SAA Digital Repositories Course

Quality Primer

Images: Bit Depth and Resolution



Bit Depth



1 bit image

24 shades of gray

16 million colors

Looking Closer:



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Resolution



File Size and Storage: Doing the Math:

Image size formula: X pixels x Y pixels x bit depth ÷ 8

8 x 10 photo at 300 ppi and 8 bit grayscale= 7.2MB (((8x300) x (10 x 300))x 8) ÷ 8

The same 8 x 10 photo at 600 ppi = 28MB 8 x 10 at 300 ppi 24 bit color = 22 MB 8 x 10 at 600 ppi 24 bit color = 87 MB

Audio Quality: Sampling From: Introduction to Computer Music: Volume One http://www.indiana.edu/%7Eemusic/etext/digital_audio/chapter5_sample.shtml



Audio Quality: Compression

Compression creates smaller file sizes with a resultant loss of quality as "insignificant" bits of data are discarded and sound values are interpolated.