Abstract

The Crow Nation working in close collaboration with Little Big Horn College (LBHC) is applying for an Institute of Museum and Library Services Native American Enhancement grant to commence in the fall of 2018 centered on Preservation and Revitalization. The objective of this project is to continue creating metadata, digitizing deteriorating and outdated audiovisual objects, place them online via the Content Management System, Mukurtu. We will establish partnerships with schools and cultural leaders in isolated districts on the Crow Reservation to foster reciprocal relationships to engender local repatriation of audiovisual materials to these communities. Furthermore, through the translation and transcription of selected audiovisual items, and the creation of virtual galleries we will stimulate access to our digitized materials in a culturally meaningful way.

Within the Crow Reservation, several districts, Pryor and Wyola, lack ready access to cultural materials for a variety of reason including lack of internet connectivity often stemming from poverty. Working with local schools through outreach, training, and providing technical resources, these sites that serve as a hub a for access to the Internet and even basic computer usage providing access for community members of already digitized materials and virtual displays. This will enhance local understandings through increased measured use through DVD and CD copies and usage of Mukurtu and the virtual galleries online at the schools. Similarly, at LBHC will measure usage via increased usage of digitized materials online and the virtual displays with the Crow community at large and with users off the reservation. The latter objective will also occur off the reservation, as users nationally and globally will be able to access resources via the Internet. Through these activities conducted over a two-year time period, the LBHC Library and Archives will address a variety of community needs centered around the preservation and revitalization of Crow culture. These specific needs center around maintaining important cultural traits and historical events that might otherwise be lost without digital preservation. The intended outcomes for audience members include greater access to cultural resources, a greater appreciation of Crow across the reservation and beyond measured through increased usage of digitized materials via Mukurtu and virtual displays.

1.Statement of Need

Little Big Horn College (LBHC) is a tribally controlled community college located on the Crow Indian Reservation in south-central Montana. The reservation is 2.28 million acres and spans ninety miles east-west and sixty miles north-south. Currently, there are 13,600 enrolled member of the Crow Nation with approximately 9,800 or 72 percent who reside on the reservation. Fifty percent of the reservation population currently falls under federal poverty guidelines. The economy of the Crow Reservation includes agriculture, mining, and employment through tribal and federal agencies such as the Bureau of Indian Affairs, the Indian Health Service, and the Crow government. The Crow Nation sustains many cultural institutions including the Crow language, which is spoken by 60 percent of the adult population. Language and cultural preservation are one of the primary goals of LBHC and are reflected in the Crow Studies degree LBHC offers. The Little Big Horn College campus is located in the town of Crow Agency, Montana. The Crow Tribe of Indians chartered the college in 1980 and the Northwest Association of Schools and Colleges (NWASC) fully accredited LBHC since 1990.

The LBHC Library was founded in 1985 and the Archives in 1986 and function as one unit under the college's structure. Crow Tribal Chairman Richard Real Bird designated the LBHC Library/Archives as the official library of the Crow Nation in 1986. The LBHC Library/Archives is the only public library on the reservation that provides print, digital, audiovisual and online resources stakeholders including Crow community members and residents of Big Horn County. In 2008, LBHC built a new Library/Archives building that dramatically increased the square footage for the Library to 9,500 square feet and the Archives to 4,200 square feet. The library is open from 8:00 AM to 5:30 PM Monday thru Thursday and 8:00 AM to 12:00 PM on Friday during the academic year and 8:00 to 5:00 Monday thru Thursday during the summer.

The current LBHC Library and Archives staff includes a Library Director, Assistant Librarian, Archivist, Archival Audio/Visual Technician, Technical Library Assistant, and a Library Aide. The library currently has 5,820 registered patrons. In 2018, the library's holdings totaled 24,451 items, including 6,592 in the Crow/Native American Collection. The Archives holds a wide range of materials that includes eleven hundred and twenty-three feet of paper collections, maps, audio, video, microfilm, and photographs. The audio and video holdings housed in the Archives total 2,878. These are irreplaceable items that document a wide array of cultural practices, historical events, and community gatherings dating to the 1940s and they detail the culture/history of the Crows well before the reservation era.

