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The methodological problems of creating a digital thematic repository of historical cartographic and textual sources. Case study

Abstract. The paper discusses the activities involved in the process of creating a digital thematic repository focusing on historical cartographic and textual sources. On the basis of the thematic repository created as part of the project “Shaping the borders of Independent Poland in the light of cartographic documents”, the author presents proposals for solutions aimed at effective management of the various materials, as well as allowing users easy access to specific information. It provides an overview of the issues identified in the context of identifying, selecting, digitising and sharing digital copies of sources of relevance to humanities and social sciences research. With regard to the digitisation of cartographic sources, the article examines the challenges of adapting the technology to meet the diverse needs of information retrieval. In addition, it addresses issues related to the development of metadata and the integration of different types of sources. The article also addresses issues related to maintaining and updating the digital repository, with a particular focus on ensuring the sustainability of the project. The conclusions of the completed project allow us to identify best practices in the process of creating and managing a digital thematic repository, which can be a valuable tool for researchers, students, and cultural heritage institutions.

Keywords: old maps, thematic repository, textual sources, digital humanities, spatial humanities

1. Introduction

Archival research, i.e. the systematic search for and correlation of information in historical sources, is an integral part of scientific research. In the process, researchers are guided by knowledge, experience and intuition, formulating questions about people, time and places of events. In addition, they seek to locate relevant information in available sources (Torou et al., 2010), the availability of which is crucial for conducting sound scientific research. Advances in digital humanities have not only widened access to digital copies of primary sources (elements of cultural heritage) but also to the results of research on them (Rydberg-Cox, 2005; Sweeney et al., 2017). A key role in ensuring this accessibility is played by repositories and digital libraries (Bednarek-Michalska, 2017). This medium significantly enhances the

impact and dissemination of research findings (Hixson & Cracknell, 2007; Lynch, 2003).

The digitisation of cultural heritage is an important part of scientific activity, but it is also of momentous importance in a cultural context. These activities are carried out at various levels by international, national and regional institutions, as well as by private individuals and informal groups, e.g. see Centre of Community Archives (Centrum Archiwistyki Społecznej, n.d.). They have recently become increasingly popular, highlighting the growing interest of the community in digitising and making cultural heritage accessible. In Poland, some of the leading projects in this area are Polona (n.d.), which is a digital version of the National Library of Poland (Biblioteka Narodowa, n.d.), and the National Digital Archives (Narodowe Archiwum Cyfrowe, n.d.). These institutions are concerned with acquiring, storing and making available

digital materials such as books, manuscripts, photographs, sound recordings and films (Dzięglewski et al., 2017). In the context of universal access to digital resources, projects supporting the development of regional and institutional libraries, archives and digital repositories are worth noting. The Polish Digital Libraries Federation (Federacja Bibliotek Cyfrowych, n.d., hereafter: FBC), considered a pioneer in this field, is relevant here. The Digital Repository of Scientific Institutes (Repozytorium Cyfrowe Instytutów Naukowych, n.d.) is an important initiative, which is part of the trend to popularise scientific sources and resources and improve scientific communication (Gazicka-Wójtowicz et al., 2013).

The use of Geographic Information System (GIS) and WebGIS (web-based applications that are accessed via a web browser) have an important place in the creation of modern cartographic source repositories. These applications use an interactive map that, using a predefined geographical context (base map), presents content from a selected thematic area (Konopska et al., 2023).

An example of the application of these capabilities is the National Library of Scotland (n.d.), which has improved user access to old maps by implementing WebGIS applications. Through it, recipients can view georeferenced maps and the spatial metadata describing them (Fleet & Pridal, 2012). The use of a map interface to present old maps is gaining popularity. This is confirmed, among others, by the authors of the David Rumsey Historical Map Collection project (n.d.) including this form of presentation of cartographic sources. In addition to viewing the maps, the user is actively involved in the map georeferencing process, verifying the accuracy of previously georeferenced maps and making their own corrections. Viewing and sharing of maps using WebGIS solutions is also enabled by the Arcanum project (n.d.). The platform cooperates with several archives from Austria, Hungary and Croatia, and provides access to cartographic resources from the area of the former Austro-Hungarian monarchy (Timár et al., 2010).

Thematic repositories are an increasingly common type of repository. Their main purpose is to identify, acquire, organise and make available digital resources related to a specific research area (Fenlon, 2017). Such repositories contribute to facilitating access to resources

held in various institutions, both national and international, which enables information to be organised thematically.

An example of such a repository is Europeana Collections (n.d.), which aims to integrate access to digitised cultural heritage in Europe. This allows digital resources to be explored without geographical or institutional constraints (Purday, 2009). In Poland, the institutions co-operating with Europeana are Polona and FBC. Their inclusion of Europeana in the structures has expanded the scope of access to Polish cultural heritage on an international scale, which represents a significant advance in the sphere of global cultural and technical cooperation (FBC, n.d.; Rosa, 2019). The KRONIK@ portal (n.d.) plays an important role in the thematic organisation and dissemination of sources. The repository is both a tool to integrate existing collections and to introduce uniform standards for digital data management. KRONIK@ functions as a multi-search engine, providing access to state resources from which users can easily create their collections (KRONIK@, n.d.).

