

User:

Please review the [Application Guidelines](#) for details about the information requested in this proposal. Fields marked with an asterisk are required.

Eligibility

To be eligible for a Digitizing Hidden Collections grant in 2017, applicant projects must meet the following requirements:

- Minimum allowable request for 2017: **\$50,000**
- Maximum allowable request for 2017: single-institution projects: **\$250,000** / collaborative projects: **\$500,000**
- Minimum allowable project term: **12 months**
- Maximum allowable project term: single-institution projects: **24 months** / collaborative projects: **36 months**
- Projects must begin between **January 1 and June 1, 2018**
- Single-institution projects must be completed by **May 31, 2020**
- Collaborative projects must be completed by **May 31, 2021**

Is this a collaborative project? *(Note: collaborative projects are required to submit a Collaboration Statement)*

Yes/No

No

What is the size of the request?

NOTE:

- The minimum acceptable request in this program, for all projects, is **\$50,000**.
- Single-institution projects can request **no more than \$250,000**.
- Collaborative projects can request **no more than \$500,000**.

Amount Requested

\$62,218

Provide the proposed project length in whole months, and list the project start and end dates.

NOTE:

- All projects must begin between **January 1 and June 1, 2018**.
- All projects should **start on the first of the given month** (e.g. January 1), and **end on the last day of the given month** (e.g. November 30) when the project closes.
- The minimum project length, for all projects, is **12 months**.
- Single-institution projects can last **up to 24 months** and must end by **May 31, 2020**.
- Collaborative projects can last **up to 36 months** and must end by **May 31, 2021**.

Project length (months)

12

Project Start Date

02/01/2018

Project End Date

01/31/2019

A note regarding principal investigators:

An individual may not be named as a principal investigator (PI) on more than one proposal, and may not serve as PI on two funded projects simultaneously. Please tick the box below to confirm your acknowledgement of and compliance with this guideline.

Tick to confirm: Confirmed

Project Summary

All applicants are required to upload a [cover sheet](#) with their final proposals. The cover sheet provides you with a place to point reviewers to the sections in your final proposal where you've addressed questions or concerns they have may expressed in first round feedback. [Click here](#) to download the cover sheet template.

Cover Sheet 0_ProposalCoversheet_RussianMilitaryMaps_CLIRHiddenCollections2017.p

Applicant Institution Indiana University

Applicant Institution: legal name Trustees of Indiana University
(if other than above)

Collection/Project Title Eastern Bloc Borderlands: Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947

Project Summary Funding for Eastern Bloc Borderlands: Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947 will support the digitization, cataloging, and georeferencing of 4,000+ largely Soviet-era maps that were originally captured by the Germans during World War II, then Americans, and ultimately deposited in the Library of Congress (LC). The Indiana University Libraries (IUL) holds duplicates of this map series based on a cataloging exchange arrangement between IUL and LC. The Russian Military Topographic Map Collection covers areas of Eastern Europe that were greatly impacted by World War II, and were of strategic importance to Russia/Soviet Union. Areas featured, such as Crimea, are critical in international relations today. These maps also provide a glimpse of pre-war Eastern Europe, with villages and settlements that in some cases no longer exist. Increasing patron demand from IU and scholars abroad and preservation concerns provided the impetus for this year-long digitization project.

Collaborating institutions (if applicable)

If this is a collaborative project, include the names of the collaborating institutions below. Use the green **add** button to list additional partners as needed.

Collaborating Institutions (if applicable)

Institution

Collaboration Statement (required for all applicants proposing a collaborative projects)

Identify the ways in which your proposed project constitutes a collaborative effort. Explain how the collaboration advances the missions and meets the priorities of each of the institutions involved and enhances the capacity of the project to support the creation of new knowledge, and describe benefits of the project that would not be possible if the partners worked individually.

Collaboration Statement

Quantities and Types of Original Materials to be Digitized during the Project

Enter estimated quantities and select the units of measurement [boxes, cubic feet, items, linear feet, pages, recorded hours, volumes] and material types [books, serials, manuscripts, photographs, posters, ephemera, musical scores, maps, architectural drawings, audio recordings, audiovisual recordings, artworks, artifacts, specimens, mixed archival collections, other] that most specifically describe the extent of source materials that will be digitized during the project.

You may add as many different measurement/material types as you like by clicking the green **add** button found below this section, but each individual item should be accounted for in only one category.

If the quantities provided are rough estimates rather than precise descriptions, explain the method used for estimating those quantities in the space provided for additional information.

Materials

Amount of Materials	3452
Unit of Measurement	items
Type of Materials	maps
Type of Materials: Other	

Additional information (optional)

Because the Russian Military maps were of strategic interest that were captured by Germans, then recaptured by Americans, a complete set of maps from the Russian/Eastern European region is inherently incomplete. It is believed that the Library of Congress (LC) holds the largest number from this map series, including maps of Russia/Eastern Europe, but their collection is unprocessed. Indiana University (IU) is believed to hold the second-largest number from this series of Russian/East European maps based on IU's item-level inventory. LC's unprocessed map collection and administrative hurdles made partnering difficult, but they are supportive of this application.

Quantities and Formats of Master Digital Files to be Created during the Project

Enter estimated quantities of uniquely described digital files to be created through digitization, as well as the relevant digital format(s) created and technical specifications for those formats (dpi, minimum pixel dimensions, bit-depth, optical density, etc.).

If additional files are to be derived from those created in the digitization process for the purposes of backup, preservation and/or access, do not count these derivative files or formats in the totals entered; you may describe any derivative formats to be created and the purposes these will serve in the space provided for additional information.

Digital Files to be Created

Quantity

3452

Format

TIFF

Quantity

4106

Format

GeoTIFF

Quantity

10356

Format

JPEG

Quantity

3452

Format

JPEG2000

Additional information (optional)

Materials will be scanned at 100% of the original size and the digital master files will be saved as uncompressed TIFF format. For each TIFF image, three sets of derivatives will be generated for non-interactive access: thumbnails (200 pixels), screen-size image (600 pixels) and larger image (1,000 pixels). An interactive version of the map is also created for tiled zooming following the J2K Codec specifications, which is a minimum of 400 dpi/4,000 pixels on the long side. Georeferencing will also result in GeoTIFFs, a metadata standard that allows for the embedding of geo-information such as map projection, coordinate data, etc.

Catalogs/repositories/services

Provide names and complete URL(s) for all of the portals through which content digitized through the proposed project will be available to researchers and the general public. Use the green **add** button to list additional portals as needed.

Portals

Portal

Image Collections Online

URL

<http://dlib.indiana.edu/collections/images/>

Portal

IUCAT

URL

<http://iucats.iu.edu>

Description of Content: Public

Description of materials

Provide a brief narrative description of the source materials nominated for digitization, including their subject(s), provenance, relevant associated people, organizations, and events.

Description

The Russian Military Topographic Map Collection at Indiana University contains just over 4,000 maps of Poland, Ukraine, Belarus, Latvia, Lithuania, Estonia, Finland, and Western Russia at scales of 1:25,000, 1:50,000 and 1:100,000. They measure 38 x 63cm. These maps were made by the Russian Military for internal, tactical use in the field. In the years surrounding World War II, many of these maps were captured in the field by opposing forces, including German and American troops. The history of these maps is told by the myriad stamps from institutions such as the University of Berlin, the US Army Map Service, and the CIA Map Library. After the war, the maps were sent to the Library of Congress. Indiana University's collection came from a cataloging exchange arrangement with the Library of Congress. While Soviet military topographic maps from the Cold War era are abundant, it is rare to find pre-World War II maps of this area in such detailed scale. Given that the geographic area covered by these maps would later become part of the Soviet sphere of influence, the existence of these maps provides evidence for intentionality, or at the very least interest on the part of the Soviets in this borderland region.

Geographic Scope

Describe the range of geographic regions represented in the nominated collection(s). Do not describe the current or future location(s) of the original, physical materials.

Geographic scope

The map collection covers Eastern Europe, consisting of present-day Poland, Ukraine, Belarus, Latvia, Lithuania, Estonia, Finland, and Western Russia, and features areas, such as Crimea in Ukraine, which are hot spots in current day international relations.

Date range of materials to be digitized

List your best estimate of the date range covered by the collection(s), in whole years. Dates should be formatted as YYYY BC/AD – YYYY BC/AD (e.g. 356 BC - 1542 AD).

Date range of materials 1883 AD - 1947 AD

Collection level descriptions (if applicable)

If applicable, identify and provide the URL(s) for any collection-level descriptions currently available online. The existence of such descriptions is not a requirement for this award and there is no minimum level of description required before collections can be eligible for nomination for this program. Use the green **add** button to list additional URLs as needed.

Collection URL(s)

Collection name(s)

The Russian Military Topographic Map Collections in Image Collections Online

Collection URL

<http://webapp1.dlib.indiana.edu/images/splash.htm?scope=images/VAC9619>

Collection name(s)

Catalog record for 1:25,000 maps in IUCAT

Collection URL

<http://iucat.iu.edu/catalog/14701157>

Collection name(s)

Catalog record for 1:50,000 maps in IUCAT

Collection URL

<http://iucat.iu.edu/catalog/5020131>

Collection name(s)

Catalog record for 1:100,000 maps in IUCAT

Collection URL

<http://iucat.iu.edu/catalog/5020129>

Description of Content: Confidential**List of collections to be digitized**

The list of collections to be digitized must follow the format found in this [template](#). This document lists the nominated collections included in the project, the sizes of the collections, the holding institution(s), the formats of the collection material, and re-usage rights for each collection.

List of Collections (.pdf, .xls, .xlsx)

3_ListofCollections_RussianMilitaryMaps_CLIR2HiddenCollections2017.pdf

Current arrangement and description(s) of materials to be digitized

Provide a brief narrative that summarizes the physical arrangement and the level(s) of processing, cataloging, or other descriptive work that has previously been done for the nominated collection(s). Include the date(s) this descriptive work took place and the standard(s) and/or current format(s) of the records that were created.

Current Arrangement

The maps have been cataloged at the set level according to scale (1:25,000, 1:50,000 and 1:100,000) with an inventory of the total sheets held as part of each cataloged record delivered through IUCAT.

Indiana University began digitizing and describing these maps with greater detail in 2013, adding descriptive metadata for each individual map. To date, 1,509 maps have been cataloged and made available online via Image Collections Online (ICO): <http://webapp1.dlib.indiana.edu/images/splash.htm?scope=images/VAC9619>. Approximately 30 descriptive and administrative metadata fields are being used for this collection, including the ICO core fields (<https://wiki.dlib.indiana.edu/x/tYGtHg>) to facilitate cross-collection searching in ICO. The metadata is stored as data streams in our Fedora 3 digital library repository for which we generate MODS records for cross-collection searching outside of the ICO environment.

The bibliographic metadata will include transcription, transliteration, and translation of the title and place names to increase access to the maps. Upon consultation with members from our Cataloging department, we will need to remediate the current metadata model and structure to improve access including normalization, subject analysis, and support translation and transliteration.

Current condition and housing of materials to be digitized and plans for their conservation and preservation

Describe the current condition and housing of the materials to be digitized, including the means through which this condition has been assessed. Identify the individual or individuals responsible for this assessment and approximately when the assessment took place. Describe the strategies to be employed for stabilization, conservation, and/or preservation of the materials, including the means through which this work will be supported and sustained long-term. Explain the environmental provisions made for the long-term management of the source materials and the strategy for responding to requests for access to them.

