Ventus

Created By Sam
Colorado

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Defining the Problem

At my school we are given iPads to do assignments, read, learn, create, and grow. Everyday we are expected to bring them to school with a fully charged battery. About 75% of my classmates do but 25% still don’t. In each classroom we have charging areas with a couple cables. Students who didn’t charge the night before have to sit there, all of class, with at least two other kids charging with no desk space, or work space, affecting their ability to learn.

Not only that, but power cords for various household items are flimsy, complicated, and annoying. They get tangled, not plugged in the right way, and bent so they break.

Finally, natural disasters, especially the recent hurricanes, affected thousands of people. They went without power for months. There, people don’t have access to lights, refrigerators, washing machines, dishwashers, and many other basic necessities.
Background Research - AirPower

“AirPower begins to charge your Apple products almost as soon as they are placed on the mat. The iPhone X screen displays the AirPower interface, providing easy-to-read updates on the battery life of your devices.”

- From *What is AirPower? Here's what we know so far about Apple's wireless charging mat*

AirPower was something proposed by Apple in September, 2017. It’s a wireless charging mat where you can put your devices to charge.

Many companies such as Samsung have created their own version of AirPower.
Solution - Ventus

Ventus is a device that will replace power cords and outlets, and all the inconveniences and issues that goes with them. Ventus works like a WiFi router in the way that the energy is transferred. Ventus has a touch screen display to find the devices in the area to apply power to. It is equipped with 3 antennas for transporting power to household electronics including home entertainment systems, lighting, and appliances. More robust models can provide power to meet large demands including charging electric vehicles. Ventus is energy efficient. Solar panels convert solar energy into electricity and uses it to power your devices. Ventus also stores energy. With excess power, the machine can store it and use if there is a power outage or natural disaster.

During Hurricane Maria in Puerto Rico, 3 million people lost power.
How does it work?

Ventus uses a process called induction. This is when an electromagnetic field is created to transfer power from one device to the another. Ventus checks the device to make sure it is ready for power. A green light signals that the device has received power.

The emissions released by the transmitter will not be harmful to humans. It will be monitored by the FCC. (Federal Communications Commission)
The Cost

Price - $999.99

Availability - Available at most stores including Walmart, Target, Best Buy, Costco, and Amazon.

If you want to use Ventus, you will need to make sure all of your electronic devices have a Ventus Receiver.

Uses - Airports, schools, houses, planes, churches, offices, zoos and every place that uses power.
Prototype Design - Tinkercad Screenshots
Final 3D Design

https://www.tinkercad.com/things/0mmVNu06UWw

(Select the link for a better image)
Conclusion

With the help of Ventus, students will enhance their learning time. People affected by natural disasters will have power. Now, powering your devices will be easier than ever before.

Welcome to Ventus.......


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