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Oakland, California
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Taking Oral History to the Next Level

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Abstract

For nearly twenty years, the Oral History Program at the University of Alaska Fairbanks has been an international leader in the development of on-line oral history programs that feature full-length audio with associated photos, maps, and texts (Project Jukebox). The rapid advancement of technology, increased reliance on the Internet, and emphasis upon video demands our continued innovation. We have teamed up with The Australian Centre for Oral History (ACOH) (<http://www.acoh.com.au>) and its founder, Dr Bob Jansen, to create fully searchable video Project Jukeboxes on the Internet. ACOH's *Testimony Software* produces and delivers synchronized digital video, audio, images and text to a user's browser. Testimony Software provides for a myriad of doorways into the information space allowing users unrivaled access to the various parts of a collection, while also providing users the ability to use an index to search and find oral history video segments on demand. For the first time, people will be able to easily and quickly compare video segments and gain a comparative perspective on history.

With funding from the Alaska Humanities Forum, we have been developing a sample project with a group of archival recordings from the Communities of Memory Project that was conducted in Nome, Alaska in the mid-1990s. The Nome project was part of a statewide effort to document community values, histories and personal experiences in Alaskan communities. The Nome sessions describe themes such as opening of contact with the Russian Far East, the 1918 Flu Epidemic, and the history of the Iditarod International Dog Sled Race. The ultimate value of this collection will be realized when users are able to search by themes and compare observations.

There are no other on-line oral history sites in the United States that feature the simultaneous search-find-play capability within four formats that we are developing. This revolutionary technology supports linkages between discrete testimonies, something that is very difficult to achieve today; linkages that will provide powerful facilities to researchers and the general public alike.

Introduction

The Oral History Program at the Rasmuson Library, University of Alaska Fairbanks was established in 1981 to collect and curate audio and video recordings that document Alaska's history and the people who have contributed to its rich heritage.



The Rasmussen Library at the University of Alaska, Fairbanks

The collection contains over 9000 individual tapes, including interviews with politicians, pioneers, and Native elders. In 1986, the Program turned to electronic access to oral history after the department experienced a serious budget cut that threatened to eliminate the whole program. The basic idea was that digitization would provide a less labor intensive way to manage and distribute our recordings and would make it easier for more people to access the collections. In 1988, the Program created Project Jukebox, an interactive and integrative approach to digitally access oral history recordings and associated contextual material, such as photographs, maps, and texts.

**Project Jukebox** 

Home | Projects | Alaska Map | Workstations | Contact | Overview | Rasmuson Library | © Copyright | Search | Help!

Project Jukebox Home Page



Berle Mercer and Jarrod Decker looking over a map for the Denali Mountaineering Project Jukebox

Project Jukebox is the digital branch of the Oral History Program at the University of Alaska Fairbanks. Project Jukebox was originally developed using hypercard in 1988, with initial support from Apple Computer's *Apple Library of Tomorrow* program, and is a way to integrate oral history recordings with associated photographs, maps, and text. We have over 35 projects from throughout Alaska, each specific to a topic or an area and we are constantly creating more. We eventually hope to make all the recordings in our oral history collection digitally available. Permission and ethical issues about making people's recordings so widely accessible have slowed the process of putting more projects online. To access the jukebox projects that are currently online, [click here](#). You can also visit the Rasmuson Library on the UAF campus to see all the jukebox projects on individual workstations.

Our site use agreement statement (seen before entering each project) is based on research we conducted on the internet and by talking with the Project Jukebox participants. [Click here](#) to see the results of this study. Contact William Schneider, the Curator of Oral History, at fwss@uaf.edu for more information about the Project Jukebox.

The Oral History Program is part of the Alaska and Polar Regions Collections of the Elmer E. Rasmuson Library at the University of Alaska Fairbanks. The program was established in 1981 to collect and curate audio and video recordings that relate to various aspects of Alaska's history and the people who have contributed to its rich heritage. The collection contains over 9000 individual tapes, including interviews with politicians, pioneers, and Native elders. Key collections include "Alaska Native Songs and Legends" Program" by the UAF Alaska Native Studies Department, and "On the Road Recordings with Old Timers" funded by British Petroleum Corporation. Contact William Schneider, the Curator of Oral History, at fwss@uaf.edu or Robyn Russell, the Assistant Curator for Collection Management at fnrlr1@uaf.edu for more details about the Oral History Collection.

