# The Digital Dissertations and Theses in the Russian State Library

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**Abstract**
*The report describes the digital library of electronic theses and dissertations (ETDs) supported by the Russian Fundation for Basic Research and developed by RSL. The digital library of ETDs contains: (1) the OPAC functioning now in the RSL, (2) tables of contents, (3) full text database of theses and dissertations, (4) bibliographic citations, (5) authority data representing names of authors (personal names). This digital library should be one of digital collections in the RSL Digital Library named OREL (Open Russian Electronic Library).*
*The main result is that the Library begins to take dissertations and theses in electronic form from authors graduated by home academic (dissertation) councils and who wish to give their works for the digital library of RSL. The Library makes an agreement with each author by which an open access to dissertation and/or thesis text is provided through the RSL Web-site in Internet or Library intranet.*
*Thus the Dissertations Digital Library (DDL) was opened in June, 2002 and received an official status.*
*The report describes an organization work in RSL and out of it; the technology of graduated authors files processing; the cataloguing process; the software for the DDL development towards XML structure; metadata structure; the search means in the data base. It would be made an attempt to compare the project of RSL with the similar foreign experience.*

## Preface

The report describes the digital library of Electronic Theses and Dissertations (ETDs) supported by the Russian Foundation for Basic Research and developed by RSL.

## The main result

**The main result** is that the Library has begun to collect dissertations and theses in digital form from authors who defended them before specialized scientific councils in our country, and who wish to give their works for the digital library of the RSL. The Library concludes agreements with each author by which an open access to a dissertation and /or theses text is provided through the RSL Web-site in Internet or Library intranet - depending on the terms of the agreement with each author. Thus the Dissertations Digital Library (DDL) was opened in June, 2002 and received an official status. With our stud-

ies of the main **foreign projects of digital dissertations libraries** and due to trips to France, Germany and Finland in particular, those engaged in conceiving the digital dissertations library in the Russian State Library have convinced themselves of the sound essence of their own choice of project decisions and of the possibility of applying apt methods as far as possible.

## Common matters in the Russian and foreign projects:

- availability of full texts of the electronic documents published in the digital dissertations library in the **PDF** format;
- tendency towards forming **XML** documents;
- orientation towards the standards of the **NDLTD** and **Dublin Core format** in developing metadata (DTD included);
- tendency to introduction of bibliographic entries for digital documents **into general electronic catalogues** with the electronic address indicated in bibliographic records;
- use of authority files for names and corporate bodies;
- attention paid to the problems of the **thematic (or subject) search** and striving for the application of the national **classifications** with regard to hierarchical relations in the search process;
- **strict observance of the copyright** by drawing up agreements with the authors (accords, authors' declarations and the like) or with the institutions of higher education supplying the digital dissertations library with digital dissertations or the information on them.

## Differences between the Russian and foreign projects:

- different principles and technologies of forming and maintaining the data bases of the digital dissertations library due to considerable distinctions **in rules of degrees conferment**, in passage of the dissertations and in arrangement of the depositary storage;

- different **incentives** to publishing works in the digital library;
- use of key words, headings, abstracts in Russian only (not in English);

**Rules of conferring degrees in Russia run as follows.** Dissertations for a doctor's degree are presented in the shape of specially compiled manuscripts, scientific reports or published monographs, while dissertations for a candidate's degree are presented in the shape of specially compiled manuscripts or published monographs. The main statements of dissertation for a candidate's degree presented as a manuscript are to be published before it is submitted for defense to one of the specialized academic councils at universities or any other institutions entitled to confer degrees. Dissertations in the form of monographs are to go through scientific expert appraisal.