This article focuses on the methodological problems associated with the creation of a thematic repository of cartographic and textual sources, using the example of the platform developed within the scientific project "Shaping the borders of independent Poland in the light of cartographic documents" (MEiN proj. no. 01SPN 17 0032 18). The first of the main challenges in creating this type of repository is identifying and acquiring sources, which is time-consuming due to their dispersion and differences in storage rules (Konopska & Barwiński, 2021). Another key aspect is to effectively link together sources of different types, such as manuscript and printed maps, with statistical data, expert reports, minutes, reports, correspondence, etc. The third challenge is to critically analyse related sources and insert information about them into metadata, the creation and sharing of which requires the development of a quality control process (Palavitsinis et al., 2014; Park & Tosaka, 2010).

A key factor in ensuring the usability of the repository is the proper design of the structure and search tools with future users in mind (Mobo, 2021). Repositories are most successful when they are tailored to the needs of scientific communities, offering dedicated solutions to support the creation of new knowledge (Armbruster & Romary, 2010). A thematic repository, built with users in mind, provides a collected

and substantive resource that is conducive to analytical work, opening up new perspectives and providing a basis for formulating further research questions (Harvey et. al., 2022).

2. Steps in the development of a thematic repository

The process of developing a thematic repository involves a number of steps that take into account the specific requirements of identifying, selecting, acquiring, developing and sharing resources (Figure 1). It is crucial to define the precise scope of the repository. This may include identifying a specific period, geographical region, significant historical event, type of documents, etc. The selection of topics lays the foundation for further activities, defining the research area and the scope that will become the main area of activity, counteracting so-called scope creep,

i.e. the uncontrolled expansion of the repository's content.

The precise definition of the operating framework influences the next steps in the process, enabling the design of precise technical and organisational requirements. This is crucial, as a well-defined scope helps to secure the appropriate means and resources needed to meet the repository's objectives. The decisions adopted at this stage have important consequences for the effective functioning of the repository in the future, and also affect its usability for users.

2.1. Identification and valorisation of historical sources

The first and essential step in creating a digital repository is to identify the relevant historical sources and assess their scientific and

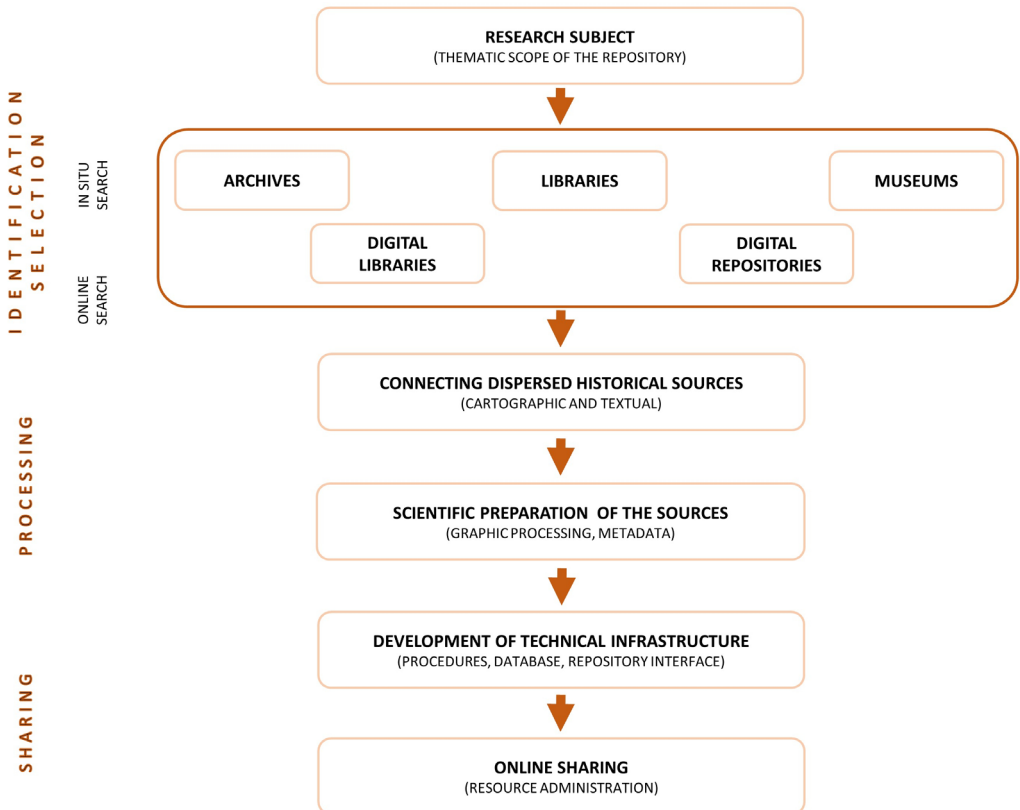


Figure 1. Schematic representation of the process of developing a thematic repository

cultural value. This stage is crucial as it directly affects the quality of the material collected.

As part of the project carried out, it was possible to acquire sources that are a legacy of the work of the Polish delegation and team of experts at the Paris Peace Conference, as well as sources thematically related to this event. The official delegates to the conference were Roman Dmowski and Ignacy J. Paderewski, who were supported by specialists from various scientific disciplines, including historians, geographers, geologists, ethnographers and statisticians. Hence, the initial identification of the resource concerned the legacy of these individuals (Konopska, 2016). These materials include important documents to help negotiate the shape of the borders of an independent Poland. This resource includes archival maps and the associated textual source documents that served as the basis for their compilation.

