NARRATIVE

Introduction
The University of Hawai‘i at Mānoa (UHM) Library, in collaboration with the Hawai‘i State Library, Hawaiian Historical Society, and the Hawai‘i State Archives, proposes to digitize (image, convert to text, and mark-up) and submit to the Library of Congress National Digital Newspaper Project, two or more Hawai‘i papers published between 1880 and 1910. The first newspapers printed in Hawai‘i were in the Hawaiian language. However, English-language newspapers have been published continuously in Hawai‘i since 1856. They reported international, American, and local news; transmitted the Hawaiian, western, and ethnic cultures to their readers; and shaped public opinion throughout the historical period of Hawai‘i as a kingdom, republic, US territory, and 50th state of the United States.

Newspapers have been printed in Hawai‘i since the mid-1800s. As primary sources of information on the history of Hawai‘i, the newspapers are used in various ways. Students refer to the papers to learn about life in different periods—important events, cost of living, design of clothing and other goods pictured in advertisements. They are able to study political and social movements, and use of language by reading the news articles, editorials, letters to the editors, etc. Teachers use the newspapers as learning tools, to bring to life a time in history for their students. Community members search for genealogical information. Scholars utilize the newspapers as information resources for their publications.

It is estimated that the Hawaiian islands were settled by Polynesians between 300-750 AD. In 1778 Captain James Cook first arrived in Hawai‘i. In 1794 the first foreign ship entered Honolulu Harbor. During the 1800s, the city became a very prominent shipping point in Hawai‘i with sandalwood, sugar, pineapple exports and an extensive whaling trade. America and Europe sent merchants and missionaries to settle, profit from and westernize the Hawaiian Islands. New England missionaries who arrived in the 1820s had a lasting affect on the islands’ religion, education, economics and politics. In 1850, when Kamehameha III proclaimed Honolulu the capital city of his kingdom, newspapers were already widespread. In 1893 a coup fomented by U.S. sugar interests resulted in the monarchy's overthrow and the establishment of a Republic of Hawaii. In 1898 the government of the new republic of Hawaii and the U.S. agreed on annexation, and in 1900 Hawaii became a U.S. territory. During the kingdom and republic eras, Hawaii was transformed from an isolated island chain into a nation involved in world trade.

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1 The University of Hawai‘i at Mānoa official style guide states: "UH encourages the use of correct Hawaiian spelling, including glottals ('okina) and macrons (kahako). [...] The use of an apostrophe and an “s” is acceptable, in forming English possessives of Hawaiian singular nouns (Hawai‘i’s people)." The practice in this document is to include diacritic marks in proper names, and in any titles where the marks originally appeared. Extrapolating from the UH style guide declaration "In matters of Hawaiian orthography, do not guess." - where the original material is known to have not included diacritical marks (for example, in early Hawaiian language newspapers) then none are supplied. Use of Hawaiian language diacritical marks throughout this application is based on usage in the item cited.
Religion, especially evangelical Protestantism, played an important role in nation-building which occupied Americans in the nineteenth century. But after mid-century, "as Americans looked out on the Pacific from newly acquired and recently settled California [...] the foreign missionary movement gathered momentum. By 1900, its expansion was in full bloom [...] with its presence on all continents of the globe characterized by a distinctive American mixture of religious and national or 'civilizing' purpose."  

The newspapers of this period provide a unique and first-hand chronicle of the social, economic and religious issues of the time. Access to early and recent issues of these papers has been through microfilm, copies of which are located in academic and public libraries throughout the state of Hawai‘i. Heavy use and poor environmental conditions have caused deterioration of the film. At the University of Hawai‘i at Mānoa Library the microfilm reels are heavily scratched. Some reels are missing. Newspapers in digital format are a more readily accessible alternative to microfilm, and enable broader access. In addition, presently the only way to locate information in the papers (other than skimming through the papers page-by-page) is by using printed indexes to the papers. These indexes do not include the papers published prior to 1929. Digitization will thus improve searchability as well as access through the Library of Congress website.

A. History and Significance of Newspapers in Hawai‘i

From 1834 to 2000, approximately 1,350 separate titled newspapers have been published in Hawai‘i in various languages including those of the original indigenous Hawaiian population and of people who immigrated to Hawai‘i from throughout the world—English, Chinese, Portuguese, Japanese, Filipino, Korean, Vietnamese.

Historically, newspapers in Hawai‘i served to spread the news, but were also an instrument of American Protestant missionaries for literacy and religious education, and to encourage Americanization of the native population. In the early 1800s, while local news was spread between the Hawaiian islands in one or two days, it took 6 months for international news to arrive by sailing ship. Beginning in 1900 steamships took 6 days to arrive in Honolulu. In 1903 the Pacific cable enabled instant transmittal of news between Hawai‘i and the continental United States. The newspapers published in these decades document the enormous changes that transpired as the influences and information from the world outside Hawai‘i arrived ever more swiftly in ever-growing quantities.

The following sections will summarize the first newspapers to be published in Hawai‘i in the Hawaiian language, and the English language papers based on the seminal descriptive work by Helen Chapin.

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Between 1834 and 1856, the only newspapers in Hawai‘i were Hawaiian language newspapers. While the first newspapers were religious papers, later Hawaiian language papers were commercial in nature, relying on subscription and advertising revenue. With widespread literacy in the Hawaiian language attained by mid-century, the reading public for Hawaiian language newspapers was impressively large. Chapin reports “A highly literate literature Hawaiian population read the output of Native Hawaiians and their Caucasian allies who from the 1860s to 1900 produced almost 70 newspapers.”

