

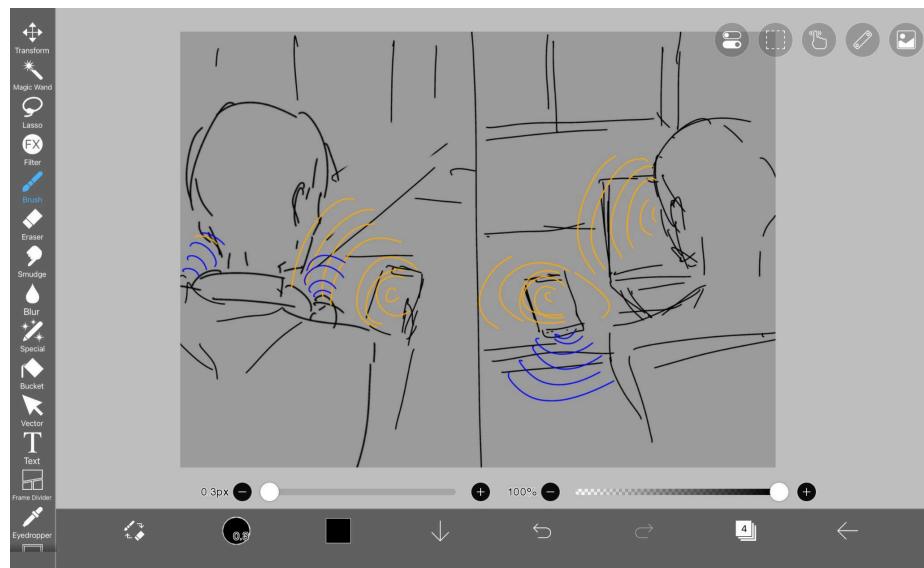
## OVERVIEW

My project explores "hidden technology" through the visualization of electromagnetic and mechanical waves in an otherwise mundane scenario. This illustration includes a digitally illustrated image of someone at a desk, unaware of the various waves being emitted and bouncing from surface to surface.

## PROCESS/SCHEMATICS

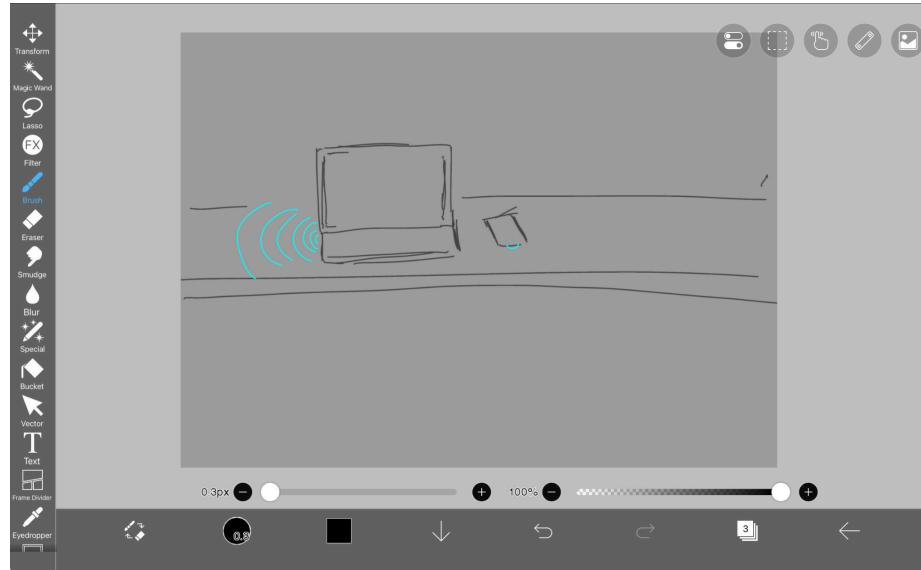
First, I did most of my brainstorming/rough sketch drafting on my iPad, using my apple pencil and a drawing program I've used for many years called IbisPaint. These sketches were only made so I could think of different ways to approach my topic, thus the very rough/sloppy nature of them, and many others that were scrapped are not shown. I chose these two to showcase because they were the most intriguing, and were the few I did not scrap.

