

# Notes on Operations

## Digital Collections at a Distance

### Telework during the COVID-19 Pandemic

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*This case study explores how one team tasked with the creation of digital collections at The University of Alabama Libraries succeeded at telework to carry on its essential functions despite not being able to digitize new content from March through July 2020 during the COVID-19 pandemic. Managers of similar units will gain strategies to create similar telework projects at their institution and lessons learned while working and supervising employees remotely.*

The COVID-19 pandemic forced The University of Alabama to limited business operations with its libraries shutting down its physical spaces and all library employees shifting to telework. Within The University of Alabama Libraries Special Collections, Digital Services functions as a specialized unit tasked with the digitization of unique materials, creation of digital collections, and digital preservation. The challenge was how to continue these functions without having physical access to materials and the ability to digitize new content. This case study explores how Digital Services responded to the challenge by leveraging technology and embracing the constraints of working remotely. By sharing these experiences, the goal is to help others who face similar challenges now and in the future, and to offer strategies that can be adapted to use at their institutions. Digital Services implemented four strategies while working remotely, including the repurposing of existing digital content, strengthening infrastructure, enhancing discovery, and trying a new approach. The historical significance of the COVID-19 pandemic pushed Special Collections to try something new with the creation of “Still Tide Together: Documenting Life during the COVID-19 Pandemic,” whose submissions will represent the first intake of born-digital content without having an established born-digital program in place. Although the impetus for telework was the COVID-19 pandemic, the strategies presented apply to other unexpected situations including natural disasters, medical emergencies, building maintenance issues, or other short-term disruptions. This advice is also relevant for business continuity and emergency management plans and other planned disruptions, such as building renovations, familial job relocations, or extended medical leave, that take employees away from physical collections and equipment. Besides these strategies, this case study offers managers who oversee the creation of digital collections practical advice on how to develop projects in alignment with strategic goals, remote supervision, and supporting employees during extraordinary circumstances.

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### Literature Review

In 2006, Robertson hypothesized how a pandemic would affect the daily operations of a library, and many of his predictions, including library closures and limited physical access to the physical buildings for extended periods, were correct. Yet, Robertson could not imagine how technological improvements over the next fourteen years would transform the library into an institution that could carry

on the majority of its functions remotely with employees effectively working from home.<sup>1</sup> The literature on teleworking work for library employees is limited but most likely will expand over the next few years because of the COVID-19 pandemic. The literature primarily focuses on four areas: setting up a telework agreement, employee-supervisor relationship, technology and communication tools, and personal experiences primarily from reference and instruction librarians and many technical services positions.

The overwhelming majority of library literature on this topic incorporated personal experiences and opinions towards telework and the process of setting up a teleworking agreement. Manley gave up telework after thirty minutes and drove into the library, believing that connection to people was fundamental to what defines a library.<sup>2</sup> Moe described her teleworking experience as a law librarian who found that online access to legal databases and electronic delivery of research made her position suited to telework.<sup>3</sup> Diehl Dietr explained the process of transforming her position as a theological librarian into a telework position.<sup>4</sup> Brooks-Kieffer negotiated with her university library administration a formal agreement to telework three days a week while working as an electronic resources (e-resources) librarian.<sup>5</sup> Throughout these papers, the authors repeated the importance of planning, outlining expectations, and deciding if a particular library position is suitable for telework and the best choice for an individual.

One reason for engaging in telework was to assess the feasibility of telework as part of a pilot program. Black and Hyslop participated in a two-day-a-week pilot program at Michigan State University Libraries in which librarians created original catalog records while working from home.<sup>6</sup> Luce and Hartman studied the six employees representing various departments of the Boulder Public Library who teleworked one day a week for one year in 1985. They found that employees experienced personal growth, increased productivity, a sense of control in planning work, and increased job satisfaction, yet also experienced distractions, feelings of isolation, workspace difficulties, and a need to structure work time. Their findings remain relevant to library employees who engage in telework today as there are advantages and disadvantages to working outside of a structured office environment.<sup>7</sup> While extremely dated in terms of technology used for telework, these authors believed that telework has promise for use in libraries, but the technology had to improve to make it an everyday reality instead of a pilot program.

