Virtual Footlocker Project: Developing a User-centered Framework for Digital Preservation of Active Duty and Veteran Personal Records

Edward Benoit, III, Louisiana State University, School of Library & Information Science

The Virtual Footlocker Project (VFP) is a three-year research project that will investigate best practices and protocols for archivists assisting veterans and active duty personnel with preservation of their personal digital archives. The project will address the following questions:

- What are the digital preservation concerns of contemporary active duty and veterans?
- What are the technical and descriptive requirements to meet these needs?
- Which existing open source tools and practices can be adapted and modified for assisting digital preservation, where are the gaps, and how can they be filled?

For generations, soldiers documented their wartime experiences in personal diaries, photographs, and correspondence. Often veterans kept these treasured personal collections long after their service, and handed them down to family members with some eventually donated to archives and museums. These personal military service accounts serve a vital role in humanizing wartime sacrifices and experiences. The contemporary 21st century soldier no longer creates and maintains the same analog personal archives with the shift towards digital technologies over the past twenty years, thereby creating a critical future gap in the record. The proposed project will develop a user-centered framework to create best practice digital preservation protocols for assisting veterans with preserving their personal records.

The VFP will employ a combination of qualitative and quantitative data gathering and analysis methodologies to provide multidimensional findings. The proposed project will leverage existing data collected from the PI's previous quantitative research, specifically a survey of 500 contemporary veterans and active duty personnel. New data will be gathered through a series of ten focus group interviews with both enlisted and officer representatives from each of the five armed service branches (Air Force, Army, Coast Guard, Marine Corps, and Navy). Analysis of both the existing and new data will map the technical requirements for digital preservation based on existing standards, identify challenges (technical and policy), and propose a functional framework for protocol design. Finally, the VFP will design a workshops series for archivists based on these findings. The PI will receive feedback throughout the project from advisory boards of archival scholars, practitioners, and military representatives.

The proposed project builds on the PI's previous research, and the anticipated findings will be used to secure additional funding from governmental or private sources to develop and implement personal digital archiving workshops for veterans and active duty personnel. The direct findings from the project will be disseminated through conference presentations, publications, reports, and a workshop curriculum. All produced materials, including the datasets, will be made freely available on the project website and through the LSU Digital Commons.

While the project aims to address the specific needs of military personnel, its findings could easily be adapted for personal information management and personal digital preservation needs. Additionally, the findings from the focus groups will illuminate the information practice behavior of an under-analyzed group. Likewise, the suggested adaptation of existing open source tools will highlight their availability to outside LIS researchers and practitioners thereby addressing the NDP's call for highlighting more "shared solutions" and "open and interoperable technologies."[1]

[1] Institute of Museum and Library Services, *National Digital Infrastructures and Initiatives: A Report on the 2017 National Digital Platform at Three Forum,* 8-9.

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The Virtual Footlocker Project (VFP) is a three-year research project conducted by Dr. Edward Benoit, III, an Assistant Professor and the Russell B. Long Professor in the School of Library & Information Science (SLIS) at Louisiana State University (LSU). This Early Career Development project proposal requests $390,706 from the Laura Bush 21st Century Librarian Program under the National Digital Infrastructures and Initiatives category. The research will investigate best practices and protocols for archivists assisting veterans and active duty personnel with preservation of their personal digital archives.

Statement of Broad Need

For generations, soldiers documented their wartime experiences in personal diaries, photographs, and correspondence. Often veterans kept these treasured personal collections long after their service, and handed them down to family members with some eventually donated to archives and museums. These personal military service accounts serve a vital role in humanizing wartime sacrifices and experiences. The contemporary 21st-century soldier no longer creates and maintains the same analog personal archives with the shift towards digital technologies over the past twenty years, thereby creating a critical future gap in the record. The proposed project will develop a user-centered framework to create best practice digital preservation protocols for assisting veterans with preserving their personal records.

Although several projects and scholarship identify common trends in social media use and the shift towards digital formats, few focus solely on military personnel.[1] Increased reliance on born-digital records provided a renewed interest in personal information management (PIM) research, focused specifically towards understanding the intersection of PIM and archival theories. Several authors summarize the PIM literature with specific attention to its connection to archival practice. Bass, for example, notes the addition of "long-term preservation of personal digital information" to the traditional PIM technological functions as a specifically archival intervention.[2] Furthermore, he discusses how PIM concepts assist with the appraisal of digital records since determining value now requires near active intervention by archivists during the creation process. Since appraisal requires an understanding of value, it is also important to realign archival value with personal value as identified by PIM research. In doing so, archivists can better advocate for the importance of digital preservation. As he states:

> Never before have the records that constitute a personal fonds or collection been so widely distributed across multiple locations, and as shown in this paper, PIM research elicits key information on how and where individuals preserve their valuable records in both online and offline environments. This is especially germane in an era where personal digital records are being kept by non-familial third parties more for their commercial value than for their cultural and historical value.[3]

Cushing also connects archival principles to PIM research, specifically those of Marshall and Cunningham. A vital difference between analog archives and digital PIM is that "the computer desktop does not provide a

[1] For example the Library of Congress Twitter Archive, https://blogs.loc.gov/loc/files/2017/12/2017dec_twitter_white-paper.pdf; and Pew Research Center, "Social Media Use in 2018," http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/.
[2] Jordan Bass, "A PIM Perspective: Leveraging Personal Information Management Research in the Archiving of Personal Digital Records," *Archivaria* 75, no. 1 (2013): 52.
[3] Bass, 75.

decent central space for the valuable documents as the shoebox [under the bed] did."[4] The same could be said for the military footlocker. The VFP responds to Reyes' call for archivists (and other LIS professionals) to better educate the public on the fragility of digital records, issues with social media-based storage, and how to begin digital preservation and format migration themselves.[5]

Military records and archives have a long relationship. Early archival literature, for example, discusses the indexing of military records by Major General Ainsworth who argued against the historians' use of personal military accounts since they were not intended to be public documents.[6] The Vietnam War changed many views of personal military records and their importance within archival institutions. Focusing on the physical records, Stevens discusses the difficulty of collecting veteran's personal records from the war. This was partly due to the controversial nature of the war, but also due to its contemporary proximity whereby families still placed significant sentimental value on the materials.[7] Through his discussion, Stevens notes the importance of the donation process towards the healing of long-term anguish simply through allowing veterans to tell their stories and recognizing their value.

