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TECHNOLOGICAL INFRASTRUCTURE

Connection

The device will wirelessly connect to two different types of devices. The first is the app that is found on the phone. This interaction will happen when the owners are near the stove and when they are away from home. Because interacting with the device through the phone will happen at many possible distances, communication will not use Bluetooth. The most common distances are too far for this type of technology. While the device will connect to the app and send information about the condition of stove and surrounding area, it will also receive part of this information from smoke and gas detectors in the home. Therefore, this requires that the other smart appliances and services in the home will be able to send information to the stove monitor. Once more devices such as the smoke detector have become smart devices, the device will be able integrate with a Smart Home.

Power

The device will connect to an socket for power. It will not have a battery that needs to be replaced. This has a potential problem during a power outage but is better than running out of power when needed. Furthermore, the purpose of the device is to cut power for safety and any power outage would also have an effect on the stove. Therefore, the benefits more than outweigh the problem of using a plug for power. We have decided that the plug will be a Type A.¹ This type of plug has two flat plugs of different sizes. These plugs fit both Type A and B sockets. They are common to North America and Japan. We have chosen this type of plug because of our device will be marketed in the USA first. It also increases the number of available sockets.

App

The app will communicate with the stove monitor through a wireless connection. It will send instructions to the device and receive information about the state of the device and its environment. This app will be available for both Apple and Android phones. The app is also available for tablets with the right operating system. This app will not be available at the beginning for mobile Windows device or for general desktop usage. This is subject to change when the stove monitor becomes more popular with the public and more appliances become Smart. Thus the device is part of the beginning stages in building a truly Smart Home.

¹ "Plug Type A." IEC - World Plugs. Accessed June 6, 2015. <http://www.iec.ch/worldplugs/typeA.htm>.