

E kuahui like i ka hana. 'A'ohe hana nui ke alu 'ia.

"Let everybody pitch in and work together. No task is too big when done by all."

'Olelo No'eau by Mary Kawena Pukui



HENRY KU'UALOHA GIUGNI DIGITAL ARCHIVE PROJECT REPORT

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Archival Media Consulting
September 30, 2009

"Most early moving image materials have been discarded or have deteriorated beyond saving. What is left is of paramount importance to preserve regardless of its content."

Cover: The Kukui Nut Tree is Hawai'i's state tree and one that was very important to ancient Hawaiians as it provided for light, fuel, medicine, dye and ornaments. The Kukui tree is a symbol of enlightenment, protection and peace.

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Executive Summary

The current condition of Hawaiian film and moving image heritage is in a precarious state. There is no institution that focuses its effort on preserving moving image materials and with each new paradigm shift in media communication and technology, older formats are neglected, destroyed, or discarded. In the transition from film to videotape, a large amount of early Hawai'i film was neglected. Coupled with the tropical environment of high temperatures and humidity, the overwhelming majority of film materials have been lost. What is left is of paramount importance to preserve regardless of its content. We find ourselves again in the midst of another paradigm shift as digital technology has eclipsed analog formats making them obsolete. As a result, massive amounts of rich and valuable Hawaiian history are endangered and need immediate attention.

At a panel session at the 2009 Annual Association of Moving Image Archivists (AMIA) conference in St. Louis sent out a stern warning: **"The loss of access to most videotape collections is a Katrina-level disaster and most video archivists are not aware of this."** With the exception of vhs, analog videotape decks are no longer being manufactured. The panel which represented a large percentage of professional archival vendors issued stern warnings that the parts and materials that they need to maintain video heads are disappearing. **As such, digital preservation is required now. If action is not taken soon entire collections will be lost.**

To address this need, The Henry Ku'uialoha Giugni Digital Archive Project (HKG Digital Archive) has secured grant funding from the Department of Education to assist in the creation of a film and media archive dedicated to the preservation and access of Hawaiian moving image history and culture. In the initial phase of the project a consultant was hired to write a report that would assess the conditions in Hawai'i and establish a guideline to direct the Archive's progress.

One of the most unique features of the HKG Digital Archive is that it aims to represent the records and archives of various sources of independent companies, stations, and individuals creating media that document the stories of Hawai'i. As such, it is important the Archive connects the materials to the continuation of culture - a sentiment expressed by many people in this report.

In the course of the work undertaken in the first phase of the Project, it has become very apparent that there is a shared urgency and desire to see the HKG Digital Archive come to fruition. There is recognition that if an institution is not created in the near future much of the Hawaiian history will continue to be lost. This initial phase was essential for the HKG Digital Archive Project to begin moving forward and

mobilizing support for the Archive. Organizing the archival effort is essential to organizing the Archive and its activities.

When completed, the HKG Digital Archive will come to represent a special resource for multiple users. From the standpoint of scholarly research it will be important because they illustrate the entire production process from initial research to broadcast and distribution. Moreover, the Archive will be able to provide the raw primary source materials this group demands to generate new forms of scholarship, develop new curriculum, and construct new models of scholarly communication.

The HKG Digital Archive will also be able to distinguish itself for several reasons:

- the histories, issues, events, and voices contained in the collection cannot be found elsewhere
- the educational value of the collection would present a multitude of opportunities as the use of video and other media dominate Web 2.0 and social media networks
- the potential for significant contribution and empowerment of the Hawaiian community is very promising through the preservation history and traditions.

The HKG Digital Archive will also bring much benefit to whatever institution steps forward to build a home for these collections. Benefits include: highly visibility; increasing demand for moving images materials; the ability to reach and cater to generally an underserved Hawaiian community; and the ability for the collection to act as a great recruiting and fund-raising tool for faculty, scholars, and students.

The Archive has the potential of becoming a high profile, highly publicized archive with very visible projects and programs throughout the region. It can provide opportunities for student work, training, and educational projects. It also allows the ability to explore new media projects, filmmaking and production, and new forms of scholarly communication.

The challenges posed by the creation the HKG Digital Archive are immense. The financial climate in Hawai'i is bleak making fund-raising efforts even more difficult. The budget cuts being seen throughout the State affect the possibilities of finding a host institution that can build a new facility and support its long-term operations. Changes in technology and digital formats are affecting all aspects of the archival profession, practice, and workflows. Efforts to keep abreast of cataloging and metadata standards, best practice for digital preservation, and a dizzying array of storage and asset management system all impact the decision that need to be made by the HKG Digital Archive Project leadership.

Moreover, the special needs an audiovisual archive requires puts a high demand on resources. Media is expensive, it is inherently complex, and is rapidly changing. The HKG Digital Archive must be able to address the preservation needs of older obsolete materials while addressing the demands for access to

highly visible digital materials. The different media materials deteriorate at different rates and require unique housing, storage, and preservation solutions. It will be necessary that a well thought out plan and design is considered for the Archive and that there is much deliberation and consultation as it is constructed.

Despite the multitude of challenges ahead there is growing support and movement to see the Archive built. The recognition of common problems of preservation and digitization has resulted in an overwhelming number of individuals and organizations express an interest in working with the Archive. There is the belief and hope that the HKG Digital Archive will emerge as a leader in the areas of media preservation and help to develop guidelines that can be adopted and applied to smaller archives and collections throughout the Islands. Despite the economic hardship being experienced by many, it appears to be an opportune time to make the Archive a reality. If it is accomplished, the HKG Digital Archive will serve the needs of preserving a living history for generations to come and will go a long way in keeping Hawaiian traditions and voices alive.

Acknowledgements

The following is a list of individuals who I met with or communicated with during this project. Their time and willingness to share their knowledge and insights were extremely valuable to my work and provided much of the information contained in Part 1 of this report. From the *University of Hawai'i Manoa Libraries*: Joan Hori, Dore Minatodani, Alexis Weatherl, Lynn Davis, and Ruth Marie Quirk; from the *University of Hawai'i at West O'ahu*: Gene Awakuni, Chancellor, Chris Conybeare, CLEAR, and Ryan Mielke; *Hawai'inuiakea School of Hawaiian Knowledge, University of Hawai'i Manoa*: Maenette Benham, Dean, Piilani Kaaloa, and Marvlee Naukana; *University of Hawai'i Systems*: David Lassner, VP for Information Technology and CIO; *Ka Huli Ao Center for Excellence in Native Hawaiian Law - William S. Richardson Law School*: Jocelyn Leialoha M-Doane; *Lyman Museum and Mission House, Hilo*: Dolly Strazar, President & Executive Director, and Libby Burke; *Lana'i Culture & Heritage Center* Kepa and Onaona Maly; *Pacific Islanders in Communication*: Ruth Bolan, Executive Director; *Kamehameha Schools*: Candace Lee and Marsha Bolson; *Bishop Museum* DeSoto Brown; *Hula Preservation Society* Maile Loo and Gene Kois; *Kaua'i Historical Society*: Marylou Bradley; and at the *Hawai'i Community Foundation*: Kalowena Komeiji.

I also met with a number of independent filmmakers including: Joan Lander & Puhipau, *Na Maka O Ka Aina*; Myrna and Eddie Kamae, *Legacy Foundation*; Joy Chong-Stannard, Independent, Heather Giugni, *Juniroa Productions*, Esther Figueroa, *Vagabond Media*, and Marlene Booth, Independent. While exploring online options for the HKG Digital Archive I met with people from Campus Docs including Lance Murata and Aime Montero; as well as Kazuyuki Hashimoto from Avatar.

Introduction

This report is submitted in fulfillment of the contract between Archival Media Consulting and the Academy for Creative Media through the Research Corporation of the University of Hawai'i for consulting services pertaining to the Henry Ku'uialoha Giugni (HKG) Archives. The work was an integral part of Phase 1 project.

During the past four months I have worked closely with the HKG Project Team - Chris Lee, Principle Investigator; and Heather Giugni, filmmaker and Project Planner and driving force behind the creation of the Archive. Both have been very accommodating and open in their discussions with me and I am grateful to them for the opportunity to participate on this extraordinary Project.

My work included two trips to Hawai'i to conduct site visits, meet with the directors of archives, libraries, and cultural institutions that hold, or manage, audiovisual collections. I also met or had discussions with filmmakers, producers, television stations, and other "creators" of media which the HKG Digital Archive aims to preserve. A list of contacts whom I met or communicated with can be found in Appendix 1. During my second visit I continued meeting with individuals and conducted a workshop updating the progress of the HKG Digital Archive Project and provided an overview of the challenges of media preservation.

In consultation with the Project Team, it was decided that the early stages of my work would be used to gather information about the status of film, video, and audio materials in Hawai'i. My meetings and discussions would be used to inform the Project of what materials existed and how much, what format where they on, and how they were being stored, catalogued, and preserved. I was also interested in any digital projects particularly as it pertained to preservation efforts.

It quickly became evident that many others were also interested in this information and were hoping that my work would provide answers to common questions. As such, I felt that it would be a useful exercise to conduct a general survey of audiovisual collections. I designed and ran a survey, on Survey Monkey for approximately 12 weeks. The results of the survey are discussed in the first section of the report.

In the course of my visits I was able to travel to three islands. The majority of my time was spent in O'ahu but I was also able to visit Hawai'i and Lana'i with Heather Giugni. I have also been in email communication with organizations on Maui and Kauai. The Maui Historical Society thanked me for reaching out to them but felt that because they did not have media materials their participation was unnecessary.

The appreciation and genuine welcome we received by including relative small non-O'ahu based organizations reinforced the importance of inclusion. My visit to the Lanai'i Cultural & Heritage was particularly meaningful. Lana'i is blessed with a richly storied landscape and the love for the island's history and community was very clear in our hosts - Kepa and Onaoana Maly. It gave us encouragement and reaffirmed that our work is important and meaningful beyond the preservation of artifacts and stories – that it was important to the preservation of histories and cultures of living communities.

To retain an open process I created a blog (Henry K. Giugni Archives at <http://giugni.wordpress.com/>) and have recorded much of my work on the blog. As of September 29, 2009 the blog has had 657 visitors averaging between 150 – 250 visitors per month. I am hopeful that the blog can be transformed at the end of the project and integrated into future activities of the Archive.

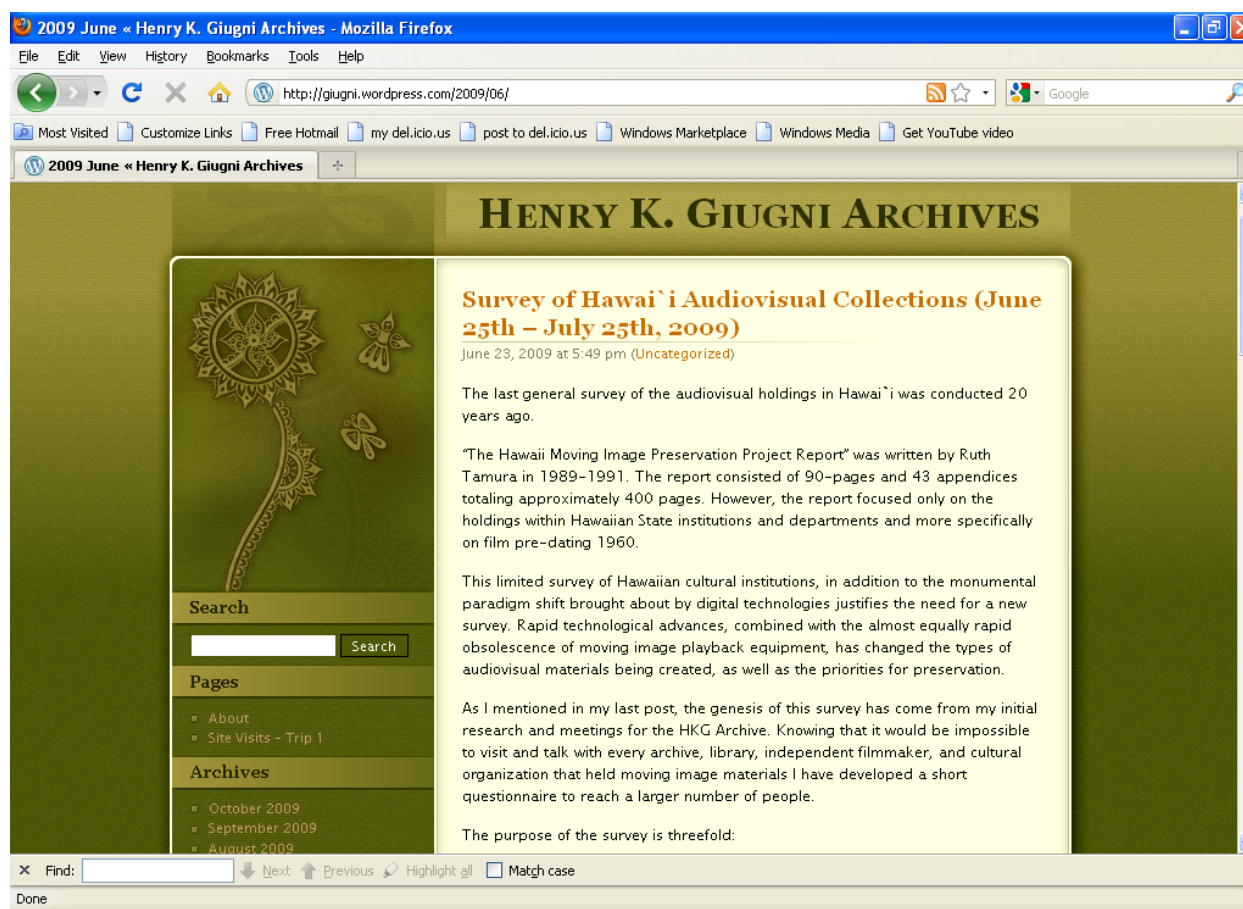


Figure 1. Screenshot of the HKG Digital Archive Blog

The report is divided into three main parts:

Part 1 – Describes the current status of audiovisual materials in Hawai'i. The section provides an overview of past practices and efforts of preservation. Through information gathered in my meetings and data provided in the online survey I provide some general observations.

Part 2 - Evaluates and discusses the initiatives of the HKG Digital Archive. The section examines the unique opportunity of creating a distinct and important Hawaiian historical and cultural resource. Specifically, it is an overview of the considerations of starting and operating a moving image archive and exploration into fundamental preservation issues.

Part 3 – Describes important recommendations and suggested implementations necessary for the creation of the Henry Ku'ualoha Giugni Archives. The section offers archival systems and procedural suggestions, estimated budgets for those areas that can be quantified at this point in time, possible equipment considerations, and references for additional information.

Note: 1. The use of Hawaiian in the report generally refers to the Native Hawaiian population which is the primary focus of the HKG Digital Archive Project. However, it is also used to reference other media materials that the HKG Digital Archive would include in its collections because of its overall value to the people that live, reside, and call Hawai'i home.

2. Bolded text in the report is used to emphasize certain aspects of the report.

PART 1:

**The Status of Moving Image
Preservation in Hawai'i**

The Status of Moving Image Preservation in Hawai'i

*From the earliest days of the monarchy,
the people of Hawai'i have taken great pride
in remembering the events and lineage of
our islands' ancestors.*

(A Survey of Hawai'i Historical Records Institutions, 2006)

The 2006 Hawai'i State Historical Records Advisory Board report begins with an examination of the long tradition of archives and preservation activities in Hawai'i and recognizes the importance of these documents. The effort of the HKG Digital Archive Project is a continuation of this tradition and a logical extension of past efforts that specifically targeted film and audio visual materials.



(Figure 2. Meeting: August 3, 2009 - Hawai'inuiakea School of Hawaiian Knowledge. See Appendix 1 for list.)

Henry K. Giugni Project Meeting – August 3, 2009

Attendees:

Heather Giugni, Filmmaker, Juniroa Productions
 Chris Lee, Founder, Academy of Creative Media, University of Hawai'i - Manoa
 David Rowntree, Archival Media Consulting
 Lynn Davis Lynn Davis – Head of Preservation, University of Hawai'i at Manoa Library
 Luella Kurkjian, Historical Records Branch Chief of State Archives
 Joan Hori Curator, Hawaiian Collection, University of Hawai'i at Manoa Library
 Chris Conybeare, Producer and Faculty at the Center for Labor Education and Research, UH-West O'ahu.
 Ryan Mielke, Executive Director for Public Affairs, UH-West Oahu)
 Joy Chong-Stannard, Independent Video Producer
 Candace Lee, Assistant Archivist, Kamehameha Schools
 Jocelyn Mdoane, Huli Ao Center for Excellence in Native Hawaiian Law –Richardson School of Law
 Esther Figueroa, Filmmaker, Vagabond Media
 Victoria Keith, Filmmaker, Victoria Keith Productions
 Joan Lander & Puhipau, Filmmakers, Na Maka O Ka Aina
 Kalowena Komeiji, Hawai'i Community Foundation
 Marvlee Naukana-Gilding, Hawai'inuiakea School of Hawaiian Knowledge
 David Lassner, Vice President for Information Technology and Chief Information Officer, System, UH
 Larry Kimura, Associate Professor UH-Hilo, 'Aha Punana Leo
 Dolly Strazar, President & Executive Director, Lyman Museum
 Jeannette Hereniko, President, Asia Pacific Films.com
 Maile Loo, President, Hula Preservation Society
 Gene Kois, Video Producer, Hula Preservation Society
 Myrna Kamae , Executive Director & Producer, Legacy Foundation
 Alexis Weatherl, Media Specialist, Sinclair Library – Wong Audio Visual Center
 Kathy Kawelu, Merrie Monarch Festival
 Naalehu Anthony (Filmmaker, OIWI TV)
 Keoni Lee (Computer/Producer, OIWI TV)
 Vera Zamboneli (Hawai'inuiakea School of Hawaiian Knowledge)
 Kaaloa (Hawai'inuiakea School of Hawaiian Knowledge)
 Naalehu Anthony, Filmmaker, Paliku Documentary
 Marsha Bolson, Director of New Media, Kamehameha Schools
 Brian Chang, IT, Kamehameha Schools
 Craig Howes, Professor, University of Hawai'i -Manoa

It is an all too common story to hear of the world's historic, culturally significant, and even iconic, film and video material being lost to decay, neglect, or a lack of proper archival knowledge. Unfortunately it is also a common story in Hawai'i. **Most early moving image materials have been discarded or have deteriorated beyond saving.**

With each new paradigm shift in media communication and technology, older formats are neglected, destroyed, or discarded. In the transition from film to videotape, a large amount of early Hawai'i film was neglected. Coupled with the tropical environment of high temperatures and humidity, the overwhelming majority of film materials have been lost. **What is left is of paramount importance to preserve regardless of its content.**

We find ourselves again in the midst of another paradigm shift as digital technology has eclipsed analog formats making them obsolete. History is repeating itself as the old video formats are being neglected, stored inadequately, or just thrown out to clear space. Similarly, as stations begin to move to a tapeless environment the older formats will quickly be seen as unnecessary.

Moreover, the decks to play these materials are becoming scarcer, difficult to maintain, and to find parts for repair. As a result, massive amounts of rich and valuable Hawaiian history are endangered and need immediate attention. During my last visit there was talk that the Sony repair store may be closing. This rumor has not been confirmed. Nonetheless, the possibility such an event could occur sent concern through the group of participants at the HKG group meeting and could have drastic implications on the ability to maintain old decks necessary for playback (also required for digitization) of the old videotapes.

The Importance of preserving Hawaiian Audio Visual Heritage

Like the long established attitudes towards books and art, moving image material are becoming increasingly important vessels for the transmission of history and cultural meaning and therefore one of the main rationales to preserve audio recordings, television, documentaries, oral histories, amateur films, and home movies. Recognizing their value as historical artifacts helps to develop a collective memory and by preserving as much original material as possible, including raw materials, a more comprehensive record can be formed.

The Henry Ku'ualoha Giugni Archives is vital to achieving these aims. The HKG Digital Archive seeks to establish a physical archive that will care for these materials, create a comprehensive online digital collection, and integrate materials into emerging Web 2.0 and social media networks that can speak to a

variety of users and successive generations. The HKG Digital Archive looks to acquire film, video, and audio recordings for permanent or long-term preservation based on their enduring cultural, historical or evidentiary value to Indigenous Hawaiians in particular and the people of Hawai'i in general. A wide array of media types (both format and content) has its place in society and can have historic value, ranging from footage of the prestigious Merrie Monarch Festival to someone's home movie.

In a society whose history and voice has traditionally been overlooked or ignored, the ability to preserve Hawaiian voices (literally) empowers Hawaiians to be able to tell their history in their own words. It allows for a continuum of knowledge, tradition, and beliefs for posterity. The filmmaker Esther Figueroa notes that Hawaiian, and Pacific Island in general, culture and traditions are as fragile as the ecological environments found on these islands... that they are "one of the most fragile cultures in the world". As such, a systematic, well planned and executed archive whose mission is to preserve Hawaiian moving image and media heritage will go a long way in keeping these traditions and voices alive.

Past Efforts

Hawai'i Moving Image Preservation Project Report (1989-1991) by Ruth Tamura.

(Prepared for the Department of Accounting and General Services, State of Hawai'i)

The Tamura report represents the earliest document that examined the conditions of moving image materials in Hawai'i. It was comprised of 90-pages and 43 appendices totaling approximately 400 pages. I am grateful to Lynn Davis for sharing the Tamura report with me. The report was fairly narrow in its focus as it only examined the holdings within Hawai'i State institutions and departments. The appendices primarily offered general information about film and video properties, care, storage needs, and outlined many preservation issues.

