NFNPA Oral History Team Training –

Podcasting and audio editing

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Introduction

Audio recording and programs as with oral histories is a significant tool in the archaeologists/researchers' "tool kit" and brings a connective dimension to our appreciation and understanding of the past and a valuable means of recording the present.

Podcasts, or audio programs, are a useful and accessible means of disseminating information. Many programs are heard on mobile personal devices, as with most "mp3" podcasts and for the listener it can be a very personal experience.

Audio archives, as with any archaeological site archive, can be a weighty recourse to tackle. The final reports can be dry, technical and in some cases very long and so are not readily accessible by the general public.

Podcasts are a means by which we can use this archive material in a planned, engaging and accessible way. We can publicise current events or projects, explore events from the past and bring personal accounts, of some historic events, to a modern audience.

Audio guides are a useful tool in the interpretation of sites and features. They can help guide visitors around the site (keeping to a set path) as well as giving additional information and interpretation. They can be very personal to the listener, as if you were on a private guided walk with specialist. They can also help reduce the need to intrusive interpretation boards and/or panels.

With the introduction of smart phones these audio resources are even more accessible in a wide variety of sites.

Objectives

The aims of this workshop are:
Instil confidence in using the recording equipment
Learn how to use the editing software
Learn about program planning
Gain an understanding of editing techniques and ethics
Understanding Meta Data and exporting the audio file

Evaluation

Have a listen to these podcasts (listed below in bold) and record you thoughts. Try to focus on: quality of recording (e.g. Can you hear what is said?), editing (e.g. How and how well are the audio segments joined together?), subject (e.g. How was the topic/subject covered?), overall program (e.g. How was the program laid out, chapters, a beginning, middle and end, credits?).

WA-PC09-Salisbury-Plain.mp3
Archaeocast 9: Salisbury Plain
Gareth Owen, Steve Thompson and Phil Harding head out onto the Salisbury Plain Training Area (SPTA) in a land rover to conduct a survey of the archaeology within the Army training zones.
http://www.wessexarch.co.uk/blogs/archaeocast/2007/05/22/archaeocast-9-salisbury-plain

HWTMA Podcast-WWII changes.mp3
A Work Experience student at HWTMA has also completed a podcast relating to WWII and not only made use of audio archive (in this case oral history from the Dive onto Victory project) but also conducted an interview. This podcast is now hosted on the Trust's website for free public download.
http://www.hwtma.org.uk/d-day

AUTONO~1.MP3
Autonomous, enormous, ingenious
by Ari Daniel Shapiro
Gwyn Griffiths is at the National Oceanography Centre in Southampton in southern England. He heads up a team of about 50 engineers and students. They build robots and gadgets to keep track of what's going on in the ocean.
http://coseenow.net/podcast/2009/07/ingenious/

(If you are interested)
An audio guide series along the Hamble River
In early 2010 a HWTMA volunteer produced an audio guide drawing on a number of sources including River Hamble project archive, using a digital recorder to capture on site commentary, an audio editing program called Audacity to edit and produce the program. The River Hamble audio guide, in two parts, was completed by November 2010. With all additional information the program chapters were hosted on the Trust website for free public download.
http://www.hwtma.org.uk/bursledon

Planning

Whatever your topic or subject planning the program is essential, unless you have hours of free time to edit your recorded material into your program. It may not be worth recording hours of audio for a 10 minute program.

There is also the question of program style. A short, fast, loud program may not interest the more mature listener where as a long in depth, detailed program may not suit a younger audience. It is also important to consider where and when the program will be heard, while walking a site, on a journey, at home etc.

Understanding the target audience and how the subject matter can relate to them makes for an engaging, informative and listenable program.