The technology exists to make telework doable for library employees, but libraries have been reluctant to embrace telework, citing a need for employees to be with library collections. Hickey and Tang argue that an underlying fear drives this decision due to a lack of trust between a supervisor and employee or within the organizational

culture. They also discussed the teleworker and the supervisor relationship using Tang's teleworking experience as a reference and instruction business librarian.<sup>8</sup> Circumstances, such as the need to move to another geographical location, force libraries to consider telework as an option for an employee. An unexpected temporary move led Duncan to telecommute for six months while working as an e-resources librarian.<sup>9</sup> Smith and Van Dyke shared the telecommuting experiences of their university's interlibrary loan department from both the perspective of the telecommuter and an on-site supervisor when Van Dyke relocated to another city three hours away.<sup>10</sup> These authors emphasized the importance of planning for telework, outlining expectations for both the employee and the supervisor, and establishing methods of communication. The physical distance added another dynamic between the employee and supervisor relationship. Manley argued that supervisors have assumed that visual observation of employees at work guarantees job performance instead of measuring an employee's performance by the deliverables produced.<sup>11</sup> Brooks-Kieffer suggested that results-based or outcome-based evaluation of employees lends itself to telework.<sup>12</sup> Hickey and Tang pointed out that the collaborative nature of the library work with many employees working in teams has stifled the acceptance of telework, yet telework can be effective in a team environment if a supervisor ensures communication and collaborations between employees.<sup>13</sup>

The COVID-19 pandemic necessitated the transition of library employees into telework with little time to plan, sometimes overnight. There have been a few contributions to the literature that specifically address the COVID-19 pandemic, with many more to follow. Technology has made it possible to simulate much of the team environment virtually with collaborative technologies. Rysavy and Michalak discussed the communication methods as library employees of Goldey-Beacom College in Wilmington, Delaware, transitioned to telework. Some of the technologies included Flipgrid, Slack, Zoom, Notion, and SharePoint. Rysavy and Michalak focused mainly on communication in the first weeks following the physical shutdown of the campus and represented an early contribution to the literature.<sup>14</sup> Walsh and Rana wrote about The University of Toronto's response during the first three months concluding with May 2020. They provided a bird's eye view of library operations with a focus on reference, circulation, interlibrary loan, and e-resources. Subsequent contributions to the literature should include examples of telework projects within a specific library area and the possible incorporation of telework in long-term plans and goals of that unit.<sup>15</sup>

No one was adequately prepared for the COVID-19 pandemic's effect on libraries. This case study positions itself as an in-depth look at how to create digital collections at a distance when facing no physical access to the

materials that need digitization and provides strategies for similar units for telework. By giving concrete examples of what a unit tasked with the creation of digital collections could accomplish remotely from March through July 2020, the author argues that telework is a feasible option to carry out the overwhelming majority of the functions of this unit and that the technological barriers that thwarted telework years ago no longer exist. This case study offers advice to managers in supervising employees remotely. Everyone has their own transition to telework story, and managers should reflect on what worked and what they could have done differently going forward in a world where telework might be the new normal for months and maybe even years to come.

## Background

At The University of Alabama Libraries Special Collections, there has been a significant amount of change over the past two years that shaped the daily work of Digital Services. The Special Collections and Digital Initiatives Librarian who oversees Digital Services started in August 2018, and she supervises two full-time staff and two student employees. There was a decision to switch the digital asset management system (DAM) from a custom-built in-house system called Acumen to the cloud-hosted version of CONTENTdm. One of the reasons for this decision was that Acumen's infrastructure lived on an aging physical server that could not be upgraded to meet Special Collections' needs. This server also contained the digital archival storage consisting of TIFFs and metadata plus the Lots of Copies Keeps Stuff Safe (LOCKSS) infrastructure. The University of Alabama participates in the Alabama Digital Preservation Network (ADPN), a statewide LOCKSS network, for its digital preservation solutions. Digital Services froze additions to the existing server and deposited its last batch of new digital content into ADPN in June 2019 as part of its preparation for the migration to a new server. Digital Services was given access to a new virtual server in December 2019 with only the archival storage on it while the transfer of other components were scheduled to take place in summer 2020. The new public-facing digital collections website powered by CONTENTdm launched in April 2019, and Digital Services has been migrating content from one DAM to the other with the planned shutdown of Acumen in July 2020. The focus was on completing migration and redesigning workflows for CONTENTdm and technical processes for the new server. Digital Services digitized a few high priority collections, uploaded them to CONTENTdm, and stored the images and metadata on local network storage while waiting for a new server and LOCKSS to be fully functional. Digital Services planned to resume regular digitization production in summer 2020.

With the COVID-19 pandemic threat looming, students, faculty, and staff left for Spring break on March 14, 2020, fully expecting to return to class and work after this holiday. By March 17, 2020, The University of Alabama announced limited business operations, the switch to online classes for the rest of the semester, and instructed students not to return to campus from Spring break. All library employees transitioned to telework with a telecommuting agreement in place on March 23, 2020. It also meant the loss of the two student employees who digitize the majority of new digital content and were in the middle of digitizing two large collections. When considering the feasibility of telework for library departments, Special Collections departments would be one of the least likely candidates because its staff requires access to its collection of unique and rare materials to perform both archival processing and digitization. The unforeseen transition to telework required managers to determine what telework looked like every day for their units by assessing technological needs, defining communication methods, and planning the scope of work while working remotely.