First Newspapers were in the Hawaiian Language
The history of newspapers in Hawai‘i began in 1834, with the publication of two Hawaiian language newspapers, *Ka Lama (The Luminary or Torch)* on February 14, 1834, published at Lahaina, Maui and *Ke Kumu (The Teacher)* published a short time later in Honolulu, O‘ahu. Both were published until 1839 by American Protestant educator-missionaries for their Hawaiian converts, to whom the missionaries had brought literacy in the Hawaiian language. These missionaries first learned Hawaiian then devised a writing system for the language. Beginning in 1822 they printed alphabet sheets, school readers, and religious tracts. *Ka Lama* and *Ke Kumu* were followed by other Hawaiian language newspapers, some such as *Ka Nonanona (The Ant)* and *Ka Elele Hawaii (The Hawaiian Messenger)* in the 1840s, with English language pages; bilingual newspapers being the result of increasing use of the English language.

Bilingual newspapers were followed by papers printed completely in English. The first mission-sponsored English newspaper was *The Temperance Advocate and Seaman’s Friend*, started in 1843 and known as *The Friend*. In 1855 five newspapers were being published, some providing both Hawaiian and English pages. While primarily religious in content, these early newspapers also provided news about the world, stories with moral content, features, and illustrations.

**B. History and Scope of the Project**

**Newspapers in English**
Until the mid 1800s the English language press in Hawai‘i was in reality the foreign language press in an independent kingdom of Hawai‘i. These early English language papers were commercial ventures, published by businessmen to promote their economic and political ideas. The first English-language newspaper, the *Sandwich Island Gazette and Journal of Commerce* (1836-1839) was aimed at the foreigners living in Hawai‘i. It was the first newspaper to contain advertising. It published old news from world newspapers, local shipping notices, and contributions from its readers. It advocated freedom of the press, discussed the declining native population, and supported freedom of religion for Roman Catholics in Hawai‘i. The monthly *Sandwich Island Mirror and Commercial Gazette* (1839-1840) continued the anti-missionary position of former weekly *Sandwich Island Gazette and Journal of Commerce*.

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4 Chapin 1984, 67.
Two English language newspapers considered most important in the 19th century were the *Polynesian* and *The Friend*. The *Polynesian* (1840-41, 1844-64), published by James Jackson Jarves of Boston, was the leading publication in the mid-1800’s. From 1844 to 1860 it was the official printer of laws and notices of the Hawaiian government. *The Friend* (1843-1954, originally called *The Temperance Advocate and Seamen’s Friend*) was begun by Reverend Samuel Chenery Damon and printed by the American Mission Press. It was one of the English language newspapers that overtly supported Christianity. In contrast, the *Honolulu Times* (1849-1851) published by Henry L. Sheldon, originally of Rhode Island, opposed the influence of American Protestants, as did the earlier English language newspapers supported by the business community. After the *Honolulu Times* ceased publication, Abraham Fornander, who had written for Sheldon’s *Honolulu Times*, published the *Weekly Argus* (1851-53). Fornander’s objective was to provide in the *Weekly Argus* a voice against the government’s *Polynesian* and missionary descendant Gerrit P. Judd. Helen Chapin states that “Fornander toppled Judd from power and celebrated by renaming the paper the *New Era and Weekly Argus*”.(1853-55)5.

By the mid 19th century English language had become the medium of business, government and education. Historian Helen Chapin groups them into five categories:

- **establishment newspapers**—first introduced by missionaries, and mainly in the Hawaiian language, such as *Ka Nonanona (The Ant)* (1841-1845), continued by *Ka Elele Hawaii (The Messenger)* (1845-1855), two bilingual newspapers.
- **opposition newspapers** such as business, ethnic, and Hawaiian nationalistic papers: *Sandwich Island Gazette* and *Journal of Commerce*, (1836-1839)—anti Protestant missionaries and pro-business, the *Sandwich Island Mirror and Commercial Gazette* (1839-1840), the *Weekly Argus* (1851-1853) later called *New Era and Weekly Argus* (1853-1855)—opposed the missionary influenced Hawaiian government.
- **official government sponsored newspapers**, such as the *Polynesian* (1841, 1844-1864); *Hawaiian Gazette* 1865-1918 (1887-1888 concurrently published with *Daily Hawaiian Gazette*) —1865-1881 government; after that became establishment paper.
- **independent papers**—*Honolulu Times* (1849-1851), *The Temperance Advocate and Seamen’s Friend* (1843-1854),
- **commercial newspapers**—English language newspapers, such as the *Daily Commercial Bulletin* (1871-1881), the *Pacific Commercial Advertiser* (1856-).

**Major Hawai’i Newspapers in English**

This project proposes to digitize microfilm of the English language newspapers with the longest history of publication in the time period 1880-1910 and with sustained impact on Hawai’i. Two of these with the widest influence on social, economic, and political developments in Hawai’i are the *Pacific Commercial Advertiser* (later called the *Honolulu Advertiser*) and the various manifestations of the early *Honolulu Star-Bulletin* prior to 1911. However, other newspapers noted in the previous section, with shorter publication histories, will also be considered for their regional impact, and final selection will be made by the Advisory Board.

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5 Chapin, 1984, 65.
Since the mid 1800s the major English language newspapers for the six main islands of the Hawaiian archipelago have been the *Honolulu Advertiser* and the *Honolulu Star Bulletin*. Both have maintained publication to the present. The long history of these newspapers is demonstrated by their various name changes:

- *Pacific Commercial Advertiser* (1856-1921); *Honolulu Advertiser* (1921-).

These two newspapers shared common parentage. The papers were not identical in content, however. Coverage varied and different points of view (e.g. letters to the editor) were expressed in each newspaper. Both papers were begun by the same Protestant missionary descendent Henry Whitney. With his connections to four important Hawai‘i newspapers in both languages, Whitney’s impact on journalism in Hawai‘i was immense. His influence on the political and social developments of the Kingdom and Republic of Hawai‘i was significant because of his dominant position in newspaper publishing as the following brief biography illustrates.