The research was carried out in the form of direct *in situ* archive searches and online searches. Remote queries included collections made available as digital copies. The research team consisted of cartographers, historians and geographers. Topics related to historical geography, socio-economic aspects, nationality and political issues were searched. All available cartographic sources were sought, such as manuscript and printed maps, cartographic sketches, as well as source material such as analyses, reports, descriptions, notes, letters. These documents were to be used to create or verify cartographic materials, particularly relating to the formation of the territories of independent Poland after the World War I. Some of the sources identified are correspondence with institutions and individuals, as well as official materials. These are largely typescripts and prints, but also manuscripts. In the case of the latter, the nature of the writing does not always allow them to be read easily, which has an impact on the difficulties not only in correctly identifying them but also in evaluating and sharing them (Konopska & Barwiński, 2021).

The final identified resource mostly include cartographic sources, which can be divided into several categories by, among others, their method of production, geographical coverage, function, or detailed subject matter. A detailed characterisation of the sources is discussed in the papers by Konopska and Barwinski (2021) and Konopska et al. (2023).

2.2. Acquisition and technical preparation of resources

The acquisition of digital copies of the sources was carried out in two ways, related to the methods of querying: *in situ* and online. The widespread digitisation of sources collected and stored in archives, libraries or museums makes it much easier to obtain these resources. Depending on the form of sharing (the object is in the public domain), digital copies of the resources were downloaded or URLs redirecting to the digital repositories (where the resources were originally stored) were acquired. Where only links to external repositories are used, any change to such URL may be a problem. As an example, in Poland the Search the Archives (Szukaj w Archiwach, n.d.) portal is gradually taking over the function of an access point to archival resources, affecting the change of URLs and generating difficulties in accessing many resources that were previously stored in the domains of individual archives. For sources for which publication rights were not obtained (copyrighted documents), redirection to the relevant repository was used and expert descriptions were prepared for them.

By carrying out *in situ* searches, it was possible to obtain scans of maps and documents that were already known in the scientific literature, as well as those that were previously inaccessible or unstudied. Due to the nature of cartographic sources, obtaining high-resolution scans is not always an easy task. These problems are due, among other things, to the large size of the maps, which often consist of several sheets. When these sources are scanned, specialised graphic processing is required, including the merging of map fragments into a single file, while maintaining the cartometric accuracy of the original map. Analogous procedures are required for text sources, where it is necessary to combine individual scans, which form a coherent object, into one continuous text file. This process contributes to a more coherent perception of the source as a continuous narrative.

As a result, effective sharing of digital copies of historic sources requires not only technical knowledge of scanning (Panecki, 2019), but also graphic and text processing skills, especially for sources with specific characteristics, such as cartographic and textual sources.

Another challenge is to optimise the presentation of digital copies, which always involves certain compromises. The use of high-resolution files brings with it the need to wait a long time for a map or text document to be displayed. Hence, the optimisation of file sizes is an important procedure.

2.3. Development of metadata for historical sources

Metadata plays an extremely important role in the process of making digital data available, performing a key function in providing detailed information describing resources stored in repositories. The main purpose of metadata is to enable users to efficiently search and browse the repository using a variety of search criteria (Nahotko, 2004). Carefully formulated metadata elements are crucial in the process of promoting collections but also provide essential information that may be used to present and analyse resources in different research contexts. Furthermore, the use of standard metadata formats promotes interoperability between different repositories and systems, which contributes to easier sharing and exchange of data between institutions (Cannon et al., 2022; Degbelo, 2022; Kuźma & Mościcka, 2020).

The process of developing metadata for historical sources requires special attention in the context of adapting to the preferences of Internet users in finding these sources. Depending on these preferences, this may include a chronological search, where the user takes into account the time of creation of the object. The alternative is inquiry based on the content of the sources or spatial search, referring to the geographical scope of the source content. In the process of determining the structure and scope of metadata, especially for cartographic sources, it is particularly important to include information on spatial coverage (Bidney, 2010; Goodchild & Janelle, 2010).

The metadata in the completed project was developed based on the widely used Dublin Core standard. This standard, applicable to the description of web resources, offers 15 key metadata elements. The choice of Dublin Core was dictated by its international recognition, widespread use and flexible structure (Dublin

Core, n.d.). In addition, it enables the description of textual and spatial resources. In order to manage the information more precisely, the data structure was divided into two main components: descriptive metadata and spatial metadata (Zawadzki, 2021).

In terms of descriptive metadata, the historical context of the objects is presented, taking into account the 15 main metadata elements according to the Dublin Core standard. In addition to the basic information, the scope of elements has been expanded to include a short title, scale and keywords, which have been enhanced by: 1) factual keywords (e.g. nationality structure; Paris Conference); 2) name keywords (e.g. Paderewski Ignacy Jan; Dmowski Roman); 3) geographical keywords (e.g. Polish-German border; Duchy of Cieszyn). Such an extension has found its justification in the functioning of web browsers, where this type of metatag supports the process of searching for information and generating relevant results (Zawadzki, 2021).

