

User Documentation

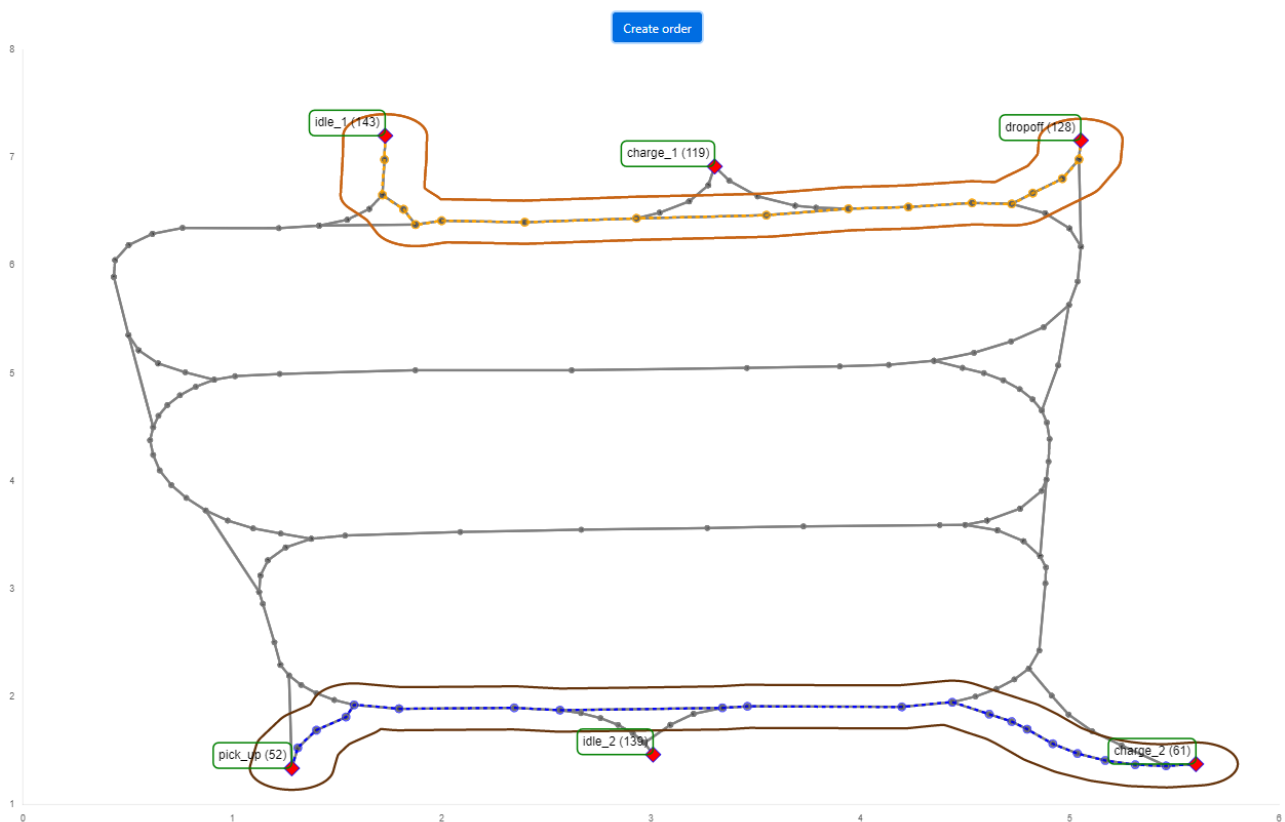
Our User Documentation can be found at <https://github.com/amosproj/amos2022ss03-turtlebot-fleet-management/wiki/User-Documentation>.

The content below was generated from the wiki. [v_2022_07_26]

Fleet Management



Turtlebot Fleet Management - Global UI



The Fleet Management frontend can be accessed by the user in the browser at 127.0.0.1:8080. The map shows the driving course with the available stations like "pick_up" or "dropoff".

Order Creation

To create an order, click on the "Create order" button.

Create order



AGV serial

1

From Station

pick_up (52)

To Station

charge_2 (61)

Cancel

Create order

The user can specify a source (From Station), destination (From Destination) through two drop down menus and enter the AGV number. The order will be generated once the user clicks on the "Create order" button. The path to be driven is highlighted.

Orders Table

Once an order has been created, it is listed in the Orders Table.

1. The ID (Update) consists of two ID's. ID refers to the order id that uniquely identifies an order. Update refers to the update id in the particular order.
2. AGV is the serial number of the assigned AGV.
3. Type refers to Order Type being either "Normal" nor "Relocation".
4. Status can show 4 different messages. When an order has just been created & it's not under execution yet, it will show as "Created". Once the order has started to execute, it will show as

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"Active", "Completed" once it's finished and "Cancelled", if a user stops order by pressing the "Cancel" button.

5. Start -> End shows the path that for the order that was selected during order creation.
6. Route provides information about the Base and Horizon of the order path.
7. Resend button allows a user to resend the order.
8. Cancel button will terminate the current order.

AGVs Table



All the AGVs are listed in the AGVs Table

1. AGV ID is the unique serial number of the AGV.
2. If the worker node is running on Turtlebot, the Connection Status shows "Connected" otherwise it would show "Offline".
3. Battery Status shows the battery percentage dynamically.
4. If the Turtlebot is not powered in and is driving, "Charging Status" will show "Discharging". When it's plugged in, it will show "Charging".
5. Velocity shows the current velocity of Turtlebot.

Orders

ID (Update)	AGV	Type	Status	Start -> End	Route	Resend	Cancel
0 (6)	2	NORMAL	ACTIVE	137 -> 61	Completed: [] Base: [137, 138, 142, 141, 140, 2] Horizon: [3, 43, 53, 54, 55, 56, 57, 58, 59, 60, 61]	Resend	Cancel

AGVs

AGV ID	Driving Status	Connection Status	Battery Status (%)	Charging Status	Velocity (m/s)
1		 Offline			
2	No Status	 Connected	 37%	Discharging	0

Turtlebot

The map of the room created with the Sick Map Engineering Tool (SMET) must be loaded into Sick LiDAR-LOC. Furthermore the initial position of the robot in the room has to be set. For legal reasons, these instructions can be found on the Sick extranet <https://extranet.sick.com/> instead of in this public repository.