The Library/Archives also provides public programming with a Cultural Enrichment course, which meets weekly during the academic year and deals with important themes in Crow culture and history. Based upon this background, the Library/Archives mission and goals statement includes: access to appropriate information resources, to enhance and refine Library resources, to develop and refine information literacy skills,

and especially to provide and enhance materials complementary to and supportive of the Crow Studies Associate of Arts degree course work.

Beginning in October 2015, the LBHC Archives began an IMLS funded project to create metadata for our audiovisual collections, digitize the holdings, and upload them to Internet via the Content Management System, Mukurtu. Mukurtu allows for local controls over viewing options, which allows the Archives to present audiovisual materials in a culturally appropriate manner. This project was largely informed and based on consultations with cultural and historical leaders from the Crow community and beyond from 2009 onwards. Prior to beginning digitization, library and archives staff received training from Sustainable Heritage Network (SHN) at Washington State University. The SHN has continued to assist us throughout the project. The Archivist and Audio/Visual Technician created metadata for most of the materials in our collections and large numbers of video and audio recordings were digitized, along with the uploading of the digitized contents onto Mukurtu. As of April 2018, the Archives digitized 1,255 items including 338 videos and 917 audio recordings along with 2,645 items of metadata. The Library Director conducted an extremely thorough item level evaluation in February and March 2018 of the audio and video holdings. This led to the discovery of many significant audiovisual items and a new prioritization of what should be digitized. Many of the items are truly priceless, containing the recollections of tribal elders who have long since passed. The assessment also located cultural events dating back to the 1970s in mediums that are no longer in in use such as reel to reels. Often rather than a collection the librarian identified one or two tapes on a significant aspect of Crow history. These new and significant materials necessitate continued metadata creation, digitization thru the creation of preservation and access copies, and the continued uploading of content to Internet in a culturally responsible manner. This built on an earlier oral history assessment conducted by the Archivist in 2015 that listed and prioritized oral histories at the collection level for preservation.

Over the last three years, the Archives also acquired new materials produced through the videotaped Cultural Enrichment course, Handgames recordings (an annual guessing contest), Crow Fair and a series of (sung and explained) Crow Warrior Society songs along with a National Endowment for the Humanities funded oral history project that details reservation life and issues in the post-WWII period. These along with the items identified in the recent assessment total 178 tapes that vary in length from twenty minutes up to four hours. These new audiovisual records along with the prioritized items from the earlier consultations and evaluations provide the overarching structure of our IMLS Preservation and Revitalization Enhancement grant future digitization activities in the Archives titled *Cultivating Ourselves: Access. Outreach, and Repatriation in a Digital Age*.

With continued digitization a priority, community members commented in surveys and formal conversations articulated a lack of outreach and access in more outlying communities on the Crow Reservation.

Outreach and increased access proves the most important need to highlight the tremendous strides made in digitizing our collections. From this broad idea more specific areas of need came to fruition. First, the isolated outlying reservation districts, particularly Pryor and Wyola, either lack or have an inadequate Internet connection that often precluded their ability to access our digitized audiovisual material. The Pryor District is located seventy miles west of Crow Agency and Wyola is thirty-five miles to the south. Access and outreach to these communities is of paramount importance, as distances prove daunting to directly access archival materials. Both Districts are over ninety percent Native American and have poverty rates of over sixty percent. Conducting outreach and providing access to these materials available in a variety of formats such as external hard drives and DVDs will produce, effectively, a local repatriation, whereby these isolated communities will both receive and make available important audiovisual (and other) cultural patrimony through locally based library facilities and community and cultural leaders. Working with schools and community/cultural leaders would provide appropriate outreach for community engagement and increased usage, both in the districts and in Crow Agency.