Note that no funds for conservation, stabilization, or preservation of physical materials are available through this grant program. This includes costs for re-housing or storage supplies. Similarly, no funds related to the conversion or migration of born-digital files are available. All such costs are the responsibility of the holding institutions.

Current Condition

The Russian Military Topographic Map Collection is currently housed in map cabinets in the IU Libraries' Government Information, Maps, & Microforms secure area. This area is available to the public, with supervision, during business hours or by appointment. Digitization is completed in this same area, minimizing transportation of the maps. Many of the maps in this collection went through various preservation treatments before arriving at Indiana University. Most have a linen backing with a lamination treatment, which has begun to

deteriorate. Eventually, this plasticized treatment will lead to the degradation of the maps, and loss of information.

In 2016, the condition of this collection was evaluated by Doug Sanders, Paper Conservator from the E. Lingle Craig Preservation Laboratory, Indiana University Libraries. Digitization will aid in the preservation of these collections by reducing direct, physical contact with them. The resulting digital archival images may also become, in some cases, the primary representation for items that require reformatting due to fragile conditions.

Representative samples of materials to be digitized (max. 10 pages, 12 MB, .pdf format only)

Upload a PDF document containing images of up to ten (10) selected items from the collection(s) to be digitized. This document must be no more than ten pages in length, and it must be no more than 12MB in size. Each image should be accompanied by a description and full citation that includes the name of the holding institution, the collection title, any identification numbers or shelfmarks, and any available information about rights or licensing. The document may contain embedded URLs linking to additional content, such as sample audio or audiovisual files, but must contain samples of no more than ten items.

Description of Samples

The maps chosen as representative samples include sheets from each of the map scales in the collection (1:25,000, 1:50,000 and 1:100,000), and highlight some of the significant stamps that mark the collection's movement from the Russian Military, to Nazi Germany institutions, and finally to the United States. The samples also demonstrate the level of detail, sometimes at the building-level, and notation indicating the secret nature of these maps.

Samples (.pdf format only)

3_
RepresentativeSamples_RussianMilitaryMaps_CLIRHiddenCollections2017.}

May CLIR excerpt from and display some portion of these representative samples within the Hidden Collections Registry, elsewhere on CLIR's website, or in program-related social media?

Tick "yes" or "no," indicating whether CLIR may display some portion of the provided samples within the Hidden Collections Registry, elsewhere on CLIR's website, or in program social media. CLIR staff will cite the holding institution if a sample is used in one of these ways. Note that an applicant's response to the question will be visible to CLIR staff only and will not affect the proposal's assessment in the competition for funding in any way.

If some samples may be displayed and some may not, clarify which of the representative samples are permissible to display publicly.

Yes/No

Yes

Selected Permissions (if applicable)

Rights, Ethics, and Re-Use

All parties to this proposal understand that as a condition of acceptance of any *Digitizing Hidden Special Collections and Archives* award from CLIR, all recipient institutions and collaborating partner organizations will be required to sign and execute the program's [intellectual property agreement](#).

Tick to confirm: Confirmed

All parties to this proposal understand that as a condition of acceptance of any *Digitizing Hidden Special Collections and Archives* award from CLIR, all metadata created in the course of funded project activities must be dedicated to the public domain under a [CC0 Creative Commons license](#). Exceptions may be made for culturally sensitive metadata.

Tick to confirm: Confirmed

All parties to this proposal understand that as a condition of acceptance of any *Digitizing Hidden Special Collections and Archives* award from CLIR, recipient institutions, including partnering institutions in cases of collaborative projects, must not claim additional rights or impose additional access fees or restrictions to the digital files created through the project, beyond those already required by law or existing agreements. Digital copies of materials that are in the public domain in their analog form must also be in the public domain. CLIR strongly encourages grant recipients to share digital copies as public domain resources and/or with [Creative Commons](#) licenses, as appropriate. Exceptions may be made for those materials in the public domain without the express wishes of local, traditional, and indigenous source communities.

Tick to confirm: Confirmed

Applicants who tick any of the boxes below must provide details clarifying their responses in the Rights, Ethics, and Re-Use Statement, strongly justifying their choices.

Tick any that apply: Applicant and/or partner institutions plan to impose specific attribution requirements when digital copies created through this project are re-used by others.

Note that applicants planning to use watermarks or charge fees for the use of digital materials created through this program, particularly for non-commercial re-use, are less likely to be competitive for this program.

Rights, Ethics, and Re-Use statement (max. 4 pages plus optional appendix, 5MB, .pdf format only)

Upload a description of up to four pages that:

- Summarizes all known rights, embargoes, and access or legal restrictions applicable to the source materials to be digitized and describes how these rights, embargoes, or restrictions will be communicated to the public (such as employing the standardized statements offered by RightsStatements.org);
- Identifies and explains any ethical considerations that affect circulation of, access to or re-use of the digital copies;
- Explains the basis upon which the proposed activities are justifiably legal and ethical;
- Explains the specific terms under which users of the collections will be able to access and re-use the digital copies created through the project;
- Explains and justifies any institutional watermarks incorporated into copies made accessible to users and any fees charged for re-use; and
- Describes any other measures to be taken to restrict access to or re-use of the digital copies in order to comply with the law or with applicable, pre-existing agreements or contracts, or to uphold ethical and moral claims and rights of individuals or communities.

This statement should not be a “boilerplate” institutional policy or template, but should be tailored to this project and to the requirements above. Applicants may include copies of institutional policies, deeds of gift, or other additional documents in this section as an optional appendix. This appendix must be combined into the same PDF as the statement, led by a cover sheet identifying each additional document.

Statement (.pdf format only)

4_Rights_RussianMilitaryMaps_CLIRHiddenCollections2017_updated.pdf

Value and National Significance

Describe the impact of the proposed project upon scholarship, and explain why digitization is the most appropriate means to maximize the value and significance of the materials to scholars and students.

This part of the proposal should address the importance of the collections to teaching, research, and the creation of new knowledge and not merely provide a more detailed description of the materials than is given elsewhere in the application. In other words, this statement should go beyond asserting the significance of the subjects covered in the original materials and instead explain how a scholar's understanding of those subjects could be transformed by using digitized versions of those materials specifically.

Value and Significance Statement

This collection supports the reputable Russian and Eastern European, Central Eurasian, and International Studies programs at Indiana University Bloomington. This collection is also frequently requested from scholars outside of the United States who are unable to view the maps in person. Digitization of this collection allows international scholars to gain access to detailed historic maps of their region. The changes that took place in Eastern Europe encompassing the time span of the map collection cannot be overstated. Changes in political boundaries, war, forced resettlement, and demographic shifts permanently changed the landscape of Eastern Europe. These maps provide scholars with a historical view of the pre-war landscape.

This collection has immense interdisciplinary value to scholars and students of History, Archeology, Anthropology, International Studies, Area Studies, Jewish Studies, Geography, and genealogists. In

many cases, these maps show the locations of villages and buildings that no longer exist. Increasing access to this collection will provide myriad opportunities for researchers to examine the historical, geographic, and political landscape of Eastern Europe in new ways, including examining change in land use, creating spatial humanities projects, or recovering artifacts from past settlements.

According to the web statistics, use of the online maps has steadily increased from 2,254 unique hits in 2013 (site launched in November) to 120,631 unique hits in 2016. From 2014 to 2015, we had an 82% increase in use. Since 2014, we have also tracked email reference inquiries. Through February 2017, we have received 74 discrete reference inquiries from twenty researchers, largely from historians residing in Eastern Europe and Russia, and hundreds of high-resolution image downloads. The number of in-person requests is also significant, but are not systematically tracked.

To our knowledge, the Library of Congress (LC) holds the largest collection of Russian Military maps from the East European and Russian region with Indiana University Libraries (IUL) holding the second-largest collection that comprises duplicate maps from LC. Since these maps were subjected to warring interests, a complete collection is not likely to exist. As a result of several discussions with Mike Klein, Geography & Map Reference Specialist, Paula Hasier, Chief of Geography & Map Division, and Colleen R. Cahill, Digital Conversion Coordinator, in hopes to partner with LC to fill the gaps in this map series for the region, we learned that their map collection has not been processed. Based on their set-level catalog records, they were able to estimate that they hold ~15,000 maps from this series, but could not confirm how many of those depict Russia and the Eastern Bloc borderlands. Their unprocessed map collection along with administrative hurdles made partnering difficult. LC is aware of our plans and supportive of our grant application. Discussions will continue to determine ways our respective institutions can overcome obstacles beyond this grant. Ultimately, LC and IUL agree that digitization of this collection is important. It not only provides access to scholars in Eastern Europe and around the world, but facilitates the use of these maps for scholars conducting research in the field.

Upload three letters of scholarly support for your project (max. 10MB, .pdf format only).

REDACTED (PII)

Project Context and Impact

List and describe all envisioned project deliverables. Explain the means through which each will be available to the public, and any applicable conditions or terms affecting their availability.

Applicants should describe all expected outcomes, how each will be made accessible to others, and under what conditions.

- Deliverables include the digital surrogates created during the project and related metadata, and they may also include aggregations of those files and metadata with related files and metadata already available online. Metadata created through this program is not restricted to any particular standard or structure. Other possible deliverables include authority files, description and digitization manuals, training materials, research guides, or other outcomes.
- If any special measures are being taken to improve accessibility for specific user communities (e.g. visually or hearing impaired; users with limited internet access; foreign language speakers, etc.), include them here.

Deliverables

Eastern Bloc Borderlands will make publicly accessible nearly 20,000 digital maps and just over 4,000 item-level records through Image Collections Online (ICO), one of several digital library curation and discovery services developed by the IU Libraries.

Images: This project will generate two kinds of TIFFs — TIFF following archival standards and a GeoTIFF. For every regular TIFF file created as part of this project (~3,452), we will generate display derivatives for web access (thumbnail, screen and large) as well as JPEG2000 files for interactive viewing. The GeoTIFF, which contains geospatial metadata in the file's header, will also be accessible through ICO, and will be shared widely with GIS-savvy aggregators like the Big Ten Academic Alliance Geoportal.

Metadata: Over 4,000 item-level metadata records will be created for this project. To date, 1,509 maps have been cataloged and made available online via Image Collections Online (ICO): <http://go.iu.edu/1u15>. Approximately 30 metadata fields are being used for this collection, including core fields to facilitate cross-collection searching in ICO. The metadata is stored as data streams in our Fedora 3 repository for which we generate MODS records for cross-collection searching outside of the ICO environment. Upon consultation with members from our Cataloging department, we will need to remediate the current metadata model and structure to improve access including normalization, subject analysis, and support for translation and transliteration. Metadata will be made available for third-party aggregation by organizations like the Digital Public Library of America.

Documentation: Another deliverable, the resulting documentation—cataloging guidelines, georeferencing information, etc.—will be publicly available as part of our Libraries' Confluence wiki. We will also use a restricted counterpart wiki for managing and documenting day-to-day project activities.

The project team is committed to open access of the digitized content as permissible by law and to sharing the content, including metadata, for aggregation, reuse or remixing in an effort to advance scholarship on the Russian and East European region. Based on consultations with experts, it was determined that because the maps

were anonymously created and published over seventy years ago, they are in the public domain under the copyright laws of the Russian Federation and the United States.

