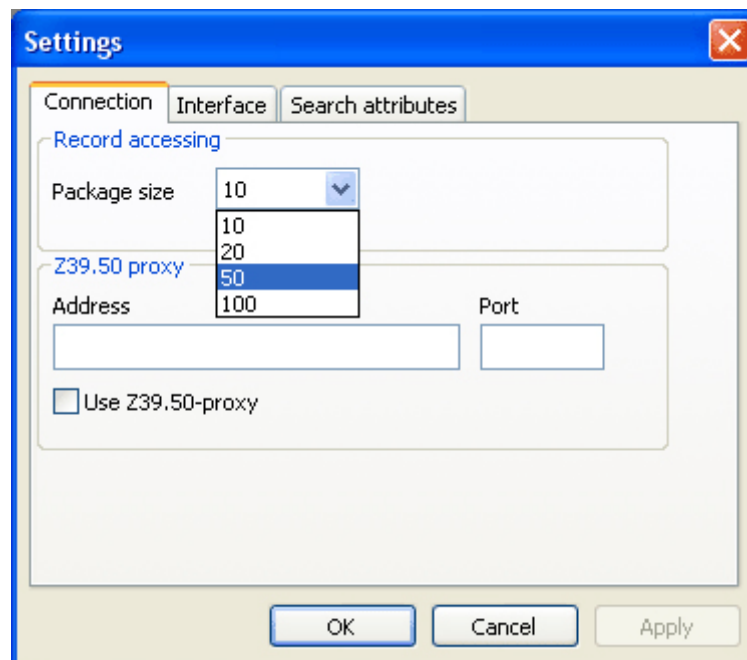


Fig. 32. Settings dialogue, Connection inset

#### 5.1.1 Records retrieve

Characteristic **Package size** defines quantity of records that server is requested to deliver in one session, i.e. in one package. You will receive such number of records by one search request. To change the records number choose number from the offered list (from 10 up to 100). On default number of records in a package equal 10.

#### 5.1.2 Z39.50-proxy application

When local network computers hardly have a direct access to the Internet some additional settings can be demanded. In this case proxy-service is used for accessing the Internet. To get more information about Z39.50-proxy service refer to Appendix 3. Installing Z39.50 LibNavigator Proxy.

### 5.2 Search form characteristics modification

To modify search form characteristics go to the **Search attributes** inset of the **Settings** (fig.33) dialog (**Service** ⇒ **Settings**). You can select attributes used in the search forms.

To modify search forms attributes follow next steps:

- Select a search form you want to modify (Simple, Main, and Extended).
- To add one attribute from the *Available* List to the *Used* list select the attribute you need and click **Add selected**.
- To add all attributes from the *Available* List to the *Used* list click **Add all**.

## LibNavigator customizing

- To remove one selected attribute from the *Used* list select the attribute and click **Delete Selected**.
- To clear the *Used* list click **Delete all**.
- To change the attributes sequence order move them **Up** and **Down** in the *Used* list.
- Follow these instructions for all search forms.

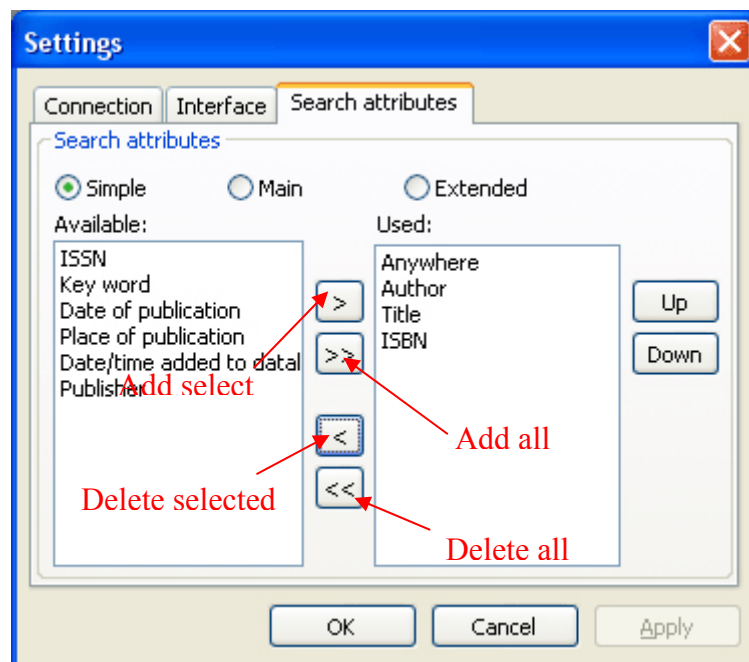


Fig. 33. Settings dialog, Search attributes inset

### 5.3 Other user interface characteristics

LibNavigator program gives opportunities to modify user interface.

#### 5.3.1 Program language

LibNavigator multilingual version allows choosing language of the user interface. Language changing comes along with resources tree changing. To choose a language use **Language** of the **Interface** inset of **Settings** dialog (**Service** ⇒ **Settings**). In this case program restart is necessary (it starts automatically).

#### 5.3.2 Hide/show bibliographic resources and search forms bars

To increase the area for record viewing you can hide **Bibliographic resources** or **Search form** bars. To do this, select **Windows** ⇒ **Toolbar** ⇒ **Resource Bar /Search form bar** in the menu.

The bars can be placed in both, left and right parts of the main window. To change the bar location- catch the heading (by left-clicking) and drag it to a new place. To cancel bar parking to the windows borders or vice versa to park a bar there, double-click by the left mouse button on the bar heading.

### 5.3.3 Hide/ show the status bar and toolbar

You can hide and show the status bar and Toolbar by selecting Windows ⇒ Tools ⇒ Toolbar and Windows ⇒ Toolbar ⇒ Status bar in the menu.

## Chapter 6. Frequently asked questions (FAQ)

This chapter covers the most frequently asked questions while running LibNavigator program.

### The questions:

- Why one uses the LibNavigator bibliographic browser when one can work with the bibliographical catalogues in the usual Web-browser, e.g. Internet Explorer?
- Can a computer become infected with viruses while running LibNavigator program?
- What record formats does LibNavigator support?
- Is it possible to add own electronic catalogues to the resources tree and where one can get their addresses?
- What exactly is Z39.50 Protocol and how it differs from the rest such-like protocols?
- What does the “Unsupported attribute” mean?
- What is ISO 2709 format?
- What the basket is meant for?
- Some resources regularly cause troubles. What should one do?
- I often get “0 found records” as search result...
- Will my library accept the LibNavigator printed requisition for a book?
- Where can I find extra information on new topics: Z39.50, MARC, ISO 2709 etc.?
- I have a registration key of one edition, whether it will approach for work in other edition?
- I often get 500 or 1000 records as search result. How can I decrease their quantity?
- How can one select a section of resources tree in order to search for info in chosen catalogues only?

## Frequently asked questions (FAQ)

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### **Why one uses the LibNavigator bibliographic browser when one can work with the bibliographical catalogues in the usual Web-browser, e.g. Internet Explorer?**

Most Russian and foreign libraries place their information resources in the Z39.50-servers. What differs these servers from the usual WWW-servers is that they are accessed via Z39.50 network protocol. This makes usual browsers, like the Internet Explorer, useless for viewing information placed in the Z39.50-servers.

Some library systems developed the so-called gates (a software, which allows to use usual WWW-browsers to retrieve information in the Z39.50-servers) to get over this technological barrier.