## Technology

Without the ability to bring home scanners and materials from Special Collections, Digital Services had to determine what telework meant and what technology was needed to be successful when working from home. After compiling a list of all the technological needs ranging from software to server access, the best option for Digital Services was to use a virtual private network (VPN) and remotely log into their work computers using the remote desktop function from personal computers or a library loaned laptop. The reasons for this choice included the processing power of work computers designed to handle large image files, specialized software (e.g., Adobe Photoshop or CONTENTdm Project Client), and scripted workflows that relied on Perl and Python scripting languages for execution. The benefits of this approach meant less downtime in installing and downloading software on personal computers and configuring access to network drives and servers. The added benefit of using a remote desktop was the feeling of being at work with all the settings and bookmarks customized for that environment. During the first two weeks of remote work, the biggest problem was the number of connections available through the VPN and the stability of the connection. Luckily, the university's Office of Information Technology created a second VPN network on April 1, 2020, and there have been very few VPN connection problems since then.

## Communication

The shift to telework meant determining methods of communication. Managers should determine what forms

of communication work best by seeking input from their team and what works best for them. During March 2020, the Special Collections and Digital Initiatives Librarian tried a continuous Word document in Box, a university provided cloud-based storage subscription, as a centralized place for work assignments and updates. The amount of time needed to provide written updates was onerous, led to more questions, and felt impersonal. Digital Services switched to a scheduled daily check-in meeting each morning using the university-provided Zoom subscription to give progress updates and most importantly, support one another emotionally through the grief, anger, sadness, and the uncertainty of living through a pandemic. It also provided a venue to share successes, happy moments, and to laugh mirroring the informal check-ins that had occurred while working on-site. These virtual meetings typically lasted thirty minutes and were longer when troubleshooting problems or conducting training. The other primary method of communication was email both for quick questions and to communicate information coming from other library departments and outside vendors (i.e., EBSCO or OCLC). By establishing and using these communication methods, employees felt empowered to adapt work hours to fit their needs. For example, one employee monitored the online schooling of children during the day and worked late at night to minimize distractions and increase productivity. By embracing the freedom and flexibility of telework, employees could blend personal and work time throughout the normal work hours to achieve a better work-life balance when working from home.

### Scope of Work

After determining the technological needs and methods of communication while working from home, Digital Services focused on the unit's goal of completing the migration of all existing digital content to CONTENTdm and ensuring that the impending shutdown of Acumen on the existing server did not cripple workflows and digital preservation. With the number of COVID-19 cases daily rising, the state issued a "Stay at Home" order beginning in April 2020. In May 2020, the state relaxed its guidelines and issued a "Safer at Home" order, which lessened restrictions on non-essential businesses, but continued to encourage telework whenever possible. The University of Alabama responded with the announcement that remote learning for students would continue during the interim and summer 1 terms, and only essential employees would be permitted on-campus. It became apparent that telework would be the norm for the indefinite future. With this knowledge, the Special Collections and Digital Initiatives Librarian expanded the scope of work to include more than migration, ensuring that any assigned work coincided with existing objectives and goals.

She adopted these strategies, including repurposing existing digital content, strengthening infrastructure, enhancing discovery, and trying new approaches to the unit's work.

## Implementation of the Strategies at Other Institutions

The strategies proposed in this case study are intentionally generic to account for the differences such as staffing levels, organizational structure, and unit responsibilities that exist between similar units at other institutions. Other institutions can use these strategies and customize the implementation to fit their situation. Each strategy will have a brief definition with generic implementation examples followed by specific examples detailing application of this strategy at The University of Alabama from March to July 2020. By providing real-life examples, this paper intends to provide guidance to managers of similar units at other institutions planning appropriate projects for telework. With no new digitization possible due to the closure of the campus, it is important to demonstrate that telework is meaningful and continuing the everyday work of Digital Services.

### Strategy of Repurposing Existing Digital Content

The first strategy was to repurpose existing digital content created originally for another purpose such as for imaging requests, exhibits, digital humanities projects, or grant-funded digitization. In a telework environment, which lacks a means to digitize new content, institutions must assess the viability of any existing digital content as a candidate for inclusion in its digital collections and digital exhibits. The strategy of repurposing digital content creates quantitatively measurable additions to digital collections. Managers of digitization units often report to library administration the number of images digitized and added to its digital collections as one statistical measure to demonstrate productivity. Repurposing digital content to create new digital exhibits can add context and interpretation and can serve as an outreach tool to create awareness of an institution's holdings. By using web analytics, both digital collections and digital exhibits can provide usage statistics.