### CONCEPT #1 PROCESS:



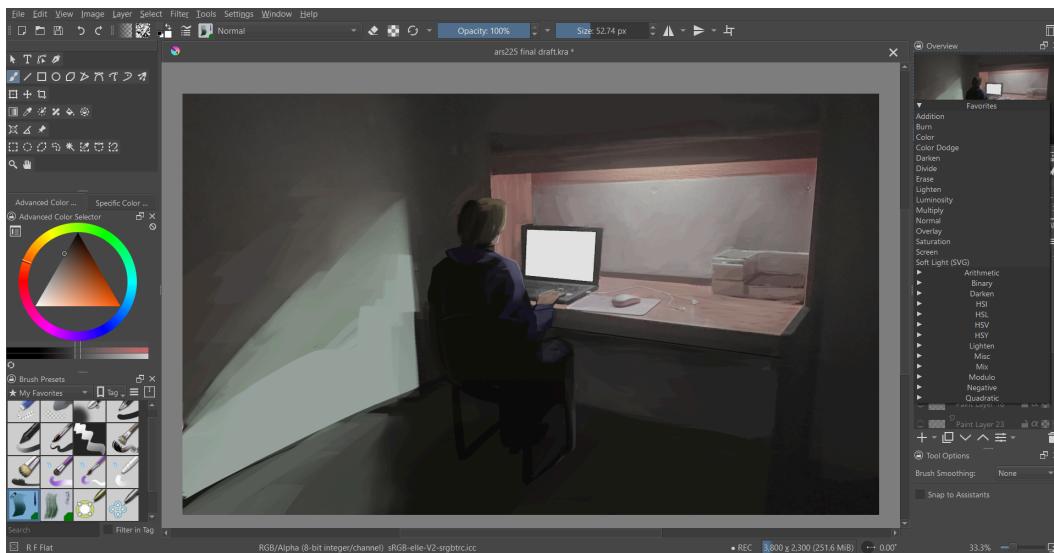
In this initial sketch, I wanted to show some sort of connection between people and their devices, and how those devices would connect them through various wave types. I ultimately scrapped this idea because I felt it strayed a little too far from my initial idea of hidden technology and became more about how technology provides a means for interconnection among people. Although an interesting idea as well, it wasn't necessarily what I wanted to portray.

## CONCEPT #2 PROCESS:

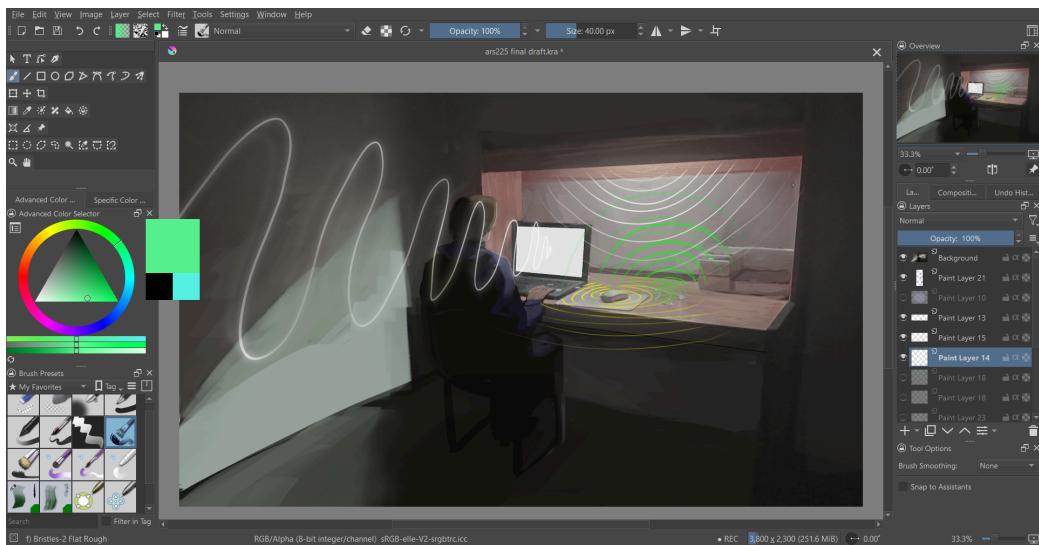


This sketch is pretty lackluster, mostly because I had switched over to working on my laptop at this point. However, this concept is the most strongly reflected in my final piece. I wanted to take a setting that many people are familiar with: a laptop, a desk, and perhaps a few other devices. Then, I went ahead and drew in the waves.