However this approach has some disadvantages, e.g. the search forms interface and record view can be different in various gates. Besides, a gate is an additional link in the 'client - Z39.50 server' chain and that causes the loss of the net interchange speed and increase in the network traffic.

Some other disadvantages become clear when professional librarians use a gate (e.g. in the work of the cataloguers on the electronic catalogues update). Some gates don't allow you to view records in the RUSMARC communicative format, what makes them almost useless for the library cataloguers. Another disadvantage is that some gate forms of record view cannot provide the record details. Besides, you need to make a new search request (and it is time-consuming) to change the record view form.

These problems can be solved using browsers developed especially for the Z39.50 Protocol. This very browser is the LibNavigator software (Reader edition).



### **Can a computer become infected with viruses while running LibNavigator program?**

LibNavigator program is relatively virus-proof, as it doesn't start itself the execution of the code received from the Internet. It is only vulnerable while browsing the full-text on-line documents, pictures, audio and video records in the Web, as potentially dangerous information may be downloaded.



**Be careful while working with external documents, use anti-virus software, and do not run suspect programs!**

This is the problem of using browsers. Be careful.



### **What record formats does LibNavigator support?**

LibNavigator supports queries, receiving and viewing in the following bibliographic record formats:

- UNIMARC

## Frequently asked questions (FAQ)

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It is an international communicative format of bibliographic information interchange.  
The details at <http://www.gpntb.ru/win/unim/>

- RUSMARC

Russian variety of UNIMARC format.  
The details at <http://www.rba.ru:8101/rusmarc>

- MARC21

The record format adopted in the USA, Canada, Great Britain.  
The details at <http://www.loc.gov/marc/>

- USMARC

The US record format.  
The details at <http://www.loc.gov/marc/>



### **Is it possible to add own electronic catalogues to the resources tree and where one can get their addresses?**

Yes, you can add and remove resources in the preset resources list of the program. To perform this you must know the address of the needed resource, port number and database name. Operation sequence is given in the section “Resources list modification”.

If you want this resource to be available for other users, e-mail to [support@libnavigator.com](mailto:support@libnavigator.com) providing comprehensive information on the electronic catalogue (server address and port number, database name, Cyrillic code table). The resource is likely to be added to the next version reset list and its address will be available at the LibNavigator website.

The new electronic catalogue addresses for enlarging the resources can be found by following ways:

- You can go to the LibNavigator site <http://www.libnavigator.com/> where you can find regularly updated electronic catalogues list of the libraries, the members of Russian library associations and many other.
- Contact the administration of the library you are interested in by post, telephone or e-mail. The library may have the electronic catalogue, available in the Internet via Z39.50 Protocol. If there is one, ask for its electronic address, port number, database name and Cyrillic encoding used.
- Go to [http://www.ruslan.ru:8001/rus/rus\\_lib.html](http://www.ruslan.ru:8001/rus/rus_lib.html), where you can find links to the web-pages of the CIS and Russian libraries.
- At the site <http://www.ruslan.ru/rus/> you can find a lot of useful links, e.g. Z39.50 services test results of the participants of the “Russian Corporate Library Systems” contest.
- At the site <http://z3950.ruslan.ru/stat/> there is a large regularly updated list of Russian Z39.50 resources with the details of their addresses, current availability, bib-1 supported attributes, record formats and other useful information.
- You can find links to many foreign resources at the Index Data company site. <http://indexdata.dk/targettest/>.

## Frequently asked questions (FAQ)

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### What exactly Z39.50 Protocol is and how it differs from the rest such-like protocols?

Z39.50 protocol is defined by a corresponding standard (ANSI Z39.50-1995, ISO/FDIS 23950). Z39.50 is a protocol of application layer in a 7-layers reference model of systems interaction, developed by International Standard Organization (ISO), and thus can be applied in the nets of various types (e.g. TCP/IP, IPX/SPX, OSI), no matter what the transport layer is.

Its aim is to afford a "client" computer an opportunity to search and get the information from other computer, acting as an information server.

The standard specifies for the client computers a uniform procedure of search to information resource (servers), supporting library catalogues.

Z39.50 standard also defines some computer interaction rules, which allow unifying the access to the various databases. In other words the user working with only one application on the client computer, can search in the remote distributed databases, which have different structure and information presentation formats.

There are many other protocols of applied layer apart from Z39.50 protocol, e.g. http and ftp. The following features differ Z39.50 protocol from others:

- The information view type, designed in the protocol, doesn't depend on the information resources, using this protocol. In other words the protocol is an abstract model of information view on every stage of the client-server interaction.
- Z39.50 provides a full session interaction of a client and the server. This feature is designed in the protocol and it is supported in all its applications in both server system and client program.



### What does the "Unsupported attribute" mean?

Z39.50 defines the structure of a particular database as a set of search attributes, i.e. reflects a real Data Base Management System (DBMS) structure to an abstract data base. Defined by a corresponding standard, BIB-1 attribute set is used for bibliographic and such-like systems. This set consists of 6 search attribute types (usage, truncation, structure, relation, position, fullness) and a set of diagnostic messages with OID (unique identifier) = {1.2.840.10003.3.1} and {1.2.840.10003.4.1} accordingly.

Many the server support operation not with all attributes. So if you make a search request ISBN=5-09-001909-6 and a server can't discern the ISBN attribute of usage, then in reply to the search request it will send the "Unsupported attribute" diagnostic message to the program.

If you get the "Unsupported attribute" diagnostic message, modify the search request to suit you and not to cause a server error. Try to search for info using data about author, title, date of publication, etc.

You can get detailed information on the BIB-1 attributes in the Appendix 1.



### What is ISO 2709 format?

## Frequently asked questions (FAQ)

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Refer to Appendix 6. Additional information.



### **What the basket is meant for?**

The basket is meant for a convenient storage of found and selected records. It will reduce the time you spend on saving records. You can place all necessary useful records that you found to the basket. When the search is completed you can save them to the file for their further editing.



### **Some resources regularly cause troubles. What should one do?**

While running the program you can face such a problem. Indeed, the performance of many catalogues is unstable due to some reasons: connection breaks, server failures etc. You can solve this problem by less frequent usage of faulty resources while searching or by deleting them from the resource tree.



### **I often get “0 found records” as search result...**

Your queries may be built incorrectly. We recommend you to reread section 4.1 “Bibliographic records search” section in “Using LibNavigator” chapter and section 4.5 “Typical models of LibNavigator usage”.

It is possible that you have made a spelling mistake while typing a search request.



### **Will my library accept the LibNavigator printed requisition for a book?**

Most Russian libraries will accept LibNavigator printed requisition for a book in the library loan or in the reading-room. However there may be libraries that use strictly regulated requisitions, but you can fill in a form on the basis of a typical requisition, printed in the Libnavigator program.



### **Where can I find extra information on new topics: Z39.50, MARC, ISO 2709 etc.?**

You can find all information concerning these topics in the Internet and special literature. The list of the Internet addresses is given in the section 7.3 “Internet Resources” in the “Technical Support” chapter.



### **I have a registration key of one edition, whether it will approach for work with other edition?**

Registration keys of different editions have different set of symbols. You can't apply your “Reader Edition” key to work with “Cataloguer Edition” and vice versa.