At the time the report was written, it would have been a useful document - albeit more for its information and recommendations on moving image archival practices, than as a survey of the State's holdings. Although the report contains some basic moving image archival principles that remain true today, it is somewhat dated and more accurate information is widely available online.

The "project team" is noted to have identified 17,000 audiovisual items - but focused their work on 350 films pre-dating 1960. The report does a good job documenting the selected films and highlighting the need for their preservation. Sadly, there was no documentation of where these 17,000 items were located or their formats. As part of the project's activities, basic repairs were made on several films to

Henry K. Giugni Archive Project Report

allow for their viewing and several others were sent to a lab in Los Angeles for preservation. Video copies were made but there is no reference as to where these videos were kept. Sadly, the videos themselves are likely in need of preservation today.

Despite its limitations, the report does provide some valuable observations about the condition of materials at that time. These include:

- **The majority of the state's moving image collections are documentary in nature**
- **The majority of moving image materials are found in educational institutions (such as the Department of Education, State Library System, UH Library system, etc.)**
- **A search of home movie materials in private collections still needs to be undertaken**
- **Much of Hawai'i's early moving image material has been discarded or had deteriorated beyond saving - that which is left is paramount to preserve**

The report identified 177 films that were in need of preservation. It also emphasized that "owing to the limited number of available moving image materials from the early 1900's it would be reasonable to recommend that all moving image material produced before 1960 be preserved." This is a clear call to the HKG Digital Archive and should be considered carefully when it creates its overarching Mission.

Several assumptions can be drawn from the Tamura report which can help inform the HKG Digital Archive's activities. The first, and probably most obvious, is that given the profound changes in technology a very large amount of programming, content, and new formats have been created in the 18 years since the report was written.

Secondly, there are significantly more materials in collections and archives beyond State institutions that need preservation. Tamura mentions filmmaker George Tahara in her report as having a very large and important collection... there are many others. Moreover, she does not address television or radio – one of the largest creators of content.

Finally, the 177 films that were recommended for preservation were likely not preserved. Therefore, they will be in even more dire need for preservation today if they have survived.

Legacy Foundation of the Pacific

Established in 2000 by Dr. Esther Figueroa, the not-for-profit organization was dedicated to "the preservation of Pacific media, the perpetuation of Pacific cultures and knowledge, and the creation of educational products and processes which create access to Pacific cultures and knowledge." Although the organization still exists in name it is essentially non-functioning.

The Legacy Foundation represented the only real large scale effort in Hawai'i to address the need to preserve Hawai'i's moving image heritage. The organization was successful developing partnerships, public programming, and outreach and education initiatives. The *"Made in Hawai'i – A Retrospective of Hawaiian Filmmakers"* showcased at the 2000 Hawai'i International Film Festival and drew an audience of over 3,000 people over the course of the festival. The retrospective was also broadcast on Hawai'i Public Television.

Despite these successes, the Legacy Foundation was unable to secure the support or resources to sustain its activities. Nor did the organizations' activities make much headway into actual preservation of materials. Nonetheless, the efforts of Dr. Figueroa have laid much groundwork for the continuation of these efforts. The documents Dr. Figueroa has shared provide good contacts of past Foundation partners, as well as lists of films that are likely good candidates for preservation. Her documents also describe important Hawaiian filmmakers whose collections the HKG Digital Archive consider in their collection development plans.

Hawaii/ Pacific Film & Video Database (<http://preservefilm.hawaii.edu>)

Inspired by her work with the Legacy Foundation, Lynn Davis created a searchable database that documented basic information on documentary film and video titles about Hawai'i and the Pacific region. She was able to locate a number of detailed inspection sheets created by Ruth Tamura during her project that were never included in the report. From these sheets she was able to begin compiling this database.

The stated goal of the website was to "raise awareness about how much we have already lost, and the urgency of taking preservation steps." The site was intended to help identify film in both private and public collections and provide a venue to advocate for the preservation of these films.

At the time the website was created (last updated in 2005) most of the films in the database had not been restored and were not available. It can be assumed that there has been no change to date. Similar to many of the titles mentioned in the Tamura report, the film titles in this database should be investigated and preserved if they can be located.

A Survey of Hawai'i Historical Records Institutions

In 2006, the Hawai'i State Historical Records Advisory Board produced a report for the National Historical Publications and Records Commission (NHPRC). The report surveyed Hawai'i historical records institutions. While not specifically related to audiovisual collections, the report does provide a good

overview of the achievements and challenges faced by archives in Hawai'i. The last survey of its kind was conducted in 1982.

The report indicated that audiovisual collections are increasingly common and held by the majority of institutions throughout the State. While **70% of the archives participating in the survey indicated that they have audio and video tapes, over half indicated they have no arrangement and description procedures and are lacking a concise collection management plan.** The statistics also clearly show that **Hawaiian history is not well represented on the Web with 82% of the archives having no records online.** The statistic is a clear indicator that large opportunity exists for the HKG Digital Archive to become a major source of Hawaiian historical resources online.

The report also confirms that the preponderance of historical cultural institutions and archives (74% of respondents of their survey) are located on Oahu. Similarly, the bulk of professional education and training opportunities primarily occur in Honolulu. The report advocates for building a "strong professional network that incorporates all the archives throughout the islands." This sentiment should be echoed in the efforts of the HKG Project and incorporated into its activities.

Current Practices, Collections, and Initiatives

Overview

The following section is drawn from my notes and observations during meetings and visits with librarians, archivists, filmmakers, and other knowledgeable individuals. It is also supplemented by information obtained from the Online Survey. The sample of organizations and activities described in this section by no means represents all of the moving image collection in the State or individuals working with these materials.

In fact, one collection I was unable to get any information about is held by the Department of Education. The Department was mentioned in several documents (Tamura, Figueroa) and by several individuals I spoke with, as having a substantial film & video collection. The State Foundation is another not included in my work but is also said to have valuable collections from the 1960's and 1970's. Nonetheless, there is a good sampling of different types of collections to formulate a general understanding and from which to draw assumptions of current practices throughout the State.

Overall, while specific conditions of an archive may vary widely, the general practice of archival management and digital preservation of moving image collections in Hawai'i is at an early stage of

development. While some collections are stored in relatively stable environments others lack proper conditions. Similarly, the level of arrangement, description, and cataloging efforts also varies widely. With relation to access and the development of comprehensive online collections, there is relatively little available and even fewer serious long-term digital preservation efforts in progress.

Among the people I communicated with, **there was a general consensus that Hawaiian materials are in a precarious situation and that action was needed immediately. However, there is currently no institution that has the resources and expertise capable of leading efforts on a large-scale and that action is not forthcoming.** Nonetheless, many organizations expressed an open willingness to collaborating with others on a number of these issues. As such, there was significant interest in seeing the HKG Digital Archive emerge as a leader to develop best practices guidelines for digital preservation, caring for moving image collections, and metadata collection.

Similarly, the relative lack of activity does not translate to a lack of awareness or desire to learn (as evidenced by the large group that attended the August 3rd meeting). Most institutions I visited were keenly aware of the need to increase their digitization efforts and attention to media materials, but were hampered by resources, lack of technical knowledge, or guidelines. The Survey of Hawai'i Historical Records Institutions report supports these sentiments and cites "education and training" as the second most important need (after staffing) by institutions throughout the islands.

Audiovisual Collections in Hawai'i

Similar to many libraries, archives, and other collecting institutions around the world, most people I spoke with did not actively seek out moving image collections, rather these materials came to them by default. Many still do not actively seek media materials but will take them into their collection because of the lack of other options. The following section provides an overview of some of the moving image collections that can be found throughout the Hawaiian Islands.

The Island of Hawai'i

The *Lyman Museum* and the *Kona Historical Society* are the two major cultural archives on Hawai'i. Dolly Strazar, President & Executive Director of the Lyman Museum, mentioned that some noteworthy films can be found in the Historical Society that depicts the island's old ranching history. A cursory survey of the collections at the *University of Hawai'i – Hilo* (based on information they have online) indicated there were few moving image resources outside of their general library videos and DVD's. However, a more thorough investigation will need to be undertaken.

Additional sources of valuable materials and potential partners on Hawai'i include the *'Imiloa Astronomy Center of Hawai'i* and the *Merrie Monarch Festival*. Larry Kimura, Assistant Professor, UH-Hilo Hawaiian Studies and one of the leaders of *'Imiloa*, created a number of video oral histories with people who remembered or knew Queen Liliuokalani back in the late 1970's and early 1980's. Preserving and digitizing these histories is an example of a worthwhile endeavor of the HKG Digital Archive. Since its opening in early 2006, the *'Imiloa Astronomy Center of Hawai'i* has partnered with the Merrie Monarch Festival to offer hula-related workshops and demonstrations during the popular annual festival and competition held each spring in Hilo.

Kaua'i

The *Kaua'i Historical Society* has a video collection, which was transferred to DVD a year or two ago, of roughly 175 events, lectures, meetings, etc. These date back to about 1960s. The Historical Society, which began in 1914, has been documenting their meetings and lectures first as written documents then on different formats over time (8mm, VCR tapes, DVDs, etc). They are accessed through their in-house computer database.

In addition, they have several oral histories on audio cassettes but many have poor audio quality and obsolescence is a problem. They believe some of the audio tapes may have been damaged with age but they are keeping them in the hope of some day preserving them. Marlyou Bradley, Research Assistant at the Historical Society, suggested that the HKG Digital Archive may want to also contact the Kaua'i Museum, *Grove Farm Museum*, *Kaua'i Community College Library*, and the *Lihue Public Library* to survey their collections.

Maui

Maui Historical Society is the main institutions on the islands. The organization is very connected to the arts community and should be included in future discussions, even if their media collections are relatively small or non-existent at this point in time. A good working relationship with these institutions will help the Archive to have a presence on each Island and will be important for education and outreach activities.

Lana'i

The Lana'i Culture & Heritage Center is the primary institution collecting, preserving, and providing access to the traditional item of "cultural, historical and artistic value to the people and island of Lana'i.

Kepa Maly, the Executive Director of the Center, is very enthusiastic to be included in the activities of the HKG Digital Archive. The Center does not have a large amount of moving image materials but it will be a key partner to work with the local population to educate them about the importance of preserving their own personal videos and home movies.

O'ahu

Bishop Museum

The Museum has acted somewhat as a default catch all for materials that otherwise would not have found a home. The collections at the Museum may represent one of the largest sources of known Hawaiian historic films. Most are amateur silent films. Access is available to the public but there is a fee structure in place and none are available online. The Bishop Museum did receive an early collection of 16mm films and 2" video from PBS. Similarly, they received materials a small collection from the ABC affiliate (16mm, 2" Quad, and 3/4"UMatic tapes). The films and videos are stored in a monitored temperature controlled space.

Desoto Brown, Collections Manager of the Archives, notes that some films have been preserved; however, there have been very few digitization efforts to date. He is not optimistic that there is much film material from the earth 20th C. that has survived. Bishop Museum has some materials from the Hawai'i visitor bureau dating from the 1950's, 60's, and 70's, as well as a small amount of 35mm film consisting mostly of travelogues from the 1930's.

University of Hawai'i at Manoa Library, Hawaiian Collection

The Library contains one of the largest audiovisual moving image collections in the State. Hamilton Library is also home to materials from the Center of Oral History. Sinclair Library is the home of the AV Wong Center and where most of the digitization efforts in the library are occurring. The Library attempts to purchase as many commercially released films, videos, and DVDs as their budget allows. They also collect "television programs taped off-air and other unpublished edited programs that are released or that become available."

All program types and topics are collected as long as they relate to Hawai'i in some way although only 21-40% of the collection distinctly pertains to Hawaiian content. The Library does not collect raw or unedited footage. The majority of the Library's materials (75% of their total) are feature films, television programming, or documentaries. Approximate 25% are believed to be unique materials. This amounts to 9,225 items not thought to exist anywhere else.

PBS Hawai'i

Leslie Wilcox, President of PBS Hawai'i was very supportive of the HKG Digital Archive very early in the process. In several communications she expressed a strong level of support and keen willingness to work with the Project. Unfortunately, scheduling and timing issues prevented me from speaking with her in more detail. The HKG Digital Archive should reach out to her again in the future as work moves forward. The station has a large amount of very relevant materials. This belief is confirmed by Joy Chong-Stannard - a previous producer at PBS Hawai'i and probably one of the most knowledgeable persons of their collections.

Ms. Chong-Stannard has helped prepare much of PBS's materials for storage and she believes there is a very large and rich amount of materials that PBS produced. In particular, there are numerous oral histories, long form interviews, and raw footage created for their programs that would be of interest to the Archive. Materials created from the year 2000 onward are kept on-site at PBS while all earlier material has been stored off-site. She personally packed up many boxes and placed logs inside the boxes. She estimates that a wide range of formats, approximately 2,000 - 3,000 tapes are packed away, in a space whose climate she suspects is probably not favorable for long-term storage.

An aspect of operations in PBS Hawai'i, likely applicable to all television station archives, is that large personnel shifts in the company has created disruption in inventory control. While this is true for many organizations, it is more so at stations where changes in staff and personnel can occur with each new program or series created. The lack of continuity has prevented a coherent system of recording institutional memory at PBS. Ms. Chong-Stannard notes that changes in staff have also resulted in materials be shifted around and lost, misplaced, or discarded.

The Kamehameha Schools

The *Kamehameha Schools* have trained archivists and good resources. Their mission is to serve the institution and Kamehameha 'ohana. The archive collections hold mixed materials and arranged and catalogued using the Describing Archives Content Standard (DACS) and shared through Encoded Archival Description (EAD) finding aids. The school does have a media production center and is actively videotaping oral histories. Collaborations with the Schools must be arranged through the communications office. Teachers working with video at the Schools would like to see a way in which materials could be accessed on line for student use.

Hula Preservation Society

The *Hula Preservation Society* was created by Maile Loo when she began conducting oral histories out of a personal interest and passion for hula. Over time she gained a trust and respect of the hula masters and in turn they entrusted their precious collections to her. She provides great insight to the expansive nature of oral history collection saying that her collection is not just about hula. She notes that it is hard to separate hula out from the general history of Hawai'i because in an interview people talk about the changes they have seen, the history, language, and struggles to maintain traditions. The Hula Preservation Society is actively creating oral histories and seeking to acquire programs created by others. Most of the work at the Society is done through volunteers. It has also received some assistance from the *Kamehameha Schools*. Ms. Loo is looking to develop educational and curriculum resources through partnerships with educational departments.

Center for Labor Education and Research (CLEAR) at the University of Hawai'i West Oahu

Largely driven by the efforts of Chris Conybeare and Joy Chong-Stannard, CLEAR has been fairly active in their efforts to secure their media materials. A grant from the Hawai'i Council for the Humanities several years ago allowed CLEAR to undertake an analysis of its video archive. Their library largely consists of the materials associated with the production of the programs in the *Rice & Roses* series.

First airing in 1971, the program was "conceived by Hawaii's labor movement for Hawaii's working people." The report represents the Center's initial efforts to seriously address preservation of their important collection.

The Center has also entered into partnerships with several other University Departments and Hawai'i Public Television to provide archival storage for materials related to its mission. A recent partnership with the Film & Media Archive at Washington University in St. Louis helped to digitize and preserve an interview with Frank Marshall Davis. CLEAR is moving to a new space at the UHWO Campus and an environmentally controlled environment is planned for their collection.

Hawaiianuiakea School of Hawaiian Knowledge University of Hawaii at Manoa

The main focus of the School is to "pursue, perpetuate, research, and revitalize all areas and forms of Hawaiian knowledge, including its language, origins, history, arts, sciences, literature, religion, and education; its law and society; its political, medicinal, and cultural practices; as well as all other forms of knowledge." The Center was very enthusiastic about the possibility of working with the HKG Digital Archive and thrilled that another area of Hawaiian heritage was about to be preserved. Maenette Benham, Dean of the School, sees the HKG potentially becoming a major resource for new curriculum development, new areas for scholarship, and opportunities for student research. The School owns

copyright to approximately 80% of their media materials. This is large percentage and suggests much can be done with their materials to make them accessible at an early stage because of the lack of restrictions.

Hawaii State Archives

The first building in the United States designed specifically for the archiving of public records was created in 1905 and became the first home for the *Hawai'i State Archives*. Over the years, the Archive has collected a wide range of formats and materials. Their moving image collection documents the functions, activities, and events of state government agencies. The State Archives has the largest number of films of those organizations who participated in the survey (over 300 35mm films). Susan Shaner, State Coordinator, communicated with me her support of the HKG Digital Archive Project.

Independent Filmmakers

Driven by the absence of certain issue in the mainstream media, a burning desire to share a story, or personal passion for the art of filmmaking, independent filmmakers capture and record important culture, events, and chronicle histories that otherwise would be lost. Independent filmmakers produce outside of a major film and television studios. They are often interested in local and regional issues and are in touch with their communities. Outside of the broadcast stations, independent producers can be attributed as being responsible for recording and capturing the stories of Hawai'i and its people. The body of work arising out of their long and arduous efforts, as a collective, represents some of richest resources available.

There are many noteworthy filmmakers that I was not able to include in this project. The absence of some, from the list below, is in no way a reflection of the insignificance of their work – rather is a reflection on the limited scope and timeframe with which to complete this project. A more thorough campaign must be undertaken in the future to ensure important filmmakers are considered in the development plans of the HKG Digital Archive.

The ability to convince independent filmmakers that their work needs to go to an archive where it can be preserved, organized, and shared goes to the core of the HKG Digital Archive Project. There is a mass of material that has never been seen before, much cut out of finished programs, or part of a program that never got off the ground. These new resources will speak to a whole new generation in ways the filmmakers did not intend or could imagine.

Na Maka o ka `Aina

Na Maka o ka `Aina is an independent video production company that focuses on the land and people of Hawai'i and the Pacific. Joan Lander and Puhipau are the founders and principle producers. Well respected throughout Hawai'i and the region they have amassed a huge amount of unique and valuable materials. They have been documenting traditional and contemporary Hawaiian culture, history, language, environment and the politics of independence and sovereignty since 1982. Na Maka o ka `Aina has aired over 80 programs including important titles such as *Act of War*, *Stolen Waters*, *Pele's Appeal* and *Makua Homecoming*.

Legacy Foundation

Eddie and Myrna Kamae are unquestionably, producers of valuable Hawaiian programming. The mission of the Legacy Foundation is to "document, preserve and perpetuate the cultural heritage of Hawai'i through music, film and video, educational programs, community outreach and archival work." Their collection would be a treasure and wealth of knowledge if it was made accessible for viewing and research. From my discussions they seemed to recognize the important work that the HKG Digital Archive was undertaking, and appreciate the opportunity to participate in meetings, but were hesitant to commit to a collaborative effort at this time.

Juniroa Productions Inc.

Since 1985, Juniroa has produced quality television programming for and about the Native Hawaiian community and Pacific Island content that includes documentaries, public service announcements, commercials and web content. Full support and commitment from Juniroa Productions will be very helpful to the early efforts of the Archive.

Separate from the important materials they have produced and collected, having this collection as one of the inaugural collections will allow the Archive to work and hone its activities on a large body of work very typical to the kinds of materials the Archive is seeking to collect.

Video Lolo/Specific Video (Gene Kois)

The Video Lolo/ Specific Video collections are two that have been identified by many as important and essential to preserve. Gene Kois, of Specific Video in has been working in film and video for over 30 years. He was an early member of Video Lolo and has expressed an interest in the HKG Digital Archive Project.

George Tahara

A pioneer in early Hawaiian filmmaking, Tahara's works are very important to preserve. He began producing his "Legends of Hawaii" films in 1941 which ran regularly on PBS in the 1970s. Another notable film "Kioni's Poi Pounder" is a classic that has been screened for generations of elementary school students. The film was also recognized nationally when it screened in the 1964 World's Fair in New York. A Star Bulletin article <http://archives.starbulletin.com/2003/07/26/news/whatever.html> from July 26, 2003 discusses his works. Tahara's films seem to have recently gone out of distribution (based on the withdrawal of his films from several commercial sales websites by the publishing/distributing company).

Victoria Keith Productions

VKP documentaries are generally about Hawaiian cultural, political, and environmental issues, including land and water rights, cultural practices such as fishing and taro growing, and economic/environmental sustainability. Complete transcripts are available for some programs as well as notes, photos, and research material.

Pacific Islanders in Communications (PIC)

PIC was established in Honolulu in 1991 as a national non-profit media Arts Corporation dedicated to "supporting, promoting, and developing Pacific Island media content and talent." Ruth Bolan, the Executive Director of PIC notes that they have amassed a substantial number of films from the projects they have supported over the years and would be will to work with the HKG Digital Archive to preserve these films. Both Ruth Bolan and independent filmmaker Marlene Booth suggested that PIC would be well situated to communicate and work directly with individual filmmakers.

Current Challenges & Initiatives in Hawai'i

Based upon the concerns and challenges expressed to me in my meetings, it is evident that many Hawaiian organizations face similar challenges. The two most frequently cited are a lack of resources and a lack of information about best practices. However, there are several others that could pose challenges for the HKG Digital Archive down the road, listed below:

- A need for more support to accommodate user requests.
- One person mentioned that there are no local film projector technicians to repair projectors in Hawai'i.

