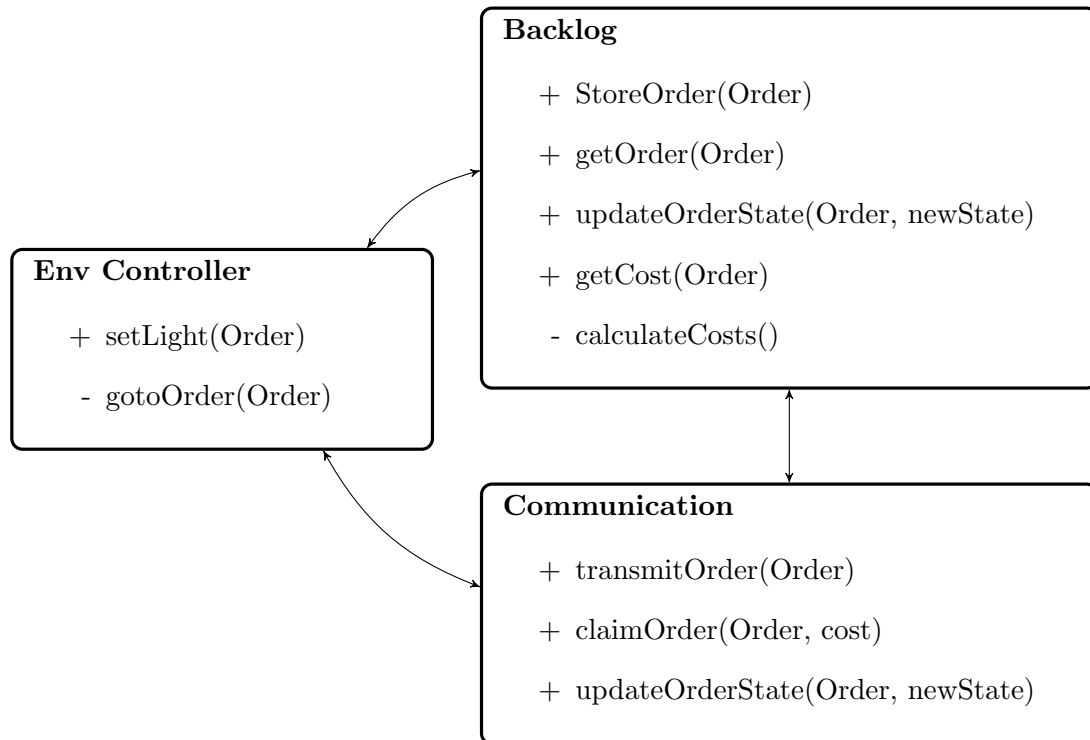


Beastly Heis v1.0

Kolbjørn Austreng, Andreas Våge

January 26, 2017



Oder object

Order	Comment
+ type	Internal / External
+ floor	Destination floor
+ timestamp	Set by computer that first received order
+ origin IP	Set by computer that first received order
+ state	Queued, In progress, Timed out, Complete

Environment Controller

+ setLight(Order)

Sets the light corresponding to the floor of an Order object.

- gotoOrder(Order)

Moves the elevator from its current position to the floor of an Order object.

Backlog

+ **storeOrder(Order)** ok

Saves an order from either *Environment Controller* or *Communications* to the backlog. Returns acknowledgement.

+ **getOrder(Order)** ok

Returns to the *Environment Controller* the next most feasible order. Returns acknowledgement if such an order exists, no-acknowledgement if there are no orders.

updateOrderState(Order, newState) ok

Changes the state of an Order object. Returns acknowledgement.

+ **getCost(Order)** cost

Returns the cost of taking a specific order for this elevator.

- **calculateCosts()**

Calculates the costs of all the orders in the backlog for this elevator.

Communication

+ **transmitOrder(Order)** ok

Transmits an Order object to all the other nodes in the network. Acknowledges if at least one other elevator received the order transmit.

+ **claimOrder(Order, cost)** ok

Attempts to claim an order in the backlog. Transmits own cost of taking on this order. Acknowledges if no other elevators have a lower cost on specified order.

+ **updateOrderState(Order, newState)** ok

Broadcasts an order state update to ensure that the backlogs are identical.