

A team effort: Overcoming digital appraisal anxiety through communication and collaboration

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Abstract The University of Michigan's Bentley Historical Library (BHL) collects physical and born-digital archival records of the University of Michigan as well as of the State of Michigan, its organisations and its people. To streamline and better inform its processes in order to provide efficient and effective access to digital archival materials, the BHL's curation team analysed its processes for the technical and intellectual appraisal of records. This article describes the challenges associated with the technical and intellectual appraisal of digital records, analyses the work of a cross-team group of BHL archivists, and makes recommendations for the expedient and informed appraisal of large sets of born-digital records.

KEYWORDS: electronic records, archival appraisal, collaboration







INTRODUCTION

Background

The University of Michigan's Bentley Historical Library (BHL) collects physical and digital manuscript and audiovisual archives and publications pertaining to the university and of the State of Michigan.

On the university side, BHL acquires materials from the university administration and departments within the university's 19 schools and colleges. While BHL collects archival materials in all paper-based and digital formats, for the purposes of this article, 'materials', 'collections', 'records' and other terms related to collected archival objects will represent digital assets.

In addition, BHL receives the archives of myriad student, faculty and staff organisations, as well as the personal archives of distinguished members of the university community. Most of the administrative offices (ie offices of university executive officers) and academic units (ie schools and colleges, individual departments, programmes and centres) deposit their materials on a regular basis, sometimes several times annually. Archives of campus organisations, and especially personal archives, can be a single donation or a series of smaller donations over a period of time.

On the State of Michigan side, donations are less regular and numerous. However, a single donation may amount to several terabytes of data per deposit (eg archives of former Michigan officials or collections of large audiovisual files).

As of May 2019, BHL was managing 7.5 TB of web archives and 143 TB of additional content, including born-digital and digitised content. Incoming records are present in numerous formats and arrive at the BHL in a variety of ways, from digital records on 'removable' media (ie floppy disks, optical discs, USB drives, and other digital storage units) to web archives, including YouTube channels and social media content. Records are also received by cloud transfers (eg via Google Drive or Box), network transfers

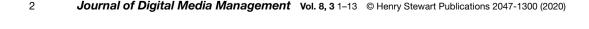
and e-mail. BHL physical collections include more than 70,000 linear feet of records. These materials represent 11,000 research collections, ranging from the papers of governors of Michigan to the records of student and faculty life at the university.

Roles

There are two principal collecting areas, each with a staff member responsible for seeking out and acquiring archives: the Lead Archivist for University Archives and the Principal Archivist for Michigan Historical Collections. Internally, they are referred to as field archivists (FAs). Archivists and technical personnel responsible for accepting, preserving, and providing access to all analogue and digital files comprise the Curation Team. FAs and Curation evaluate records, in the archival context known as 'appraisal'. The appraisal of archival records — digital and physical — includes evaluating intellectual, physical and technical characteristics of material, and its objective is perpetual preservation and public access. Appraisal is a continuous process. It begins at the earliest stages of donor negotiations leading to acquisition and continues through technical and intellectual evaluation, the preservation and preparation of records, to the records being opened for research.

Field appraisal

Before examining records, FAs communicate BHL's collection development policy to donors, articulating the range of records BHL collects. Records are evaluated for appropriateness to the institutional collection development mission. For example, are the records created by or do they document activities of the University of Michigan's administrative units or affiliates? Are they records of importance for scholarly research or do they have administrative value (eg do they enrich the researcher's understanding of a particular topic, event or policy)? How well do they complement existing









archival holdings (ie do they fill any gaps or otherwise intellectually relate to similar records)? Along with most duplicative records, records not meeting these intellectual criteria are not collected during field appraisal.

In addition, FAs establish the provenance and the custodial history of records (including their creator(s), possessor(s), donor(s), copyright owner(s)), and other information that may help determine future conditions of use and access. The physical condition of analogue files, types of digital media, and file formats are assessed. FAs collect and review any available documentation (eg description of contents) and determine whether BHL already has this content (and, if so, in which format). In most cases, FAs will decline to accept duplicate records or may need to choose between collecting matching content in physical or digital format.