Project Jukebox's Alaska Map

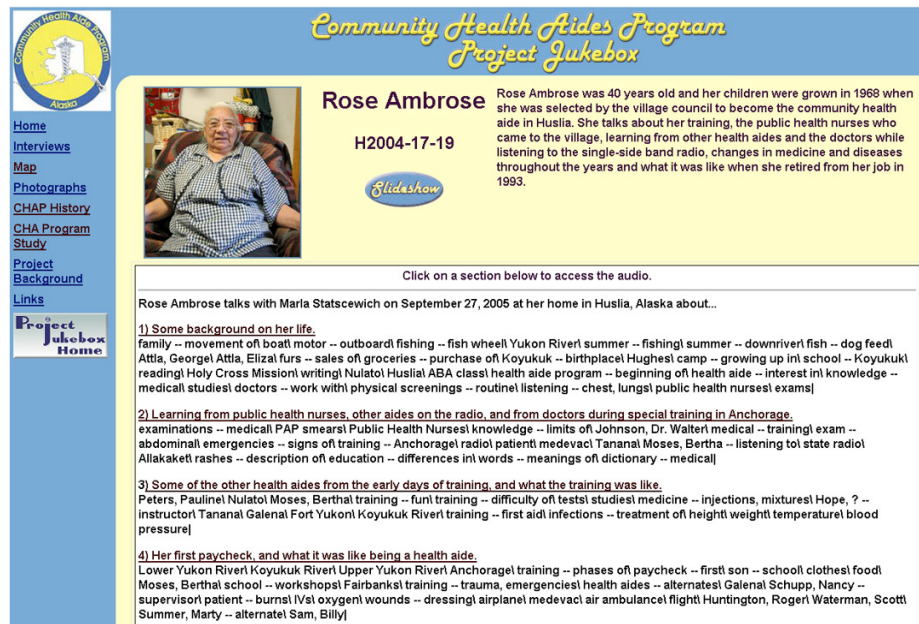
For more detailed information on Jukebox Projects currently online, follow this link.
Check the help page for information about playing MP3 files, streaming audio, and adjusting the buffer settings.
Please note: These audio files are streaming and may take some time to play especially when using a dial-up modem.

::Aleut/Alutiq Cultural Atlases	::Kiana Village History Project Jukebox
::Central Reflections, Then and Now Project Jukebox	::Lake Clark National Park Project Jukebox
::Climate Change Project Jukebox	::Nanwalek & Port Graham
::Community Health Aide Program Project Jukebox	::North Slope Project Jukebox
::Dangerous Ice Workshop	::Nunivak Island Place Names Project Jukebox
::Denali Mountaineering Project	::Pioneer Miners of Alaska Project Jukebox
::Dry Bay Project Jukebox	::Rampart Project Jukebox
::The Fairbanks Jukebox: The Interior Experience	::Raven's Story Project Jukebox
::Fairbanks Native Association Project Jukebox	::Reindeer Herding Jukebox: The Present & The Past
::Gates of the Arctic National Park Project Jukebox	::Sitka National Historic Park Project Jukebox

The Home Page of the Project Jukebox web site

Each recording is keyword outlined and broken into sections for quicker access. In the 1980s, the Program was one of the few utilizing digital technology.

This move into the digital age has positively impacted how we think about recordings and how we provide access, but it has not been less labor intensive, nor less expensive. Two primary benefits from digital delivery highlight the work. First, the level of outlining and control of content on each recording in Project Jukebox allows users to search the oral record with greater speed and efficiency than anything short of a full transcript.



The screenshot shows the 'Community Health Aides Program Project Jukebox' website. On the left is a blue sidebar with a logo and a list of links: Home, Interviews, Map, Photographs, CHAP History, CHA Program Study, Project Background, and Links. The main content area has a yellow header with the program name. Below this, there is a photo of Rose Ambrose, her name, the date 'H2004-17-19', and a 'Slideshow' button. A paragraph of text describes her background: 'Rose Ambrose was 40 years old and her children were grown in 1968 when she was selected by the village council to become the community health aide in Huslia. She talks about her training, the public health nurses who came to the village, learning from other health aides and the doctors while listening to the single-side band radio, changes in medicine and diseases throughout the years and what it was like when she retired from her job in 1993.' Below this is a section titled 'Click on a section below to access the audio.' followed by a list of topics for Rose Ambrose's interview, such as 'Some background on her life', 'Learning from public health nurses, other aides on the radio, and from doctors during special training in Anchorage', 'Some of the other health aides from the early days of training, and what the training was like', and 'Her first paycheck, and what it was like being a health aide'.

The outline of Rose Ambrose's story

There is not anything near this level of content description for most of the rest of the Program's oral history collection, and only a small percent of the rest of the recordings in the collection are listed in the University's on-line library catalog. Second, the Jukebox programs allow the presentation of oral history within a greater context.

Photos, maps, texts, and in some cases video clips give the patron a close up look at and feel for the actual recording setting, and provide related historical and cultural material helpful to understanding the broader subject and themes of the interviews.

[HOME](#)
[INTERVIEWS](#)
[TRAIL MAPS](#)
[PLACES](#)
[TOPICS](#)
[SLIDESHOW](#)
[Project Jukebox Home](#)

Click on the map to see more detail.
The audio is also available on the next map.

Click to navigate

Trail to Akiachuk from Tuluksak

Click below to hear Joe describe this trail (excerpted from tape #H2004-07-12).