**Publisher Henry Whitney**

Henry Martyn Whitney (1824-1904), son of Samuel and Mercy Whitney of the Pioneer Company of ABCFM missionaries, was born on the island of Kaua‘i, and educated in Rochester, New York. He is said to have worked on the American newspaper *New York Commercial Advertiser* and for the publisher Harper and Brothers, then returned to Hawai‘i where he served as head printer at the Hawai‘i government printing plant and business manager of the English-language newspaper, *The Polynesian*. Whitney’s influence was wide-ranging. He is described as a “...man who was a true and experienced journalist rather than a mission or government educator. What he achieved in 1856 was two-fold: the liberation of the press from the mission and the government, making journalism a commercial enterprise independent of the church and the state, and the liberation of the Hawaiian reader or writer.”

**Pacific Commercial Advertiser**

In 1856 Henry Whitney began the *Pacific Commercial Advertiser (PCA)* (1856-). It is Hawai‘i’s oldest continuously published newspaper. He described the *PCA* as a free press, independent of the government. It began as a bilingual weekly and from July until September 1856 the last page of the *PCA* was printed in the Hawaiian language in a section called *Ka Hoku Loa o Hawai‘i* (The Morning Star of Hawai‘i). In 1882 the *PCA* became a daily, which was renamed the *Honolulu Advertiser* in 1921. In 1882 Whitney also started the *Daily Bulletin* (1882-) which was later renamed the *Honolulu Star-Bulletin*. In 1861, while he continued to publish the *Pacific Commercial Advertiser*, Whitney commenced publication of *Ka Nupepa Kuokoa*, a Hawaiian language newspaper which during its long tenure (1861-1927) supported the Caucasian establishment while also providing extensive and valuable native Hawaiian content.

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In 1870 Whitney was forced to sell his business, for financial and political reasons. He had offended sugar planters and the Hawaiian government by his position that importation of foreign labor for the sugar industry was akin to slave labor. Thus the Pacific Commercial Advertiser did not consistently support American business. In the 1880s it supported the Hawaiian King Kalākaua’s policies, when Walter Murray Gibson controlled the paper.

Walter Murray Gibson arrived in Hawai‘i in 1861, learned Hawaiian, and became a champion of the Hawaiian people and supporter of King David Kalākaua. With money borrowed from the Hawaiian government he bought the Pacific Commercial Advertiser in 1880, and in that year also began the Hawaiian language paper Ka Elele Poakolu (The Wednesday Express). In 1882 he became Premier of the Hawaiian kingdom. Over the next several years Gibson acquired two more newspapers. In 1887 Gibson was forced to leave Hawai‘i as a result of the “Bayonet Constitution”, which stripped the power of the king and denied voting rights to Native Hawaiians. With Gibson’s departure the Pacific Commercial Advertiser reverted to its previous anti-monarchy position, and supported the overthrow of the Monarchy in 1893 as well as American annexation in 1898. This seven-year interval, when an establishment English language newspaper promoted a pro-Hawaiian nationalist stance against the Caucasian elite, is an important period. Coverage of news during this period in both major newspapers offers a unique perspective for historical research.

Honolulu Star Bulletin

In addition to publishing the Pacific Commercial Advertiser, Henry Whitney was also responsible for starting the second important English language newspaper in Hawai‘i. He wrote the Daily Marine Bulletin news from 1870-1871, when it became the Daily Commercial Bulletin, then published the Daily Bulletin in 1882 and the Evening Bulletin in 1895. In 1912 the Honolulu Star-Bulletin was created, with the merger of the Hawaiian Star and the Evening Bulletin, which had absorbed the Independent (1895).

In 1870 Henry Whitney had been forced to sell the Pacific Commercial Advertiser. He left Hawai‘i, but returned later to open a stationery and book business in the building that also housed the post office. It was the practice of the postal office to post daily bulletins on ship arrivals, mail dispatches, and other information. Whitney began to post a news sheet daily except Sunday, on the wall opposite the post office bulletin. This was the start of what was to become the Daily Bulletin in 1878, the first daily printed news sheet in Honolulu. Shortly after the Daily Bulletin appeared as a daily, the PCA also began publication as a daily.

While generally considered pro-American in their positions toward business and politics, the PCA and the various Bulletins considered themselves rivals for readership and influence. The Advisory Board will review a historical chronology of how important events on the international, national, and local levels were treated in both newspapers, in order to compare coverage and editorial policies of these and at least one other newspaper with a significant run available on microfilm. Of particular note is the period of editorship by Walter Murray Gibson, enthusiastic supporter of the monarchy and the king’s policies.
Some of the historical events include the 1893 overthrow of the Hawaiian government, the 1898 annexation by the United States, the position of the Native Hawaiians in their homeland, importation of foreign (Asian) labor, the 1900 bubonic plague and Chinatown fire, ethnic labor strikes of the early 1900s. Differences and similarities in coverage and point of views expressed in each newspaper may prove to be sources for very interesting historical and sociological research.

The Friend
The sustained viewpoint of The Friend (May 1843- ), originally titled The Temperance Advocate and Seamen’s Friend, is noteworthy, in the longest paper published in Hawai‘i. Originally a monthly published by the Hawaiian Missionary Board and still published by the United Church of Christ 10 times annually, it was a source of information on the whaling industry and for sailors, but through the years included articles on a variety of topics pertinent to the times. Editor for 40 years, Reverend Samuel Chenery Damon supported women’s rights, improvements in the whaling industry, and health services for Hawaiians. As a monthly, it does not fit the definition of newspaper used by the Library of Congress (“A newspaper is a serial publication, appearing usually at least weekly, which serves as a primary source of information on current events of general interest”). The Friend was microfilmed by the University of Hawai‘i at Mānoa Library, and master copies are stored in the UHM Library’s underground storage at OCLC.