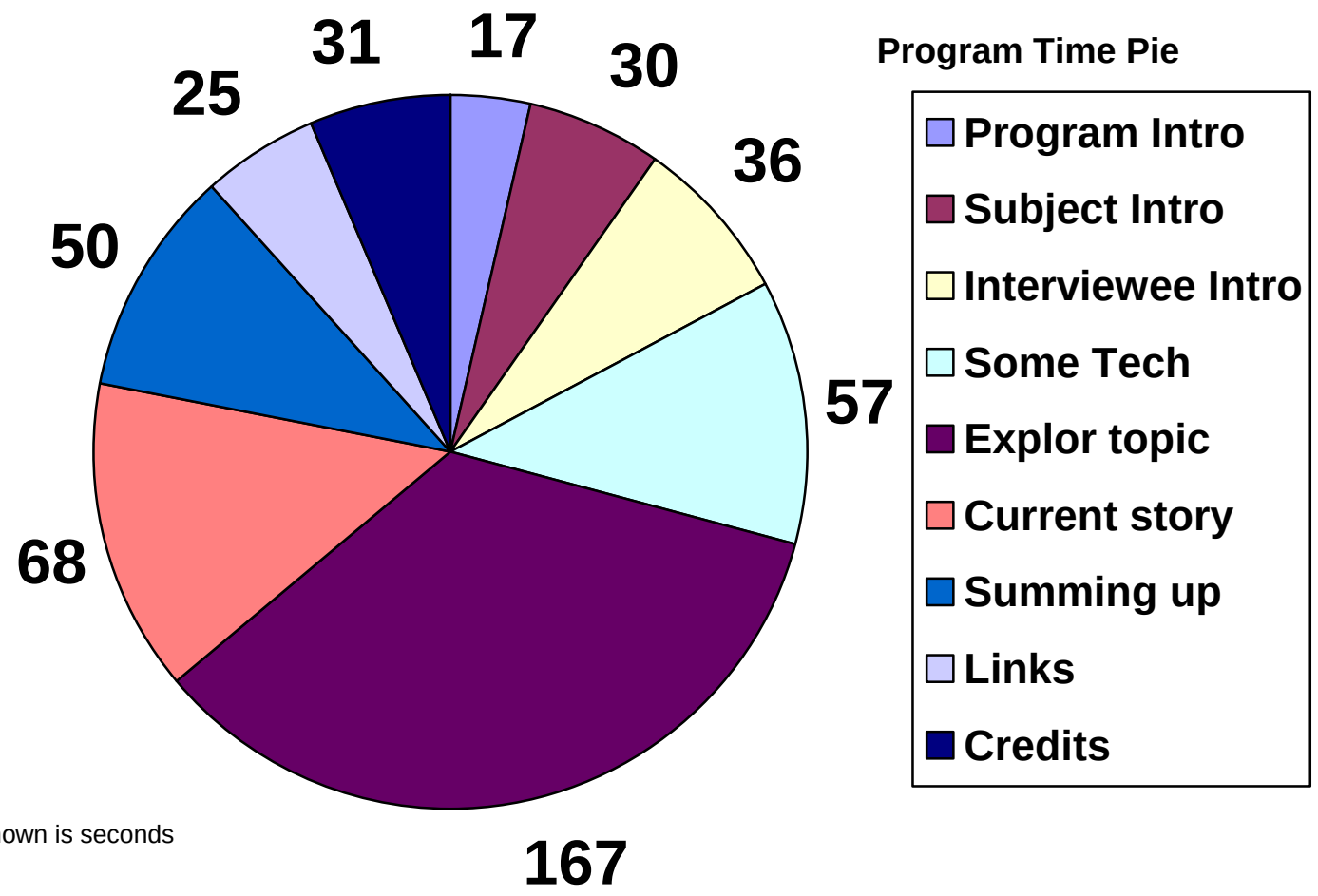
When planning a program we can make use of a Pie Chart to outline the program content. We can start populating it with fixed or known sections first like introductions and the credits. This method can also help shape the program as it gives a very graphic representation of the entire podcast (Example-01).

The chart or more importantly this process of thinking about the program and planning it in any form is very useful and time/cost saving. Through planning the desired program outline one can identify locations for recording and record all material at that location in one go, needed equipment can be booked and tested and any permissions can be gained in advance.

Audio program planning chart – Example-01

Project	NFNPA Oral History Team Training					
Program Title:	Autonomous, enormous, ingenious.mp3					
Subject key words, Tags:	example					
Abstract: Exploring underwater vehicles, their design, building and what they do. With an interview…						
Audience:	**14-16**	**16-18**	**18-25**	**25-35**	**35-55**	**55+**
Length: 8.01min (481 Seconds)						
To credit: Ari Daniel Shapiro						
http://coseenow.net/podcast/2009/07/ingenious/						

Total Program Time: 8.01min (481Sec)



