

APPENDIX: Glossary of acoustical terms relevant to rock art studies

attenuation of sound - decrease in the intensity of sound as it travels from a source to a receiver. *

auralization - process of using acoustical measurement data to determine how any sound would be heard if were to be modified by the acoustical characteristics of an environment.

binaural - sound reproduction technique involving use of two separated microphones to capture multi-dimensional acoustic information, and two transmission channels to achieve a stereophonic effect.

decibel (dB) - term used as a unit of relative measure of sound power level, and which is logarithmically proportional to subjective loudness. *

direction of arrival (DOA) - direction from which sound is perceived to originate.

echo - reflected sound that can be distinguished as a repeat of the sound source.

echogram - visual record of sound level history.

Haas effect - psychoacoustic phenomenon of the inability to distinguish two sounds separated in time because of an insufficient delay; temporal masking.

Hertz (Hz) - unit of frequency equal to one cycle per second; (1 kHz = 1 kiloHertz = 1000 Hz).

impulse response - result of a brief acoustic stimulus.

insonify - to produce a sound stimulus in order to characterize a space.

MLSSA - Maximum Length Sequence Analyzer used in steady state acoustic measurement approaches.

octave - a doubling of frequency.

pink noise - sound with continuous frequency spectrum and with equal power per constant percentage bandwidth.

reflection coefficient - the fraction of sound power reflected or otherwise not absorbed.

reverberation - persistence of noise in a closed or partially enclosed space after the source of sound has stopped. *

reverberation time (RT60) - time for reverberation to decay by 60 dB.

scattering - large number of mostly low energy sound reflections.

Schroeder integration - mathematical technique for minimizing measurement variation.

Snell's law - The angle of incidence of a ray of sound or light, measured from the normal, is equal to the angle of reflection.

SNR - signal to noise ratio.

steady state - acoustic measurement technique employing continuous sound at varying frequencies.

temporal masking - psychoacoustic phenomenon of the inability to distinguish two sounds separated in time because of an insufficient delay; Haas effect.

transient - acoustic measurement technique employing a brief sound stimulus.

* Definitions with an asterisk are paraphrased from Designation C624 - 1996 Standard Terminology Relating to Environmental Acoustics (ASTM 1997).