

# Software Design Document Outline

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*Specification presentation of SEP group project*  
by  
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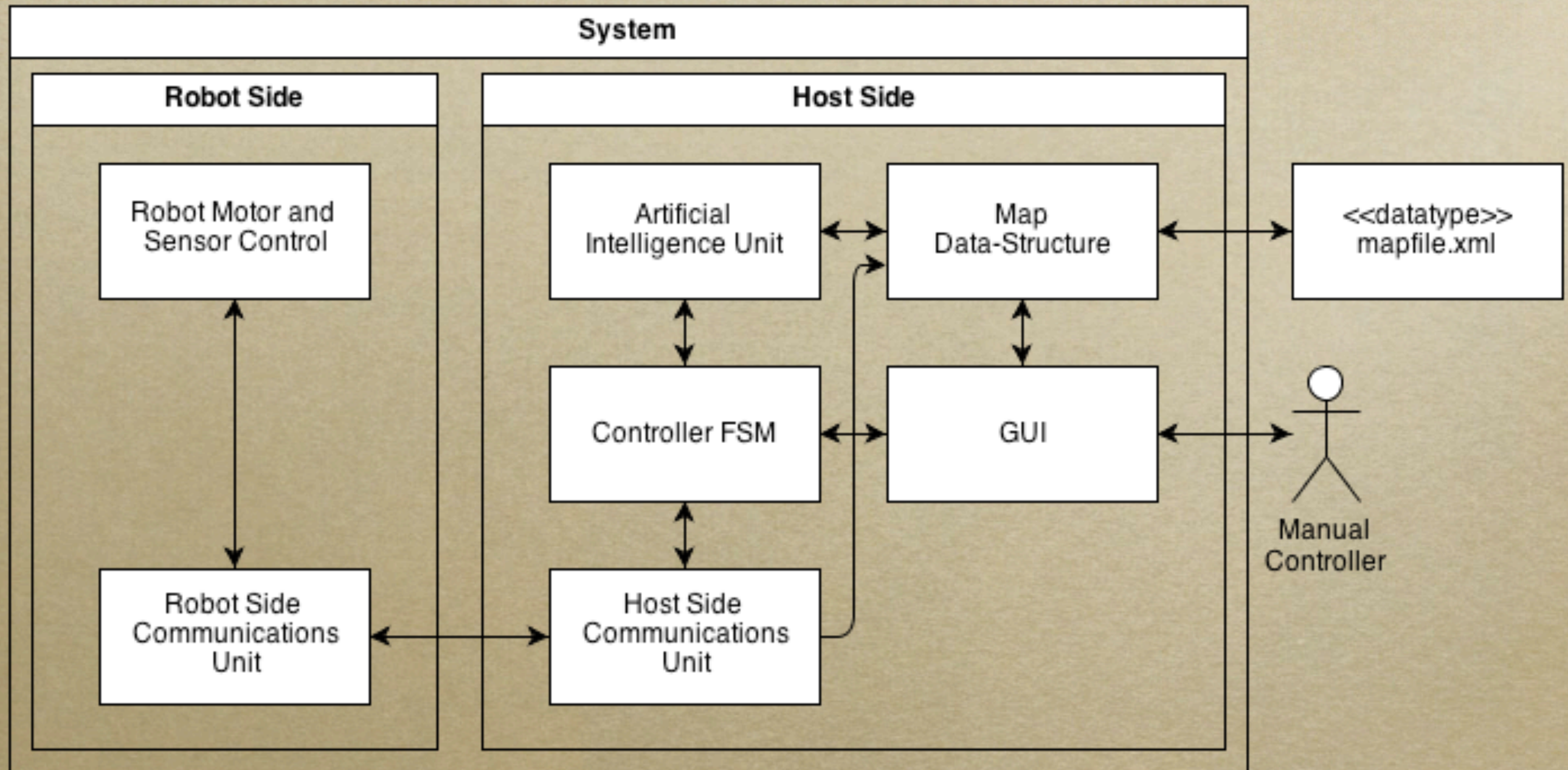
# Structure

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- *Overview of system and Architecture*
- *FSM mechanism*
- *Data Structure*
- *GUI*

