UNLV
HOWARD R. HUGHES COLLEGE OF ENGINEERING

Forget Me Not

Personal item tracker

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Background

- Many people struggle with keeping track of personal items such as their phone, keys or wallet
- While many existing products such as Tile provide ways of tracking personal items, none of them alert users when they **forget the item in question**
- This design is meant to provide an **extra level of protection** against losing important items by alerting users when they leave without them
- Ideally this means a user will **never leave home without their wallet** again

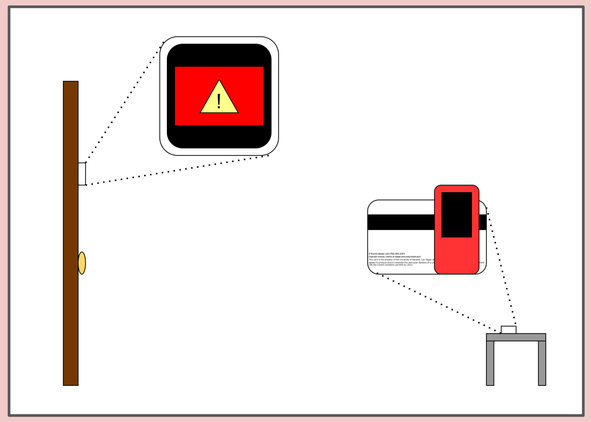
Methods and Materials

- This design includes several “tag” devices that can be attached to objects as well as a “brain” that controls them.
- C++ code was created and programmed via Arduino IDE
- Bluetooth Low Energy used as wireless communication medium

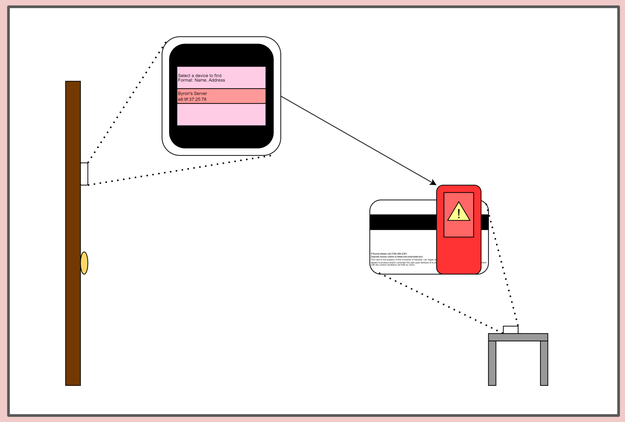
Includes the following components:
(3) M5Sitck C-Plus
(1) M5Stack Core2

Function

If the user tries to leave the house without all of their tracked items, the controller provides an **audio and visual alert**



Likewise, **the user can find any lost item** by using the controller to issue an audio and visual alert to that tracker



Implementation

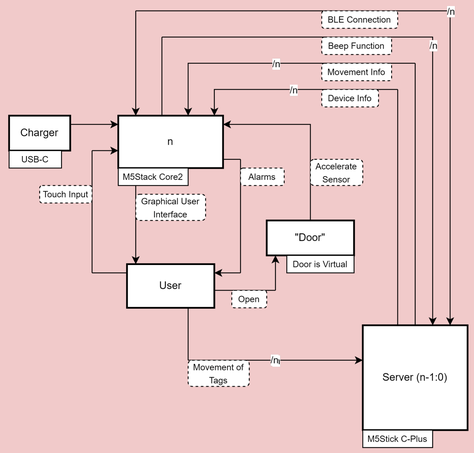
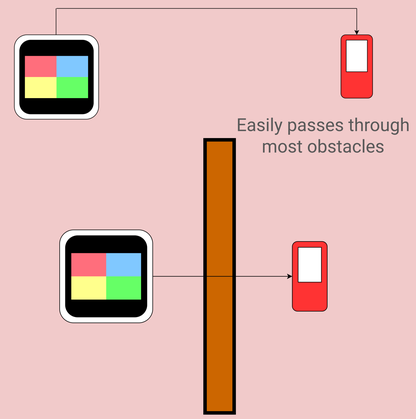


Figure 2: Data Transfer Diagram

Capabilities

Operation Distance of over 26 meters



Possible Improvements

- The design works well, but the trackers are too small to use with smaller items such as keys
- Wifi support and compatibility with other IOT devices would allow for better organization
- The devices must be individually charged via USB-C port. A central device that can charge everything at the same time would be beneficial

Conclusion

- With some polish, this product could compete with tile and other commercial tracking devices by filling **an unexplored niche in the market**
- This device fits in well with an IOT home, and could potentially be **controlled with an existing IOT interface**
- This device boasts **superior security features** compared to other trackers

References

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