Scholarly impact is evident from the number and types of reference email inquiries we have received since launching a subset of the map collection online in November 2014. As of February 2017, we have received 74 discrete reference inquiries from twenty researchers, largely from historians residing in Eastern Europe and Russia, and hundreds of high-resolution image downloads. The number of in-person requests is also significant, but are not systematically tracked. According to the web statistics, use of the online maps has steadily increased from 2,254 unique hits in 2013 (site launched in November) to 120,631 unique hits in 2016. From 2014 to 2015, we had an 82% increase in use. Online dissemination of the remaining maps will extend research potential as scholars will be able to interact with materials directly including overlaying georeferenced maps over non-Russian language maps to compare toponyms.

Describe any planned outreach and community engagement activities.

Identify the communities most likely to be interested or invested in the digitization of the proposed material. Describe how you plan to engage them and detail specific outreach approaches for different user groups. Consider the potential impact of the project on scholarly, local, professional, and other related communities of interest.

Outreach and Marketing

This collection was publicized in A Snapshot of a 21st-Century Librarian by The Atlantic in June 2016 (<https://www.theatlantic.com/business/archive/2016/07/research-librarian/492911/>). Press around other collections of Soviet Maps, including a 2015 Wired article, Inside the Secret World of Russia's Cold War Mapmakers (<https://www.wired.com/2015/07/secret-cold-war-maps/>) and upcoming book, The Red Atlas: How the Soviet Union Secretly Mapped the World (<http://redatlasbook.com/>) have increased public and scholarly interest in Russian Military maps. We will continue outreach efforts with the Indiana University School of Global and International Studies and the extensive and diverse group of faculty and students studying this region at IU. The connections the IU community has with scholars in the region will aid our outreach efforts with scholars and institutions in Russia and Eastern Europe.

Plans to enhance this collection through the continued development of an online, interactive index (<http://cdb.io/1ITbIEA>) will promote discovery in addition to Image Collections Online and contributions to the Digital Public Library of America. Georeferenced maps and the interactive index offer new opportunities for digital research projects and exhibits showcasing the Russian Military Map Topographic Collection.

The PI and co-PI plan to submit a paper on this project for the 2018 Digital Humanities conference that will take place in Mexico City, Mexico, June 24-30, 2018. Also under consideration is the Spatial Humanities conference that takes place every autumn in Lancaster,

United Kingdom

(<http://www.lancaster.ac.uk/fass/projects/spatialhum.wordpress/>).

Describe collections related to the materials nominated for digitization and describe plans for creating meaningful linkages to those collections

Applicants should be as specific as possible in describing these related collections, particularly those held at institutions not participating directly in the project. The nature of the relationship between the collections described here and the collections nominated for digitization should be made explicit. Mention any meaningful linkages that will be created through aggregating related metadata for search and discovery (using registries, databases, or other well-known research portals), adopting common standards, protocols and/or controlled vocabularies, or promoting the joint use of the related collections directly to scholars and students.

Related Collections

The Russian Military Topographic Map Collection nominated for digitization provides a temporal extension to the more readily available Soviet topographic maps from the 1970's-1980's, such as those available for purchase through East View Geospatial and LandInfo and held by many libraries. With the digitization of the Russian Military maps, researchers will be able to compare maps of Eastern Europe before, during, and after this volatile period in the region's history, and leverage published guides such as the free, online version of the Department of US Army Technical Manual: <http://www.lib.berkeley.edu/EART/pdf/soviet.pdf>.

Significant related collections held by Indiana University Libraries include a collection of Soviet Propaganda Posters from the 1930's-1940's (<http://iucat.iu.edu/catalog/14349755>), and the Smolensk Archives (<http://iucat.iu.edu/catalog/6234231>). The Smolensk Archives is a collection of archival documents from the local Communist Party Archive of the city of Smolensk of western Russia. In a parallel journey to the Russian Military Topographic Map Collection, this archive was first seized by the invading Nazi ground forces in the early days of WW II, then captured by the Allied Forces. Both of these collections, along with the Russian Military Topographic Map Collection, are primary source documents that reveal the inner workings of the Communist Party of the former Soviet Union.

Other digital projects such as the JewishGen Communities Database (<http://www.jewishgen.org/Communities/Search.asp>) complement research on villages and settlements in Eastern Europe that no longer exist. Digitizing these maps would allow researchers to locate place names from the JewishGen Communities Database on historic maps, providing a spatial context to their research.

Describe any future scholarly initiatives that would be made possible by the completion of project work.

Such initiatives may be those planned by the applicant institution or consortium or those that other individuals or organizations might launch as a result of the project. Examples may include but are not limited to research and assessment projects, digital scholarship, new forms of computationally intensive research, digital exhibits, and new online teaching and learning initiatives.

Future Initiatives

Once the Russian Military Topographic Map Collection has been digitized, records for each map will be included in the Big Ten

Academic Alliance Geoportal (<https://geo.btaa.org>). This will increase discoverability and reach of the collection, and aid in outreach efforts.

Given that these maps will all be digitized and georeferenced, it will be possible to create a mosaiced basemap from this collection, digitally stitching the map images together to form one contiguous map of the area that could be used as a basemap or reference layer in future digital scholarship efforts. This would allow researchers to use a historically accurate and detailed reference for geospatial projects and data visualization.

IUL has already been contacted by researchers wanting to use the Russian Military Topographic Map Collection to locate historic sites of settlements to search for artifacts. Completion of this project will allow for research in the vein of Rondelli, Garcia-Granero, and Stride's archeological research using Soviet Military Maps in the Samarkand region (Rondelli, B., García-Granero, J., & Stride, S. (2012). Soviet military maps and archaeological survey in the Samarkand region. *Journal Of Cultural Heritage*).

Project Design

Explain the rationale behind the project's design. Describe prior research and/or experiences that have directly informed this design. Note any innovations or practices that will make the proposed approach particularly efficient, ground-breaking, and/or cost-effective.

CLIR expects that this program will support innovative and increasingly efficient methods of digitizing and disseminating information about cultural heritage materials to scholars and the broader public. All applicants should demonstrate an understanding of how their proposed approach to digitization fits into current understandings of best professional practice and, if applicable, may propose unique improvements to this practice.

Project Context

The two main partnering departments in the Indiana University Libraries (IUL) for this project are Digital Collections Services (DCS) and Government Information, Maps and Microform Services (GIMMS). The DCS department fosters partnerships that often provide opportunities for innovation, which extend the Indiana University Libraries' technical infrastructure, services, and digital collection-building. DCS connects multiple units and people across the Indiana University Libraries (IUL) and Indiana University (IU) Bloomington, as well as other IU campuses, by providing consultation and services for the creation and dissemination of digital special collections and digital research projects. DCS is responsible for three main areas that are integral to the development and growth of IUL's digital special collections and the library's technical infrastructure:

- * digitizing of special collections owned by or affiliated with the IU Libraries
- * creating and maintaining digital library services that provide workflows to curate, preserve and make accessible content online for teaching and research
- * advancing knowledge and research in digital scholarship

GIMMS, located in the Herman B Wells Library, is home to the largest map collection in the state of Indiana (<https://libraries.indiana.edu/maps-and-gis>). The collection contains maps from most countries in the world, with a focus on the state of Indiana. The majority of the maps in the collection are searchable in through the IU Libraries' online catalog, IUCAT, and Image Collections Services. DCS and GIMMS have been collaborating on digitization projects for over 15 years, with the goal of providing online access to primary-source, government document collections. We have established robust workflows that access and preservation that will be leveraged for this project through Image Collections Online (ICO). The ICO data curation and discovery service that is fully integrated with the IU Libraries' digital object repository (Fedora). ICO has been in production for over five years, and has been iteratively improved over the years in support of the IU Libraries' long history of digitization work starting in the mid-1990s that has, to date, produced over 150 terabytes of data.

GIMMS currently has two map collections hosted on ICO, a part of the Russian Military Topographic Map Collection and the Indiana Historic Maps with nearly 3,000 maps available online across both collections. All digital image files generated for the Wells' Library map collections must adhere to format-specific archival practices dictated by "Technical Guidelines for Digitizing Cultural Heritage Materials: Creation of Raster Image Master Files" (<http://1.usa.gov/1bqwrlv>). ICO provides cataloging tools based on the Metadata Object Description Schema (MODS) and workflows for scanning, quality control, and depositing images into our repository and to facilitate content sharing with aggregators like DPLA and researchers. The ICO repository service empowers collection managers to curate and publish their respective collections according to best practices and standards with little to no intervention from digital collections staff. The service streamlines digitization and cataloging efforts, allowing for efficient processing of digital content.

Upload a project plan with timeline that includes all major project activities and deliverables, including a project timeline with deliverable deadlines (max. 3 pages, 2MB, .pdf format only).

The timeline for the project should be as explicit as possible.

- The plan should identify major activities to be undertaken during each quarter of the proposed grant term and name the parties who will participate in those activities.
- The plan may include tables, diagrams, images, references, etc. at the applicant's discretion, but may not exceed the three-page limit.
- To insure clarity for reviewers, the language used to describe project activities and deliverables should be the same as that used elsewhere in the proposal, such as in the list of project deliverables or in the technical plan.

Technical Plan (max. 4 pages, 5MB, .pdf format only)

This document should explain how the equipment, technologies, standards, specifications, and methodologies to be employed for the project relate to one another in a step-by-step workflow that will result in the project's major deliverables.

- It is highly recommended that this document include at least one “mock-up” image that gives reviewers a clear idea of the context within which newly created digital files will be presented online, including examples of all descriptive information or metadata to be created and associated with those files. Any metadata or content that will be restricted in some way should be clearly marked.
- After outlining the proposed workflow in detail, applicants should briefly explain how the proposed methods and tools relate to current practice at their institution or in their community, mentioning any particularly innovative features of their approach within this context.
- Describe the proposed approach for quality control of the project deliverables.
- Applicants must explain the standards or technologies to be employed and explain why these best suit their project. Any deviations from the selected standards should be explained and justified. Applicants might find information from the [Digitizing Special Formats wiki](#), which is curated by CLIR's Digital Library Federation (DLF) program, helpful in planning project proposals.
- For technical specifications (e.g. resolution, bit depth, etc.), reviewers typically expect applicants to adhere, at a minimum, to the recommendations by the [Federal Agencies Digitization Guidelines Initiative \(FADGI\)](#), unless an alternate standard is proposed. See FADGI guides for digitizing [still images](#) and [film collections](#); information on digital reformatting for audio material can be found [here](#).

Technical Approach (.pdf format only)

7_TechnicalPlan_RussianMilitaryMaps_CLIRHiddenCollections2017_update

Principal Investigators/Primary Staff

In this section, summarize the relevant qualifications of up to three individuals who will be responsible for the deliverables named in the proposal, or other work specified in the project or technical plans.

- The qualifications of all named Principal Investigators (PIs) must be included here.
- If the project includes fewer than three PIs, applicants may optionally use this space to describe other important staff members.
- If any of the three individuals included in this section has not yet been identified, applicants should explain the nature of the qualifications required of a candidate for that role in the project.
- Individuals may not be named as PI on more than one proposal and may not serve as PI on two funded projects simultaneously.

Staff Qualifications

Michelle Dalmau, Head of Digital Collections Services (DCS) for the IU Libraries, will serve as PI for this project. As Head of DCS, Dalmau coordinates digital library and digital humanities projects and services for the Libraries and affiliated cultural heritage organizations on campus. Dalmau manages the IU Libraries' primary digitization lab dedicated to converting special collection and archival holdings; services in support of data curation, preservation, and access to special collections, such as Image Collections Online; and faculty-driven digital research projects. As the Digital Projects Librarian (2006-2013), Dalmau managed scores of grant and base-funded projects including two IMLS-funded grants (2007-2012) related to the

development of the Sheet Music Consortium for which she managed the development of a mapping tool for metadata aggregation, and LSTA-funded grants for Indiana Authors and Their Books (2006), Indiana Magazine of History (2008) and Indiana Limestone Photograph Collection (2016).

