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Maps in the Digital Collection of the Presidential Library: User Perspective

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Summary: The paper gives general characteristics of maps in the digital collection of the Presidential Library (St. Petersburg, Russia). One of the main features of the collection is the large percentage of archival materials. Sources of acquisitions are described, including state and regional archives, as well as basic instruments of subject indexing and further search in the collection. To facilitate more effective map use a number of problems still remain to be solved. Among them – more consistent use of RUSMARC instruments for bibliographic description and including geospatial information in authority records.

The Presidential Library in Saint Petersburg and its digital collection

The Presidential Library in Saint Petersburg, one of the three national libraries in Russia, was established in May 2009 as a nationwide repository for digital materials (either digital born or digital copies) of the most important documents on the history, theory and practice of Russian statehood and Russian language.

The library collection counts about 800,000 items including all kinds of materials – digitized or digital-born books, manuscripts, visual materials, etc. The whole collection is arranged in a number of specific digital collections, which are considered to be the main units of digital content organization. So every resource belongs at least to one or more digital collections.

Main sources of acquisition are state and regional archives (including RGIA – Russian State Historical Archive, GARF – State Archive of Russian Federation, Leningrad Regional State Archive in Vyborg, Archive of Foreign Policy of the Russian Empire, etc.), national libraries and major research libraries of the country. The Presidential library cooperates with regional libraries and research institutions in Russia and abroad, the Directorate for Navigation and Oceanography of the Russian Federation Defense Ministry, Russian Geographical society, other non-profit organizations, private collections. Thus, in 2018 the Presidential library received large collection of digitized maps from the Leibniz Institute for East and Southeast European Studies.

Main parts of cartographic collection of the Library are digitized manuscript and published physical maps of regions of Russia in different historical periods, special maps covering history, cultural aspects, biology and geological formation of the territory, road maps, plans of Russian towns and other settlements, routes of scientific expeditions, maps documenting development of transportation and communication systems of Russian regions.

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According to the Library Collection development profile, most of the library collection in general is in Russian, this is also true for the cartographic materials, though there is still a number of maps in German, French and Finnish.

The library collection includes not only independent cartographic resources but also component maps from other editions. One example – the map of the Irkutsk province (Pallas 1776) from the book by Peter Simon Pallas, a Prussian zoologist, botanist and traveler who worked in Russia for 43 years in the second half of eighteenth – beginning of nineteenth centuries. In 1767, Pallas was invited by Catherine II of Russia to become a professor at the St. Petersburg Academy of Sciences and, between 1768 and 1774, he led an expedition to central Russian provinces, Volga region, Urals, West Siberia, Altay, and Transbaikal. The regular reports Pallas sent to St. Petersburg were collected and published as *Reise durch verschiedene Provinzen des Russischen Reichs* (Journey through various provinces of the Russian Empire) (3 vol.s, 1771–1776). Peter Simon Pallas had a significant impact on the development of Russian science and often is considered to be a founder of zoology in Russia. This particular map was described for the digital collection dedicated to the memory of Peter Simon Pallas.

Immediate plans of the library include digitization of eight atlases dated seventeenth century from the collection of the Library of the Russian Academy of Sciences and maps from the collection of the Federal Service for State Registration, Cadaster and Cartography.

First edition to be mentioned when speaking about the cartographical collection of the Presidential library is *Materials on the history of Russian cartography* collected by one of the leading scholars of the history of Russian cartography Veniamin Kordt (Kordt 1899). The Presidential library has copies of two issues of this fundamental work from the collection of the Central Navy library (St. Petersburg). As V. Kordt stated in the introduction to this work, his aim was to provide first comprehensive historical survey of the consistent development of cartographic representations of Russian land abroad and in Russia. V. Kordt gathered great materials for the researchers of the history of Russian cartography from many publications, mostly rare and not widely available. Two first issues contain maps of south-western regions of Russia by the end of XVII century. Individual maps are distributed by type and accompanied with the necessary bibliographic material.