Onsite appraisal by the Curation Team

After field appraisal, records are transferred to BHL, documented (accessioned), and integrated into the Curation Team's in-depth technical and intellectual appraisal.

Compared with other university archives, BHL's Curation Team is a large one, having a structured organisational chart and specialised workforce. At the time of this writing, the team consisted of ten full-time archivists (all managing or intellectually describing digital assets), beginning with three part-time technicians (one for digitisation and two to manage born-digital assets) and two physical-records conservators. Importantly, the Curation Team includes four project archivists (PAs). Typically, these beginning professionals work at BHL for a two-year term and are tasked with various projects to hone their developing skills. PAs bring fresh perspectives and many unique qualities to the table. Recent recipients of a graduate information science degree from different institutions, they are attuned to the latest technologies and eager to experiment

with (and challenge) established procedures or find alternative ways of managing and processing archival records.

The born-digital assets technicians are graduate students at the University of Michigan School of Information. The Archivist for Metadata and Digital Curation (for the purposes of this article, the Digital Archivist or DA) creates workflows and supervises the work of the technicians.

Technical appraisal

Once records arrive, one of the PAs creates a document called an accession record, in which she catalogues all information about the records (eg provenance, digital and physical extent, contents, arrangement, types of removable media and file formats), and notifies a technician. In consultation with the DA, the technician transfers files to a secure digital backlog. The technician also performs an initial appraisal of records that includes virus scan, checksum, technical metadata extraction, file format identification and validation, generation of unique identifiers for files and folders, zipped content extraction, and personally identifiable information (PII) scans. The technician then bundles the records according to the Library of Congress Bagit specifications and performs record preservation actions. The technician also gathers baseline intellectual information about the contents of files.

At this early stage, Curation may know a lot about the intellectual properties of records in addition to the technical. At a minimum, the team knows who created, owned and used the records. Thus, technical transfer informs future intellectual appraisal, which takes place during archival processing by an archivist. Deselection of duplicate, out-of-scope, and invalid records begins at this stage and continues during the subsequent intellectual appraisal of materials.





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Intellectual appraisal

In 2016 BHL began using Archivematica, a web and standards-based, open-source application that allows institutions to preserve long-term access to trustworthy, authentic, and reliable digital content. At-risk file formats are automatically normalised to more widely accepted preservation formats and deposited to a digital preservation and access repository (DSpace repository at the University of Michigan is called Deep Blue). Using Archivematica, a PA performs careful intellectual appraisal, arrangement, description, and packaging of files at the appropriate level of aggregation (ie where records belong intellectually within the collection). Files are analysed based on their administrative and scholarly research value, for perpetual preservation, maintenance and (ultimately) public access. Intellectual descriptions and links to digital records appear in collection guides, called finding aids, alongside intellectual descriptions of analogue materials contained in physical boxes and folders.²

Categories of accessions

While the above-described system has been working well, technical and intellectual appraisal remains a challenging and very time-consuming task. The challenges lie in the sheer scope of materials received

for processing. With every accession, there is the challenge of what analytical science calls 'known unknowns' and 'unknown unknowns'.3 Even after an initial appraisal by the FA, materials may still contain digital media with unknown content (often unknown to the donor/creator of the media); likewise, as materials are rehoused upon arrival or processed by the processing archivist, additional media may be discovered hidden within physical materials — thrown in office folders, tacked inside three-ring binder pockets, lost underneath stacks of paper, enclosed in envelopes containing correspondence, and so on. Archivists find countless CDs, DVDs, floppy disks and USB drives with 'paper' files. In some cases, these discoveries are anticipated (known unknowns), but often they come as a surprise (unknown unknowns). There are three categories of incoming digital media:

- Known knowns: There are technical and descriptive metadata for everything. The likelihood of 'surprise' removable media is low.
- 2. Known unknowns: Knowledge about technical metadata and intellectual content is incomplete or even missing entirely. The likelihood of 'surprise' removable media is high.
- 3. *Unknown unknowns*: Digital content is unexpected, but found nonetheless.