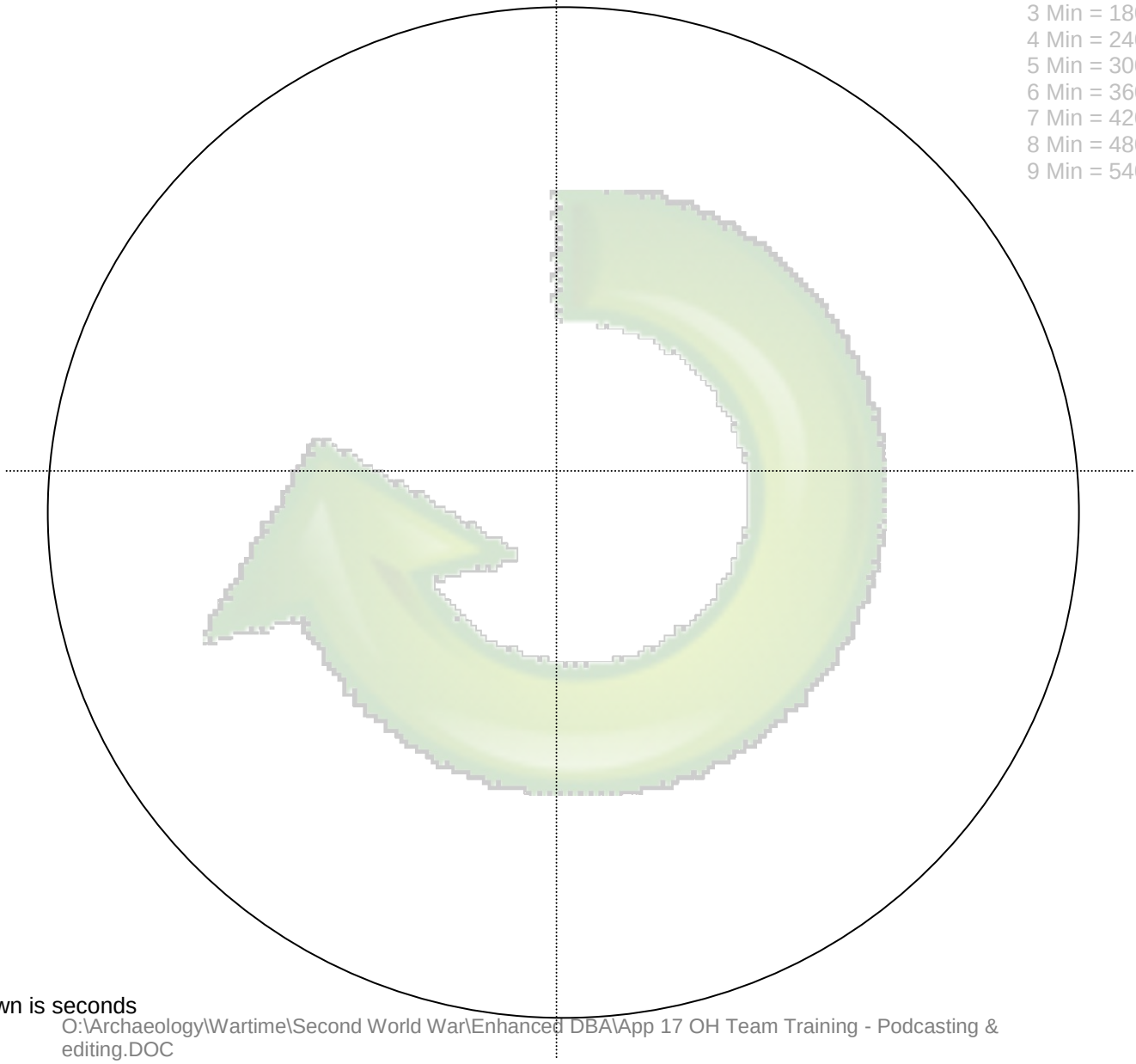
Time shown is seconds

Program planning chart

Project						
Program Title:	NAME					
Subject key words, Tags:						
Abstract:						
Audience:	14-16	16-18	18-25	25-35	35-55	55+
Length:						
To credit:						

Total Program Time……min

1 Min = 60 Sec
2 Min = 120 Sec
3 Min = 180 Sec
4 Min = 240 Sec
5 Min = 300 Sec
6 Min = 360 Sec
7 Min = 420 Sec
8 Min = 480 Sec
9 Min = 540 Sec



Time shown is seconds

Recording Equipment

The kit:

Please see **Oral History Training - Interviewer V1-01.DOC** for more detailed information on the recording equipment.

The microphone:

The field mic' is a powered stereo microphone and receives sounds from a wide angle but this is better shown in the Polar Pattern diagram. The diagram is simplified into 2D but the effect is 3D. The mic must be turned on to use it and is powered by its internal battery.

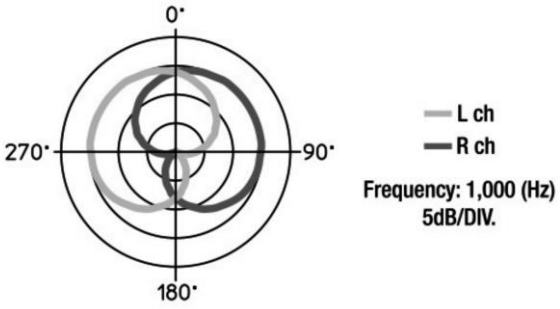


Figure 1: A 2D CS-15S Polar (pickup) Pattern Diagram.