Interestingly, the Wisconsin Historical Society project discussed also included several letters to tape, a format specific to the Vietnam War. While most Vietnam War era collections focus on analog materials, Harrison discusses the importance and challenges of preserving the computer data from the war. He trumpets the untapped records available to researchers, and challenges archivists of the era (the late 1980s) to begin addressing the emerging issues.[8]

Soyka and Wilczek offer the most relevant archival research for the VFP in their recent article on military records from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).[9] Although focused on official records, Soyka and Wilczek highlight the dispersed and voluminous nature of modern military records. They discuss the challenges personal milbogs, or military blogs, placed on the community stating, "Because soldier-authored milbogs are, for the most part, scattered, unofficial creations of individuals, they are not captured as part of official documentation of the experiences of the wars in Iraq and Afghanistan. The varied form, structure, and presentation of these informal creations also blocks their potential capture, preservation, access, and use."[10] Soyka and Wilczek conclude that any complete documentary record of the wars will invariably involve multiple repositories and the inclusion of personal military records.

While not focused on preservation, PIM, or archival approaches, several additional studies from outside disciplines explore the nature of modern personal military communication and documentation. An earlier study by Schumm et al. analyzed the uses of different communication methods for deployed peacekeepers in the 1990s.[11] They found married personnel used all communication methods at higher rates, and that peacekeepers

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[4] Amber L. Cushing, "Highlighting the Archives Perspective in the Personal Digital Archiving Discussion," *Library Hi Tech* 28, no. 2 (2010): 304.
[5] Vanessa Reyes, "We Created It, Now How Do We Save It? Issues in Preserving Personal Information, a Review," *Preservation, Digital Technology & Culture* 42, no. 3 (2013): 150-154.
[6] Siert Riepma, "A Soldier-Archivist and His Records: Major General Fred C. Ainsworth," *American Archivist* 4, no. 3 (1941): 178-187.
[7] Michael E. Stevens, "Voices from Vietnam: Building a Collection from a Controversial War," *American Archivist* 64, no. 1 (2001): 115-120.
[8] Donald Fisher Harrison, "Computers, Electronic Data, and the Vietnam War," *Archivaria* 26, no. 1 (1993): 18-32.
[9] Heather Soyka and Eliot Wilczek, "Documenting the American Military Experience in the Iraq and Afghanistan Wars," *American Archivist* 77, no. 1 (2014): 175-200.
[10] Soyka and Wilczek, 184.
[11] Walter R. Schumm et al., "Expectations, Use and Evaluation of Communication Media among Deployed Peacekeepers," *Armed Forces & Society* 30, no. 4 (2004): 649-662.

preferred telephone calls for more engaged communication. More recent studies focused on activities during OIF and OEF. Many of these analyze the increased availability of communication technologies and its impact on maintaining spousal and child relationships. Cigrang et al. found that spousal relationship's condition before deployment dictated the communication rate during deployment.[12] Durham notes the new challenges soldiers face with increased access to communication technologies. Specifically, the "pressures from home to stay intimately involved in the day-to-day lives of their families," which can place additional stress on the soldier.[13] Greene et al. provide similar findings.[14] Interestingly, Houston et al. found the increased communication with military children improved the quality of the parent-child relationship during deployment compared to its pre-deployment state.[15] Finally, both children and non-deployed spouses benefit from the use of social networking as a peer support network during periods of deployment. [16]

Previous Research

The proposed project builds off the PI's previous research and experience as a veteran. The PI conducted a broad survey of veterans' and active-duty personnel's use of communication and documentary methods to begin identifying the population's particular needs.[17] This research found that veterans relied on a combination of cloud-based and local storage for digital media, and used a wide range of social media and email platforms.[18] Unlike Schumm et al.'s findings that peacekeepers preferred analog formats to emerging digital technologies in the 1990s, the PI found "modern soldiers are adapting to newer technologies more quickly than before."[19] The previous study also found military members are increasingly concerned of the potential loss of their digital materials. The study did not specifically address the participants' concerns but did note the need for further veteran input to ensure their privacy and other issues are addressed.

The proposed project also builds off the PI's previous research on community and participatory archives. Participatory archives are part of the larger archival postmodern movement. Through engaging users, participatory archives attempt to integrate new perspectives into their collections within description, development of new collections, archival funding and even outreach. Many archives since 1980 focused on filling the gaps created by decades of adherence to outdated definitions of records and value through translating postmodernism into new archival practices such as documentation strategy and functional appraisal.[20] Cook describes this as the shift "from the 'nature' residue or passive by product of administrative activity to the consciously constructed and actively mediated 'archivalisation' of social memory."[21]

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[12] Jeffrey A. Cigrang et al., "Intimate Partner Communication from the War Zone: A Prospective Study of Relationship Functioning, Communication Frequency, and Combat Effectiveness," *Journal of Marital and Family Therapy* 40, no. 3 (2014): 332-343.
[13] Susan W. Durham, "In Their Own Words: Staying Connected in a Combat Environment," *Military Medicine* 172, no. 8 (2010): 558.
[14] Talya Greene et al., "How Communication with Families Can both Help and Hinder Service Members' Mental Health and Occupational Effectiveness on Deployment," *Military Medicine* 175, no. 10 (2010): 745-749.
[15] J. Brian Houston et al., "Family Communication across the Military Deployment Experience: Child and Spouse Report of Communication Frequency and Quality and Associated Emotions, Behaviors, and Reactions," *Journal of Loss and Trauma* 18, no. 2 (2013): 103-119.
[16] Jennifer Rea, Andrew Behnke, Nichole Huff, and Kimberly Allen, "The Role of Online Communication in the Lives of Military Spouses," *Contemporary Family Therapy* 37, no. 3 (2015): 329-339; Austen B. McGuire and Ric G. Steele, "Impact of Social Networking Sites on Children in Military Families," *Clinical Child & Family Psychology Review* 19, no. 3 (2016): 259-269.
[17] Edward Benoit, III, "Digital V-Mail and the 21st Century Soldier: Preliminary Findings from the Virtual Footlocker Project," *Preservation, Digital Technology & Culture* 46, no 1 (2017): 17-31.
[18] Benoit III, "Digital V-Mail," 24.
[19] Walter R. Schumm et al., "Expectations, Use, and Evaluation," 649-662; Benoit III, "Digital V-Mail," 24.
[20] Helen W. Samuels, "Improving Our Disposition: Documentation Strategy," *Archivaria* 33, no. 1 (1991-1992): 125-140; Helen W. Samuels, *Varsity Letters: Documenting Modern Colleges and Universities* (Chicago: Society of American Archivists, 1992).
[21] Terry Cook, "Archival Science and Postmodernism: New Formulations of Old Concepts," *Archival Science* 1, no. 1 (2001): 4.

