



Above: University of Hawai'i West O'ahu James & Abigail Campbell Library, where 'Ulu'ulu's archive and research center are located.

Case Study: 'Ulu'ulu The Henry Ku'ualoha Giugni Moving Image Archive of Hawai'i University of Hawai'i West O'ahu

A state-wide collecting and preservation initiative in a geographically isolated region with rich cultural heritage

Magnetic Media Collection Size: Large Collection (49,000 items)

Staff Size: Five+ full time staff, two part time staff, and typically one intern

Annual Budget: Medium Budget (\$400,000)

Digitization Rate (previous year): High Digitization Rate (1,100 items)

Location: Kapolei, Hawaii



Above: The 'Ulu'ulu staff: Janel Quirante, Head Archivist; Tisha Aragaki, Assistant Archivist for Reference and Outreach; Heather Giugni, Collections Specialist/Producer; Koa Luke, Assistant Archivist for Cataloging; Robert Omura, Digital Media Specialist. Right: Hōkū Ka'aha'aina, Assistant Archivist for Processing is included in the photo to the right.

Introduction

'Ulu'ulu is the official state moving image archive of Hawai'i, founded in 2009. It is part of the University of Hawai'i West O'ahu James & Abigail Campbell Library. 'Ulu'ulu was developed as a project of the Academy for Creative Media System at the University of Hawai'i. It is unique in that it was formed specifically to take in statewide audiovisual collections from other collecting institutions that do not have the specialized training or equipment to preserve these materials.

Mission and Model

'Ulu'ulu aims to perpetuate and share the rich moving image heritage of Hawai'i through the preservation of film and videotape related to the history and culture of Native Hawaiians and the people of Hawai'i. 'Ulu'ulu is a Hawaiian word meaning "collections," "assembly," or "gathering." The archive is not just a collection of moving image items but also an assembly of voices, communities, and stories; a gathering place for people to share Hawai'i's culture, traditions, and collective memory. 'Ulu'ulu was founded with the idea that it would work collaboratively with other archives, and on the premise that other archives could learn from its expertise and collaborate. The audiovisual collections that came into 'Ulu'ulu were originally held at their organizations and were often only one small part of an overall collection containing mixed media. 'Ulu'ulu offers specific expertise in audiovisual preservation.

"Our archive is not just a collection of moving image items, but also an assembly of voices, communities, and stories"



Above: Janel Quirante in the archives workspace.

Economic Model

'Ulu'ulu receives about 75% of its funding through government support. Non-governmental grants account for approximately 25% of its funding. The administration goes to the legislature every year to advocate for the program. Because it is part of the university system, it is subject to university-wide budget decisions.

"We are in touch with archives all over the island, and there is a strong network. We are all friends. We know how to refer researchers to the right place. We are not trying to monopolize the work of archiving in Hawai'i. Because we can't do everything ourselves, we make it a point to stay in touch with Hawai'i archivists and the Hawai'i Library Association and Hawai'i Museum Association. These groups form field building and networking."

"Before 'Ulu'ulu existed, probably no one in Hawai'i would have described their job as a moving image archivist."