How to set up the microphone:

The microphone (when on) will receive sound from the areas shown in the Polar Pattern diagram. At 0deg (pointing the mic at the sound) both left and right channels receive the sound equally. While at 90deg (to the mic) the majority of the sound is only received by the right channel. Note that sound is also received equally at 180deg to the mic, but at a reduced sensitivity.

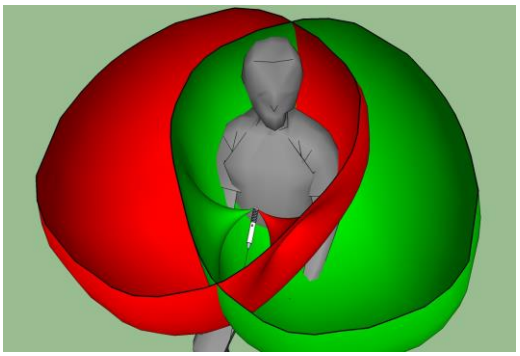


Figure 2: A "cutaway" 3D graphic of stereo Polar (pickup) Pattern, with source within.

When placing the microphone it should be no more then one metre (3ft) from the subject and pointing directly at the source. It should also be noted that the cardioid mics will exhibit pronounced proximity effect, i.e. to close to the source and the recorded sound will be distorted.

If the cardioid "balloons" could be seen, a good position for voice recording is shown in the figure. (Left and right cardioids have been coloured for clarity.)

Microphone covers:

The microphone should always be used with one of two covers. The "microphone foam" cover is for general use, mostly indoors where there is no wind. The furry microphone cover (referred to as a Furry Windsock / Windjamm) is used when outside or in any "windy" environment. It helps to reduce/remove the wind buffeting the microphone sound being recorded.

The microphone “pistol” grip has a three legged stand, this can hold the mic’ on a stable surface negating the need to hold it for prolong recording. The pistol handle is a useful addition when roaming recording, as holding the mic vie this reduces/prevents the mic’ being knocked or handled (and that sound being recorded) when moving and recording.

Recording levels/Gain:

Gain can be described as how sensitive the recording device is to sound and thus how much of it will be recorded.

E.g. Set the mic gain to HIGH when recording bird songs or other quiet sounds. This setting makes the recorder very sensitive so that even the smallest sounds are captured. Conversely, set the mic gain to LOW when recording nearby loud noises such as trains..

Headphones:

It cannot be stressed enough how important it is to listen to what is being recorded whilst it is being recorded. The headphone will reduce the background sound focusing on what is being recorded. This is even more so when using a stereo mic’ as even slight misdirection of the mic’ can significantly reduce the quality of the audio recording and will record the sound with a louder right or left channel.

Recording:

Audio program planning/execution:

Refer to your chart when planning your recording time.

This is particularly poignant when conducting interviews. Form your main questions in advance and focus the interview on them. Do not be afraid to raise additional questions but resist interrupting, it is not question time…
Note: An interview can be edited. It is harder/impossible to edit if two or more voices are recorded at once.

Know the locations you intend to record at. The ideal is to record all material from that location in one visit, no matter where that segment sits in the final program. This is very much the ideal and good practice but not always possible.

Ambient/background/environment sounds:

Test for any background sounds that may be recorded, this ambient sound may enhance or diminish the overall program, and so in many cases it's a judgment call.

If recording on location it can be very useful to record a segment of this ambient sound, as this can be added to any later studio voice recordings to maintain continuity or to add an effect (sweetening). How much background sound is recorded is governed by a number of factors, not only how much background sound there is but also the gain or input levels on the recording device and the microphone (setup) being used.

It is very hard to comment on all recording methods for all locations, but some things to consider are; who is being recorded and about what, as this will effect where and when the recording is best conducted.

When recording an interview or segments a controlled studio may be the most appropriate. If one is producing a current affairs style program a suitable location to conduct interviews could be a shopping centre, with the target group being young general public. Whereas to record a more personal account like an oral history a more comfortable private location may be the interviewee's home.
Note: Watch out (listen) for pets and clocks!

Editing

Free software:

A free program used to edit and produce podcasts is Audacity. It is a free program and is the chosen software for our use. One will also need to download Lame for Audacity to enable the exporting of MP3 files.

We record in .WAV format at the highest resolution possible. This produces large files but at a high quality. Once edited the final program is exported in .MP3 format. This is a much smaller file size and so can be easily uploaded to websites for public download for playing on a computer, phone or MP3 player.

Adding Meta Data to MP3 tracks

To aid in forming a standard consistent approach to our audio track naming and the information shown in the metadata, this guide should be followed when adding metadata to MP3 audio tracks of an interview master recording, sound-bite tracks (taken from an interview master recording) and other audio programs e.g. audio guides, Podcasts etc.