### Implementation of the Strategy of Repurposing Existing Digital Content

At The University of Alabama, the three options to repurpose existing digital content were non-migrated digital content from its legacy DAM, a grant-funded digitization project, and digital content created originally for physical

exhibits. By March 2020, Digital Services had migrated 288 digital collections to CONTENTdm, which represented 94 percent of the total digitized content of 524,941 images. Digital Services concentrated their efforts on the most popular or the largest digital collections. The remaining 6 percent of digitized content was from 259 small digital collections and was the most time-consuming and difficult digital collections to migrate to CONTENTdm. The migration to the new DAM required converting MODS metadata to Dublin Core (DC) metadata, which Digital Services had partially automated using a Python and Perl rules-based scripted workflow. The metadata transformation required the same number of steps regardless of collection size, which meant that smaller digital collections consisting of one item took as long as 1,000 item digital collections. By July 2020, Digital Services completed the migration of the remaining 259 digital collections consisting of 31,720 images and audio files, successfully completing the migration of 547 digital collections totaling 524,941 images and audio files.

Grant-funded digitization offers another means to find existing digital content. The University of Alabama Libraries Special Collections received a National Endowment for the Humanities grant in 2018 to digitize 100,000 pages of state newspapers for inclusion in the Library of Congress's Chronicling America digital collection as part of the National Digital Newspaper Program (NDNP). The inclusion of its newspapers would generate significant amounts of web traffic, be beneficial to researchers using the digital collections, and represented the largest amount of existing digital content with 50,000 pages available when telework started in March 2020. That number of pages continued to grow over the next few months as the vendor returned newly digitized content to meet the grant-mandated completion deadline of August 2020. Digital Services transformed NDNP-compliant metadata to align with its DC metadata template and uploaded the PDF version of each newspaper issue since OCR was already embedded within the file. By July 2020, Digital Services added 62,036 newspaper pages to its digital collections.

Another option might be to repurpose existing digital content created specifically for a physical or digital exhibit whose content does not already exist in the digital collections. In 2019, Digital Services successfully used this strategy with *The Alabama Forum* LGBTQ newspaper digital exhibit to modify existing metadata to make it compliant to DC standards, add optical character recognition (OCR) to previously digitized images, and upload to its digital collections. This strategy can also work in the reverse with the creation of digital exhibits using existing items from an institution's digital collections or digital content created specifically for physical exhibits. Digital exhibits provide a way to offer more context to digital content, showcase small

yet important digital collections, can coincide with anniversaries and other historical events, and highlight holdings of marginalized groups to foster diversity, equity, and inclusion in campus culture at an institution. In summer 2020, the Reference Services and Outreach Coordinator used existing digital content to create two timely digital exhibits, "Woman Suffrage in Dixie" and "Unrest: Two Weeks of Protest at The University of Alabama, 1970."

### Strategy of Strengthening Infrastructure

This strategy involves the development or modification of technical processes and workflows to accomplish a specific task or improve efficiency. Sometimes, in the pursuit of creating quantifiable statistics through images digitized and uploaded to digital collections, managers do not allocate enough resources towards strengthening infrastructure. The abrupt shift to telework due to the COVID-19 pandemic allows managers to re-visit resource allocation towards the development of technical processes and improvement of workflows. Strengthening infrastructure is necessary for the care and maintenance of digital content and is worth the time investment to ensure long-term digital preservation. Digital collections represent the public-facing view of what digitization units do, but the behind-the-scenes work of digitization, creating metadata, uploading digital content, and digital preservation represents the important work that happens before and after making a digital collection available online. Because of the differences inherent in similar units at other institutions, there is not a list of examples for ready implementation, but most managers know where deficiencies and inefficiencies lie.

### Implementation of the Strategy of Strengthening Infrastructure

Digital Services implemented this strategy of strengthening its infrastructure by tweaking existing scripts for audio collections, developing a bulk editing metadata script, and re-configuring the first part of its digital preservation workflow. Throughout 2019 and early 2020 as part of the migration, Digital Services had created new workflows with most of the processes automated using Perl and Python scripts to migrate existing digital content and add new digital content to its digital collections. The migration of the audio collections represented another challenge as they epitomized the lack of standardization and variation within metadata from one audio collection to the next. Migrating these problematic audio collections meant the modification of existing scripts and the development of new scripts to pull large .wav audio files from the server and convert them to smaller .mp3 files for upload into digital collections and incorporating both the item- and track-level metadata. MODS metadata