### **I often get 500 or 1000 records as search result. How can I reduce their quantity?**

## Frequently asked questions (FAQ)

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Probably, your queries are built incorrectly. Use main and extended search forms to input more data about requested edition and not simple one only. We recommend you to reread section 4.1 “Bibliographic records search” in “Using LibNavigator” chapter and section 4.5 “Typical models of LibNavigator usage”.



### **How can one select a section of resources tree in order to search for info in chosen catalogues only?**

In LibNavigator program version 1.1 such opportunity is not present. In version 2.0 on the panel «Bibliographic resources" there is a scroll "Favorites". In this scroll you can add those information resources on which will often prospect. You can add both one resource, and the whole branches of resources. The detailed description of procedure of addition/removal of resources can be read through in Appendix 4. Resources list and characteristics modification.

## Chapter 7. Technical Support

While running the program you can face problems. Some can be solved with the help of the information in this chapter. If you won't be able to solve the problem yourself, you can send the program creators an e-mail message to [eremeev@omskreg.ru](mailto:eremeev@omskreg.ru)

### **Contents:**

- LibNavigator program update
- Troubleshooting
- Internet resources
- Contact us

### 7.1 LibNavigator program update

To update LibNavigator version 2.0 to version 2.x download the new version distribution kit from the program web-page <http://www.libnavigator.com/reader/>. Then run the setup file and follow the wizard's instructions. At this address you can also download the latest version of this manual (in the Adobe Acrobat Document format).

### 7.2 Troubleshooting



#### **There is no access to the electronic catalogues (connection error)...**

**Cause 1.** There is no access to the Internet.

The program cannot make a connection. It may happen due to incorrectly tuned network, faulty operation of a network card or modem, provider's failure etc. To make sure these problems are not caused by LibNavigator, open a web-page known to you (<http://www.google.com>, <http://www.msn.com> etc) in a browser (e.g. the Internet Explorer). If the pages do not open, you have troubles with the access to the Internet.

If there is a connection, problems may be caused by Z39.50 server, you want to work with. There may be bugs in some network segments. Check also the correctness of the server address and port number.

**Cause 2.** The access to the Internet is controlled by network screen.

LibNavigator must have the direct network connection with the Z39.50-server for better performance. However sometimes network screens are used to protect computers (synonyms: firewall, brand mower, IP-filters).

If the connection is made via *transparent* firewall, you should enable port numbers used by Z39.50-servers, the most frequently used is 210 port. To provide free network interchange you should enable outgoing TCP-connections for all necessary ports. To tune the firewall refer to the system or network administrator.



#### **The search request is correct but no information found...**

**Cause 1.** Selected search resources do not contain the records meeting your search instructions. Try to extend your search request.

**Cause 2.** The given resources don't support the search attributes. Check the diagnostic messages sent by the server, if there is one like the "Unsupported attribute of truncation"; try selecting "On default" attribute of truncation. It may solve the problem.

**Cause 3.** The resource doesn't support record view in the format you requested. Check the diagnostic messages sent by the server, if there is one like "The record is unavailable in requested format", modify the format (refer to chapter 5 "LibNavigator Customizing").



#### **Received records are strangely displayed**

It may happen if the records don't meet the formats, the program is working with. May be the record was damaged while posting.

## Technical Support

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### The program doesn't launch...

If you can't launch the program, try to reinstall it from the distribution kit you have. If it hasn't done you any good, apply for the technical support.

The technical support team will need the following information to provide you with expert advice and assistance:

- A general description of your problem with a full text of an error message;
- Your Windows version;
- Any other information you consider important or helpful.

## 7.3 Internet resources

The following links may be of a great help for you in the matter of additional information.

### 7.3.1 Z39.50 Protocol

- The LibNavigator program site: <http://www.libnavigator.com>
- Z39.50 Protocol supporting agency: <http://lcweb.loc.gov/z3950/agency>
- IndexData company: <http://www.indexdata.dk/>
- Z39.50-1995: Information retrieval protocol: <http://linnea.helsinki.fi/z3950/z3950pr.html>
- Z39.50 - Biblio Tech Review: [http://www.biblio-tech.com/html/z39\\_50.html](http://www.biblio-tech.com/html/z39_50.html)

### 7.3.2 MARC format

- Bibliographical format RUSMARC (National development service of the RUSMARC format system): <http://www.rba.ru:8101/rusmarc>
- Bibliographical format UNIMARC (IFLA): <http://www.ifla.org/VI/3/p1996-1/uniafull.htm>
- IFLA Universal Bibliographic Control and International MARC Core Program (UBCIM) (IFLA): <http://ifla.org/VI/3/ubcim.htm>
- Bibliographical format USMARC (The US Congress Library): <http://lcweb.loc.gov/marc/>
- Bibliographical format MARC21 (The US Congress Library): <http://lcweb.loc.gov/marc/>

### 7.3.3 Bibliographic resources list

- Z39.50 resources catalogue: <http://indexdata.dk/targettest/>

## 7.4 Contact us

OOO «Kvantor» (Russia)

- Telephone: +7 (381-2) 22-26-16
- Fax: +7 (381-2) 22-26-17
- E-mail: [eremeev@omskreg.ru](mailto:eremeev@omskreg.ru)

You can forward your questions and offers to the following address:  
[eremeev@omskreg.ru](mailto:eremeev@omskreg.ru)

The LibNavigator program website:  
<http://www.libnavigator.com/>

## Appendix 1. BIB-1 attributes

Bib-1 attributes of the Z39.50 protocol include 6 types of search attributes.

**The attributes of usage**– attributes, pointing at the element (context) of the bibliographic description where the search phrase is interpreted, e.g. you can specify that the given phrase should be interpreted as the author’s last name, the document’s title or the key word etc.

Attribute	Attribute value	Examples
Anywhere	No special interpretation (The record is selected if the term value (as qualified by the other attributes) occurs anywhere in the record).	1) verses 2) lectures, full stop
Author	An author’s real name, pseudonym, title of nobility nickname, or initials.	1) Shakespeare 2) Yakovlev
Title	Main title of the document (one or several words)	1) Sonnets 2) full stop mechanics
Keyword	The terms, used in the document, or to characterize the document (one or several words)	1) lyric poetry, the 16 <sup>th</sup> cent. 2) mechanics, textbook
Date of publication	The date (usually year) of document publishing (in the YYYY format).	1) 1993 2) 1991
Place of publication	The city or town where an item was published.	1) M. 2) Perm
Publisher	The organization responsible for the publication of the item.	1) Fenix 2) Perm University
ISBN	International Standard Book Number – Internationally agreed upon number that identifies a book uniquely.	1) 5-280-02887-8 2) 5-230-09260-2
ISSN	International Standard Series Number - Internationally agreed upon number that identifies a serial uniquely.	1) 5-280-02887-8 2) 5-230-09260-2
Date/time added to database	The date and time that a record was added to the database (in the YYYY or YYYYMMDD format).	1) 2000 or 20000315 2) 1996 or 19960304

Tab. 5. The attributes of usage

**The attributes of relation** – attributes, pointing at the correlation between the inputting phrase and numerical elements of the bibliographic description. Only the numerical data is used, e.g. the date. You can search the documents being published no sooner the date specified.