[How Joe made this trail](#)

- [1. Start of the trail](#)
- [2. Small creek \(An'qeraraq\)](#)
- [3. Big opening, grassy area \(Pekutartalek\)](#)
- [4. Big lake \(Qayikvayagtulek\)](#)
- [5. Across Sevkarniar](#)
- [6. To the creek, Uruniq](#)

[This trail avoids the north winds on the Kuskokwim](#)

Katmai map with sites marked

[Click here for video clip](#)

Will Forsberg was interviewed at his home on the Stampede Trail in Healy, AK. He and his wife, Linda, were preparing to leave with their dogs for their camp on the Kantishna River. This is where they stay in the fall until after freeze-up. Then they return to Healy and train dogs until spring when they begin freighting supplies for mountain climbers attempting northern routes on Denali. Because of a Park Service ban on

Will Forsberg

[Slideshow](#)
[Map](#)
[Main](#)
[People](#)
[Places](#)
[Themes](#)

H2000-17-27

Will Forsberg talks with Bill Schneider in Healy, AK on August 22, 2000. Denali National Park Jukebox Series.

[1\) Growing up in the Lower 48 and his first time in Alaska.](#)

Lakehurst, NJ\ father -- Navy\ Guam\ California\ Santa Barbara, CA\ Alaska Pipeline -- construction\ Vice President -- Spiro Agnew\ college\ Park Hotel\ Alaska\ Horseshoe Lake\ moose\ winter -- Alaska\ parents\ Sioux City, IA\ farms -- relatives\ Southern California\ Navy -- retirement\ Earth Day\ college -- Environmental Studies

[2\) His introduction to Alaska and committing to spend the winters there.](#)

influence -- parents\ Kodiak, AK\ bears -- brown\ Healy, AK\ ferry\ Ketchikan, AK\ cemetery\ camp\ restaurant -- Chinese\ Haines, AK\ Fairbanks, AK\ McKinley National Park\ laundry facility\ buses -- wash\ supplies -- haul\ sled dogs\ winter -- commitment\ skis\ sled\ backpack\ Reeves, Ford\ Jones, Steve\ Barb, Steve\ sled -- bought

[3\) His very first experience with a sled dog team on the Yanert Glacier.](#)

Johnson, Linda\ sled dogs -- National Park\ Jones, Steve\ Reeves, Ford\ Kogl, Dennis\ dog team\ winter trip\ Yanert Valley\ Tolly, Steve\ dogsled --

Context statement for interview with Will Forsberg

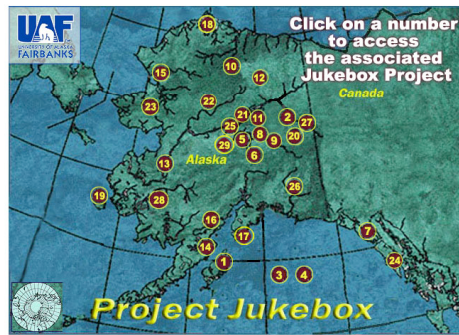
Context statements are used to explain the setting and conditions under which the interview was done.

Basic to the success in mounting Project Jukebox on the Web was the support received from the National Science Foundation (NSF) in 2002 to review and convert older programs. Currently there are over 30 programs available on-line (www.uaf.edu/library/jukebox).

Project Jukebox's Alaska Map

For more detailed information on Jukebox Projects currently online, follow this [link](#).
Check the help page for information about playing MP3 files, streaming audio, and adjusting the buffer settings.
Please note: These audio files are streaming and may take some time to play especially when using a dial-up modem.

Alutai/Alutian Cultural Atlases (1)
Central Reflections: Then and Now (2)
Climate Change (3)
Community Health Aide Program (4)
Dangerous Ice Workshops (5)
Denali Mountaineering (6)
Dry Bay (7)
The Fairbanks Jukebox: The Interior Experience (8)
Fairbanks Native Association (9)
Gates of the Arctic National Park (10)
Geophysical Institute - UAF, Fiftieth Anniversary Celebration (11)
Giesch/agaroonookhyaa Shiro: Don't Forget the Past (12)
History at Risk radio series (29)
Holy Cross Community (13)
Katmai National Park (14)
Kiana Village History (15)
Lake Clark National Park (16)
Nanwalek & Port Graham (17)
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Nunivak Island Place Names (19)
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Rampart (21)
Raven's Story (22)
Reindeer Herding (23)
The Sika National Historic Park (24)
The Tanana Tribal Council (25)
Wrangell-St Elias National Park (26)
Yukon-Charley Rivers National Preserve (27)
Yupit School District (28)



The Project Jukebox Home Page,
<http://www.uaf.edu/library/jukebox>

The rapid advancement of technology, increased reliance on the Internet and its emphasis upon video demands continued innovation. We are always seeking new and creative ways to provide access to oral history material that will excite users and help make the oral history increasingly meaningful. Internet users increasingly want to control the information available to them. They will not sit and listen to 60 minutes of an interview. They want to quickly find and access the specific parts that interest them. They want visuals, video, and links to related material - in other words, 'entertainment'.

