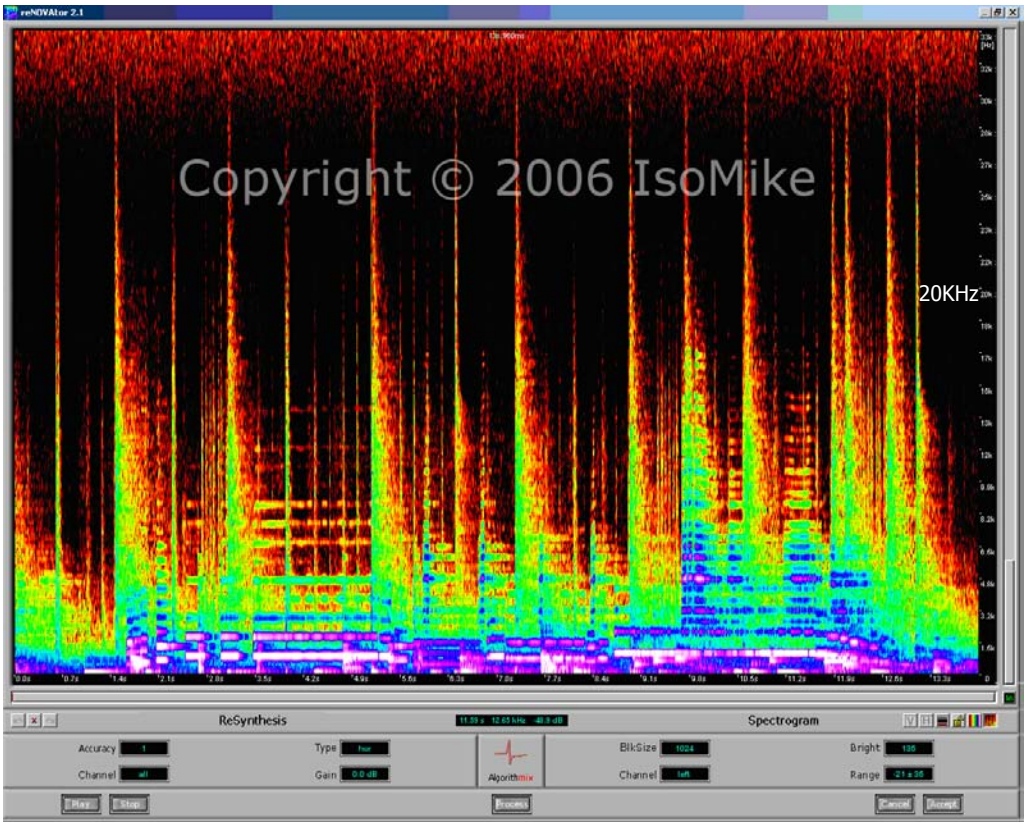

Fig. 1 - This NOVA spectrogram is an analysis of a high resolution DSD recording.

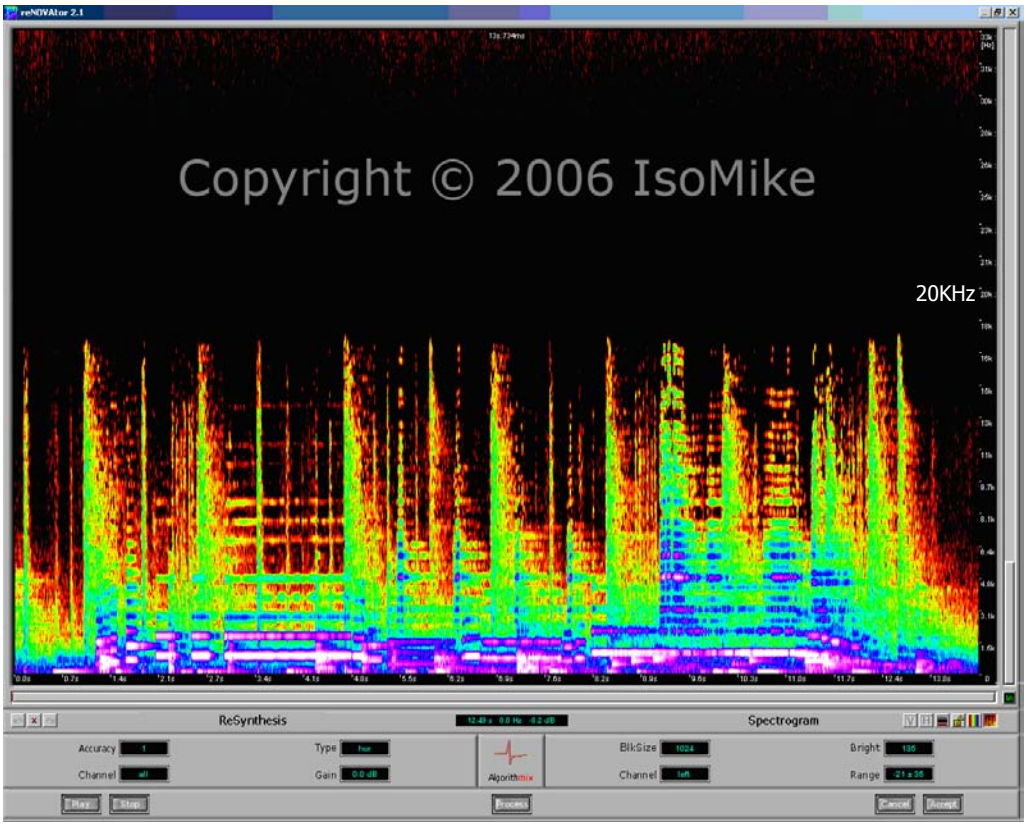

Fig. 2 - This NOVA spectrogram shows the same song as an MP3.

images available at www.isomike.com/ces2007/DSDvsMP3

Fig. 1
DSD signal path:

The signal started from an EMM Labs CDSD SACD player,

then to an EMM Labs DAC8 Mk IV, resulting in an analog signal,

then converted to DSD via an EMM Labs ADAC8 Mk IV,

then to a Merging Technologies' Pyramix DSD workstation for SACD authoring.

Fig. 2
MP3 signal path:

The signal started from an EMM Labs CDSD SACD player,

then converted from DSD to PCM 44.1khz/16bit with Sonic Studio nexStage AFC DSD to PCM converter,

then converted to MP3/128k via the LAME encoder inside Steinberg's WaveLab 6,

songs then loaded onto an Apple iPod 30GB video and played back as an analog signal via the iPod line-out,

then converted to DSD via an EMM Labs ADAC8 Mk IV,

then to a Merging Technologies' Pyramix DSD workstation for SACD authoring.

Websites for equipment used:

www.emmlabs.com
www.merging.com
www.sonicstudio.com
www.steinberg.net
www.algorithmix.com

Regarding the NOVA spectrograms:

Horizontal plane = time
Vertical plane = frequency
Color spectrum = amplitude (0 black, softest red, orange, yellow, green, blue, violet, white loudest)

Here are two articles about the audibility of extended high frequency:

http://www.dcsltd.co.uk/technical_papers/aes97ny.pdf
http://www.nanophon.com/audio/antialia.pdf

* No other processing (and all iPod processing turned off.)