- There was talk about the possibility that the Sony repair shop may close. Obviously, this would have a significant impact on the service and repair needs of obsolete equipment and decks.
- There was significant interest in a central repository that listed where equipment could be found. However, there was no initiative to create the repository.
- Many expressed a fear that in the move to digital production much analog material will be discarded (in the same way film was discarded from stations in the switch to video). For example, KGMB is going tapeless – what does this mean for their analog archive?
- The current economic climate in Hawai'i has forced cut backs, furloughs, and layoffs. As a result, it is difficult to expect people to willingly give much of their time. In some cases, where possible it would be appropriate to compensate organizations for their assistance with HKG activities. This is a very important issue to understand. It is reflected in the relatively low response to the online survey. Compensation should be a consideration as the Project moves forward to Phase 2.
- As exemplified in a recent CLEAR project, it is important to be diligent with the details of creating a new archival space. An oversight in planning for environmental controls has resulted in extra costs for CLEAR for their HVAC system. This is an example of how it is imperative, before the HKG Digital Archive finalizes any agreement for a permanent home, that many of the details in this report are explored and responsibility is delegated and fully understood.

Current Initiatives by Others

On several occasions it was brought to my attention that there is intense interest in Hawaiian Studies and a desire for these materials to be made available to support student studies. This sentiment was reinforced by Maenette Benham during my visit to the School of Hawaiian Knowledge. She expressed a great deal of interest to partner with the HKG Digital Archive and work in multiple facets of the collection such as research, scholarship, student opportunities, teaching and instruction, curriculum development (K-12). It is particularly noteworthy of the School's intentions to build and use new tools and explore new means of scholarly communication. She sees the HKG Digital Archive as the foundation to creating many "end products."

PBS Hawai'i will be moving to a new location in the near future. With such a large move it is inevitable materials will be lost and discarded. This would be an opportune time to talk with PBS to acquire a number of their materials. Although not directly confirmed by Leslie Wilcox, there were hints that PBS Hawai'i might be interested in finding a permanent home for their collections. However, this option needs to be discussed with Leslie Wilcox before it can be considered seriously.

Similarly, Ruth Bolan at PIC mentioned she would be open to discussing donating their collection to the HKG Digital Archive. She believes that “the taxpayer has already paid for the films” that PIC financially supports, therefore, they should be made available to the public.

Many expressed an interest in seeing the HKG Digital Archive take the lead and sustain an initiative for a consortium that worked on standards (and possibly a shared catalogue), it would find large support. This sentiment was noted in my meeting with DeSoto Brown and reinforced in the responses in the survey. There was the belief that a centralized web consortium would be excellent for Hawai’i as it would allow for input from large and small organizations across several islands.

Lynn Davis re-organized the preservation department and created a "model program" in the UH Library. The program is well respected and should be examined by the HKG Digital Archive as an example of successful design. In particular, she focused on professional training of her staff, developing a cost effective approach to preservation management, and planning for the Library’s future preservation needs. A formal relationship should be established with the UH preservation unit for possible assistance in training as well as collaborative preservation projects.

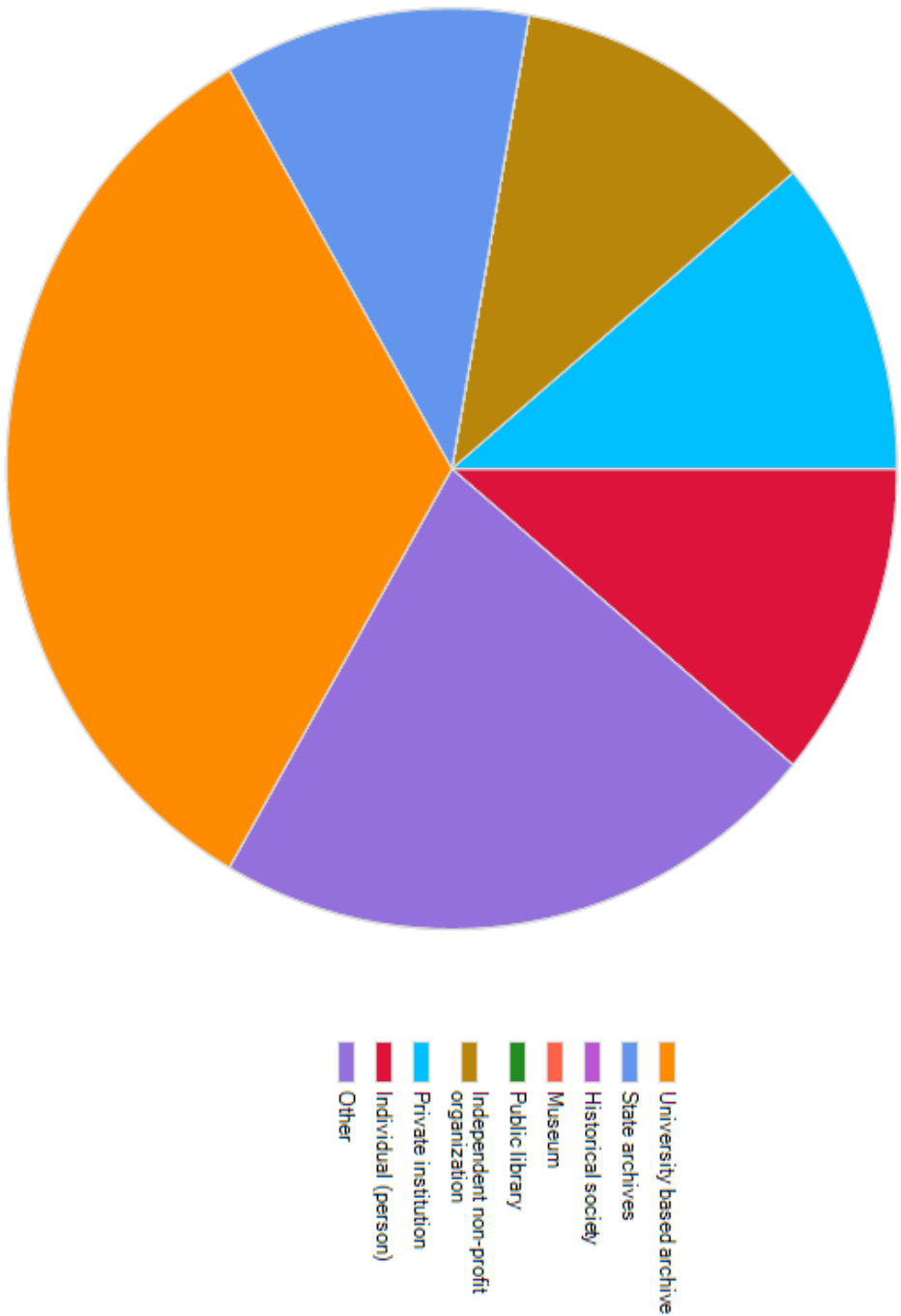
Survey Results

The survey was completed by nine institutions or individuals: **University of Hawaii at Manoa Library, Hawaiian Collection; Kamehameha Schools Archive; Na Maka o ka ‘Aina; Center for Labor Education and Research, University of Hawai’i – West O’ahu; Hawai’i State Archives; Victoria Keith Productions; Hawaiianuiakea School of Hawaiian Knowledge, University of Hawaii at Manoa; Kamehameha Schools Kapalama High School; and Juniroa Productions, Inc.** The survey was started by Punahou School but there were some problems with the survey so the results are not show in the data below.

The information provided by the respondents was very encouraging and enlightening. One of the most heartening indicators to come out of the survey is a clear commitment to collaboration. The survey responses and data provide a solid foundation from which to draw some generalizations, assumptions, identify areas of strengths and weakness. With several important collections represented, it is also an excellent beginning to an expanded more formalized information gathering activity proposed for the next Phase of the Project.

A summary of the responses is included in Appendix 4. A complete list of responses will be delivered to the Project Team as a separate document.

Check the institution or organizational type that best describes your archive



There are a large number of audio and video materials represented in the survey (from just nine organizations) – evidence of the amount of materials needing preservation. The overwhelming majority of materials are held by the University of Hawai'i Library on relatively newer tape formats. The numbers below do not tell the whole story, because there are no numbers from television stations, but it begins to paint a good picture of the amount of work that needs to be done.

Table 1. Types of Formats in Respondent Collection

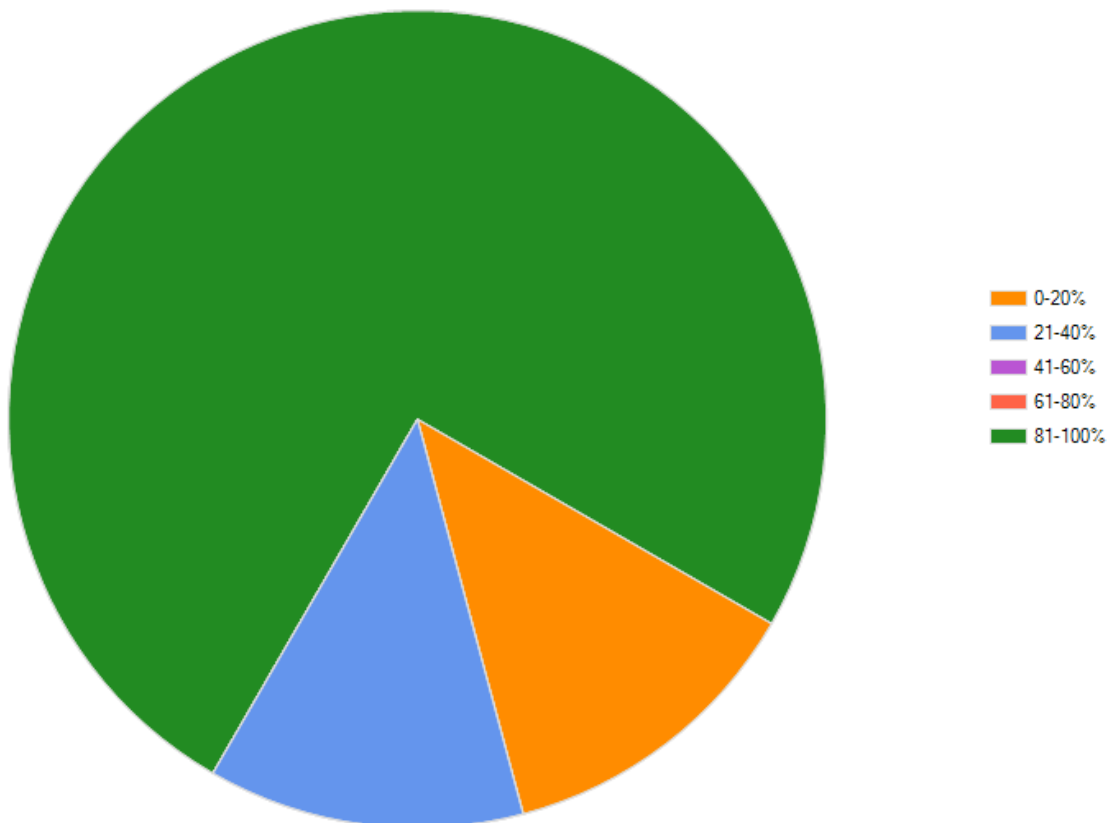
FORMAT	Number of Responses	Total Number
35mm Film	4	305
16mm Film	4	310
8mm Film	3	25
1" Video	6	117
¾" Umatic Video	9	4297
VHS Video	9	23,378
Betamax Video	6	237
Betacam/BetaSP Video	6	8490
Other Video	6	10,500
¼" Audio Reels	5	465
Cassette Tape	7	4596
Other Audio	5	25,035 *

* This number is almost entirely made up of LP's from UH-Manoa

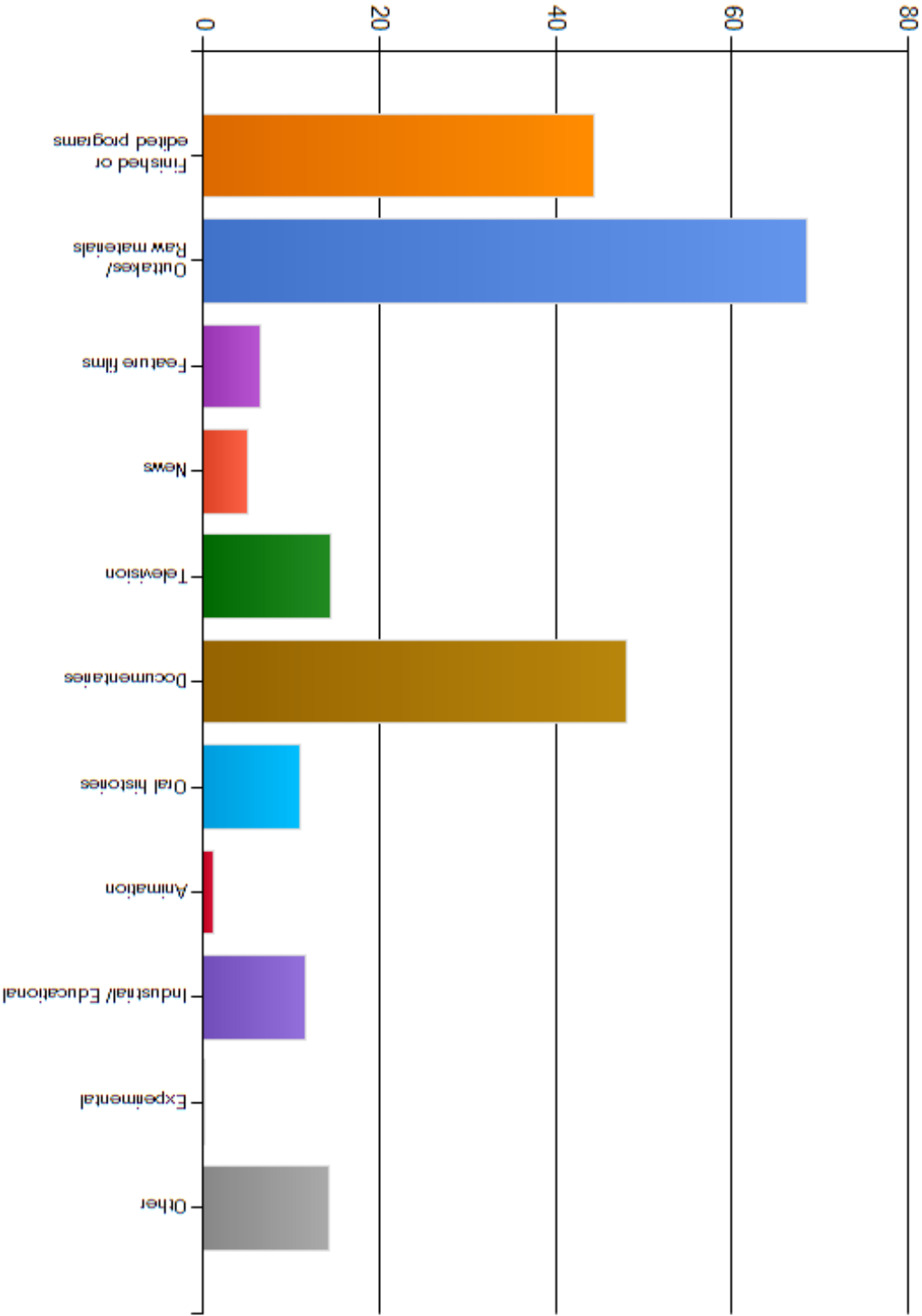
The majority respondents noted that the bulk of their collections are made up of Hawaiian materials (80-100% of the collection).

The types of programming held in the respondent's collections range from television shows and oral histories to educational films and news. However, the bulk of materials tend to be for documentaries and a significant portion are raw and unedited materials.

What percentage of your moving image collection are made up of Hawaiian materials?



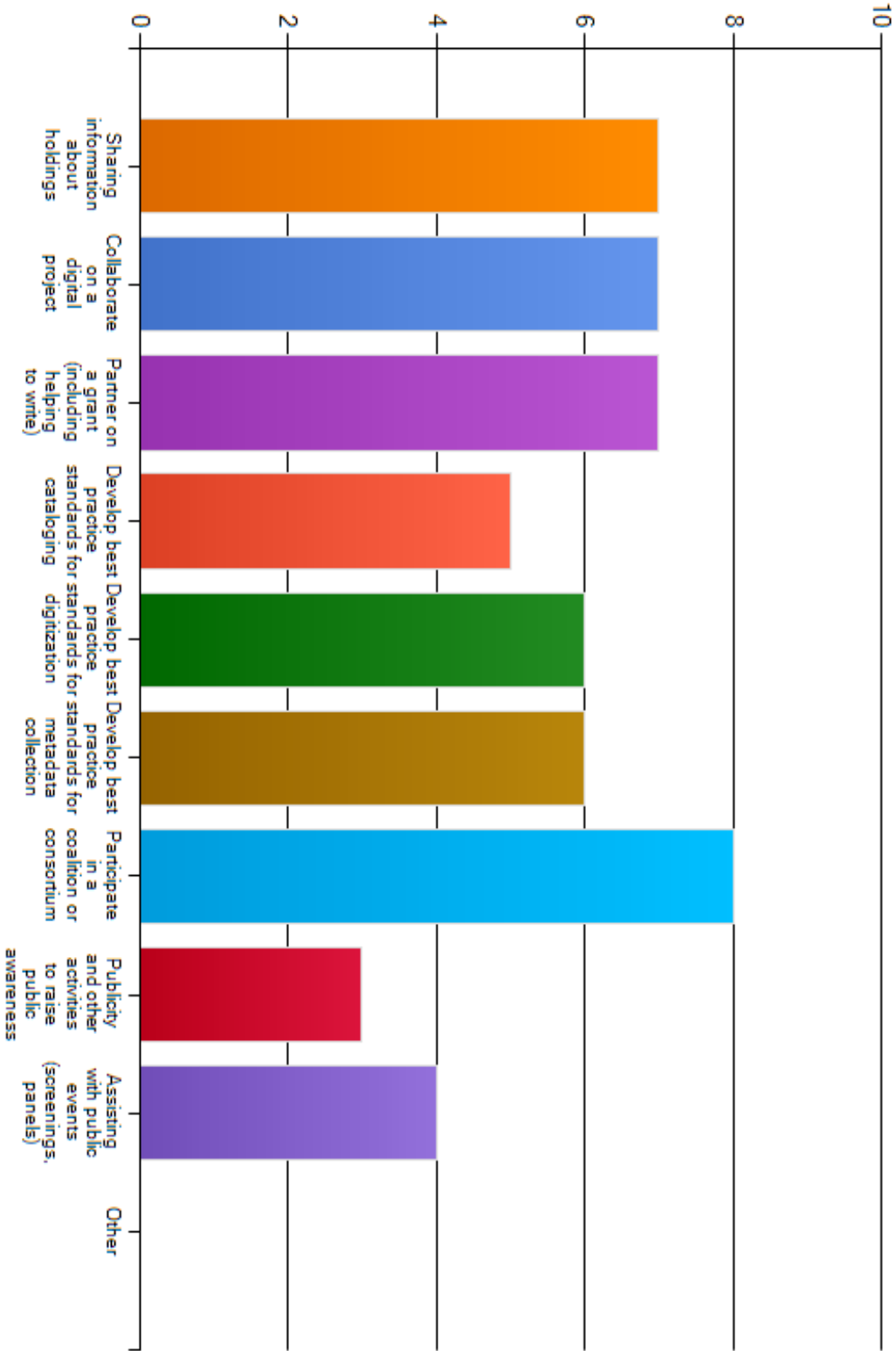
What percentage of your collection is made up of the following materials?



One of the most interesting bits of information coming out of the survey is that ALL respondents said they would be interested in working with the HKG Digital Archive in some capacity. The breadth of areas people are willing to collaborate is also surprising. It seems only logical that the areas garnering most support are ones that would benefit the entire community of archives and libraries in Hawai'i. People are less interested in raising public awareness but very interested in digital projects and information sharing.

Understandably, people are also very interested in partnering in areas that directly affect their own collections. One respondent noted that "We would probably keep that which makes our collection unique and share that which promotes our institution in the best possible light." Others noted that there is a limit to how much time they could contribute on a volunteer basis, "we have checked the boxes saying we would be interested in collaborating on a digital project and partnering on a grant, but, as a small, two-person production facility, we cannot actually commit to these time-intensive activities without financial resources." These two points suggest that effective collaboration must take into consideration and address each partner's interest with real time and financial burdens.

Would you be interested in working with the Giugni Archive in one or more of the following activities? Select all that may be appropriate.



PART 2:

Establishing an Archive

Introduction

The importance of the HKG Digital Archive Project has been vocalized by both Senator Inouye and Senator Akaka. "The Giugni Archives will perpetuate and share the special history and culture of Native Hawaiians, and allow voices from the past to touch future generations. It will be especially valuable as a resource for creating educational materials, and for researchers," said Senator Daniel K. Inouye. Senator Daniel K. Akaka noted that the Archive "will enable the sharing and perpetuation of the culture, collective memory, and history of a community that Henry Giugni so dearly loved. It will ensure that future generations have access to the traditional knowledge and wisdom of all indigenous peoples."

In the search for a consultant, the HKG Digital Archive Request for Proposal stated that the Archive would like to model itself on DENSHO, the Japanese American Legacy Project and Stephen Spielberg's USC Shoah Foundation Institute. Both are good examples to draw inspiration from as well as practices.



Figure 3. Screen shot from the USC Shoah Foundation Institute for Visual History and Education

A) Henry K. Giugni Archive Project

The HKG Digital Archive Project represents a real opportunity to create a truly unique one of a kind institution in Hawaii. The establishment of a physical space, construction of a digital archive, and development of procedures and practices for audio visual and digital moving images is unprecedented. There is nothing comparable in the State. The Archive can address a real and pressing need to preserve a rapidly disappearing Hawaiian moving image culture and history. Simultaneously, the Archive can also assume a leadership role in setting standards and practices that can be emulated in other collecting organizations.