In July 2006, Bill Schneider, Curator of Oral History at UAF and Karen Brewster attended the International Oral History Association Conference in Sydney, Australia, where they met Dr. Bob Jansen, founder of The Australian Centre for Oral History (ACOH). Dr Jansen demonstrated an exciting new approach for accessing oral history video that met these Internet demands and that was compatible with our Jukebox programs. The two groups are collaborating to utilize Testimony Software to create Project Jukeboxes on the Internet that deliver synchronized parallel streams of digital video, audio, images and text to a user's browser. A table of contents index provides a doorway into the information space that allows users unrivaled access to the various parts of a collection, while also providing the ability to search and find oral history video segments on demand. For the first time, people will be able to easily and quickly compare video segments and gain a comparative perspective on history.

To the best of our knowledge, there are no other on-line oral history sites in the United States that feature the simultaneous search-find-play capability within four formats that we are developing. This revolutionary technology is exciting because it supports linkages between discrete testimonies (oral histories), something that is very difficult to achieve today; linkages that will provide powerful facilities to researchers and the general public alike. We also believe that the power of oral history goes beyond just the written transcript or audio clips. To do these narratives and speakers justice, requires the use of as many channels of communication as possible and this includes video and integrated access between the delivery methods.

This paper shares the experience in creating a sample, demonstration project based on material from the Alaska Community of Memories project, and discusses the potential for this method of oral history access and delivery into the future.

Testimony Software

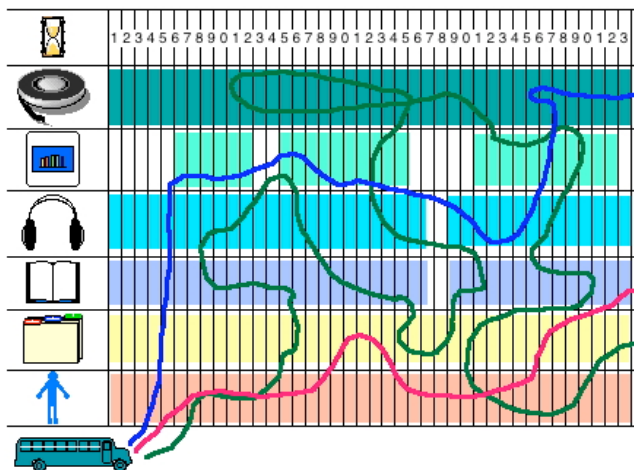
In today's increasingly digital world populated by ever more technically literate users, the conventional ways to access information, namely sequential access through serialised information spaces, are no longer relevant. The digital entertainment revolution has developed a user base who expect to be entertained, who are used to being in control and come in and out of information spaces as, when and where they see fit. Authors and publishers have to get used to a changing power structure, centered more and more on the user/reader. Dorner

(1993) describes how the special relationship that an author tried to establish through mechanisms of addressing the reader, have in recent times been replaced by the 'Oi ... You!', clamors of attention in an increasingly crowded and noisy environment.

These changing environments have led to a dissatisfaction with the Internet just being an electronic simulacrum of paper. The new requirements demand different responses from publishers and authors alike. Yet people continue to respond to a good story-teller, someone who fashions a world of belief using as many senses as possible. Testimony Software tries to mimic that story-telling experience utilizing the advances of the multimedia and entertainment revolutions. (Jansen, 2001; Jansen, 2002)

Testimony Software grew out of a research project at Australia's Commonwealth Scientific & Industrial Research Organisation (CSIRO) where Dr Jansen led a team developing IntelliText, one of the first electronic book environments (Jansen & Bray, 1993; Jansen & Ferrer, 1997). IntelliText explored how users might want to use electronic books including ways of annotating such publications. What became clear was that authors choose different media types to communicate different aspects of their story, such as layout, text, graphs, images, footnotes, etc.

Multimedia technology provides the opportunity to realize a wider communications array by delivering multiple parallel synchronised media to the user. Using a normal web browser, it can deliver video, audio, transcript, table of contents, images and a back of the book style index to allow the user to direct the story telling as they see fit. They can start at any point in the story using any of the media types. So, they can choose a table of contents entry, an index entry or even an image, and drive the story from that point. This supports the user in creating their own pathways through the story space, pathways unforeseen by the author or publisher, pathways satisfying user's needs.



Testimony Software - Parallel synchronized streams of media through which you can flexibly navigate.

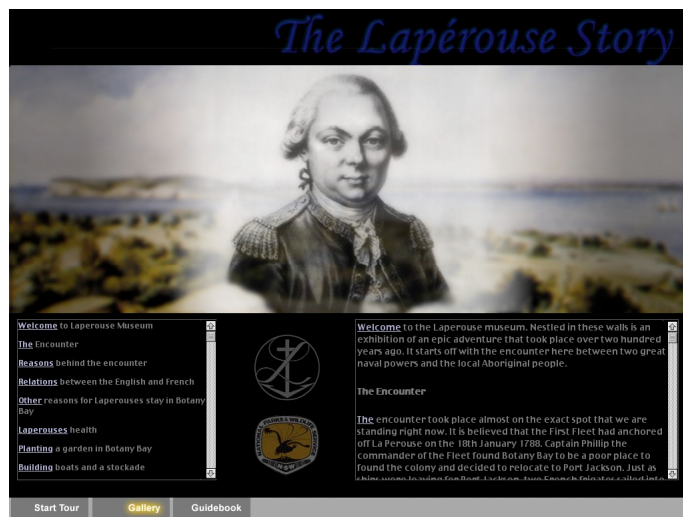
The Technology

The technology behind Testimony Software is the same technology used to deliver the Internet today and consists of an authoring workbench and a browser interface.