allowed for the nesting of subelements within top-level elements, which provided the means of including delineated tracks within the metadata. The problem was finding a way to retain page-level metadata consisting of track-level relevant information while adhering to a less specific DC metadata standard. None of the existing workflows or technical processes had that capability to incorporate descriptive page-level metadata as they had been specifically designed for item-level metadata. After considering the time required to restructure item-level metadata plus the hierarchical file structure of the audio files, Digital Services determined that it was easier to upload the collection as it was, with its item-level metadata, and then export the metadata into a tab-delimited text file that contained technical metadata at the page-level added automatically by CONTENTdm during upload. Digital Services used the page-level technical metadata as a guide to place the page-level descriptive metadata within the export to prepare updated track-level information compiled into a spreadsheet. Digital Services wrote a Python script that would detect if descriptive page-level metadata is present in the spreadsheet, and then send instructions to CONTENTdm's Catcher API to add any page-level descriptive metadata. The final output was the inclusion of track names within the larger audio file to help users locate tracks and navigate within the audio collection. Dubbed the "field replacer script," this Python script could update any metadata field simultaneously for all the items rather than editing them one item at a time and by each individual metadata field. The creation of the field replacer script allowed Digital Services to make metadata additions or changes much more efficiently and at scale. Although it took time to write this new Python script, Digital Services has used this script multiple times and it will be a frequently used tool for future work.

With the transition to a new server, Digital Services created a new digital preservation workflow with the goal of depositing digital content and metadata into LOCKSS. The first step was to move files from network file storage to the new server. The prior digital preservation workflow intersected with Acumen, and Digital Services eliminated any dependencies within the Perl and Python scripts and changed locations to the new server. Digital Services normalized names and set staging areas within the network storage locations. By July 2020, Digital Services added its first digital content to the new server, moving closer to the goal of ingesting into LOCKSS.

### Strategy of Enhancing Discovery

Borrowing from the famous line, "Build it, and he will come" from the movie *Field of Dreams*, suggests that if Digital Services created something that every researcher needs (in this case, amazing digital collections), users would

visit the digital collections website. Increased and sustained web traffic does not happen this way for most digital collections. The strategy of enhancing discovery involves taking actionable steps to help users find and then use your digital collections. Telework provided the perfect environment to enhance the discovery of digital collections, which over time increases web traffic creating quantifiable statistics. Possible options for enhancing the discovery of digital collections include search engine optimization, social media promotion, metadata harvesting, research and subject guides, and integration with existing library systems.

### Implementation of the Strategy of Enhancing Discovery

Getting users to discover a new DAM requires significant effort, and Digital Services focused on updating any resources including reference and subject guides and metadata harvesting that previously directed users to Acumen. One of the most forward-thinking parts of Acumen was the inclusion of persistent URLs (PURLs) both at the collection and item level, which allowed Digital Services to redirect PURLs to CONTENTdm upon the migration of a digital collection, creating a seamless transition for the user while still providing the opportunity to access non-migrated digital content through Acumen. Digital Services collaborated with library personnel to remove Acumen references across websites, videos, research guides, or update the resource to point to CONTENTdm. The Reference Services and Outreach Coordinator for Special Collections created a new digital collections research guide, and her work helped Digital Services to identify and fix lingering problems with PURLs for items within migrated digital collections.

With the ability to re-route PURLs to direct users to its new digital collections platform, Digital Services waited for a majority of digital collections to be migrated before transferring metadata harvesting from Acumen and enabling it in CONTENTdm. Metadata harvesters use OAI-PMH to create a metadata record and provide a URL to direct users to the item within a digital collection. Digital Services completed the transition with the statewide digital collection website, Alabama Mosaic, in January 2020, and the next harvester was EBSCO Discovery Service (EDS). The benefit of a discovery service is the creation of more of a one-stop search experience in which users can cross-search the catalog, databases, electronic journals, and digital collections. For example, a user searching for Autherine Lucy, who first integrated The University of Alabama in 1956, would see search results of published books and journal articles alongside pictures taken of her on campus during this time from two digital collections, Donn Sanford, and James Oakley, Jr. photographs collections. The inclusion of digital collections metadata in EDS exposes users who

would not have considered searching digital collections to the wealth of Special Collections and increases web traffic to CONTENTdm.

The University of Alabama Libraries plans to replace its existing integrated library system with FOLIO, an open-source library services platform jointly developed by libraries, vendors, and developers, and EDS will provide the public-facing discovery search tool for users. With this major change, the goal was to fix metadata harvesting in EDS before FOLIO implementation in fall 2020. EBSCO required the completion of an extensive institutional repository database questionnaire about a digital collection's metadata schema and a list of digital collections.<sup>16</sup> Digital Services collaborated with the Resource Acquisition and Discovery department, which manages the EDS, and submitted the questionnaire in January 2020. EBSCO began work in April 2020. After EBSCO harvested the metadata for the first time, Digital Services reviewed it within EDS, noting any mapping and visual display problems. Concerns were then submitted to EBSCO for resolution. This process continued until its completion in June 2020 and included the setup of an ongoing harvest schedule. The final design resulted in several improvements, with users being able to limit by the name of a digital collection and the use of the correct publication type icon displaying in the EDS interface (i.e., a periodical icon for a periodical).