Currently, there are a number of disparate efforts at preserving audio and moving image collections in Hawai'i with varying degrees of success. While the HKG Digital Archive may eventually take the lead role in preserving audiovisual collections, it cannot be expected to preserve everything on its own, nor should it try. A sustainable model and means for deep collaboration is both important and necessary. The HKG Digital Archive can offer to the community the expertise required to preserve vast amounts of media materials. In doing so, it can leverage the combined resources of the Hawaiian community of archives and other cultural organizations with shared goals.

B) Creating a Program

The creation of the HKG Digital Archive should not solely be about creating a physical space to store materials. Nor should it merely strive to digitize old materials and put them online. Albeit important activities, the Archive should aim to develop a program that works with various partners, actively seeks to secure a diverse community of users, and is not static but grows and evolves over time.

Users

Situating the Archive within a University context would create a built-in user base from which to grow. Doing so also establishes the Archive's main user group, for which it serves, as the faculty, students, and larger academic community within the various University of Hawai'i Campuses.

According to a recent report by Intelligent Television and NYU, "*Video Use and Higher Education Options for the Future*" there is an emerging demand for online video repositories. Faculty and students' educational use of video on campuses is accelerating rapidly in all departments, across all disciplines. The University should recognize that a benefit of the HKG Digital Archive is that it will be perfectly positioned to meet these new and rising demands. The Archive will be able to provide the raw primary source materials this group demands to generate new forms of scholarship, develop new curriculum, and construct new models of scholarly communication.

As previously mentioned, there is an intense interest in Hawaiian collections on the UH campuses throughout the State. The mission of the HKG Digital Archive to preserve Hawaiian media collections would be an invaluable resource to this important and growing constituent. The diversity of materials in the Archive will generate an inter-disciplinary interest across several departments including: Hawaiʻinuiakea School of Hawaiian Knowledge, Political Science, History, Law School, and Academy for Creative Media. This interdisciplinary interest can already be demonstrated by the acceptance of a panel about the HKG Digital Archive at the *8thHawaiʻi International Conference on Arts and Humanities* scheduled for January 2010. The decision to accept the panel was based on a peer review process.

The Archive is also likely to service two other important communities. The first is the indigenous Hawaiian community. The Archives will enable the sharing and perpetuation of the culture, collective memory, and history of a community that has traditionally been overlooked. A potential public component to the Archives activities includes educational programming such as lectures, screenings, and events. These activities help develop a sense of community through a public consciousness of the past and direct link to kupuna. The second important community is the network of media makers, documentarians, television producers, local programmers, and public screenings. Access to new raw materials may encourage several new works.

Partners

A report from the Association of Research Libraries, (March, 2009) notes that collaboration will be extremely important to the future of most memory institutions, particularly those that don't have built-in communities such as university-based archives. The HKG Digital Archive may find therefore a wide range of organizations and groups willing to collaborate on shared interests (a theme already highlighted in the Survey Results). Such cooperation may be a loose collaboration or informal association, while others may entail deep partnerships of shared resources, work, and efforts. Examples may include:

- Acquisition of a collection
- Collaboration on a preservation project or partnering on a grant
- Integrating the Archive's resources into a school or department's curriculum development, student teaching and research, or large faculty academic project
- Sharing information or catalogue
- Creating tools for cross-catalogue searching or building interoperability between institutions

- Building an online collection of shared resources around a common theme, event, or issue
- Participation in a conference, symposium, or other public event
- Generating new resources – such as conducting oral histories that will ultimately become part of the HKG Digital Archive. Chris Lee believes this could be an activity for the students in the Academy for Creative Media. Jocelyn Leialoha M-Doane from the Ka Huli Ao Center for Excellence in Native Hawaiian Law at the William S. Richardson Law School also expressed finding a home in the HKG Digital Archives for the oral histories the Center is planning to conduct.

New Opportunities

- The past few years has seen fundamental change in the nature in the way we communicate. In the scholarly community an article or paper is no longer the only vehicle to convey knowledge. The vehicles which facilitate communication have exploded (audio, video, datasets, direct linking, mash-ups). As scholars and students alike adapt to utilize these new compound objects the HKG Digital Archive is ideally situated to provide the raw materials used in these new forms of communication.
- The younger generation is going to carry the academic and scholarly world forward in a way the existing community cannot. The adoption of moving images, social networks, Web 2.0 has been slow on campuses. Virtual Worlds – user generated environments such as Second Life have been seen as a major area of development for education and conferences. As a result, over 160 universities now have a presence in Second Life - a space where people can quickly come together and communicate, despite their proximity (Cyber Infrastructure Technology Watch, The Coming Revolution in Scholarly Communications and Cyberinfrastructure, August, 2007).
- At the Washington University Film & Media Archive we have been exploring the possibilities of having a presence in Second Life. A virtual museum “*The Hellfighters Museum*” is dedicated to a collection of materials from the film *Men of Bronze*. This film is the definitive story of the black American soldiers of the 369th Infantry Regiment, known as the "Harlem Hellfighters," who, because of segregation in the U.S. Army, fought under the French flag in World War I. The museum is situated in “Virtual Harlem” – a space that has recreated 1920’s Harlem.



Figures 4 & 5 - Images from Virtual Harlem, a space in Second Life representing 1920's-1930's Harlem Renaissance



Figure 6 & 7: Ohio University Virtual Campus

Ohio University has constructed an entire “virtual campus” in Second Life to recreate the classroom. <http://www.youtube.com/watch?v=aFuNFRie8wA>

- It is not difficult to think of a “Virtual Hawaii” space dedicated to Hawaiian culture, arts, and science that may be developed and incorporate materials from the HKG Digital Archive. Interest in potential partnerships led to a meeting with Kazuyuki Hashimoto President of **Avatar Reality**. The company was founded in December of 2006 “to create a next-generation virtual world platform dedicated to bringing people together on a global scale.”

C) Organizational Structure

To achieve a high-functioning and efficient state of operations in the Archive it is important to strike a balance between personnel needed for user services, administrative functions, and preservation and digitization activities. With a primary mission to preserve Hawaiian media materials, it will be absolutely necessary to have access to Hawaiian language specialists, historians, legal or other cultural experts. This will be achieved through a combination of key professional and staffing positions being filled by Hawaiians and both formal and informal partnerships with the Hawaiian academic community and public in general.

Audiovisual archivists, like librarians, museologists, and other collection professionals exercise a particular power over the survival, accessibility, and interpretation of a society's cultural memory. Recognizing the influences and understanding the nuances of their work is essential. It should not be lost on those making the staffing decisions in the HKG Digital Archive.

Advisory Board

The creation of an Advisory Board for the HKG Digital Archive should assemble a group of expert advisors that will help grow the operations and prestige of a world-class institution. The structure and activities of the Board should be carefully decided upon when selecting members. The HKG Digital Archive may even decide to have two boards. The first, comprising of high-profile figures members who are willing to lend support to the Archive through the use of their name and primarily assist with fund-raising efforts. A second "working" Board may be created to advise more specifically with the Archive's operations, archival practice, and technology.

The Advisory Board should comprise of a variety of local and national leaders considered specialists and recognized in their respected fields. Members should be invited to participate on the Advisory Board based upon their ability to bring expertise and insights to an aspect of the Archive's operation. This may include, but not limited to, media production, scholarship and education, archival management, Hawaiian culture and history, fund raising, and communications.

The Advisory Board will play an important role in the "big picture" discussions and vision of the HKG Digital Archive. It would be advisable that the structure of the Board should produce non-binding recommendations on a variety of activities and projects beneficial to the Archive's long-term growth and goals. Recommendations could include:

- Working and partnering with the Hawaiian community
- Strategies to create a national presence
- Assistance in identifying potential resources for its growth
- Identifying collections for future acquisition

Director or Head of Archives

The first person hired should be the “Director” or “Head of Archives.” It is critical that there is a single person identified as directing the HKG Digital Archive’s daily operations, making policy and procedural decisions, building partnerships, and working full-time to bring the Archive to fruition. Once a host institution is found the Director’s position will need to be filled. This person will need to be intimately involved in discussions about planning, construction, and other aspect of building the HKG Digital Archive. Seeking out and negotiating the acquisition of collections and determining the short and long-term goals of the Archive will also be high priorities.

Initially, the Director will be involved in all aspects of the Archive’s operations. Responsibilities will change as the Archive grows, increases its scope of work, and adds more staff. The position’s responsibilities will slowly change from managing the details necessary to bring the Archive into existence, to larger vision goals, objectives, growth and stability.

Administration Assistant

The Director should next hire an administrative assistant. The person need not be hired until the Archive is constructed (or nearing construction). The assistant’s roles in the Archive may change over time but will initially consist of assisting with user services, daily administrative duties in the Archive, administrative work associated with the larger institution, assisting with organization and arrangement of the Archive, cataloging, and other duties as needed. This position should be considered as a support staff position.

Digital Specialist - If the Archive is to prioritize an online presence relatively early on, a digitization specialist will be needed. The person should be familiar with the production process, video formats, and digitization workflows of analog materials, knowledge of tape decks, equipment, and editing software such as Final Cut Pro. This position is a professional position.

Cataloging Specialist - Another critical position is a cataloger/metadata expert. This person should be responsible for the management of the cataloging effort and media asset management system. This position should not be underestimated as to the importance of the overall organization and access to the Archive’s materials. This position is also a professional position. Hiring a cataloger with Hawaiian language skills and knowledge of Hawaiian history is highly recommended.

Additional staffing

Other personnel that may be required once the Archive is fully functioning include an IT specialist, an additional assistant for patron services, and a person for the management of website/online activities.

Staff will not only need the equipment, supplies, and tools to perform their work, they will need professional development opportunities to remain on top of their profession and abreast of latest technological developments. Therefore, the Archive should encourage opportunities to train its staff and gain more skills to keep this knowledge in Hawai'i.

D) Building an Archive

Organizing the archival effort is essential to organizing the archive. Planning for its operations must precede any discussion of film and video collections, catalogue records, or online resources. The HKG Project Team has several options and paths it can pursue in its efforts to create a new film and media institution. Some options are more realistic than others and some more original and creative. However, all require a monumental effort and support.

There are essentially three ways in which to proceed with the creation of the HKG Digital Archive. The first is to create an independent free-standing not-for-profit organization. The second is to build an archive within a larger organization and acquire collections. The final option is the reverse of the second, acquire desired collections and build an archive around the collections.

Independent Organization

The lure of the first option, to be able to determine and chart the directions of the Archive without being encumbered or inhibited by a larger organizational structure, is certainly appealing. An undertaking to fully support an independent media archive would be costly, complex, and difficult to sustain in the best of conditions. Beginning such an endeavor in the current economic climate would prove to be challenging.

Any serious deliberation of this thought about pursuing this option would require serious investigations into the Project Team's ability to run a capital campaign, raise funds for staff, purchase equipment, identify and attract technical expertise, and sustain it over time.

Densho is an example of this kind of organization. While the concept of preserving a particular history in a digitized fashion is similar to the objectives of the HKG Digital Archive, it is important to note that their

specific functions and activities are very different. A more detailed discussion is provided below in the Digital Archive Examples section. Densho was created in 1996 with the initial goal of documenting oral histories from Japanese Americans who were incarcerated during World War II. As a 501(c)(3) nonprofit organization, Densho relies on contributions from foundations, corporations, and generous individuals.

Situation Within a Larger Institution

The second option is to establish the HKG Digital Archive in a larger educational institution such as the University of Hawai'i. Given that the University already has a long history of managing archives and collections through their library system it seems a logical choice. This is further compounded by the fact that the Project is already being run through the Research Corporation of the University of Hawai'i.

If the Archive is to be a part of a larger institution, the endorsement must receive strong support from the UH System. Similarly, the Archive must be astute and aware of the institutional culture of which it is apart and should work to promote the larger institution as well. Defining the organizational structure of the HKG Digital Archive within the UH system will be a fundamental question that must be addressed. And it won't be properly addressed without support from senior administrators in the UH System.

It is essential that many key questions are both answered and understood, these include: Where does the Archive fit in the parent institution? Who does the Archive Director report to? What level of autonomy will she/he have in operating the Archive? A clear line of reporting will be necessary to ensure the lines of authority are in place at the outset of the Archive's operations.

However, it is rare that an archive is constructed without the firm commitment to receive a valued collection. More traditionally, Archives tend to acquire important collections and archival space is created to house these collections. Therefore, it would be rather unusual if the HKG Digital Archive found a permanent home without the formal commitments of recognized collections.

Acquiring Collections

As a third option, the HKG Digital Archive Project may wish to secure a number of high profile collections prior to or concurrent to seeking a home. The Film & Media Archive at Washington University was created in 2001 because the University was awarded the Henry Hampton/Blackside Collection. Similarly, in 2006, the University of Southern California (USC) College of Letters, Arts & Sciences and became the home for the Survivors of the Shoah Visual History Foundation and was renamed USC Shoah Foundation Institute for Visual History and Education.

In addition to overall hierarchical structure, it is imperative that the level of support and commitment to the Archive is understood and fully embraced. Failure to receive anything less than full commitment will lead to future problems or outright failure. The HKG Digital Archive must be seen by the supporting institution as a unique and valuable resource and not a burden or expense. Inviting submissions as part of a RFP process will help to identify the series contenders and allow discussions to occur with a variety of different organizations. I will discuss this in more detail in the Recommendations section. Moreover, opening up the RFP can lead to many creative and innovative potential arrangements. One example of such an arrangement, although it has not been discussed, could integrate the HKG Digital Archive and PBS Hawai'i (both looking for new space).

Physical Space and Functions

A good layout of space in the Archive will help facilitate its functions and allow for effective and efficient operations. In designing the Archive, consideration must be given to the different areas of the archive and their functions. These spaces include: office space, a processing space, the vault, and public space.

Location

When deciding upon the physical location for the HKG Digital Archive several factors pertaining to the safety of the material must be considered carefully. While it is often difficult to predict disasters, the Archive should not be constructed in an area known to be susceptible to floods, surf surge, lava flows, a Tsunami flood area, in an existing building that has a prior history of problems, or any other situation that may compromise the Archive's materials. Valuable lessons can be learned from the flood at the Hamilton Library at UH Manoa several years ago.

Within the UH System there are ten campuses that could potentially become the permanent home for the Archive. Given the current fiscal crisis in the UH system however it remains to be seen which campus might be best suited, or capable, of undertaking this large project. An invitation to submit a proposal for the HKG Digital Archive will certainly help to make this clearer.

The ability to situate the Archive within close proximity to some of the user groups discussed above, a significant Hawaiian population, and the ability to service the Hawaiian community should all be important considerations.

i) The Vault

The most important aspect of media longevity is temperature and humidity. Good environmental conditions can significantly help prolong the life of film and video materials. The head archivist should work closely with the architect, engineers, and contractors when designing the space and HVAC system to ensure the equipment can maintain temperature and humidity conditions needed year round. The HVAC system should be located outside the vault, duct work should be well insulated, and the space monitored for several conditions.

Hawai'i has equable temperatures with small seasonal variance. Typically, this lack of large swings in temperature constitutes a relatively stable environment. However, the average temperatures, and equally important, relative humidity on the Islands are far higher than recommended conditions. In particular, the RH averages 60-70% in leeward areas and 70-80% in windward ones. Night time and early morning hours often sees the humidity at 90%. (Western Regional Climate Center <http://www.wrcc.dri.edu/>)

Prolonged exposure over 60% RH can lead to fungal growth on both paper and video tape. High temperatures and humidity accelerate decay of the film and video materials, therefore faithful attention to storage conditions is absolutely necessary in an environment like Hawai'i. A high quality HVAC system must be central to the HKG Digital Archive's immediate and long-term preservation efforts. *The Book of Film Care* published by Kodak notes that under the conditions of high temperatures and humidity "there is little chance of preserving films without rather special or even heroic efforts." The Image Permanence Institute's *Storage Guide for Acetate Film* serves as a guide to help "buy time" for partially degraded film through improvements in storage conditions.

Past preservation strategies have relied on the construction of cold storage vaults. While this strategy is proven to be effective, a fundamental problem is undercutting the effectiveness of this strategy... the lack of playback equipment in the near future. Thus, the Archive could find itself with a lot of cold tapes and nothing to play them on. It is necessary therefore to be able to effectively balance storage needs with digital preservation efforts. Given the relatively large costs to construct and maintain cold storage the HKG Digital Archive will want to proceed carefully what a vault is being proposed.

Table 2. Image Permanence Institute Storage Guide for Acetate Film (New Film)

	55F	60F	65F	70F	75F	80F
20% RH	250 yrs.	175 yrs.	125 yrs.	90yrs.	60 yrs.	45 yrs.
30% RH	200 yrs.	125 yrs.	90 yrs.	70yrs.	45 yrs.	35 yrs.
40% RH	150 yrs.	100 yrs.	70 yrs.	50 yrs.	35 yrs.	25 yrs.
50% RH	100 yrs.	80 yrs.	50 yrs.	40 yrs.	25 yrs.	20 yrs.
60% RH	80 yrs.	60 yrs.	40 yrs.	30 yrs.	20 yrs.	15 yrs.
70% RH	60 yrs	45 yrs.	30 yrs.	25 yrs.	16 yrs.	12 yrs.
80% RH	50 yrs.	35 yrs.	25 yrs.	17 yrs.	13 yrs.	9 yrs.

Table 2 depicts how long it takes for new film stored in a given temperature and relative humidity to show early signs of vinegar syndrome (decay). **The highlighted areas represents the conditions the majority of Hawai'i films have been stored over the years.**

Table 3 (below) shows the time required for a decomposing film to double its acidity. Essentially, what this chart is depicting is how fast decomposition occurs. It shows that while a film today may still be in fair condition, the process of deterioration has begun. Once the film reaches a certain level of acidity it reaches an autocatalytic stage where the deterioration begins to feed off itself exponentially accelerates vinegar syndrome.

Table 3. Time required to double acidity in film.

	55F	60F	65F	70F	75F	80F
20% RH	65 yrs.	45 yrs.	30 yrs.	20 yrs.	15 yrs.	10 yrs.
50% RH	15 yrs	10 yrs.	7 yrs.	5 yrs.	4 yrs.	2 yrs.
80% RH	6 yrs.	5 yrs.	4 yrs.	3 yrs.	2 yrs.	2 yrs

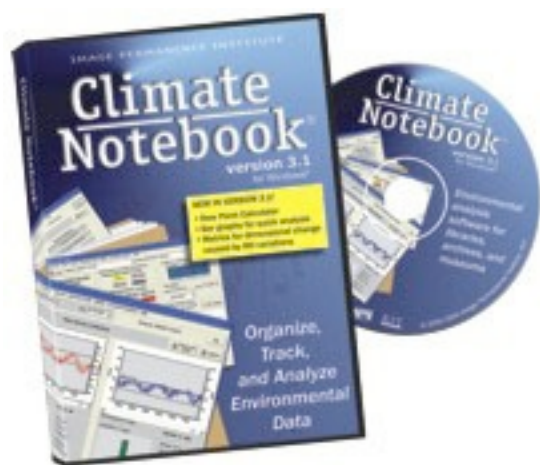
The International Standards Organization (ISO) publishes the most widely recognized guidance for the extended life of video tape. The organizations acceptable ranges are listed in Table 4.

Table 4. ISO Standards for Extended Video Life

Maximum Temperature F	Relative Humidity %
52	50%
63	30%
73	20%

The Image Permanence Institute's PEM data logger and Climate Notebook are excellent tools to measure and analyze temperature and humidity in the vault. Climate Notebook produces graphs, charts, and other helpful indicators to help measure the environmental conditions that affect the rate of decay of the materials in the collection.

<http://www.climatenotebook.org/>



ii) Shelving in the Vault

Shelving can often be overlooked when prioritizing the needs of an archive. However, a good shelving system can significantly improve the efficiency of the Archive's operations in addition to providing greater storage capacity. When designing for storage the first consideration is the kind of shelves the Archive will use for materials – fixed or mobile. Fixed shelves are less expensive and relative easy to

install while high density shelves provide more shelving per square foot of floor space than traditional shelves (see diagram below from Commercial Shelving Inc.).

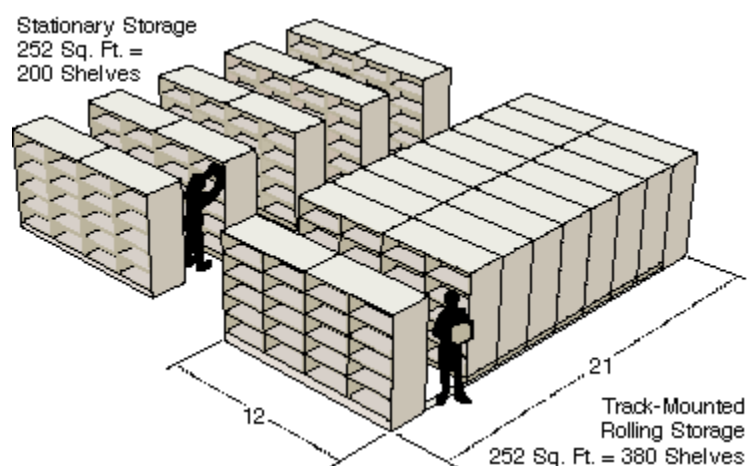


Figure 8. Comparison of shelving types

Using the calculations above, a vault space with 2500 Sq. Ft. of shelving equals 1800 more shelves. This can translate into tens of thousands more film and video items. Moreover, by using longer ranges than the 12ft. examples above you eliminate the extra aisle further increasing shelving space. Thinking another way, this increased shelving space can reduce the size of the vault needed and therefore the amount of space needing environmental controls. From the same calculations above:

2000 Stationary Shelves = 2500 Sq. Ft.

2000 High Density Compact Shelves = 1326 Sq. Ft.

With energy cost relatively high in Hawai'i a careful cost analysis should be undertaken to see if the initial upfront costs offset savings in the long-run. As such, when designing the vault the Archive will have to balance current shelving needs, costs, anticipated growth, types of media formats (which affect the size of the shelf) and cost of controlling the vault space.