Master Recordings:

A master recording is identified via “M0” (“M” “zero”) at the end of the file/track name.
E.g. J-S001_0001M0.WAV or J-S001_0001M0.MP3 = the first track of an interview with John Smith by (interviewer) 001.

If a master recording/s is edited for any reason (and the track is still deemed to be a master recording) this is identified via “M1” (“M” “one”) at the end of the file/track name.
E.g. J-S001_0001M1.WAV or J-S001_0001M1.MP3 = an interview recording/s with John Smith by (interviewer) 001 which has, for some reason, had to be edited to produce a new master recording.
Note: in some instance the original master track/s may be deleted.

Easy Access or Sound-bites:

The terms Easy Access or Sound-bite refers to the same thing: an (edited) audio track taken from master .WAV recording/s suitable for general release as a stand alone audio track/s in .MP3 format.

On rare occasions a master recording may be deemed suitable for general release “as is”. In this instance the track is identified as an easy access or sound-bite recording via “A0” (“A” “zero”) at the end of the file/track name.

e.g. J-S001_0001A0.MP3 = the first track of an interview with John Smith by (interviewer) 001.

In most instances a/the master recording/s are edited to produce one or more easy access or sound-bite recordings for general release. These are identified via “A1” (“A” “one”) at the end of the file/track name. The track name should also contain a descriptor and the date it relates to.

e.g. J-S001_0001A1 – Landing at Beaulieu Airfield 1943.MP3, J-S001_0001A1 – Bombing runs at Ashley Walk 1942.MP3 (two sound-bites taken from interview recording track 0001) or J-S001_0004A1 – Avoiding FLAK 1941.MP3 (one sound-bite taken from interview recording track 0004) = the interview recording/s with John Smith by (interviewer) 001 have been edited to produce easy access or sound-bite recordings.
Note: we include the original track details (e.g. J-S001_0001) to enable the sound-bite to be tracked back to its master recording.

This table shows the type of Metadata to be completed for each MP3 file. In Audacity it is referred to as the Metadata tags (Found in the File “drop down tab” “Open Metadata Editor”. It is also shown (for checking and/or completion) when exporting into MP3 format. It is possible to save the metadata as a template. This is very useful if editing multiple track for a single person or a series of podcast or audio guides.

Artist Name	The name of the contributor	
Master	The name of the contributor	John Smith
Sound-bite	The name of the contributor	John Smith
Track Title	Original track file name – Descriptor + Date	
Master	Original track file name + M0 or M1	J-S001_0001M0 or M1
Sound-bite	Original track file name + A1 or A0 – Descriptor + Date	J-S001_0001A1 – Landing at Beaulieu Airfield 1943
Album Name	Contributors name – Remembers WWII	
Master	New Forest Remembers WWII	John Smith – Remembers WWII
Sound-bite	New Forest Remembers WWII	John Smith – Remembers WWII
Track Number	Number of track in this album	
Master	Not applicable	
Sound-bite	If five sound-bites produced from J-S001_000*A1	* = 1, 2, 3, 4, 5 respectively
Year	Year of interview	
Master	Year of interview	e.g. 2012
Sound-bite		
Genre	The type/classification of audio track	
Master	“Other” or Oral History	Other or Oral History
Sound-bite		

Comments	Brief description of track & Web link	
Master Sound-bite	Key words relating to audio track	e.g. RAF, Home Guard, Rations, Bombing etc. www.newforestww2.org

Audio guides, Podcast (a web based audio program):

When you produce an original piece of work whether a guide or program the metadata recorded will be different and to help form a consistent format the following guide should be followed.

Artist Name		
Master	The name of the project	New Forest Remembers WWII
Track Title		
Master	Site or program title	Ashley Walk, Rationing etc.
Album Name		
Master	New Forest Remembers WWII – Podcast or Audio Guide	
Track Number	Number of tracks in this album	
Master	Each podcast will be allocated the next number. Audio guides may have a number of tracks	Podcast No 01. Audio Guide 1 of 6
Year	Year of production	
Master Sound-bite	Year of production	e.g. 2013
Genre	The type/classification of audio track	
Master	“Other”, Podcast, Audio Guide, etc	
Comments	Brief description of track & Web link	
Master	Key words relating to audio track and the Web site for the portal	e.g. RAF, Home Guard, Rations, Bombing etc. www.newforestww2.org

Third party website:

Podcasts can be listed on third party website like iTunes. This has not been looked into as yet as our own site has capacity, but it may be an area to look into to gain a wider audience once we are more confident with the medium.