The cartographic collection includes digital copies of a number of old atlases dated XVIII-XIX cent., e.g. *Атлас Россійскій* (Atlas Russian) issued in 1745 by the Russian Academy of Sciences and recognized as the first official atlas of Russia. The original atlas is stored in the Russian State library (Moscow). The atlas consists of a general map of the country and nineteen sheets of the provinces of the Russian Empire – 13 maps of European Russia (scale 1:1 470,000), six maps of Siberia (scale 1:3,800,000 and a General map of the Russian Empire (scale 1:8,400,000). The introductory text provides brief history of the atlas compilation and explains the goals of its creation. The atlas is known as the first Russian cartographic work implementing a table of symbols – a legend, which included 46 symbols, 18 of which relate to settlements.

Archival maps in the collection

One of the main features of the collection of the Presidential Library is that more than 50% of the collection are archival materials. As for the maps the figure is about the same, though it is rather difficult to determine precise number of maps in the collection. Archival maps are really in high demand with the patrons, because sometimes it is easier to get them from the library, and the description of

maps in the library catalogue normally is more detailed than in archives. The cartographic part of the collection includes maps from the RGIA (Russian State Historical Archive) – RGIA F.1399 Maps, plans and drawings of the St. Petersburg Senate Archive; RGIA F. 1293. Technical and Construction Committee of the Ministry of Internal Affairs; RGIA F. 380. Planned archive of the Ministry of Agriculture, etc. Leningrad Regional Archive in Vyborg is represented with various types of maps of “Old Finland” (that is the period of Swedish rule), provinces of the Grand Duchy of Finland and the Republic of Finland, settlements, estates, forests, fortifications in Vyborg, military topographic maps of the Leningrad Region, the Kola Peninsula, the Gulf of Finland, the Vyborg bay – LOGAV F F. 531. Maps, plans, drawings of the city of Vyborg and Vyborg province, Kuopio and Mikkeli provinces (1812 – 1938); LOGAV F. 532. Maps, plans and drawings of railway, highway and waterways of the city of Vyborg and Vyborg province (1643–1944). Archival collections from regional archives of the country include not only plans of Russian towns in different historical periods, but also various special maps of specific regions.

Bibliographic description and subject indexing of cartographic materials

All library resources in the Presidential library are described in RUSMARC format, which is the national implementation of UNIMARC. RUSMARC provides a set of instruments to distinguish maps from other types of documents (using codes in special character position in record label) and to specify the scale and geographical coordinates to identify the location of the area depicted in the map. Coordinates and scale can be given in textual form (in field 206) as prescribed by Russian Cataloguing Rules and new national standard GOST R 7.0.100–2018 “Bibliographic record. Bibliographic description” or in coded form (in field 123). Also a number of coded data fields can be used for details as colour, type of relief depicted, map projection (field 120), techniques used for the creation of the primary cartographic image, physical medium of the cartographic item, creation technique of the original cartographic item, geodetic adjustment, aerial photography and remote sensing coded data, form of reproduction, etc. (field 121) and other characteristics.

These coded data is formalized and language-independent, so it might be used not only by library software but also by other automated systems, which utilize map-specific metadata, both in the library community and outside.

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686 ##$a26.89(235.44)я64$vLBC/MS$2rubbk
702 #1$aПавлов$4570
801 #0$aRU$bВладимирская ОУНБ$c20100625$gRCR
801 #1$aRU$bВладимирская ОУНБ$c20100625$2rusmarc
801 #2$aRU$bПБ им. Б.Н. Ельцина$c20101206

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Figure 1: RUSMARC record for “Map of Sudogda County, Vladimir Province”

All records for maps are indexed with geographical subject headings from the National authority file and the Authority file of the Presidential library (field 607, Geographical Subject Heading). When necessary, these headings may be supplied with subheadings (topical, chronological or formal). Thus, the geographical subject heading for the *Map of Sudogda County, Vladimir Province* published in 1898, includes topical subheading “География” (“Geography”), chronological subheading “конец 19-го в.” (“end of XIX century”) and form subheading “Карты” (“Maps”) (Fig. 1). Wherever possible, geographical subject heading is given for every place name depicted in the map. For example, “Map of Kazan province and city plans: Kazan, Kozmodemyansk, Cheboksary, Tsyvilsk, Yadrin, Sviyazhsk, Tetyush, Spask, Chistopol, Laishov, Mamadysh and Tsarevokokshaysk” has 15 geographical subject headings representing every town depicted.