If the Archive wishes to explore the compact shelving plan there are a couple of options for high density storage shelving in Hawai'i. One of the country's leading manufacturers of high density "compact" shelving systems is Space Saver. The Hawai'i dealer is Systemcenter, Inc. Another local option which may be cheaper is Commercial Shelving, Inc. The Archive should also talk with the UH Librarians to determine their sources and if there is a preferred vendor.

Systemcenter, Inc.

Sandra Edwards, the Education, Museum and Library Market Manager

Tel: 808-284-7779

Email: sandra@systemcenter.com

Web: <http://www.systemcenter.com/>

Commercial Shelving, Inc.

2835 Ualena Street, Honolulu, Hawaii 96819.

Tel: 808-836-3811

Web: <http://www.comms shelving.com/>

The HKG Digital Archive must select several shelving styles appropriate for a mixed media environment. Four-post shelves seem appropriate to store both the manuscript boxes and film cans. Cantilevered shelving would be best for the videos, audio, CD's and DVD's. However, several other factors must be considered before a shelving type is decided upon. These factors include: floor loads, weight of materials (film is much heavier than books while videos are lighter), dimensions of the shelves, cost, and if the shelves will be fully mechanized or mechanically assisted. These decisions affect amongst other things the length of the carriages.

Another important decision in the vault is choosing the type of lighting over the shelves. The shelving company the Archive chooses to work with should be able to provide and install lighting as part of the shelving order. Lighting loads tend to be the largest influence for raising vault temperature and counteract an archive's efforts to keep temperatures low. The more control the Archive can have over lighting the more it can directly affect cooling costs. Similarly, if the HVAC system is malfunctioning, the ability to turn the lights off will significantly slow rising temperatures until the system can be fixed.

A variety of lighting options is possible and should be explored carefully. Options range from keeping the lights on around the clock, to those fully controlled by switches, to those that are triggered by movement or an opening of the shelves. Many of these discussion and decisions should be made with consultation with a shelving specialist, architect, and engineer. The shelving vendor selected should provide full installation and maintenance services and be available at all stages of a project planning process.

In deciding a shelving option the Project Team may wish to visit several locations to look at shelves that have been installed by the various companies being considered. For example, Systemcenter, Inc. has installed shelves at the State Foundation on Culture and the Arts and BYU Hawai'i. Systemcenter is also currently involved in several other projects at the University of Hawai'i. Sandra Edwards mentioned that Michael Thomas, at UH who has been working with libraries and archives to conduct an assessment of their collections and assist with their storage planning. Most of his work pertains to Hawaiian collections. The Project Team should approach Mr. Thomas given the noticeable increase and interest in Native Hawaiian collections.

Whatever shelving solutions are decided upon, planning must include:

- Size of the storage space (determined by anticipated size of collections)
- Types and lengths of the ranges
- Types and size of the shelves
- Will the shelves be mechanically powered, mechanically assisted, or manually moved
- what will be stored and how it will be accessed

Materials deteriorate at different rates and need to be organized separately in the vault. As such, collections should be divided by format separating film, videos, audio, and paper based manuscripts. Different shelving types and sizes will be required to store this assortment of items. Ideally, the Archive will want to select a couple different options that are compatible to a couple different format mediums.



Figure 9 & 10 - Examples of four-post Space Saver shelves.

Film needs to be stored flat. Shelving should be deep enough to accommodate large film cans or manuscript boxes on each side of the shelving unit. The shelves shown here are adjustable. The film shelves measure 47 ½" long and 24" deep. The manuscript box shelves measure 42" long and 31 ¾" deep.

Video shelves are significantly shallower in depth therefore the ranges are much smaller. The videos should be stored upright like books. The shelves can be organized by format and similarly sized tapes (i.e. VHS, BetaSP, U-Matic) to maximize the efficient use of shelf space. Each shelf (35 ¼" x 6 ¾") will hold 27- BetaSP tapes, 23- UMatic tapes, or 30 VHS tapes. These figures should be used when calculating the amount of shelving required for the Archive. Tapes should be labeled sequentially and not tied to a specific shelf location.



Figure 11. Video Shelves in the Washington Film & Media Archive

iii) Vault Security

The vault should be monitored for several security issues. It should be alarmed for forced entry, fire and smoke alarms and “water bugs” for flood. In addition, the environment the environment should also be monitored with high temperature and humidity alarms. Ideally, it would be preferable that the alarms could be tied into and monitored within the larger institution central security systems. All of these

factors must be planned with appropriate consultation and an awareness of these issues must be understood when negotiating a permanent home for the Archive. For additional security features the Archive can consider card access for entry outside of normal hours of operations.

iv) Other Vault Considerations

Vault storage should be separate from work and traffic areas. Floors should be tiled and not carpeted to minimize dust and facilitate ease of cleaning. The vault should be constructed on the ground floor, or an upper floor that is designed with sufficient strength. Film is much heavier than books and therefore the architects and engineers must be aware of possible increased loads.

v) Processing Space

The processing space must be separate from the vault to allow for the proper handling of new acquisitions as they come to the HKG Digital Archive. The space should be used to re-house old and dirty containers, fumigate or freezing materials (to get rid of pests that may be brought in with new acquisitions) and general organization of the materials before they are moved into the vault. Room design should be allowed for several workstations that can accommodate computer and video equipment.

The processing space should have hard surfaces, can be easily cleaned, large enough to unpack boxes and sort through unprocessed collections. The space should have large tables which will be necessary for arranging and sorting through large collections. The space could also contain cabinets and/or shelves for supplies and operating materials.

vi) Inspection Space

A space dedicated to inspection is necessary to assess and view materials in the collection. It can be adjacent to the processing space, however, enough of a separation is necessary to ensure that contaminants from the processing space do not easily move into the inspection space. When examining film and video a clean environment helps to ensure that new dirt or dust are not introduced to the item. This space should be well ventilated to allow for the dispersal of potentially harmful odors for decaying materials.

vii) Digitization Workstation

A designated space for a digitization workstation will also be necessary. The room should be separated by a door and from the other spaces in order to help keep the room clean, but also to minimize audio and other sounds. The station should be determined in consultation with the staff person (i.e. digital archivist) who will be responsible for the Archive's digital project. Purchase of digitizing equipment is not necessary until a staff person has been hired. A sample workstation has been included and is discussed in a later section.

viii) Public & Office Space

There should be several kinds of public spaces within the Archive. There should be a centralized "reading room" that can accommodate visitors to the archive and those conducting research. A separate viewing room is needed for patrons who desire to watch videos. Additionally, the inclusion of a meeting room or "classroom" would be helpful to accommodate classes and presentations.

Staff offices should be located off of the main public spaces and reading room for convenience of patron services and security issues around theft and handling Archive materials. Office shelving, furniture and other fittings for the Archive will need to be planned for.

OPERATIONS OF THE ARCHIVE

Nature of the proposed Collections

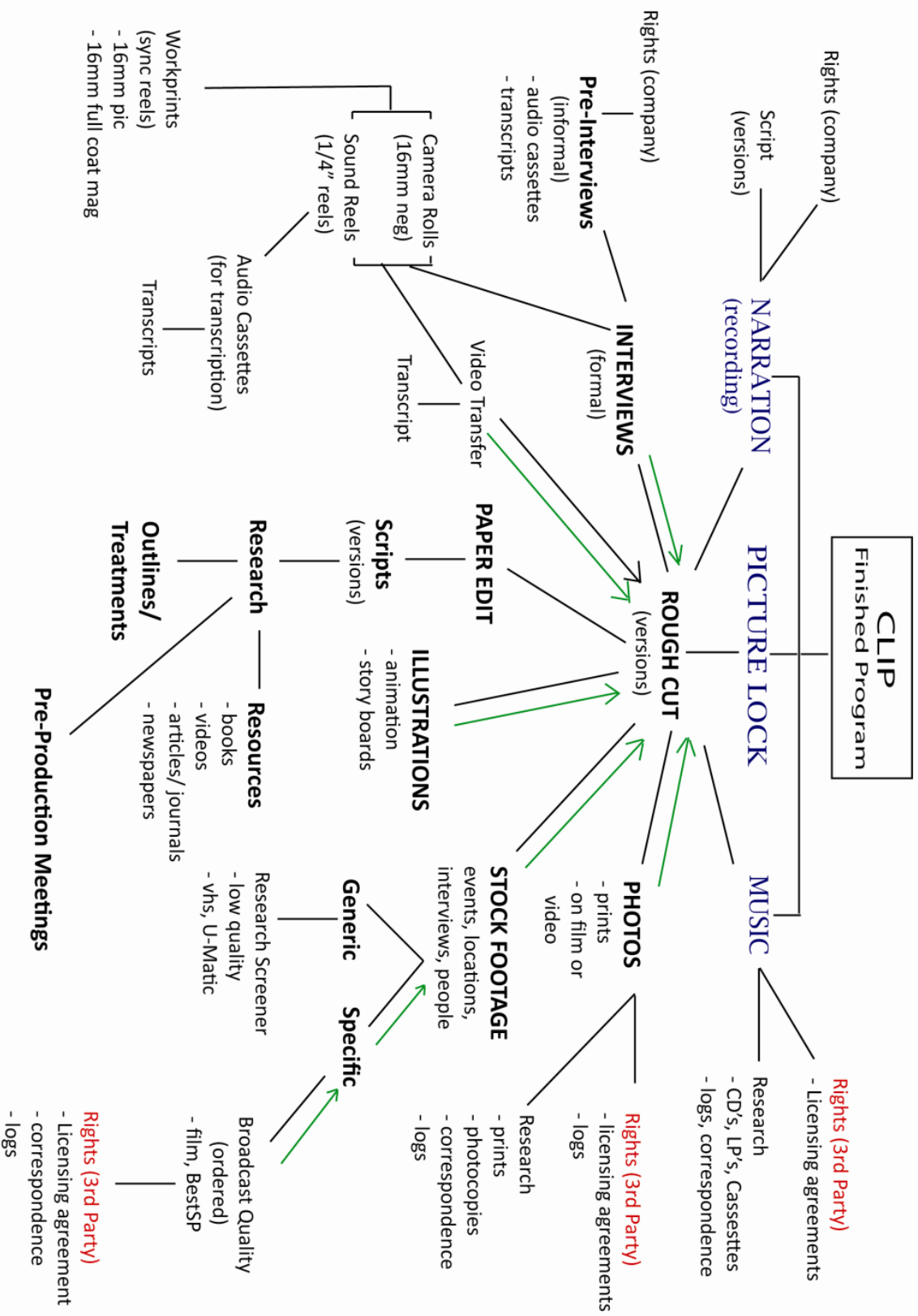
A thorough understanding of the nature of the materials that may ultimately reside in the HKG Digital Archive will assist in many of the planning aspects of operations. An awareness of the complexity of the materials in question, knowledge of the multifarious interrelationship between the materials created in the production process, and understanding of the context in which they are created has many implications on the Archive's cataloging, arrangement, and access policies.

Accepting "raw" materials and production elements brings a new level of complexity to archiving but also brings a wealth of underutilized materials that represent a wealth of information and potential which far exceeds work that can be done with a traditional collection. Lisa Carter, from the Association of Research Libraries Special Collections Working Group states that "As we increasingly share a collective collection of books, it is the special collections that will distinguish our institutions. The rawest

representations of human endeavor and the building blocks of new knowledge are the rare materials and primary sources in our special collections and archives.” (Feb 11, 2009).

The schematic on the next page was designed by me to help explain the complexity of new materials the Film & Media Archive was embarking upon when they decided to create an audiovisual archive in the Washington University Libraries. It demonstrates the various sources a filmmaker may have obtained materials, the various formats that may have been created, context and stage at which an item may have been created, and the various copyrights necessary at different stages.

ANATOMY OF A FILM CLIP



Archival Workflow

There are well documented and long established archival workflows that can help direct the operations of the HKG Digital Archive. As such, I will provide a cursory overview to simply reference these considerations but will elaborate on certain aspects of archival management that may differ as it pertains to audiovisual collections. Archivists typically follow established workflows that include: appraisal, acquisition, processing (arrangement and description that includes both physical and intellectual control of a collection), preservation, access, and providing user services.

Appraisal

This is the process in which materials are reviewed and considered whether they are worth acquiring. **This is based upon the perceived value of the materials in question and as it relates to the Archive's goals and mission.** The Archive will not be able to take in everything it seeks or is offered. A clear understanding of the HKG Digital Archive's mission is essential and materials not considered to have value or fall outside of the Archive's mission should not be accepted.

Accession

The process of acquiring a collection can be relatively easy or extremely complicated. Accession records should be created to document the process, inventory the materials, and explain the legal transfer of the materials. When receiving a collection it is likely to arrive in varying degrees of arrangement, organization, and condition. Boxes and containers may be broken, falling apart, or inappropriate for long-term storage. Labels may be peeling off folders or tapes, and materials may not be very well identified.

A deposit agreement should be mandatory for the acceptance of any collection into the HKG Digital Archive. The agreement should address the following issues:

- The nature of the transfer – is it a gift, bequest or loan. A gift is the immediate transfer of the materials to the Archive. See Appendix 3 for a sample.
- A bequest takes effect upon the death of the donor (physical materials may be transferred earlier and copyrights bequest to the Archive).
- The agreement should set forth in detail exactly what is being transferred.
- If the donor is also the copyright owner of the materials the agreement should address which aspects of copyright are being transferred to the Archive. These rights are explored in detail in a later section.

Arrangement & Description

The process entails organizing the collection in accordance with the main tenants of archival practice of provenance and original order. While these principles should be followed whenever possible, audiovisual archives often find it necessary to modify the core archival cannons of archival management to provide appropriate media-specific physical storage conditions. However, the order should be maintained intellectually within the cataloging system. The cataloging system and its capabilities will determine the level of arrangement that can be accomplished. The Preservation Guide for the BBC Archive notes that “an archive runs on its catalogue – metadata should be at the top of the list.” <http://bbcarchive.org.uk/pmwiki/>

Preservation

These are activities that are undertaken to protect the collection from deterioration. Preservation is an ongoing process that typically begins as soon as a collection is acquired. Activities re-housing into archival containers, cleaned and repaired if necessary and/or applicable, mounting film on cores storing in cans which allow circulation, and removing any contaminants. These kinds of activities are essentially geared toward preparation for long-term storage. Other activities will include reformatting and transferring degraded film and video.

Access

Preservation of materials is all for naught if there is no access made available to the collections. Access comes in a variety of ways including catalogues, finding aids, viewing capabilities, and public programming. With increased use of online applications amongst the general population as a whole, it is imperative that a strong online presence is established... particularly with younger generations.

The Online Computer Library Center (OCLC) produced a report in 2005 that showed only 2% of college students started their work at a library. With the Web now as the *de facto* encyclopedia of choice, and Google the means with which to search and organize this information, the HKG will need to be found online. Therefore, it will be important for the HKG Digital Archive to look at Web 2.0, Social Media, and indentify its role in the Archive’s operations. This is NOT about having a website – this is about having a presence, about integrating its collections into the “information workflow of younger generation students.”

KEY POLICY DOCUMENTS

A range of policy documents will need to be established to govern and guide the HKG Digital Archive's operations and activities. These documents will help formalize the principles by which the Archive will operate and conduct its work. **As a general principle the Archive may wish to publish all of its documents on its website to allow for transparency of its guiding principles and as a means of sharing with the public and the archival community as a whole.**

Several key policy documents include:

- Mission Statement or Statement of Purpose
- Collection Development Policy
- Indigenous Materials Policy
- Access and Use of Collections
- Preservation Policy
- Collection Disaster Plan
- Digitization Policy

Mission Statement

Foremost, the HKG Digital Archive must have a clear mission statement or vision to guide its operations. It is also effective in communicating answers to the questions of why the Archive was established and what it is attempting to accomplish. The Mission Statement is a key tool that assists with acquisition. Materials out of scope of the Archive's mission should not be accepted. Planning for the archive must consider several important functions and activities.

The HKG Digital Archive leadership should develop a written Vision Statement or Mission Statement in the near future. A tentative statement might be helpful until a more formalized one is developed once the Archive is situated in a permanent home. I have provided a few examples for the HKG Digital Archive Project to consider:

USC Shoah Foundation Institute for Visual History and Education - Mission Statement

To overcome prejudice, intolerance, and bigotry--and the suffering they cause--through the educational use of the Foundation's visual history testimonies.

Densho – Mission Statement

To educate, preserve, collaborate, and inspire action for equity. Densho educates young and old about the World War II detention of Japanese Americans to promote respect for civil liberties.

Collection Development Policy

The Collection Development Policy is a key document in interpreting preservation policy. It defines the scope and nature of Archive's collecting activities helps the archivist select what collections to acquire and, equally important, what is not accepted. There are inherent dangers involved in accepting anything "Vacuum cleaners generally suck up junk, and it does little good to pretend this junk is a cultural treasure" (Selecting & Appraising: Archives & Manuscripts, Frank Boles p. 66)

In developing a collection policy some basic criteria of what the policy should consider and address includes:

- A statement of purpose (goals and objectives of the Archive)
- The users or clientele the Archive aims to serve
- Knowledge of the external environment – knowing what other archives collect often helps an archive focus on areas not well served. Given that there is no single institution on the planet dedicated solely to the preservation of all types of Hawaiian moving image materials, the HKG Digital Archive will immediately stand out as the premiere institution.

The HKG Digital Archive collections should focus on Hawaiian moving image heritage but also include materials considered valuable to the people of Hawai'i and their collective shared history. Supporting materials relating to the audiovisual media or productions should also be accepted and include items such as:

- Photos
- Interviews and outtakes
- Scripts
- Research and Producer notes
- Posters
- Stock footage
- Music

When deciding on whether to donate their collections to an archive most filmmakers, documentarians, and other donors typically desire to have their collections kept together. The reason that the Film & Media Archive at Washington University was able to secure the collections of New York filmmaker William Miles (over other organizations despite being in New York) was its commitment to take his entire collection.

Indigenous Materials Policy

As the HKG Digital Archive develops its collection it must respect the rights of Indigenous owners of tradition in relation to the ownership of cultural materials. In providing access, the HKG Digital Archive must be sensitive to and respect the culture and social context of the items in its collection. There are several examples in other countries that the HKG Digital Archive can look to when developing its policies. More importantly, these discussions and decisions must include respected leaders in the Hawaiian community.

Guidelines should direct the HKG Digital Archive on the following issues:

1. Hawaiian Intellectual Property Issues
2. Accessibility and Use
3. Subject Headings/Classification of Materials
4. Secret or Sacred Materials
5. Offensive Materials
6. Education and Training for Professional Practice
7. Awareness of Hawaiian Language, People, and Issues

The suggested guidelines above have been borrowed from Aboriginal and Torres Strait Islander Protocols for Libraries, Archives and Information Services <http://www.cdu.edu.au/library/protocol.html>

In Hawai'i, the HKG Digital Archive should work with the *Ka Huli Ao Center for Excellence in Native Hawaiian Law*. The Center promotes education, scholarship, community outreach and collaboration on issues of law, culture and justice for Native Hawaiians and other Pacific and Indigenous peoples and the preservation of invaluable historical, legal, and traditional and customary materials (from its website <http://www.law.hawaii.edu/kahuliao>). I met with Jocelyn Mdoane, from the Center and she expressed a strong interest to work with the HKG Digital Archive.

Access Policies

A general user's guide will be helpful to answer some of the basic questions patrons will have about using the Archive and its materials. Policy documents can address access rules, duplication procedures and costs, reference services (and fees if applicable), visiting the Archive, research assistance, classroom use, copyright notification and licensing fee schedules.

Various aspects of access to the archive holdings often require different levels of monitoring and/or permissions. For example, the Archive may make its holding available to the public for research or viewing without any additional permissions. However, if a patron wishes to use the materials in a capacity beyond reference, such as in a documentary, third party copyright permission may be required. Examples of forms that would help facilitate patron services include:

- paging forms: used when a patron is requesting materials
- Request for reproduction of Archival Materials: used when a film or video needs to be duplicated for access/ viewing purposes only
- licensing forms: used to license materials (in which the HKG Digital Archive would own copyrights). The Archive should expect many queries from filmmakers and others looking to license materials in their own works. A fee schedule should also be created and made public stating rates and terms.
- Many Archives put their policies online for easy access. An example from the Washington University Film & Media Archive can be found online at:
<http://library.wustl.edu/units/spec/filmandmedia/policies.html>

Preservation Policy

Archives around the world are faced with the reality that the rate of deterioration of their materials exceeds the rate of preservation activities (and capacity). A key concept to preservation is knowing and accepting that not everything can be preserved (or should be preserved) forever. Decisions for preservation have to recognize that not all items need to be given the same level of care, security, and attention. Thus, preservation amounts to identifying and prioritizing items that:

- 1) Need the attention and resources because they are deteriorating;
- 2) Are unique – there are not multiple copies of the material circulating elsewhere. The copy in the Archive may be the only one that exists
- 3) The inherent value of the contents of the film or video as it pertains to Hawaiian history, art, science, culture or potential for scholarship and education.

Similarly, preservation is a delicate balance of maintaining the physical integrity of the item for posterity with making it as accessible as possible for use. Generally, it should be assumed that the on-going cost of maintaining an item over its lifetime will far exceed the costs involved in the initial acquisition. This is particularly true when discussing preservation of digital medium.