Staff

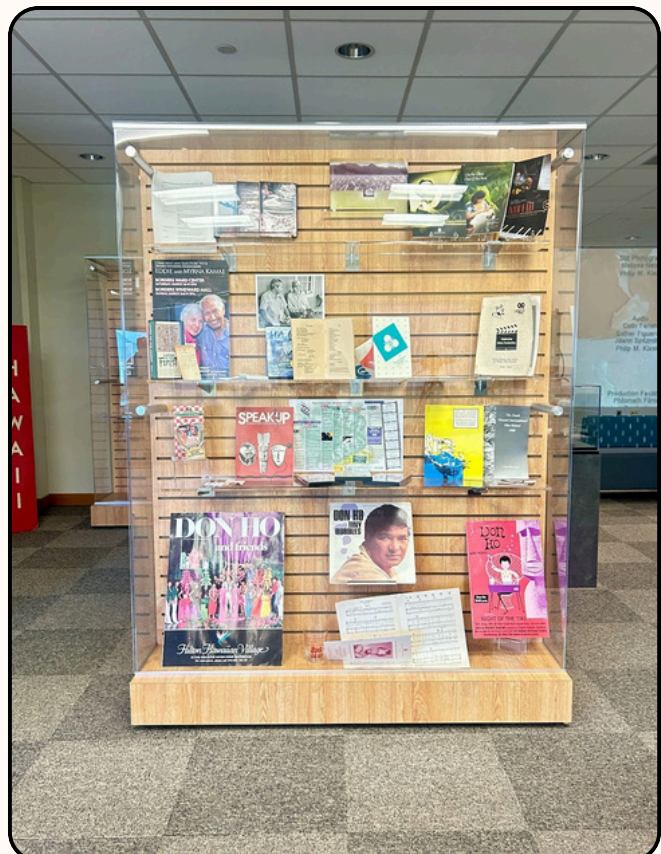
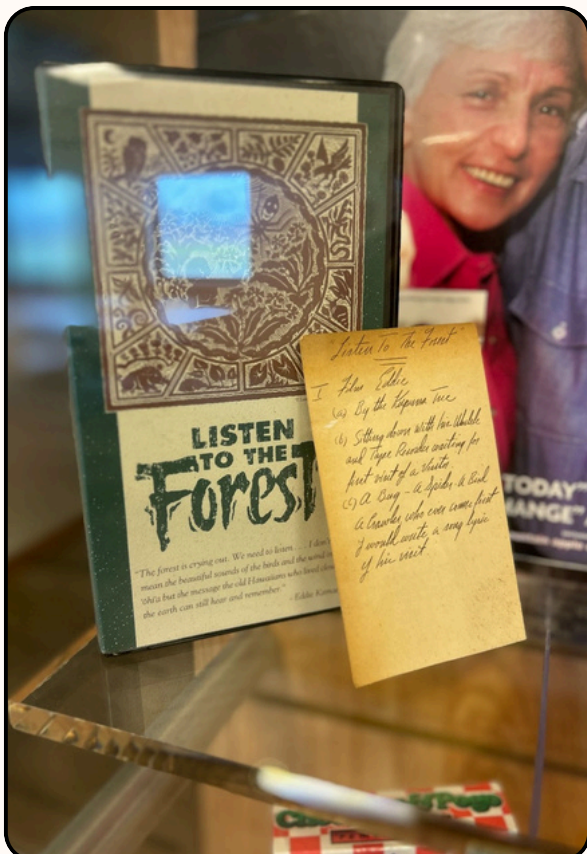
Core staff also includes the following positions: Collections Specialist / Producer, Digital Media Specialist, Cataloger, Reference and Outreach Archivist, and Processor. There are occasionally floating part-time positions, such as project assistants on grant-funded projects. Typically these are one-year positions that can be renewed depending on the availability of funding.

Volunteers and interns are an important part of the infrastructure of 'Ulu'ulu and its focus on community building and education. They frequently host fellows from the Pathways Program, a program operated by the Association of Moving Image Archivists (AMIA). The AMIA Pathways Fellowship supports paid internships in combination with mentorship and professional development training to forge pathways in the audiovisual preservation field for people from groups historically underrepresented in the profession at any level of their career. At the time of this report, the current intern is working directly with a living filmmaker to process and catalog a collection.

Community Served

The collection is used by filmmakers and producers (often working on documentaries), University of Hawai'i students, and the general public. Many members of the general public come to 'Ulu'ulu researching family genealogy. The majority of users are from Hawai'i, with the exception of filmmakers, who are working on documentaries about Hawai'i's history but do not live there. Collection donations come from both individuals and organizations.

"One thing that's unique about Hawai'i and about 'Ulu'ulu's collection is that, in the very beginning and even now, it was all built on trust."



Above: Display case highlights the Don Ho collection; and the Hawaiian Legacy Foundation Eddie & Myrna Kamae collection

Significant Collections

'Ulu'ulu collects cultural materials from all communities in Hawai'i, not just native Hawaiians. They collect non-commercial materials from all over the islands, including local television stations, museums, media organizations, home movies, independent filmmakers, and individuals. They do not collect Hollywood films shot in Hawai'i. The collection includes film materials from 1900 to the present day. It contains a wide variety of genres, including regional and cultural documentation (language, traditions, etc.), educational films, television, news, and scientific research material. 'Ulu'ulu becomes more selective about what they collect, in part due to concerns about space. They are currently piloting the intake of small born-digital collections, but it has not been fully implemented at this time.

The Bishop Museum Collection consists of approximately 5,000 film reels from 1915 to 1976 (including some magnetic media).

Merrie Monarch Festival Collection: This Hula competition has been televised since the 1980s. It started as a revival of the ancient style of Hula and also documents the Hawai'i renaissance of the style. It now also contains a modern hula dance competition.