Manuscripts of the dissertations are printed in three or four copies, with two or three bound copies. One copy goes to the academic (dissertation) council, another one goes to the library of the appropriate institution of higher education. Furthermore an author compiles an abstract (theses) of this dissertation. A thesis of a dissertation is a scientific publication in the shape of a pamphlet (about 24 pages) containing author's abstract of the research work done and submitted by him with the object of taking a degree. It is as much of information and a legal document. The applicant is not eligible for the defense of his dissertation until he is given permission to put out the abstract of his work. Permissions are granted following the preliminary defense (discussion) in the university (institution). The published thesis (abstract) is sent out to six or eight libraries depending on their speciality with each receiving one copy. One copy goes to the council, two copies go to the library of the institution where the defense takes place. The publishing house is to hand nine copies over to the Russian book chamber as a legal deposit copy. One month before the defense the published thesis should be sent to the members of the academic council, to the opponents and to the institutions concerned for the purpose of procuring expert opinions.

The dissertations are defended at open council meetings. To take the floor are the author, two or three official opponents, a representative of one institution and other specialists. The dissertation is defended if more than half the members of the council cast their votes for it. After the defense one bound copy of the dissertation for a candidate's degree is to be sent to the Russian State Library for the purpose of the depository storage (those on the medicine and the pharmacy are sent to the Medical library). Another unbound copy is to be sent to the All-Russian Scientific and Technical Information Centre with the object of microfilming. On receipt of the acknowledgement of the registering of the copies by these bodies the council is to send the documents to the Supreme Certifying Commission (SCC) of the Ministry of Education of Russia for approval. The author is not presented with the candidate's diploma until after the endorsement.

The council is to send one copy of the dissertation for a doctor's degree and one copy of the thesis (abstract) along with the documents direct to the Supreme Certifying Commission. Then after the approval the dissertation is passed on to the Russian State Library or to the Medical library for the purpose of the depository storage and the author is presented with the doctor's diploma. Now and then the commission fails to endorse the results of the defense.

The Russian State Library keeps the defended dissertations and all published thesis. It does not go in for finding out whether or not authors take their degrees.

## The copyright

Both the dissertations and the thesis of the dissertations are author's works and so they fall under the action of the Russian law ''On the copyright and the contiguous rights'' of 1993. Under the 16th clause of this law **the authors** of the dissertations **possess personal property and personal non-property rights** including the right to publish and to reproduce.

In case that the author hands over his electronic version to the Digital Dissertations Library he is to ensure **the identity** of the full text of the dissertation or of the thesis he has delivered and their printed versions received by the Library with a view to keeping.

The Library keeps the dissertations and the theses according to the place of their defense and in its depository storage as items possessing the rights of manuscripts.

## The assurance of the completeness of the data base and possible incentives

It is obviously that existing rules do not stimulate the authors to publish their works in the electronic form as compared, for example, with the rules of defending the dissertations in Germany. For the time being **the assurance of the completeness of the data base** of the Digital Dissertations Library of the Russian State Library (without altering the legal basis or the procedure of conferring the degree) is dreams of the future taking the human factor into account. Indeed, the authors have a right to decide whether to parade their works in the Internet or to publish it otherwise.

**Possible incentives** listed in our announcement **for the authors to hand over their works to the digital dissertations library are as follows**: fame coming to the works

and the authors, establishing of scientific contacts, inanity of any illegal borrowing with any expert or executive being in a position to see the dissertations at any time on our Web-site. We simply cannot understand misgivings concerning plagiarism since the Russian authors are bound to publish the main content of their theses prior to the defense. However, the authors are at liberty to refuse to hand over their theses on such simple grounds as lack of the full electronic version of their woks, being unsure of the quality of their works, intention to publish the book, usual laziness.

The Russian State Library is discussing these matters out with the Ministry of Education, the Supreme Certifying Commission. Talks are under way with various **universities** on cooperation. Under the treaty they will hand over electronic dissertations to the Digital Library of the Russian State Library and to look after the legal relations with the authors, while the Russian State Library is supposed to pass on the results of the processing of the files or to create "mirror" data bases. If a university creates its own digital dissertations library it will transmit to us the addresses of electronic dissertations on its site.

## The project

**Main components of the project are on display on the special Web site** (http://www.rsl.ru/r_pub10.htm), in particular: fields in the MARC 21 format for bibliographic records of dissertations and theses in the electronic form, the DTD project for the XML files of dissertations and theses, the form of the agreement with authors.