Spatial metadata is a graphical and mathematical representation of the range of information contained in the source, complementing the descriptive form of the location (e.g. geographical keywords) and the notation of the coordinates of the bounding quadrilateral. The visual representation in geographical space is the bounding quadrilateral, defined by the meridians of the western and eastern borders of the area and the parallels of the southern and northern borders. In the implemented project, out-of-form quadrilaterals were used, resulting from map georeferencing and generated map coverages (Figure 2).

The effective use of the available collection of maps and documents depends on precisely designed metadata, which in this context is not only an integral part of the repository infrastructure but also a key part of the critical analysis of the sources. The process of developing metadata is the most time-consuming stage of creating a repository. It is necessary to develop a methodology for describing the resource, enabling users to easily find information of interest and providing insight into the specifics of the available sources. Responsibility for the development of the metadata rested with an interdisciplinary research team including specialists in the areas of cartography, socio-economic geography, political, social and economic

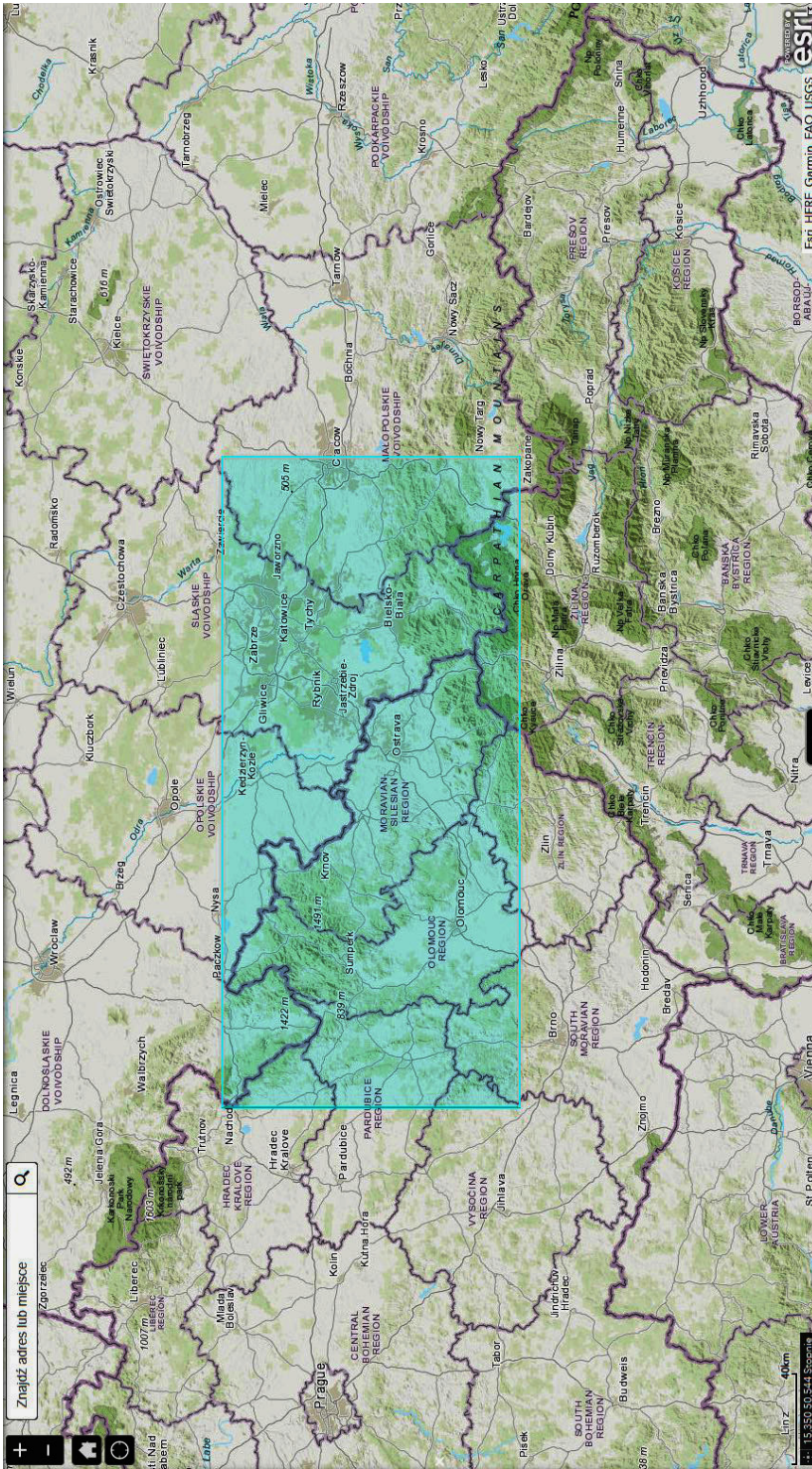


Figure 2. Example of spatial metadata – coverage of a selected map

history, and geoinformatics. This multi-faceted approach to the research material resulted from the diversity of sources and the specificity of the material analysed. It has resulted in detailed descriptions of the maps and their linking to other sources, providing a unique element of differentiation for the thematic repository under development. This aspect contributes to widening access to the collected sources, aimed at both a broad group of researchers and enthusiasts of Polish history and old maps (Zawadzki, 2021).