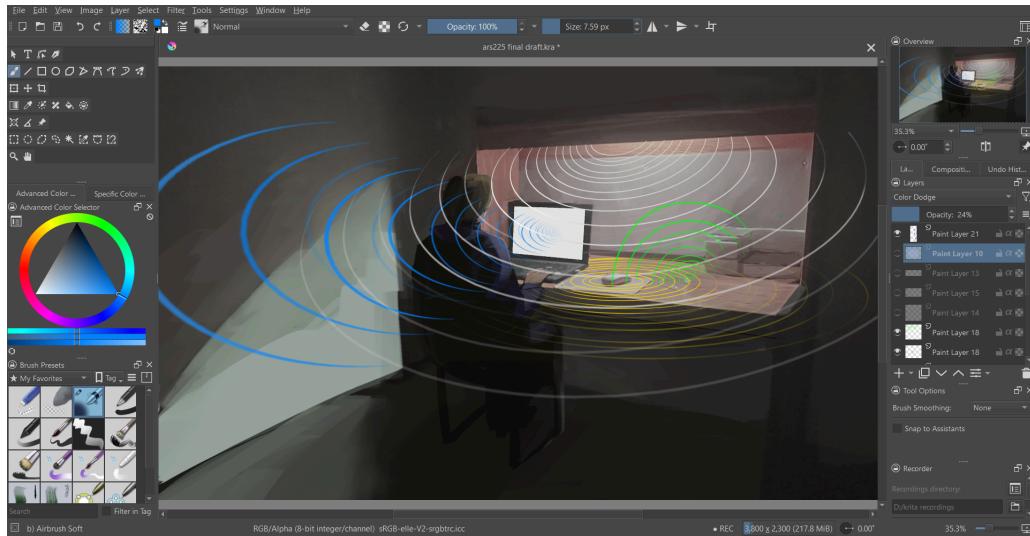
## FINAL PAINTING PROCESS:



For the entire final piece, I used my Huion drawing tablet and worked on a painting software on my laptop, Krita. First, I had to create the background. I used an online reference picture to get the correct angle. I always paint on a single paint layer, and adjust the lighting and shading after blocking out the main shapes. I didn't add too much detail, as I wanted the main focus to be the waves.



My first pass of the waves was a bit messy and wasn't exactly how I wanted the end result to look. I was experimenting with different colors and shapes of waves, which is why the waves released by the laptop screen are a different form. This was mostly a trial run, so I could see what would look the most visually interesting but remain at least somewhat accurate to how the waves would travel along the room.



As I drew the waves for the final rendition, I wanted to make the shapes more refined, and not be afraid to have the waves intersecting. I initially didn't add too many waves, not wanting the piece to be too overwhelming. However, after the peer review, I decided that the overpowering nature of the waves would help portray my idea in this piece, as a testament to just how much goes on with technology that we don't see.

I also made some other last-minute stylistic adjustments, like changing the laptop's wave color to blue. I initially wanted one color to correspond to one wave type: yellow for ultra-high

frequency (UHF) radio waves (used by Bluetooth devices like the mouse), white for light waves, and green for mechanical sound waves. I decided to change the laptop's waves to blue for the sake of the overall composition of the piece, and it's also a slight nod to the fact that our devices specifically emit *blue* light, even if it isn't visibly blue all the time.

## DATA SET

My chosen media for this project was an illustration, so I do not have a dataset that corresponds with this piece. No AI or outside images were directly used.

## REFLECTION

I believe my chosen concept of “hidden technology” can be interpreted in a multitude of ways. Whether wires or waves, there are many elements to technology that we can’t see or fully understand. In my earlier explanations of my concept, I noted that I wasn’t sure whether these aspects would be too overwhelming for the piece. I believe I effectively used this point to be taken as another commentary on how we cannot fully portray the complexity of technology in other mediums.