Preservation includes the following:

1. Planning and policy making
2. Guidelines to prolong life – housing, storage conditions, handling guidelines, user education and policies.
3. Scheduled inspections and testing – AD strips for film, rewind video (tape packs), minor repairs, cleaning, etc
4. Duplication and digitization
5. Managing information about preservation work
6. Use of an item; handling & shipping; screenings, etc.
7. Identifying high priority items: unique copies, the original or best copy, “at-risk” materials



Figure 12. Materials need to be re-housed



Figure 13. Videotapes need plastic casings

Disaster Plan

Disaster preparedness and preparation is a key activity in any archive. In addition to the current literature on disaster planning, the HKG Digital Archive should look to a forthcoming comprehensive manual for disaster planning from the National Archives and Records Administration. The manual will provide strategies to better prepare film, tape, and disc collections in advance for potential disasters. It will also address proper methods of salvaging AV media after a disaster. Contributors will be holding a workshop at the AMIA Annual Conference in St. Louis (November, 2009).

Digitization Policy

Guidelines for a digital workflow will need to be developed and put into practice once digitization activities begin in the Archive. Key activities include file-naming conventions, identification of formats for preservation and access, and procedures put in place for cataloging the newly create files.

An example of a digital workflow would include:

1. Inspection and evaluation of item. Determine a preservation copy is merited or an access copy will suffice.
2. Digitize the video or audio asset
3. Identify storage space for all copies made
4. The creation of intermediate copies that can be used for transcoding
5. The creation of quality access copies
6. Updating catalogue records

File naming conventions

When you work collaboratively, it's important to have a system to help organize files. Standardizing the way files can be created and named will foster consistency, allow for easier searching, and ensure the files have meaning to future users. Important considerations to naming files include:

1. All characters should be alpha/numeric only. Do not use symbols or other characters.
2. Only use the underscore keystroke to separate information (do not use spaces, tabs, dashes, backslash, etc...)
3. All characters should be lowercase.
4. Each file begins with a code identifying the archive as the HKG Digital Archive
5. Each collection in the archive should have a unique collection ID number
6. A unique ID is created for the file. Ideally, this ideal will be generated when then item is catalogued. This process also ensures all digital files are catalogued in the HKG system
7. Identify the role of the file. There are three options: i.e. preservation master file, master intermediate file, access file
8. Date: enter date as year, month, day numerically without any spaces (i.e. 20081208 represents December 8, 2008)
9. End the file name with the type of file format (i.e. .wav)

Technical Considerations

Software and Systems

The decision on which software and management systems the HKG Digital Archive chooses is extremely important. Software can play a vital role in streamlining archival workflows and the decision will fundamentally affect the day-to-day operations of staff, their capabilities of organizing and sharing data, and the level of technical support needed both within the institution and/or from a vendor.

Lisa Spiro has produced an excellent report that analyzes a number of archival management software that is currently available. It includes popular applications such as Archon and Archivist Toolkit. The report *Archival Management Software: A Report for the Council on Library and Information Resources* should be consulted to familiarize decision makers of some of the criteria that should be considered when choosing a system. The report can be downloaded at <http://clir.org/pubs/reports/spiro2009.html>

A fundamental difference that must be understood between collection management systems which generally supports an activity such as cataloging, and an “integrated” archival management system, that helps with the archival workflow. This kind of system will support cataloging in addition to addressing particular needs of archives, such as archival description and conformance to archival standards.

Archival Management Systems

Lisa Spiro notes that “A primary advantage of archival management systems is the ability to enter data once and generate multiple outputs. Rather than being isolated in separate systems, data can be brought together through a single interface, reducing redundancy and making it easier to find and manage information.” The HKG Digital Archive should therefore be cognizant of systems that increase efficiency, has a good data interface, produces reports, and web-publishing capabilities.

For a detailed discussion of criteria to consider see Section 6 of her report. Key factors listed include:

- open source or a commercial system
- cost
- Sustainability
- Quality of customer support (vendor or community)
- Support for archival standards

It is important to evaluate an Archival Management system primarily on its ability to address the needs specific to the HKG Digital Archive. It will need to allow for customization, manage digital rights, be scalable, simple yet powerful, and sustainable. A prevailing attitude in many of the digital asset management (DAM) systems available today is that digital files are far more valuable than the “antiquated” analog predecessors. As such, many systems do not manage existing physical carriers very well. In a media archive it remains vitally important that the physical formats still be maintained and managed.

Similarly, systems designed for traditional paper based archives or collections containing only published works can be restricting as they don’t address the types of media materials that will comprise the HKG Digital Archive and the multifarious formats on which they are contained. In addition to the systems Spiro discusses, the HKG Digital Archive should look at a system called MAVIS.

MAVIS (Merged Audio Visual Information System)

Mavis was originally designed by the National Film and Sound Archive in Australia by film and media specialists to cope with the great variety of material and needs in their collection. It is currently being marketed to other audiovisual archives throughout the world and is the only archival management system designed specifically for media collections.

MAVIS is currently used in the U.S. by the Library of Congress, the Academy of Motion Pictures Arts and Sciences, and Washington University Film & Media Archive. Because it was designed for these large institutions it can accommodate all mediums (manuscripts, photos, audio, video, film, artifacts, and digital materials). It is an archival management system and allows for the management of the entire archival workflow. See attached price quote.

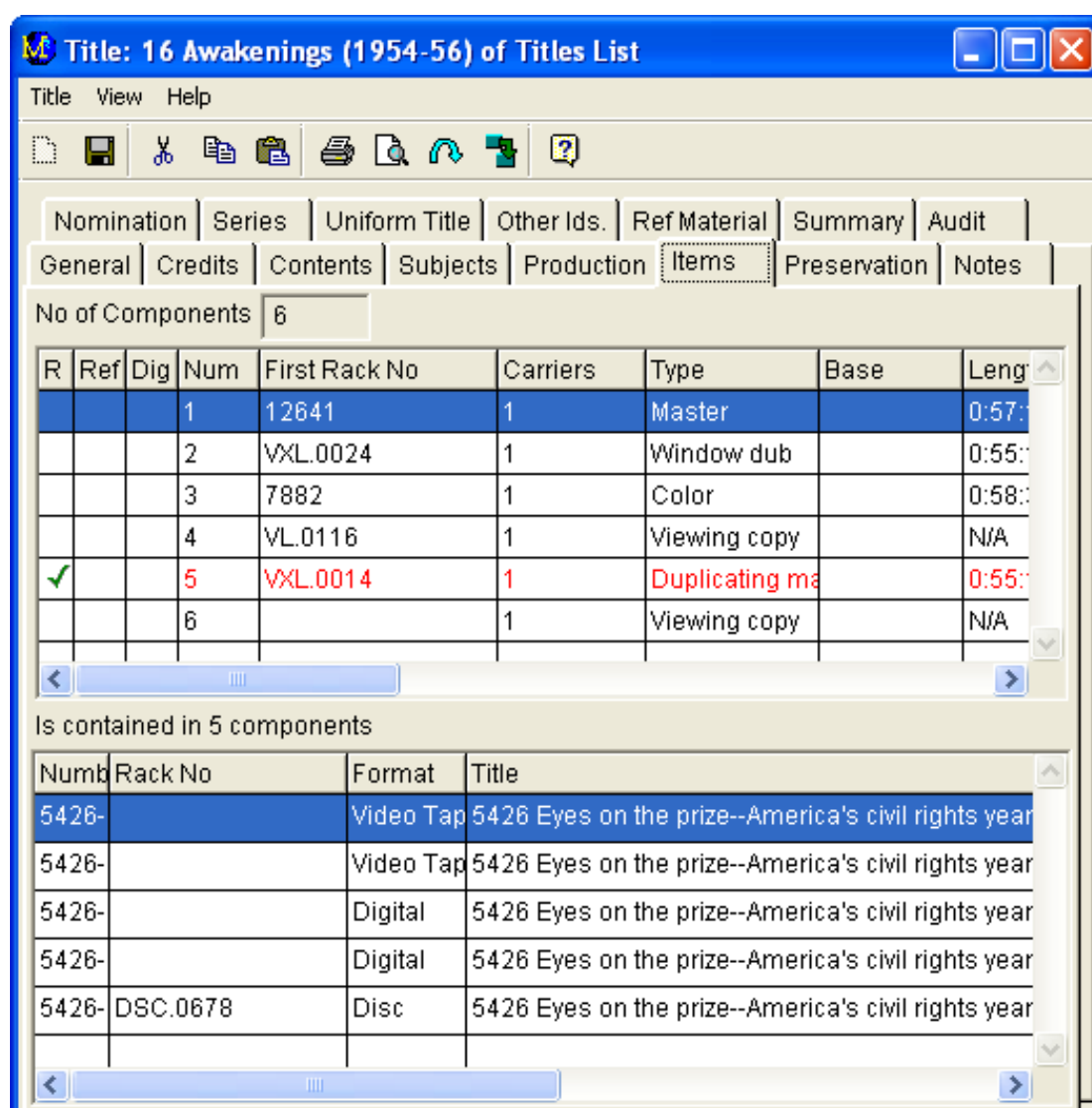


Figure 14. Screenshot of MAVIS

Content Management System

A content management system (CMS) is different from an archival management system. The CMS is a management tool that allows the Archive to control its online content and build dynamic websites. It also assists in the organization and management of digital assets in a centralized system. Without such a system files can get scattered across devices, departments, and individual computers. Open source CMS

examples include Drupal and Alfredo. Chris Lee and myself met with people at Campus Docs about the development of the HKG website. They are proposing a solution using Alfredo and will likely be approached again for more information as part of the HKG Digital Archive Phase 2 “pilot” project.

Kamehameha Schools is now using Drupal as their main CMS. They worked with their IT department to recently launch their new site <http://kaiwakiloumoku.ksbe.edu/> . In an email shared with Heather Giugni, the original purpose of the website was “to create a virtual center while the bricks and mortar Cultural Center was being built on the Kapalama campus. The project has now been placed on hold so the site evolved into a cultural resource and virtual archive website.” A meeting with Deby Chock at Design Logix (the person behind this site) may be beneficial when the HKG is deciding on a CMS.

Copyrights

Copyrights can be an intimidating and confusing issue. On top of this, the HKG will also need to be aware of and address Indigenous rights. A lack of understanding of copyright law, Hawaiian culture, and fair use principles, can lead to inadvertent violations of copyright ownership. Such lack of understanding can also create an environment of inaction such that materials are not made accessible because of the fear copyright might be violated. Too often copyright is experienced as an impediment when an institution adopts a “culture of permission” or misinformation and fear from legal threats dampen exploration and sharing of resources.

My recommendations should by no means be taken as substitute for legal advice. It is strongly recommended that the Archive consult legal counsel as it formulates its policies and documents. However, it is essential that those working in the archive are familiar with copyright law to use them as a valuable tool in their operations and ensure laws are not violated. The HKG Digital Archive should take the position of ensuring copyrights are protected but also adopting a strong position with regards to providing access.

The rights in a work consist of both the tangible rights to the physical materials and the intangible rights of intellectual property. As such, physical materials may be owned by or transferred to the HKG Digital Archive but the rights to use those materials may not. This arrangement restricts the use of the materials by the Archive and is not desirable when it can be avoided. It also adds another layer of administration for Archive personnel as the rights holder has to be contracted each time the material is

to be used. It is recommended that the HKG Digital Archive act creatively to obtain as much copyright to the materials in the acquisition process.

The copyright owner controls 5 sets of rights:

1. The Right of Reproduction – the right to make copies.
2. The Right of Distribution – the right to disseminate a work.
3. The Right of Public Performance – the right to publicly screen the film (there is an exception under the fair use doctrine discussed below).
4. The Right of Public Display – this is generally associated with an exhibit and does pertain to motion pictures themselves but may apply to materials such as photos that come with a film.
5. The Right to Prepare Derivative Works – this is the right to create new works based on the original work.

Deposit Agreements

It is of utmost importance that the HKG Digital Archive develops clear and concise deposit agreements between its potential donors and the archive. Standard forms should be developed, with consultation with legal counsel, to be used as default agreements. These agreements should spell out exactly what rights are being transferred to the archive.

There are two types of transfers: gifts, which transfer all right to the archive; and loans, which usually have restrictions on the use of the materials. In the event that a loan agreement is made with a donor, the provisions of the loan should have a clear term of expiration such as the loan converts to a gift after 5 years or upon the death of the donor. It is always preferable to seek outright gifts.

All aspects of copyrights are divisible. Therefore a donor can transfer any number of the sets of rights to the archive. Similarly, they can be further broken down by geographic area, length of time, and can be exclusive or non-exclusive. However, the donor cannot grants rights he or she does not have in the materials being transferred. For example, if a filmmaker is transferring all rights in their documentary to the Archive they cannot transfer the rights of third party owners (i.e. someone else's photos or footage that were used in the film).

Fair Use

Section 107 of the Copyright Act establishes a test based upon the purpose, nature, amount, and effect of the proposed use to determine if it qualifies as Fair Use. This section, as well as Section 108, which gives the Archive certain special privileges, should be well understood by Archive staff. Archives and Libraries are able to both reproduce copyrighted materials for preservation purposes as well as publicly screen copyrighted materials in certain contexts. Chapter One of the copyright act can be found at: <http://www.copyright.gov/title17/92chap1.html#108>

Creative Commons

Creative Commons licensing should be considered for all “works” that may be created by the HKG Digital Archive. This would be particularly relevant if the Archive partners in the creation of new educational materials or oral histories. A creative commons license makes it easier for people to share and build upon the work of others, consistent with the rules of copyright. Creative Commons provide free licenses and other legal tools to mark creative work, decided by the creator, so others can share, remix, use commercially, or any combination thereof. There are six main licensing options ranging from free use to more restrictive options. <http://creativecommons.org/about/licenses/>

Metadata

There is a good introduction to metadata on the Metadata on the University of Queensland Library website <http://www.library.uq.edu.au/iad/ctmeta4.html>. "Metadata is structured data which describes the characteristics of a resource. It shares many similar characteristics to the cataloguing that takes place in libraries, museums and archives." The main purpose of metadata is to provide adequate levels of descriptors to provide excellent descriptions and facilitate information sharing.

A metadata schema is comprised of the following characteristics: a set number of elements, the name of each element, the meaning of each element. The key to successfully implementing a metadata schema is applying a balance of detail and efficiency.

Metadata that exists in a newly acquired collection is usually in a non-standard format. The data will need to be mapped to the adopted metadata schema and integrated into the management system the HKG has adopted. Determining the detail or “granularity” of metadata

description is important in the cataloging process. It affects both the degree of effort in describing an object and assists users to find the materials.

Metadata is useful both for exploration of collections but also to Archive staff managing the collection.

- Descriptive metadata - facilitates discovery, title, author, subject, geographic scope, intellectual property, etc.
- Administrative metadata – intended to facilitate management of the resources by the Archive staff. Often customized and determined based on local needs. Includes copyright statement, access requirements, etc.
- Technical metadata – captures information about the original formats as well as the digital file, file size, type, format, bit rate, etc.
- Preservation metadata can overlap with technical data however it is useful to record changes over time, work done on materials, etc.

List of Metadata Standards

A few well know standards for moving images include:

SMPTE Metadata Dictionary – a register of over 1700 data elements. This is overly excessive for most.
<http://www.smpte.org/standards>

Dublin Core – is a bare-bones list of simplified metadata fields that can be applied across many formats. There are 15 basic descriptive elements. www.dublincore.org

PBCore was based on Dublin Core but had added much necessary detail to allow for adequate description and of media materials produced by PBS radio and television. The premise behind this effort is to be able to share media items between stations. There are 53 elements. It is available with a free license and should be looked at by the HKG Digital Archive www.pbcore.org

METS (Metadata Encoding and Transmission Standard) – a standard for encoding descriptive, administrative, and structural metadata regarding objects within a digital library, expressed using the XML schema language.

Metadata will be unusable if it cannot be read or shared by other computers. Therefore, metadata needs to be encoded in a scheme that understands the semantics of the metadata schema. This allows the data to be processed by a computer program. One of the most used schemes for sharing files is XML (eXtensible Markup Language)

Cataloging Rules

Rules for cataloging will inevitably always have a level of customization to meet the special needs of an Archive. However, AMIM2 (Archival Moving Image Materials, version 2) is a cataloging standard that the HKG Digital Archive staff should be familiar with. Cataloging best practices includes:

- metadata field definitions
- creating controlled vocabularies and definitions
- what to complete in each field

Controlled vocabularies, authority names, and subjects are all tools to help ensure records are described accurately and correctly. Determining these will be very important given the special needs of Hawaiian names and language. This is an area that the UH Library should be able to assist given its larger Hawaiian collection. Many of the metadata elements, cataloging standards, vocabulary, etc. can be controlled by pull-down menus which are integrated into the cataloging system. For example, this approach may also be applied to describe material conditions (i.e. broken, cassette case damage, edge damage, mold or fungus, oxide shedding, uneven wind, sticky shed, etc.)

The LOC *Moving Image Genre-Form Guide* Genre serves as a shorthand for archivists, scholars, and filmmakers. It is the best source for appropriately way to categorize film and television works into readily understood classifications. It is not as helpful when describing raw materials. <http://www.loc.gov/rr/mopic/migintro.html>

Digital Preservation

Video Recordings

The storage of archival audio as digital files, instead of physical carriers such as Digital Audio Tape and CD and DVD disk, has been the accepted norm for several years. It is only recently that digital video files can be accepted as preservation copies. The relatively large files and confusion over formats and codecs prevented many from taking that leap to digital video preservation. Storage space has become cheaper and while there is still no standard for digital video preservation old analog tape obsolescence and degradation is driving people to look at digital solutions.

Roy Rosenzweig the founder of the Center for History and New Media (CHNM) at George Mason University has called audio and moving images “the most complex historical artifacts to digitize.”

Archives must deal with enormous file sizes, time, labor, and large costs. As a result they are often neglected out of inactivity. Others lack the resources, hardware, software, and technical knowledge to sustain a digital archive.

A quick investigation at the costs of digital preservation will reveal that that the major costs of a long-term digital system do not reside on the storage media, but in the rest of the system (hardware, software, support, maintenance, and administration). Despite storage space being cheap the cost of digital storage is much more expensive than most people recognize. A decrease in storage costs does not necessarily equate to a decrease in the costs to manage the data. Similarly, the costs of long-term storage are dependent on the rate of activity: the more the information is used the more expensive it is to administer.

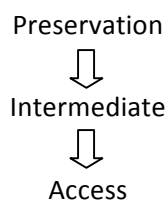
In his article, “The Digital Black Hole” Jonas Palm, Head of Preservation at the national Museum in Sweden, states that the standard practice for digital preservation is to establish a practice that continually and periodically migrate files approximately every five years (following the manufactures roadmap means every 2 generations to the newer format). **Preservation therefore becomes a management issue once items are digitized. The digital archive is based on the concept of continual migration and verification.** Migration to progressively higher density storage will eventually translate to progressively greater storage capacity. This trend appears to continue indefinitely into the future

There are 3 primary digital storage options open to the Archive today: magnetic hard drives, digital data tapes and digital videotape, and recordable optical disk (i.e. DVD). Hard Drive prices have been dropping and capacity has been increasing dramatically for years. This trend will continue for several years to come. Hard drives are designed to be on and spinning, leaving them on a shelf for long periods of time is not a storage option. As such, large storage space requirements can be very costly if they are maintained online or “nearline” (type of data storage that is between online and offline – typically not instantaneous, but it only requires a few second to access).

LTO-4 is the preferable data tape options format for moving image media. The current generation LTO-4 has a capacity of 800GB per tape and costs approximately \$50 per tape. LTO-5 is in development and is expected in about a year. Its storage capacity and data transfer rate will double LTO-4.

Digital video tape such as Digibeta is still an acceptable option for those archives not networked. However, optical disks are not accepted as long-term archival storage solutions.

Preservation Files: Three-Tiered System



- a. Video: preservation files will be 10-bit uncompressed. Estimated storage requirement is 100GB per hour
- b. Video: intermediate files should be a high quality format that can be easily transcoded such as DVD PRO50. Estimated storage requirement is 25GB per hour
- c. MPEG-4 is a good quality access format requiring approx 100MB/hr Photos: Output Type: True Color; Resolution: 600 dpi; Format: tiff; Image compression: none

Audio Recordings

International standards and best practices for audio preservation have been firmly established and are readily accessible for archives. Organizations such as the Association for Recorded Sound Collections (ARSC) and the International Association of Sound and Audiovisual Archives (IASA) have been instrumental in these developments.

International Association for Sound and Video Archive (IASA) has adopted a 96kHz, 24 bits standard. For detailed information on Recommended procedures for transferring analog audio tape see Part Two from the March 2006 report "Capturing Analog Sound for Digital Preservation" sponsored by the National Recording Preservation Board of the Library of Congress. The .wav file is considered the standard file for preservation.

While the IASA standard master is a 96 kHz/ 24-bit file, it is acceptable to use a 48 kHz/ 24-bit or 44.1 kHz/ 16-bit depending on the nature quality of the source. A recorded telephone conversation on cheap audio cassette tape is not going to be a good recording in the first instance and therefore may not justify

the higher rate. These are calculated decisions the Archive will have to make as it begins to digitize for preservation purposes.

Proposed Digital Preservation Strategy for the HKG Digital Archive

Digital files should be structured in a 3-tiered system (where applicable): Preservation, intermediate, and access copies of files are created.