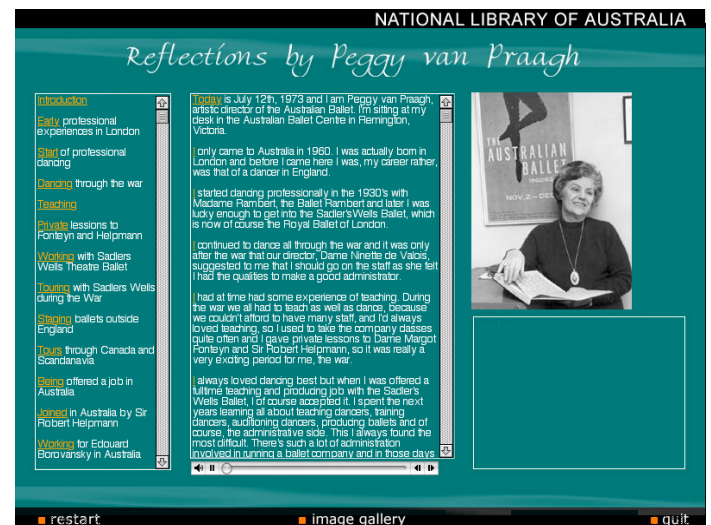
The project has developed an XML schema defining a simple markup method that allows the creator to identify the various components of a story and how they interact. This schema underpins work in the browser and the authoring workbench

For the browser, we have developed a framework using JavaScript to display the Testimony Software story through a normal Internet browser and an alternate framework for delivering the story on a CD/DVD/local hard disc (using the iShell software from Tribal media (<http://www.tribalmedia.com>)). In both cases, the design principles have been to develop a cross-platform solution and adhere to widely accepted standards wherever possible. To these ends, we can simultaneously deliver on both Windows and Macintosh platforms

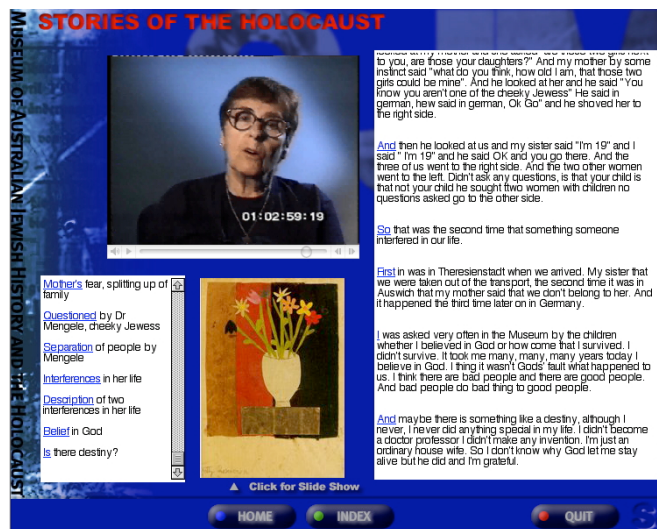
with no re-working of the material, and we have adopted the Quicktime architecture as the closest form of a video 'standard' today. Each story can have its own look and feel by a simple edit of HTML code to layout the various design elements of the story.



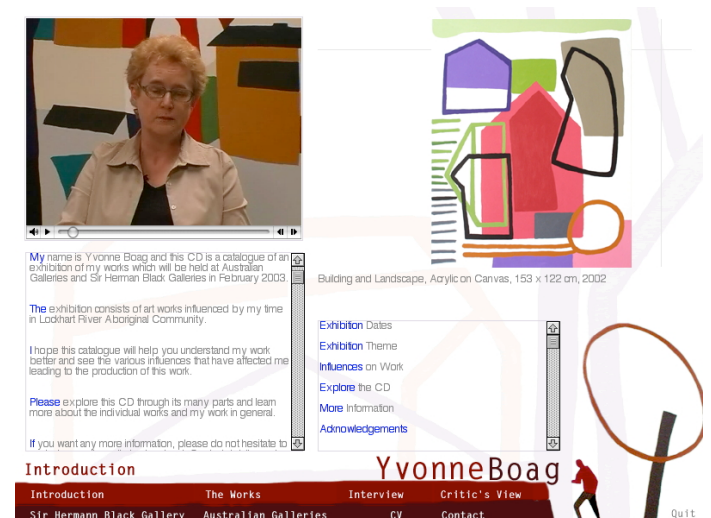
The Laperouse Story, a museum kiosk created for the La Perouse Museum, Sydney Australia



Reflections of Peggy van Praagh, a prototype created for the National Library of Australia.