The PBS Hawai'i Collection contains production materials and raw footage related to programs produced by and broadcast on PBS Hawai'i (KHET), a PBS member television station located in Honolulu, Hawai'i. Program titles include: Pau Hana Years; Newsmakers; Dialog; Hawaiians; The Breaks; XL : The UH Sports Show; Spectrum Hawaii; Era of the Pacific; and Hawaiian Quilting. They are currently partnering with the American Archive of Public Broadcasting to digitize nearly 1,500 videotapes from this collection.

Collection Storage



Above: Temperature and relative humidity (RH) monitors in the vaults. This was a high humidity day, and the vaults usually average 54% humidity (left). Shelving in the primary vault (middle). Janel near carts that provide extra storage outside the vaults (right).

The onsite media vaults have temperature and relative humidity control. Items are stored on moveable, space-saving shelving and another storage area serves as a triage area for incoming collections. Collections are assessed, and contagions such as mold are identified before the materials are brought into the main collections. 'Ulu'ulu faces a significant challenge with space in their vaults. The vault is approximately 80% full with collection materials—mostly videotapes and films, with some audio recordings and paper-based materials. Staff expect the vault will reach capacity within seven to ten years based on current acquisition activities. One collection is housed on tall carts outside the main storage area. The donor underestimated the collection's size by three times. With the donor's agreement, 'Ulu'ulu created separate storage for this collection to preserve vault space for future acquisitions

Digitization/Preservation

The geographic isolation of the islands creates unique challenges in obtaining and repairing legacy analog and contemporary equipment required for digitization. Originally, the archive was formed with the idea that it would serve as a central digitization facility for the state of Hawai'i, where there are no archival-level digitization facilities. 'Ulu'ulu set up a digitization lab, but as playback equipment broke down, it became cost prohibitive to send it to the mainland for repair. Shipping equipment is also prohibitively expensive. Staff performs regular maintenance, but there is no one who can do the work of a bench technician or perform major deck repair. As a result, 'Ulu'ulu began to send more tapes to a trusted vendor on the mainland, which is more cost-effective, despite being over 2,000 miles away. Currently, they outsource 80-90% of their digitization work.

The Digital Media Specialist performs limited on-site digitization focused on researcher requests, staff-selected projects, and Betacam materials. This free service for researchers totals about 10 hours monthly in-house.



Above: Digital Media Specialist, Robert Omura demonstrates the digitization setup (left). In the collections storage (right).

Digitization Rate and Risk of Loss

'Ulu'ulu rates itself as "somewhat confident" that all priority materials can be digitized at the current rate. They estimate digitizing about 1,000 tapes last year and expect to continue at that pace. To date, only about 10% of the collection is digitized, with no anticipated rate increase as analog materials continue arriving. This leaves tens of thousands of magnetic materials unpreserved, as 'Ulu'ulu is at staff capacity for preservation work.

Decision to Digitize/Curation

Preservation priority is based on whether the content has high research value and the physical format's general degradation. Older and less stable formats, such as 2" Quad, $\frac{3}{4}$ " U-matic, and $\frac{1}{2}$ " open-reel are high priority. 'Ulu'ulu also focuses on preserving collections in accordance with the grant requirements and deliverables available to them, as government grants are a significant funding source for preservation. The decision-making process begins with acquisition: when a collection comes in, it is surveyed, informing future preservation decisions.

Pre-Digitization

Materials enter a quarantine room and are inspected for mold, damage, or other issues that may affect the larger collection. Collections are then sent to the Processing Archivist, who checks tapes for odor and mold. Tapes are cleaned externally, if needed. An intake checklist is part of 'Ulu'ulu's cataloging software, Recollect. 'Ulu'ulu maintains a pre-digitization migration queue that tracks all in-house and vendor digitization work, serving as the starting document for digitization projects. The queue records completion status and any digitization failures. Before digitization, tapes are cleaned using SAMMA system cleaners, which also run diagnostics. Tapes that fail diagnostics are removed from the in-house queue and sent to specialized vendors.



Above: Janel with the U-matic tape cleaning machine and a Beta tape cleaning machine. These were part of the organization's SAMMA system, and are the only part of the system still in use.

Triage, In-house vs. Out-of-house

If a researcher requests a tape or collection that can be digitized in-house, it will be. Materials with significant issues, like mold, are stabilized and sent out to a vendor if they are identified as a priority. Large collections will go to a vendor if there is funding to do so.

Intervention

'Ulu'ulu reported that mold and sticky shed are the biggest problems in their magnetic media collections. Mold is reported as an especially significant problem throughout the state due to the high humidity of the climate. If a tape with mold is identified, the item is sealed in plastic and triaged from the collection. If it is a duplicate, it is deaccessioned.

