

# Development and Proof of a Submarine Copntrol System

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**Abstract.** This is where your abstract would go.

## 1 Introduction

Sections look like this

- non-numbered lists look like this.

Internal referencing is done like this §1.

## 2 Controller Structure

The controller consists of many small parts.

### 2.1 First Requirement

The first requirement was to make sure that at least one door is closed at all times.

### 2.2 Second Requiement

The second requirement was to ensure that the submarine could not perform any operations unless two doors were locked and closed.

### 2.3 Third Requirement

For the third requirement the submarine first had to have the ability to change depths. Secondly, the submarine had to ensure that when oxygen levels went below a certain threshold a warning will show. After this, the submarine has to re-surface after the oxygen is empty.

### 2.4 Fourth Requirement

The fourth requirement instructed is that the submarine must surface if the nuclear reactor overheats.

### **2.5 Fifth Requirement**

Another requirement is that the submarine cannot dive beneath a certain depth.

### **2.6 Sixth Requirement**

The last requirement was to make sure the submarine could load, store and fire torpedos safely.

## **3 Descriptions of Procedures and Functions**

## **4 Proof of Consistency**

## **5 Conclusion**