

EE/CprE/SE 491 WEEKLY REPORT 4

3/24/23 – 4/7/23

Group number: SDMAY23-14

Project title: Mobile Vehicle Security Bus

Client &/Advisor: John Potter &/ Joseph Zambreno

Team Members/Role:

- 1. Campbell, Ryan / Lead Developer**
- 2. Jansen, Levi / Developer**
- 3. Lawson, Riley / Developer**
- 4. Ridgeway, Drake / Developer**
- 5. Scehovic, Ryan / Lead Developer**
- 6. Stricker, Cody / Developer**
- 7. Torres, Josue (Josh) / Developer**

(All the above information should be there in each weekly report. The format/color scheme etc need not be the same. However, please remove everything that is in a bracket from your final submission. These are just part of the template and need not be a part of the report.)

- **Weekly Summary** *(Short summary about what the group did for the week. This should be about a paragraph in length. These are just a few questions to help you get started. What was the overall objective for the week? In general, what tasks were completed? Were there any changes made to the project?)*

The overall objective for this week was to make sure a round trip of communication is working, bidirectionality, and programming ECU's. We programmed a routing table for specific bits from Vcan0 and Vcan2. We will search in our programs for those bits in the FD Frames, and send them throughout the files.

- **Past week accomplishments** *(Please describe/summarize as to what was done, by whom, when and, collectively as a group. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project related results are acceptable, but please ensure that they are legible (clear enough to read) and to provide an explanation. If*

*researching a topic, please add a few details about what was learned and how it is relevant to the project. If two or more people worked on a single task, be sure to distinguish how each member contributed to the task. Specific details relating to the assistance provided to other members may be included here. **Do not include classwork, such as individual reflection assignments, and group meetings as part of your duties.**)*

- Drake Ridgeway: I started coding Bidirectional.py and helping with bidirectionality and ECUs, helped team members with debugging, brainstormed ideas, attended team meetings

- Riley Lawson: Did bidirectional.py coding and assisted with bidirectionality debugging, coding and coming up with ideas to fix bidirectionality support.

- Cody Stricker: I worked on the development of tools for testing such run.sh which now automatically runs all the testing programs at once in different terminals.

- Levi Jansen: Helped setup vcan2 and planned for unpacking and sending of individual CAN frames.

- Ryan Scehovic: Helped with ECU table code to identify if a CAN frame should be packed into a CAN FD frame. Also worked on testing bidirectional code for seeing if two bridges can send/receive messages over the same VCAN network

Ryan Campbell: Helped debug one small error in run.sh, was missing | tee to write to files for logging output in its own folder. Debug and brainstorm ideas for bidirectionality.

- Josue Torres: Helped develop an address lookup table to determine if a message contains a valid address. Also helped the development of bridge bidirectionality by brainstorming functional ideas. Also met with our client to clear up some of our confusion with bidirectionality.

- ...

- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

Most of us were busy this past weekend, so not a lot of work was done at that time. Other than that, no complications. Also, we were unsure on how to approach our bidirectionality problem, so we consulted our client and gave us a couple of ideas and tips on how to approach it.

- **Individual contributions** *(Creating this section is optional, but it is Required to include the “Hours Worked for the Week” and their “Total Cumulative Hours” for the project for each member somewhere relevant in your report. Your individual weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that individual contributions support your claim to the weekly hours. Be honest with the reports.)*

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Campbell, Ryan	Run.sh (1 line), bidirectionality	7	73
Jansen, Levi	Sending to ECUs	6	42
Lawson, Riley	Bidirectional.py, bidirectionality	8	46
Ridgeway, Drake	Bidirectional.py, bidirectionality, helping with ECUs, attended team meetings	8	46
Scehovic, Ryan	Bidirectionality code + ECU table	8	90
Stricker, Cody	ECU Sniffing, testing tools	10	50
Torres, Josue (Josh)	Lookup Table/Routine, Brainstorm ideas for bidirectionality	10	41

- **Comments and extended discussion** *(Optional)*
- **Plans for the upcoming week** *(Please describe duties for the upcoming week for each member. What is(are) the task(s)? Who will contribute to it? Be as concise as possible.)* • Drake Ridgeway: This week, I plan to help the team finish Bidirectionality

and help with the ECU programming

- Riley Lawson: Hopefully to finalize bidirectionality, make sure the tools to run one single file works, and make our project presentable.
- Josue Torres: Refactor code to make it more maintainable and easier to work with. Also, I plan to develop code for bidirectionality. Lastly, try to get our project ready for demonstrations.
- Cody Stricker: The next coming weeks I intend to work to finalize our project to get it to a point where it is able to be presented.
- Levi Jansen: Help wrap things up with bidirectionality, polish our simulation
- Ryan Campbell: Fix bidirectionality, get it working, pretty-up the project for presenting a demo as we come to a conclusion of senior design
- Ryan Scehovic: Continue working on bidirectional code so that the two main bridges can both send/receive and also route messages to the proper ECUs

○ **Summary of weekly advisor meeting** *(If applicable/optional)*

John, our client, was very helpful this week by giving us more information about bidirectionality. He helped us solve an error in our code that we were constantly running into, halting some progress. He gave us a github link for reference to help with our round trip which proved to be a big help for our progress.

Grading criteria

Each weekly report is worth 10 points. Scores will be awarded as follows:

- **8 – 10:** Progress for your project seems to be suitable. Documentation and hours reported by team members are adequate.
- **6 – 8:** There is scope of improvement both in your report and your project progress. Can consult with instructor/TA after class for further inputs.
- **< 6:** Please talk to instructors/TA after class hours about any difficulties that you/your team is facing.

Each weekly report should be unique in that they have a unique set of supporting details for your contributions. So please do not just copy your reports from the

previous week. In addition, please avoid any personal pronouns (he, she, I, you). Try to keep your reports as neat as possible.