

EE/CprE/SE 491 WEEKLY REPORT 3

Feb 13, 2023 – Feb 19, 2023

Group number: sddec23-19

Project title: Bluetooth-Enabled Ingestible Capsule to Monitor Gut Activity

Client &/Advisor: Santosh Pandey

Team Members/Role: Chase Thompson, Cutler Thayer, Tucker Thomas, Robert Zukowski

○ **Weekly Summary**

This week we continued our research on capsule endoscopy. This technology could be especially useful for Diabetes and Malaria patients as they sometimes require specific dosages that could change on the fly. Anne Trafton's article for MIT news was useful for obtaining information. The pill they described contains multiple arms that are designed to both hold/release drugs and keep the pill inside the stomach. Also, the bluetooth signal from the pill reaches roughly an arms length away. This is for the safety of the pill's user as to avoid malicious or accidental connections.

○ **Past week accomplishments**

- **Chase Thompson:** Did more research into Medtronic looking at their company background and structure as well as their products. Continued to find more information about Rapid Reading and learning about that.
- **Robert Zukowski:** Have an idea of what parts are available for what prices.
- **Cutler Thayer:** Continued to read research papers, but ultimately at a stand still until we can meet with our mentor again.
- **Tucker Thomas:** Contributed to team initiation assignment and discovered good future meeting times.

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Chase Thompson	Did more in depth research into Medtronic. Began reading more papers regarding Rapid Reading algorithms	3	11
Robert Zukowski	Continued looking into existing products and sensors.	2	10
Cutler Thayer	Read more research into rapid reading technology, bluetooth capsules, and similar technologies.	2	11
Tucker Thomas	Brainstormed questions for a survey, the purpose of which is to gather data regarding how potential users feel about the technology. Asked friends and family about their opinions of the project as a whole.	3	10

○ **Plans for the upcoming week**

- All Team Members: Read the attached article about [already existing companies that are prevalent in this field](#).
- Chase Thompson: Discuss what I found about Rapid Reading technology with the advisor and come up with ways to find out more.
- Robert Zukowski: Discuss with the professor what constraints exist for what parts we need to buy/create. (same as last week, a meeting was not possible)
- Cutler Thayer: Keep reading and work out a good time for everyone to meet with the professor.
- Tucker Thomas: Brainstorm survey questions and get better with using figma. Determine a consistent meeting time with the professor.