In June 2020, Digital Services began switching the metadata harvesting in OCLC WorldCat's Digital Collection Gateway (DCG).<sup>17</sup> This tool uses OAI-PMH to transform a digital collection's metadata into MARC format and synchronizes the harvested metadata with WorldCat to create an item record. With the shutdown of the public-facing Acumen digital collections website scheduled for mid-July, users who found a WorldCat record for a digital collection of interest and clicked the hyperlinked URL were either redirected to CONTENTdm or discovered a dead hyperlink. Digital Services instructed OCLC to delete 97,501 WorldCat records harvested from Acumen and will be using the DCG to create WorldCat records from CONTENTdm over the next few months. Migration was the impetus for much of this work, but any institution can adopt the strategy of enhancing the discovery of digital collections while working remotely. By enhancing discovery and making it easier for users to locate relevant digital collections, the long-term benefit is more web traffic to an institution's digital collections.

### Strategy of Try a New Approach

This strategy involves either trying something new that was never done before or significantly different from existing practices. It could incorporate the previously mentioned

strategies, but a feeling of being challenged, and often apprehension, are the defining characteristics when executing this strategy. Managers should consider the size of an institution, staffing levels, and available resources in determining the level of difficulty and the scale of implementation of this strategy. Depending on the nature of the work, it may present the opportunity to collaborate with other library units that may have additional resources and staff now available with telework.

### Implementation of the Strategy of Try a New Approach

At The University of Alabama, the most difficult strategy to implement was to try a new approach. The COVID-19 pandemic ushered in significant changes to everyone's daily lives, both personally and professionally, and coping with those changes was overwhelming. This pandemic is a moment in history that needs documentation for researchers now and in the future, and Special Collections collects this type of material for long-term preservation and access, but typically after an event and often many years later. Tasked with determining the parameters and logistics of collecting and preserving COVID-19 pandemic materials for Special Collections, a six-member team formed in April 2020 consisting of the Archival Access Coordinator, Reference Services and Outreach Coordinator, Institutional Records Analyst, and two Processing Archivists, with the Special Collections and Digital Initiative Librarian representing Digital Services. This paper provided more detail on the execution of this strategy specifically on the decision-making process to help other institutions emulate this type of project documenting the COVID-19 pandemic without a born-digital processing workflow in place.

The team began its work mindful of the internal resources, staffing levels, ongoing job responsibilities, and the unknown timing of a return to working on campus when the project was conceived. After consulting the Society of American Archivists' "Documenting in Times of Crisis: A Resource Kit," and looking at other institutions' projects already in progress that were created specifically in response to the COVID-19 pandemic, the team observed that institutions' scope of projects fell into three categories: physical materials only, born-digital materials only, or both physical and born-digital materials.<sup>18</sup> Special Collections did not accept born-digital materials without a physical media counterpart, resulting in a situation where most of these born-digital materials that existed on physical media remained unprocessed. The dilemma was that when most people routinely create born-digital content, such as taking cell phone pictures, they do not generate a physical counterpart that would be easy for Special Collections to add to its collections. The team decided that the significance

of documenting life during the COVID-19 outweighed the lack of born-digital processing workflow and proceeded with creating a project that allowed for the submission of both physical and born-digital materials. The method of delivery for born-digital content might end up in a digital exhibit, included in digital collections, or might take another form, as this was the first time Special Collections had taken this type of content.

The University of Alabama adopted the phrase and the hashtag #StillTideTogether during the pandemic, and the team named the project *Still Tide Together: Documenting Life during the COVID-19 Pandemic*. The team sought to define the project's scope by the audience, technical limitations, and internal resources. The team chose to emphasize the collection of materials from people who were connected with The University of Alabama, resided locally, or lived within the state and required all donors to be at least eighteen years old. Special Collections accepted only born-digital materials consisting of text, image, and sound files. This decision excluded video, social media, and websites due to the size of video files, the absence of a web archiving program, and the lack of experience with preserving these formats. With this type of project, it was not possible to predict the level of participation. The team created a dedicated webpage outlining the project's general information and collection policy and provided a link to a text-based questionnaire that consisted of a series of standardized questions to gather personal experiences. Respondents were asked to indicate interest in donating physical and born-digital materials to allow Special Collections to follow up with interested respondents.

Since Digital Services would be responsible for the digital preservation of the born-digital content, including the text-based questionnaire and possible inclusion within its digital collections, Digital Services held several Zoom meetings to determine what was technologically feasible and to develop a temporary born-digital workflow. Creating digital collections and preserving them demands alignment with digitization and metadata standards and structure with standardized file names, but the incoming born-digital content from the public would not adhere to these standards. The questionnaire platform needed to be able to export the data in an Excel spreadsheet or preferably a tab-delimited file to create Python scripts to parse the data. Digital Services realized the importance of creating structure and standardization within the design of the questionnaire but doing it in a way that was unobtrusive to the public filling out the questionnaire. In seeking a robust survey platform for the questionnaire, Digital Services tested several options and found that Qualtrics met its needs. It was free through the university's subscription, already branded with its colors and logo, had data validation, and offered great flexibility in creating questions and answer responses.