Although postmodernism in archival theory remains a debated topic, it is one that is difficult to define.[22] Unlike early Jenkinsonian theory, the postmodern archivist rejects the idealized objectivity of passive record selection and static archival processes in favor of a more dynamic, ever-evolving, social-memory-focused role. As part of a dynamic understanding of records, postmodernism captures the struggle to provide and preserve contextual information, since every record can be interpreted in a multitude of ways, and this interpretation may alter over time. Ketelaar suggests the exploration of the multi-faceted contexts of creation and use bring the different meanings to light over time.[23] Additionally, Nesmith argues the multiple meanings of records and contextualization can only be known over the course of time, and therefore must be readdressed when necessary.[24]

Not only can the archival understanding of a record change over time from the archivist's perspective, but each user brings differing perspectives. The addition (and possible subtraction) of records within an open collection or a repository may add or remove context and contextualizations.[25] Therefore, the user and potential user of archives hold an essential role within the postmodern archive. The participatory archive movement can be seen as an extension of postmodernism through an attempt to better integrate the user perspective within archival processes.

Additional archival movements emerged from the postmodern turn, including community archives and social justice.[26] Cifor et al. note, these movements also find roots in "the social and political movements that came to the fore in the 1960s and 1970s, including the civil rights, gay liberation, and women's movements."[27] As with participatory archives, the role and benefits of archivists as activists and the use of archival records within broader social justice efforts remains a debated topic.[28]

The participatory, community and social justice movements are not mutually exclusive and often overlap – particularly community and participatory archives. Scholarly interest in community and participatory archives proliferated with the advancement of Web 2.0 technologies in the mid-2000s, although it had existed previously. Similar to digital archives, the growth itself outpaced discussions of unique characteristics for both. There are numerous, often overlapping though sometimes contradictory, definitions of participatory and community archives.

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[22] Cook, "Archival Science and Postmodernism," 5–10. Cook provides an excellent bibliography and overview of the development postmodern archival research in footnote 13 of his article.
[23] Eric Ketelaar, "Tacit Narratives: The Meaning of Archives," *Archival Science* 1, no. 2 (2001): 141.
[24] Tom Nesmith, "Seeing Archives: Postmodernism and the Changing Intellectual Place of Archives," *American Archivist* 65, no. 1 (2002): 36.
[25] Verne Harris, "Claiming Less, Delivering More: A Critique of Positivist Formulations on Archives in South Africa," *Archivaria* 44, no. 1 (1997): 136.
[26] For more discussion on community archives see Andrew Flinn, "Community Histories, Community Archives: Some Opportunities and Challenges," *Journal of the Society of Archivists* 28, no. 2 (2007): 151-176; and Andrew Flinn, Mary Stevens and Elizabeth Shepherd, "Whose Memories, Whose archives?: Independent Community Archives, Autonomy, and the Mainstream," *Archival Science* 9, no.1 (2009): 71-86.
[27] Marika Cifor, Michelle Caswell, Alda Allina Migoni and Noah Geraci, "What We Do Crosses over to Activism: The Politics and Practice of Community Archives," *The Public Historian* 40, no. 2 (2018): 71.
[28] See Randall C. Jimerson, "Archives for All: Professional Responsibility and Social Justice," *American Archivist* 70, no. 2 (2007): 252-281; Mark A. Greene, "A Critique of Social Justice as an Archival Imperative: What is it We're Doing That's All That Important," *American Archivist* 76, no. 2 (2013): 302-334; Randall C. Jimerson, "Archivists and Social Responsibility: A Response to Mark Greene," *American Archivist* 76, no. 2 (2013): 335-345.

As the profession moves into what Cook describes as the community paradigm of archives, there is evidence of democratization of archival power.[29] Gabriel and Jensen observe, "Information professionals such as librarians and archivists are no longer the sole authorities in the distribution, presentation, and retrieval of information."[30] This is quite clear in the many iterations of participatory and community archives. Though many participatory archives include professional and institutional mediation, countless others are independent and autonomous archives run by their participants and community members.

The universe of participatory projects extends beyond transcription, description, and outreach into the grey area overlapping between community and participatory archives. While all of the projects serve specific purposes with individual characteristics, they share some common themes and approaches. Perhaps most importantly, all projects allow community members to take an active and primary role in their creation, curation, and use. This approach follows contemporary archival trends towards simultaneously limiting the archival voice and increasing marginalized communities' representation within collections. Likewise, it reflects what Flinn, Stevens, and Shepherd refer to as the "defining characteristic of community archives – the active participation of a community in documenting and making accessible the history of their particular group and/or locality *on their own terms*." Additionally, Flinn et al. note the range of included possibilities "from complete autonomy from the 'mainstream' to the delegation of the custody and preservation of their materials to public sector archivists and a wide range of options in between."[31]

