

## **Map Scanning Workflow Working Group**

### **Summary Report**

#### **January 2020**

#### **Charge**

Many of our institutions have paper maps and atlases and have processes for scanning these and ultimately making them discoverable through the BTAA GDP. There are many steps that are involved in this process, including: selecting maps to be scanned, scanning them in house or externally, updating metadata to meet the needs of the individual institution's hosting of digital objects, ingesting into local hosting platform, and sharing metadata with BTAA GDP. We want to share knowledge and develop best practices around these steps.

#### **Group Membership**

Nathan Piekielek and Nicole Scholtz (co-chairs); Danny Dotson, Cathy Hodge, Theresa Quill, Josh Sadvari

#### **Process for Discovery**

The working group (hereafter referred to as 'WG'), met virtually four times between October 2018 and January 2019 via zoom and exchanged emails and shared documents (via google drive) on an "as-needed" basis. A narrative workflow document was solicited from each institution that had a participating member in the working group (six), with five completed and received. Workflow narratives, along with group discussion, constituted the primary means of discovery for this report. A limited annotated bibliography is also summarized in the report.

#### **Executive Summary**

The primary finding of this working group was that no individual member of the working group had complete knowledge and/or understanding of every step of their institution's workflow to select, scan, prepare metadata, and upload maps to the BTAA Geoportal. Furthermore, even following some member effort to better understand their own institution's workflows there remained substantial confusion among group members and the group as a whole. We take this to indicate that standardized workflows do not exist, are not transparent (even within institutions), or change frequently enough that there is not an opportunity to institute best practices into these workflows for reasons that are idiosyncratic to each institution and organization. Although it is outside the scope of this working group, it would seem that academic libraries in the BTAA have some work to do on handling and documenting digital objects before progress can be made on best practices for handling scanned print maps specifically.

## **Introduction**

There is increasing interest and capacity among map collections in libraries to digitize (i.e. scan) and geolocate (i.e. input bounding box coordinates to metadata) maps to improve discovery and access. Numerous large-scale map digitization campaigns have now been undertaken and completed and in parallel efforts, several high-profile online discovery interfaces have been launched, the BTAA Geoportal among them. This report summarizes the map scanning and geoportal posting workflows of BTAA Geoportal participating institutions as of late 2018, with an eye towards recommending best practices that could apply at any institution.

## **Workflows**

Five institutions contributed (to the best of their knowledge), narrative workflows. Although each institutional workflow shared some common steps, they were disparate in the full suite of steps included and how and when each step was implemented. Our attempt at creating an idealized workflow diagram is presented in Figure 1 and we acknowledge that there are practical reasons that this workflow cannot be implemented in some institutional contexts. Nonetheless, it presents most or all of the steps needed to go from a print map to a digital surrogate that is discoverable in the BTAA GDP and a logical process for how the steps could fit together into a single workflow.