Newspapers not on microfilm
In the mid-1980’s the Hawaii Newspaper Project identified and microfilmed the most important newspapers. There are 24 English-language newspapers published in the time frame 1880-1910 which are not available on microfilm. One-third (9) of the titles have no known paper holdings. Most of the papers were published for only a year or two, the few that have longer publication runs extend beyond the grant coverage period. See the list at the end of Appendix B for details.

The seven short run titles held at the UH Mānoa Library and/or the Hawai‘i State Archives might be potential candidates for microfilming and digitization. However, these titles do not report Hawai‘i-wide events of historical significance or for a sufficiently long period of time as to be worth the effort of processing for microfilming and digitization.

Newspapers on other islands
Newspapers were published on islands of Hawai‘i other than in Honolulu, O‘ahu. They served their local communities, and have not competed with the major Honolulu newspapers in terms of influence and circulation. While useful for coverage of local community news, they have not been major factors in political decision-making nor in the shaping of public opinion across the state.

The Hawai‘i Island Hilo Tribune began in 1895 as a bilingual weekly paper. On the same island the Hawaii Herald was begun in 1896, then merged with the Hilo Daily Tribune (originally the Hilo Tribune) and Daily Post-Herald to form the Hilo Tribune-Herald. It became the Hawaii Tribune-Herald in 1969. In 2000 its circulation was 19,000 weekdays, 22,800 weekends. On the island of Kaua‘i, the Garden Island was started as an English-
Japanese newspaper in 1902, became English-only in 1904 and continues to the present, with a circulation in 2000 of 10,000 daily; 10,950 weekends. On Maui the Maui News began publication in 1900. In 2000 circulation was 18,000 daily, 23,500 Sundays. By comparison, the circulation of the papers produced by the Hawai‘i Newspaper Agency (a joint operation of the Advertiser and Star-Bulletin) in 2000 was 113,000 daily, 188,000 Sundays.

While the Honolulu newspapers were distributed throughout the islands, those from islands other than O‘ahu have not enjoyed widespread circulation or influence upon the broader community. The bulk of the population has been concentrated on O‘ahu, where the capital city of Honolulu was established in 1850. Rising population rates on all the islands during the time period of 1880-1910 were due to in-migration by foreign agricultural laborers, from Portugal, China, Japan. As agriculture became less central to the economy, O‘ahu became and remains the mostly densely populated island. The table below will demonstrate the population shift to O‘ahu, which continues to the present:

<table>
<thead>
<tr>
<th>Date</th>
<th>Hawai‘i island</th>
<th>Maui</th>
<th>O‘ahu</th>
<th>Kaua‘i</th>
</tr>
</thead>
<tbody>
<tr>
<td>1831-32</td>
<td>45,792</td>
<td>35,062</td>
<td>29,755</td>
<td>10,047</td>
</tr>
<tr>
<td>1853</td>
<td>24,450</td>
<td>17,574</td>
<td>19,126</td>
<td>6,991</td>
</tr>
<tr>
<td>1872</td>
<td>16,001</td>
<td>12,334</td>
<td>20,671</td>
<td>4,961</td>
</tr>
<tr>
<td>1896</td>
<td>33,285</td>
<td>17,726</td>
<td>40,205</td>
<td>15,228</td>
</tr>
<tr>
<td>1910</td>
<td>55,382</td>
<td>28,623</td>
<td>81,993</td>
<td>23,744</td>
</tr>
</tbody>
</table>

Hawai‘i’s major English-language newspapers published in Honolulu have recorded significant events during turbulent transitional periods in the nation of Hawai‘i and the United States and have preserved details of everyday life in a multi-ethnic territory. Highlights of important political, social, and cultural news that occurred within the 1880-1910 time frame of the National Digital Newspaper Project are included in Appendix A.

C. METHODOLOGY AND STANDARDS
Newspaper Collections within the State
Access to Hawai‘i newspapers has been sustained by the NEH sponsored U.S. Newspaper Project, which, among other objectives, preserves historical newspapers on microfilm. The Hawaii Newspaper Project identified and microfilmed newspaper holdings in Hawai‘i repositories. Between 1983 and 1990, the University of Hawai‘i at Mānoa Library preserved the content of 141 Hawai‘i newspaper titles (120,975 frames) with NEH funding. OCLC union lists records were updated to reflect the microfilming. A revised Union List of Hawai‘i Newspapers was distributed in 1990.

In 2000, the Hawaiian Collection of the University of Hawai‘i at Mānoa Library held 12,183 microfilm rolls (statistics are not available since 2000). Annually the Hawaiian Collection microfilms 12 current newspapers in English, Korean, and Japanese; these cover general news, business, ethnic, and neighbor island interests. Master copies of newspapers filmed under the NEH grant and in the on-going microfilming program are preserved on polyester-based, silver-negative 35 mm microfilms stored remotely under ANSI standard conditions.
**Extent to which Newspaper Collections have been Cataloged and Microfilmed**

Hawai‘i newspapers are held in a number of libraries in the state, mostly in microformat, and listed in their online catalogs. Collections in paper, particularly of Hawaiian language newspapers, are held in the Bishop Museum Library and the Hawaiian Historical Society Library. The University of Hawai‘i at Mānoa Library has scattered print holdings which are listed in the Hawaii Voyager Online catalog. There are 13 English language newspaper titles (approximately 16 database records) for material published between 1880 and 1910 in the WorldCat database.

