Game Art & Sound
Sound

- Midi files
  - Musical Instrument Digital Interface
  - Advantages
    - small
    - fast
  - Disadvantages
    - synthesized
    - rendered

- Wav files
  - Waveform Audio
  - Advantage
    - sampled
    - direct
  - Disadvantages
    - big
    - slow
Sound

• Sound Effects
  – wav files at http://www.thepocket.com/sounds.htm
  – midi files at http://www.mididb.com/
  – multimedia lab at 016 Old Chem for more advanced editing and sampling
    http://www.oit.duke.edu/ats/mps/hardware.html
Sound in Java

• Create a URL (examples taken from SplashScreens of Beat The Bugs!)

```java
private static final URL START_GAME_URL = SplashScreens.class.getResource("audio/destruction.wav");
```

• Create AudioClip

```java
startSound = JApplet.newAudioClip(START_GAME_URL);
```

• Play the Audio Clip

```java
if (GameLoop.audible) startSound.play();
```
Sound in Java

• Create only as many AudioClips as you'd like to play at once. Replay rather than recreate AudioClips.

• Use the loop methods of AudioClip to repeat a clip continously, and stop to terminate the playing clip.

• Be sure to check GameLoop.audible

• Use the getResource method in order to generate the URL. This will make sound (images) work on your applet by loading the files from the jar.
Game Art

• Use Paint or a similar application to draw your own images.

• Extend Sprite and make a custom shape for fast sprites (ImageSprites take longer).

• Transparency makes ImageSprites really come alive.
  – Crop out portions of the image to be transparent by
    • painting a uniform color on what is to become transparent
    • save the image as a gif
    • use TransWeb http://www.mit.edu/transweb.html
Animated Gifs

• Make your own animated gifs to go on buttons
  http://www.gifworks.com/

• Make your own animated text
  http://www.cooltext.com/

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