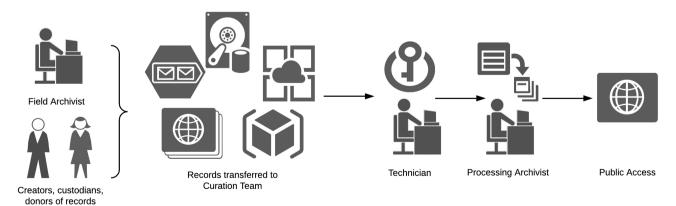


Figure 1: Digital processing workflows and roles

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Challenges

To guarantee effective and efficient access to digital records, the Curation Team would ideally receive only Category 1 accessions. Materials in Categories 2 and especially 3 slow and complicate the curatorial workflows, introducing uncertainty about value and accessibility of records. When curation members are engaged in initial discussions about digital records transfer, they have an opportunity to perform at least a preliminary appraisal of media with the donor/creator of records. However, curation staff cannot accompany field archivists on every trip. Most of the time, such joint discussions happen when the Curation Team is promptly informed after the trip and is expecting the arrival of digital media. In the majority of cases, BHL's digital media accessions fall within Categories 2 and 3.

The sheer volume of digital records received is challenging, measurable not only in time but in resources dedicated to appraisal. Accession also represents an intellectual challenge that may require lots of assumptions to be made. Between August 2018 and June 2019, one PA processed (ie intellectually analysed, separated unwanted files, and transferred retained files) 4,271 removable media items, such as floppy disks, optical discs and USB drives.

It is common for a PA to make assumptions about the intellectual content of files based on possibly unreliable, incomplete metadata or limited understanding of content. Very often the only sources of information available include removable media labels (while it is still unclear whether actual contents correspond to what is on the label) or record donors' anecdotal recollections or assumptions. In combination, uncertainties about the content and its amount create 'appraisal anxiety'. Unsure of the reliability of donor-supplied descriptive data, archivists face the prospect of providing access to records content while running the risk of describing records incorrectly. The implication of this could be anything

from loss of time to misleading research for collection users.

Archivists can try to verify descriptive data, but that can delay access indefinitely, depending on how quickly (if at all) information can be verified. Another approach would be to provide access with available information but with a warning that this information may not be reliable. While one might argue that the latter approach saves time for the archivist, the benefit is dubious for the researcher. Once the true content of materials becomes evident down the road, archivists would need to adjust archival descriptions, thereby kicking the proverbial can further down the road. Yet another approach would be to provide access with no description at all, but this places the discoverability of records at risk.

THE DIGITAL APPRAISAL WORKING GROUP

In 2017, a review was performed of the BHL's workflow for processing born-digital materials stored on removable media. The purpose of the review was to ensure processes and procedures were meeting the needs of archivists and supporting the increasing number of digital materials acquired by BHL. As a result of the review, digital appraisal was identified as an area of further inquiry, based on a series of interviews as well as ongoing discussions with archivists involved in field work.

To better understand the unique requirements and challenges of appraising born-digital materials, two PAs proposed a working group to explore the topic in greater depth. The PAs' perspectives as early-career archivists contributed an openness and curiosity to the group. Moreover, they were uniquely positioned within the organisation to lead the group due to both rank and specific work assignments. Their work required regular interaction with the BHL archivists







responsible for appraisal. One PA co-led the workflow review mentioned above. Both made ongoing improvements to the workflow and were responsible for the day-to-day management of the removable media workstations as well as supervising technicians. In addition to the two group leads, participants included seven archivists involved in digital appraisal work at various stages of the archival process, in positions related to field work, donor relations, digital curation and processing.

Objectives and methods

Objectives

In forming the working group, the main objectives were to develop a shared understanding of the digital appraisal being conducted by BHL archivists and identify barriers to its actualisation. Meetings were designed to open channels of communication, clarify roles and set expectations. At the outset, participants had limited knowledge of other team members' contributions to digital appraisal or how those contributions intersected with and impacted their own.