Master microfilm for the *Honolulu Advertiser* and its predecessor is available at ProQuest. Master film for the early *Honolulu Star-Bulletin* is available at the Hawai‘i State Archives. Copies of film for both titles can be obtained for this project. Master microfilm of titles filmed by the Hawaii Newspaper Project, such as *The Friend*, are available for purchase through the University of Hawai‘i at Mānoa Library. Titles available on microfilm include:

1. Austin’s Hawaiian Weekly  
2. Daily Bulletin  
3. Daily Commercial Bulletin  
4. Daily Hawaiian  
5. Daily Hawaiian Gazette  
7. Daily Herald  
8. Daily Pacific Commercial Advertiser  
9. Democrat  
10. Evening Bulletin  
11. Friend  
13. Hawaiian Gazette  
14. Hawaiian Star  
15. Honolulu Times  
16. Honolulu Republican  
17. Independent  
18. Liberal  
19. Pacific Commercial Advertiser  
20. Saturday Press

There are 24 known English language newspapers that are not available on microfilm. Appendix B contains the detailed descriptions of the newspaper records and holdings.

Newspapers in the state of Hawai‘i have also been described and cataloged in a number of publications over the years including:

**Articles:**
Bell, Janet E. “A project to microfilm Hawaiian newspapers published primarily before 1900.” *Hawaii Historical Review*. 2.4 (July 1, 1966): 332-334.
Books:
Chapin, Helen Geracimos.
Hawaii Newspaper Project.
Hawai‘i State Archives.
Hawaiian Historical Society.
Newspapers published in Hawaii; survey of the holdings of the Hawaiian Historical Society: analysis of the files in the collection, their relation to holdings of other Honolulu libraries and to the total production in Hawaii, 1953.
Mookini, Esther T.

Past or Current Effort to Digitize these Collections
English language newspapers of Hawai‘i are not available in digital formats, except for the current files available through the websites of the Honolulu Advertiser and Honolulu Star-Bulletin. In 1997, the University of Hawai‘i at Mānoa Library began a pilot project to make selected, heavily used Hawaiian language newspapers available on the World Wide Web (WWW). These historical newspapers, published from the mid-nineteenth through the early twentieth centuries in Hawai‘i, were only available on microfilm. In an effort to make the information accessible in places where local libraries did not have the microfilm or were unable to provide long hours of service, the pilot project goal was to digitally scan selected articles pertinent to Hawaiian language and history courses and selected rolls of particularly significant Hawaiian language newspapers, index the images on a basic level, and mount them on a server for access via the Internet. The original five-month project (February-June 1997) was designed to identify the problems and issues related to making microfilmed Hawaiian language materials more widely available through use of digital technology. This project was funded by a University of Hawai‘i Student Equity, Excellence and Diversity (SEED) Grant. Additional SEED grants were received in 1998 and 1999, and a large 2-year grant, 1999-2000, from the Institute for Museum & Library Services (IMLS), continued the work. The University of Hawai‘i at Mānoa through the Hawaiian language program, in collaboration with ALU LIKE, Inc., the University of Hawai‘i at Hilo’s Hale Kuamo‘o, and Bishop Museum, is presently digitizing Hawaiian language newspapers (see: Hawaiian Nupepa Collection http://www.nupepa.org) and plans to make available on this site all of the published newspapers in the Hawaiian language.
Experience with Digital Conversion Projects

The University of Hawai‘i at Mānoa Library has a long history of involvement with digitization projects, beginning in 1991 when the library received a 2-year Title II-C federal grant for a pilot project to create a digitized database using the Trust Territory Archives Photo Collection. This first foray into digitization supplied the library with "ground floor" experience and knowledge of the early development of standards for image formats and quality, the management issues of running an in-house conversion project, and what end-users looked for when using online image collections. Over the years the library has developed significant expertise in researching technical specifications for equipment, working with vendors offering digitization services and managing grant funds.

In Fall 1998, three areas of the Special Collections were awarded an Institute of Museum and Library Services (IMLS) grant to fund a two-year project to begin developing a digital library of Hawaiian and Pacific Islands materials. This project represented a major leap forward in technology. The World Wide Web was now an integral means of access to digitized information, standards for description of archival materials (finding aids and metadata) were evolving and technology capable of high quality output was becoming affordable. Flatbed scanners, with transparency capability, and a microfilm scanner were acquired and used extensively in this project. Later, in partnership with PREL (Pacific Resources for Education and Learning) an overhead book scanner was added to the growing digitization lab. The latter has been used for Interlibrary loan document delivery and reformatting projects as well as for digitization projects such as the Asia Collections web site "Asia at Work" http://libweb.hawaii.edu/libdept/asia/books/.

The Library has been involved with efforts to digitize newspapers from microfilm since 1997. During the IMLS-funded project, a significant number of issues from Hawaiian language newspapers were scanned. Titles included:

- *Ke Aloha Aina Oiaio* - 1896-1897
- *Ke Au Hou* - July 1910 - January 1912
- *Hawaii Holomua* - 1912
- *Ke Kiloohana o ka Malamalama* - 1907 - 1919
- *Ka Lanakila* - July 1, 1909 - October 21, 1909
- *Ka Lei Momi* - June 21, 1893 - September 22, 1893
- *Ka Lei Momi e Mau Kou Olino Ana* - August 5, 1893 - December 25, 1893
- *Ka Leo o ka Lahui* - 1889-1896
- *Ka Loea Kalaiaina* - 1897-1900
- *Ka Manawa* - November 7, 1870 - December 12, 1870
- *Ka Nai Aupuni* - 1905-08

One of the project objectives was to determine the feasibility of performing OCR (Optical Character Recognition) on the scanned newspaper images. Several potential software solutions were tested, and an excellent OCR program (Abbyy Finereader - since become one of the most popular and widely used programs) was identified. However, it was determined that because of the poor quality of the original papers, the inconsistent microfilm quality, and the need for proficient Hawaiian language expertise to perform text proof reading that OCR was not feasible for the Library to attempt. These findings and

In Fall of 2000, librarians and staff involved with digitization projects gave an introduction to digitization 2-day pre-conference workshop before the 10th Annual Pacific Islands Association of Libraries and Archives PIALA conference. Librarians, archivists, museum staff from Belau National Museum, Koror, Palau; Chuuk High School, Chuuk [Truk], Micronesia; College of the Marshall Islands, Majuro, Marshall Isles; FSM Learning Resources Center, Pohnpei, Micronesia and Yap Archives, Yap, Federated States of Micronesia [FSM] attended. It raised the level of understanding and awareness of the issues involved and also the positive aspects of a digitizing program.

