

The S.M.A.R.T. Helmet

Old Dogs and New Tricks?

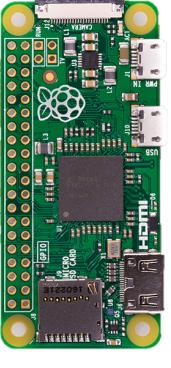
The Motorcycle has long been a simple pass-time for many individuals. However in recent years this singular method of transportation has steadily grown into a reliable method of regular commute. The technology behind the motorcycle however, has yet to catch up to that of the modern vehicle until now.

The S.M.A.R.T. Helmet helps to bridge the gap between modern vehicles and this beloved pass-time by adding GPS Navigation and Video Recording

What Did We Use?



Raspberry Pi R3
Controls navigation display and
records secondary video



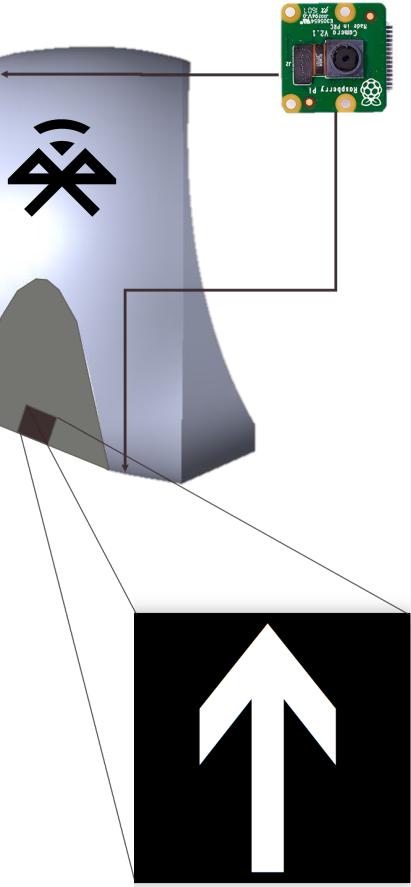
Raspberry Pi Zero
Controls primary video

Raspberry Pi Camera
Records navigation display and
records secondary video

Brookstone Pico Projector
Performs high definition
video recording at 1080p
30fps

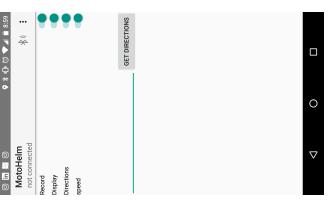
What is it?

The Helmet displays directional arrows on the HUD (as seen below). Simultaneously the two raspberry pi cameras continuously record video (as seen to the top right). In the bottom left corner the overall system diagram can be seen demonstrating the overall circuit.



But How do you control it?

The Smartphone app allows the user control over each of the helmet functions. The desired location is typed into the entry box and sent to the Helmet processing.



What are we planning for the future?

Improving upon this prototype version yields many possibilities. If a new display can be found, with higher quality resolution, more detailed instructions can be added.

References

1. <http://www.bu.edu/gov/HIGHWAY>
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