During initial meetings, the goal was to learn about the archival workflow and each group member's role and responsibilities. Efforts then shifted to identifying and describing digital appraisal challenges at each phase of the workflow. Ultimately, the group sought to generate solutions to identified challenges and make recommendations that would facilitate digital appraisal at BHL.

Methods

To achieve these objectives, the project leads adopted research methods from the contextual design process. This customer-centred process supports learning how people work and discovering work practice improvements. Using contextual design methods such as contextual inquiries, interpretation sessions and affinity diagrams,

the working group was able to take a structured approach to its objectives.

Due to time and resource constraints, the leads used meetings instead of interviews as a primary format for the contextual inquiry. Unfortunately, this format had the potential to distort the data-gathering results toward summarised and abstract data from interviewees — a format that does not reflect everyday work. The leads, however, were able to collect ongoing and concrete data by setting up semi-structured meetings in which they guided participants to share their most recent digital appraisal experiences, in stages, using a specific donor or collection as an example.

Seven archivists from the Curation and University History Teams were invited to the working group meetings, based on their roles and responsibilities in the digital appraisal workflow. These archivists included:

- From the Curation Team:
 - · Project Archivist for Processing;
 - Arch2ivist for Metadata and Digital Curation;
 - Lead Archivist for Digital Initiatives; and
 - Lead Archivist for Collections Management.
- From the University History Team:
 - Lead Archivist for University Archives;
 - Archivist for Records Management; and
 - · Athletics Archivist.

In the working group, the leads were able to represent not only different types of appraisals horizontally (eg field, on-site, technical and intellectual) but also varying levels of organisation hierarchy vertically (eg supervisors and supervisees).

This diversity provided an ideal opportunity to use an affinity diagram, which is an effective tool to organise notes into 'a hierarchy revealing common issues and themes'. The leads used this method to visualise challenges by each digital appraisal stage and brainstorm solutions with the working group members.

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Process

Facilitating the working group was an iterative process for the project leads. As the group evolved, meeting formats took on varying levels of structure based on the changing needs of the group. Early meetings took a relatively unstructured approach, providing an open forum to discuss the digital appraisal issues the archivists were having. This format gave participants an opportunity to openly share their criticisms of current practices while gaining new perspectives from fellow archivists. At the outset, many participants stated that at least some aspect of the workflow was a 'black box' and that people's roles and responsibilities were unclear. Learning about the responsibilities and challenges of others provided context for the ways each member's work connected to others', and fit within the workflow as a whole. A sense of camaraderie developed as group members learned that everyone involved faced challenges when doing this work. One difficulty of this approach is ensuring that all participants are empowered to speak and have sufficient time to do so, especially when navigating hierarchical dynamics and differing perspectives on the application of archival principles.

After two unstructured meetings, the project leads realised the group had reached a

saturation point. Information sharing was no longer productive as discussion topics tended to repeat or veer outside of the group's scope. Using an affinity diagram to structure the conversation around work processes and discrete tasks helped facilitate the next phase of discovery (Figures 2 and 3). First, group members independently identified appraisal tasks occurring at each stage of the workflow and placed red Post-It notes with these tasks on corresponding diagram boards. The group then shifted its focus to the challenges that arise when trying to complete these tasks at each of the various stages. This time, vellow Post-Its were used to indicate where challenges were appearing in the workflow.

Once group members finished generating challenges, they reconvened to synthesise the results and suggest potential solutions using a blue Post-It note. The identification of patterns and duplications among the challenges was relatively straightforward. During the discussion, the project leads rearranged the Post-Its into clusters of challenges on each of the boards based on broader themes as they emerged. One theme, for example, was 'communication breakdown'. These clusters allowed the group to organise small, recurring challenges into overarching issues, thus identifying areas for improvement, termed 'solution areas'.