Links

Podcast web locations:

http://www.hwtma.org.uk/podcasts
http://www.wessexarch.co.uk/blogs/archaeocast
http://coseenow.net/podcast/2009/07/ingenious/

Production software:

http://audacity.sourceforge.net/

References and guide sites:

http://wiki.audacityteam.org/wiki/Category:Tutorial

Glossary of sound recording terms

http://www.pcmusicstuff.com/terminology.html
http://nasta.tv/2010/11/audio-glossary/

Jargon Busters

The two following glossaries form a good overall jargon de-buster, though they do need consolidating. They are both individually listed alphabetically.

http://www.pcmusicstuff.com/terminology.html

A/D - (Analog to Digital Converter) A device that converts analog signals into digital data.

Attack - The time period between a note being struck, and reaching it's maximum decibel level.

Attenuate - To reduce the level of a signal.

Bandpass Filter - A filter that allows a range (band) of frequencies to pass through but stops or at least attenuates any frequencies above or below this range.

Bus - One of the main outputs of a mixer which may be connected to one of the inputs of an amplifier or signal processor, for instance.

Buzz - Audio noise created by harmonics at 60 Hertz (the frequency of AC electricity).

Balanced Line - An audio cable usually associated with a three pin "XLR" mic cable and connector.

Bidirectional - Typically applies to microphones which are sensitive to sound coming from the front and rear, but not the sides.

Chorus - A delay effect that somewhat simulates a vocal chorus.

Compression - Modifying sound in such a way that the difference between highest and lowest levels of the sound is reduced.

D/A or DAC - (Digital to Analog Converter) A device that converts digital data into an analog signals.

DAW - (Digital Audio Workstation) A computer with analog and digital converters plus software to record, edit, mix, process and play digital audio.

Decibel - Measure of sound pressure level known (db).

Detent - Typically, a stop or catch in a control knob.

DSP - (Digital Signal Processing) The process of modifying audio digitally, also refers to computer software audio processing or to the computer chips which perform the processing.

Echo - The reflected sound that arrives at the listener's ears later than the direct sound.

Editing - Modifying a recorded sound track by adding, deleting or moving part(s), adding effects, etc.

Reverb - Reflected sound in which the rate of arriving reflections changes (degrades) over time.

Delay - An effect in which sounds are repeated at regular intervals, thus producing an echo-like effect.

Effects return - The path where a signal from a processing device enters a mixer.

Dry Signal - An unprocessed audio signal.

Equalizer - A processing device which alters the frequency response of an audio signal.

Expansion - A signal modification in which lower level signals are reduced and higher level signals are increased.

Fader - A sliding control which may increase or attenuate the gain of a signal.

Fade-In / Fade-Out - Gradually increasing or decreasing the level of a signal.

Final Mix - The product of mixing a multitrack recording down into a (typically) two channel stereo recording.

Flanger - Combines a signal with a slightly delayed form of itself providing an unusual, other-worldy, swishing effect.

Frequency response - Difference between the lowest and highest frequencies that are capable of being produced by a piece of audio equipment.

Gain - The level of amplification of a particular signal.

Harmonic Distortion - An output signal containing harmonics that weren't present in the signal going into an audio device.

Hertz - Frequency or Cycles per second.

Highpass Filter - A filter that allows frequencies above a certain point to pass through but attenuates frequencies below that point.

Lowpass Filter - A filter that allows frequencies below a certain point to pass through but attenuates frequencies above that point.

Master - The final mix of multiple recorded audio tracks.

MIDI - (Musical Instrument Digital Interface) A standard which allows electronic musical instruments such as synthesizer keyboards and drum machines to be connected to other MIDI devices and computers.

Mixing - Combining multiple, independent audio signals or tracks, so that the result is fewer tracks.

Multitrack Recording - The recording and processing of multiple audio tracks, at the same or different times, which are then typically mixed down into a stereo track.

Omnidirectional - Typically applies to microphones which pick up sound equally from any direction.

Overdub - The process of layering new tracks over previously recorded tracks. A component of multitrack recording.

Phantom Power - a DC power supply (usually +48v) designed for use with condenser microphones. The name "phantom" denotes the fact that the power travels through the same cable as the audio signal.

Pitch-shift - Raising or lowering the pitch or frequency of an audio signal, without changing the tempo.

Punch in - The re-recording of a specific segment of a track, without changing the rest of the track.

Reverberation - Sound that has gradually decayed due to multiple echos reflecting from numerous surfaces in an acoustic environment.

Recording - Capturing a sound signal onto an appropriate storage media such as tape, cd or hard disk.

Segue
(noun): to make a transition from one thing to another smoothly and without interruption: The conversation segued from travel anecdotes to food

Synthesizer - Electronic musical instrument, usually a keyboard, capable of producing many different types of sounds.

Trim - Controls the level of input on a mixing desk.

Unidirectional - Typically applies to microphones which are sensitive to sound coming from a single direction.

Velocity - A term used to denote the speed or force with which a note has been struck.

