

PROJECT RATIONALE

In the winter and spring of 2003/2004, the Langley Centennial Museum undertook a project to digitize its aural history collection, with funding from the British Columbia Digital Collections program, supported by the British Columbia Arts Council and British Columbia Museums Association. The project involved the conversion of a collection of over 200 analog oral history tapes to digital format, the indexing of the recordings, and storage of the recordings on CD's.

The oral history collection of the Langley Centennial Museum includes recordings from the 1970s, through to today. From the editor of Langley's first newspaper, to the children of fur trade pioneers, the large collection is rich in historical content.

The project was developed for several reasons. First, the collection was largely un-indexed, and the lifespan of cassette tapes limited. The quality of analog cassettes is reduced with each play. We recognized this important collection was threatened by deterioration, and under-utilized because of the vast amount of un-indexed information. This project aimed to improve preservation and increase access to this rich historical collection.

The following describes the equipment and procedures we used. Further detailed instructions, used by project staff, are also available for download. Museum Curator Lisa Codd can be contacted by phone at 604-888-3922 or by e-mail at lcodd@tol.bc.ca for further information about the project.

EQUIPMENT

The process of converting analog recordings to a digital format involves playing the analog recording in a playback device, transferring the sound into digital format, storing and editing the recording using appropriate software, and recording the digital file.

The equipment required included: playback devices, analog to digital converters, and software.

Playback

Equipment used for playing the recording is guided by the appropriateness of the technology to the original material. For example, we found that playing cassettes that were recorded without Dolby technology were best played without Dolby. Therefore, a range of playback devices was used, determined by the original materials. We used a current era, Akai stereo cassette recorder for more recent recordings. For older recordings, a Technics by Panasonic player where the Dolby Noise Reduction feature could be turned off was used. The latter was purchased at a thrift store, as locating new equipment with these features was not possible. We found that some of the recordings had been done using compression features, where the sound is recorded at double time. We had to use the original recording device to replay these tapes at regular speed.

Converter

There are many ways to convert analog sound recordings to digital sound recordings. One popular method is to plug the playback device into the sound card of a computer.

A cable is used to shuttle sound between the playback device's headphone or speaker jack and a soundcard. Audio software, such as GoldWave, can then be used to capture the sound in digital format. We used this method for the few tapes that were made with a compressed recording speed, as a headphone was the only output option for this playback device.

However, we chose to rent a dedicated analog to digital converter designed for the majority of the recordings. We rented a TASCAM CD-RW 402 CD Recorder/Duplicator. This is a stand-alone device that is not attached to a personal computer. It is a twin-deck CD recording and duplication system, which can be used for duplicating CD's. It is also capable of 24-bit digital to analog and analog-to-digital conversion, with a sampling frequency of 44.1 kHz. We used gold-tipped RCA connectors to connect our playback devices to the converter.

Recorder

When using a sound-card to complete the audio to digital conversion, the audio file was ultimately recorded onto a CD using the computer's CD burner. When using the TASCAM CD Recorder/Duplicator, a CD is burned by the device as part of the analog to digital conversion process.

Software

Software must allow manipulation of the signal, editing of tracks, and sound editing features (such as compression and equalization) to ensure a high quality recording. We used GoldWave Digital Audio Editor, Version 5.

INPUT RESOLUTION

While standards are still evolving in this area, it is generally recommended that recordings are made at a sampling rate of 44.1kHz, and a sample size (or bit-depth) of 24. Storage of the materials as .wav files is recommended, at least for the preservation copy. We followed these recommendations for our project.

STORAGE AFTER DIGITIZATION

The original analog cassette recordings were retained, and moved into archival storage cases and boxes. A preservation copy of each CD was made, which is stored off-site. High quality archival CD storage products were purchased for the preservation copies. A reference copy of each CD was also made, and also stored in archival CD storage

products. The reference copies are available for use by researchers at the Museum. Both the preservation and reference CD's are CD-R's with a gold reflective layer, phthalocyanine dye layer, and tough protective layer, as recommended by the CCI.

The Museum is committed to ensuring the data is migrated to new formats or media, as best practices in this field evolve. For example, in the near future we may consider DAT storage rather than gold CD storage.

INDEXING/ACCESSIBILITY

The indexing project involved two components. First, a technician edited the digital recordings to create tracks. Tracks were based on major subjects in the interview, and a brief summary of each track was included in a description of the recording. A listener can listen to the entire recording, or skip to the track containing the particular subjects relevant to their research. Only the reference copy is divided into tracks: the preservation copy is preserved in its unedited state.

Second, the technician prepared a RAD-compliant item level description and entered it into a database of recordings. The database has been uploaded to our web-site, enabling a searchable, on-line finding aid to the collection.

The data can be used for researchers, especially genealogists. Having indexed access to the oral history collection will also enable us to use sound bites for public programs, web exhibits, and museum exhibits in the future. The reference CD can be played on a standard CD player, or we can convert the recordings to other formats (such as MP3 files).