Figure 2: Affinity diagram

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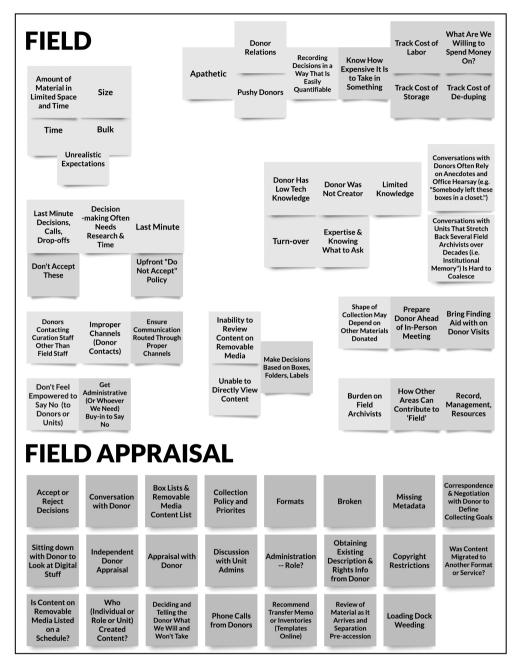


Figure 3: Example affinity diagram board, with different coloured Post-It notes to indicate challenges, solutions and appraisal tasks

After helping to identify the solution areas, the affinity diagram began to detract from the process as the amount of visual information became overwhelming. The project leads changed gears again by creating a slide deck before the next group meeting, with each slide outlining one solution area.

Working through the slides, participants collaborated to develop specific solutions that could be developed into project recommendations. Each recommendation would address one or more of the broad challenges and help improve digital appraisal practices across BHL.



Throughout the process, the project leads held separate debrief meetings — crucial to the group meetings running smoothly. These provided an opportunity to reflect on lessons learned at each phase, identify when a method or approach was no longer productive, and strategise about the next steps of the process. It was important for the project leads to remain open and adaptable as the process unfolded. Adhering to assumptions held at the outset of the project might have limited their ability to uncover the true challenges and needs of BHL archivists.

Findings

From semi-structured meetings and affinity exercises, the working group identified numerous digital appraisal challenges that BHL staff face during accessioning, transferring and processing born-digital materials.

The first key finding was that the digital appraisal process is not one-dimensional but rather a multidimensional challenge. The affinity diagram created by the working group showed five major challenge categories occurring throughout the BHL's workflow:

- 1. massive scale of removable media and their contents;
- 2. lack of or incomplete metadata from record donor or creator;
- 3. overlapping duplicates within digital materials as well as between digital and physical materials;
- 4. increasing time required for appraising removable media and their content; and
- 5. varying external and internal expectations.

As discussed previously, challenges regarding scale and metadata were expected by the working group leads, as these were the main cause of the appraisal anxiety that catalysed formation of this working group.

What was not anticipated was that these two problems were worsening the third challenge — duplication. As a part of standard practice at BHL, archivists remove any duplicates from accessions and collections to save space. Digital materials, however, often arrive with incomplete or no metadata, which makes the appraisal of duplicate content strenuous.

Even with appropriate metadata, it is impossible to manually inspect gigabytes of digital content. There are deduplication tools available, but their functionality is usually limited to identifying exact duplicates. Members of the working group, moreover, reported that this challenge goes beyond the digital realm as there can be an overlap between digital and physical (ie paper-based) materials.

The leads noticed a pattern of affinity diagram notes revealing the fourth challenge — time. In one of the working group meetings, archivists described that the digital appraisal process requires more time, not only because of appraisal anxiety and duplicates but for the following reasons:

- Time in the field:
 - The contact for record donation is usually not the record creator and, as an assistant or intern, may have no knowledge about the materials, in which case the FA must schedule additional conversations or visits.
 - Record donation is often triggered by an irregular event (eg construction, moving, or retirement), and removable media for the donation are often lumped into a large, disorganised package.
- Accessioning time:

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- Compared with paper-based materials:
 - creators of digital materials tend to neglect any appraisal and lack of arrangement continuity; and
 - accessioning archivists may not have the technical skills and tools to access digital content from removable media.