2.4. System architecture – database and data flow

Thematic repositories need to effectively manage the collected resources, including metadata. This includes the issues of data storage, updating and sharing. Contemporary trends in the archiving of digital copies of historical primary sources propose the use of a database to facilitate the finding of their contents by researchers on the web (Mobo, 2021; Torou et al., 2010).

The database used in the project is a classic relational database, offering the necessary security mechanisms and allowing multiple access to data sources. The database also acts as a basis for the implementation of a mosaic dataset structure, which enables the efficient collection and organisation of raster data. In addition to the spatial data, the database also stores metadata, constructed according to the previously discussed structure. An essential component of the system is the GIS server. This component is responsible for serving the data stored in the database via the REST API. ETL software, on the other hand, was used to construct data flow streams and verify them. The designed ETL processes are used to supply databases that store raster sources and metadata. The software also checks that the information entered is consistent with the database model, and that the fields are completely filled with the required values. Each of the components of the system, listed above, remains closely interconnected (Konopska et al., 2023).

The basis of the system is a server infrastructure that includes three virtual machines, with configurations dedicated to development, test and production environments. Such divi-

sion was implemented to minimise the potential for errors. In addition, each of these environments is equipped with an Nginx server, which is a web server built for high availability and efficient handling of heavily loaded sites. The architecture created makes it possible to consolidate collections into a single, organised data set, while providing open access. The implemented solution harmonises the two perspectives of the presented data and is in line with international standards (Konopska et al., 2023).

2.5. User interface

Based on existing solutions (Fleet & Pridal, 2012; Mikuła, 2023; Mills et al., 1997) and the specifics of the resource, a portal was developed which, from a user perspective, consists of two main client applications:

- a dashboard application (repository) dedicated to the collection and sharing of digital copies of sources and associated metadata;
- a WebGIS (geoportal) application designed to present cartographic sources on an interactive map.

The homepage of the thematic repository (<https://graniceniepodleglej.edu.pl>) acts as an access point to the client applications. Through it, the user can choose between two options for viewing resources, i.e. the repository application (dashboard) or the geoportal (Figure 3).

The use of a dashboard application provides the opportunity to search and browse resources in a user-friendly format. Additionally, this solution provides the ability to scale vertically, allowing it to adapt to an increasing number of sources over time. The main screen of the application contains a map list view (Figure 4). It includes thematically sorted objects and each tab acts as a hyperlink. Once opened, the user is redirected to a detailed view of the cartographic source (Figure 5). Its purpose is to present the source and the metadata describing it and to be able to download a high-resolution scan of the object. The interface style is common for maps and text documents (Figure 6). The only difference is in the additional component that allows the display of the translation available for selected documents. In terms of additional functions, the user is able to search for objects based on their titles. When a phrase is entered



Figure 3. View of the project homepage – thematic repository access point

and the *Szukaj* (Search) button is pressed, the page is refreshed and the result is a display of objects whose title contains the phrase entered. Advanced searches are provided by the extended *Wyszukaj* (Explore) filters tool. This mechanism makes it possible to search maps and documents using metadata elements such as full title, abbreviated title, map language, author keywords, subject keywords, geographical keywords, author information, subject matter, and source type.

The second element of the repository is a geoportals-type application. It allows interactive viewing of cartographic sources in the form of georeferenced rasters, using selected base maps as geographical context. It can be accessed from the project homepage by selecting the *Geoportal* tile. Both visually and functionally, the application follows commonly accepted patterns, allowing the user to browse, search and manage data (Figure 7).

When initializing work with the application, first, it is necessary to search for a map. Due to

the extensive metadata structure, the functionality of the search engine has been limited to five fields that allow the map to be identified based on criteria such as title, author and three types of keywords. The combination of these criteria allows the precise filtering of sources that do not meet specific requirements. Selected maps are presented against a base map that provides a geographical context, making it easier to understand the content presented. Cartographic sources are interactive, allowing the user to view them at the scale of their choice. It is also possible to select a map by using the content table, located in the bottom panel, which contains detailed metadata. When the record is selected, the spatial coverage of the resource is visible in the main window. With the map's spatial coverage identification tool, the user is able to view the content of the expert description.

Additional features include a tool that allows users to compare map content. To activate it, the user has to select a map in the content

