

ERROR PROCESSING EXPLANATION

For errors to enter the system they will come from the FloorSubsystem. Errors will be associated with regular requests with the only difference being a different number for the request type. 0 indicates a regular request, 1 indicates a temporary error request, and 2 indicates a permanent error request. These requests will be sent from FloorSubsystem->Scheduler as if they are regular requests

Once a floor request is received by the scheduler, it will first check if any of the elevators are available to schedule a request. If all elevators are out of service due to temporary or permanent errors then the incoming request(s) will be discarded.

Regardless of the request type, the Scheduler will pass the request to ElevatorSpecificSchedulerManager to find a ElevatorSpecificScheduler to handle the request.

If ElevatorSpecificScheduler receives a permanent error request, then it will be permanently left in the PERMANENT_OUT_OF_SERVICE state.

If ElevatorSpecificScheduler receives a temporary error request, it will enter the TEMPORARY_OUT_OF_SERVICE_STATE and then instantiate and start a TemporaryErrorSelfRevive thread who will wait for a specified period of time before calling the reviveFromTempError() method on ElevatorSpecificScheduler. This will return the ElevatorSpecificScheduler into it's previous state before the temporary error request and the scheduler will proceed as normal upon the next floor request or elevator status change to generate elevator specific next floor to visit.