FAMU/FSU College of Engineering

Department of Electrical and Computer Engineering

<u>Project Scope and Code of Conduct</u>

Team 303 Software Defined Radio

Names: Kira Bronstein

Simon Charry

Christian Pollock

Jaryd Walton

Evan Woodard

Date: January 15, 2021

Description: Multipurpose software radio transmitter

Goal: Design and test a software radio transmitter

Primary Market: Commercial communication, radar (government and/or automobile)

Assumptions: Parts from DigiKey, commercial practices for board

Stakeholders: Government, Northrop Grumman

Mission Statement

Team 303 is committed to ensuring a positive work environment that supports professionalism, integrity, respect, and trust. Every member of this team will contribute a full effort to the creation and maintenance of such an environment in order to bring out the best in all of us as well as this project.

Roles

Each team member is delegated a specific role based on their experience and skill sets and is responsible for all here-within:

Team Leader – Kira Bronstein

Manages the team as a whole; develops a plan and timeline for the project, delegates tasks among group members according to their skill sets; finalizes all documents and provides input on other positions where needed. The team leader is responsible for promoting synergy and increased teamwork. If a problem arises, the team leader will act in the best interest of the project. She keeps the communication flowing, both between team members and Sponsor. The team leader takes the lead in organizing, planning, and setting up meetings. In addition, she is responsible for keeping a record of all correspondence between the group and meetings. Finally she facilitates presentations by individual team members and is responsible for overall project plans and progress

Team members:

Lead Analog Design - Evan Woodard

Responsible for overall design of electronic components. Takes care of filtering the signal for the digital radio and regulates other parts of the system. Keeps line

of communication with tester to ensure quality design. Responsible for taking and keeping record of meeting minutes.

Software/Firmware - Kira Bronstein & Jaryd Walton
Responsible for FPGA design. He/she maintains a line of communication with the lead mechanical/tester. He Keeps all design documentation for record.

Lead RF Design - Christian Pollock
Responsible for the propagation of the radio wave in the correct manner, dealing with the transmission of the wave, interference of other frequencies, and maintaining an accurate power/energy spectra.

Financial Advisors - Simon Charry & Jaryd Walton
Manages the budget and maintains a record of all credits and debits to the project account. Any product or expenditure requests must be presented to the advisor, who is then responsible for reviewing and the analysis of equivalent/alternate solutions. They then relay the information to the team and if the request is granted, order the selection. A record of these analyses and budget adjustments must be kept.

Lead Mechanical/Tester - Simon Charry
Takes charge of the mechanical design aspects of the project.
He is responsible for knowing details of the design, and presenting the options for each aspect to the team for the decision process. Keeps all design documentation for record and is responsible for gathering all reports.

All Team Members:
- Work on certain tasks of the project
- Buys into the project goals and success
- Delivers on commitments
- Adopt team spirit
- Listen and contribute constructively (feedback)
- Be effective in trying to get message across
- Be open minded to others ideas
- Respect others roles and ideas

Communication
The main form of communication will be through GroupMe and most meetings will be through Zoom. If necessary, group meetings will be in-person. Email will be a secondary form of communication for issues not being time-sensitive. For the passing of

information, i.e. files and presentations, Google Drive will be the main form of file transfer and proliferation.

Each group member must have a working email for the purposes of communication and file transference. Members must check their emails daily to check for important information and updates from the group. Although members will be initially informed via the GroupMe, meeting dates and pertinent information from the sponsor will additionally be sent over email so it is very important that each group member checks their email frequently.

If a meeting must be canceled, an email must be sent to the group at least 24 hours in advance.

Any team member that cannot attend a meeting must give advance notice of 24 hours informing the group of his/her absence. Reason for absence will be appreciated but not required if personal. Repeated absences in violation with this agreement will not be tolerated.

Team Dynamics

The students will work as a team while allowing one another to feel free to make any suggestions or constructive criticisms without fear of being ridiculed and/or embarrassed. If any member on this team finds a task to be too difficult, it is expected that the member should ask for help from the other teammates. If any member of the team feels they are not being respected or taken seriously, that member must bring it to the attention of the team in order for the issue to be resolved. We shall NOT let emotions dictate our actions. Everything done is for the benefit of the project and together everyone achieves more.

Ethics

Team members are required to be familiar with the NSPE Engineering Code of ethics as they are responsible for their obligations to the public, the client, the employer, and the profession. There will be stringent following of the NSPE Engineering Code of Ethics.

Dress Code

Team meetings will be held in casual attire or themed meetings to boost morale. Sponsor meetings and group presentations will be business casual to formal as decided by the team per the event.

Weekly and biweekly Tasks

Team members will participate in all meetings with the sponsor, adviser and instructor. During said times ideas, project progress, budget, conflicts, timelines and due dates will be discussed. In addition, tasks will be delegated to team members during these meetings. Repeat absences will not be tolerated.

Decision Making

It is conducted by consensus and majority of the team members. Should ethical/moral reasons be cited for dissenting reason, then the ethics/morals shall be evaluated as a group and the majority will decide on the plan of action. Individuals with conflicts of interest should not participate in decision-making processes but do not need to announce said conflict. It is up to each individual to act ethically and for the interests of the group and the goals of the project. Achieving the goal of the project will be the top priority for each group member. Below are the steps to be followed for each decision-making process:

- Problem Definition – Define the problem and understand it. Discuss among the group.
- Tentative Solutions – Brainstorms possible solutions. Discuss amongst the group most plausible.
- Data/History Gathering and Analyses – Gather necessary data required for implementing Tentative Solution. Re-evaluate Tentative Solution for plausibility and effectiveness.
- Design – Design the Tentative Solution product and construct it. Re-evaluate for plausibility and effectiveness.
- Test and Simulation/Observation – Test design for Tentative Solution and gather data. Re-evaluate for plausibility and effectiveness.
- Final Evaluation – Evaluate the testing phase and determine its level of success. Decide if design can be improved and if time/budget allows for it.

Conflict Resolution

In the event of discord amongst team members the following steps shall be respectfully employed:

- Communication of points of interest from both parties which may include demonstration of active listening by both parties through paraphrasing or other tool acknowledging clear understanding.
- Administration of a vote, if needed, favoring majority rule.
- Team Leader intervention.
- Instructor will facilitate the resolution of conflicts.

Statement of Understanding

By signing this document the members of Team 303 agree to all of the above and will abide by the code of conduct set forth by the group.

Name   Signature   Date

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