While community participatory archives existed well before the 20th century in more analog forms, the expansion of the Internet, social media and Web 2.0 tools hastened the expansion of such archives and communities.[32] Their growth and recognition by traditional archival institutions challenge the professional role of archivists.[33] Despite these challenges, the community and participatory models provide ample opportunities for the archival profession and the communities themselves. For communities, the projects offer a space to engage with memory-making activities and ensure the preservation of their own stories, artifacts, and records. For archivists, the projects offer partnership opportunities within post-custodial frameworks – and, as Flinn notes, a call for a re-evaluation of the profession itself:

> A re-evaluation which leaves behind the idea of the archivist as a neutral, passive, reactive figure and instead embraces a much more active or proactive role, one which acknowledges the power and influence which the archivist has over framing our archival heritage and social memory. Under the terms of this shift, the profession should become more flexible and outward facing, working in partnership with, and supporting the creators and custodians of community archives and heritage materials, considering postcustodial models and relationships for these and perhaps other collections.[34]

The use of participatory models also challenges traditional thinking of archival authority through the potential for introducing new voices that "muddy the network, reducing authority and authenticity, and perhaps, value."[35]

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[29] Terry Cook, "Evidence, Memory, Identity, and Community: Four Shifting Archival Paradigms," *Archival Science* 13, no. 2–3 (2013): 95-120.
[30] Lýsa Westberg Gabriel and Thessa Jensen, "Who Is the Expert in Participatory Culture?" in *Participatory Heritage,* eds. Henriette Roued-Cunliffe and Andrea Copeland (London: Facet Publishing, 2017), 87.
[31] Flinn, Stevens and Shepherd, "Whose Memories, Whose Archives?," 73.
[32] Flinn, Community Histories, "Community Archives," 159.
[33] See Flinn, "Community Histories, Community Archives."
[34] Flinn, "Community Histories, Community Archives," 168.
[35] Terry D. Baxter, "Going to See the Elephant: Archives, Diversity, and the Social Web," in *A Different Kind of Web* ed. Kate Theimer (Chicago: SAA, 2011): 286.

It is viewed as a method of decentralizing authority and moving from static to dynamic spaces.[36] In doing so, participatory advocates argue participants "should be treated as *peer collaborators* . . . rather than outside interlopers."[37]

In addition to prior community and participatory research, the proposed project builds on the existing literature of digital preservation and curation. This includes, but is not limited to, the work of Christopher Lee, Margaret Hedstrom, Pat Galloway, Richard Cox, Anne Gilliland, Amelia Acker, Paul Conway, Devan Donaldson, and Lorraine Richards.

Research Agenda

As noted above, the VFP is grounded in the PI's previous research on community and participatory archives.[38] In prior studies, the PI investigated the use of social tagging and other user-based description methods within digital archives and libraries. The participatory research illuminated the need for further development of archival/community partnerships, specifically with under-represented and minority populations. Archivists should work directly with communities to identify and address their user needs. This is particularly important to help community members preserve personal digital archives, which may or may not be donated to a repository in the future. The VFP is another step in addressing this issue within the PI's broader research agenda.

Project Design

Research Questions and Goals

The proposed project seeks to develop an understanding of the digital preservation needs of contemporary veterans and active duty personnel and the archival tools and practices that can best address these needs. The project follows a mixed methods approach to address the following research questions:

- What are the digital preservation concerns of contemporary active duty and veterans?
- What are the technical and descriptive requirements to meet these needs?
- Which existing open source tools and practices can be adapted and modified for assisting digital preservation, where are the gaps, and how can they be filled?

Focus on 21st Century Veterans

As noted earlier, the VFP focuses on the preservation needs of contemporary veterans and active duty personnel. This includes service members of all five branches of the military (Air Force, Army, Coast Guard, Marines Corps, and Navy) as well as reserve and National Guard members (Air Force Reserve, Air National Guard, Army National Guard, Army Reserve, Coast Guard Reserve, Marine Corps Reserve, and Navy Reserve). Additionally, the VFP limits participation to those who served in any of the above branches for at least one year

[36] Isto Huvila, "Participatory Archive: Towards Decentralised Curation, Radical User Orientation, and Broader Contextualisation of Records Management," *Archival Science* 8, no. 1 (2008): 25; Eric Ketelaar, "Cultivating Archives: Meanings and Identities," *Archival Science* 12, no. 1 (2012): 29; and Eric Ketelaar, "Being Digital in People's Archives," *Archives & Manuscripts* 31. no. 2 (2003): 12-13; Joy Palmer and Jane Stevenson, "Something Worth Sitting for? Some Implications of Web 2.0 for Outreach," in *A Different Kind of Web* ed. Kate Theimer (Chicago: SAA, 2011): 6.
[37] Palmer, "Archives 2.0."
[38] Edward Benoit, III, "#MPLP Part 1: Comparing Domain Expert and Novice Social Tags in a Minimally Processed Digital Archive," *American Archivist* 81, no. 2, (2017): 145-176; Edward Benoit, III, "#MPLP Part 2: Replacing Item-level Metadata with Social Tags," *American Archivist* 82, no. 1, (2018): 38-64; Edward Benoit, III and Alexandra Eveleigh, eds., *Participatory Archives: Theory & Practice*, (London: Facet Publishing, forthcoming in 2019).

following January 1, 2005 to most accurately reflect the contemporary technologies (particularly social media) used by modern veterans and active duty personnel.

Research Activities

The VFP will employ a combination of qualitative and quantitative data gathering and analysis methodologies to provide multidimensional findings. The proposed project will leverage existing data collected from the PI's previous quantitative research, specifically a survey of 500 contemporary veterans and active duty personnel. New data will be gathered through a series of ten focus group interviews with both enlisted and officer representatives from each of the five armed service branches (Air Force, Army, Coast Guard, Marine Corps, and Navy). Analysis of both the existing and new data will map the technical requirements for digital preservation based on existing standards, identify challenges (technical and policy), and propose a functional framework for protocol design. Finally, the VFP will design a workshops series for archivists based on these findings. The PI will receive feedback throughout the project from advisory boards of archival scholars, practitioners, and military representatives (see below). The primary research activities will occur over three phases, as described below.

