AP Written Response

2a) The computational artifact is called Sound-to-Energy, as represented by the image. The purpose of this artifact is to convert sound, more appropriate, the vibrations that sound creates and turn them into energy that can be stored for later use. The process begins by putting sound through a microphone, indicated by the saxophone player; which will be put through a converter, illustrated by the box that indicates waves to electricity. Finally, once those vibrations are converted into electrical energy; they can be stored or used as shown by the light pole.

2b) I used a program called Google Draw because it allowed me to import images that could help me explain the process visually; I also had the liberty to edit the images and input text. I looked through google images for a favorite saxophone player, saved the image, and uploaded it to the Google Draw Canvas. I used this same process for the microphone and converter box. Then I used tools given to me by this program such, as a paintbrush, to connect images and draw attention as to the definite steps. The canvas is a place where one can put in images to edit and create, physically draw using colors, and personalize as desired. These qualities made Google Draw an excellent choice.

2c) Sound-to-Energy can be used as a significant source of clean energy, which could eventually replace current use of fossil fuels. That means, that, the world would no longer need to use expensive means of energy that pollute the environment and aren't renewable. There are a few, however, harmful effects in terms of economic depletion of enormous oil and gas companies that have made fortunes off of unrenewable energy. The empires could topple as renewable energy becomes more popular. This would also debilitate the growth of such new waves to harness energy as rich and influential politicians are funded by large oil, coal, and

unrenewable energy companies. A culture of a knowledgeable population that understands the harmful effects of gases released through pollution and anew age of clean energy is the best possible scenario.

2d) Sound-to-Energy processes sound which is exorbitantly abundant, especially in terms of ambient sound. Any sound that occurs in any situation would be processed by a converter that tracks and processes that information, and would turn the vibrations from the sound into electrical energy. If a further innovation in Sound-to-Energy were to be able to pick up and convert ambient sound, or sound from the constant movement and liveliness of a city, then the concern of privacy would come up. This refers to the everyday conversations and sound that comes from general day-to-day life. A myriad of conversations that generally would not be heard, could have the potential to be recorded and used for nefarious purposes.

Sources

1. N. (n.d.). Learning About Renewable Energy. Retrieved December 13, 2017, from https://www.nrel.gov/workingwithus/learning.html

2. Li, G., & Shchukin, V. Y. (2012). *Advances in engineering design and optimization III: selected, peer reviewed papers from the third international conference on engineering design*

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3. N. (2017, June 15). Renewable Energy Record Set in U.S. Retrieved December 13, 2017, from https://news.nationalgeographic.com/2017/06/solar-wind-renewable-energy-record/