1. Preservation files are uncompressed
2. Intermediate files are high quality files (some compression) and are used for creating access copies
3. Access copies are highly compressed files that can be easily viewed and shared.

Data Flow

1. Preservation, intermediate, and access files are created at the HKG Digital Archive workstation.
2. Files are moved from the workstation drives to File Servers in Systems IT
3. Because the files are so large, preservation files may be moved off-line and backed up on LTO-4 tape. The creation of LTO-4 tapes may be unnecessary if the Maui Supercomputer is an option as suggested by David Lassner. This is a clear example of a possible benefit of being attached to a larger institution.
4. Intermediate files are maintained online and are accessible only to the HKG Digital Archive workstation (servers will be low use)
5. Access copies are transferred to streaming servers
6. Catalogue records are created for the new files

Mass Digitization

Given that digital transfers of analog happens in real time, once the HKG Digital Archive is functioning it will soon come to the realization that the tens of thousands of video and audio tapes in its collections will require a massive scaling up of digitization efforts if they are to be preserved. Therefore, automation of the process will eventually need to happen. This is both extremely expensive and requires massive amounts of storage space. Decisions do not need to be made immediately by the project Team, but it is an issue that will need to be addressed.

The Library of Congress is a leader in this area. The entirety of LOC's recorded sound and videotape holdings is in the process of being digitized. Some of their formats will require a hands-on, one-at-a-time approach, others formats like 3/4" videotape will employ the SAMMA robotic operation. This level of large scale digitization will be out of reach for the majority of archives who will be forced to employ a mix of strategies based upon finances. (McDonough, 2004, Preservation-Worthy Digital Video: or, How to Drive your Library into Chapter 11)

The creation of so much digital information required LOC to develop a sophisticated archival system for long term storage. They chose MAVIS as its archival management system. Information about their preservation efforts can be found at: <http://www.loc.gov/avconservation/preservation/>
<http://www.digitalpreservation.gov/videos/>

SAMMA

Front Porch Digital produces the Samma Solo and SAMMA Robot is the only system I am aware of that employs an automotive solution to digital video preservation. In addition to the LOC, other clients include:

- South Florida Holocaust Documentation and Education Center has selected the company's SAMMA Solo system to migrate more than 2,200 interviews with Holocaust survivors, liberators, and rescuers
- International Tennis Hall of Fame & Museum in Newport, R.I., has selected the company's SAMMA Solo™ system to migrate 2,700 hours of archival footage
- The University of Georgia's Peabody
- ABC - The first installation of SAMMA products for the Group was at WPVI-TV, the ABC O&O station in Philadelphia. The migration process at WPVI-TV. When the work is finished at WPVI, the SAMMA-Grass Valley team will move to the next ABC O&O station to continue the project. The intention is to do each station sequentially until migration is complete at all or most O&O stations in the group.

Digital Archives - Examples

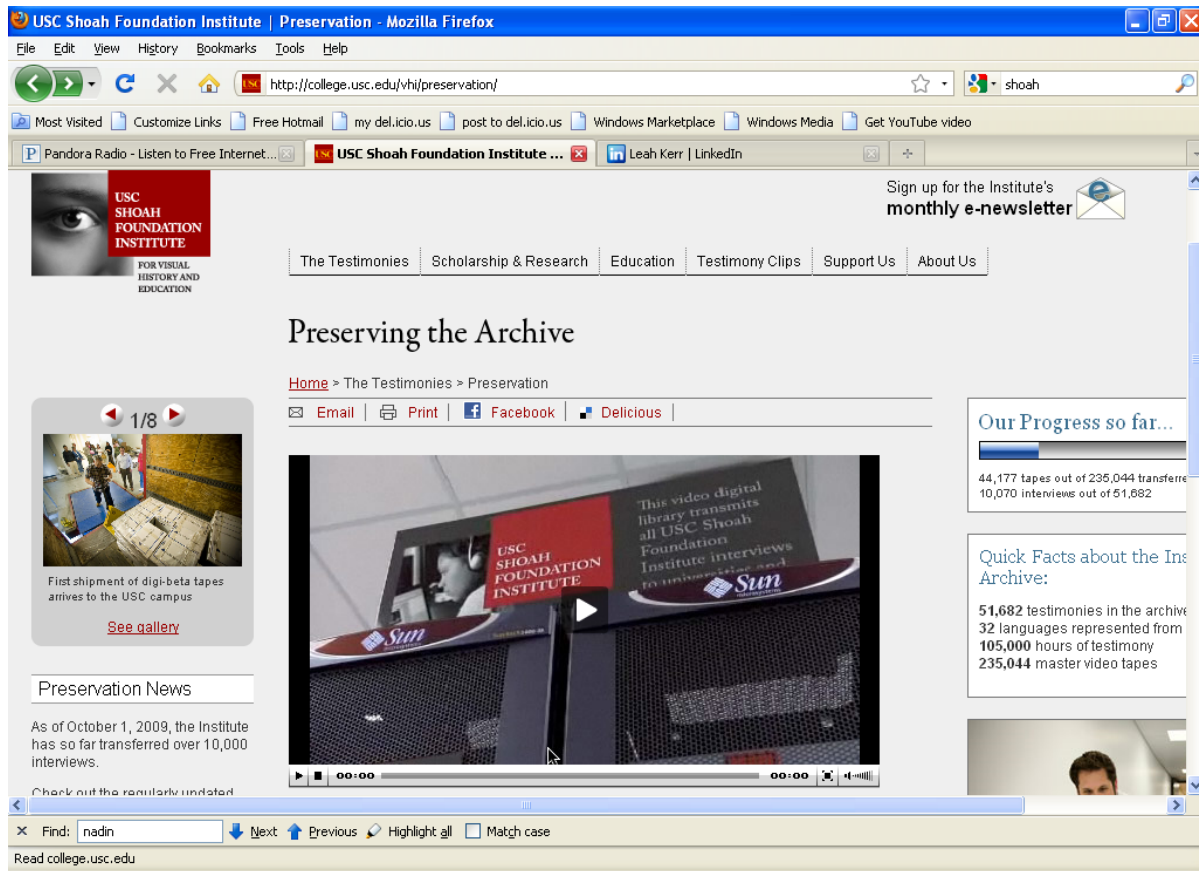
In the search for a consultant, the HKG Digital Archive Request for Proposal stated that the Archive would like to model itself on DENSHO, the Japanese American Legacy Project and Stephen Spielberg's USC Shoah Foundation Institute. This section examines both organizations to determine the applicability of their structure, preservation efforts, and access strategies to the development plans for the HKG Digital Archive.

The USC Shoah Foundation Institute's Visual History Archive (<http://college.usc.edu/vhi/>)

Inspired by his experience making *Schindler's List*, Steven Spielberg established the Survivors of the Shoah Visual History Foundation in 1994 to gather video testimonies from survivors and other witnesses of the Holocaust. The Foundation felt it important to integrate into a university environment to "advance academic research and scholarship for centuries" and is now a part of the *USC Shoah Foundation Institute for Visual History and Education*. The archive hold over 52,000 videotaped testimonies of Holocaust survivors and witnesses conducted in the mid-1990's.

The Foundation is a relatively large organization with many profession positions in all aspects of its operations including 6 Executive Staff, 10 program officers, 14 in information and technology services, and 14 regional consultants. The Foundation is also very involved and active in developing courses, education, and online exhibits.

In 2008, the Foundation determined they required a plan to digitize and to preserve their tapes which totaled over 107,500 hours of video testimony. In short the Foundation needed to address three major issues: digitize 244,000 BetaSP tapes - that would result in 8 petabytes(PB); create an appropriate file system keeping the files locally available on the network; complete the project within 5 years.



To accomplish this task the Foundation needed to automate the digitization process. As a result, they purchased two automated SAMMA robots. The new “digital masters” are saved as 10-bit Motion JPEG 2000 file (.mxf) at 75Mbps. Several derivatives are also made:

- MPEG-2 (.mpeg) at 5Mbps
- QuickTime (.mov) at 1Mbps
- Flash (.flv) at 1Mbps
- Windows Media Player (.wmv) at 1Mbps

To view a 7-minute video about their preservation efforts at: <http://college.usc.edu/vhi/preservation/>.
For a detailed discussion of the Shoah Foundation Architecture they have employed for the project see: <http://hriday.org/articles/Shoah-Foundation-Architecture-final.pdf>

The Foundation has chosen the option to package and license access to their material. Users can search the testimony catalogue for bibliographic information but they cannot access the full interviews. There is an annual subscription to the full archive of \$15,000. Institutions may acquire subsets of the archive, called Visual History Collections, in VHS or DVD media formats. Costs are \$90 per DVD. The Foundation Archive is currently available to the public in its entirety at only 21 locations across 4 countries. Members of the public can use the online "Testimony Catalogue" to view biographical information for all interviewees in the archive but must travel to a licensed locale to conduct further research.

Densho (<http://www.densho.org/>)

The Densho Archive holds over 350 visual histories (approximately 750 hours) and 10,000 historic photos, documents, and newspapers. These resources document the Japanese American experience from the immigration of the early 1900's through the 1980s with a strong emphasis on WWII incarceration. Users need to register to use the archive but it is available freely to students, teachers, and general public for educational purposes. Densho also provides free multidisciplinary lessons that introduce students to questions of civil liberties in relation to the life experiences of Japanese Americans.

Densho retains copyrights in the interviews, after allowing interviewees to review their interview. The videos are entered in the online Densho Digital Archive and are made available to registered archive users for educational purposes. Densho does not collect physical photographs, documents, or objects. They occasionally scan photos and papers and then return the originals.

Densho charges for research, identification, and duplication services. There are also licensing fees if you want to publish or distribute Densho materials. Sample costs include: Research costs - \$90 per hour (staff time) billed in 30 minute units; Image - \$25 per image for non-profit use; Video - \$100 per minute for non-profit use.

After registering and signing in to the Densho Archive I was able to search their catalogue. I have attached a screen shot to show how they present their collection.

The screenshot shows the Densho Digital Archive website in a web browser. The browser's address bar displays the URL <http://archive.densho.org/main.aspx>. The website has a yellow header with the text "Densho Digital Archive" and a navigation bar with links like "Getting Started", "Ping.fm / Your Dash...", "Film & Media Archive", "Gmail: Email from G...", "Video Explaining the...", and "TimeWarner/ HBO". Below the header, there is a sidebar on the left with a "Topics" menu listing various categories such as "IMMIGRATION & CITIZENSHIP", "INDUSTRY & EMPLOYMENT", "COMMUNITY", "RELIGION & CHURCHES (147)", "EDUCATION", "ARTS & LITERATURE (2)", "RACE & RACISM", "IDENTITY & VALUES", "PEARL HARBOR AND AFTERMATH", "NON-INCARCERATED JAPANESE AMERICANS", "MASS REMOVAL ('EVACUATION') (7)", "U.S. GOVERNMENT PROPAGANDA (21)", "ECONOMIC LOSSES (66)", "ASSEMBLY CENTERS", "INCARCERATION CAMPS", "DEPARTMENT OF JUSTICE CAMPS (64)", "ENEMY ALIEN CLASSIFICATION (183)", "REGISTRATION, THE 'LOYALTY QUESTIONNAIRE' (106)", "SEGREGATION AND TULE LAKE (103)", "RENUNCIATION OF CITIZENSHIP (24)", "MILITARY SERVICE", "RESISTANCE", "LEAVING CAMP ('RESETTLEMENT')", "EXPATRIATION / REPATRIATION / DEPORTATION (34)", "ATOMIC BOMBINGS OF HIROSHIMA & NAGASAKI (23)", and "LIFE IN JAPAN". The main content area features a video player showing an interview with Arthur Ogami, titled "Arthur Ogami Interview Segment 23". To the right of the video, there is a description of the segment, including the date (March 10, 2004), location (Seattle, Washington), interviewer (Alice Ito), and collection (Densho Visual History Collection). Below the video, there is a table listing various interview segments related to the topic of "RENUNCIATION OF CITIZENSHIP (24)".

Format	Title	Collection	Time	Place	Facility
Video	"No-no" status, renouncing U.S. citizenship, and a draftee (Norman I. Hirose Interview Segment 26)	Norman I. Hirose Interview	1943		Topaz (Central Utah)
Video	Complying with family's decision to renounce U.S. citizenship (Hiroshi Kashiwagi Interview Segment 21)	Hiroshi Kashiwagi Interview	1943		Tule Lake
Video	Deciding to renounce U.S. citizenship, separating the family (Sarah Sato Segment 24)	Sarah Sato Interview	Wartime		Tule Lake
Video	Decision and impact of renouncing U.S. citizenship (Minoru Kiyota Segment 10)	Minoru Kiyota Interview			
Video	Decision to renounce U.S. citizenship (Hiroshi Kashiwagi Interview Segment 14)	Hiroshi Kashiwagi Interview	Wartime		Tule Lake
Video	Decision to renounce U.S. citizenship: "We really didn't have any choice"; forming the Hoshidan, moving to Santa Fe internment camp, New Mexico; a chaotic incident with the border-patrol (Bill Nishimura Interview Segment 8)	Bill Nishimura Interview	Wartime		Santa Fe

Applicability to the HKG Digital Archive

The two archives are similar in that they are largely centered on documenting, preserving, and making accessible the important histories around a single issue. The HKG Digital Archive, as the Project Team has noted, aims to be broader in scope and mission, the HKG Digital Archives seeks to document "the history of an entire society." This will prove a challenging particularly if the Archive looks to develop educational resources.

In looking at the two organizations there are some aspects of each operation that can be adopted or influence some of the HKG Digital Archive's initiatives. Despite the two different models, it is clear that in both sites that education is central to their mission. **THE HKG Digital Archive should aspire to structure much of its activities towards in a similar fashion.** Both sites provide users with lessons plans, resources for instructors, and strategies for integrating their respective archives into general learning initiatives. Shoah felt that integrating into a major research institution, such as USC, would help fulfill their preservation and educational-driven mission. This ultimately may be the best option for the HKG Digital Archive.

While the Shoah Foundation is certainly impressive, the deep pockets and licensing model make it a very different kind of organization. The public accessibility and openness of Densho may be more in line with the HKG Digital Archive's goals. However, Shoah has set a high-standard for automated preservation which would be wonderful to aim towards. They are certainly “doing it right” and clearly have the resources to do so. Regardless of size of donor – you need patrons.

PART 3:

**Considerations &
Recommendations**

CONSIDERATIONS & RECOMMENDATIONS

The following recommendations are based upon the information I have been able to obtain through my research, discussions, and meetings with many archival and media professionals throughout Hawai'i. They are also rooted in the procedures and best practices adopted by the moving image archiving community. It is important to understand that moving image preservation practices continue to evolve and change. While some aspects of the profession are widely accepted and observed, other aspects, such as digital video preservation, standards still do not exist.

Widely accepted standards and best practices should be adopted and applied to the HKG Digital Archive as much as possible. However, there is rarely ever just one way to do something. Customization and adaptation will also be necessary to customize and apply local practices that best address the needs of a Hawaiian focused media archive.

Finding a Home

Stating the obvious, the immediate priority for the HKG Digital Archive Project Team is to develop the Pilot Project and begin laying the foundations for the creation of the Archive. There are several options and paths the Project Team could pursue, however, it essentially can be reduced to integrating the Archive into a larger organization or establishing an Archive independent from any parent organization.

Should the Project Team choose to establish the HKG Digital Archive within a larger institution, a formal request for proposal (RFP) should be developed. It is extremely important that the Project Team work with knowledgeable individuals to write the RFP so that it clearly describes the mission of the HKG Digital Archive and what the Archive seeks in a home. A group of reviewers will also be required to evaluate and provide feedback of the proposals. The evaluating group should be national in scope.

The decision of the Project Team should largely be based on the host institution's ability to support the Archive. The host institution must act as an enabler and remain resolute in its support. There must be a clear understanding, on the part of the institution, of the major commitment with regards to long-term financial and technical needs. At the same time it should embrace and celebrate the HKG Digital Archive

as an invaluable resource and recognize the truly unique opportunity to create something special for the people of Hawaii.

For its part, the HKG Digital Archive must understand its role within the larger organization. It must be an active participant in the larger organization's activities and contribute to its overall mission. Although demanding many resources, the Archive should bring the institution much benefit. These benefits include:

- Bringing the prestige of being the only institution in the State that specializes in the highly visible and increasingly in-demand moving images collections;
- Providing primary source materials pertaining to the history and culture of Hawai'i – translating into high demand for scholarly and academic projects;
- Act as a great recruiting tool for faculty, scholars, and students
- Act as a great fund-raising tool (because of its uniqueness);
- the potential of becoming a high profile, highly publicized archive with very visible projects and programs throughout the region
- Ability to reach and cater to generally an underserved Hawaiian community
- Potential for student work opportunities, training, and educational projects
- Multiple partnering opportunities to explore new media projects, filmmaking and production, and new forms of scholarly communication

The Film & Media Archive has brought many these benefits to the Library as well as Washington University as a whole. Shirley Baker, Dean of University Libraries at Washington University has noted that creating the Film & Media Archive is one of the best things she has done in her career.

Budget Considerations

Overview

Planning a budget for the construction of a complex institution such as a media archive has multiple factors that are essential to planning calculations. In this section I have tried to outline these factors, providing guidance that will assist in selecting strategies (that will affect the budget) and have provided specific estimates where they can be determined.

Construction Costs

The costs surrounding the construction of the HKG Digital Archive is first and foremost determined by the decision if it will be a stand-alone new building, integrated into a new building, or retrofitted into an existing building. Determining the size of the Archive will be decided after a careful analysis is made of the current and anticipated size of the collections, the space required for its operations, and the services offered.

The vault space will be the most expensive space. It needs a HVAC system to environmentally control the space maintaining a set constant temperature and humidity around the clock. Selection of a system requires engineering professions and consideration of the building system in which it is being integrated into.

The space will also require a shelving system to properly store the various media materials. Ongoing costs associated with maintaining environmental controls must consider the size of the vault and heat load from lighting. The size of the vault should be determined by the estimated size of the collection in the near future as well as allowing ample space for planned growth.

Shelving is determined by the number of items expected and the number of anticipated formats. Three sizes of shelving will be needed: for videos, for film, and for manuscripts and photos. Based on the survey count, audio and video formats will far exceed other formats. Therefore, greater video shelves should be planned for. The high density storage shelves at Washington University cover an area of approximately 2600 Sq Ft. Shelves are 7 ½ ft high and there are 10 video ranges, 3 film ranges, and 4 manuscript ranges. Approximate cost was \$250,000 which included full installation, lighting and service for 3 years. Factors influencing price will be location (Hawai'i versus the Midwest and the current price of steel). It can be expected that a comparable space will be more expensive.

Security system costs are also an expense that varies with the type of system that is selected, and is a part of the original construction costs. It is also an ongoing expense to monitor.

The HKG Digital Archive design should be planned in consultation with architects, engineers, the institution's facilities department, the Head Archivist (with input from the Project Team). Understanding the archival workflow and needs of the Archive will help create an efficient, functional, and aesthetically pleasing design.

Costs for Washington University

The Film & Media Archive at Washington University was built into the last unfinished space in an old department store that the university retrofitted for a library and administrative offices. Construction took approximately 6 months to complete. The total cost for construction, including furnishings and utilities, was \$1,313,600. I am unable to determine the ongoing facility costs for the Archive since it is incorporated into the entire building costs.

Costs for Northeast Historic Film

Northeast Historic Film (NHF) constructed a cold storage vault in Bucksport, Maine. It was the first of its kind in the Northeast and one of only a handful nationwide. Groundbreaking for the \$1.8 million (12,000 sq. ft.) state-of-the-art structure took place on June 13, 2002. In addition to providing a home for their own collections, the NHF Conservation Center offers storage services for film, video, and photographic materials. They have 3 separate facilities and prices for storage ranges from \$6.25/ month for 3 cubic feet to \$2.25/ month for 250+ cubic feet. Careful consideration should be made if the HKG is planning to offer any services such as the NHF. It represents a possible revenue stream but runs the risk of experiencing similar problems as the NHF (higher operational costs and lower occupancy than expected).

Estimated Costs for Equipment

The HKG Digital Archive will become a wonderful treasure trove of new and old technology...all of it essential to its operations. It is not cost efficient (there is not much film in Hawaiian Archives and Collections), nor practical, to acquire equipment to copy or print film. Available equipment is increasingly hard to find and difficult to maintain. The sprocket-driven mechanisms in these machines can be very damaging to older shrunken film. Much work can be done in-house to prepare the film for long-term preservation however the HKG Digital Archive should expect to outsource the transfer of film materials.

A work bench will be required to inspect and prepare film for storage and shipping to a lab for preservation. The bench should be sturdy, contain a light box, and able to mount manual rewinds. The rewinds will need to accommodate both 16mm and 35mm film. A good bench will cost approximately \$4500. **Note that the prices listed in this report are average prices from the continental U.S. for the Fall of 2009 and will be higher when equipping the HKG Digital Archive.**

Many supplies are needed for film work including a loupe, film scissors, film tape, leader, marking pens, a film ruler, shrinkage gauge, etc. Supplies will also be need for re-housing purposes such as film cans,

cases for videos, A-D Strips, and cores. These costs are relatively small and are ongoing. Prices for these materials can be found at Christy's <http://www.christys.net/about.html>. A good supply should be budgeted for the Archive's opening. These materials do not need to be obtained until the Archive is nearing completion.

The Archive will need many video decks for its operations. Most are obsolete and can only be procured used and on spaces like eBay. Tape decks built for broadcast were built to better standards than industrial decks and therefore should be preferred. They were also designed for extended use and are recommended for the HKG Digital Archive. Based upon the results of the survey, the HKG Digital Archive can expect the majority of their media to be video in the following formats: BetaSP, 3/4" U-Matic, and VHS.