Attribute	Attribute value	Examples
Less than	Meaningful only when the term value as qualified by the attributes is less than the access point.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published before 1998
Less than or equal	Meaningful only when the term value as qualified by the attributes is less or equal than the access point.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published in 1998 and earlier

## BIB-1 attributes

Equal	Meaningful only when the term value as qualified by the attributes is equal to the access point.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published in 1998
Greater or equal	Meaningful only when the term value as qualified by the attributes is equal to the access point or greater.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published in 1998 or later
Greater than	Meaningful only when the term value as qualified by the attributes is greater than the access point.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published after 1998
Not equal	Meaningful only when the term value as qualified by the attributes is not equal to the access point.	The attribute of usage: Date of publication Search phrase: 1998 Results: All editions published in any year but 1998.

Tab. 6. The attributes of relation

**The attributes of position** – attributes, pointing at the inputting phrase location in the bibliographic description, e.g. you can make a search only by the initial or the last word in the title. LibNavigator doesn't support this attribute and has none in its search forms.

**The attributes of structure** – attributes, pointing at the structure of the inputting phrase, which can consist of one or several words and their sequence may be dependent or not, e.g. the search can be made by several words from the title.

Attribute	Attribute value	Search phrase
Word	The search phrase is interpreted as one word, which is compared to the words in the bibliographic description stated in the attribute of usage.	The attribute of usage: Title Search phrase: theory Possible result: The theory of relativity, The classical gas theory.
Phrase	The search phrase is interpreted as several words with the dependent sequence order. It is compared to the words in the bibliographic description stated in the attribute of usage.	The attribute of usage: Title Search phrase: movements model Possible result: the classical molecule movements theory, the celestial bodies movement theory
Word list	The search phrase is interpreted as several words with the independent sequence order, which are compared to the bibliographic description element stated in the attribute of usage.	The attribute of usage: Title Search phrase: gases liquids Possible result: The processes in the viscous fluid and gases, Gases and liquids – structure and analysis

Tab. 7. The attributes of structure

**The attributes of truncation** – attributes, pointing at possible incompleteness of the search phrase, e.g. the search can be made only by known part of the word, which can be the beginning, the center or the end of the word.

Attribute	Attribute value	Search phrase pattern
Right truncation	Only the left part of the bibliographic description element is compared to the search phrase stated in the attribute of usage. The truncation border is free.	The attribute of usage: Author Search phrase: kras Possible result: Krasnov, Krasikov, Krasavtseva
Left truncation	Only the right part of the bibliographic	The attribute of usage: Author

## BIB-1 attributes

	description element is compared to the search phrase stated in the attribute of usage. The truncation border is free.	Search phrase: stein Possible result: Einstein, Eizenstein, Volkenstein
Left and Right truncation	Only the central part of the bibliographic description element is compared to the search phrase stated in the attribute of usage. The truncation border is free.	The attribute of usage: Author Search phrase: ustov Possible result: Paustovskyi, Shustov, Ustovich
Do not truncate	The bibliographic description element is fully compared to the search phrase	The attribute of usage: Author Search phrase: marquez Possible result: Marquez

Tab. 8. The attributes of truncation

**The attributes of fullness** – attributes, pointing at the inputting phrase correspondence to complete or incomplete bibliographic description element, e.g. the search can be made by any acceptable complete element. LibNavigator doesn't support this attribute and has none in its searching forms.

## Appendix 2. Z39.50 protocol

LibNavigator uses Z39.50 an applied level protocol for searching and information retrieval on the Internet.

Z39.50 protocol definition, "Information Retrieval (Z39.50): Application Service Definition and Protocol Specification", is presented by ANSI/NISO Z39.50 and ISO 23950 standards, runs as follows:

*Z39.50 is a network interchange protocol of applied layer. Z39.50 allows the user to search and get information from computer systems supporting this protocol. The user doesn't have to know search request syntax of a particular system. Z39.50 is an American National Standard, initially offered by NISO in 1998. (The US Congress Library, an official Z39.50 support agency)*

The US Congress Library is an official Z39.50 support agency. To get more details about Z39.50 protocol apply to the site <http://lcweb.loc.gov/z3950/agency/>.

### Z39.50 protocol support in LibNavigator 2.0

LibNavigator supports the client version of Z39.50 protocol - 1995 (versions 2 and 3). The software meets the requirements of Baseline version 3 (<http://lcweb.loc.gov/z3950/agency/v3base.html>) as the Z39.50 client part. Protocol version 3 is used on default. Version 2 is used if the server doesn't support version 3.

### Making a search request

LibNavigator fully supports queries (search request) of a type-1 format (RPN-Query).

### Bib-1 attributes

Z39.50 defines a particular database as a search attribute set. Bib-1 is one of such attribute sets and is used primarily for bibliographic information retrieval. Bib-1 set determines the attributes of usage, useful for bibliographic queries and supporting such fields like "Author", "Title", "Subject heading", "ISBN" etc. Besides the attributes of usage LibNavigator allows specifying other Bib-1 search attributes: relation, truncation and structure.

### Records getting

The protocol determines two record types, provided by the server: proper records in requested format and diagnostic messages. LibNavigator supports the following formats: RUSMARC, USMARC, MARC21, UNIMARC. LibNavigator supports Bib-1 diagnostic messages set (<http://lcweb.loc.gov/z3950/agency/defns/bib1diag.html>).

### Z39.50 protocol functions, supported by LibNavigator version 2

- **Session initialization (init)**

LibNavigator can make a Z39.50-connection with several Z39.50 servers simultaneously.

- **Search**

Search function allows making queries in the Z39.50 databases and viewing the results. The client can select the record representation format and if supported by the server the records will be viewed in this format.

- **Records retrieve**

Records retrieve function allows the client party of Z39.50-connection to get records from resulting set of databases created by requesting.

- **Glossary scanning**

Glossary scanning function allows the client of the Z39.50 -connection scanning the search terms glossary of the server.

- **Session end (close)**

Z39.50 protocol allows closing Z39.50-connection by both client and server initiative.

### Yaz applied program interfaces library

LibNavigator uses Yaz applied program interfaces library (Yet Another Z39.50) by IndexData company (<http://www.indexdata.dk/>) to support Z39.50 protocol. ZOOM API is used.

## Appendix 3. Installing «Z39.50 LibNavigator Proxy».

System requirements:

Operating system: Windows NT SP6, Windows 2000, Windows 2000 Server, Windows XP, Windows Server 2003.

To install «Z39.50 LibNavigator Proxy» Version 1 run zproxyn1\_0setup.exe and follow all the instructions of the «Z39.50 LibNavigator Proxy» installation wizard.



**1. To install «Z39.50 LibNavigator Proxy» the computer must have the direct access to the Internet.**

**2. To install «Z39.50 LibNavigator Proxy» you must be a system administrator!**

**Step 1.** Choosing the wizard's language.

*Description:*

Dialog box offers to choose the language of setup. The wizard will give all the information in selected language.

*Your actions:*

Select language and click **OK** to proceed with installation or **Cancel** to exit the wizard.

**Step 2.** The wizard's welcome page.

*Description:*

You will be recommended to exit all running applications to proceed with «Z39.50 LibNavigator Proxy» installation.

*Your actions:*

Click **Next** to proceed with installation or **Cancel** to cancel «Z39.50 LibNavigator Proxy» installation on your computer.

**Step 3.** Choosing the setup directory.

*Description:*

You will need to choose the directory in one of the computer discs where all necessary files for running the program will be copied. The program requires about 2 MB of free disc space.

*Your actions:*

Choose the directory in the browser window or continue installation by default and click **Next** to proceed installing or **Cancel** to cancel «Z39.50 LibNavigator Proxy» installation.

