European Commission

7th July
Východná, Slovakia

THE STORY OF UAV WHICH WANT TO LIVE

Alojz Gomola, Advanced Technology Europe

Honeywell

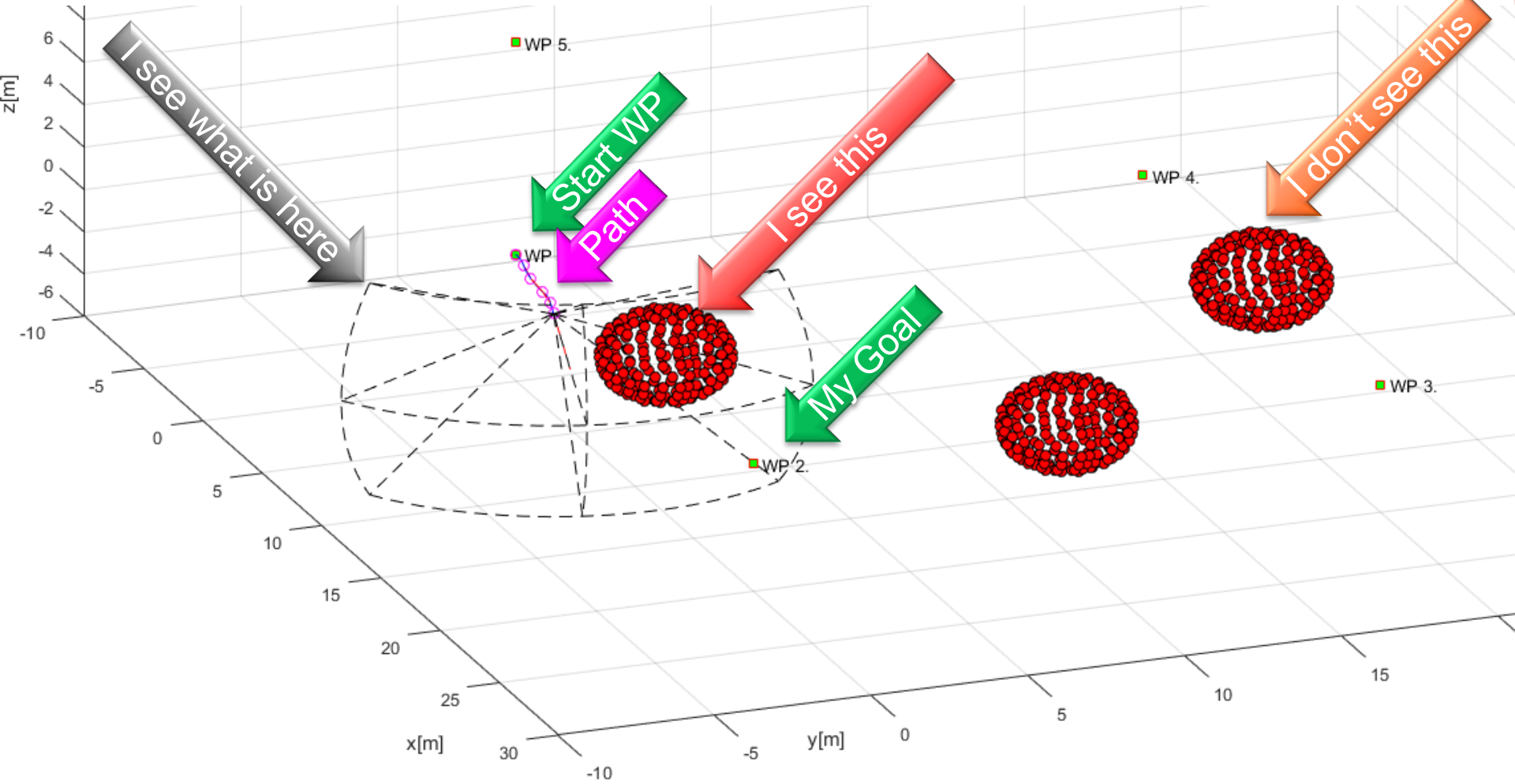
I have a mission and I don't want to crash