Theresa Quill will serve as co-PI. As the Social Sciences Librarian for Maps and Geographic Information Systems (GIS), Quill manages the Herman B Wells Library map collection and provides reference assistance related to maps, geospatial information, and geography. She conducts geospatial and map-related research consultations with scholars from a variety of disciplines, including Digital Humanities projects. Quill also leads a workshop series, Cartoshop, for teaching cartographic skills and tools, including web GIS and geographic literacy. In addition, she manages cartographic digitization projects and consults with the E. Lingle Craig Preservation Lab to ensure proper storage and care of the Herman B Wells map collections.

RESUMES REDACTED (PII)

How many staff will be assigned to this project?

You may include students and volunteers in this list. List the number of applicable staff that will be assigned to the project and briefly describe their roles (e.g. professional, graduate student, etc.), noting how many are full- and how many are part-time staff. For the purposes of this question, "full time" refers to those individuals who will be spending 75% or more of a full-time (37.5+ hours/week) position devoted to the project. "Part time" refers to those individuals who will be spending less than 75% of a full-time (37.5+ hours/week) position on the project.

An individual who regularly works only 20 hours/week, but will spend all 20 hours devoted to this project, should be described as "part time," as should an individual who regularly works a 40 hour week but will spend 20 hours/week devoted to this project.

Applicants will be given the opportunity to indicate the percentages of staff members' time which will be dedicated to this project in the Budget Detail section that follows.

Staffing

The IU Libraries will hire five hourly/temporary part-time staff who will work approximately 15-20 hours per week over a 38-42 work period to conduct the digitization, cataloging, georeferencing, and quality assessment for this project. In addition to hired staff, the IU Libraries will also dedicate five base-funded staff members to support project management, digitization, cataloging/metadata and georeferencing activities, and support for Image Collections Online, publishing platform.

Will special skills or training be required?

Explain the nature of any required skills or training to undertake the project and how the applicant institution intends to solicit or provide it.

Training

The Digitization and Cataloging Assistants and the Image and Metadata Quality Control Specialist will undergo digitization training led jointly by Kara Alexander, the Digital Media Specialist, Caitlyn Smallwood, the Digital Imaging Specialist, Jennifer Liss, Head of Monographic Image Cataloging, and Michelle Dalmau, Head of Digital Collections Services. The training procedures that will be utilized are codified, follow digitization and cataloging standards and best practices, and are proven effective in a university setting, with high turnover in student positions.

The Geographic Information Systems (GIS) Assistants will undergo georeferencing training led by co-PI Theresa Quill, who is an expert in Geographic Information Systems and various mapping tools and often provides workshop and training for student and faculty in this area. Our goal is to recruit students who have taken the Geographic Information Science course (G338 at Indiana University). These students will already be familiar with core GIS concepts, and will be given an opportunity to put into practice what they learned from class with additional support from Theresa Quill. In addition to mastering georeferencing skills, the GIS Assistants will learn data management and data curation best practices, especially as they relate to geospatial metadata.

Sustainability

Digital Preservation and Discoverability Plan (max. 2 pages, 2 MB, .pdf format only)

Upload a digital preservation and discoverability plan explaining how project deliverables will be made secure and discoverable for the long term.

- The digital preservation and discoverability plan should identify where digital files created through this project will be stored, how they will be backed up, and the steps the applicant will take to insure that the files and metadata are checked regularly for continued integrity (i.e., lack of corruption, loss and/or errors) and monitored for possible future migration
- This plan should identify clearly the parties accepting responsibility for sustaining those preservation activities after the conclusion of the project; the basic terms under which they would provide such services; and the qualifications of the parties to provide them. Should any such activities be outsourced, applicants can upload the relevant subcontracts (or proposals/requests for proposals, as appropriate) on the Funding tab.
- The plan should describe actions to be taken in the event technical or other circumstances require the migration of project files and metadata from one system to another.
- The plan should also explain how digital files, their associated metadata, and any software developed through the project will be made easily discoverable and accessible to relevant user communities for the long term. It should justify why these platforms are appropriate given the subject matter and/or users of the source materials to be digitized. This explanation should include any measures to be taken to maintain, update, aggregate and publish project metadata for external harvesting.
- If access to digital copies created through the project will be restricted or controlled in some way, the digital preservation and discoverability plan should explain how these access policies will be re-assessed and adjusted in the future. Applicants may choose to cite or briefly mention plans detailed elsewhere in the proposal rather than repeating such information.

Institutional Capacity

Upload a letter of support from the head administrator of the applicant institution.

Letter of inst. support:

REDACTED (PII)

Institutional Priorities

Describe the applicant's institutional priorities for digitization, digital collection development, maximizing access, and supporting scholarship, learning, and/or the public good, as well as those of any collaborating institution(s). Explain the relationship of the proposed project to those priorities. Applicants may mention or cite relevant details given elsewhere in the proposal and supporting documentation but need not repeat those details in their entirety. The purpose of this section is to provide space for additional evidence of the applicants' motivation to undertake the proposed project and sustain its outcomes beyond the project term.

Institutional Priorities

The institutional priorities stated in the strategic plans for Indiana University (IU) (<https://strategicplan.iu.edu>), the IU Bloomington (IUB) campus (<http://provost.indiana.edu/plan/>), and the IU Libraries (IUL) (<https://libraries.indiana.edu/strategicplan>) are a natural extension of IU's institutional strengths and demonstrate areas of new and continual growth for IU as a whole. In the IU strategic plan, President McRobbie sets forth the Digitization Master Plan for all campuses. The IUB strategic plan specifically includes the creation of services to store and provide access to digital collections, supporting their use in research, teaching and learning, and adapting library services to meet those needs.

The IUL 2016-2020 Strategic Plan establishes several goals and objectives that are upheld by the Eastern Bloc Borderlands project with the following two of special interest. Objective 2.4 focuses on making "hidden" collections discoverable through digitization, and to "build rich digital collections that support research through acquisition and digitization of physical collections, both locally and through collaborative projects." In addition, the IUL are known for their rich area studies collections, and for their commitment to developing and providing access to those collections. Core Goal 3, International Dimension of Excellence, supports this strength.

The IUL digital infrastructure will continue to benefit from these university-wide priorities and from the strength of the university's underlying technical infrastructure. The Libraries' digital infrastructure, including curation-to-publication services like Image Collections Online, reflects our commitment to provide online access to special collections beyond IU and into the foreseeable future.

Diversity and Inclusion

Describe your project team's approach to diversity and inclusion. How will the proposed project help to broaden representation within and access to your collections? In what ways will you encourage the participation of people with diverse perspectives in your project activities, and how will these efforts be supported by the applicant institution(s)? If applicable, include examples of how past experiences have informed the project team's approach to diversity and inclusion.

Diversity and Inclusion

In the Fall 2016, the Indiana University Libraries released a diversity plan (<https://libraries.indiana.edu/libraries-diversity-resources>) expressing the Libraries' values that can be summed up by the first and second foundational principles set forth in the Libraries' 2016-2020 Strategic Plan: "IU Libraries esteems diversity of all kinds, building collections and collaborations to support students from diverse socio-economic backgrounds and foster a global, diverse, inclusive community of excellent students, scholars and teachers. In addition, the Libraries commits to diversifying its own staff to reflect a diversity of perspectives and backgrounds." The Libraries' diversity plan underscores the relationship between a diverse staff and diverse collections and services and is committed to "developing collections that reflect the world's complexity and diversity." The diversity plan also identifies the importance of women in areas "where there numbers are few" (i.e., technology-oriented positions). The international, multilingual scope of the Eastern Bloc Borderlands project along with the technical capacity required to complete the project will readily allow us to recruit a diverse, student-oriented staff.

Institutional Strengths

Describe the institutional strengths that justify the undertaking of the proposed project by the applicant and any collaborating institutions. Strengths may include existing infrastructure, partnerships, professional associations, staff experience, access to local expertise (scholars, volunteers, students), financial or other resources, etc. Applicants may mention or cite relevant circumstances that are described in greater detail elsewhere in the proposal but need not repeat those details in their entirety.

Institutional Strengths

The institutional strengths of Indiana University (IU) and the individual project units are considerable and speak to our anticipated success of Eastern Bloc Borderlands.

IU has a long history in establishing successful information technology programs in support of teaching, learning, and research. In particular, IU has shown a strong commitment to establishing robust digital library infrastructure and digitization programs for preservation and access with the formation of the Digital Library Program in 1997 and thereafter strategic support from University Information Technology Services and the IU Libraries. Support for digitization now comes from the highest level with IU president, Michael McRobbie, funding the Media Digitization and Preservation Initiative (MDPI, <http://mdpi.iu.edu>), a campus-wide endeavor aimed at preserving and providing access to audio, video and film collections. The MDPI is a partnership between the IU Libraries and UITS that benefits from the Libraries' strengths in collection building, digital library research/development, and expertise in audio/video technologies and metadata.

IU is also a pioneer in the field of digital libraries, in the development and application of open source software, and an early adopter of repository systems such as Fedora. IU's experience with Fedora dates back to 2003, when the IU Libraries served as one of the initial implementation partners on the Fedora project led by the University of Virginia and Cornell University. Since 2005, the IU Libraries have developed and maintain a series of preservation and access services -- Books/Serials, Finding Aids, Images, Electronic Texts and others -- that facilitate the ingest of content into our digital library repository, and promote curation, preservation, and access including Image Collections Online, which is the service we will be using for this project.

IU has historically established world-wide connections with universities, instituted in the mid-20th century by visionary former IU president, Herman B Wells. The university also fostered the creation of a highly recognized area studies program in the 1960s, including the Russian and Eastern European Institute and Department of Central Eurasian Studies, both nationally and internationally prominent among such centers. IU's School of Global and International Studies was launched in 2015, creating an epicenter for collaboration among international and visiting scholars on campus. IU's commitment to area and international studies is also reflected in its current strategic plan which stresses campus and curriculum internationalization as strategic goals. In alignment with the campus strategic plan, the IU Libraries have also identified international dimensions of excellence, encompassing collections and services, as a strategic priority.

The IU Libraries are known for the breadth and depth of area studies collections. The Slavic and East European collection ranks in the top tier of such collections in the U.S., and contains over 700,000 volumes in 15 vernacular languages. The collection includes related primary sources such as the papers of the Red Army, 1918-1923, Records of the All-Union Communist Party, Smolensk District, 1917-41, and Dissent in Poland publications and manuscripts.

Prior Initiatives

Provide up to three examples of prior initiatives that demonstrate preparedness of the institution(s) to undertake project work. If you have more than three examples to share, select those you feel are most relevant to this particular project.

- Examples of successful collaboration, or examples that demonstrate a level of engagement with broader professional and academic communities are particularly welcome, and strongly recommended for applicants proposing collaborative projects.

Initiative #1

In 2010, Government Information, Maps and Microform Services (GIMMS) partnered with Digital Collections Services (DCS) to begin digitizing the Indiana Historic Maps collection:
<http://webapp1.dlib.indiana.edu/images/splash.htm?scope=images/VAC3073>, which provides access to maps of discrete areas from the state that complement our Sanborn Fire Insurance map collection. In 2016, IU began soliciting contributions to Indiana Historic Maps from small towns around Indiana in a collaborative

effort to preserve the cartographic heritage of these areas. This was the first full-blown, successful map digitization partnership between GIMMS and DCS.