**Step 4.** Specifying «Z39.50 LibNavigator Proxy» launch characteristics (parameters).

*Description:*

You will have to specify «Z39.50 LibNavigator Proxy» launch parameters:

- 1) File for saving static information on the packages transmitted by the proxy-server. This file will be created in the folder, containing «Z39.50 LibNavigator Proxy» program. On default the parameter is «zproxyn.log».
- 2) Port number for listening. This port is listened by the proxy-server for the queries from the local area network computers. The parameter on default is «9000».

*Your actions:*

Modify given parameters or continue on default and click **Next** to proceed installing or **Cancel** to cancel «Z39.50 LibNavigator Proxy» installation.

**Step 5.** Everything is ready for installing.

*Description:*

Checking up the correctness of selected setup parameters.

*Your actions:*

## Installing «Z39.50 LibNavigator Proxy»

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Check the correctness of selected parameters. Click **Install** for «Z39.50 LibNavigator Proxy» installation on your computer or **Back** for modifying the setup parameters.

**Step 6.** «Z39.50 LibNavigator Proxy» installing.

*Description:*

The installation is in process and the setup status is given. If there is any problem an error description will be displayed.

*Your actions:*

You will have to wait until installing is completed.

**Step 7.** Installation completion.

*Description:*

The installation is completed. On default the service is created as auto threaded, it means that after rebooting the Windows service will continue its work automatically. If due to any reasons you are against such work mode of the service, you can deselect the corresponding option in the last setup window.

*Your actions:*

If it is necessary unmark auto launch option and click **Ready**.

## Usage of Z39.50 proxy while setting LibNavigator program

Local network computers hardly have direct access to the Internet. The Internet resources are available from the local network by using the Net-connected computers with special software – the so-called PROXY-SERVERS. Proxy-servers, having direct access to Internet, work up user search request from local net, perform net operations in the Internet and transmit all the results to the computer of a user.

To work with WWW-resources service HTTP-proxy is used. To work with bibliographical resources on Z39.50 protocol special service Z39.50-proxy is used.

LibNavigator bibliographic browser allows making a net connection via Z39.50- proxy service. To use this connection- enter address of Z39.50-proxy to the field **Address** and port used Z39.50 proxy, to the field **Port**. To activate the connection via Z39.50 proxy mark **Use Z39.50-proxy**, otherwise the connection via proxy fails, even if the fields **Address** and **Port** are filled in.

«Z39.50 LibNavigator Proxy» is freely distributed proxy-server software, using protocol Z39.50 for the transmission of search request to the bibliography resources. It was developed on the Open Source basis of «YAZ Generic Server» project. Currently it is meant to be used in Windows NT operating systems families, but it can be easily transferred to other operating systems.

If the operating system of Unix family is installed on the computer meant to be a proxy-server, you can seize the opportunity of using «YAZ Proxy» software developed by the company «Index Data Aps.» You can get all the details at <http://www.indexdata.dk/yazproxy/>.

## Appendix 4. Resources list and characteristics modification

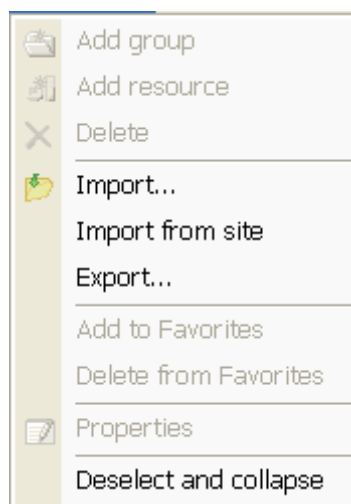
A tree-type bibliography resources listing allows grouping them on the basis of their territorial (e.g. city or country) or subject features.

For handiness of work, resources are divided into several classes: servers, databases and resources proper.

A server is an object, describing real network services of Z39.50 servers, which serve electronic catalogues. The server is also a database (or electronic catalogue) storage. If Z39.50 server serves just one electronic catalogue, it is a resource (a proper resource).

You can modify resources list used in the program to your needs. You can add and remove resources and groups, change their properties, import settings from the file you received from the program site or your colleagues.

You can modify resources list in the **Resources** menu item (fig. 34).



**Fig. 34. Resources menu**

### Updating of the resources list

The quantity of the libraries, giving bibliographic records through the Internet constantly varies. The collective of developers of LibNavigator program carries out constant monitoring on this process and corrects the list of resources at the site [www.libnavigator.com](http://www.libnavigator.com). To update the list of resources of LibNavigator program in item of the menu "Resources" it is necessary to choose item «**Import from site**». Updating of a resources tree will occur automatically.

### Addition of a group

To add a group note group inside of which the new one should be created and use item of the menu **Resources** ⇒ **Add group**. Enter the name of created group. To create a group of top level (it is displayed on the top of resources hierarchy):

1. Select **Top layer group**.
2. Enter the name of group.
3. Click **OK**.

## Resources list and characteristics modification

The group on top level of hierarchy will be created. Any group on top level of hierarchy, and also any group at below-mentioned levels of hierarchy is Parent group in which is included one or several resources.

### Addition of a resource

The resource represents a server that serves the only one electronic catalogue. To create a resource:

1. Select Parent group in which we shall add a resource.
2. Select item of the menu **Resources** ⇒ **Add resource**.
3. In a dialogue window **Resource type** it is necessary to choose item **Resource** (fig. 35).