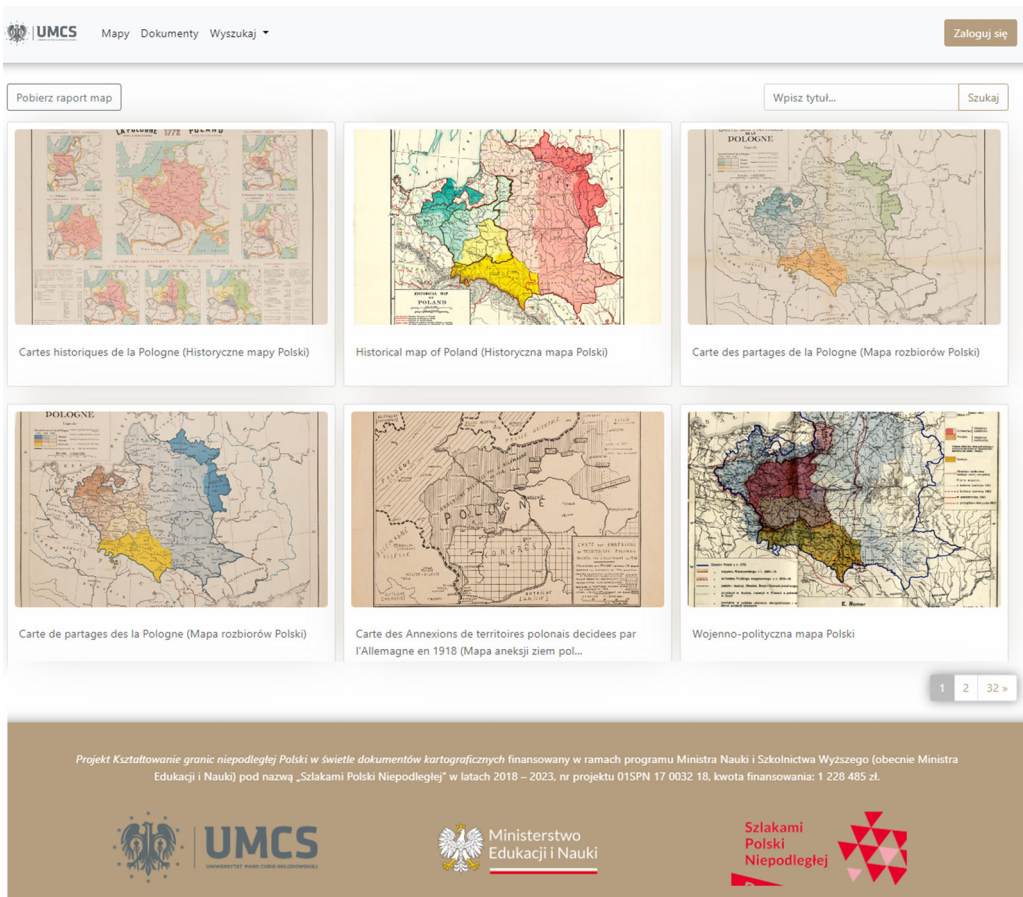


Figure 4. View of the main page of the dashboard application – repository

table and run the *Porównaj mapy* (Compare Maps) function. Then, by selecting a map and activating the *Mapy dawne – porównanie* (Historical Maps – Comparison) option, the tool allows the contents of two maps to be compared in horizontal view mode. By moving the mouse, the content of the maps can be dynamically revealed and obscured.

3. Administration of resources

In order to meet the requirements for managing the repository, an administration panel was created to provide control over resources and users. This module includes the logic responsible for authorising or blocking users

who attempt to access specific parts of the application depending on the access group assigned to them. Registering an account provides access to additional capabilities, such as downloading metadata reports and publishing new data via an internal form in the dashboard application.

The procedure for entering digital copies of sources and the metadata describing them into the system consists of several interrelated steps, referring to the methodology for developing a repository. The acquired cartographic source is subject to preliminary cleaning and georeferencing if it meets cartometric requirements (Kuźma, 2020). Spatial metadata is then prepared in the form of the actual spatial

The proposed frontiers of Poland (Proponowane granice Polski)

03/04/2022

Typ Mapy: Społeczna Polityczna

Kategoria: narodowości Polska granice



Miniaturka! Zdjęcie wyświetlone powyżej jest tylko miniaturką, [kliknij tutaj aby zobaczyć mapę w pełnej rozdzielczości](#)

Opis

Pomimo tego, że na mapie nie ma podanego nazwiska autora oraz daty jej wykonania, powszechnie wiadomo, iż jest to mapa z propozycją granic przyszłego terytorium Polski przedstawiona wiosną 1919 roku przez polską delegację pod przewodnictwem Romana Dmowskiego, podczas Konferencji Paryskiej. Na mapie przedstawiono proponowane granice Polski na tle struktury narodowościowej (językowej), z podziałem na Polaków, Rusinów (Ukraińców), Litwinów i Białorusinów. Nie uwzględniono, zapewne celowo, ludności niemieckiej. Kolorami zaznaczono obszary, gdzie te cztery narodowości stanowią od 50 do 100% ogółu mieszkańców, natomiast dodatkowo, tylko w odniesieniu do ludności polskiej (polskojęzycznej), zaznaczono szrafem regiony gdzie się grupą mniejszościową, w przedziałach 25-50%, 10-25% oraz mniej niż 10%. Nie podano źródeł danych statystycznych, co utrudnia ich weryfikację. Ponadto na mapie namiesiono sieć rzeczną, główne miasta oraz granice innych państw: Rosji, Niemiec, Czechosłowacji, Węgier i Rumunii. Zaznaczono także obszary występowania surowców mineralnych: węgla i cynku na Śląsku, żelaza i miedzi w Świętokrzyskim, soli w Małopolsce i ropy naftowej w Galicji Wschodniej. Proponowane granice Polski nie nawiązują do granic historycznych z roku 1772 (co w roku 1919 było nierealne), ale z drugiej strony nie ograniczają się tylko do regionów z większością ludności polskiej, nie są wytyczone według kryteriów etnicznych. Zwłaszcza na wschodzie postulowane jest przyłączenie rozległych obszarów z dominacją ludności litewskiej, białoruskiej i ukraińskiej, a proponowana granica z Rosją została wytyczona zdecydowanie na wschód od dawnego Królestwa Kongresowego, także wyraźnie na wschód od Zbrucza czy Mińska oraz na północ od Dźwini. Również na zachodzie i północy polskie żądania terytorialne względem Niemiec, dotyczyły niejednokrotnie obszarów z niewielkim udziałem ludności polskiej, zwłaszcza na Pomorzu, Warmii i Mazurach oraz zachodniej Opolszczyźnie. Z kolei proponowana granica południowa obejmowała m.in. Śląsk Cieszyński, Orawę i Spisz. Jednak najdalej szedł postulat włączenia w granice Polski całego terytorium tzw. Litwy etnicznej. Taki kształt postulowanego terytorium przyszłej Polski, odbiegający od kryteriów historycznych oraz narodowościowych (językowych) był uzasadniony czynnikami gospodarczymi, strategicznymi i politycznymi. Postulowane terytorium Polski, zwłaszcza w części zachodniej i północnej, było w ówczesnych uwarunkowaniach politycznych, mało prawdopodobne do urzeczywistnienia. Nie udało się przeforsować m.in. propozycji dotyczących Śląska Opolskiego i całości Górnego Śląska, ponadto Warmii i Mazur, Gdańska czy szerszego dostępu do Bałtyku. Nierealny był także postulat przyłączenia całego terytorium Litwy. Również ustalona ostatecznie w wyniku wojny polsko-bolszewickiej granica na wschodzie, była mniej korzystna, niż zaproponowana na omawianej mapie. Była to jedna z trzech map przesłanych przez Romana Dmowskiego prezydentowi Wilsonowi w październiku 1918 roku.