Initiative #2

In 2016, IU joined the Big Ten Academic Alliance Geoportal project (<https://geo.btaa.org>). The geoportal aggregates metadata to provide searching of thousands of geospatial datasets and scanned maps. The Geoportal is collectively managed by librarians and GIS specialists from ten institutions in the Midwest, and is built with Geoblacklight, an open source tool for geospatial data. Upon completion, we will add maps from East Bloc Borderlands to the project, ensuring greater access and discoverability to the collection.

Initiative #3

Collaboration is integral to advancing collection-building and digital infrastructure for preservation and access. Indiana University is part of several collaborative initiatives, big and small: HathiTrust Digital Library and Research Center, DuraSpace (Fedora, DSpace, VIVO), Hydra, Avalon Media System project (<http://www.avalonmediasystem.org/>) that includes partners like the Rock and Roll Hall of Fame and WGBH Boston, Reveal Digital (<http://www.revealdigital.com/>), and Indiana Memory DPLA Service Hub, to name a few.

Building capacity

Describe how this project contributes to building local institutional capacity, as well as the professional development of all staff involved.

Development and capacity

As an organization dedicated to providing access to special collections of international importance, the IU Libraries consider this project of great significance for expanding teaching and research use of the Russian Military Topographic Map Collection. Since Co-PI Quill joined the Libraries as Visiting Librarian (July 2014-April 2016) and as a tenure-track librarian since April 2016, she has been building capacity, internally with fellow-librarian colleagues and staff, and across campus through extensive outreach initiatives including workshops, instructional sessions for map literacy, and teaching partnerships. This project will extend Quill's reach into the School of Global and International Studies as she continues to champion spatial digital research projects, imparting to students and scholars the skills necessary for map-based technological research. These same skills will be imparted to the staff hired to digitize, catalog, and georeference the Russian Military maps.

The IU Libraries is committed to teaching and learning opportunities that incorporate primary source materials. With backing from the IU Bloomington strategic plan's objective, "A Commitment to Student Success Through an Engaged, Diverse, and Global Experience," we have an opportunity to expand our respective outreach to the widest possible audience, including undergraduate students. The next strategic objective, "A Commitment to Student Success Through Our Historic Academic Strengths," further exemplifies opportunities for "highlighting our enormous humanistic and cultural assets" and "expanding our student's engagement with our cultural institutions" that include the Libraries and their various primary source collections, including the Russian Military maps.

Digitizing Hidden Collections Proposal
List of Collections to be Digitized

Reusage rights
(note all that apply):
Free, no watermarks (FNW)
Free, with watermarks (FWW)
Free, onsite only (FO)
For a fee (FEE)

Holding Institution	Collection Title	Collection Size	Collection Material Formats (e.g. manuscripts, photographs, etc.)	
Indiana University Bloomington	Russian Military Topographic Maps	4,106 maps		FNW

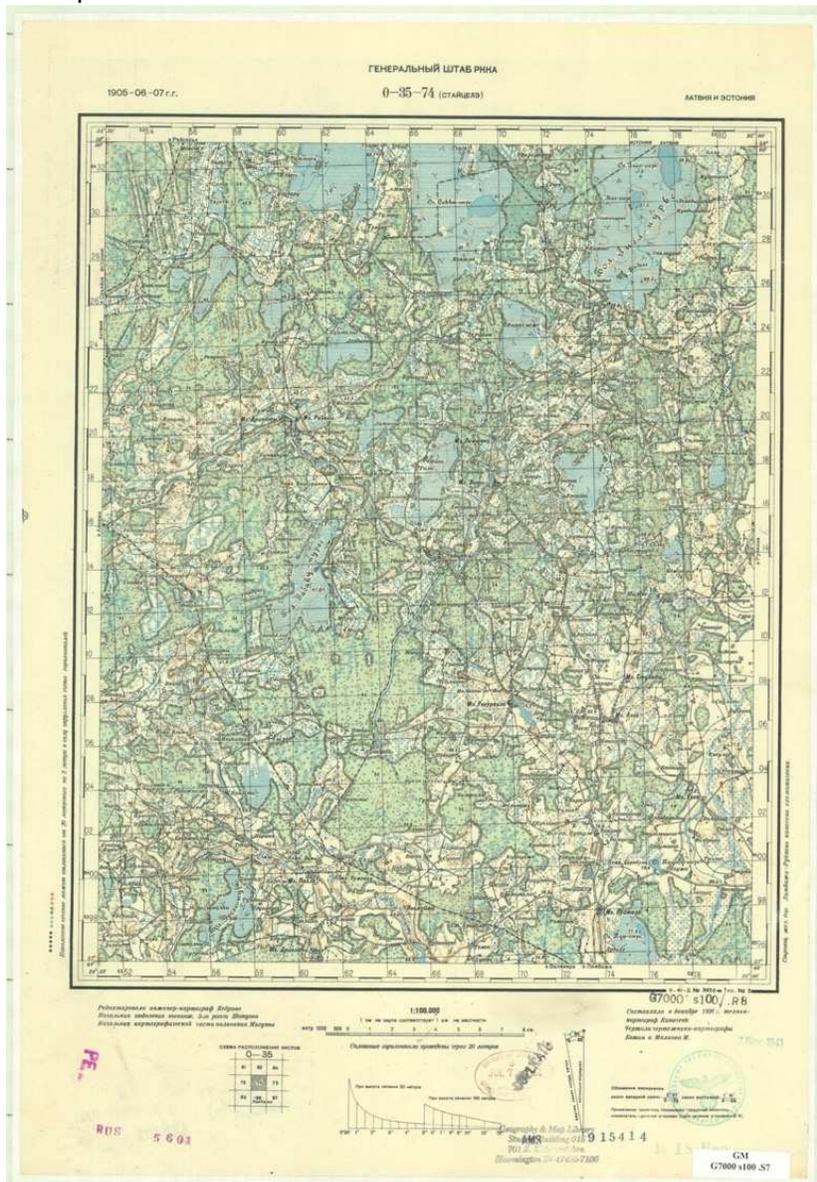
Representative samples of materials to be digitized

Eastern Bloc Borderlands:

Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947

Indiana University Libraries

Example 1:

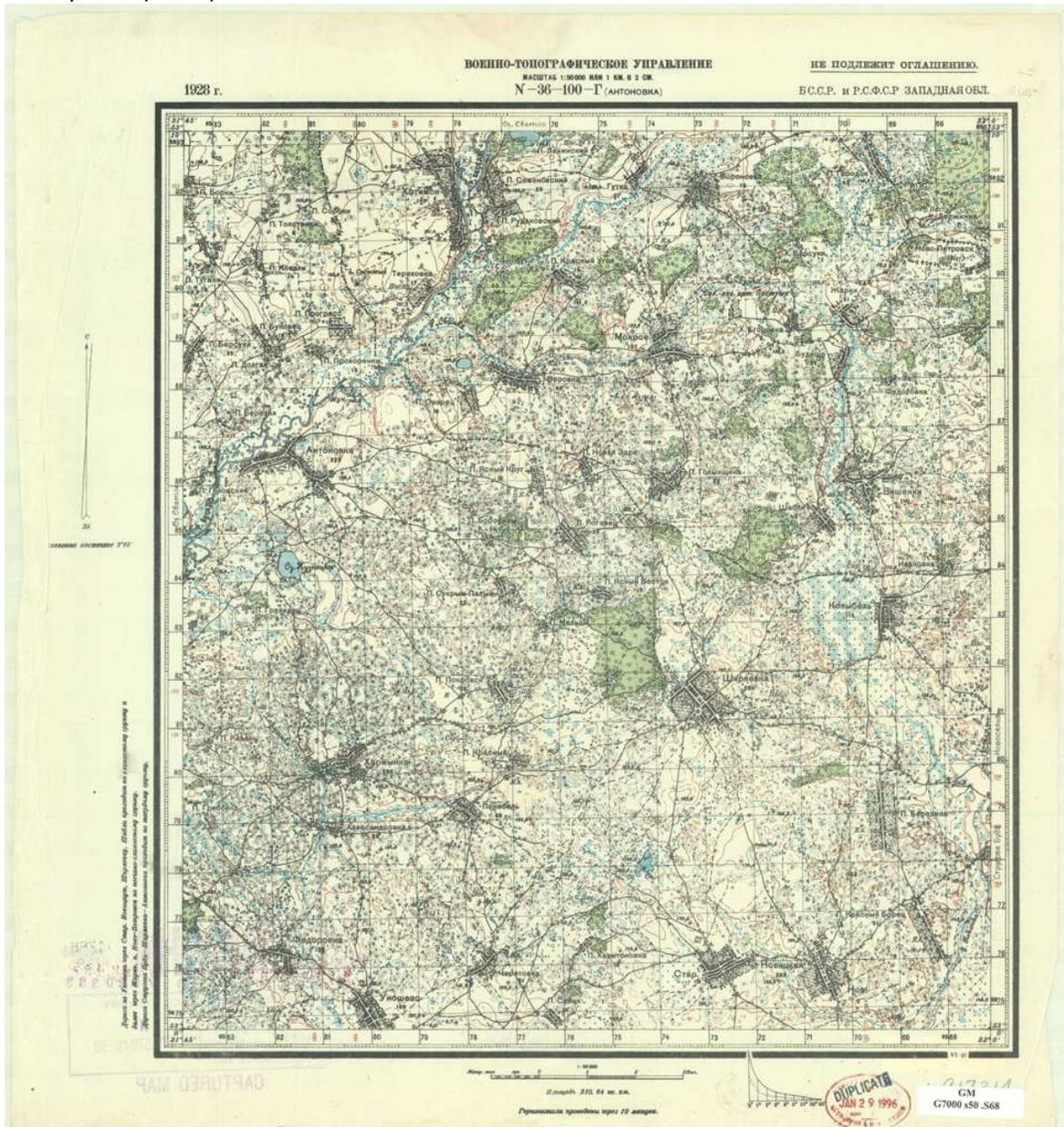


Russian Military Topographic Maps. O-35-74 [map]. 1:100,000. Moscow: General'nyi shtab, 1907.