Phase 1: Veteran/Active Duty Personnel Data Gathering (August 2019-July 2020)

The first phase of the project will address the first research question through following user-centered design (UCD) approaches, specifically a series of comprehensive focus groups with active duty and veteran personnel from each of the five service branches. The PI and graduate assistant will work with Judith Rhodes of LSU's Social Research & Evaluation Center to develop a focus group protocol, including methods to ensure privacy and confidentiality of all participants. The PI will pilot test the protocol with veteran students at LSU and subsequently submit it for IRB approval.[39] Following approval, the PI and graduate assistant will schedule a series of ten focus groups over three trips including four locations. The specific locations were selected based on the concentration of military personnel from each service branch. Additionally, the project will separate focus groups based on enlisted and officer status since each will speak more candidly among their own ranks. Table 1 lists the individual locations, focus groups, branch, and rank.

Table 1 Focus Group Divisions

Trip	Location	Branch	Focus Group	Rank
A	San Diego, CA	Navy	FG 1	Enlisted
			FG 2	Officer
		Marines	FG 3	Enlisted
			FG 4	Officer
	Anchorage, AK	Coast Guard	FG 5	Enlisted
			FG 6	Officer
B	Fayetteville, NC	Army	FG 7	Enlisted
			FG 8	Officer
C	Dayton, OH	Air Force	FG 9	Enlisted
			FG 10	Officer

[39] The VFP already received provisional IRB approval, but will require subsequent applications for the recruitment and focus group portion of the study.

The VFP will partner with local libraries in each of the focus group locations for participant recruitment, including military base libraries. Additionally, each focus group will occur in meeting spaces within local libraries. Participant recruitment will also utilize social media advertisements placed on Facebook, Twitter, and Instagram. Interested participants will complete a pre-questionnaire with demographic and military service questions. The PI will select participants based on their answers and in accordance with the process detailed in the Diversity Plan section. Each participant will be compensated $150 for each two-hour focus group. Each focus group will include seven participants. The sessions will be audio and moving image recorded with the resulting recordings sent for professional transcription.

Phase 2: Data Analysis (August 2020-July 2021)

The second phase of the project focuses on the second research question through the analysis of the focus group data and previously collected data. The postdoctoral associate will begin working on the project at the start of Phase 2 and primarily assist with the data analysis. The PI and postdoctoral associate develop an initial codebook based on open coding of the transcribed data. Subsequently, they will consult with Judith Rhodes to verify the codebook and begin applying it to the data using qualitative coding software, such as NVivo. Based on the coding analysis, the PI and postdoctoral associate will map the technical requirements for digital preservation based on existing standards, identify challenges, and develop a functional framework for initial protocol design.

Phase 3: Modeling, Protocol Design, and Dissemination (August 2021-July 2022)

The third phase of the project will focus on the development of veteran-specific digital preservation modeling, finalizing the protocol design and disseminating the project findings to stakeholders. During this phase, the PI and postdoctoral associate will identify existing open source tools, such as APIs, that could be adapted to meet the technical requirements. Subsequently, the PI will analyze digital curation models and emerging research for additional methods to fill the areas without existing support. Based on this analysis, the PI and postdoctoral associate will update and finalize the best practices and protocols. Subsequently, the PI and postdoctoral associate will develop a workshop curriculum for archivists centered on the protocol and best practices for veteran outreach.

Dissemination Plan

All project reports and findings will be posted on the VFP website. Additionally, the reports, datasets, and workshop materials in PDF/A format will be housed in the LSU Digital Commons (the institutional repository for LSU). The PI and postdoctoral associate will share findings at several national and international conferences during phase 3, including the Society of American Archivists (SAA) in 2021 & 2022, the Personal Digital Archiving Conference (PDA) in 2022, and the Archival Education and Research Institute (AERI) in 2022. Preliminary findings will also be shared throughout phase two at SAA, Society of Southwest Archivists (SSA), and AERI (although these presentations are not included in this request for funding). Additionally, the PI and postdoctoral associate will submit several journal articles to significant archival peer-reviewed journals during phase 2 and 3. Finally, the VFP will offer the developed workshops following the end of the proposed project using subsequent funding. Such workshops will be held in partnership with allied organizations such as the Library of Congress Veterans History Project.

Project Resources

The VFP's principal investigator (PI), Edward Benoit, III has experience with qualitative, quantitative, and mixed method research in community and participatory archives. He has published preliminary findings from

early research for the VFP in *Preservation, Digital Technology & Culture*. Additionally, he has published in *American Archivist, International Association of Sound and Audiovisual Archives Journal, portal: Libraries and the Academy, the Journal of Documentation*, and is co-editor of the forthcoming volume, *Participatory Archives: Theory & Practice* from Facet Publishing. The PI will dedicate 20 hours per week to the project during the academic year, and full time hours during the summer semesters.

Additionally, the PI will apply for a sabbatical semester to run concurrently with the start of year 3 of the proposed project. The PI will facilitate the focus group data collection, analysis, and dissemination of findings. He will supervise a graduate assistant who will aid in organizing and recruiting the focus groups participants, initial data analysis and communication with the advisory boards. Additionally, he will supervise a postdoctoral associate who will focus on data analysis and dissemination of findings.

The project will also utilize the expertise of Judith Rhodes, Director of the Louisiana State University Social Research and Evaluation Center. She will assist with the creation, pilot testing, and validation of the focus group protocols. Additionally, she will provide feedback and assistance with the data analysis plan following the completion of data gathering.

Throughout the project, the PI will meet regularly with two advisory board to receive feedback on the project's progress and development. Formal meetings will occur 2-3 times per year via online conference software, such as WebEx or Zoom. Such meetings will occur at critical stages in the project including codifying the focus group protocol and recruitment procedures, diversity, representation and ethical concerns with recruitment and focus groups, codebook development and data analysis, and dissemination of project findings. The PI will also periodically request feedback outside of formal meetings via email. Each board member will be compensated $500 per year of the project for their time and expertise. The first advisory board includes archival scholars and practitioners with expertise and experience in digital curation and/or veteran records. Members of this board are[40]:

- Heather Soyka, Assistant Professor, Kent State University;
- Amelia Acker, Assistant Professor, the University of Texas at Austin;
- Beth Ann Koelsch, Associate Professor and Curator of The Betty H. Carter Women Veterans History Project;
- Paul Conway, Associate Professor, University of Michigan; and
- Kimberly Guise, Assistant Director for Curatorial Services, The National WWII Museum.