The Archive should look to acquire:

- Three to four UMatric decks – if more can be obtained they are good for parts. Decks range from \$250 - \$500
- Three to four VHS/ SVHS decks – currently \$200-\$300
- 2 BetaSP decks, one that is capable of playing Betacam tapes - \$900 - \$300

For the digital workstation: Professional monitoring/ measuring equipment such as a waveform monitor and vector scope is needed. These scopes monitor the video signal and are essential to ensure your video is in spec when digitizing. A professional monitor is critical to ensure your colors are accurate and an audio mixer is used to reduce distortion if the audio is too high or enhance it if too low. A time base corrector will stabilize the video signal and a quality capture card is required.

Sample Equipment for a digital Workstation

Video Processing, Distribution and Capture

8x4 Matrix Router
 Frame Synchronizer and ProAmp with Analog and SD-SD I/O
 Videotek SD-SDI Waveform Monitor / Vector Scope
 Rack Mount for WFM / VS
 20" Color LCD Production Monitor
 Rackmount for Production Monitor
 10-bit SDI to Component Converter
 AJA Power Supply
 Kona Card w/ Breakout Box
 Configuration of AJA and Customer Supplied FCP Computer
 Analog Sync and Test Generator
 Distribution Amplifier
 RS-232 to RS-422 Bi-direction Converter
 RS-422 Switcher

Audio Processing and Distribution

Dual Bus Audio Mixer
 Digital Audio Leveler
 Pair of Self-power Near-field Audio Monitor Speakers
 Audio Signal Matching Transformers

Installation Materials and Components

Cables, Connectors and Adapters
 Misc. Installation Hardware
 Equipment Racks and Mounts
 Power Conditioning, Surge Suppression and Distribution

Installation and Configuration Labor

Labor to Wire, Install, Configure and Test System Components
 CAD As-built Wiring Diagrams

ESTIMATED SYSTEM TOTAL: \$27,500

NOTE: this arrangement does not include a computer workstation which will require video production software such as Final Cut Pro and ample internal and external hard drives. Add an additional \$6000-\$8000.

Secure collections

Although it may be a couple of years before the HKG Digital Archive has a permanent physical building, negotiations to acquire and obtain collections should begin. High profile collections and the works of prominent and well know filmmakers will help sustain interest in the Archive and ultimately ensure these important works will find a permanent home. Obtaining the promises and commitments of collection owners will help avoid complicated and messy legal situations in the future.

The generation of filmmakers and media creators whose work are in most danger are aging. In fact, while I was in Hawai'i for this project a prominent filmmaker died and two other collection owners were ill. **The reality is if steps are not taken to ensure the transition of these valuable historic and cultural media they may be lost forever.**

Creativity and flexibility is key for acquiring important collections, to ensure they are preserved, but also satisfy the needs of the donor. Allowing donors to retain certain rights in their collection (particularly as it pertains to the distribution their films) is important. In situations where the filmmakers or copyright owners do not want to part with their materials, efforts should be made to try and secure a deed of gift. The tragedy of losing an iconic filmmaker is compounded when their life's work and legacy are also lost.

Similarly, discussions with broadcasters, archives, museums, and other cultural institutions can be important in obtaining much of their media collections – or at least making them aware that it is an option. Archive staff at some point should revisit the Tamura report in detail to find clues to where many of the films listed in the report reside. Similarly, efforts should be made to identify sources of the materials discussed in the report to be assessed for possible acquisition. **Preservation of the few remaining early films should become a high priority for the Archive.**

Technical Considerations

Audio and video materials are inherently technical by nature. They require machines for recording, playback, and transfer. The HKG Digital Archive will have large technical demands right from the start

which will continue to grow over time with digitization. The technical demands of the Archive may be very different from what the host institution may be used to so the ability to have a technical specialist whose work focuses on the HKG Digital Archive is very desirable. The Archive will challenge the IT and systems departments as it will likely need a different cataloging/media asset management system, require IT to work with new video formats, and demand enormous amounts of storage space.

Establish an Advisory Board

The actual establishment of an Advisory Board may not be required until the Archive is constructed. The selection of a Board is a very important process and requires a deliberate and strategic process. Members are not only participants in driving the big-picture vision for the HKG Digital Archive, they are also ambassadors of the Archive, important resources for fund raising efforts, technical and educational insights, Hawaiian community leaders, and other sources of specialized knowledge.

One indicator in determining a potential Member is how quickly she or he can grasp both the uniqueness of the Archive and obviousness of the vision. The Board should be involved in providing recommendations and guidelines (these should be non-binding) and active in assisting in fund-raising initiatives. The Board should be comprised of a variety of individuals that includes archivists, filmmakers, scholars, business leaders and respected elders from the Hawaiian community. It should be national in scope and draw Members from across the country.

The Advisory Board should be expected to provide non-binding recommendations on a variety of activities and projects beneficial to the Archive's long-term growth and goals. Some of the issues the Board should address early in their process include: strategies to create a local, national, and Pacific regional presence; development and growth of an endowment; strategies to make the collections relevant and accessible to the Hawaiian community, and assisting to develop a long-term vision for the Archive.

Endowment

A secure long-term source of revenue/income is necessary to properly meet the preservation, access, and growth needs of the HKG Digital Archive. To meet these needs the Archive should aim to establish an endowment fund. An obvious benefit of an endowment is the ability to continue with critical preservation efforts on a continuous and predictable schedule. Preservation is a strategic decision and should be viewed as a long-term activity, not constrained or dependent on grant funds. Many key

activities such as preservation and digitization must be incorporated as processes in the Archive and not considered as projects.

An endowment will help to formalize many desired activities, act as a catalyst for the development of new programs and initiatives, and enhance academic and scholarly programs on campus. Use of the funds from an annual draw down from the endowment may be used for the following activities:

- preservation – such as lab work, reformatting, outsourcing obsolete material
- digitization – servers, equipment, drives, software updates
- acquisition – appraisal, donor visits, shipping, rights
- staff development
- Draw down finances for special projects: preservation, digital projects, public programming, outreach, acquisition, workshops

PROJECTS TO WATCH

There are a few national initiatives that should be watched closely by the Project Team. In particular, the American Archive Project should be able to provide a great model for the work of the HKG Digital Archive in Phase 2.

NDIIPP

As part of the National Digital Infrastructure Preservation Program (NDIIPP), the Library of Congress has partnered with the Academy of Motion Picture Arts and Sciences (AMPAS) to create a follow-up report to “The Digital Dilemma.” The report will delve into issues facing public archives, independent filmmakers, and libraries as more and more materials are digitized or is born digital. Using case studies to investigate various archival strategies the report will examine the issues of long-term access, preservation, storage, and handling. The report should be available before the end of the 2009 calendar year from AMPAS.

American Archive

Earlier this year, the Corporation for Public Broadcasting (CPB) selected Oregon Public Broadcasting (OPB) as the initiative manager for the American Archive Pilot Program, a project designed to determine

the processes needed to restore, digitize, and preserve public broadcasting's deteriorating collections of local television and radio content.

The project is current engaged in a "Pilot" that will establish an online digital collection. The Association of Moving Image Archivists has participated as a partner throughout each phase of the project, providing input and guidance on preservation and archival practices. The project is scheduled to be completed by year's end (2009). A report will be produced and provide information on what the project has accomplished, and what lessons have been learned so far.

REFERENCES

National Film Preservation Board, *Depositing Films with Archives: A Guide to the Legal Issues*

ScreenSound Australia, the National Screen and Sound Archive, *Introduction to Policy Documents* (June 2003)

National Library of Australia, *Policy & Planning*, www.nla.gov.au

The Digital Black Hole, Jonas Palm, Director, Head of Department of Preservation, Riksarkivet/ National Archives, Sweden

Association for Recorded Sound Collections (ARSC) Technical Committee, *Preservation of Archival Sound Recordings*, April 2009

Best Practice Guidelines for Digital Collections at University of Maryland Libraries.
<http://www.lib.umd.edu/dcr/publication/>

Science and Technology Council, *The Digital Dilemma: Strategic Issues in Archiving and Accessing Digital Motion Picture Materials*, 2007
<http://www.oscars.org/science-technology/council/projects/digitaldilemma/index.html>

Basic Inspection Techniques to Sample the Condition of Magnetic Tape
<http://www.specsbros.com/whitepaper.html>

Association of Cinema and Video Laboratories, *Handbook: Recommended Procedures for Motion Picture and Video Laboratory Services*, http://www.acvl.org/filmlab_procedures.html

Texas Commission on the Arts, *Videotape Identification and Assessment Guide*
<http://www.arts.state.tx.us/video/>

Archival Management Software: A Report for the Council on Library and Information Resources

by Lisa Spiro January, 2009 <http://clir.org/pubs/reports/spiro2009.html>

Henry K. Giugni Archive Project Report

APPENDIX 1

The following is a list of individuals whom I have met with or communicated with during this project. Their time and willingness to share their knowledge and insights were extremely valuable to my work and provided much of the information contained in Part 1.

University of Hawai'i Manoa - Libraries

Joan Hori
Dore Minatodani
Alexis Weatherl
Lynn Davis
Ruth Marie Quirk

University of Hawai'i at West O'ahu

Gene Awakuni, Chancellor
Chris Conybeare, CLEAR
Ryan Mielke

Hawai'inuiakea School of Hawaiian Knowledge, University of Hawai'i Manoa

Maenette Benham, Dean
Piilani Kaaloa
Marvlee Naukana

University of Hawai'i Systems

David Lassner, VP for Information Technology and CIO

Ka Huli Ao Center for Excellence in Native Hawaiian Law - William S. Richardson Law School

Jocelyn Leialoha M-Doane

Lyman Museum and Mission House, Hilo

Dolly Strazar, President & Executive Director
Libby Burke

Lana'i Culture & Heritage Center

Kepa and Onaona Maly

Pacific Islanders in Communication

Ruth Bolan, Executive Director

Kamehameha Schools

Candace Lee

Marsha Bolson

Bishop Museum

DeSoto Brown, Collections Manager

Hula Preservation Society

Maile Loo

Gene Kois

Kaua'i Historical Society

Marylou Bradley

Filmmakers

Joan Landers and Puipau,

Myrna and Eddie Kamae

Joy Chong-Stannard, Independent

Heather Giugni, Junihoa Productions

Esther Figueroa, Vagabond Media

Marlene Booth, Independent

Campus Docs

Lance Murata

Aime Montero

Avatar

Kazuyuki Hashimoto

Hawai'i Community Foundation

Kalowena Komeiji

APPENDIX 2

Sample of a Deed of Gift

Washington University Libraries
Department of Special Collections
Film & Media Archive

DONOR AGREEMENT

The undersigned, [NAME] (hereinafter referred to as Donor), hereby donate, transfer and convey the films, videos, moving image media, and other materials (hereinafter referred to as Materials) described in the attached Preliminary Inventory to Washington University in St. Louis (hereinafter referred to as the University) for inclusion in its Film & Media Archive.

As sole owner of these Materials, Donor gives physical ownership of them to the University. Title to the Materials shall pass to the University upon their delivery to the University's authorized representative. To the best of Donor's knowledge, no person has any claim of ownership in any of the Materials adverse to Donor's interest. Donor warrants and represents to WU that Donor has not heretofore transferred or assigned the Materials or any portion thereof or any right, title or interest therein to any other party.

Donor gives and assigns to the University all rights of copyright in (a) the Materials and (b) in such of Donor's works as may be found among any collections of Materials received by the University from others, with the following exception(s):

Donor maintains copyright in all finished programs and has final decision on licensing footage from the finished programs. However, the University is authorized to give permissions to use for the purpose of researching Materials (including Materials reproduced in such finished programs), on behalf of the Donor. Any requests to license materials from the finished programs will be reported to the Donor and require the Donor's permission. Donor agrees to and does hereby transfer to the University all of Donor's copyrights in the finished programs effective upon NAME's decease.

These Materials shall be preserved, organized, and made available for education and research in accordance with the University's Department of Special Collections access and use policies. The Donor shall be permitted to examine any of the Materials during the regular business hours of the University's Department of Special Collections or requests delivery of materials needed for use in further work or productions.

The University is authorized to display any Materials in non-profit exhibitions both on and off campus. Materials may also be used to illustrate exhibition catalogs and University publications.

The University is authorized to dispose of any Materials in the collection that the Department of Special Collections, in its sole discretion, determines are no longer necessary to the collection. In such event the Materials specified below will be returned to [NAME] (use attached sheet if necessary):

In the event that [NAME] may, from time to time, hereafter give, donate, and convey to the University, for inclusion in its Department of Special Collections, additional Materials, title to such additional Materials shall pass to the University upon their delivery, and all the provisions of this instrument of donation shall be applicable to such additional historical Materials. A description of the additional Materials so donated and delivered shall be prepared and attached hereto and incorporated herein.

DONOR

_____ Dated: _____

Name

Address, City, State, Zip Code and Telephone

The foregoing donation of Materials of the Donor is accepted on behalf of the University, subject to the terms and conditions heretofore set forth.

WASHINGTON UNIVERSITY

By: _____ Dated: _____

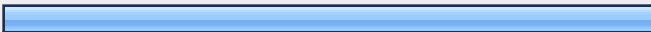



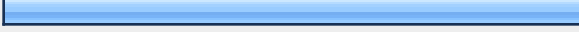
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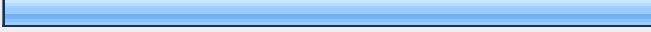
APPENDIX 3

Summary of Survey Results

HKG Archive Moving Image and Recorded Sound Survey




1. Name of Institution		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

2. Contact Information			
		Response Percent	Response Count
Address		100.0%	9
City		100.0%	9
Telephone		100.0%	9
Email		100.0%	9
Website		88.9%	8
		<i>answered question</i>	9
		<i>skipped question</i>	0

3. Can your archive's name be listed as a respondent to this survey in the consultant's final report?			
		Response Percent	Response Count
Yes		100.0%	8
No		0.0%	0
		<i>answered question</i>	8
		<i>skipped question</i>	1

4. Check the institution or organizational type that best describes your archive			
		Response Percent	Response Count
University based archive	<div><div></div></div>	33.3%	3
State archives	<div><div></div></div>	11.1%	1
Historical society		0.0%	0
Museum		0.0%	0
Public library		0.0%	0
Independent non-profit organization	<div><div></div></div>	11.1%	1
Private institution	<div><div></div></div>	11.1%	1
Individual (person)	<div><div></div></div>	11.1%	1
Other	<div><div></div></div>	22.2%	2
	answered question		9
	skipped question		0

5. Briefly describe the main areas of collection development for moving images in your institution. If there is no clearly defined focus please state this and describe contents as best you can in general terms.		
		Response Count
		9
	answered question	9
	skipped question	0

6. What percentage of your moving image collection are made up of Hawaiian materials?			
		Response Percent	Response Count
0-20%		12.5%	1
21-40%		12.5%	1
41-60%		0.0%	0
61-80%		0.0%	0
81-100%		75.0%	6
	<i>answered question</i>		8
	<i>skipped question</i>		1

7. Approximately how much of each of the following formats do you have in your collection?				
		Response Average	Response Total	Response Count
35mm film		76.25	305	4
16mm film		77.50	310	4
8mm film		8.33	25	3
1" video		19.50	117	6
3/4" Umatic video		477.44	4,297	9
VHS video		2,597.56	23,378	9
Betamax video		29.63	237	8
Betacam/ Beta-SP video		1,415.00	8,490	6
Other video		1,750.00	10,500	6
1/4" audio reels		93.00	465	5
Cassette tape		656.57	4,596	7
Other audio		5,007.00	25,035	5
	<i>answered question</i>			9
	<i>skipped question</i>			0

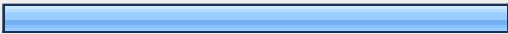

8. What percentage of your collection is made up of the following materials?				
		Response Average	Response Total	Response Count
Finished or edited programs		44.44	400	9
Outtakes/ Raw materials		68.57	480	7
Feature films		6.57	46	7
News		5.00	35	7
Television		14.50	58	4
Documentaries		48.13	385	8
Oral histories		11.00	66	6
Animation		1.20	6	5
Industrial/ Educational		11.71	82	7
Experimental		0.25	1	4
Children's programs		3.50	21	6
Home movies		3.33	20	6
Other		7.50	30	4
	<i>answered question</i>			9
	<i>skipped question</i>			0

9. Do you have transcripts, notes, manuscripts, photos, or other material that is related to these moving image collections?		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

10. What percentage of your collection is unique (original, only known source, or best copy of the material)?				
		Response Average	Response Total	Response Count
Percent		77.11	694	9
	answered question			9
	skipped question			0


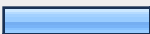
11. Do you maintain a database of these materials? What software do you use?			
			Response Count
			9
	answered question		9
	skipped question		0

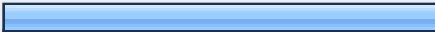
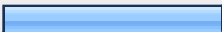
12. How you catalog these materials? Mention any cataloging standards you use.			
			Response Count
			8
	answered question		8
	skipped question		1

13. Do you store your moving image materials in an environmentally controlled space?				
		Response Percent	Response Count	
Yes		77.8%	7	
No		22.2%	2	
	answered question			9
	skipped question			0

14. Please include temperature and humidity levels if it is an environmentally controlled space.		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

15. Are your moving image materials available for use? Is there an online catalog or finding aid?		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0


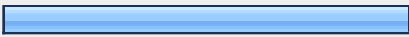
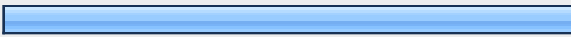
16. Do you as an individual or an institution collect digital video or audio materials?			
		Response Percent	Response Count
Yes		77.8%	7
No		22.2%	2
		<i>answered question</i>	9
		<i>skipped question</i>	0

17. Do you as an individual or an institution actively engage in digitizing moving image or audio materials?			
		Response Percent	Response Count
Yes		66.7%	6
No		33.3%	3
		<i>answered question</i>	9
		<i>skipped question</i>	0

18. What percentage of your moving image and sound recording collection have been digitized?			
		Response Percent	Response Count
0-10%	<div><div></div></div>	55.6%	5
11-20%	<div><div></div></div>	11.1%	1
21-30%	<div><div></div></div>	11.1%	1
31-50%		0.0%	0
51-70%	<div><div></div></div>	11.1%	1
71-90%	<div><div></div></div>	11.1%	1
91-100%		0.0%	0
		answered question	9
		skipped question	0

19. Where do you digitize your materials?			
		Response Percent	Response Count
In-house	<div><div></div></div>	87.5%	7
Facility in parent institution		0.0%	0
Outsource to vendor	<div><div></div></div>	50.0%	4
Other		0.0%	0
		answered question	8
		skipped question	1

20. Do you have a digital preservation plan in place? If yes, please give a brief description.		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

21. What digital formats do you use?			
		Response Percent	Response Count
Video		100.0%	8
Audio		62.5%	5
Photos		87.5%	7
		<i>answered question</i>	8
		<i>skipped question</i>	1

22. Are your digital materials available online?		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

23. How do you store and backup your digital files?		
		Response Count
		8
	<i>answered question</i>	8
	<i>skipped question</i>	1

24. What is your current digital storage? Please estimate and use GB, TB, or PB.		
		Response Count
		8
	<i>answered question</i>	8
	<i>skipped question</i>	1

25. Do you own the copyrights in the moving image materials you have in your collections? What concerns do you have about copyright?		
		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

26. What do you see as the major obstacles/challenges that will need to be addressed or resolved in order to create a successful media archive?		
		Response Count
		8
	<i>answered question</i>	8
	<i>skipped question</i>	1

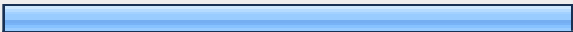

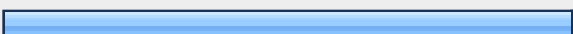

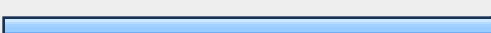

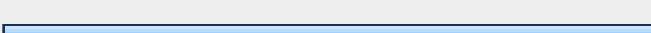


27. Are you familiar with a facility in Hawai'i that collects large amounts of moving image materials?		
		Response Count
		8
	<i>answered question</i>	8
	<i>skipped question</i>	1

28. What role or function would you like to see the Giugni Archive assume? How do you believe it could best work with the existing archival community in Hawai'i and serve the needs of preserving Hawaiian moving image material for use by future generations.?

		Response Count
		8
	<i>answered question</i>	8
	<i>skipped question</i>	1

29. Would you be interested in working with the HKG Archives to transfer, digitize and preserve your moving image materials? If not, what would be your reservations?

		Response Count
		9
	<i>answered question</i>	9
	<i>skipped question</i>	0

30. Would you be interested in working with the Giugni Archive in one or more of the following activities? Select all that may be appropriate.			
		Response Percent	Response Count
Sharing information about holdings		87.5%	7
Collaborate on a digital project		87.5%	7
Partner on a grant (including helping to write)		87.5%	7
Develop best practice standards for cataloging		62.5%	5
Develop best practice standards for digitization		75.0%	6
Develop best practice standards for metadata collection		75.0%	6
Participate in a coalition or consortium		100.0%	8
Publicity and other activities to raise public awareness		37.5%	3
Assisting with public events (screenings, panels)		50.0%	4
Other		0.0%	0
		answered question	8
		skipped question	1

31. If you have any other comments, suggestions, or issues that were not addressed in the questionnaire please feel free to add them here.		
		Response Count
		6
		answered question
		6
		skipped question
		3