Digital Services adopted the mantra "Make them make the metadata for you" to reduce the time needed to normalize and transform the data to align with standards. The inclusion of the respondent's geographic area during the pandemic would be useful to future researchers since, for example, an out of state student from Oregon would have a different experience from an in-state student from Alabama. The DC field Coverage provided the geographic location in alignment with formatting and vocabulary in the Getty Thesaurus of Geographic Names. For example, the questionnaire asked for a respondent's country, state, and county (Alabama only), in a series of questions with a drop-down menu of pre-defined options except for city, which respondents enter in a free text response. By requiring respondents to enter the metadata, and only needing to verify respondents' city response for spelling and capitalization errors decreases the time spent on quality control and allows for scripted metadata transformation. Digital Services can write a Python script to parse the data to form a geographic location like United States--Alabama--Baldwin County--Mobile. The ability to script metadata transformation reduces the time-consuming work of manually creating metadata.

The most difficult decision was how to facilitate the transfer of born-digital content from the public to library servers easily and safely. Because of the anticipated short duration of this project, it was not prudent to implement a new server. Cloud storage, like Box, was an option, but the fear was that the public would submit unstructured digital content using a variety of filenames without any accompanying descriptive metadata. Abiding by the same mantra "Make them make the metadata for you," Digital Services envisioned a second questionnaire that would enable respondents to upload a file and describe the contents by answering a series of questions that Digital Services could parse and align to standards. If a respondent submitted a photograph, the respondent would need to provide the date, geographic location, and a brief caption describing who and what was happening in the image. Digital Services needed a platform that could pair descriptive metadata with the digital file and tested Google Forms, WordPress's Ninja Forms, and Springshare's LibWizard before choosing Qualtrics. This platform supports a variety of file types, enables multiple file submissions, and offers many export options. The deciding factor was Qualtrics' response id (e.g., R\_1o89wqDgFbnCe0l), a unique identifier created from a random series of letters and numbers for each questionnaire submission and appended to the front of each a file name (e.g., R\_1o89wqDgFbnCe0l\_MyPandemicDiary). Although Qualtrics placed all the uploaded files in one zipped folder when exported, the response id allowed Digital Services to create a Python script to parse the data to match the file with its descriptive metadata. After data normalization,



Digital Services renamed the files using standardized file names and converted proprietary file formats to open file formats for long-term digital preservation.

With a draft of a born-digital workflow in place, the Special Collections and Digital Initiatives Librarian collaborated with the rest of the Still Tide Together team and advocated for Digital Services' technological needs to develop a viable project. Due to all the uncertainties associated with the pandemic, including the timing of the end of limited business operations, physical access to Special Collections, and unknown response rates, the team divided the project into three phases. Phase one was for the creation of a website and a questionnaire to gather text-based responses and to identify respondents who intended to donate physical and digital materials. In phase two, Special Collections contacted donors regarding the logistics of physical donations and would send a second questionnaire to facilitate born-digital submissions. Digital preservation and delivery of content would happen in phase three. The Still Tide Together project launched in May 2020, and by July 2020, Special Collections had received about fifty submissions to its text-based questionnaire, with donors intending to donate five to ten physical items and at least seventy-five digital files. By dividing this project into phases, the team has the flexibility to adjust its plans due to the uncertainty and fluid situation during a pandemic. As this project progresses to the next phase, Digital Services will test its proposed workflow and adapt it to meet the constraints of the data and files. Trying a new approach is challenging under any circumstances, and this project presents a practical small scale opportunity to prepare for the adoption of a born-digital program and to assess its feasibility.

## Discussion

Digital Services excelled at the transition to telework through the implementation of the four strategies suggested above. Telework provided three lessons to those who led units like Digital Services. First, acknowledge the emotional toll of living through a pandemic and embrace a more flexible management style. The uncertainty of the future and unexpected changes affect everyone differently. Telework created a difficult and different situation for everyone, with employees balancing work, home, and family in a new work environment. In such situations, managers must be supportive and adjust expectations regarding how much and what type of work is appropriate to the employee's situation. Employees may have to work at night or need a few easy tasks assigned to them on days when they are not in an emotional space to remain focused on a complex project. This advice also holds true for managers. For example, writing a script requires intense focus and concentration, and that

may be difficult to do when an employee is also simultaneously monitoring the online learning of a child, working at home with other family members and possibly sharing a computer, or caring for sick or elderly relatives. A manager should provide multiple work assignments at various levels of difficulty and empower employees to determine what to work on first based on how they are feeling mentally and emotionally. It gives employees a sense of control in their work when everything else feels out of control. Other employees may need more structure with the assignment of one project with small deadlines at intervals to provide a sense of accomplishment more frequently and to keep them on pace.