The second advisory board includes stakeholder representation from two service organizations, two veterans, and one active duty member. Recruitment of the veterans and active duty advisory board members will occur after the grant is funded through an open application process. The veteran representatives will be required to have separated less than ten years ago, and selection criteria will ensure equitable representation of both veterans and active duty personnel by including one officer and two enlisted members. Additionally, at least one of the representatives will be from an underrepresented group, and one will be a woman. Members of this board include:

- Jen Stockman, Warrior Support, Wounded Warrior Project

[40] The PI intended to include a representative from the Veterans History Project, however they are precluded based on their senior counsel's advice, "Offering Library support to a particular applicant in a grant competition would violate Library regulations that prohibit preferential treatment, private gain, and endorsements. Prohibited support includes letters of support for grant applications and being listed as key personnel (e.g., as a project advisory board member) in grant applications, as well as other commitments of Library resources."

- Michael Case, United Service Organizations
- Two (2) veteran representatives
- One (1) active duty representative

The proposed project budget includes the costs for VFP staff including the PI, a graduate assistant (2 years), and a postdoctoral associate (2 years). The budget also supports research-related travel, participant recruitment and stipends, audiovisual recording and computer equipment, transcription, advisory board stipends, and dissemination travel costs.

Diversity Plan

The project focuses on 21st-century active duty personnel and veterans. The PI will use the U.S. Department of Defense reporting of military demographics to ensure proportional and equitable gender, racial, and ethnic representation in the focus groups and advisory panels.[41] Additionally, the PI's military background will assist in providing an inclusive atmosphere and more candid discussions during the focus groups. Finally, veterans and other underrepresented groups will be given hiring preference for the project's student and postdoctoral positions.

Broad Impact

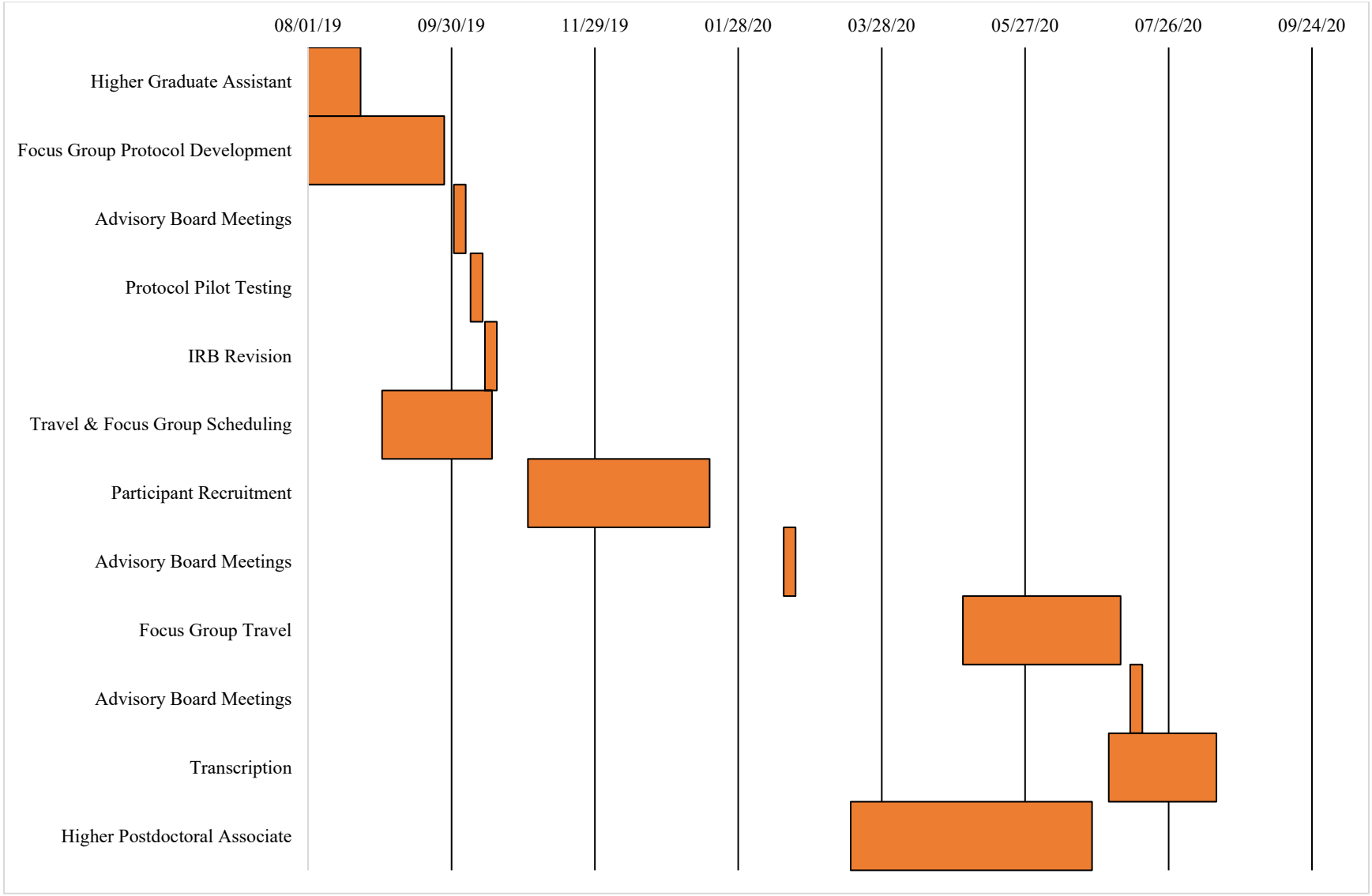
The proposed project builds on the PI's previous research, and the anticipated findings will contribute to both scholarly and professional communities. The developed best practices and protocols will provide archivists the tools for assisting veterans with the digital preservation of their personal archives. Additionally, the resulting framework and workshop curriculum will be used to secure additional funding from governmental or private sources to implement a series of personal digital archiving workshops for veterans and active duty personnel.