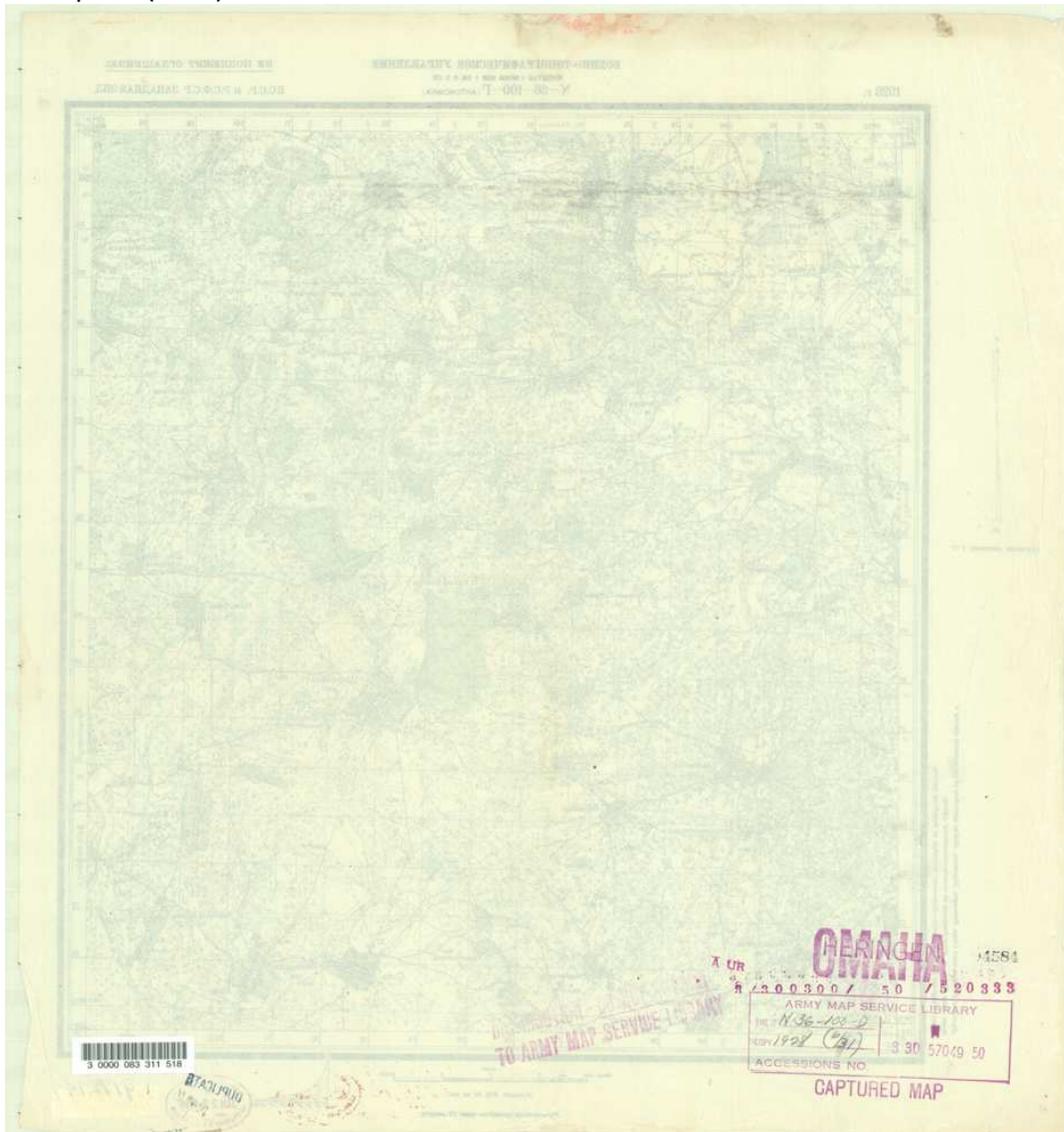
Indiana University Libraries, Russian Military Topographic Map Collection, Call number G7000 s100 .S7 O-35-74

This sheet is an example of the 1:100,000 scale maps in the Russian Military Topographic Map Collection. It shows areas in Latvia and Estonia. Of particular interest is the stamp in the bottom right corner that reads "Reichsamt für Landesaufnahme, Kartensammlung", or German topographical survey, with the symbol of the Nazi Party.

Example 2: (front)



Example 2 (back)

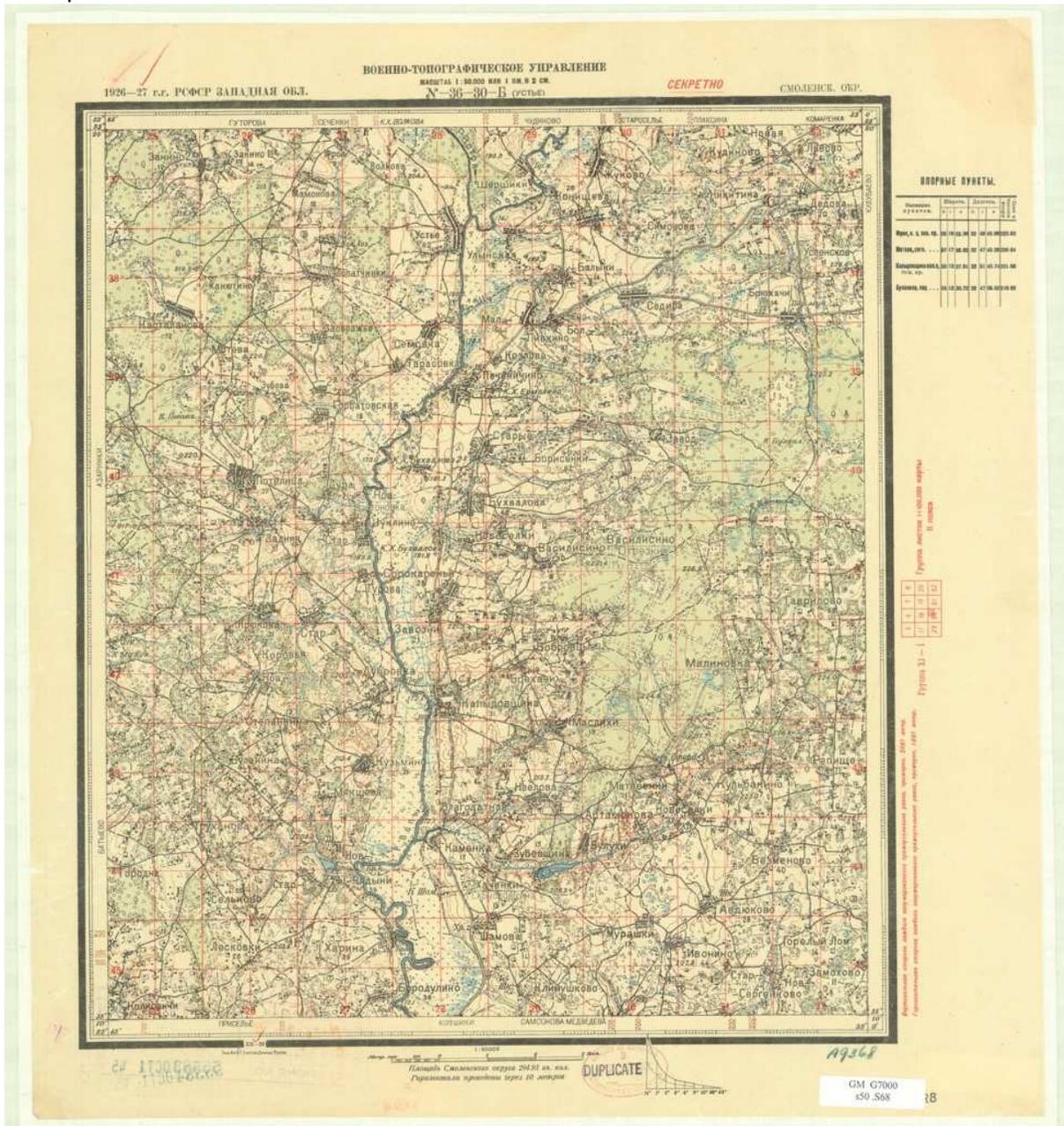


Russian Military Topographic Maps. *N-36-100-G* [map]. 1:50,000. Moscow: Военно топографическое управление, 1928.

Indiana University Libraries, Russian Military Topographic Map Collection, Call number G7000 s50 .S68 N-36-100-D

This sheet is an example of the 1:50,000 map scale, showing Western Russia. The top right corner states, “не подлежит оглашению”, literally “is not subject to disclosure”. The back of the map shows stamps indicating this was a captured map.

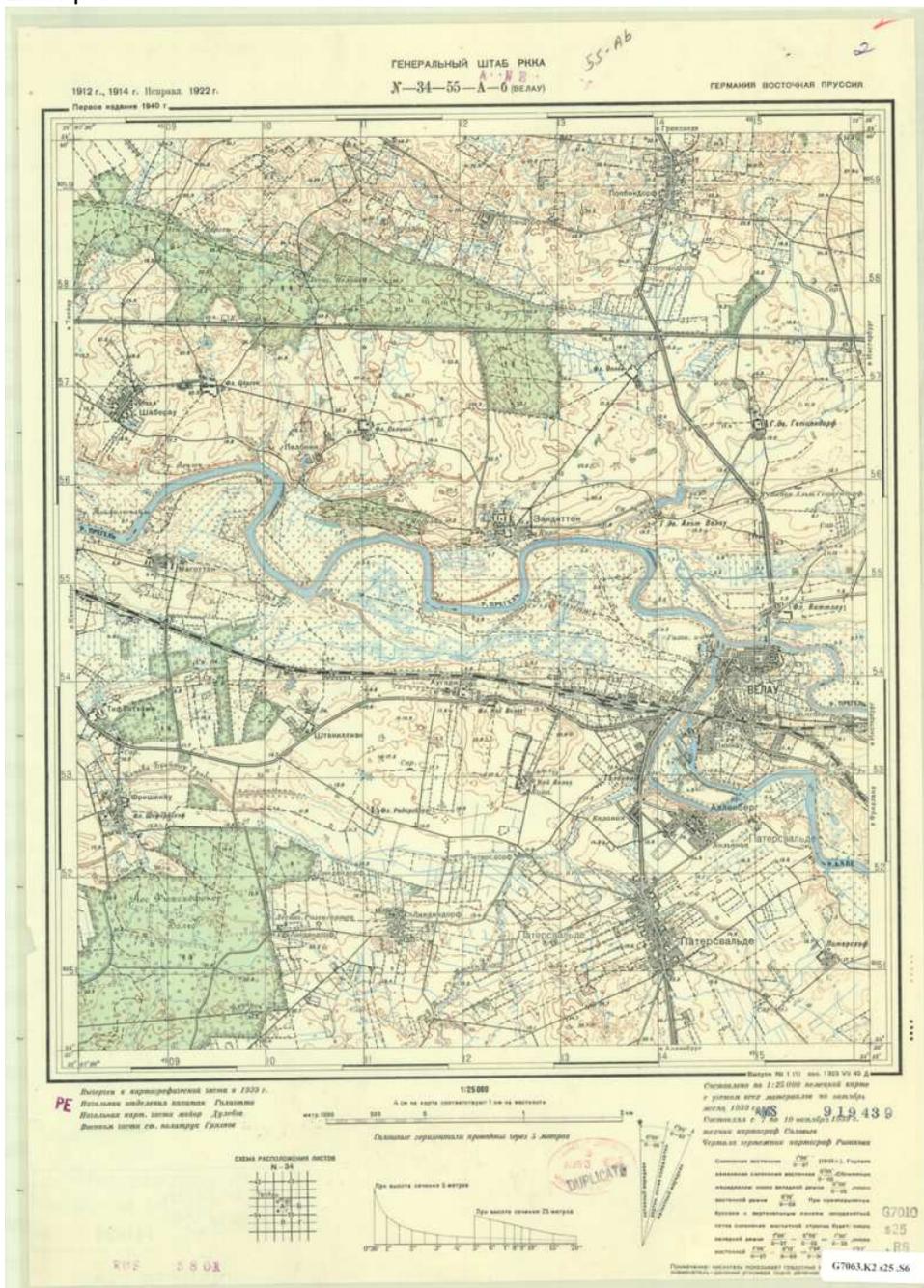
Example 3:



Russian Military Topographic Maps. N-36-30-B [map]. 1:50,000. Moscow: Военно топографическое управление, 1927.
Indiana University Libraries, Russian Military Topographic Map Collection, Call number G7000 s50 .S68 N-36-30-B

This map shows the area around Smolensk in Western Russia. It is marked “СЕКРЕТНО” (SECRET) in the top right corner.

Example 4:



Russian Military Topographic Maps. N-34-55-A-6 [map]. 1:25,000. Moscow: Генеральный штаб РККА,, 1940.