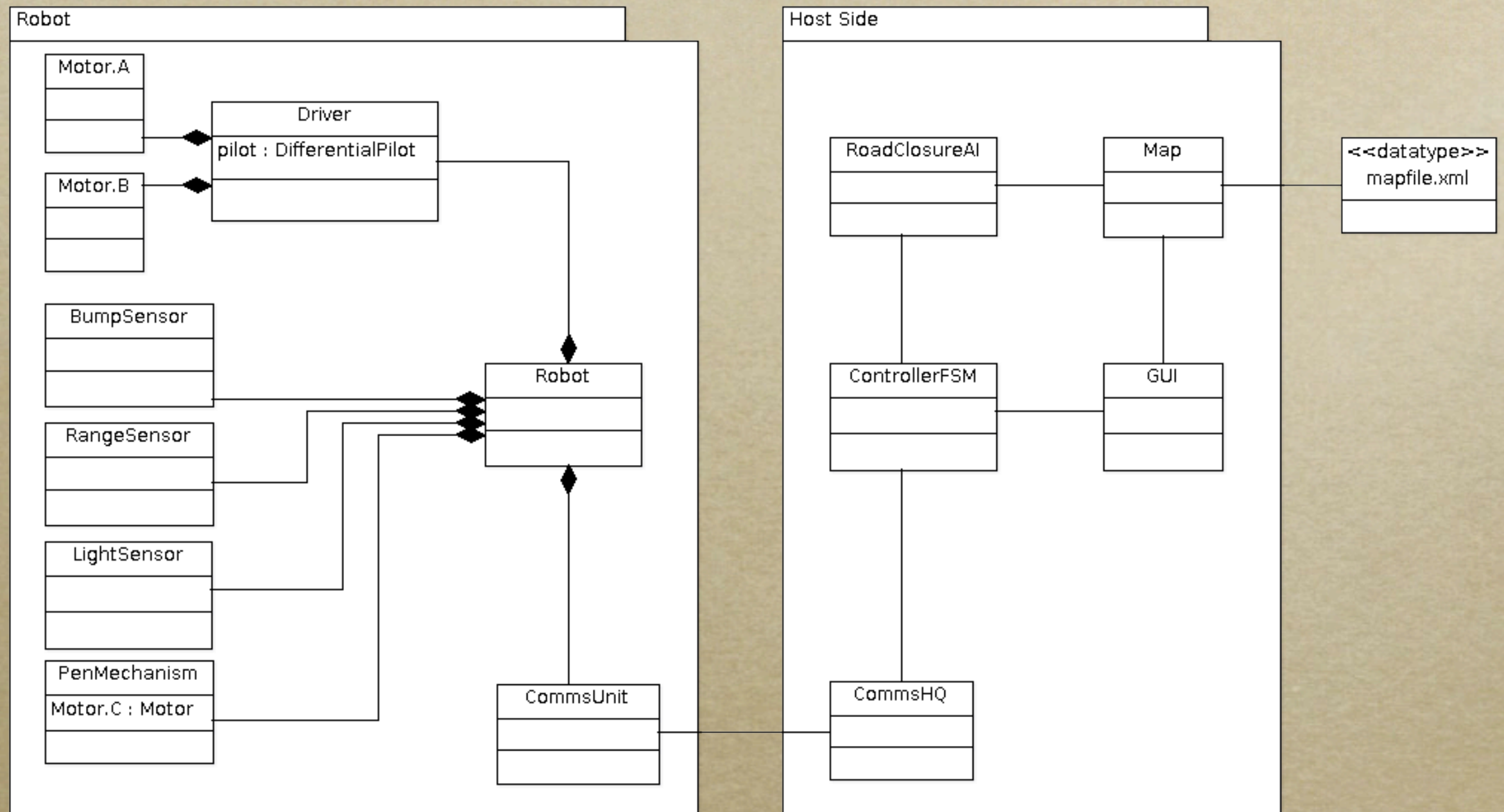


# *pipe-and-filter*



## Overview





# Architecture

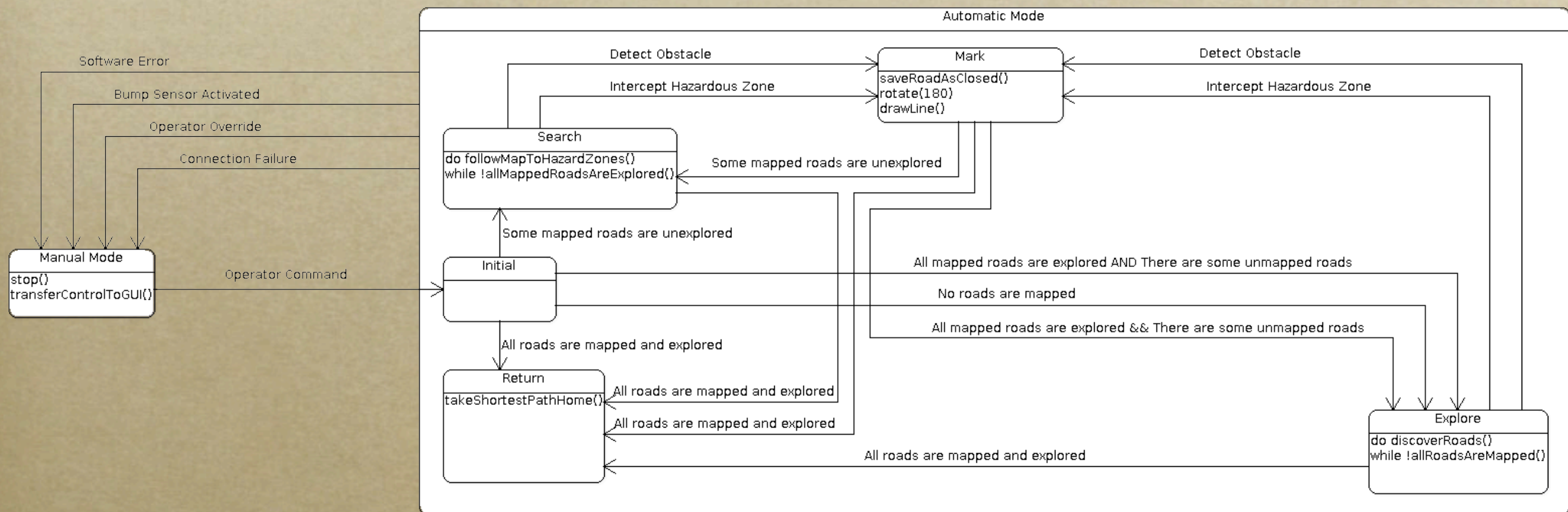