Wet signal - An audio signal which has been processed using some type of effects.

XLR Connector - (X-tended Locking Round) A common, three pin balanced connecter, commonly used on microphone and audio cables.

Common Audio File Formats

AIFF - Audio Interchange File Format
A format for storing digital audio in a computer file. (commonly used on the Macintosh)

AU - Audio (Unix Audio) File Format
This is the standard format used by Unix and Sun.

CDA - CD Audio Track
CDA file is actually a misnomer. It is really a simple pointer to digital audio information stored on a music CD.

MID - MIDI Music File
Not a true audio file. MID files are the product of MIDI music instruments.

MP3 - MPEG Layer-3 File Format
By far the most popular format for downloading and storing music. MP3 files are compressed by eliminating inaudible parts of the audio file, yet audio quality remains quite good.

OGG - A patent free, open source format that supports a number of codecs. The highly compressed format Vorbis is the most popular of these, thus the name OGG Vorbis. Not a highly supported format.

RA - Real Audio Format Real Networks file designed for streaming audio over the Internet.

WAV - Digital Audio File Format
Highly popular Microsoft file format for storing digital audio data on a computer. WAV files are the preferred format for PC (Windows) computers. These files are quite large but are very clean.

WMA - Windows Media Audio File Format
A Microsoft proprietary format for storing digital audio data on a computer. WMA files use compression in order to create a smaller file size.

http://nasta.tv/2010/11/audio-glossary/

Ad-lib
Unrehearsed, spontaneous act of speaking, performing, or otherwise improvising on camera without preparation.

AGC
(Automatic gain control) A circuit on most camcorders that automatically adjusts a microphone's gain (volume) to match environmental sound levels.

Ambient sound
(Ambience) Natural background audio representative of a given recording environment. On-camera dialog might be primary sound; traffic noise and refrigerator hum would be ambient.

Amplify
To magnify an audio signal for mixing, distribution and transducing purposes.

Audio dub
Result of recording over pre-recorded videotape soundtrack, or a portion thereof, without affecting pre-recorded images.

Audio mixer
The piece of equipment used to gather, mix and amplify sounds from multiple microphones and send the signal on to its destination.

Backing Track:
Pre-recorded accompaniment for a singer or voiceover actor who then listens through headphones to a replay as he/she performs. Generally, the two signals are ultimately mixed to produce the final recording.

Dubbing
An actor's voice synchronization with lip movements which are not the originally recorded sound. This is used to replace unusable dialogue or recordings.

Boom, microphone
Any device for suspending a microphone above and in front of a performer.

Condenser mic
A high-quality mic whose transducer consists of a diaphragm, back plate and capacitor.

Decibel
(dB) A unit of measurement of sound that compares the relative intensity of different sound sources.
Digital audio
Sounds that have been converted to digital information.

Equalize
To emphasize, lessen or eliminate certain audio frequencies.

Feedback
Echo effect at low levels, howl or piercing squeal at extremes, from audio signal being fed back to itself.

Frequency
The number of times a signal vibrates each second as expressed in cycles per second (cps) or Hertz (Hz).

Gain
The ratio of the signal level at the output of an audio device to the signal level at its input. Expressed in decibels (db)

Handheld mic
A microphone that a person holds to speak or sing into.

Hi-fi
(High fidelity) Generalized term defining audio quality approaching the limits of human hearing, pertinent to high-quality sound reproduction systems.

High-Pass Filter
An electronic filter used to attenuate all frequencies below a chosen frequency.

Hiss
Primary background signal interference in audio recording, result of circuit noise from a playback recorder's amplifiers or from a tape's residual magnetism.

Impedance
Opposition to the flow of an audio signal in a microphone and its cable.

Input channel
On an audio board, the control into which a microphone, tape recorder or other source is plugged.

Lapel mic
A small mic often clipped inside clothing or on a tie or lapel.

Lip sync
Proper synchronization of video with audio — lip movement with audible speech.

Lowpass Filter
A filter that attenuates frequencies above a specified frequency and allows those below that point to pass.

Master fader
The audio volume control that is located after all the input channel controls and after the submaster controls.

Mic
(also "mike") short for microphone.

Mix
Combining sound sources to achieve a desired program balance. Finished output may be mono, stereo or surround.

Nonsynchronous sound
Audio without precisely matching visuals. Usually recorded separately, includes wild sound, sound effects, or music incorporated in post-production.

Omnidirectional
A microphone that picks up sound from all directions.

Phantom Power
A method of remotely powering the preamplifier which is built into many microphones by sending a voltage along the audio cable.

Phone plug
Sturdy male connector compatible with audio accessories, particularly for insertion of microphone and headphone cables. Frequently referred to by their sizes, usually1/4- inch and 1/8-inch. Not to be confused with phono plug.