Second, many in the community and outside the reservation borders did not fully understand or appreciate the contents of our audiovisual collections. While the Crow language and culture remain strong, many younger members of the community lack the fluency to truly comprehend many audiovisual materials. Thirty-eight percent of students who accessed online resources via the college website specifically looked for Crow items in 2017. Providing transcripts in English translation (along with a selection in both English and Crow) on Mukurtu, would help ameliorate this barrier and allow the entire community and those outside the reservation who access digitized recordings to fully comprehend selected materials. Along with the language barrier, a large percentage of users on and off the reservation do not fully understand Crow history or tenets of its culture. In order to bridge these barriers, virtual displays will be created which will provide context along with selected digitized recordings in order to help provide appropriate understandings. Currently there is no museum or cultural center that presents archival materials or material culture from a Crow perspective. In turn, this would provide for greater access and use of materials via our CMS, Mukurtu. Fulfillment of all of the above needs will in conjunction allow for outreach, access and cultural literacy of Crow history/culture in a digital format across the reservation and beyond long after the project.

2.Project Design

Goal 1

In order to provide access to cultural and historical materials in the isolated areas of the reservation the following activities will occur.

Activity 1.1) The Archivist will identify digitized materials with a focus on the Pryor and Wyola districts working closely with cultural leaders and practitioners during meetings early in Year One. This will occur

during meetings in December and March of the Year One of the project. After the identification process, the Audio/Visual Technician will load the materials on external hard drives at Little Big Horn College. These hard drives will go to each local school's library during the summer of Year One, where they will be connected to computers provided by Little Big Horn College. Throughout the project, quarterly meetings will continue to update the cultural leaders and practitioners on our activities for them to provide feedback that will facilitate outreach and access.

Activity 1.2) After the conclusion of the consultations with cultural leaders and practitioners, the library and archives staff will meet with librarians and teachers from the local schools to familiarize them with our digitized collections and also give them basic instruction if needed on burning CDs and DVDs to provide local community members. Cultural leaders and practitioners will also participate in assisting with trainings. This will occur over the course of two days each summer. The second meeting will identify successes and areas for improvement after the conclusion of the grant period. After the first training, the Audio/Visual Technician will travel to Wyola and Pryor and set up the computers and external hard drives. The local schools will be provided with CDs and DVDs for making copies of digitized materials for a nominal fee. Throughout the duration of the grant, LBHC will conduct outreach with Pryor and Wyola to ensure that access is provided to allow for local repatriation of these important resources.

Goal 2

Create virtual displays utilizing the digitized materials during year one and then with transcripts in year two.

Activity 2.1) In order to facilitate better understanding of Crow history and culture within the community itself and with those off the reservation the creation of digital displays using the software Cultural Codex from Davadan Systems, Inc. During year one, the Archivist and Audio/Visual Technician will create twenty-five digital galleries utilizing digitized audio and video. Accompanying the audio or video, the Archivist will produce text that puts the digitized material in context culturally or historically. During year two, an additional twenty-five galleries will be produced with transcripts also included. The galleries will detail specific cultural traits, historical events, and more recent happenings on the Crow community with a focus on materials from the recent assessment. Potential galleries include Crow Fair, the Daytime Dance, the 1868 Fort Laramie Treaty, and Community Action Programs on the Crow Reservation. Multiple galleries on some subjects will provide for excellent context on a topic

Goal 3

Translate and transcribe significant collections from the prioritized lists from recent assessments.

Activity 3.1) As noted in the statement of need while the Crow language remains strong, many younger community members lack full fluency. Many of the most significant materials that have and will be digitized

are in the Crow language. One particular collection, the Barney and Henry Old Coyote Recordings, includes forty recordings with individuals born in the 1860s and 1870s. Therefore, we will hire a translator and transcriber with the morphological experience to successfully translate and transcribe this collection in year one. With other collections that use the modern form of the Crow language, we will have a second person doing translation and transcription with decades of experience in the field. This will occur at the beginning of the grant and continue through year two. As transcripts are completed, they will be placed onto Mukurtu and into relevant virtual galleries.