## The data processing

The **electronic versions of dissertations and theses** received from the authors are registered and transformed into the **PDF files**. Digital dissertations and theses are **provided with electronic title pages and displayed on the RSL Web-site** in the Open Russian Electronic Library (**OREL**). At present **bibliographic records in the OPAC** of this electronic library are being compiled for them on the basis of the records for corresponding traditional documents in case that they have been already recorded in the general RSL OPAC. In future it is intended to compile all records of digital dissertations directly **in the general electronic catalogue** within the integrated ALEPH SYSTEM. It makes four records in the catalogue, namely two of the printed dissertation and the thesis and another two of the digital dissertation and the thesis. The structure of the electronic address is designed in such a way that it can be assigned at the cataloguing stage.

## Access to the data base of full texts

**Access to the data base of full texts of dissertations and theses is provided in various** ways on the Web-site of the RSL (*www.rsl.ru*): from the first page, by direct entry into the OREL and subsequent search in that library, etc.

## The maintanance of the ETD's processing

**The functioning of the digital dissertations library is maintained by the following components of the on-line public access catalogue (OPAC)**: authority files, in particular data on persons (authors, executives); thesaurus of codes and designations of specialities in conformity with the nomenclature of the Supreme Certifying Commission; data on corporate bodies (institutions); the machine-readable national library - bibliographic classification (BBK).

We pay a special attention **to the assurance of the subject search** with account of the hierarchical relations between subjects of the search. In the latest time the verbal expressions of the BBK indices have been introduced into bibliographic records of dissertations and theses just as it has been taking place in processing books since 1998.

An example:
```
084___$aE691.894.73For-813.2,2 $2rubbk
650_7$a Biological sciences - - Zoology - -
Taxonomy of animals - - Invertebrates - -
Articulates - - Insects - - Hymenoptera - -
Stingers - - Ants - - Ant ecology - -
Intraspecific and Interspecific relationship
among ants - - Ant food ecology - - Ant food
dependences  $2rubbk
```

Since search in the electronic catalogue is possible from any of the words, their parts and any combinations, the appropriate document is to be found out in particular due to the following marks: "zoology AND ecology", "food dependences AND animal-", "hymenoptera", "interspecific relationship and insect-", "biologic- and ants".

## The further development of the project

With the aim of further development of the project the software of the Integrated System of Information Resources of the Russian academy of sciences has been designated as a future foundation of the software for the Digital Dissertation Library making it possible to maintain

the data base containing **XML documents** and ensuring the information retrieval algorithms elaborated under the project.

The digital library of ETDs on the base of that software will contain:

Fulltext database of theses and dissertations in **PDF**;

Excerpts (extracts) of works in the form of **XML** files.

The bibliographic records in the OPAC functioning now in the RSL will contain both addresses of PDF and XML files in the MARC21 field 856.

The documents presented in the XML have **built-in metadata** including the bibliographic data. They are intended to mark out structural elements, to store, information retrieval and data exchange with other SYSTEMs. We have resolved to choose the **PDF** format to be the chief format of the display of full texts of ETD's and to use the **XML structure for some ETD's components** making out the so called extract of the ETD's which comprises the following: all **elements of the title page** (in the case of the thesis they are the cover and its reverse side); **authority data** representing names of authors (personal names); **tables of contents** with all sections marked out,

bibliographic citations. The bibliographic citations are **divide**d by elements: authors, titles, sources and the rest of the elements of the bibliographic records.

In the course of formatting ETD's extracts the **Data Type Definition (DTD)** has developed and specified. The actual version of the DTD can be seen on the site of the Russian State Library at the address *www.rsl.ru/ r_pub10_12_1.htm*.

**The SYSTEM will provide** the conversion of the metadata put in the electronic catalogue in the international **MARC21 into XML** files as well as the conversion of metadata into **Dublin Core** structures for the purpose of assuring the exchange.

**Ensuring the completeness of the data bases is the main issue within the framework of the given project**. As ever libraries' mission to provide free access to their stocks runs counter to the copyright. Besides, it seems doubtful whether the question of the Russian State Library turning into a depositary storage not only of printed theses but of electronic ones too can be resolved with laws and rules obtaining now.