TSM543 Media Formats

Psychoacoustic coding

Psychoacoustic modelling allows us to assign less bits to parts that we can't hear or can hear less. This means we can squeeze audio a huge amount (11:1!)

Task 1: Determine the spectral masking effect around 1kHz, 5kHz, and 10kHz

a. Using Adobe Audition, set up a 1kHz tone in a multitrack session (around -20 dB).

b. Set up another track with a 1.1kHz tone, and turn it down until it's not audible. (make sure the combined amplitudes of the tones do not cause clipping!)

c. Record the dBFS value of this, and then move up in frequency.

d. Explore both sides of the masking frequency to determine the masked cone

Task 2: Determine the temporal masking time for a 1kHz tone

a. Set up a 1kHz tone at -20 dB

b. Play a 1.1kHz tone alongside at -40 dB

c. Set the 1.1kHz tone to finish a little later

d. Reduce the time until it's temporally masked by the 1kHz tone

e. Note the time!