# Working with Audio and Video Files

This tutorial outlines the special considerations involved with storing digitized audio and video files using CONTENTdm. To fully understand this tutorial, you must have a general working knowledge of CONTENTdm and be familiar with audio and video formats and standards.

## Learn About

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## Section I: Storing Audio and Video

CONTENTdm can store and retrieve any file format, including digitized audio and video files. CONTENTdm can also display any file format for which you have the plug-in or the application defined in your Web browser. Audio and video files can be stored in CONTENTdm and accessed in the same manner as other file formats. The image below shows an audio file displayed in the results within the website.
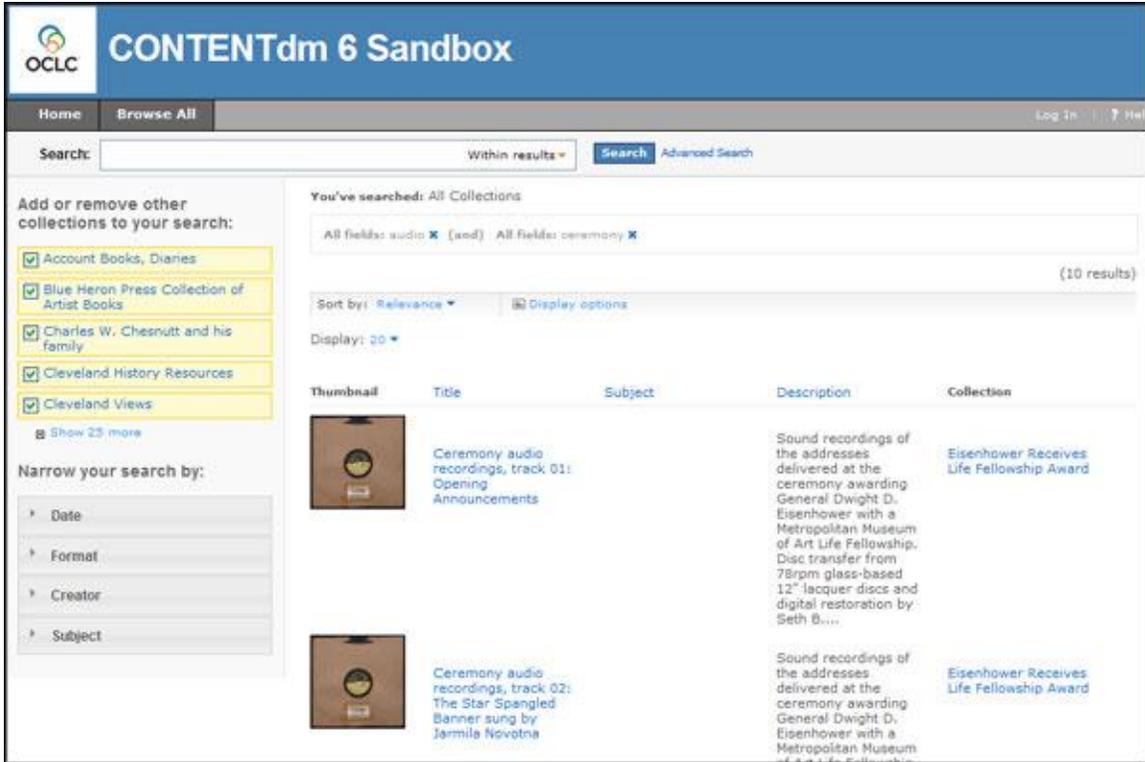
Figure 1. CONTENTdm Collection with Audio

When a user clicks on an audio or video file from search results or while browsing, the metadata and an inline player are displayed.

**Note:** CONTENTdm can store video files of any format but only h.264-encoded video will play inline in the Web interface.

Figure 2. Audio recording, displaying with inline player

## Section II: Special Considerations

There are, however, some special considerations when working with digitized audio and video files that you will not encounter when working with other formats.

**Note:** To help you troubleshoot issues or learn more about your media files, you can use a tool such as **MediaInfo**. This is a free tool that supplies the technical and tag information about your video and audio files.

### Encoding

CONTENTdm can store video files of any format but only h.264-encoded video will play inline in the Web interface.

For an optimal end-user experience in CONTENTdm, we recommend using h.264-encoded video and audio .mp4 files that are enabled for Fast Start (this option enables immediate playback while the remainder of the file is buffered).

Tools such as **ffmpeg, MP4 Box** and **MP4 Fast Start** can be useful for encoding and setting Fast Start.

### Segmentation

When storing a long sequence, such as a lengthy audio or video interview, it is generally good practice to break up the sequence into a number of smaller segments. These smaller segments will be easier to download and access than a single, large file. These smaller segments may also be indexed as separate clips, allowing for the search and retrieval of each segment individually.

### Compression

Choosing a high-compression format allows you to compress more data into a file that can be downloaded faster. The MP3 format works well for audio, offering both high compression and high quality, and is good for most applications from speech to music. Compared to other formats, MP3 can reduce the size of your files dramatically. For example, a typical 10 MB uncompressed WAV file can easily be reduced to an MP3 file of less than 1 MB. For video, the MPEG format offers a good compression ratio compared to other formats.

### Custom Thumbnails

CONTENTdm enables you to specify a custom thumbnail image for any item stored in a collection.

For more information about creating custom thumbnails or replacing thumbnail images when editing items, see **Using Custom Thumbnails** and **Changing Thumbnail Images**.

### Transcription

For digitized audio or video clips with speech, such as interviews or narrations, enter the transcribed text from the clips into the searchable full-text metadata field. This allows users to search for and retrieve audio and video segments on specific topics.

### Streaming Media

In addition to using individual digitized audio and video files, you may also use a streaming media solution so that your audio and video clips are actually streams originating from your streaming media server.

CONTENTdm can store your streaming media pointer files (small text files that contain the URL of the corresponding stream) and retrieve these files to access the streams. For example, RealAudio produces a small text file — a .ram file — that contains the URL of the corresponding audio stream. These .ram files are commonly linked on Web sites that offer music clips. CONTENTdm can store and index these .ram files and use them to access the media streams. See **Streaming Media Support** in the Help files for more information on using streamed media files in CONTENTdm.