Goal 4

Continue creating metadata, digitizing pre-existing and newly identified collections, creating collection, and uploading to the Internet via Mukurtu.

Activity 4.1) The Audio/Visual Technician will create metadata for each item acquired or identified item since 2015 with an emphasis placed on items discovered during the recent Librarian assessment. Through the use of Dublin Core, twelve fields will describe audiovisual contents at the item level.

Activity 4.2) The Audio/Visual Technician will continue to digitize items not reached previously and those identified and prioritized during recent assessments. First, the item is inspected to see if there are any flaws with the cassette, if so, this is noted in the metadata. After the completion of digitization, preservation and access copies are created. These files are saved on a server and tape drive for multiple backups (see digital products form for formats.) Little Big Horn College has also entered into an agreement with the Archives at the Mansfield Library at the University of Montana to house a third copy off site in case copies onsite become compromised.

Activity 4.3) Digitized audio and video along with metadata will be uploaded to the Internet either at the item or collection level via the Content Management System, Mukurtu from the local server. The Archives Audio/Visual Technician uploads audio directly into Mukurtu, while, videos are first uploaded to YouTube and then transferred from our private account into Mukurtu.

Activity 4.4) The Archivist will create collection level records for each collection to aid patrons in locating materials for in house use. These records will include basic information such as creator, extent, format, subject headings, collection description, and use statement. The collection records reflect the Archives aim of integrating collections in all formats under a single system of description.

Goal 5

Promote the use of the new resources to the community through Library sponsored presentations, workshops, social media and more. Promote the resources and methods of the project to the professional world of tribal

archives, libraries and museums through presentations and poster sessions at the Association of Tribal Archives, Libraries and Museums (ATALM) conference and the Tribal College Libraries Institute (TCLI)

Activity 5.1) In Year One and Two, presentations on the new resources will be made utilizing existing forums. The Cultural Enrichment Speaker Series held by the library at LBHC every Thursday at noon during the semester and attended largely by community members will dedicate one session each semester to showing the new resources now available. The library and archives web and Facebook pages will also feature the new materials.

Activity 5.2) In Year One, a poster session will be made at the annual ATALM conference. Funds requesting travel to ATALM are included in the project budget. In addition, a presentation by project staff on the project and its challenges and successes will be made at ATALM in Year Two. Included will be some detail on the technical aspects of the work for institutions considering a similar project. The annual TCLI institute is attended by approximately 60 people representing about three quarters of tribal college libraries in the country. The tribal college libraries also serve as public libraries on their reservations, as does LBHC. A presentation similar to the one for ATALM will be made in Year Two.

Goal 6

Evaluate the project both during its course and at its conclusion through written surveys and consultation with outside experts and cultural leaders and practitioners as well as through technical evaluation by outside audiovisual experts, content specialists, and community members.

Activity 6.1) Every six months throughout the project, technical experts the Sustainable Heritage Network will analyze the digitization process for quality controls such as checksums and other technical aspects of digitization. A Certified Archivist from the University of Montana will a perform evaluation on the metadata twice annually.

Activity 6.2) It is important for community input on all activities in the project to inform outreach and access but particularly in the way of feedback about how items appear on Mukurtu and Cultural Codex. During year one and two, the cultural leaders from Pryor and Wyola will informally view uploaded items and galleries of digital displays to see how they follow cultural and historical standards from a Crow perspective. During year two, surveys of users who visit Mukurtu and the Cultural Codex sites will provide further information. The feedback derived from these venues will inform actions taken during the project and after its conclusion particularly with facilitating further rounds of outreach.

3.Impact

a. Goals

1.Provide resources to the local school libraries in Pryor and Wyola to allow access and dissemination of materials onsite or via copies. Work with and train librarians and teachers to better understand collections at LBHC and to ensure that they are able to provide access to materials either onsite to make copies for community based patrons. This local repatriation will allow for community members in the Pryor and Wyola Districts to acquire DVDs and CDs of locally relevant materials

2.Produce digital galleries highlighting the digitized audio and video holdings at LBHC using Cultural Codex from Davadan Systems, Inc. Along with audio or video, produced by the Archivist text will inform and provide context to audio or video in each gallery.