- Processing time:
 - Transfer of digital content from removable media by the technician can take months, based on the size of a collection and processing prioritisation.
 - When issues regarding platforms and tools for processing digital materials arise, resolution requires specific expertise, necessarily involving more stakeholders and additional time waiting for their responses

In an institution the size of BHL, moreover, multiple collections are being accessioned and processed at any given moment. Hence, digital appraisal activities are performed in parallel with those of other collections, presenting a time-management challenge of their own.

Similar to the previous issue, the fifth challenge — expectation — came to light by creating the affinity diagram. Post-It notes had been placed between the workflow stages that described frustrations regarding a hand-off between stages. Furthermore, the working group members referred to the BHL workflow as a 'black box', in which a collection's current status is often behind a curtain. They wanted more access to information about status and estimated timeline or deadline for collections in each team's workflow. These examples seem to indicate incongruity in internal expectations between teams and members.

The University History Team, in particular, highlighted external expectations coming from record donors and creators who are not aware of how archives operate. While the team may explain and ask them to follow BHL's guidelines, record donors and creators would send their materials haphazardly and unfortunately assume that all of their digital records would be available online within a few days.

The second key finding was that the digital appraisal challenges had a trickle-down effect throughout BHL's workflow. This was self-evident when the working group identified an inverted triangle shape from the completed affinity diagram (see Figure 4). While some challenges were unique and confined to a specific workflow stage, many challenges that arose in an early stage were often inherited by the next stage in the workflow. For example, Post–It notes describing the challenge to the number of removable media (eg 'Size', 'Bulk', and 'Scale') appeared in all stages except the collection management stage.

The third key finding was the high value in having members from different teams in the same room. After the working group was dispersed, many members reported not only a better understanding of colleagues' roles and responsibilities but also of the similar challenges they shared and on which they could collaborate in the future. Additionally, these meetings also allowed a rare opportunity for the two teams to discuss and establish common practices on a variety of issues, ranging from separating unlabelled removable media to choosing a platform to consolidate appraisal decisions.

Recommendations

The working group found that digital appraisal is a multidimensional task, with intricate challenges, for which no silver bullet exists. Understanding this level of complexity, the leads sought to develop digital appraisal recommendations that would address aspects of these challenges and provide a framework with which to develop and implement them across BHL.

Based on the clusters of Post-It notes from the affinity diagram, the project leads derived six solution areas (ie areas for improvement) and created a slide deck. Each slide outlined one solution area, including questions to guide the group discussion, as follows:

- Communicating better:
 - Who to approach with questions about digital appraisal?
 - Where to add or find information about digital appraisal decisions?



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Figure 4: Affinity diagram showing trickle-down effect

- Managing internal and external expectations:
 - How to reach a shared understanding about timeline and workload?
 - How to articulate Bentley practices to donors, making labour and cost visible?
- Clarifying workflow and roles:
 - What resources are needed to plan digital appraisal upfront?
 - What are scenarios in which to use the aggregate approach to digital appraisal?
 - How to track who has digital appraisal responsibilities at each stage?
 - Who can approve digital appraisal decisions?
- Quantifying labour and costs:
 - How to track the labour costs of digital appraisal?
- Updating policies:

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- What can be discarded prior to accession and what can be separated post-accession?
- Identifying special and uncommon scenarios:
 - Which unique scenarios (eg requests for unprocessed materials) require specific policy, procedure and workflow discussion?

Members brainstormed potential solutions to address one or more of the identified challenges. Based on the suggestions from the group, the project leads developed the following three recommendations:

- born-digital processing status system;
- born-digital workflow and roles documentation;

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removable media processing cost estimation.

