

# *ExplorNet's Digital Media I*



Objective 104.01 2%

Explain concepts used to create digital audio.

# Digital Audio

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- Sound that has been captured, created, or edited electronically by a computer.
- Analog (non-digital) audio sources are converted to a digital format by a process called sampling.
- Sampling reproduces a sound wave by recording many fragments of it.
- In media production, sound and music are crucial to helping to establish moods and create environments.

# Channel Number

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The amount of individual audio channels used during playback. The more channels of audio, the more realistic the sound.

- Monaural (Mono)
  - All sources of audio play out of one single channel.
- Stereophonic (Stereo)
  - Audio sources can be separated into two different channels (left and right).
- Surround Sound
  - Multiple audio channels; usually 5-7 channels.

# Streaming Audio

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Transmitting audio files that can begin playing over the Internet as the remaining data is still being downloaded.

- Creates little to no wait time to begin hearing the audio file.
- Example of websites that use streaming audio technology include Pandora, Spotify, Grooveshark, etc.

# Audio File Formats

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- .MP3
  - Most popular audio file format.
  - Standard for downloading and storing music.
  - Commonly used for streaming over the Internet.
- .WAV
  - Standard file format for PCs.
  - Native sound format for Windows environment.
- .WMA
  - Uses Windows Media Player for audio playback.
  - Microsoft format used for streaming audio files.

# Audio File Formats

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- .MIDI
  - Musical Instrument Digital Interface
  - Standard file format used by digital instruments (keyboards, guitars, etc.).
  - Contains information about musical notes.
  
- .AAC/.M4A
  - Standard file format for Apple Computers.
  - Higher quality sound than .MP3.
  - Standard file format used by mobile devices.