3.Utilizing local experts in linguistics and Crow culture, translations and transcripts of prioritized collections both audio and video will be produced. Once completed, these transcripts and translations will be placed online via Mukurtu or where applicable in virtual galleries on Cultural Codex.

4.Create metadata, digitize audiovisual materials, and place the said content on line via the CMS, Mukurtu. Progress for these goals will be informed by the various assessments conducted by library and archives staff along with input from members of the Crow community. Through a pre-established workflow, items will effectively and efficiently flow through all three stages of the digitization process.

5. Promote the use of the new resources to the community through presentations, workshops, social media and more. Promote the resources and methods of the project to the professional world of tribal archives, libraries and museums through presentations and poster sessions at the Association of Tribal Archives, Libraries and Museums (ATALM) conference and the Tribal College Libraries Institute (TCLI).

6. Evaluate project both during and at its conclusion through written surveys and informal focus groups as well as technical evaluation by outside audiovisual experts technically, regarding, content, and thru community members.

b. Results

Through the implementation of the goals and activities outlined above, the primary results will be the preservation at the industry level of remaining audiovisual holdings in the Archives. Secondarily, all digital materials will be uploaded to the Internet via CMS, Mukurtu. Thirdly, LBHC will provide content to Wyola and Pryor in order to facilitate greater access to isolated locations on the reservation. Fourth, through collaboration with individuals and educators in outlying districts on materials will flow back through a process of local repatriation. Through translation and transcription, the use of virtual galleries and outreach, we will better inform individuals on and off the reservation on the content and processes used in creating the collections and
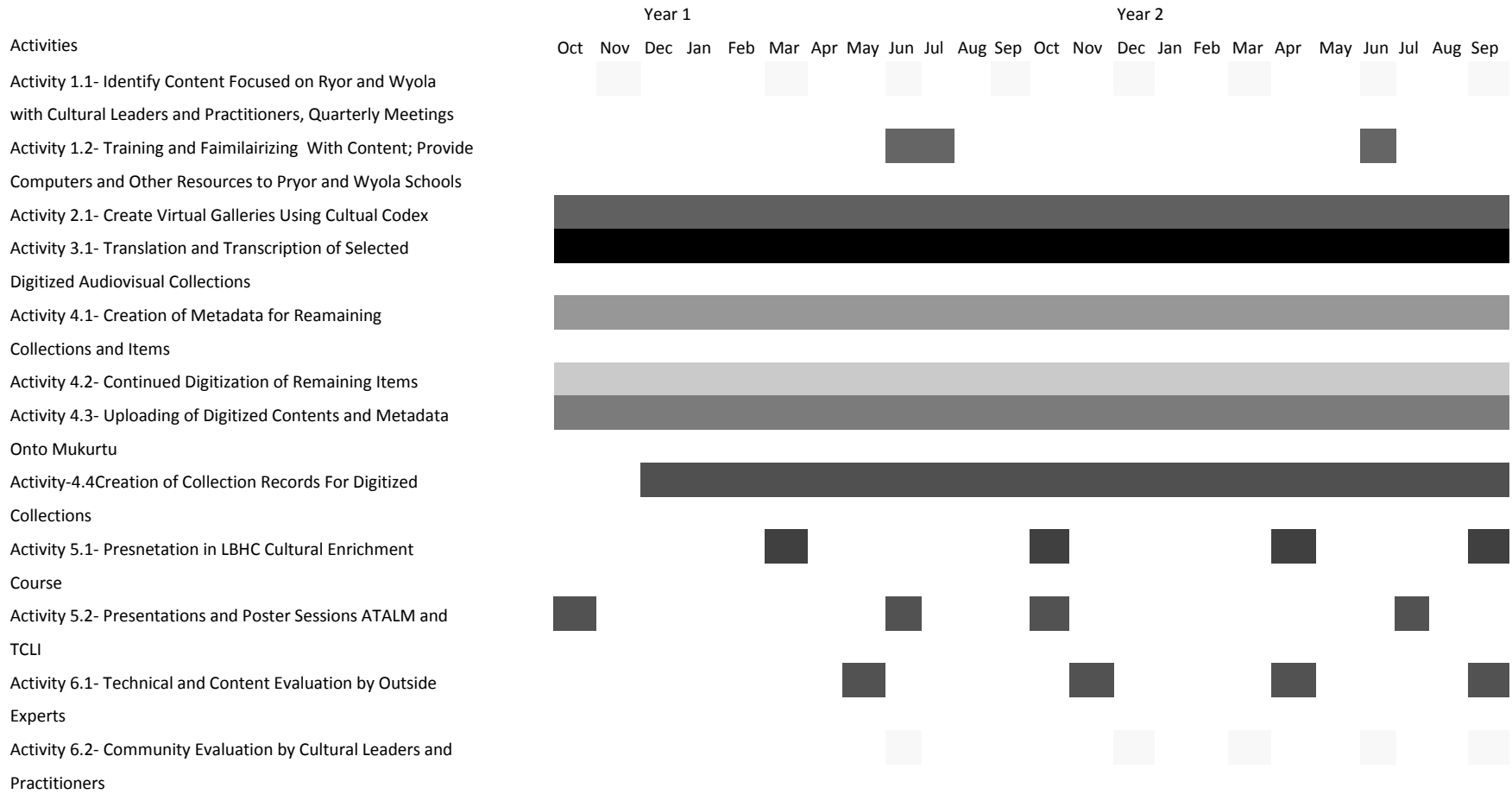
their meaning from a Crow perspective. Finally, through thorough evaluation we will proceed in a culturally authentic manner and use best practices throughout. Through this process, there will be increased access and meaning in culturally specific way for those within and outside the reservation borders.

