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COVERT CHANNEL ASSIGNMENT

The included noiseless covert channel works by using transferred of audio file (shared resource). The sender uses an audio file, enter a list of numbers. Then the python script will split the audio file into chunks of 50 seconds intervals. The first interval will have a reference volume. The following volume intervals will be used to encode the list of numbers that the sender entered. For each number, the volume of an interval is reduced by approximately that many dB. Defenders can detect this covert channel if they detect anomaly in the volume. However, the smaller change in the volume, the better. This method can be minimized to transfer binary code if lower the chance of getting noticed since the volume difference is smaller. The research was mostly learning the pydub library with the approximate time for the implementation and bug -fixing was around 6 hours.

Instruction:

- Install pydub library for Python (pip install pydub)
- Install included ffmpeg (http://blog.gregzaal.com/how-to-install-ffmpeg-on-windows/)
- Runs the python files.

Reference:

Pydub library: https://github.com/jiaaro/pydub/blob/master/API.markdown

MP3 audio file: https://docs.google.com/file/d/0B-klwLEjaXWcZHR5SmJJWEwtYnc/edit?resourcekey=0-D33DYWMxjVde0g1m7qsoZw