Podstawowe Informacje

Język mapy: Angielski

Twórca mapy: Nieznany autor

Rok wydania: 1918

Dodatkowe Informacje

Słowa Kluczowe

Zobacz w Geo Portalu

Projekt Kształtowanie granic niepodległej Polski w świetle dokumentów kartograficznych finansowany w ramach programu Ministra Nauki i Szkolnictwa Wyższego (obecnie Ministra Edukacji i Nauki) pod nazwą „Szlakami Polski Niepodległej” w latach 2018 – 2023, nr projektu 01SPN 17 0032 18, kwota finansowania: 1 228 485 zł.



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Szlakami
Polski
Niepodległej



Figure 5. Detailed view of the metadata of a sample cartographic source

coverage (legend information or sketches and notes that were made on the map are omitted). If the document does not have cartometric features, an approximate coverage of its content is created using a polygon. The resources developed in this way are ready to be displayed on an interactive map base.

The next stage is the development of metadata, which enriches the spatial information with a set of descriptive information to facilitate the search and interpretation of sources. The metadata generation process is carried out manually by verified users. The administration

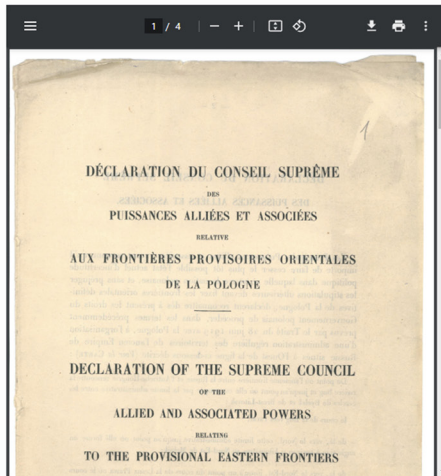
panel of the dashboard application is employed for this purpose. A table is generated from this tool and then imported into the database. Expert users enter information related to a specific document and the relevant ETL processes integrate these resources into a coherent whole.

Assessment of the accuracy of the information is carried out through validation mechanisms that check the structural as well as semantic accuracy of the metadata. These mechanisms monitor whether the necessary fields are correctly filled in and whether there are any errors due to incorrect information being entered into

Declaration of the Supreme Council of the Allied and Associated Powers relating to the Provisional Eastern Frontiers of Poland

26/01/2023

Dokument Oryginalny Tłumaczenie

Dokument można zobaczyć również [tutaj](#)

Opis

Deklaracja Rady Najwyższej Mocarstw Sprzymierzonych i Stowarzyszonych została wydana w Paryżu 8.12.1919 r. Dokument podpisał jej prezydent G. Clemenceau.

Rada uznaje prawo polskiego rządu do zorganizowania administracji na obszarze byłego Imperium Rosyjskiego położonego na zachód od wytyczonej linii opisanej szczegółowo w dokumencie. Linia ta była zbieżna z linią nazywaną później linią Curzona.

Podstawowe Informacje

Język dokumentu: Angielski

Autor: Clemenceau Georges

Data powstania: 08.12.1919

Dodatkowe Informacje

Mapy Referencyjne

Projekt Kształtowanie granic niepodległej Polski w świetle dokumentów kartograficznych finansowany w ramach programu Ministra Nauki i Szkolnictwa Wyższego (obecnie Ministra Edukacji i Nauki) pod nazwą „Szlakami Polski Niepodległej” w latach 2018 – 2023, nr projektu 01SPN 17 0032 18, kwota finansowania: 1 228 485 zł.