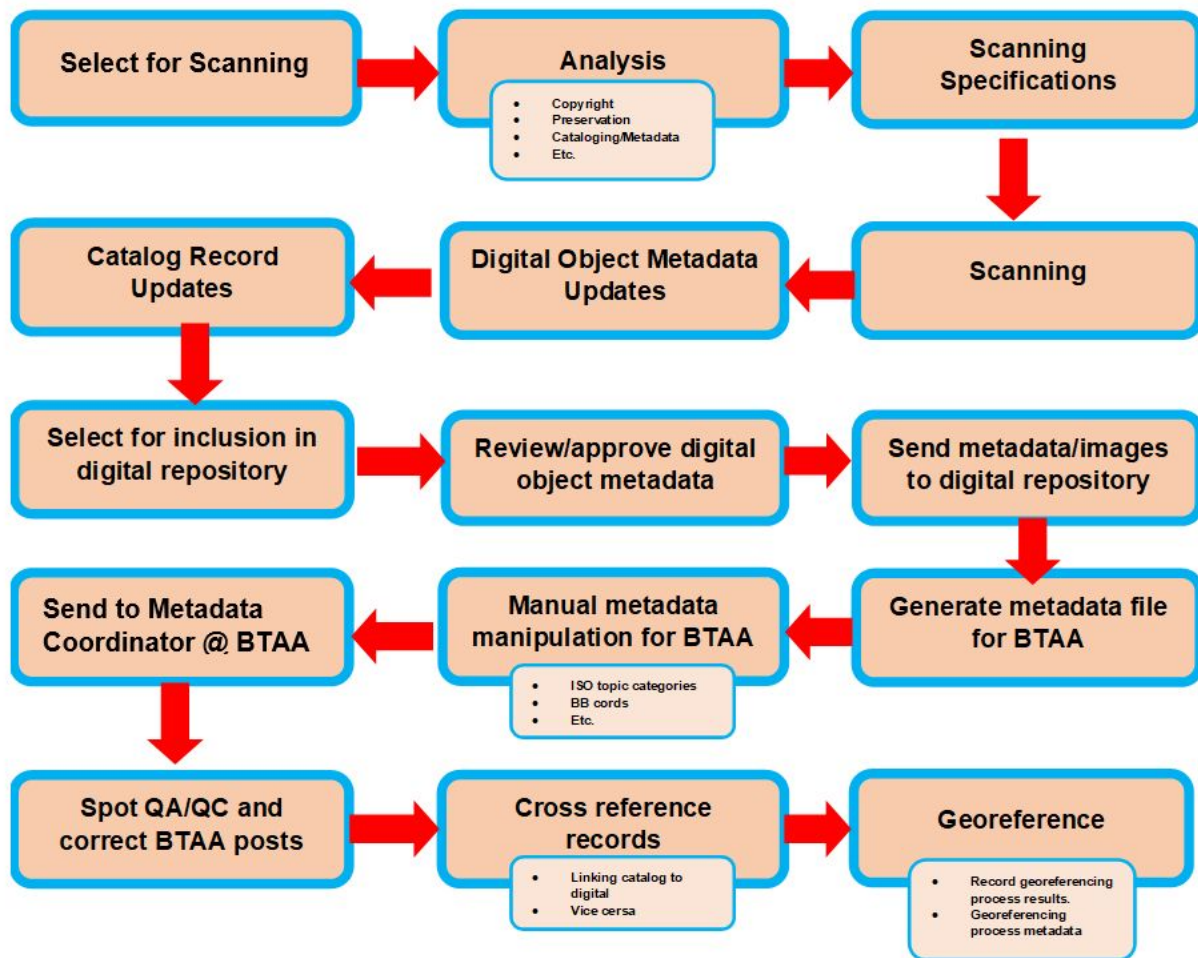


Figure 1. An idealized workflow for selecting, scanning and uploading scanned maps to the BTAA GDP.

## Recommendation

Because standardized workflows do not exist, are not transparent (even within institutions), or change frequently enough that there is not an opportunity to institute best practices into these workflows for reasons that are idiosyncratic to each institution and organization, our recommendation is to continue to have conversations across institutions and share information as is possible, as the community of map collections continues to increase its digitization activities and develop practices from which best practices can emerge.

## Annotated Bibliography

Woods, Cheryl, et al. "Historical map digitization in libraries: Collaborative approaches for large map series." Association of Canadian Map Libraries and Archives, Bulletin 152 (2016): 11.

<http://ir.lib.uwo.ca/wlpub/48>

This is a really useful description of the whole process, from a perspective of a long-time consortial collaboration (OCUL). Includes workflow diagram. Lays out image specification requirements comparison, and a comparison test conducted by six institutions. Discusses georeferencing standards. Describes cataloguing and metadata challenges, especially as applied to a large series.

Handren, Kara, and Amber Leahey. "Disciplinary Metadata in Libraries: A Case Study Applying the ISO 19115-North American Profile (NAP) for Describing Historical Topographic Maps."

Journal of Library Metadata 17.3-4 (2017): 253-269.

<https://doi.org/10.1080/19386389.2018.1440922>

Building on the above article, this describes in more detail the metadata concerns as applied to the large series of topographic maps being digitized for the OCUL Scholars GeoPortal.

Kowal, Kimberly C., and John Rhatigan. "Rare map materials made digital: scanning and metadata to archiving and access." International Cataloguing and Bibliographic Control 39.3

(2010): 57-62. <https://www.ifla.org/past-wlic/2009/121-kowal-en.pdf>

Offers an interesting perspective around digitization as a security measure.

Kowal, Kimberly C., and Christophe Martyn. "Descriptive metadata for digitization of maps in books: A British Library project." Library Resources & Technical Services 53.2 (2011): 108-120.

<https://doi.org/10.5860/lrts.53n2.108>

Focuses on metadata considerations.

Dodsworth, Eva. "University of Waterloo's historical air photo digitization project." Partnership: The Canadian Journal of Library and Information Practice and Research 3.2 (2008).

<https://doi.org/10.21083/partnership.v3i2.836>

An overview of a specific project to digitize and provide access to aerial photography.

Godfrey, Bruce, and Hayley Eveleth. "An Adaptable Approach for Generating Vector Features from Scanned Historical Thematic Maps Using Image Enhancement and Remote Sensing Techniques in a Geographic Information System." Journal of Map & Geography Libraries 11.1

(2015): 18-36. <https://doi.org/10.1080/15420353.2014.1001107>

This describes a specific process for generating vector features from scanned maps, which is currently not being done at scale by any of our institutions, but could be a future endeavour.

Peller, Peter. "From Paper Map to Geospatial Vector Layer." IASSIST Quarterly 42.3 (2018): 1-24. <https://doi.org/10.29173/iq914>

This article also describes in detail how to generate vector features from scanned maps, but includes recommendations for resolution at which to scan.