4. Communication Plan

The primary audience for the project is members of the Crow community, along with others interested in Crow history and culture. Through activities at the college including presentations in the Cultural Enrichment Speaker Series the Library/Archives staff will engage community members in person. The Cultural Enrichment Speaker Series occurs at noon on Thursdays, the Archivist will describe the project, provide updates on the project's progression, and share digital materials with the audience. This will allow the Library/Archives to engage its audience at times that are convenient for them. During these presentations, our audience will provide feedback via surveys that will allow us to adjust the project as needed to meet the needs of the community. In addition, the Library/Archives will engage community members and individuals off the reservation via social media to maximize the reach to an even broader audience. Using Mukurtu CMS and virtual galleries via Cultural Codex, the Library will be able to create "community groups" directly through the CMS inviting community members to engage with the materials. As the project progresses, the Library/Archives will submit press releases to local newspapers discussing the project's progress. Outreach will be measured via sign in sheets at presentations, comments on social media, and subsequently measured usage of digitized audio/visual materials. Beyond the audience identified in the Needs Assessment, during the first and second years of the grant staff will attend the ATALM conference and present a poster session on the project along with a live session in year Two.

5. Sustainability

The sustainability of the project is centered on LBHC's continued commitment to the perpetuation of Crow history and culture. This a key component of the college's mission statement which states, "The College is committed to the preservation, perpetuation and protection of Crow culture and language, and respects the distinct bilingual and bi-cultural aspects of the Crow Indian community." Also, as the official library of the Crow Nation there is a strong commitment to maintain cultural materials for future generations. LBHC's infrastructure also lends itself to the sustainability of the project. As noted in the introduction, the new Library/Archives building shows a strong commitment to the work performed by the department and by including training in the grant project we ensure sustainability of the new skills and future digitization work. The Library/Archives staff also affords itself to the sustainability of the project, as the average tenure of employment is 15.3 years. We will also continue to work Wyola and Pryor to maintain the infrastructure set in place beyond the project's conclusion. In total, there is broad support within the college and the Crow community for maintaining the project after the grant's conclusion.