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Edukacji i Nauki



Figure 6. Detailed view of a sample text source

individual fields of the form (e.g. data deduplication, record standardization). The data entered via the forms is adapted to a specific database template and, following a verification process, imported into it. The result of these procedures is the integration of the data into the web application.

In the final stage, the information collected in the development databases is made available to the test databases. These databases are the source for the application, which involves detailed analysis of new records by historians and experts. If problems are detected, the person entering the data is informed of the need to correct the data and re-run the submission process. If the data on the test server is error-free, it is submitted to the database directly connected to the application available to the general public (Konopska et. al., 2023).

4. Conclusions

Despite mass digitisation and widespread access to digital libraries, there are still many research areas that remain under-explored. This provides the basis for the creation of thematic repositories that organise the available resources and facilitate their accessibility and reception. However, this poses numerous challenges and barriers for their developers, which requires the use of a proper research procedure. Its main elements can be identified in three key dimensions, i.e. identification and selection, scientific preparation of resources and the development and sustainability of sharing services. It is also crucial here to learn about the needs for ways to improve the organisation of documents in historical source repositories

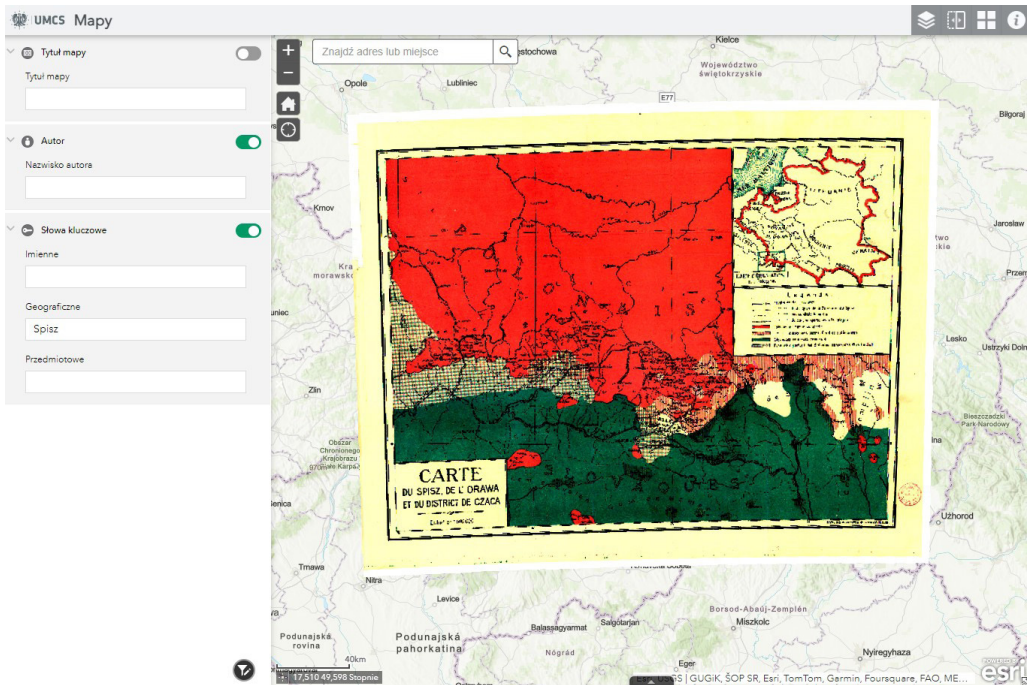


Figure 7. View of the geoportal application with the selected map displayed

and ways to increase access to information relevant to researchers (Torou et al., 2010).

Based on the experience of the completed project, it can be concluded that the main value of the thematic repository is the collection and organisation of sources, hitherto dispersed in dozens of archives in Europe and North America. This would not have been possible without the identification process, which is crucial in this context. It is only effective if it is implemented in the form of *in situ* and online searches conducted by a broad team of researchers. The way in which a search is carried out has a significant impact not only on the efficiency but also on the quality and completeness of the archival material collected. The diagnosed limitations (poor state of preservation of sources, copyright, costly trips abroad) in accessing many collections are usually the most significant obstacle to fully acquiring resources.

Thematic repositories play a role as a tool for scientific communication, so it is important to provide high quality metadata, i.e. a scientific description of the resources. Metadata devel-

opment requires the selection of an appropriate standard for their recording and the involvement of a group of experts. This allows a high level of completion of metadata elements and preparation of expert descriptions. It is also important to provide methods for automatically validating their content to avoid technical errors. The preparation of metadata also includes the process of establishing relationships between cartographic and textual sources that are related to them in terms of content or provenance. This stage requires the participation of a wide range of experts and multi-stage verification.

In keeping with trends in the sharing of cartographic sources, such as David Rumsey Collection (n.d.), Old Maps Online (n.d.), USGS Historical Topographic Map Explorer (n.d.), a spatial form of data presentation using WebGIS solutions should be used. It is also important to support the idea of Open Access, which is an important objective of many repositories. This requires a discussion of copyright and licensing aspects. This aspect is a separate issue that would need individual presentation.

This topic, related to the development of open science, was presented in detail by Poślada (2020) and Sójkowska (2023).

In summary, the creation of digital thematic repositories is a complex process that requires consideration of technical, organisational and scientific aspects. However, this endeavour is aimed at facilitating access to knowledge and resources in the field.

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