Robot State Collector

Project Name: Robot State Collector
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Interns Required: 2

Abstract:

There are three main components:

1. Collecting timed data about the state of the robot (all sensors, position etc.)
2. Find a way to efficiently store data on the robot for a single run of the robot.
3. Develop a GUI that picks up this data from the robot, encrypts it and sends it to e-Yantra servers

Task List:

Task No.	Task	Deadline
1	Study and set up Linux and understand problem statement	3 Days
2	Relevant Reading and Getting Started	4 Days
3	Interrupt based state collection	6 Days
4	Exploring other possibilities	6 Days
5	Creating a GUI for fetching collected state	6 Days
6	Encrypting and sending data to server	3 Days
7	Testing and Debugging	4 Days

Prerequisite: Experience with Linux

Hardware Required:

1. Firebird V

Deliverables:

1. GUI for extracting state information from the robot
2. Documentation of the state collection and encryption process

Acceptance Criterion:

1. The designed state collection mechanism must integrate easily with the user’s programs without significantly affecting the performance of the system.
2. The GUI and state collection algorithm must pass all test cases
3. Ability to demonstrate encoding, transfer and decoding of time synced state information over the internet.

Note: Project will be considered successful only after all deliverables are met and all acceptance criterions are met.

Software Required:

Linux OS