In 2000-2001, the University of Hawai‘i at Mānoa Library consulted with the University’s Hawaiian language program, ALU LIKE, Inc., the University of Hawai‘i at Hilo’s Hale Kuamo‘o, and Bishop Museum providing them with the information and conclusions of the newspaper scanning projects. Subsequently, those organizations began a large scale program to digitize Hawaiian language newspapers, perform OCR and proof-reading using Hawaiian language students (See: Hawaiian Nupepa Collection http://www.nupepa.org).

In addition to originating the Hawaiian language newspaper scanning, the Library has engaged in several moderate scale digitization/OCR of English language material for the Annexation of Hawai‘i: a Collection of Documents digital collection (http://libweb.hawaii.edu/digicoll/annexation/annexation.html), including *Affairs in Hawaii* (aka Blount Report - over 1400 pages) and the *Congressional debates on Hawaii Organic act, together with debates and congressional action on other matters concerning the Hawaiian Islands* (aka the Organic Act – over 600 pages). The Library has a long history of experience with digital conversion projects, a wide variety of scanning hardware and software, expertise at managing funded digitization projects and "shoe-string" operations. The Information Technology Division of the Library has an experienced project manager and programmers who have worked with a wide variety of digital library systems (e.g. Greenstone, dSpace, Streetprint). Through a cooperative internship program with the Library and Information Studies Program many library school graduates have been exposed to and involved with range of digitization projects including research and direct experience with issues relating to creation of a digital library; experience with making image and other files available for use on WWW; HTML encoding and design and indexing. (See: http://www.hawaii.edu/slis/courses/690/690-dns-speccoll.htm)

**Selection**

The Library will convene an advisory committee at the start of the project to finalize the newspaper title selection. Present members are Professor Helen Chapin, historian and author of major studies of Hawai‘i newspapers; Barbara Dunn, Director of the Hawaiian Historical Society; Patrick McNally, head of the Hawai‘i Pacific Division of the Hawai‘i State Library, and Carol Silva, head of the Records Management Division of the Hawai‘i State Archives. These members bring extensive knowledge about Hawai‘i newspapers
and experience in reference service requiring access to newspapers. A second semester Library & Information Studies student member, Alice Tran, will also serve on the board. During the initial selection process, the project staff will consider the historical significance and content of the titles, the availability of master negatives, and the technical quality of the film. Final selection will take into consideration whether master negatives for a significant portion of the full title run are available. Newspaper titles for which there is no microfilm, and titles that may be less likely to be digitized due to short publication histories and/or lack of ownership, will be reviewed. Helen Chapin’s comprehensive annotated list, *Guide to Newspapers of Hawai‘i 1839-2000* and the Hawaii Newspaper Project’s two lists of Hawai‘i newspapers, together with the subject knowledge brought to the board by its members, will guide the selection process.

During the selection process, members of the Advisory Board will draft the two documents:

1. Decade essay – history of state’s newspapers and impact on regional historic events for the relevant time period (one essay per decade) – maximum 1,000 words/essay.
2. Essay – scope and content of each title, history and significance – 500 words.

The Project Director will complete the essays with editorial input from the Advisory Board.

The Advisory Board will select from among English language newspapers available on microfilm using criteria that will include:

- Widest impact on social, economic, and political developments in Hawai‘i
- Extent of physical and demographic coverage in reporting significant historical events
- Titles on microfilm that are complete or relatively complete
- Quality of original text and microfilm capture

**Scanning**

The newspaper pages will be scanned from second generation duplicate silver negative film produced either by Proquest from master film deposited with them, or by Advanced Micro-Image (Hawai‘i) from master film deposited with the Hawai‘i State Archives. Correction of skew and other specified manipulation of images will be performed by the vendor. Images created will be 8-bit grayscale, 300-400 dpi; in uncompressed TIFF 6.0 and compressed as JPEG2000 formats. Each JPEG2000 image will incorporate appropriate XMP metadata, be 6 decomposition levels and 25 quality levels with a compression of 8:1.

Newspapers microfilmed two sheets per frame will be split into two separate image files and images with more than 3 degrees of skew will be deskewed. Page image files will be cropped to retain the actual edge and up to ¼ inch beyond. All operations that change the image dimensions, spatial resolution, or orientation will be made to the TIFF before OCR. A standards-based scanning target film strip will be scanned at the start of each session, to monitor scanning equipment performance. Target test images will be delivered along with the page images, and described in the reel metadata object.
PDF (Portable Document Format) files
The Library will contract with a vendor to create a searchable PDF image file (i.e. PDF image with hidden text) to the specifications described in the grant technical requirements. The page image will be grayscale, downsampled to 150 dpi and encoding using a medium JPEG quality setting. It will not contain any bookmarks, links, comments, external cross references, embedded thumbnails, annotations, etc. The PDF files will incorporate appropriate XMP metadata.

