ZEIT4230 Electrical Engineering Design Practice

Project Planning Report Due Date: 23rd of March

The documents required for the system planning report are as follows:

1. A system-wide document prepared by the whole team.
2. Individual sub-system documents prepared by each team member.

The required contents of each of these documents is described below:

Team Document
The document prepared and submitted by the whole team should contain a System Requirements Specification (SRS) for the overall system and a project schedule.

System Requirements Specification
The System Requirements Specification (SRS) is a solution-independent specification that details what the project team needs from the overall system as a whole. The SRS should answer the following fundamental questions:

- What is the level of functionality and performance required from the system in order to achieve the goals and objectives stated in the Project Brief?
- What constraints (if any) are being placed on the subsequent design and development of the system?
- What are the interfaces between the system and external systems and environment?
- How will these requirements be verified?

The SRS should be prepared using the supplied template document.

Project Schedule
The project schedule should be in the form of a Gantt chart or a similar graphical format.
The schedule should be developed with staged outcomes and incorporate testing of key functional components. The risks of particular activities should be identified and alternative solutions or strategies should be incorporated to mitigate these risks. The project schedule should also include strategies to establish whether the project is on track.

Individual Documents
Each member of the team will be given responsibility for one or more sub-systems that require design and development. An example set of sub-systems could include:

1. Motor Controller
2. Wireless Transmitter
3. Wireless Receiver
4. 3D-printed Platform
5. Motor Control Software
6. Positioning Software
7. Obstacle Detection Software
8. Transmitter Software
9. Receiver Software
10. Navigation Software
11. Graphical Display Software

The individual documents, submitted by each team member, should contain the following sections for each sub-system that is allocated to the team member:

Sub-System Requirements Specification

This Sub-System Requirements Specification (SSRS) is similar to the SRS but only applies to the individual sub-system. The SSRS should be prepared using the same template document as for the SRS.

Theoretical Overview

This section should contain a review of the underlying theory and/or the technical background of the sub-system. The relationship between the sub-system and the relevant technical details should be clearly explained. The theoretical overview should include any technical details that are required to make informed design decisions that will allow the requirements of the sub-system to be satsified.