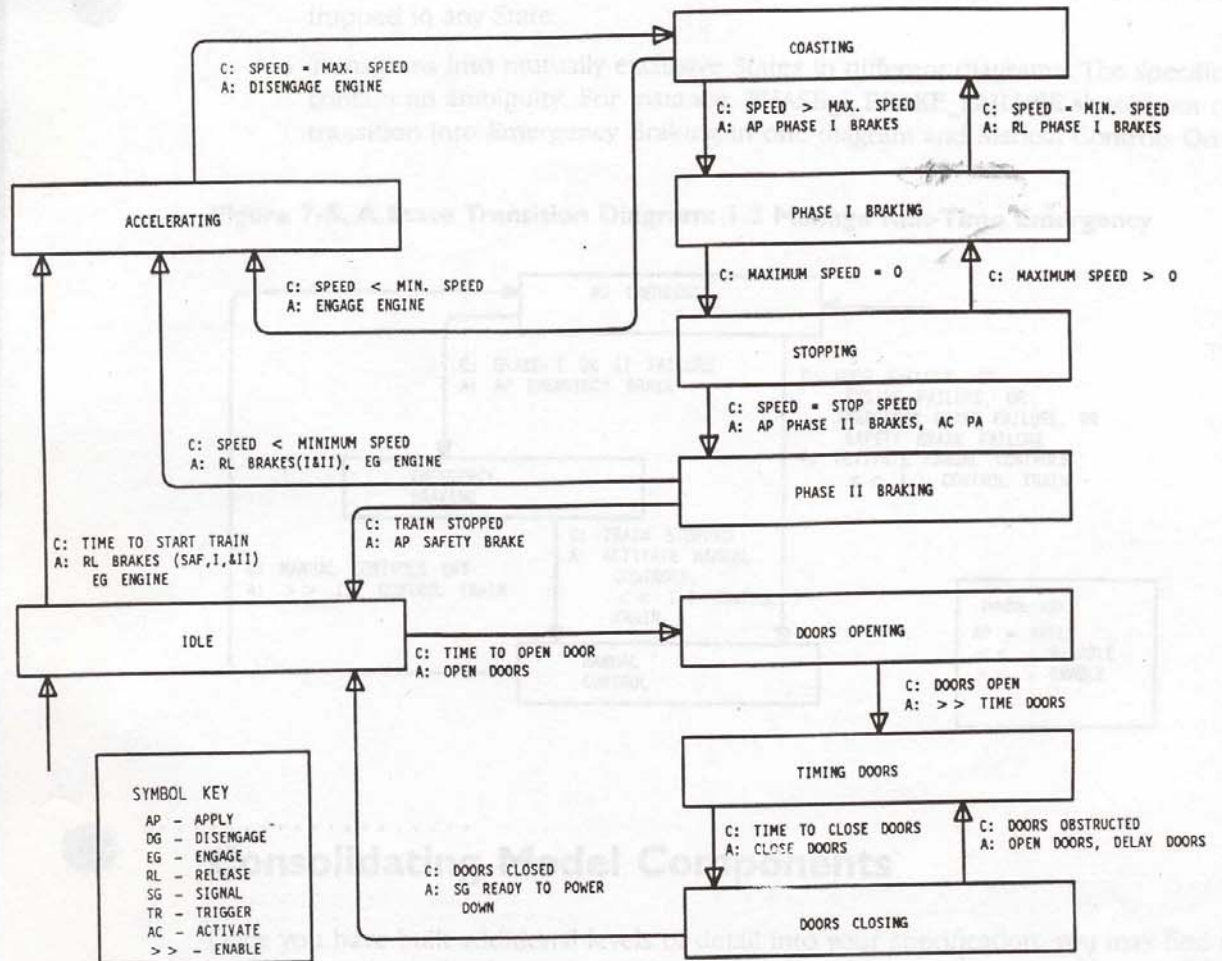


CpE 684 Project

The final project will consist of applying the process of Pattern-Oriented Analysis and Design (POAD) discussed in class on the AGV control system requirements used in Assignment 1. Each group will turn in a report for the project. The report should consist of a section for the analysis phase that contains the refined analysis diagrams based on assignment 1, a section for the design phase that develops and describes a pattern-level diagram, and a section on the design refinement phase that develops a refined class diagram. In the design refinement section also show design sequence or collaboration diagrams for the scenarios described in the analysis phase.

Figure 7-6. A State Transition Diagram: I.I Control Train



The high-level State Transition Diagram shown in Figure 7-5 shows the system starting in the Idle state. After the system has checked out and turned on all the hardware units, it enters the Train Running (Automatic) state. The system State changes to Train Running (Automatic).

At this point, the State Transition Diagram in Figure 7-6 becomes applicable. The train starts up, accelerates, cruises, brakes, stops, and then opens and closes the doors. When the doors close, the State returns to Idle. With that transition, the system sends the Signal TRAIN_READY_TO_POWER_DOWN.

Once the system is in the Train Running (Automatic) state, it performs three Data Processes: Run, Monitor Timing and Schedule, and Maintain Heating and Ventilation. The system State changes to Train Running (Automatic).

The train starts up, accelerates, cruises, brakes, stops, and then opens and closes the doors at the appropriate times. When the doors close, the system sends the Signal TRAIN_READY_TO_POWER_DOWN.