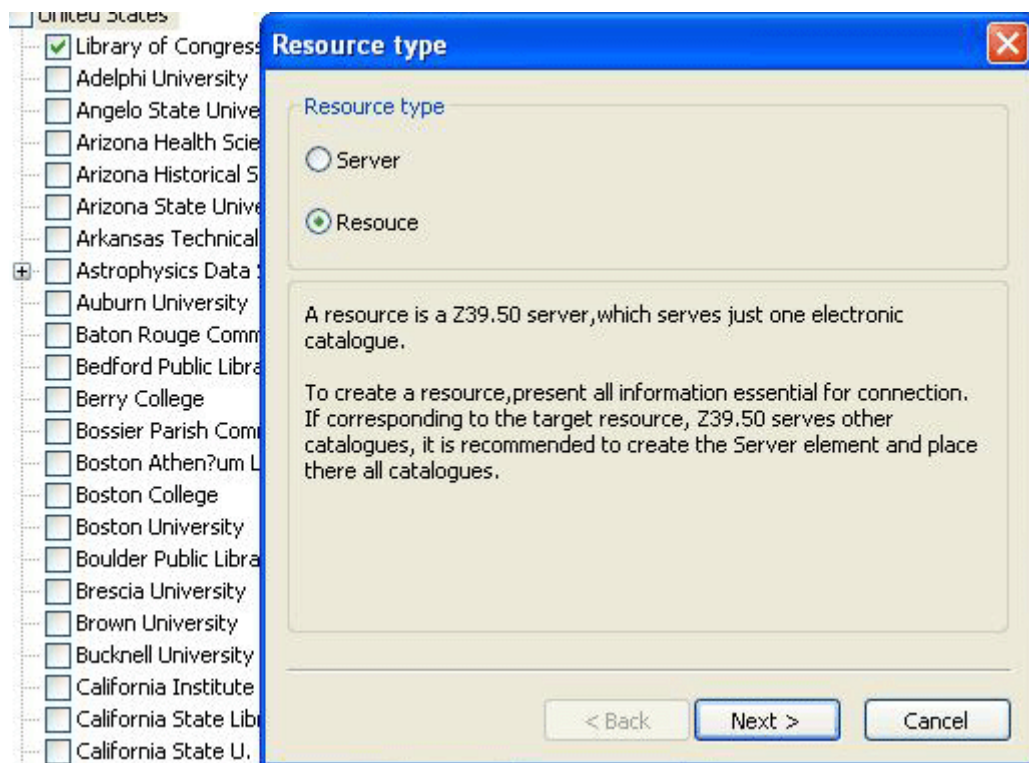
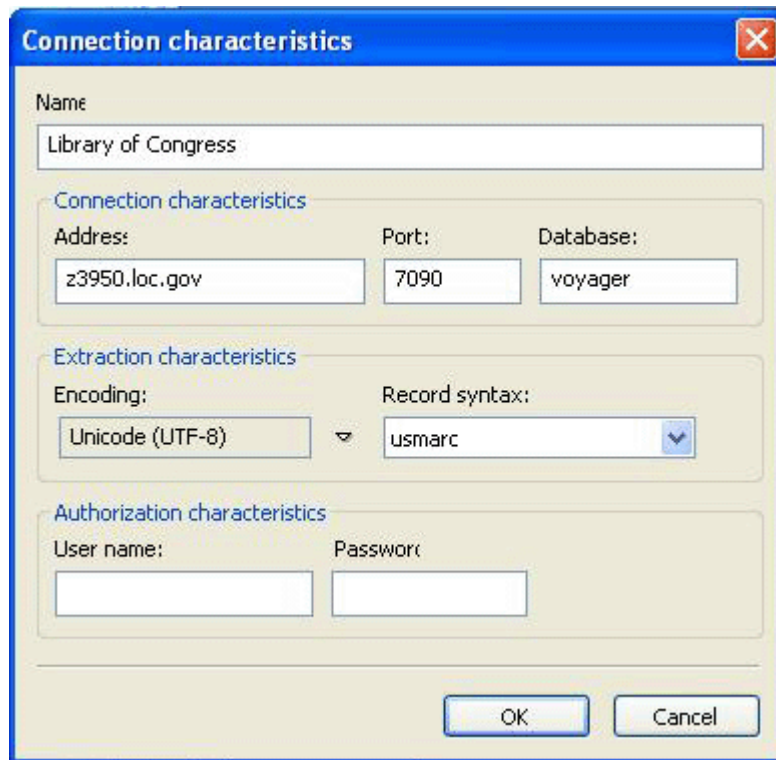


Fig. 35. Resource type

4. Click **Next** after your choice is done.
5. In dialogue window **Connection characteristics** (fig. 36) it is necessary to specify characteristics of resource: name, connection characteristics, extraction characteristics and, if necessary, authorization characteristics. Characteristics **Encoding** and **Record syntax** choose from the offered list.



**Connection characteristics**

Name  
Library of Congress

Connection characteristics  
Address: z3950.loc.gov Port: 7090 Database: voyager

Extraction characteristics  
Encoding: Unicode (UTF-8) Record syntax: usmarc

Authorization characteristics  
User name: Password:

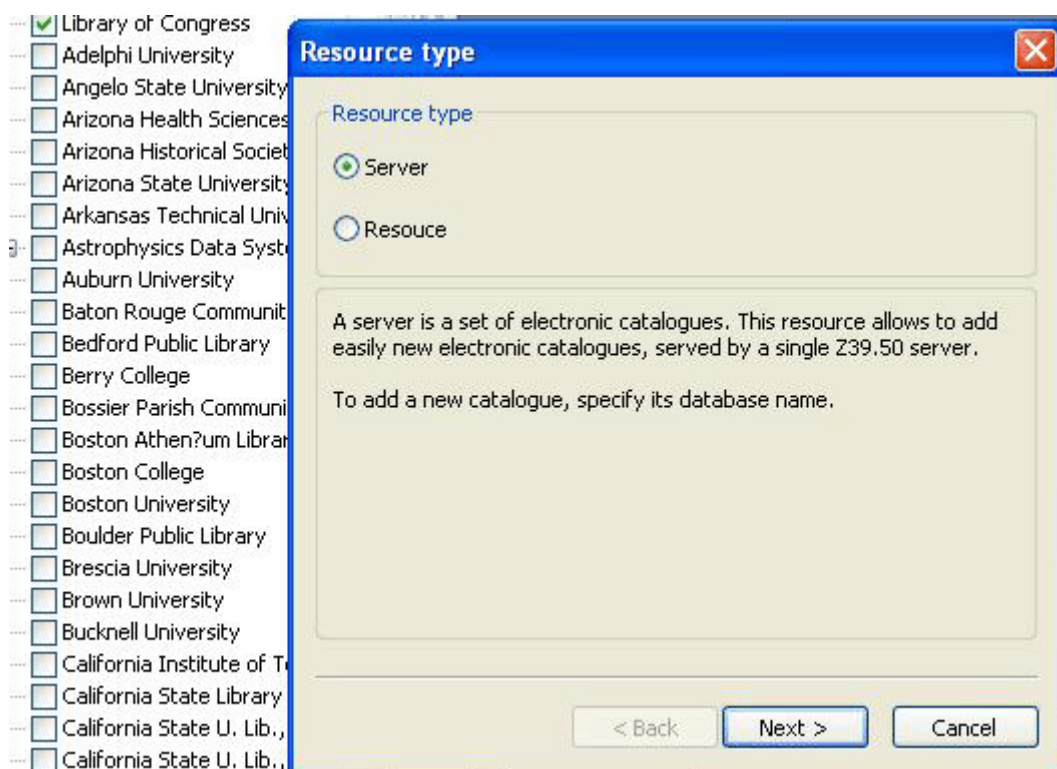
OK Cancel

**Fig. 36. Connection characteristics**

### **Addition of a server**

The server serves several electronic catalogues.

1. Select Parent group in which we shall add a resource.
2. Select item of the menu **Resources** ⇒ **Add resource**.
3. In a dialogue window **Resource type** it is necessary to choose item **Server** (fig. 37).



**Fig. 37. Resource type**

4. Click **Next** after your choice is done.
5. In a dialogue window **Connection characteristics** (fig. 38) it is necessary to specify resource characteristics: name, connection characteristics, extraction characteristics and, if necessary, authorization characteristics. Characteristics **Encoding** and **Record syntax** choose from the offered list.