Phono plug
(RCA) Shrouded male connector used for audio and video connections. Frequently referred to as RCA plugs, they only come in one size. Not to be confused with phone plugs.

Pickup pattern
Defines a microphone's response to sounds arriving from various directions or angles.

Preamp
An electronic device that magnifies the low signal output of microphones and other transducers before the signal is sent to a mixing board or to other amplifiers.

PZM
(Pressure zone microphone) Small, sensitive condenser mic, usually attached to a metal backing plate. Senses air pressure changes in tiny gap between mic element and plate.

RF
(Radio frequency) Combination of audio and video signals coded as a channel number, necessary for television broadcasts as well as some closed-circuit distribution.

RF converter

Device that converts audio and video signals into a combined RF signal suitable for reception by a standard TV.

Shotgun
A highly-directional microphone used for picking up sounds from a distance.

Sound bite
Any short recorded audio segment for use in an edited program — usually a highlight taken from an interview.

Sound effects
Contrived audio, usually pre-recorded, incorporated with a video soundtrack to resemble a real occurrence. Blowing on a microphone, for example, might simulate wind to accompany hurricane images.

Soundtrack
Generically refers to the music contained in a film, though it literally means the entire audio portion of a film, video or television production, including effects and dialog.

Stereo
Sound emanating from two isolated sources, intended to simulate pattern of natural human hearing.

Sweetening
Post-production process of adding music and sound effects or otherwise enhancing the existing audio with filters and effects.

Synchronous sound
Audio recorded with images. When the mouth moves, the words come out.

Underscore
Music that provides emotional or atmospheric background to the primary dialog or narration onscreen.

Unidirectional
Highly selective microphone pickup pattern, rejects sound coming from behind while absorbing that from in front.

Voiceover
(VO) Audio from an unseen narrator accompanying video, heard above background sound or music. Typically applied to edited visuals during post-production.

VU Meter
A meter, often in editing software, designed to measure audio level in volume units which generally correspond to perceived loudness.

White noise
A signal having an equal amount of energy per hertz, usually sounds horrible!

Wild sound
Nonsynchronous audio recorded independent of picture ie. rain on roof, five o'clock whistle — often captured with separate audio recorder.

Windscreen
Sponge-like microphone shield, thwarts undesirable noise from wind and rapid mic movement.

Wireless mic
A microphone with a self-contained, built-in miniature FM transmitter that can send the audio signal several hundred feet, eliminating the need for mic cables.

XLR
(Ground-left-right) Three-pin plug for three-conductor "balanced" audio cable, employed with high-quality microphones, mixers and other audio equipment.

Technical Terms

Cardioid

Characterized by strong sensitivity to audio from the front of the mic, good sensitivity on the sides (at 90 degrees, 6 dB less than the front), and good rejection of sound from the rear, the Cardioid pattern can almost be visualized as a "heart-shaped" pattern (hence its name).

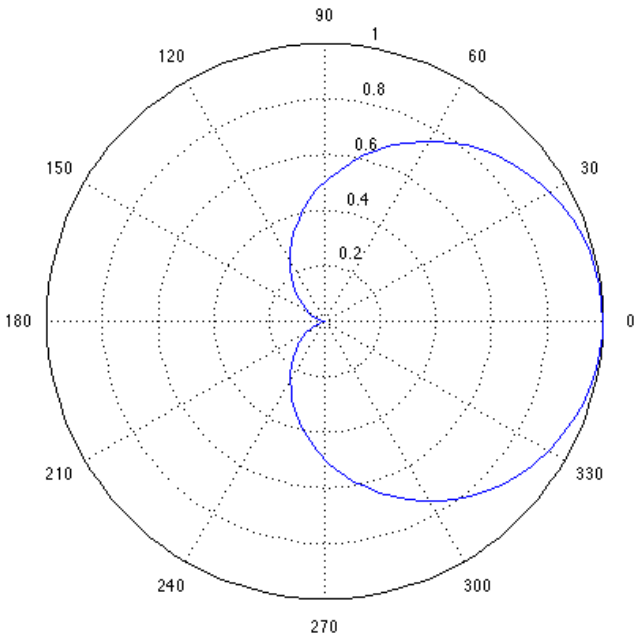


Figure 3: A microphone polar (pickup) pattern showing the Cardioid "bubble".

The ability to reject sound from the rear makes Cardioid patterns very useful in multi-miking situations, and where it is not desirable to capture a large amount of room ambience. Popular in both studio and live use (where rear rejection cuts down on feedback and ambient noise),

Cardioid mics are used for a very high percentage of microphone applications. Keep in mind that like all non-omnidirectional mics, Cardioid mics will exhibit pronounced proximity effect.