Activities		Year 1											Year 2											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Activity 1.1- Identify Content Focused on Ryor and Wyola with Cultural Leaders and Practitioners, Quarterly Meetings			▫			▫		▫			▫			▫			▫			▫			▫		▫
Activity 1.2- Training and Faimilairizing With Content; Provide Computers and Other Resources to Pryor and Wyola Schools									■												■			
Activity 2.1- Create Virtual Galleries Using Cultual Codex		████████████████████████████████
Activity 3.1- Translation and Transcription of Selected Digitized Audiovisual Collections		████████████████████████████████
Activity 4.1- Creation of Metadata for Reamaining Collections and Items		████████████████████████████████
Activity 4.2- Continued Digitization of Remaining Items		████████████████████████████████
Activity 4.3- Uploading of Digitized Contents and Metadata Onto Mukurtu		████████████████████████████████
Activity-4.4 Creation of Collection Records For Digitized Collections					████████████████████████
Activity 5.1- Presnetation in LBHC Cultural Enrichment Course						■						■					■					■
Activity 5.2- Presentations and Poster Sessions ATALM and TCLI		■						■		■								■			
Activity 6.1- Technical and Content Evaluation by Outside Experts							■					■					■					■
Activity 6.2- Community Evaluation by Cultural Leaders and Practitioners							▫					▫			▫		▫			▫		▫

DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (i.e., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products can be challenging. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions

Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

Part I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

Little Big Horn College holds copyright to the materials to be digitized. The majority of the content will be available for viewing online through Mukurtu CMS through Creative Commons.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

The audio and visual materials digitized will be accessible through the Library's content management system using Mukurtu CMS and Cultural Codex. Cultural Codex and Mukurtu CMS allows the digitized materials to be protected, for viewing only to LBHC staff.

A.3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

There is a set of tapes concerning Crow medicine bundles which is a sacred and sensitive topic and these are for in-house use and will be accessed via Mukurtu CMS using Mukurtu's "strict protocol" unless otherwise stated in a realease form allowing limited password protected access.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New Digital Content, Resources, or Assets

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and format you will use.

The digital content created for this project will be from the original analog sources:

Audio: Cassette Tapes 1218 x 60 = 73,080 Minutes; Reel to Reel 68 x 30 mins (actual play time on reels varies 30 minutes is an estimate)= 2,040 minutes
Video:

VHS 735 x 120min = 88200 minutes ; Mini DV 400 x 60 mins = 24000 minutes
Betacam SP 27 x 90 = 2,430 minutes (this format will be contracted out for digitization).

A.2 List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

Two IMacs- one that is currently used with the following specs: 3.8GHz quad-core 7th-generation Intel Core i5 processor Turbo Boost up to 4.2GHz, 8GB 2400MHz memory, configurable up to 64GB, Radeon Pro 580 with 8GB video memory

With funding an IMac Pro with the following specifications: 3.2GHz 8-core Intel Xeon W processor, Turbo Boost up to 4.2GHz, 32GB 2666MHz DDR4 ECC memory,1TB SSD, Radeon Pro Vega 56 with 8GB of HBM2 memory.

This will replace a PC used for audio digitization with the following specifications: 500MB to 1TB internal HDD, Intel i5 of i7 CPU, 8GB of RAM, USB 3.0 ports X1.