Additionally most cartographic records include field 617 Hierarchical geographical terms. Geographical names given in structured form help collocating records according to the structure of geographical or administrative regions. Basically, field 617 is used in the records for local studies. The type of map – administrative maps, archeological maps, geographical maps, geological maps, geodynamic maps, etc., – is specified in field 608 Form, genre, physical characteristics. So RUSMARC has quite extensive set of means to create description detailed enough to give precise information (both coded and textual) on the map being described for future user.

Browsing and searching maps in the catalogue

The process of browsing and searching maps in the collection of the Presidential library is the same as for other kinds of resources. Basically, one can either browse an appropriate digital collection, or search in the catalogue.

Most maps, atlases and plans are included into the general collection “Territory of Russia” (Fig. 2). The section “Maps and plans” of this collection contains most maps reflecting natural, historical, political and economical issues of the development of the Russian territory. Maps in the section are arranged in order of place names of administrative units within major geographical regions. Besides, educational atlases are available in the “Study of the territory of Russia” section; roadmaps are presented in the “Communication structure” section and sea maps – in the “Russia – a maritime power” section.

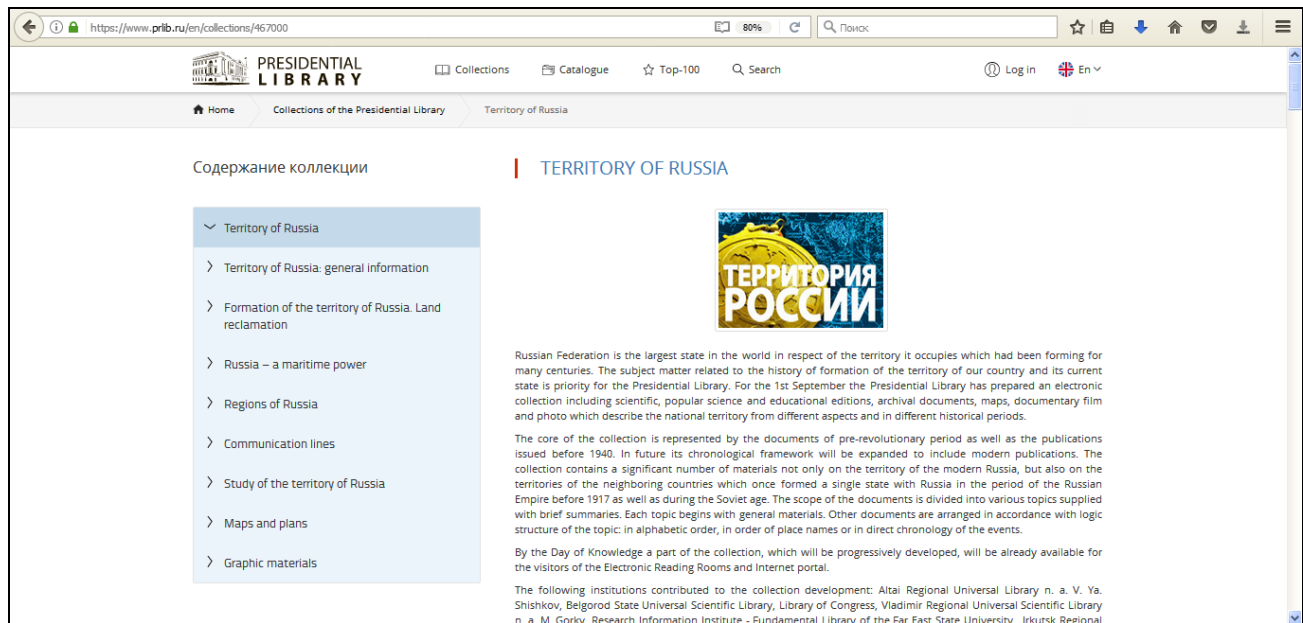


Figure 2: Collection “Territory of Russia”

Normally every section of the collection “Territory of Russia” consists of subsections according to geographical regions, place names within major geographical regions, or, in case of “Water resources” – to names of rivers and lakes. In general, the logical structure of the collection (that is list of sections and subsections), can be used for navigation, so one can choose the section he needs and browse the maps in the section.

Another option is to search the catalogue. The search algorithm is traditional – we may search for any term (e.g. the place name, topic, etc.) and then refine the results with the type of resource (e.g. maps), appropriate subject heading or type of map (e. g. “geographical maps”), date, or language.