Second, educate stakeholders about the extent of the processes associated with your unit's work. Telework limits the ability to easily engage stakeholders, but each interaction is an opportunity to share your unit's story and what your team is accomplishing during telework. As the effects of the COVID-19 pandemic trickle down to institutional budgets, library administration will be making hard financial decisions. They must have enough information to fight devastating cuts and to preserve enough funding that supports the creation of digital collections when negotiating with higher levels of administration. In the case of digital collections, stress the entire process required to create a digital collection by shedding the production mentality of measuring success by the number of images scanned and uploaded to digital collections. Many managers have failed to convince stakeholders that productivity is more than production statistics. Instead, give a fuller account of what activities digitization units undertake to create and preserve digital content. That is not an easy task as it will have to be a continually repeated message that may slowly eradicate this misconception. Otherwise, the production statistics of teleworking make it seem as if an employee who spent time strengthening the digital infrastructure did nothing for months, while another employee uploaded thousands of pages of content to digital collections. Digital collections are more valuable than ever to researchers now when a pandemic has limited physical access to many libraries, archives, and special collections.

Lastly, accept the realities of the current situation. Library administration anticipated the end of limited business operations each month, but cases of COVID-19 continued to rise, topping 2,000 cases a day in July 2020. The ability to adapt and respond to these realities is what will allow managers to cope and lead their teams. The fact is that Digital Services will digitize fewer items this year. Within Special Collections, every manager is re-adjusting priorities as lack of access to the physical collections hinders ongoing cataloging, archival processing, and metadata creation, which all need to happen before Digital Services begins digitization. The loss of student employees further

diminishes the number of images digitized, as they digitized the majority of the content while Digital Services staff conducted quality control, executed technical processes, uploaded digital collections, and engaged in digital preservation. This acceptance of the new reality was the hardest lesson learned during telework, especially for any manager who had planned the work months in advance. The goals that managers set for their team might not be feasible during telework. Set small, achievable goals and celebrate those accomplishments. By adopting the strategies suggested in this paper, these accomplishments become realities, and a manager can be proud of the team and the work completed during teleworking.

### Conclusion

Technology made telework possible, and libraries should incorporate telework into their business continuity and emergency management planning. Although not actively digitizing new content during telework, Digital Services completed projects aligned with the existing goals of the unit. The strategy of repurposing existing digital content resulted in the addition of 93,756 images and audio files to its digital collections from mid-March to July 2020. By focusing on improving the discovery of digital collections through metadata harvesting, revising subject and research guides, and removing references to Acumen throughout the website, more users are better able to discover and locate relevant digital collections more efficiently, leading to productive research and increased web traffic to digital collections. Digital Services strengthened its infrastructure through the development of additional scripts to automate parts of its workflow. The automation of the process of depositing digital content from the network drive to the new server represents the first step in the creation of a new digital preservation workflow. The Still Tide Together project forced Digital Services to try a new approach with the development of a temporary born-digital content workflow, which has the benefit of providing future researchers access

to these materials that document the COVID-19 pandemic. Through the exploration of ingesting born-digital content with real-life examples, Digital Services has gained a better understanding of the logistics, resources, and technology needed to create a full-fledged born-digital program following best practices if Special Collections chooses to implement such a program in the future. The abrupt shift to telework provided many lessons, including acknowledgment of the emotional toll of living and working during uncertain times, the importance of educating stakeholders, and acceptance of a new way to work. This success was not possible without accounting for the pandemic in projects and the people who perform the work.

As the fall semester began in August 2020 with in-person classes resuming and the end of limited business operations, The University of Alabama Libraries had prepared with social distancing and altered library policies and procedures, and with Special Collections seeing university-affiliated researchers by appointment only. Digital Services returned to campus with staggered schedules to maintain social distancing while planning to work remotely the remainder of the time. With uncertainty ever-present during a pandemic and awareness that access to the physical collections may end at any time, Digital Services will add another strategy of stockpiling digital content. While on-campus, Digital Services primarily focused on digitization and left the remaining parts of the digital collection workflow for telework. This stockpiling strategy will better prepare Digital Services to transition back to full-time remote work if pandemic conditions worsen causing a return to limited business operations or if an employee has to quarantine due to COVID-19 exposure or a positive test result. The COVID-19 pandemic may continue for months or years or be replaced by something else that makes telework the new reality for Digital Services. Managers of similar units should incorporate the strategies of repurposing existing digital content, strengthening infrastructure, enhancing discovery, trying something new, and stockpiling digital content. These strategies make it possible to continue the ongoing work of creating digital collections.

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