Optical Character Recognition
The Library will contract with a vendor to perform Optical Character Recognition (OCR) on the newspaper pages to the specifications described in the grant technical requirements. The OCR text will be encoded using the ALTO (Analyzed Layout and Text Object) schema, Version 1-1-041 or greater. The page images will correspond in dimensions, orientation, and skew to those used for the OCR. One text file per page image will be created in the UTF-8 character set. No graphic elements of the page image will be saved with the OCR text. The text will be ordered column-by-column (natural reading order) and include bounding-box coordinate data at the word level. If the OCR process selected by the grant recipient includes generation of coordinates for article zones, the segmentation data will be removed from the METS/ALTO object prior to delivery to Library of Congress.

Metadata
The Library will follow the metadata specifications provided in the technical guidelines and those developed with the awardees. Bibliographic metadata for each image, will be provided in a record structure as required by the Library of Congress. Structural metadata, for each image, shall be provided for titles, editions, issues (enumeration and chronology/date), sections, and pages per the technical guidelines. Technical metadata, including the file format, pixel array, targets, and device will be entered by the vendor at the time of digital capture.

Pre-existing CONSER records will be reviewed and updated as necessary and copies delivered with the project data. The records will be in MARC 21 Communications format.

Validation
The project-specified Digital Viewer and Validator (DVV) will be used to validate all digital objects before shipment to Library of Congress per the technical specifications for the grant.
D. PLAN OF WORK

The process of reformatting microfilm masters of newspaper into usable digital files will take place in several stages. The Library will outsource the conversion of the materials and creation of image files and metadata. However, the work of microfilm review and (in the case of the Star-Bulletin preparation), metadata review, and quality control will be done at the Library. Manual review of the microfilm will be necessary so that staff may flag potential problems that will affect scanning. Proper preparation of metadata will facilitate the reformatting work by clearly identifying and linking the digital output with the required electronic records.

Quality control is required to vet the various digital outputs and reconcile them with the technical and bibliographic metadata. The Library will adhere to the technical guidelines set for the National Digital Newspaper Program by the Library of Congress.

Digital products will be delivered to Library of Congress via tracked shipment of Firewire-enabled external hard drives. Adequate temporary storage for the TIFF, JP2, PDF, OCR, XML will be available on a 6-TB iSCSI Library server. Data will be shipped to Library of Congress on a monthly schedule after initial project timetables and procedures have been established. The budget includes purchase of 10 external hard drives to insure that there will be enough capacity to have one or more drives "in transit", and in case one or more should be lost or damaged. Two workstations will be purchased for use by the project staff and will include extra disk space and backup systems to insure that data being reviewed is not lost before it has been shipped to Library of Congress.

The final selection of a conversion vendor will occur after an official bid process if the UHM Library is awarded this grant, therefore the exact sequence of work steps cannot be fully determined at this point. A general outline of expected activities follows.

STARTUP PHASE (OCTOBER – DECEMBER 2007)
- Convene Advisory Board to select and prioritize collections to be digitized.
- Develop bidding documents and post RFQ to digitization vendors.
- Review vendor bids, select vendor, and negotiate contract with vendor.
- Liaise with project partner, Library of Congress, National Endowment for the Humanities, and other award recipients to administer the project.
- Establish web site to document and share project information.
- Outline project timetables.
- Order copies of microfilm material.
- Assess available bibliographic description.
- Host LC technical representative on site visit [schedule of visit currently unknown]

SECOND QUARTER (JANUARY-MARCH 2008)
- Hire a Technical Specialist (APT classification), who will perform microfilm review, digital file quality control, and metadata quality control.
- Train Technical Specialist on quality control benchmarks.
- Receive duplicate microfilm reels per grant project requirements.
Perform assessment of microfilm condition, note areas of concern, including missing issues.
Confirm digital file naming conventions. Assign unique identifiers to item level objects per LC guidelines.
First batch of film scanned (up to 10,000 pages). Vendor creates and initial metadata, OCR and PDF per technical specifications
Submit first semi-annual report.
Attend annual program meeting/workshop held in Washington

**THIRD QUARTER (APRIL-JUNE 2008)**
Receive first batch of digital files (TIFF, JPEG2000, PDF, OCR) and metadata from vendor.
Conduct quality control on sample of records for each type of TIFF, JPEG2000, PDF, and OCR files.
Reconcile records to digital content and enrich content of records as necessary.
Identify issues with unsuccessful sets.
Re-send unsuccessful reels to vendor for correction and reprocessing.

**FOURTH QUARTER (JULY-SEPTEMBER 2008)**
Second batch of microfilm processed by vendor (up to 15,000 pages).
Receive reprocessed batch of digital files from vendor.
Conduct quality control on sample of reprocessed records for each type of TIFF, JPEG2000, PDF, and OCR files.
Archive successful digital files, XML packages.
Validate digital objects per grant specifications.
Copy to and ship files on firewire hard drive(s).
Deliver XML package, bibliographic metadata, microfilm technical metadata, digital technical metadata, OCR files, and microfilm to the Library of Congress.
Submit semi-annual report.