Indiana University Libraries, Russian Military Topographic Map Collection, Call number G7063.K2 s25 .S6 sheet N-34-55-A-b

An example of the 1:25,000 scale maps, this covers an area of Germany and East Prussia. You can clearly see individual buildings mapped at this scale.

Rights, Ethics and Re-Use Statement

Eastern Bloc Borderlands:

Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947

Indiana University Libraries

The Indiana University Libraries acquired duplicate copies of Russian topographic maps from the Library of Congress in the early 1990s as part of a cataloging exchange arrangement, and thus the Wells Library's Russian Military Topographic Map Collection was born. The collection contains just over 4,000 maps of Poland, Ukraine, Belarus, Latvia, Lithuania, Estonia, Finland, and Western Russia, all areas greatly impacted by World War II, and of great strategic importance to Russia and later the Soviet Union. The maps were commissioned by the Russian Red Army, published by the Russian/Soviet Military Topographic Department between 1883 and 1947, and created by anonymous cartographers. Upon consulting Janice Pilch, Copyright and Licensing Librarian at Rutgers University Library and Russian copyright expert, and Naz Pantaloni, Copyright Program Librarian at Indiana University Libraries, it was determined that because the maps were anonymously created and published over seventy years ago, they are in the public domain under the copyright laws of the Russian Federation and the United States.

While the IU Libraries do not yet employ the Creative Commons Licensing structure, unrestricted use and sharing of metadata with aggregators, scholars, etc. is a long-standing tradition (in the CC0 vein). We will agree to a CC0 dedication

(<https://creativecommons.org/publicdomain/zero/1.0/>) for the descriptive metadata used to describe the maps. As a participant in the Indiana Memory Digital Public Library of America (DPLA) Hub, the IU Libraries is establishing a workflow for routine contributions to DPLA.

We are in the process of mapping existing rights statements for all of our digital collections to the Europeana/DPLA Rights Statements. The current rights statements for the Russian Topographic Map Collection, a subset of which has been digitized and made available online (<http://go.iu.edu/1u15>), reads:

The maps in the Russian Military Topographic Map Collection are in the public domain. The maps were anonymously created and published over seventy years ago. If you use or reproduce our materials in any format, we ask that the IUB Map Collections be cited as the source of the material with the credit line:

[Link to Persistent URL found in the footer], Courtesy, Wells Library Map Collections, Indiana University, Bloomington, Indiana.

For example, <http://purl.dlib.indiana.edu/iudl/images/VAC9619/VAC9619-001675>,
Courtesy, Wells Library Map Collections, Indiana University, Bloomington, Indiana.

According to the options provided by the DPLA-sanctioned Rights Statements (<http://rightsstatements.org/page/1.0/?language=en#rights-statements-for-objects-that-are-not-in-copyright>), the Russian Military Topographic Map Collection would use the "No Copyright

United States” statement to cover the digitized maps, which we would be sharing along with the descriptive metadata. Our current version of the rights statements included above follows the CCO (+BY) model that Dan Cohen, Executive Director of the DPLA, set forth in his 2013 blog post entitled the same: <http://www.dancohen.org/2013/11/26/cc0-by/>.

The derivative (JPEG) images created as part of this project can be easily downloaded by viewers and freely re-used. A free version of the high resolution image -- either the TIFF or GeoTIFF -- can be provided upon request. The platform that will host these maps, Image Collections Online, a Fedora-based repository service, provides a “contact the curator” link for each item that allows viewers to request high resolution versions for each image of interest. Attribution is highly encouraged, and citations formats established by the Indiana University Libraries include links to the persistent URLs for these items.

Project Plan

Eastern Bloc Borderlands:

Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947

Indiana University Libraries

The *Eastern Bloc Borderlands* project plan will be completed in one year, February 1, 2018 - January 31, 2019, and is being conceived in four phases, each containing concurrent components: project planning and preparation, digitizing and cataloging the maps, georeferencing the maps, quality assurance, and project management/publicity/outreach.

Project Planning and Preparation

Since we will hire students (5) to help us with digitization, cataloging, georeferencing, and quality assessment of approximately 3,500-4,100 maps and corresponding metadata records within a year's time, the Indiana University Libraries staff will dedicate January 2018 to refining project objectives, codifying workflows, developing a stable yet flexible project plan, and drafting job descriptions for positions listed below. During this time, we will officially convene the core project team with a subset of members that will cycle in and out depending on the project activities identified. Core and revolving team members will include staff from several units across the IU Libraries (IUL): Advancement, Cataloging, Digital Collections Services, Government Information, Maps, and Microform Services, and Library Technologies.

- Milestones
 - Establish IUL project team; formalize project plan
 - Assess existing metadata model, consult with subject experts on project to determine improved cataloging guidelines for the map collection
 - Review and update digitization practices
 - Plan for project hires
- Deliverables
 - Project charter and plan
 - Project documentation for digitization and metadata capture
 - Student (temporary) job postings for three positions (5 to be hired)

Digitizing and Cataloging Maps

The digitization and cataloging of the Russian Military Maps will span most of the year allotted for this grant with work commencing in month 1 and ending in month 11. Months 1 and 2 will focus on hands-on training with the actual materials. We will also focus the first two months on digitization-only until we determine the best approach to cataloging, one-at-a-time or batch. Image Collections Online, the curation and publication platform we will be using for this project, supports both. The IUL project team will finalize the cataloging guidelines and update the existing metadata model and templates by month 2.

- Milestones
 - Recruit and hire of two Digitization and Cataloging (DC) Assistants
 - Setup new hires for system/server access; train the DC Assistants
 - Update the Image Collections Online (ICO) configuration and metadata templates for the Russian Military Topographic Map Collection

- Finalize cataloging workflow
- Deliverables
 - Updated instance of Russian Maps on ICO: <http://go.iu.edu/1u15>
 - Cataloging guidelines for the Russian Maps including transcription, transliteration and translation guidelines
 - Approximately 3,000 maps digitized and item-level metadata records created

Georeferencing Maps

Georeferencing the Russian Military Maps will span months 1-11. Months 1 and 2 will focus on hands-on training with actual materials. We will begin georeferencing (using ArcGIS Desktop or QGIS) approximately 600 maps that have already been digitized and passed first round of quality control followed by maps generated by the digitization queue. The remaining months will focus on georeferencing and uploading resulting GeoTIFFs to corresponding records in ICO.

- Milestones
 - Recruit and hire two GIS Assistants
 - Setup new hires for system/server access; train the GIS Assistants
 - Finalize and document georeferencing workflow
- Deliverables
 - Georeferencing guidelines for the Russian Maps
 - Approximately 4,106 maps will be georeferenced

Quality Assurance

We are committed to a high-level of quality assurance that will span 11 months, starting in month 2. The Image and Metadata Quality Control Specialist hired for this project (month 1) will: update the metadata for the existing 1,506 items already digitized based updated cataloging guidelines, rescan/reupload approximately 500 maps already digitized that failed the first round of quality control, and review images and metadata of 3,000 maps, including the addition of embedding color profiles for the 1,506 maps already digitized.

Project Management/Publicity/Outreach

Project management will occur throughout year 1 and will include regularly convening core/rotating team members and hired staff for meetings, ensuring communication within the group and to stakeholders, maintaining the project schedule, promoting robust project documentation, coordinating and directly managing staff, and complying with grant reporting. Project management will happen at various levels—more broadly and holistically by the PI and Co-PIs, as part of normal staff reporting structures in each department, and over phases of work (i.e., digitization and capture). Our curation and publication platform, ICO, allows us to publish content on a rolling basis, and are scheduled to publish new content in months 7 and 12. We will leverage social media, including Twitter, blogging platforms, and Facebook to promote the work we are doing throughout the year, and will work with Libraries' Advancement staff to generate formal press releases and news stories at the start and end of the grant period.

Technical Plan

Eastern Bloc Borderlands:

Digitizing Russian Military Topographic Maps of Eastern Europe, 1883-1947

Indiana University Libraries

Indiana University Libraries was an early adopter (2003) of the Fedora digital object repository, which has been used to develop user-oriented services. These services include workflows for back-end processes that are unseen by most users such as image processing, metadata generation, and mapping for OAI-PMH, as well as more visible components such as applications for active metadata management leveraged by collection managers and researchers, and public interfaces for discovery.

As part of this project, the IU Libraries will rely on Image Collections Online (ICO, <https://wiki.dlib.indiana.edu/x/rCqBHg>), which functions as a central gateway for preserving and disseminating digital image collections across the Indiana University community. ICO provides standards-based cataloging tools and workflows, standards-based scanning, quality control, and ingest workflows of images into our digital library repository; and web publishing mechanisms so that collection managers can easily showcase image collections curated by the libraries, departments, researchers, and cultural heritage institutions of Indiana University. The items – images and metadata – are served directly from our Fedora digital library repository, and can be accessed from our ICO web portal:

<http://www.dlib.indiana.edu/collections/images/>.

This technical plan describes the digitization workflow and the use of ICO to preserve and provide access to materials in the Russian Military Topographic Map Collection.

Digitization: Conversion and Capture

All digital image files generated by this project must adhere to format-specific archival practices dictated by “Technical Guidelines for Digitizing Cultural Heritage Materials: Creation of Raster Image Master Files” (<http://1.usa.gov/1bqwrlv>).

With respect to conversion, digital files are created by scanning the best quality originals when multiple duplicates are available. Color images are scanned at 24-bit color at 600 dpi with embedded Adobe1998RGB color profile. The inclusion of the color profile helps ensure that the image will reproduce as accurately as possible. All master files are scanned at 100% of the original size and saved as uncompressed TIFF files. Color adjustment, when necessary, is done prior to scanning to ensure accurate representation of the original item. The IU Libraries will be purchasing a WideTek 44/48 scanner (<http://www.imageaccess.de/?page=ScannersWT48-600&lang=en>) that can scan up to 48 inches / 120 centimeters (maps measure 38 x 63cm). The scanner can optically capture up to 600 dpi and generates TIFFs among other file format.

All master files must pass a two-step quality assurance procedure. The first step is an automatic quality control (QC) process that ensures valid and well formed files. A set of computer programs systematically examines the embedded TIFF tag of every digital file to

verify that all files are named according to convention, that they are uncompressed TIFF files, that each file has an embedded profile appropriate to its bit depth, and that all images were scanned at the appropriate resolution. Files that pass automatic QC undergo an automated process for generating web deliverables. For this project, we will create a thumbnail (200 pixels), screen size (600 pixels), large size (1000 pixels), and JPEG2000 for interactive viewing following the J2K Codec specifications, which is a minimum of 400 dpi/4,000 pixels on the long side. Files that fail automatic QC, will generate a detailed report to aid in correction.

Once the files pass the automatic quality control checks, a portion of the files are manually examined to ensure accurate visual quality. Each file selected is examined at 100% (1:1) magnification to ensure that the image orientation is correct, that the color balance matches the original items as closely as possible, that it is a sharp, in-focus scan, and that no digital artifacts of scanning are visually present. To aid in the manual quality control process, the physical item is compared with the digital item with attention to color fidelity. If any inconsistencies are found in either the automatic or manual quality assurance checks, the item in question is rescanned until it is acceptable.

Technical and basic descriptive metadata information will be recorded at scan/capture time following a spreadsheet template. Since some of the pertinent descriptive metadata is included as part of the marginalia, capturing as much metadata as possible at scan/capture time improves efficiency.

