Door Error Timing Diagram

Notes for this diagram:
A first event is scheduled containing a motor error.

IN OUR SYSTEM, DOOR ERRORS ARE ONLY TRIGGERED WHEN THE ELEVATOR IS TRYING
TO CLOSE ITS DOORS.

This diagram assumes that the elevator is NOT on the pickup floor at the beginning.
If it was on the pickup floor, the LOADING state would be transitioned to (between DOORS_OPEN
and DOORS_CLOSED at the beginning).

Elevator Error Flags

- Motor Error Flag
- Door Error Flag
- No Error Flags

Elevator who received the Door Error will holds a Door Error Flag.

...

Elevator Subsystem

- MOVING_UP/ MOVING_DOWN
- DOOR_ERROR
- DOORS_CLOSED
- LOADING
- DOORS_OPEN

Event Received
This diagram assumes the elevator
is NOT on pickup floor.
Elevator was attempting door close, and door error flag triggered.

Door Error Resolved
(The time has been waited).

Elevator continues to handle all events scheduled to it (see Normal Function).

4 seconds
(Door Error Down Time)

2 seconds
(Door Closing Time)

see handleDoorsClosing() function in code.

Door stay open and wait for events

...

Scheduler Subsystem

- Handling/Scheduling
- Receiving

Schedule first event
(contains door error).

Schedule second event, the elevator with door error is still capable of receiving events.

Delay between events
(timestamp)

...

Floor Subsystem

- Sending
- Receiving

Sending an event that contains door error.

Sending an event to scheduler.

Delay between events
(timestamp)

...