# FSM

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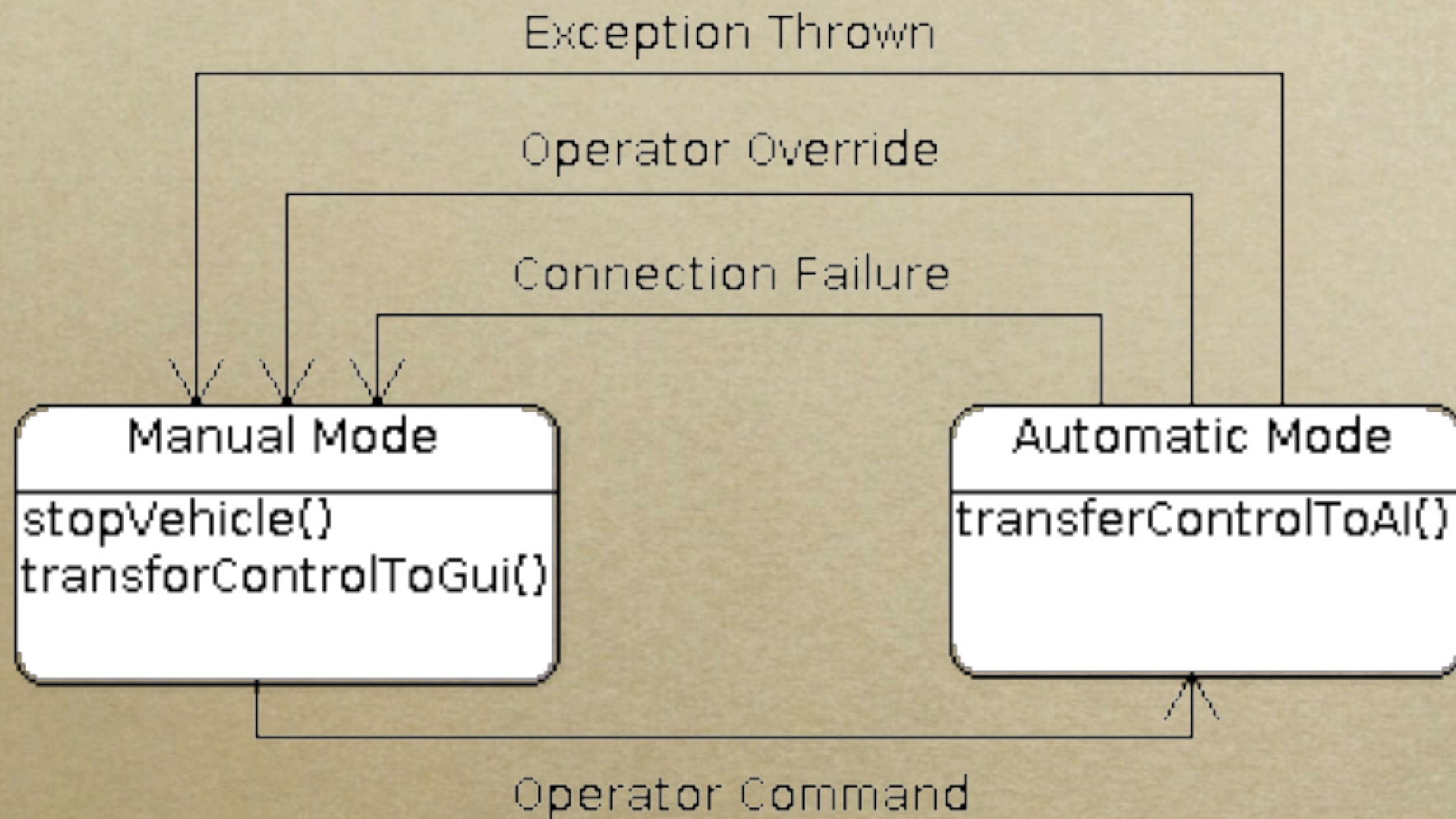
- *Manual mode and AI mode*
- *Straight forward and easy to debug*
- *Big FSM for the whole system and small FSMs for different parts*
- *AI part on Host but not on robot*