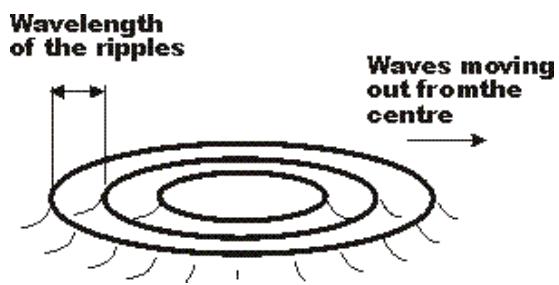
Another point of note is that the nature of real-life electromagnetic/mechanical waves is, naturally, not exactly how they are portrayed in my piece. I intentionally simplified the shapes and nature of the waves to make it more cohesive, and so the piece wouldn’t be a mess of lines and shapes. My final piece reflects the main points I wanted to hit: the complexity and interactions between the hidden aspects, in this case being waves, without being *too* overbearing. Even if it isn’t accurate to the real world, I think my methods are still effective in the message I wanted to send that the waves are always there, always moving and interacting with the things around us, even with our bodies. Being that they’re invisible to us, we often don’t spare them a single thought.

There are certain types of waves we are more familiar with, but only in certain situations. Blue light, which *is* portrayed in the piece, is something a lot of people are familiar with. Most people do know that our devices, like phones and computer screens, emit blue light. Another common wave would be X-ray waves, known to be necessary, but harmful in high levels of exposure. This isn’t to say that everyone should be aware of every aspect of their devices. I would be lying if I said I knew all the implications of different types of waves and radiation interacting with each other. However, I think people should still recognize just how much goes into technology to make it so convenient and not take those things for granted, even if we cannot see them. This would help prevent the possible disconnect we feel with the real world when we’re absorbed into our technology.

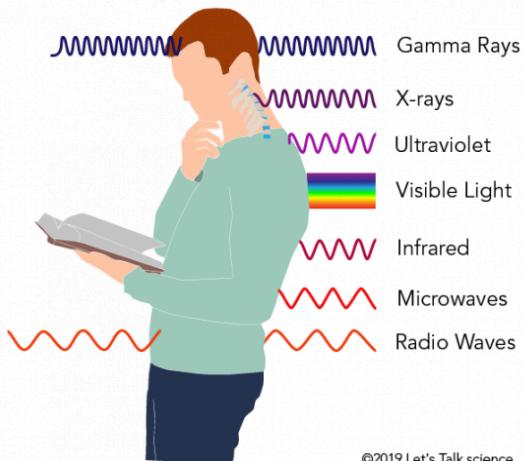
## REFERENCES

Source: [https://www.electronics-notes.com/articles/radio/basic\\_radio/radio\\_signals.php](https://www.electronics-notes.com/articles/radio/basic_radio/radio_signals.php)

I strongly based my drawings on the waves by using a ripple-wave model rather than the usual wave portrayal. I believe it worked better with the simplicity of the piece.



### HOW ELECTROMAGNETIC RADIATION INTERACTS WITH THE BODY



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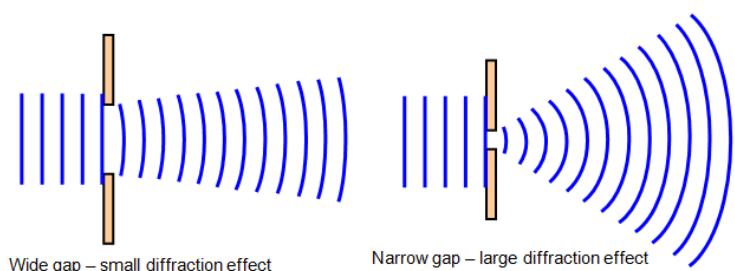
Source:

<https://letstalkscience.ca/educational-resources/backgrounder/what-are-different-types-radiation>

I used this website to gain a basic understanding of the different types of waves, and the ways they interact with our bodies.

Source: [https://www.schoolphysics.co.uk/age14-16/Wave%20properties/text/Diffraction\\_index.html](https://www.schoolphysics.co.uk/age14-16/Wave%20properties/text/Diffraction_index.html)

I used this website to observe how the different objects in the piece may affect the diffraction of the waves, thus changing how they appear visually.



## FINAL ARTWORK

