Phase II Testing

This document provides evidence of testing for the technical requirements associated with Phase II of the Controller Area Network Diagnostic Design project.

I. CAN Log Repository

User interface and control PC implements a repository capable of logging all information on the CAN nodes.

STATUS   Implemented, functioning as per the requirements

COMMENTS   Table is called CANLog. Each entry into the log has:
- Date
- Time
- Floor Queue (the contents of the FIFO queue of floor requests)
- Car Position (moving, floor 1, floor 2, etc)
- Target Position (floor 1, 2 or 3)
- Door State (open or closed)
- Signal ID (the last CAN signal, which triggers the logging functionality)

In this way, the CAN signal logging also works as diagnostic logging / system state logging at a regular interval.

II. Data Logging and Retrieval

Control PC should submit all relevant CAN data into the logging repository and the web-based UI should be capable of retrieving this data.

STATUS   Implemented, functioning as per the requirements

COMMENTS   Upon reading a signal on the CAN bus, control PC logs the signal along with the current state of the system. This is performed using an INSERT INTO command to inject the data into the CANLog table.

III.   UI Buttons Functionality

Exercise each button on the UI and ensure that it updates the appropriate tables in the databases.

STATUS   Implemented, functioning as per the requirements

COMMENTS   Each button on the UI successfully injects a request into the clientQueue table.

IV.   PC Control: UI Request Processing

Elevator requests from the UI should be sent to the elevator system via CAN.

STATUS   Implemented, functioning as per the requirements

COMMENTS   Control PC successfully reads entries from the clientQueue and processes each entry into the required CAN signal. It then deletes the entry from the queue.

This is integrated into the main application loop of the Control PC and so all requests from the client (web UI) are immediately processed and put onto the CAN bus.

V.   Authorized Access

Ethernet-based internet-subnet is only accessible by authorized users.

STATUS   Implemented, functioning as per the requirements

COMMENTS   User must create an account and login using those credentials to view the member.php page, where the client UI resides.

Attempts to view this page without proper credentials are barred; a notice is provided to the user to login.

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