Stories of the Holocaust, a prototype created fro the Sydney Jewish Museum



Australian artist, Yvonne Boag, introducing an electronic catalogue of her works for a large exhibition at Australian Galleries and Sir Herman Black Galleries in Sydney Australia.

TLSTranscription is our authoring workbench allowing an author to start with their video or audio recording, transcribe it, do the required editorial work and link in images and table of contents entries. Then, after appropriate consistency checking, a simple 'push of a button' generates all the files required by the Testimony Software browser. An example of TLSTranscription can be see below, editing the Jim Stimpfle story.

Testimony Software has already been used to build oral histories and museum kiosk systems for the Sydney Jewish Museum, NSW TAFE (Technical and Further Education), The National Library of Australia, The Laperouse Museum of the New South Wales National Parks and Wildlife Service, the Tenterfield School of Arts Museum, and more recently, Project Jukebox at the University of Alaska, Fairbanks. We have also

developed several conference proceedings wherein users can re-visit any part of any presentation and see the speaker(s), synchronised slides, transcript, table of contents and event-wide indexes.

The Jim Stimpfle Prototype

With funding from the Alaska Humanities Forum, we have been developing a sample project with a group of archival recordings from the Communities of Memory Project that was conducted in Nome, Alaska in the mid-1990s. The Nome project was part of a statewide effort to document community values, histories and personal experiences in Alaskan communities. The Nome sessions describe themes such as opening of contact with the Russian Far East, the 1918 Flu Epidemic, and the history of the Iditarod International Dog Sled Race.

Jim Stimpfle, Communities of Memory, 1996.



Play Movie | Stop Movie

Jim Stimpfle, on the phone

[Before](#) I came to Nome I met my wife Bernadette Alvanna who's from King Island and...uhm met her in Fairbanks and I followed her over to Nome here. And...uhm I used to listen to some of the elders in the King Island people talk about the early days of crossing the Bering Strait. And it was 1986, I wasn't selling any houses and I said, "Gee, you know that sounds like fun". So, I started writing letters to our Congressman and people like that and I started talking to other people in Nome.

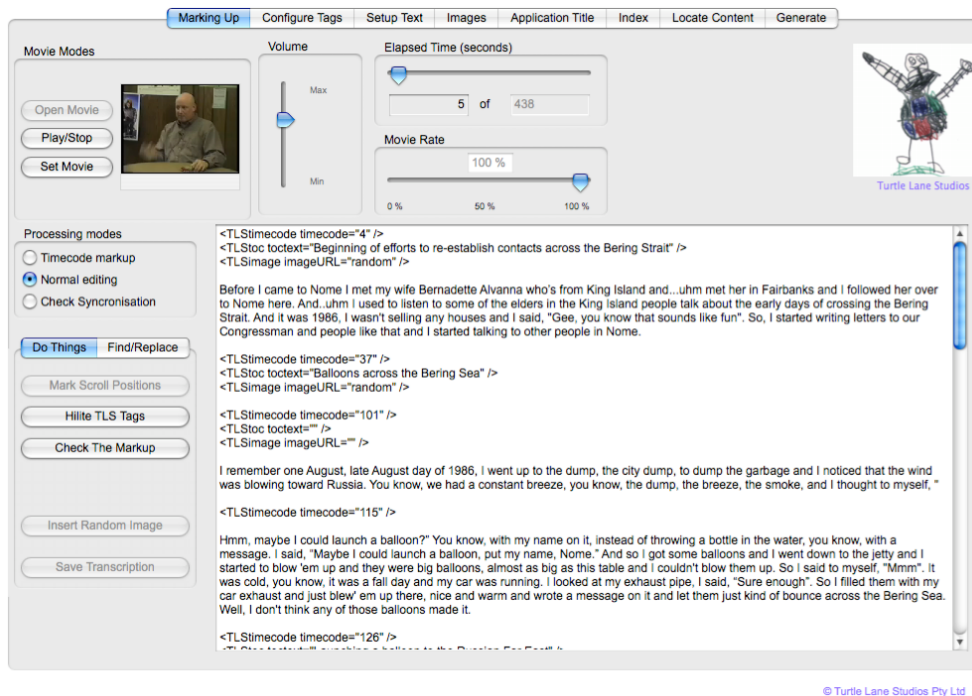
I remember one August, late August day of 1986, I went up to the dump, the city dump, to dump the garbage and I noticed that the wind was blowing toward Russia. You know, we had a constant breeze, you know, the dump, the breeze, the smoke, and I thought to myself, "Hmm, maybe I could launch a balloon?" You know, with my name on it, instead of throwing a bottle in the water, you know, with a message. I said, "Maybe I could launch a balloon, put my name, Nome." And so I got some balloons and I went down to the jetty and I started to blow 'em up and they were big balloons, almost as big as this table and I couldn't blow them up. So I said to myself, "Mmm". It was cold, you know, it was a fall day and my car was running. I looked at my exhaust pipe, I said, "Sure enough". So I filled them with my car exhaust and just blew 'em up there, close to my car, and watch 'em go.

