Format and navigation of audio and video files

Supported file formats for selected software packages

Package	Audio	Video
Transana	MP3, WAV, WMA (windows version only),AAC	MPEG-1, MPEG-2, most AVI video, QuickTime MOV MP4, WMV (windows version only), M4V.
NVivo	MP3, M4a, WAV, WMA	MPEG formats, AVI, WMV, Quicktime MOV, GT, 3g phone format 3GP, AVCHD (high definition) MTS, M2TS
Maxqda	MP3, WAV, WMA	MPG, WMV, AVI. Uses computers codecs so should run most things
Atlas	MP3, WAV, WMA	Mpeg Formats, WMV, ASF, AVI, DIVx.

For audio MP3 or WAV will probably be suitable for most, depending upon the recording device. For video, Mpeg 2 may be suitable for many applications, as it is less memory intensive. Above all, make sure you have the latest codecs loaded on your system.

Navigation is typically done through a software or hardware device that starts, stops rewinds, and cues the content. The basic navigation bars are similar across a range of packages.

The screenshot from Audacity below shows the main buttons. The symbols (in order) for pausing, playing, stopping, rewinding, fast forwarding and recording seem to be relics from tape days.
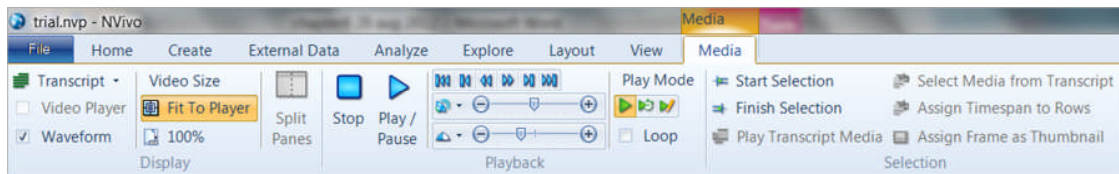

Figure 8.1 Audacity navigation bar

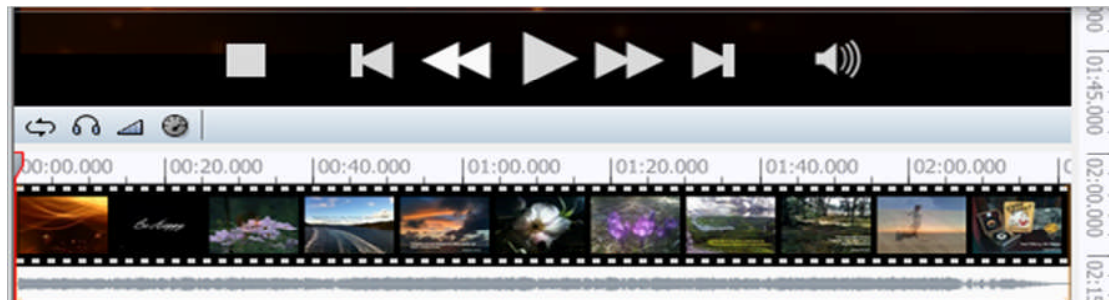In the screen shots below you can easily spot these buttons. You may also spot features for

speeding up and slowing down the audio, adding time stamps and looping.
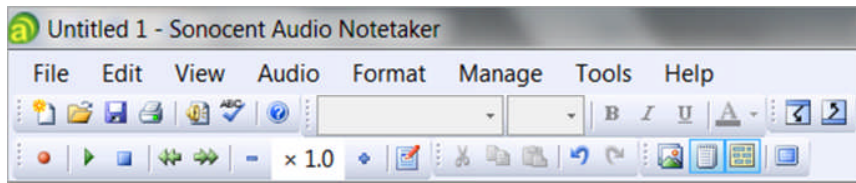
Audio Notetaker

NVivo 10

Atlas Ti7

Maxqda 10

Transana

Figures above: Navigation bars for Sonocent AudioNotetaker, NVIVO9, Atlas7, MAXqDA2010 and Transana

CAQDAS packages also have keyboard shortcuts which can be used to control different functions in the listening and viewing phase of the analysis. So you may choose to engage in repeated listenings or viewings directly in the CAQDAS packages.

Table 8.1. *Keyboard shortcuts for software packages.*

	Transana	NVivo 10	Maxqda 10	Atlas 7
Play	CTRL+D	F7	F4	F4
Pause/ Stop	CTRL+D (no rewind) CTRL S (short rewind)	F8	F4	F4
Add timecode	CTRL+T	Use stop in transcript mode	F3	F8
Rewind	CTRL+A (10 seconds)	F9	Use slider	
Fast forward	CTRL+F (10 seconds)	F10	Use slider	

Formats

There are a number of different formats that you can record in. Some are lossy which means that parts of the sound or video is compressed or removed. Obviously the higher the level of compression the less space it takes up. With the affordability and portability of drives this is less of a problem than it was some years ago. However Nvivo prefers files smaller than 20 MB and project files to be around a 10gb maximum unless you are using the server version. You are unlikely to have problems with Atlas or Transana as they store the files externally as long as you are careful not to rename them.

Some formats are not lossy, meaning a higher quality. The common audio formats are MP3, or AAC, which is a lossy format, FLAC or ALAC which is not lossy. However for some recordings such as speech you do not need CD quality WAV (you just need something you can hear). Indeed much of the music on ITunes or in podcasts is not recorded at the highest setting. See the table below.

Table 8.2. *Size of audio files per hour of recording.*

Audio recording Format	MP3 128kbps*	MP3 256kbps#	MP3 320kbps	Wav 44.1 khz(cd)^	Wav 16 khz	Flac/ Ogg Vorbis
Per hour	56.3 MB	112.5mb	140.6mb	224.6mb	619.2mb	350-400MB/ 69MB

*128 kbps is the standard rate at which Itunes/ apple plays at

#256kps is the higher bit rate

^44.1 khz is considered to be cd quality

Video can also be encoded at a number of levels. For example a video of a meeting where you want to capture who is speaking and the gestures they are making is probably not required in HD quality as it will take up a lot of space on a drive. It goes without saying that you need to check your device and software are compatible. There are a range of convertors that will convert between different formats.

> **Web Resource** There is also links to codecs and other useful tools.
> http://www.atlasti.com/uploads/media/video_formats.pdf

Video gets a little more complicated because there are two parts, there is the file format

or wrapper, which will include AVI, MPEG / MPEG-4, MKV, MOV, WMV, and then there is the encoder, which will include types like DivX / XviD, h264 / x264, FFMPEG. The file format can contain different types of encoding which is sometimes why you cannot play different .MOV or AVI files on different, machines. Make sure your machine is loaded with the latest 'codecs' a composite word made from coder decoder. Secondly if you are just playing back files then we would recommend VLC which has a wide range of codecs and tends to handle most things you throw at it.

Pictures too have a range of formats but the common ones are RAW, which can be considered to be like a digital negative, an unprocessed image and formats such as JPEG and TIFF. Like audio and video there are lossy formats which cut down the amount of information stored in an image.