The first recommendation addresses the solution areas of 'communicating better' and 'managing internal expectations'. It proposes the development of a system that would integrate into the Curation Team's project management tool. The system would allow members in the Curation and University History Teams to monitor and be notified automatically about the status of removable media transfer requests. Implementing this recommendation would help communicate clearly to archivists on different teams regarding which accession or collection is being transferred. Moreover, archivists would be able to see current workloads for removable media transfer and estimate a completion timeline for their transfer requests.

Focusing on the solution areas 'communicating better' and 'clarifying workflow and roles', the second recommendation centres on documenting the digital curation workflow life cycle. This would define associated roles for each stage of digital appraisal and describe each role's responsibilities. The resulting document will identify the appropriate person to contact when archivists encounter appraisal or technical issues. Furthermore, it will help archivists in the early stages of the workflow (eg field and accessioning archivists) to locate a colleague with whom to consult or collaborate about appraising removable media.

The last recommendation aims to quantify the work associated with digital appraisal. This addresses the solution areas of 'quantifying labour and costs' and 'managing external expectations'. By placing a price tag on each removable medium appraised, transferred and processed, this assessment will shed light on the invisible labour that goes in. Additionally, it will help field archivists make a strong case for record organisation and maintenance to record creators and

donation contacts. The implementation, however, will be a project of its own — not only because of additional research on calculation and analysis methods but also because conducting an institution-wide inquiry requires time, resources and (most importantly) — commitment.

These recommendations mainly focused on communicating better and managing expectations. Two solution areas, 'updating policies' and 'identifying special and uncommon scenarios', were not addressed in the recommendations because changes to Bentley policy could not be made in the context of the working group. Moreover, the leads agreed that addressing infrequent incidences is less cost-effective compared with other solution areas that impact digital appraisal on a daily basis. The group, therefore, focused on the solution areas for which it could make actionable and practical recommendations. Successful implementation of the working group's recommendations will benefit archivists across the team at BHL and streamline the digital appraisal process.

CONCLUSION

BHL is a large academic archive, and its staff is highly specialised compared with those in smaller archival institutions. The BHL Curation Team includes archivists and technicians who work with born-digital records, archivists and technicians who work with digitisation of analogue images, archivists and technicians who work with digitisation of audiovisual records, and archivists who process physical and digital records. Because of this diversity, it was possible to initiate and conduct the project without interrupting work or compromising individual or team productivity.

The main takeaway for the working group was the realisation that 'soft skills', such as efficient and effective documentation of activities and findings, understanding



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of colleague's roles, and overall good communication within and between teams as well as with outside stakeholders, are as critical to digital appraisal as technical know-how. For example, members of the working group reported that their work stalled at times because they were uncertain where to find information or who to contact with questions about technical issues regarding the digital appraisal. This problem not only causes more accessions to fall into the categories of 'known unknowns' and 'unknown unknowns', but also exacerbates the other five challenges.

Once the Curation Team adjusted its communication procedures vis-à-vis members of other teams and emphasised the collaborative approach to appraisal on multiple stages of records' life cycles (from initial conversation with the donor to intellectual processing in-house), there was a positive impact on team productivity. A donation from the University of Michigan School of Dentistry served as an example of success in this area. When the records transfer to BHL request was made, the collection was described as 315 DVDs. When the technician actually counted the DVDs, the number jumped to 864. Instead of simply starting to appraise and process, the PA in charge of the project consulted with the collecting field archivist and the digital archivist. From them, the PA learned that the School of Dentistry has a YouTube channel that might duplicate the DVD content. The Digital Archivist was able to export a list from the school's YouTube channel, and the technician compared that video list with the DVDs. Ultimately, the team transferred only 85 DVDs instead of 864. Simple communication and a collaborative digital appraisal approach saved a vast amount of time and resources.

It is important to point out that this article reflects the Curation Team's perspective to digital appraisal, that is, technical and intellectual appraisal performed in-house after the records have been initially identified or selected for acquisition by BHL. Further study is needed to understand field archivists' perspectives on the challenges related to initial identification of digital records as valuable (based either on research or communications with creators, donors or owners of records). Another potential area of future research and collaboration is the appraisal of records relating to the discoverability and use of digital collections.

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