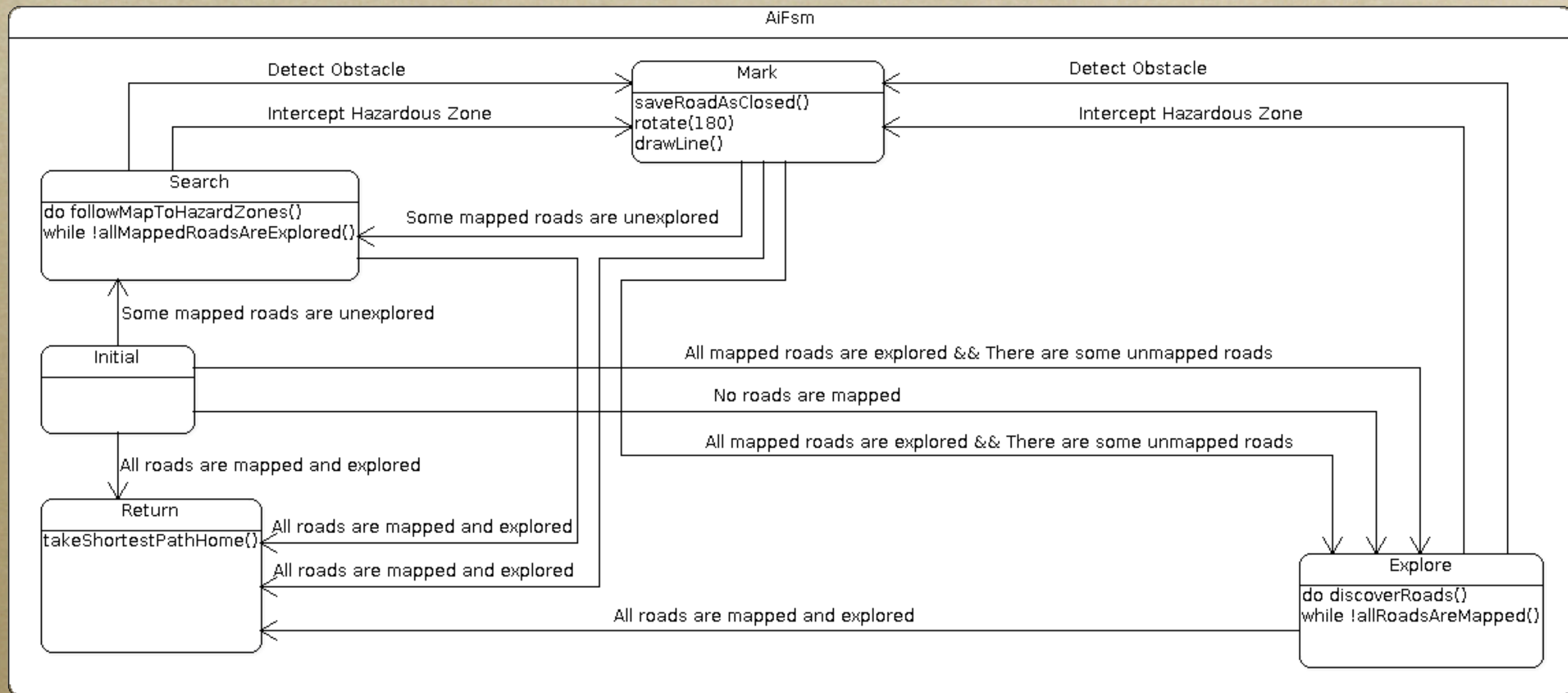
# SoftwareFSM





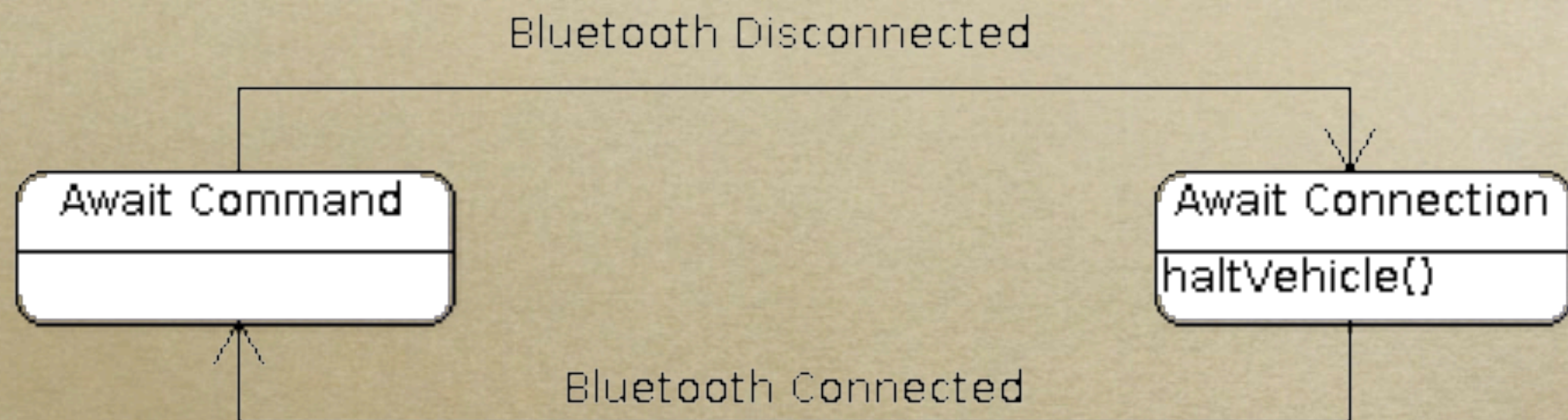
# ControllerFSM





# AIFSM





# RobotSideFSM



# Data Structure

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- *Old Design*
  - *ReadMap to read XML file and define map data*
  - *SaveMap to save new maps*
  - *DataDetecting to save mapping data*
  - *Draw to draw the map on GUI*



# Data Structure

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- *New Design*
  - *Create a Map class to store the map data structure*
  - *Use MapParser to do read and save*
  - *Draw the map based on the map data structure*



# GUI





# The End



- *Thanks*
- *Q & A*