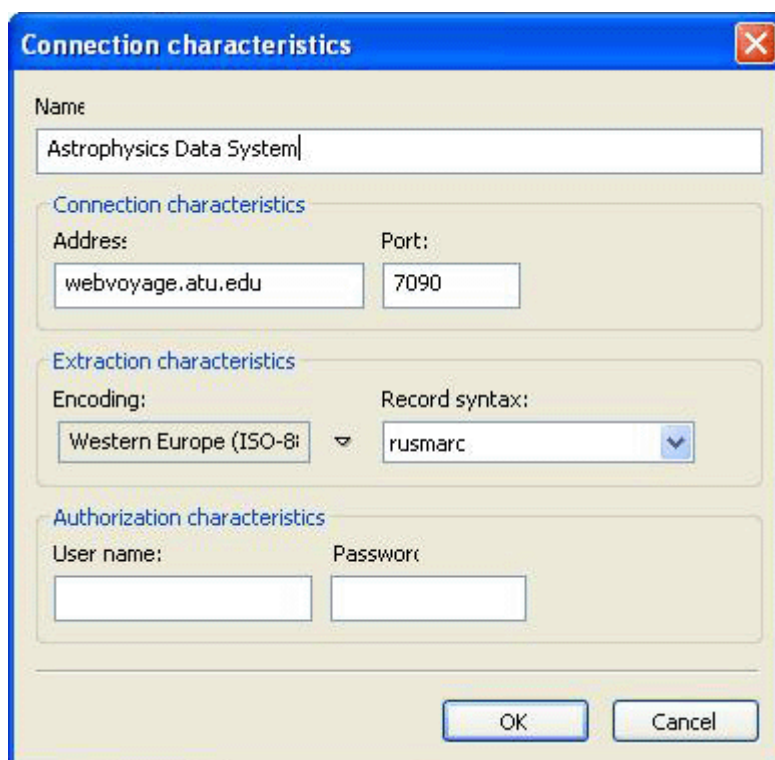


Fig. 38. Connection characteristics

6. Click **OK**.
7. To add the electronic catalogue select **Resources** ⇒ **Add resource**.

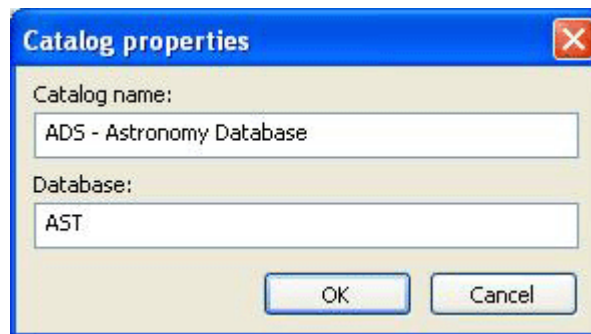


Fig. 39. Catalog Properties

8. In a dialogue window **Catalog Properties** (fig. 39) enter the name of the catalogue and a database.



Do not worry about entered authorization data (user name and password) – this information is reliably enciphered.

To import a tree of resources from a file, select **Resources** ⇒ **Import**, choose a way to an imported file (with expansion **xml**) and click **OK**. At import of the file protected by the password, it is required to enter the password for access to the enciphered information. In case of incorrect input of the password, at import all the enciphered information will appear inaccessible and will be lost.

### Resource parameters modification

To change resource or group parameters, select it and use **Properties**.

To edit the name of a group there will be a dialog **Resources Group** (fig. 40), to edit database properties– **Catalog Properties** (fig. 39), for resources and servers – **Connection characteristics** (fig.36, fig. 38).



Fig. 40. Resources Group

Change demanded parameters and press **OK**.

## Appendix 5. Glossary.

**Bibliographic record** – is an electronic analogue of a paper bibliographic card often used in library paper catalogues.

**The bibliographic resource** is an electronic catalogue placed at the site of some library. The active bibliographic resource is an electronic catalogue that you have a connection with via the Internet during your session.

**The external document** is the Internet-resource on which there can be a reference in bibliographic record. A typical example of the external document is the full text of the book, article, essay etc. In this case in the found record there is a badge (📄). In general, the external document is not necessarily some text, it can be something else, for example, a photo of a picture.

**The pull down list-** is a set of lines that appears after pressing any button or "arrows" (↕). This technological method is used now in absolute majority of software products and consequently is already habitual practically for each user of operational system Windows. LibNavigator program also uses dropping out lists.

**The diagnostic message-** LibNavigator program displays messages that help the user interpret some events correctly. For example, «unsupported attribute» message means, that the software of that library to which user has addressed, doesn't process search queries using given attribute. Other example, «the Mistake # 10004:connection lost» message means, that there is no connection with a server of that library to which the user has addressed at the moment.

**Additional attributes** – search attributes: attribute of relation, attribute of structure, attribute of truncation. See Appendix 1. BIB-1 attributes.

**The catalogue** – is an entity in which all the electronic bibliographic records in every library are incorporated. Reader searches for the information in these catalogues as if he has come to the library to looking through in the paper catalogue.

**Keyword** – one of the search attributes, used to search for the information in electronic catalogues. For example: "Mathematics", "Literature", "Economy", "Profit", "Profitability", "History".

**Basket** – a special intermediate buffer file for convenient storage of found and selected records. It's completely similar to the baskets used in the Internet-shops.

### Logic operators:

**"AND"** - simultaneous performance of two or more search conditions. For example: Pushkin "And" Verses. Only Pushkin's verses will be found, and search for prose will not be done.

**"OR"** – performance of even one condition. For example: Pushkin "OR" Nekrasov. Search for Pushkin's works and for Nekrasov's ones as well will be done.

**"NOT"** - means an interdiction of search on the specified value of search attribute. For example: Pushkin "NOT" Verses. Only Pushkin's proses will be found.

## Glossary

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**Monitoring** is a constant tracking of situation that allows to estimate a condition of any resource (resources), for example, a website. Formulations of conclusions, decision-making and supports of a resource in a necessary condition are used.

**The search attribute** is a name of one of fields that is used at drawing up of search request (the search instruction). For example, "Author", "Keyword", «Date of publication», etc.

In the Appendix1. BIB-1 attributes the term « Attribute of usage » is applied. The attribute of usage is one of versions of search attributes.

**The search term** is a search attribute value. For example, to search attribute "Author" value "Pushkin" is appropriated, to search attribute "Keyword" value "Mathematician" is appropriated, to search attribute « Date of publication» value «1986» is appropriated.

**The search request** is the expression containing specified values of search attributes, connected among themselves with logic operators: "and", "or", "not". For example, "Pushkin" "and" « the Captain's daughter » "or" «The Fairy tale on tsar Saltine». In the given example three search attributes are used. The first search attribute "Author" matters – "Pushkin", the second search attribute "Title" matters – «The Captain's daughter », the third search attribute "Title" matters – «The Fairy tale on tsar Saltine».

**Server** – the computer equipment and the special (server) software that are used in libraries.

**Session** – the work made by Libnavigator program on connection with a server of library (libraries) to which you incorporate, also processing your search request since the moment you have sent search request and until it is processed and you have received results. Processing of following search request will mean following session. To every search session corresponds the window that has a number (LibNavigator1, LibNavigator2, etc.). Windows can be curtailed and developed.

**The filter** is a special function of the program (additional restrictions), allowing to reduce set of bibliographic records in the electronic catalogue in which search is made, namely to specify more particularly, that it is desirable to find.

**The element of the filter** is a concrete value of the filter that will be used for selection of those records that are desirable for reader. For example, if the filter «Record resource» is chosen- the names of those libraries in which search is made will be its elements. If the reader spent search in two or more libraries simultaneously, and wishes to look through records in turn from each library- he should use values of elements of the given filter, in other words, in turn chooses names of libraries.

**ISBN** is the unique number appropriated to the given edition by publishing house. It is very simple to find necessary edition in the electronic resources of the libraries by means of LibNavigator program when IBSN is known. LibNavigator program will do it with a simple search request where one search attribute IBSN is underlined only.

**ISSN** is the unique number appropriated to the series of editions by publishing house. It is very simple to find the editions entering into a given series by means of LibNavigator program when ISSN is known. LibNavigator program will do it with a simple search request where one search attribute ISSN is underlined only.

## Appendix 6. The additional information.

**Given appendix contains some extra information that is not mentioned about and not included to the basic text and other appendices.**

### **docking**

Docking ("joining", "sticking") is the function allowing tool (additional) windows of the program (for example, to panels of tools) to be in one of two conditions: to be adhered to one of the borders of the basic window of the program (or other tool windows) or to be in a "floating" mode.