Georeferencing

We will georeference approximately 4,100 maps using either ArcGIS Desktop or QGIS resulting in GeoTIFF files. GeoTIFF is a metadata standard which allows geographic information such as map projection, coordinate system, etc. to be embedded within a standard TIFF file. The maps already contain printed projection information and coordinate data, which will make georeferencing not only efficient, but also highly accurate.

Image Collections Online: Curation and Access

Image Collections Online (ICO, <http://www.dlib.indiana.edu/collections/images>) functions as a central gateway for preserving and disseminating digital image collections at Indiana

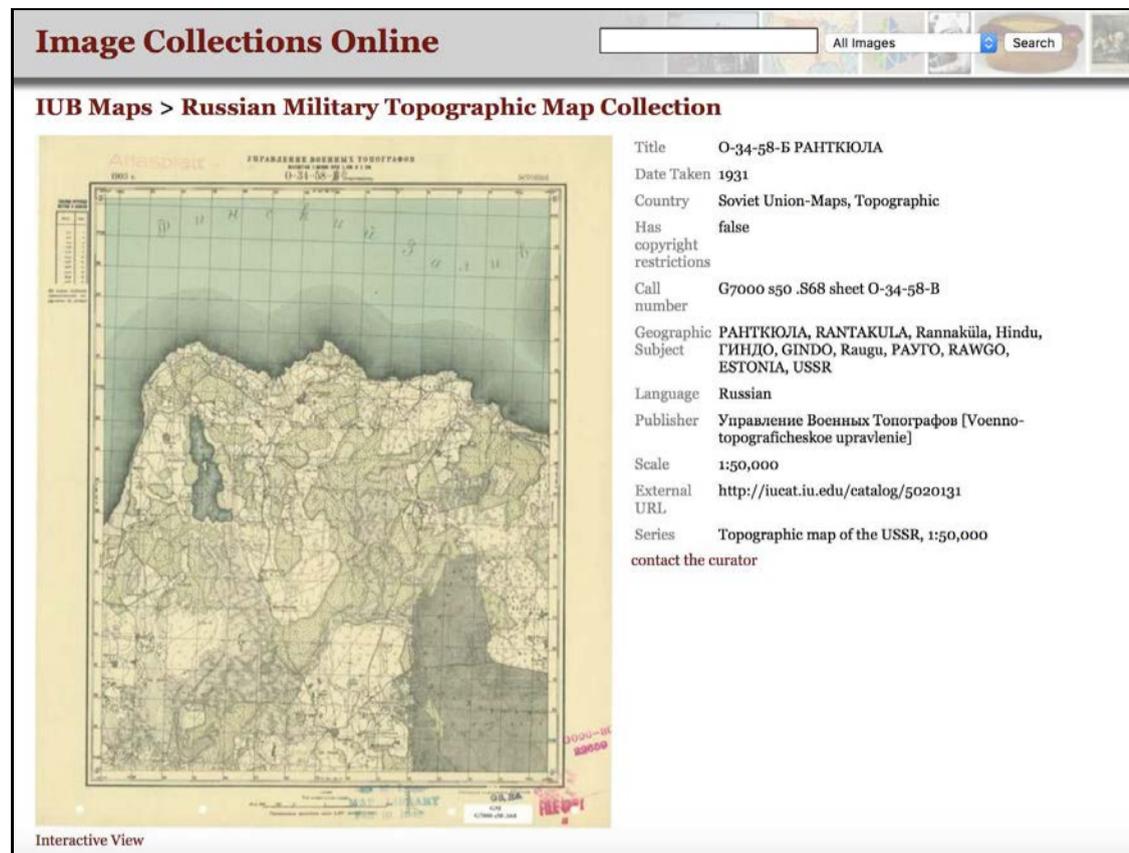
University. ICO provides standards-based cataloging tools and workflows for scanning, quality control, and depositing images into our digital library repository. Additionally, ICO provides a web publishing mechanism so that collection managers can easily showcase image collections curated by the libraries, departments, and cultural heritage institutions of Indiana University. Images and metadata are delivered directly from our Fedora digital library repository.

The screenshot shows the 'Edit Item' page for 'Russian Military Topographic Map Collection' with item ID 'VAC9619-001700'. The form includes the following fields and options:

- Title:** O-34-58-B РАИТКОЛА
- Date Taken:** 1931, with an 'approximate' checkbox.
- Subject:** Three dropdown menus, each set to 'TGM I'.
- Country:** Soviet Union-Maps, Topographic
- State/Province, City:** Empty text boxes.
- Has copyright restrictions:** A checkbox that is currently unchecked.
- Status:** A dropdown menu set to 'cataloged'.
- Last modified by:** nfeaver
- Abstract:** An empty text area.
- Title Control Number:** a5020131
- Call number:** O7000 s50 .568 sheet O-34-58-B
- Caption:** An empty text area.
- Copyright Owner:** An empty text area.
- Creator:** A table with columns for 'entered name', 'role', 'birth', 'death', and 'nationality'.
- Geographic Subject:** A list of subjects: РАИТКОЛА, RANTAKULA, Rannakila, and Hindu.

On the right side, there is an 'Item Preview' showing a topographic map. Below the preview are links for 'download master image', 'download large size image', 'download screen size image', and 'download interactive image'. There is also a 'Manage Files' button. Below the preview is a 'Transform metadata to...' button with a 'MODS' option. At the bottom right, a 'Modification History' section shows three entries, all dated 'Mar 22, 2017'.

The ICO Cataloger tool supports item-level description via web form and/or batch uploading of metadata from a spreadsheet. The Digitization and Cataloging Assistants will be responsible for uploading the TIFFs captured in a work session and cataloging, which can be a synchronous or asynchronous activity. GeoTIFFs will also be uploaded as they are created. The Image and Metadata Quality Control Specialist will benefit from quality assurance (QA) functionality built into ICO Cataloger to assist with data normalization and other data clean-up actions across fields (item-at-time or batch update fixes). ICO



Cataloger requires a core set of metadata fields that map to the Metadata Object Description Schema (MODS) behind-the-scenes to promote searching across all image collections published by the IU Libraries. Specialized fields can also be used for collections and leveraged for collection-level faceted browsing. For this project, we have identified approximately 30 descriptive and administrative metadata fields, some of which will include transliterated and translated values: title, major cities, country and region. Fields that will be used for this project include: title of map, publication year, place of publication, publisher, call number, geographic subjects following the Thesaurus of Geographic Names (TGN), language(s), scale, related records (link to online catalog), and other fields to be determined upon consultation with members of the IU Libraries' Cataloging department. Statuses are assigned to records to assist in ongoing cataloging, QA, and automatic publishing of records once cataloging and QA have been completed. Additional documentation about ICO is available at: <https://wiki.dlib.indiana.edu/x/rCqBHg>.

The IUB Libraries already host two Herman B Wells map collections: Indian Historic Maps and a subset of the Russian Military Topographic Maps -- <http://webapp1.dlib.indiana.edu/images/splash.htm?scope=IUBMaps>.

All hired staff will be trained on conversion, capture, georeferencing, and metadata creation processes and techniques. Consult the Budget Narrative and Project Design plan for detailed contributions by hired and cost-shared staff.

Digital Preservation and Discoverability Plan

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Indiana University Libraries

Indiana University (IU) has been a pioneer in the field of digital libraries, in the development and application of open source software, and an early adopter of repository systems such as Fedora. IU's experience with Fedora dates back to 2003, when the IU Libraries served as one of the initial implementation partners on the Fedora project led by the University of Virginia and Cornell University. IU is currently a financial sponsor of the Fedora 4 development project and is in the process of updating our digital library infrastructure following a Hydra/Fedora 4 framework. Hydra is an open source technical framework that lets institutions deploy robust and durable repositories supporting multiple APIs or "heads" for fully featured digital asset management applications and tailored workflows. IU is one of nearly 30 partners committed to the support of Hydra.

Since 2005, the IU Libraries have developed and maintain a series of preservation and access services -- Books/Serials, Finding Aids, Images, Electronic Texts and others -- that facilitate the ingest of content into our digital library repository, and promote curation, preservation, and access. As part of this project, the IU Libraries will rely on Image Collections Online (ICO).

Image Collections Online (ICO, <https://wiki.dlib.indiana.edu/x/rCqBHg>) functions as a central gateway for preserving and disseminating digital image collections across the Indiana University community. ICO provides standards-based cataloging tools and workflows, standards-based scanning, quality control, and ingest workflows of images into our digital library repository; and web publishing mechanisms so that collection managers can easily showcase image collections curated by the libraries, departments, researchers, and cultural heritage institutions of Indiana University. The items – images and metadata – are served directly from our Fedora digital library repository, and can be accessed from our ICO web portal:

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ICO is a heavily used service by the IU Libraries, regional campus partners, cultural heritage collaborators on the Bloomington campus and in the state of Indiana, and by researchers. As a memory institution, IU is committed to steward the content created as part of this grant in the long-term. As part of our ongoing commitment to our content, our content contributors, and to these services, the IU Libraries has and will continue to invest resources in maintaining and improving services for the foreseeable future. As new repository technologies emerge and settle, IU will migrate to these services, much like we are starting to do now with a subset of these services like our page-turning application into proven frameworks like Hydra.

While our repository is not currently certified as a trustworthy digital repository, we adhere as much as possible to the recommendations in the 2011 report, "Audit and Certification of Trustworthy Digital Repositories" (CCSDS, <https://public.ccsds.org/pubs/652x0m1.pdf>). We employ several mechanisms suggested by the checklist like checksums, manifest files, and other checks for integrity file conformance. In 2016, the IU Libraries' Digital Preservation Policy Framework Task Force, chaired by Digital Preservation Librarian, Heidi Kelly, with contributions from task force member, PI Michelle Dalmau, conducted a landscape review of digital preservation strategies and policies across peer institutions, followed by a survey aimed at collection/content managers in the IU Libraries. The outcome of both the review and survey led

to the publication of the Digital Preservation Strategic Vision, 2016-2018 (<https://wiki.dlib.indiana.edu/x/1w1NHw>), which was approved by the Libraries' administration, and a resulting Digital Preservation Policy that is nearly complete. As the task force finalizes the policy, Heidi Dowding is in the process of firming up our practices and ensuring compliance with the TRAC and ISO 16363 / TDR: <https://wiki.dlib.indiana.edu/x/DBAFHw>.

In addition to accessing the Russian Military Topographic Map Collection proposed for this grant via ICO, the IU Libraries will include the content in our cross-collection searching interface, which directly draws content from our Fedora digital object repository: <http://webapp1.dlib.indiana.edu/dcs/>. Another function of our cross-collection discovery system is the ability to serve up metadata stored in our digital library repository for harvesting (via OAI-PMH). Indiana University Bloomington is part of the Indiana Memory Digital Public Library of America (DPLA) service hub and will be regular content contributors to DPLA.

Along with the curation and access functions afforded by the ICO repository service, the contents of this collection would be stored in IU's Scholarly Data Archive (SDA, <http://kb.iu.edu/data/aiyi.html>), which supports automated mirroring of content in IU's Bloomington and Indianapolis data centers with two copies stored in each location. The Indiana University Libraries commit to supporting the preservation of digital image master files created in this project, through storage in SDA and the Fedora-based digital library repository, and to sustaining long-term online access to the collection content digitized and created as part of this project, including migration of content to new media formats, storage media, repository systems, and delivery systems as needed. In addition to our local commitments to preservation, IU is a member of the Association of Research Libraries, Digital Library Federation, Academic Preservation Trust, Digital Preservation Network, National Digital Stewardship Alliance, and together with the University of Michigan is co-host for the HathiTrust Digital Library.