[Beginning of efforts to re-establish contacts across the Bering Strait](#)
[Balloons across the Bering Sea](#)
[Launching a balloon to the Russian Far East](#)
[The helium balloon experiment](#)
[Balloon Capture](#)
[Nome group to establish contact with Russian Far East](#)
[Alaska Airlines flying to Russia](#)
[Communities can change things](#)
[Russian Souvenirs](#)

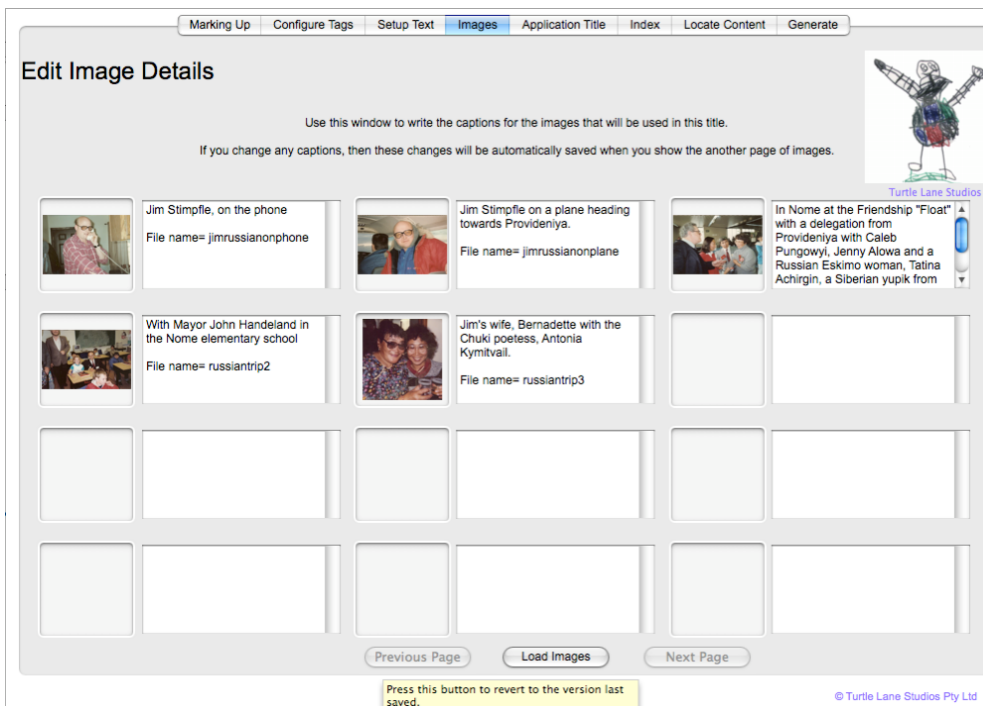
 [Story Index](#)

The opening page of the Jim Stimpfle story showing each media stream queued up ready to play

During the Nome Communities of Memory session, Jim Stimpfle told a story about his efforts to re-establish contact with the Russian Far East just across the Bering Strait from Nome, where many Natives in Nome have relatives.



Transcribing and marking up the Jim Stimpfle story using TLSTranscription. Note the special markup tags used to identify the place in the story and what we expect to see through the nuser interface.



Preparing images and their captions using TLSTranscription.

Once the images are placed in their correct folder, they will appear in this window in TLSTranscription. Then the editor can add the captions. Sequence is not important here, this view merely identified each image and its caption.

Marking Up Configure Tags Setup Text Images Application Title Index Locate Content **Generate**

Generate The Testimony Software Browser Files

Select the Testimony Browser files to be generated.

Workflow Status
All boxes must be ticked before the data files can be generated.

☐ Mark Up Checked

☒ Setup Transcript

☒ Setup TOC

☒ Indexed

☒ Located Content

Select the files to be generated by clicking on the buttons below.

☐ Table of Contents ☐ Transcript ☐ Timertrack

Select whether the users of this story will use the special Testimony Software browser or using their normal Internet browser, such as Internet Explorer, Firefox or Safari.

If you plan to deliver this story on CD ROM, it is usually better to use the special Testimony Software browser.

☐ The JavaScript Browser ☐ The Testimony Software browser

OK, Generate Files

You must select which files to generate

Press this button to revert to the version last saved.

© Turtle Lane Studios Pty Ltd

Ready to generate the testimony Software story files. Select what's to be generated and press the OK, Generate Files button. In this case, the column of ticks shows that the story has not been checked for errors and so generation can not occur until this has been completed.

Testimony Software allows users to search by transcript, video, or key word. A search in one area, such as transcript, video, or key word, automatically advances the other categories to the same discussion. For users, this feature will allow them to easily and quickly find segments and compare audio/visual with text.

Jim Stimpfle, Communities of Memory, 1996.



Play Movie Stop Movie



Jim's wife, Bernadette with the Chukchi poetess, Antonia Kymitvail.