**SECOND YEAR (OCTOBER 2008-SEPTEMBER 2009)**
Regular monthly data deliveries to Library of Congress will begin.
Conduct quality control on sample of records for TIFF, JPEG2000, PDF, and OCR files.
Reconcile records to digital content and enrich content of records as necessary.
Route unsuccessful sets to investigation and reprocessing.
Send remainder of microfilm to vendor.
Submit grant reports as required.
Attend annual program meeting/workshop held in Washington
Continue organization and quality control processes with remainder of digital files.
Validate digital objects per grant specifications.
Copy to and ship files on firewire hard drive(s).
Deliver XML package, bibliographic metadata, microfilm technical metadata, digital technical metadata, OCR files, and microfilm to the Library of Congress.
E. STAFFING (Please see the attached resumes in Appendix E)

Project Director, Joan Hori, Curator, Hawaiian Collection – 2%
Coordinator/Metadata, Martha Chantiny, Head, Desktop Network Services – 7%
Web Support Librarian, Beth Tillinghast - 2%
Technical Specialist/Quality Control (temp hire) – 100%
Preservation Librarian, Lynn Davis - 1% for approximately 1 year
Advisory Board – 5% for approximately 6-9 months over two year span

The Project Director, Joan Hori, and Coordinator, Martha Chantiny, will have oversight of the project. Both have been leaders on several digitization projects. They will liaise with the funding agencies, hire and supervise staff and library interns and work with contractors. They will attend NDNP meetings in Washington.

The Coordinator, Ms. Chantiny, will develop procedural guidelines for the project and is responsible for the administration of digital materials; will work with vendors to ensure content integrity. In consultation with the Preservation Librarian she will assess the condition of the microfilm materials, and note areas of concern such as missing issues. She will confer with members of the Library’s Catalog Department on bibliographic issues. She will advise the temporary hire Specialist on technical issues related to the creation, storage, and retrieval of digital items.

The Specialist, TBD, is responsible for close monitoring of production. Will be responsible for overseeing the project’s daily production and review of metadata for accuracy. Will liaise with the microfilm storage and reproduction vendor(s), supervise second-generation microfilm quality control, and manage shipments of microfilm to the digitization/text-conversion vendor. Will perform quality control on the digital images and the metadata returned from the vendor. Will review images and associated metadata returned from the vendor to ensure product meets project specifications. Will prepare, monitor, and document project schedules. Will document the process flow of materials. In collaboration with Project Director and Coordinator, will prepare project reports. Will establish a web site that will document policies and procedures and publish documentation on website. The positions will be hired to start in the second quarter of the project and continue through the end of the project period. See Appendix F for a draft job description for this position.

Beth Tillinghast, as part of her regular duties as Web Support Librarian, will coordinate creation of web sites to document the project and make the digital files available. She will work with project staff to explore, and if feasible, implement value-added web-based access to the project material in addition to the basic Library of Congress system.

The Advisory Board will confer to help finalize the titles for the project and prepare the historical essays. Members include Professor Helen Chapin, historian and author of major studies of Hawai‘i newspapers; Barbara Dunn, Director of the Hawaiian Historical Society; Patrick McNally, head of the Hawai‘i Pacific Division of the Hawai‘i State Library, and Carol Silva, head of the Records Management Division of the Hawai‘i State Archives. These members bring extensive knowledge about Hawai‘i newspapers and experience in
reference service requiring access to newspapers. A second semester Library & Information Studies student member, Alice Tran, will also serve on the board.

F. BUDGET
See the attached budget form for details. Budget categories include salaries, fringe benefit costs, travel expenses for two project representatives to attend the initial meeting of award recipients and annual program meeting/workshop in Washington, D.C.; estimated expenses for a Library of Congress technical representative to conduct a site visit and technical consultation (exact time frame, length of stay are currently unknown). The budget assumes for estimation purposes that the digitization vendor will be Proquest, but final costs and selection of a vendor will be subject to competitive official bid. Locally held microfilm will be duplicated by Advanced Micro-Image under a contractual discounted rate. The budget includes estimated costs for hard drive media and insured/tracked shipping to Washington, D.C. as well as a processing workstation for the Technical Specialist and another workstation for use by project staff and library school interns that may be brought in to assist for educational credit.

G. HISTORY OF FUNDING
- IMLS - "Project To Create and Expand Digital Databases for Three Collections in the University of Hawai‘i at Mānoa Libraries" - $120,000. (See http://libweb.hawaii.edu/digicoll/grants/imlsgrant.htm)
- HCH (Hawai‘i Committee for the Humanities) – Digitization for Preservation of an Important Hawaiian Language Newspaper – Ka Nupepa Kuokoa - $5,000 awarded, September 1999 (See: http://libweb.hawaii.edu/digicoll/grants/HCH/hchgranttoc.html)
- SEED (Student Equity, Excellence & Diversity) -- microcomputers to access Hawaiian Newspapers on the web, for distance education Hawaiian language courses on Kaua‘i and Maui - $7,635.00 for 3 requests coordinated by UHM, January 1999 (See: http://libweb.hawaii.edu/digicoll/grants/HCH/hchgranttoc.html)
- SEED (Student Equity, Excellence & Diversity) -- Digitizing Hawaiian Language Newspapers on the World Wide Web, Phase II - $2,270.00 awarded, November 1997 (See: http://libweb.hawaii.edu/digicoll/grants/SEED/intro.htm)
- SEED (Student Equity, Excellence & Diversity) -- Digitizing Hawaiian Language Newspapers on the World Wide Web, Phase I - $7,188.00 awarded, February 1997 (See: http://libweb.hawaii.edu/digicoll/grants/SEED/intro.htm)
Conclusion
The Library is well prepared to undertake a digital conversion project and has the expertise necessary to continue this effort in future phases. Highly skilled Library staff has led and participated in numerous digital conversion projects. The staff’s experience in managing the administrative and technical aspects of those projects will guide and inform the new effort to digitize materials in microfilm format. The Library has also participated in a number of partnership projects, in varying roles. The Library has begun exploring a partnership with the Hawai‘i State Library to cooperatively fund article level indexing of the newspapers. Commitment of funding from a local foundation has been assured in the amount of $10,000 per year for two years and the Library is actively pursuing supplementary funding from relevant funding entities associated with the two major newspapers (*Honolulu Advertiser* and *Star Bulletin*). The Library looks forward to contributing its historical content and its technical expertise to this national initiative.