As it was noted above, one of the important features of the catalogue of the Presidential library is that it includes records both for library and archival materials, so after conducting the search the user may click specific tab to choose the category of materials – library or archival. Every category has specific options to sort the records retrieved or to refine the search results. Archival records may be sorted by relevance, title, creator, inclusive dates, date of publication, archival level (fonds, series, file, item). The user may choose to browse records at specific archival level, browse materials included in specific digital collection, switch to another level (from archival item to file and then to the fonds, or from issue to the high-level serial record).

How to make our maps work more effectively

To facilitate more effective using maps a number of problems still remain to be solved. The first problem concerns the lack of geographical metadata in RUSMARC records for maps. Though RUSMARC format provides quite extensive instruments to present spatial metadata in bibliographic records in textual or coded form, in fact this kind of metadata is omitted in most cases. According to Russian cataloguing rules coordinates are considered as optional element, and at the best, coordinates are included in bibliographic record only by special libraries or if information on coordinates is explicitly specified in the resource being described. On the other hand, including coordinates in the resource description could allow to provide extra access point to make search more full and precise, to avoid ambiguity in case of non-unique place names, to clarify extent of regions or places when the place names are some kind of descriptive, e.g. “Moscow, North” or “Volga region”. Also formalized coordinates metadata would facilitate sharing of bibliographic records (both on national or international level) and using the bibliographic information together with the maps as such in geographical information systems.

It is more effective to encode geographic coordinates in authority record for the place rather than in bibliographic record; it would increase value of the authority file and help to avoid redundant cataloguing work. As it was already mentioned above, maps in the catalogue of the Presidential Library are indexed with subject headings from the National authority file and Authority file of the Presidential library. Authority records may include coordinates of the place, which is described in the record. This information could be recorded in coded form (field 123 in RUSMARC format) either in decimal format or as degrees, minutes, seconds. So when the authority record for the place has coordinates data, it can be used by the system to better retrieve records concerning a place (of course, provided that there is correct linking implemented between bibliographic and authority records).

In fact this particular field was added to RUSMARC format in 2016, and great majority of authority records just do not use it. Editing records to enrich them with coordinates would require lots of time, effort and expenses, but eventually it would help to use cartographic resources more effectively and eventually to find new ways of their usage. Not only the Presidential library but all other libraries working with the National authority file would benefit from such enrichment, so it would make sense if we could involve specialists from other libraries and even not only from libraries.

Another big problem is that most archival materials in the Presidential library are described on file level. That means that many maps contained in archival collections are in fact hidden from the user. If the title of the archival file or the whole archival fonds contains a geographical name and/or the words “map”, or “plan” or similar ones – there is a good chance that the materials may be discovered (e.g. RGIA Fonds 1399 “Maps, plans and drawings of the St.-Petersburg Senate Archive” Op.1 File 475 “Plans of county towns: Borovsk, Volokolamsk, Dmitrov, Kashira, Klin, Kolomna, Ruza of Moscow province”).

But, in some cases the title and even description does not provide sufficient hints concerning type of resource or the place. For example – GARF Fonds 5793 “Ryabikov Pavel Fedorovich, General, professor of the General Staff Academy”. The fonds contains maps and plans of military units during the First World War and the Civil War. But, these maps are quite difficult to discover because the file titles are not self-explanatory, and indexing of these records is insufficient.

In result sometimes it is not even possible to determine precise number of cartographic materials in the library collection. To make all these materials more searchable and visible, to open the collection for the patrons it would be necessary to create item-level descriptions and to enhance description with detailed specific geographical metadata relevant to items. Both ways are costly, time- and effort-consuming.

Summing up...

Presidential library has rich collections of digitized maps, great part of them are from archival collections, which are normally not easily available for ordinary users. That makes our collection very interesting and potentially very useful. Enriching geographical metadata and making it more consistent would help to utilize the whole potential of these valuable resources and to provide more qualified access to them.

References

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Атлас российской, состоящей из девятнадцати специальных карт представляющих Всероссийскую империю с пограничными землями, сочинённой по правилам географическим и новейшим обсервациям, с приложенною притом генеральною картою великия сея Империи / Старанием и трудами Имп. Академии наук. – СПб: типография Академии наук, 1745. – 18 с., 20 л. карт с.