Digitization Workflow

There are two digitization stations at 'Ulu'ulu. One setup is permanent, while the other is currently being reassembled and will also be set up permanently. At the time of this report, the latter was in another building on campus due to library building repairs and is being moved back into the current digitization space. This report covers only the existing and currently in-use onsite digitization station.

Betacam SP and VHS decks are hooked up to a patch bay. The setup includes a vectorscope, monitor, and two TBCs (Leitch, Holtronic Incorporated) to monitor and strengthen signal. The analog-to-digital converter is an AJA IO.

Before operation, equipment is warmed up for ten minutes. Decks are cleaned as needed, usually after every tape. Equipment is unplugged at the end of each day.

Target File formats

'Ulu'ulu has a document detailing all specifications for access and preservation file types for video and film. 'Ulu'ulu does not collect audio-only formats. In this case study, we present the standard file and wrapper types used for preserving and accessing video files.

- Preservation: 10-bit Uncompressed Quicktime .MOV file; Format: PCM
- Access: H.264 Quicktime .MP4; AAC LC

Software

Final Cut Pro 7 is used for ingest and editing, and Adobe Premiere is used to test files.

QuickTime and VLC media players are also used for file playback. Compression, copying, and watermarking are performed using Adobe Media Encoder (AME). MpgStreamclip and Apple Compressor are also used for compressing and copying.

Quality Control

'Ulu'ulu performs quality control on all tapes. They use QC Tools open-source software and visually check the beginning, middle, and end of files to ensure audio and visual quality.

Equipment Sourcing and Repair

It is extremely expensive to source and repair decks on the island. At the time of this report, 'Ulu'ulu staff surveyed their collection of playback equipment to determine what works and what does not: most of the decks in the lab are operational.

Auxiliary equipment

'Ulu'ulu stores decks that no longer work but can be used for parts. A group of television

engineers originally helped to create the digitization station but haven't serviced the decks in about four years.

File Storage

'Ulu'ulu stores files on a dedicated server in the university system. The university recently contacted 'Ulu'ulu staff to let them know that they are at server capacity and that there is no more server space available for audiovisual materials. The staff of 'Ulu'ulu must find their own new storage solution.

Access, Copyright, and Licensing

'Ulu'ulu provides some online access to footage, but is very cautious about licensing. The Recollect content management system hosts both an online public access catalog and an online streaming service. Footage is only available to stream in short clips; community members must register with 'Ulu'ulu to view the entire collection.

Janel explains, "A lot of filmmakers are very, very, very protective of their collections and their work. And so when we first started, it was a lot of community discussion trying to explain what we were trying to do because this was brand new. We had to create a pilot project first and create a digital collection to show all of the potential donors what we intended to do and how we were going to do it in this thoughtful manner. And so all of these procedures that I'm explaining to you now really came about because of feedback. Feedback from community members, feedback from filmmakers, or really a lot of tough questions from filmmakers like, what if something private comes up, what are you going to do about that? Through addressing all of their concerns, that's how we built all of these procedures that we practice now."

Emergency and Disaster Issues and Preparedness

'Ulu'ulu has a disaster preparedness plan in progress and which is being refined. They note that it has been difficult to find a disaster plan that is audiovisual specific.

Advocacy

'Ulu'ulu notes that "there are so many things to advocate for, and the main ones are preservation and funding." Staff meets with the university and the state legislature on a regular basis to explain their work and why it requires ongoing support. They report that they also advocate in the community to community members who may still have collections that are not preserved. The third kind of advocacy they engage with is promoting the proper use of the collections and access to the collections. They note that they are always needing to educate the facilities team on why they need lower temperatures and RH for the collections.

Training and education needs

'Ulu'ulu reports that its greatest training needs are in disaster planning and remediation and in maintaining and storing digital files.

The organization has a disaster response plan that is being refined with the goal of sharing it with other Hawai'i repositories that have audiovisual collections. When they began writing the plan, they reached out to other institutions in Hawai'i and found that no one had a disaster response plan specifically targeted to audiovisual collections. The goal is for their plan to benefit other organizations throughout the state.

Next steps and goals

A top goal for the organization is to formalize their strategic plan and create succession planning. 'Ulu'ulu would like to be more visible—they note that many people still do not know they exist, even though they are on par with major organizations like the State Archives and the Bishop Museum.

Since the site visit, 'Ulu 'ulu has implemented cloud storage on Amazon AWS Glacier Deep Archive.

“I feel like we're so isolated and remote out here that some things that we're doing, I just always want to make sure that we're still doing things that is an industry standard”

