Oregon State University
College of Engineering

# CS Capstone Design Document

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# Axolotl

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**Abstract**

ASDF

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# 1 Navigation System

## 1.1 Resources

## 1.2 Implementation

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# 2 Data Logging

## 2.1 Resources

## 2.2 Implementation

## 2.3 Testing

There are two primary methods of testing the implementation of the OBDII logging system: OBDII simulation and real-life shakedown testing. OBDII simulation involves using a computer program to simulate an OBDII dongle's data stream using pre-generated OBDII data. OBDII logging functionality will be considered "functional" and meet requirements if the results of the logging system match the pre-generated data.

Real-life shakedown testing involves connecting the Axolotl and a secondary logging system to a vehicle and then driving the vehicle on a predetermined course. Both systems will record OBDII data during this time. After the course has been completed, logging will be stopped and the logs will be compared against each other. A set of critical data fields will be selected; the value within the specified data field will be examined

at a specific point in time will be compared against the same field on the opposite log.

OBDII logging functionality will be considered

will pass this test if the recorded OBDII data fields are within a 10% margin of error of each other at the same point in time.

# 3 FM Radio Integration

## 3.1 Resources

## 3.2 Implementation

## 3.3 Testing

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