So, in November we went down and we launched that balloon. Filled it up with helium, didn't want to go too high, tied some rocks on it so it'd float about 200 feet above the water. And as it uh... we launched it off and it went across and then it came back down again. It cooled off and it started bouncing across and I was watching with my binoculars as the balloon was going over. And I saw this boat come rushing up to it, I said, "Jeez, whose that boat?" And this boat came up to it and grabbed the balloon and stabbed it with a knife, throw it onboard, and it was Tim Gologergan. Tim got real excited, he opened up the bag of goodies and he saw the Russian handwriting and said, "This is from Russia! This is from Russia!"

So, I followed him down the coastline with my binoculars, down to his camp. And he gets out of his boat and I come running up to him and Tim's really excited and says, "Jim, this came from Russia!" I said, "No, Tim. I'm trying to send it over".

So, you know, that was the first attempt. I said, "Well, let's be more serious". So we formed a little committee in Nome, of citizens in Nome. Some of the people that I can remember, the very first was Chick Trainor. I think Janet Ahmasuk came to one of our meetings and we formed this little group in Nome. And so we started...

[The helium balloon experiment](#)
[Balloon Capture](#)
[Nome group to establish contact with Russian Far East](#)
[Alaska Airlines flying to Russia](#)
[Communities can change things](#)
[Russian Souvenirs](#)

Story Index

Some time into the Stimpfle story. Note how the transcript has scrolled to show the current paragraph at the top of its scrolling field, the table of contents also has scrolled to show the current topic at the top. The image is the one selected for display at this time.

Driving the story merely requires the user to click on one of the blue links in either the transcript or the table of contents. They can also drag the movie's slider to some position and the story will then synchronise to that point.

Photographs appear in slideshow format either in random order as we have here because we have a limited selection of images, or according to linkage to a specific topic mentioned.

We have a total of seven stories in this sample project ranging in length from 10 to 30 minutes which will be searchable and playable in the same way. The stories and storytellers were selected by the original Community of Memories organizing committee during a meeting and review of the Jukebox project held in Nome in June 2007. The ultimate value of this collection will be realized when users are able to search by

themes and compare observations between the different storytellers.

The Future

As far as we know, there are no other on-line oral history sites in the United States that feature the simultaneous search-find-play capability within four formats that we are developing. We are excited by this revolutionary technology because it supports linkages between discrete testimonies (oral histories), something that is very difficult to achieve today; linkages that will provide powerful facilities to researchers and the general public alike.

Yet, much remains to be done, especially given the fast pace of change in this digital world.

Mechanisms to find appropriate parts of an information space remain primitive. Algorithmic searching, such as Google, is all well and good but the well known 'venetian blind' and 'Bug Volkswagen and Beetle' problems remain. These are problems from the early days of text retrieval where, for example, there are major differences between venetian blinds and blind venetians, and 'I mean a Volkswagen when I use the term Bug', differences that algorithmic search engines can not, of themselves, differentiate. New ways are needed to assist users in finding what they are after, ways that Tim Berners Lee dubs, the Semantic Web (http://en.wikipedia.org/wiki/Semantic_Web). Our approach to tackling these problems has been to look to what is already available and utilize that, since this will be least likely to alienate users. So we've been working on the role of indexing as providing a myriad of entry doors into the information space. A competent index does not merely mirror the terms used in the object itself but utilizes terms providing the meaning of the object in its context. In this way, we move one step closer to semantic access, similar to, say, Topic Maps (http://en.wikipedia.org/wiki/Topic_map). Our developments are focusing on inter- and intra- story indexing, whereby every component of a story has an associated index which is merged with all other components of the story to create the story index, which in turn is merged with other stories' indexes to create the index of the information space - all without re-indexing, just merge and sort. This way, we can provide many, many layers of indexes as the environment demands. And in the future we can envision the user creating indexes on the fly, creating their own stories, as their own aides to accessing material from a plethora of stories.

Our work on the XML schema, a map of the components of a Testimony Software story and how they inter-relate, has led to a realization that in order to successfully share stories between repositories, a shared understanding of what a story contains is required. This will necessitate each end of the collaboration agreeing to a shared schema and our schema is just one of the first steps in this direction. Any Testimony Software story can be accessed by any version of the Testimony Software browser because all such stories share the same schema. Thus we invite the Oral History community to work with us and develop an international standard schema for oral histories on the Web.

Finally, we are committed to bringing together all of these elements into an Oral History Workbench, an environment for the processing of video and audio oral history recordings into a Web publishable form. The workbench should remove the requirement of in-depth technical expertise - as an oral historian, you should concentrate on the oral history and leave the technical stuff to us. Our TLSTranscription tool is a step in the direction of developing such a toolkit and, again, we welcome the Oral History community to work with us on achieving our vision.

As the UAF Oral History Program pioneered digitization of oral history in the 1980s, we are continuing to break new ground. This Testimony Software application is another opportunity to push oral history into exciting new directions for Web delivery beyond the confines of traditional formats and archival shelves. Similar to our previous Jukebox format, it provides active involvement allowing a user to relate audio with visual experience and guide the story according to their own interests, but the synchronized multi-formats of Testimony Software expands the levels of learning experiences. We encourage others to join us on this journey into the future of oral history on the Web.

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