The direct findings from the project will be disseminated as discussed earlier including conference presentations, publications, and reports. The research team will also share the materials with affiliated professional organizations through their email listservs and newsletters (e.g., SAA Military Archives Section, Society of Southwest Archivists, Midwest Archives Conference, etc.). All created materials, including the workshop curriculum and dataset, will be deposited in the LSU Digital Commons and linked to from the project website. These materials will be available in multiple formats to ensure accessibility and adaptability.

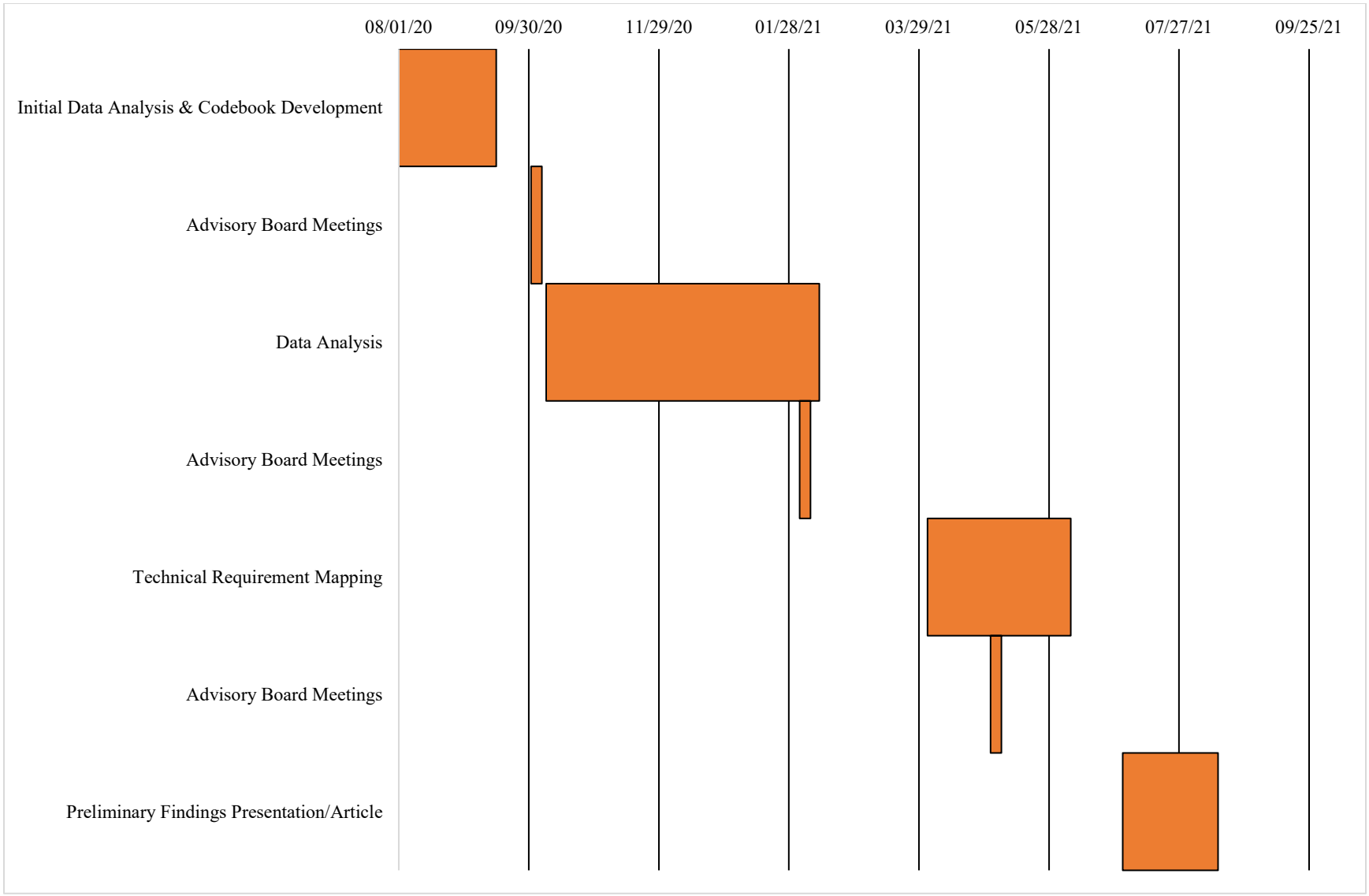
While the project aims to address the specific needs of military personnel, its findings will also impact the PIM, personal digital archives, and digital curation fields. Specifically, the scholar and professional communities could adapt the developed protocols and framework to fit other critical needs and under-represented groups, such as the LGBTQ and Native American communities. Additionally, the findings from the focus groups will illuminate the information practice behavior of an under-analyzed group. Likewise, the suggested adaptation of existing open source tools will highlight their availability to outside LIS researchers and practitioners thereby addressing the NDP's call for highlighting more "shared solutions" and "open and interoperable technologies."[42]

[41] CAN Resource Analysis, *Population Representations in the Military Services*, 2016, https://www.cna.org/research/pop-rep.
[42] Institute of Museum and Library Services, *National Digital Infrastructures and Initiatives: A Report on the 2017 National Digital Platform at Three Forum,* 8-9.

Schedule of Completion: August 2019-July 2020



Schedule of Completion: August 2020-July 2021



Schedule of Completion: August 2021-July 2022

DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (e.g., 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. 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

All applications must include a Digital Product Form.

☐ 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.

Digital products of this grant project will all be assigned the Creative Commons Attribution ShareAlike CC BY-SA license. This license allows others to use the datasets, reports, and curriculum materials as the foundation for their own products so long as they attribute the Virtual Footlocker Project and place the same license on the new products. This particular license is akin to free and open source software.