Being in an adhered condition the window can be "attached" to various internal borders of the basic window of the program, for example, to left or bottom. In this condition the window entirely borrows the area of the basic window, not allowing other similar windows to cover its visible surface.

In a floating condition such window can be set in any arbitrary place of the basic window of the program, irrespective of borders or overlapping with other tool windows. In this condition the docking-window is similar to not modal dialogue windows (not modal dialogue windows do not block work of the user with any other windows of the program before the termination of work with it), and, visually to differ from them, usually has narrower style of heading of a window.

Docking-windows in any condition allow modifying their size though in the adhered mode any one direction of change is accessible only. For example, if the window is adhered to the left internal border it can be expanded \ narrowed on the right, and if to the bottom- its height can be changed. For change of the size it is necessary to grasp the index of the mouse border of a window and to move in a new position.

Use of docking-windows in the program enables the user to place in their image most convenient to it, in the necessary place and with the optimum size depending on personal preferences, the size of the monitor and other parameters (quantity of the open windows, their size, etc.).

### **ISO 2709 format**

The ISO 2709 format, also known as MARC, is a standard bibliographic information view. The records in the ISO 2709 format have a fixed structure and consist of:

- record **marker** of 24 characters,
- **data directory** consisting of 3 numerical marks for each data field, field size and initial symbol position, relating to the first data field;
- **variable-length data fields**, separated from each other by a field divider.

The ISO 2709 standard doesn't limit the content of particular data fields, so this standard offers different bibliographic data view formats, such as USMARC, UNIMARC, RUSMARC, MARC21, UKMARC, DANMARC etc.

### Exchange format ISO-2709 and its structure

For data exchange (import and export) in library community is widely used a format ISO-2709 [1] (International Organization for Standardization). This format has been offered in the beginning of the seventieth years and used till now in many bibliographic systems, allowing importing or exporting records in MARC formats. Unfortunately, format ISO-2709 is not used by all bibliographic systems. MARC is an abbreviation for **MA**chine **R**eadable **C**ataloguing. Actually, it is a format of representation of the bibliographic information divided into records. Usually every record corresponds to the description of the bibliographic document. Format MARC developed in the end of the sixtieth years in the USA (till recently known as USMARC [4], now MARC21) is realized in many national variants. There is also its international version - UNIMARC, developed in the end of the seventieth years and recommended for using ИФЛА, in order to provide the unification of converting of the information presented in various national formats and for construction of national formats. In some countries UNIMARC (or its dialects) is accepted as a national format. So in Russia it is known as RUSMARC [2, 3].

RUSMARC (the Russian communicative format) is the Russian version of International communicative format UNIMARC (recommended IFLA, for construction of national versions of formats), in treatment and categories operating in Russia ГОСТов and Rules of the cataloguing, based on a choice of most common schemes of data elements representation. From the practical point of view it means, that any record transferred in the Russian communicative format, should be perceived adequately with any software that declared as working with format UNIMARC.

So, formats USMARC, UNIMARC, RUSMARC and other MARC-type formats have structure ISO-2709. As it was already marked, record in format ISO-2709 is defined by standard ISO-2709. Filling of these formats (mark numbers and fields content) is their distinction.

In a communicative format the form, the content or structure of record of local systems are not stipulated. This format contains recommendations to the form and the content of the data intended for an exchange. A communicative format record doesn't order necessary input formats to local system but should provide a sufficient data set for generation of types of the records accepted for given system.

At work in corporate library system the user faces basically with formats RUSMARC (UNIMARC) and USMARC [2-5] as leading library systems of Russia represent for an exchange the information in these very formats.

State Public Scientific Technical Library of Russia can be rightfully set the first to use bibliographic information exchange in practice. State Public Scientific Technical Library of Russia was one of the firsts that has attempted to interpret the description of such formats as UNIMARC and USMARC. A collective of highly qualified experts in the field of interpretation and usage of the above-stated formats work here. Therefore it is no wonder that the electronic catalogue of State Public Scientific Technical Library of Russia was one of the first to give an opportunity of an exchange in these formats under report Z39.50.

Below the structure of record ISO-2709 is considered.

The records in the ISO 2709 format have a fixed structure and consist of:

- **record marker** of 24 characters;
- **data directory** consisting of 3 numerical marks for each data field, field size and initial symbol position, relating to the first data field;
- **variable-length data fields**, separated from each other by a field divider;
- **record divider**.

## The additional information

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### *Record marker*

Standard ISO-2709 orders to each record begin with 24 symbolical record marker. It contains the data concerning structure of record, which definitions are given in standard ISO2709, and also some elements of data allocated ISO2709 for special application.

<b>Displacement (byte)</b>	<b>Length (byte)</b>	<b>Field</b>
0	5	<b>Record length</b>
5	1	Record status
6	4	Reserve
10	1	Indicator length
11	1	Identifier length
<b>12</b>	<b>5</b>	<b>Data basis</b>
17	3	Reserve
<b>20</b>	<b>1</b>	<b>Variable-length data field record length</b>
<b>21</b>	<b>1</b>	<b>Initial position record length</b>
<b>22</b>	<b>1</b>	<b>Reserve</b>
<b>23</b>	<b>1</b>	<b>Reserve</b>

### *Data directory*

Data directory comes next to the record marker. Every article of data directory consists of:

- **Label** which length is defined by #11 byte value in the marker.
- **The number specifying length of data field.** This number borrows the quantity of bytes corresponding to #20 byte in the marker.
- **The number specifying an initial position of data.** This number borrows the quantity of byte corresponding to #21 byte in the marker.

Other symbols in the data directory article are inadmissible.

The first part of every article is a label of a field.

The second part of the article defines number of symbols in the field, which the label, resulted in the first part of the article, specifies. This number joins all symbols - indicators, sub-fields identifiers, text or encoded data and a field divider.

The third part of the data directory article contains a position of the first symbol of a field concerning a position of the first symbol of that part of record that contains variable fields.

The first symbol of the first variable field has a symbolical position 0. Status of symbolical position 0 inside the whole record is determined with positions of symbols 12-16 of record marker. Data directory ends with the field divider.

### *Variable-length data fields*

Variable-length data fields follow the data directory and contain data. Labels can be found in the data directory only. Data fields consist of two indicators and any quantity of sub-fields

## The additional information

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following them. Every sub-field begins with the identifier, which consists of a sub-field divider and a sub-field code, identifying the very sub-field. Variable-length text or encoded data come next to the sub-field identifiers. These data length should not exceed specified in beginning of the description of a field. Data end symbol is the last symbol of record following the field end symbol.

Some features of the general scheme of electronic catalogues display using protocol Z39.50.

As far as Z39.50 ideology assumes display of concrete data structure into abstract one, according to the used scheme of data [5], the primary goal of adaptation of data – a formulation of rules of such display. As a rule, the corresponding data provider is engaged in it and he allows not only to formulate these rules, but also to remove a number of the restrictions imposed by the standard software. So, for example, rules of adjustment of data conformity are born in separate text server tables and if necessary suppose changes.

In summary it would be desirable to note, that MARC is only a format of external data presentation, its purpose - to serve as a mean of data exchange. There is no need to store data in an internal format of the same structure. And still, the closer the format of input and data storage to data exchange format, the easier to carry out unequivocal transformations of data. Therefore it is desirable, that at designing systems, developers of structures of data consider this moment.

## The literature

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