Osprey 260e Video Capture Card

Audio Capture card: Sound Devices USBPre 2
Audio Software: Audacity - and - Video Software: Final Cut Pro
Storage devices for tiered back up/preservation: (Primary) Storage Server: NETGEAR ReadyNAS 3220 RN322124E - NAS server - 48 TB; (Secondary)Tape backup: HP StoreEver 1/8 G2 Tape Autoloader Ultrium 6250
Tape Media; HP LTO5 Ultrium Tape Media x30

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Digital File formats planned: Preservation: .mov, .wav, Access: mp3, mp4
Video
.mov specification: H.264 encoding with a 640X480 minimum pixel dimension, 30 bit sample size with a 30 MiB/s data rate
.mp4 specification: H.264 encoding with a 640x480 minimum pixel dimension, between 4,000-4,500 kbps data rate (depending on content)

Audio:
.wav: 96000 khz with 24 bit depth.
.mp3: 128Kbps

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

Quality control in this case starts with analog playback device. All analog devices will be cleaned according to manufacturer specifications before beginning the project and then based on manufacturer recommended intervals based on "playing time" when possible moving forward. The first file converted of every material type will be compared against the analog master to ensure the specification identified (both Archival and Access) in the project plan produces a file of high enough quality to faithfully render the content moving forward. After this has been confirmed the personnel primarily responsible for the conversion will be responsible for the the first quality control (QC) check. A second QC check will be done by other project personnel on a weekly basis. This check will consist of ensuring that the digital file faithfully represents the analog master but also is being given appropriate metadata and stored (and backed up) to the appropriate file locations. This will be facilitated by a workflow that requires completed converted files be moved off the local conversion workstation to the primary storage server on a weekly basis.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

Digital assets created during this project will be maintained with a minimum of three digital copies that will be fixity checked on an every other month basis. The primary copy for the archival digital assets will be on a local server managed by our local IT staff. The locally hosted storage server is backed up to industry standard LTO tape and will serve as the second copy. Another copy will be held off site at the Archives at the Mansfield Library, University of Montana. All metadata (technical and descriptive) created for these digital assets will be ingested into a Mukurtu CMS instance and will be the primary access point to the access copies, but will also be stored along side the archival.

The fixity checks will be done primarily on the locally hosted storage server considered the primary copy, but fixity checks will also be performed on files that are pulled from LTO tapes and offsite. This will also have an added bonus of ensuring that all backups are viable.

The College president has committed to ongoing support of the project as a regular part of archival activities. When the time comes for migration to new servers or new media, funding from our Title III program will be used for this purpose. Finally, the collection records produced and revised during the project will be placed on the Archives website.

C. Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

Metadata for digital objects will first be created in Excel, copied into a Google and then imported into the target Mukurtu CMS along with the digital content. The project will use Standard Dublin Core. Metadata Terms and recommendations to structure our metadata along with creating a crosswalk for the primary MARC metadata.

Most of the VHS recordings have been cataloged in MARC, these will be updated and cross-walked into DC and ingested into Mukurtu CMS. For audio collections, some finding aids exist. After the digitization process, new finding aids will be created and existing ones updated based on the updated content analysis. The basic audio metadata will come from the finding aids first and then item level metadata will be created using Dublin Core and batch uploaded into Mukurtu CMS..

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

The metadata will be preserved within Mukurtu CMS but will also be preserved in Excel Spreadsheets with CSV surrogates in the same directory structure as the Digital Assets they describe.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

We will strive to share our metadata through OAI harvesting (and other methods) to shared repositories wherever possible. Mukurtu CMS makes the meatdata widely discoverable.

D. Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

This digital content will be managed by Mukurtu CMS and backed up using a tiered preservation storage strategy (primary, secondary and tertiary). Some of this content will be openly available to all audiences via the Internet and will be made available on CDs/DVDs for a nominal fee for those who do not have Internet connections. Depending on the interviewees' wishes, some content may only be available in-house. For access to this material, only a networked computer with audiovisual software would be needed. For the content with public web access, the only requirement will be a computer with a fairly modern web browser.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

LBHC Mukurtu site: mukurtu.lbhc.net

Part III. Projects Developing Software

A. General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

B. Technical Information

B.1 List the programming languages, platforms, software, or other applications you will use to create your software and

explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

Part IV: Projects Creating Datasets

A.1 Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

A.8 Identify where you will deposit the dataset(s):

Name of repository:

URL:

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?