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.

There will be no access or use limitations.

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.

Although the focus groups will be recorded, only the anonymized transcripts will be deposited in the LSU institutional repository for future use.

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 the format(s) you will use.

The project will create a variety of digital content including the following: 10 focus group recordings (2 hours each, audio and moving image recordings); 10 focus group transcriptions; NVivo coding files; workshop curriculum in powerpoint, PDF/A, and TIFF files for each powerpoint slide; project reports

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.

The focus groups will be recorded with a Tascam DR-100MKIII PCM recorder and a Panasonic HC-V770K Camcorder with external table microphones. The focus group recordings will be transcribed by GRM Transcription. The PI and postdoctoral associate will use NVivo for data analysis, Microsoft Office for developing reports, and workshop curriculum.

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).

The focus groups will be recorded simultaneously in wav and mp3 audio formats with 24-bit/192 kHz resolution. The moving image recordings will be made with 1920 x 1080p resolution at 60fps in AVCHD format. The focus group transcriptions will be saved in txt, docx, and PDF/A formats. The original NVivo files will be saved in their proprietary format, but also exported for institutional repository deposit in xlsx, txt, docx, rtf, and pdf/a formats. The workshop curriculum will be saved in pptx, docx, rtf, and pdf/a. Each individual PowerPoint slide will also be saved as a tiff file with 300 dpi (up to 4000 x 2250 resolution).

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

Each recording file from the focus groups will be uploaded to a cloud backup using the LSU Box service with an additional copy made from the originals on a portable hard drive. Use copies of these files will be made for transcription and data analysis. Copies of the transcription files will also be uploaded to the cloud storage and portable hard drive, with use copies made for manipulation. The project team will make daily backup files while using NVivo and use a local naming convention to track files. Similar procedures will be used in creating backup files in Word and PowerPoint. Once final products are ready, the project team will prepare the working files and final products for deposit in the LSU institutional repository.

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).

During the award period, the project team will adhere to the quality control plan described above using the on-site and cloud-based data storage solutions. As part of the funded project, the team will prepare datasets, reports, and workshop curriculum files for deposit in the LSU institutional repository, LSU Digital Commons using standardized file formats. Once deposited, LSU will maintain the files through format migration.

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).

The recording files will include complete Exif metadata associated with their capture. All digital files will include descriptive metadata adhering to Dublin Core (as persribed by the LSU Digital Commons), and preservation information based on PREMIS metadata.

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

Metadata will be created at the time of file generation including the creation of use copies. The research team will only use software application that maintain embedded metadata, and will ensure non-embedded metadata files remain attached to their associated files when moved between storage systems. After the award period, the digital materials and associated metadata will be submitted to the LSU Digital Collection who will maintain and preserve the files.

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).

All digital materials will be deposited into the LSU Digital Commons (DC). The DC materials are discoverable through the Digital Commons platform and listed within the LSU Libraries catalog using MARC and Dublin Core. Additionally, they will be listed on Google Scholar, and linked to via the project website.

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).

All digital content will be deposited and made available through the LSU Digital Commons (DC) (https://digitalcommons.lsu.edu/). Additionally, they will be linked on the project website. All materials will be licensed under Creative Commons Attribution ShareAlike CC BY-SA, and be openly and freely available on the DC site.

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.

Below are some examples of digital content stored on the LSU Digital Commons:
Moreu, Fernando; Lippitt, Chris; Maharjan, Dilendra; Aguero, Marlon; and Nasimi, Roya, "Development, Training, Education, and Implementation of Low-Cost Sensing Technologies for Bridge Structural Health Monitoring (SHM)" (2018). Data. 15.
https://digitalcommons.lsu.edu/transet_data/15
Stein, Z., Key, C., and Woods, C. Digitization on a Budget. 2018 Louisiana Library Association Conference, Alexandria, LA, March 9, 2018. https://digitalcommons.lsu.edu/libraries_pubs/38/
Grashoff, Austin, "S17RS SGR No. 21 (LSU Mobile App)" (2017). Student Senate Enrolled Legislation. 79.

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.

n/a

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.

n/a

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.

n/a

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

n/a

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

n/a

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

n/a

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

n/a

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.

n/a

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

n/a

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.

The project will conduct 10 two hour focus groups with seven participants per group. These data will be audio and moving image recorded, transcribed, and then analyzed using open coding techniques. The focus groups will occur between April and July of the first year of the grant.

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?

The data collection requires IRB approval, and has been granted provision approval (LSU IRB #E11535). The research team will submit further documentation to IRB after developing the focus group protocol and recruitment plan. The IRB will subsequently review and provide final approval for the data collection methods.

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).

Participants will sign an informed consent document, but will otherwise not be identified by name during the focus groups. Any accidentally disclosed PII will be anonymized during the transcription process. All uses of the data will refer to participates in anonymous fashion, such as Participant A. The original video and audio recordings of the focus groups will be destroyed upon completion of the project, and only anonymized data will be submitted to the LSU Digital Commons.

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.

Informed consent documents will associated with specific participants through a key that will only be accessible to the PI and postdoctoral associate. The participant key file will be encrypted prior to backing up the file to the cloud and external storage. Physical consent agreements will be stored in a locked file cabinet, and kept (along with the key file) for 5 years after the completion of the project. At that time the documents will be shredded and the file destroyed.

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).

As noted earlier, the focus groups will be recorded and transcripts will be generated. The transcripts will be available in multiple files including txt, docx, and pdf/a. The transcripts will be coded in NVivo, and exported in a variety of file formats including txt, docx, xlsx, and pdf/a.

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?

The coding book will be created and saved both in NVivo and exported as txt, docx, and pdf/a files. These files will be deposited along with the NVivo files.

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

All digital products will be deposited into the LSU Digital Commons.

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

Name of repository:

LSU Digital Commons

URL:

https://digitalcommons.lsu.edu/

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

The data management plan will be reviewed prior to data collection, following data collection (before analysis), and subsequently every six months. The PI will ensure the management plan is adhered to and implemented throughout the process.