- I am vehicle given by some equations $\dot{x} = f(x, u)$
- My input signal is given by movement automaton $\mathcal{MA}$
  - Key component is movement buffer which feeds me with commands
  - The containment of buffer is "Command chain"
- I can see with my sensors in some field of vision $\mathcal{F}_{3D}(10m, 60°, 45°)$
- I can decide my next action after movement execution
  - I like to set some decision time t_i because I do not like calculations
- I did not crash, how is that possible ?
- Listen to a story of a elusive vehicle

MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

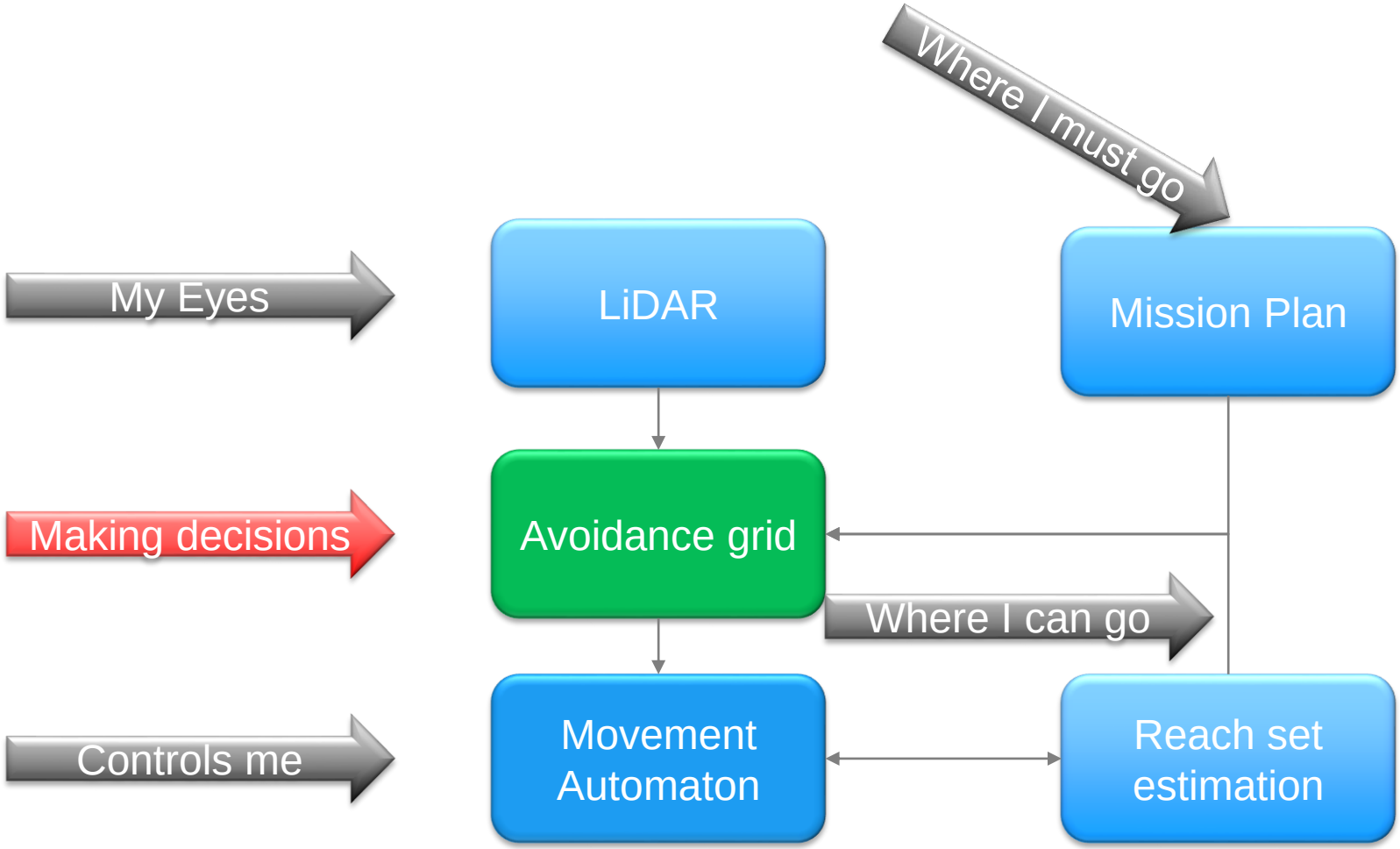
This is my mission



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

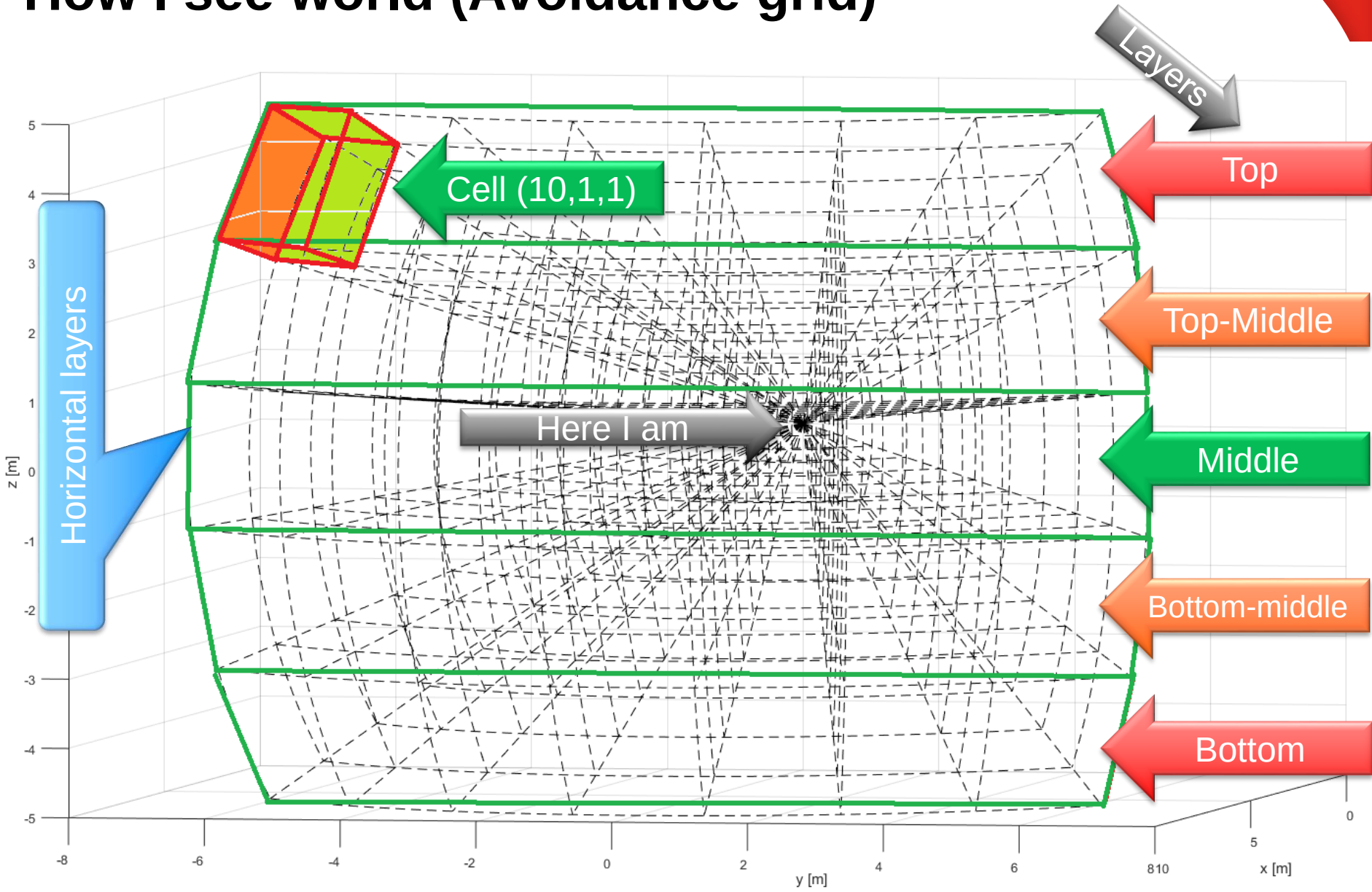
This is my decision logic



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

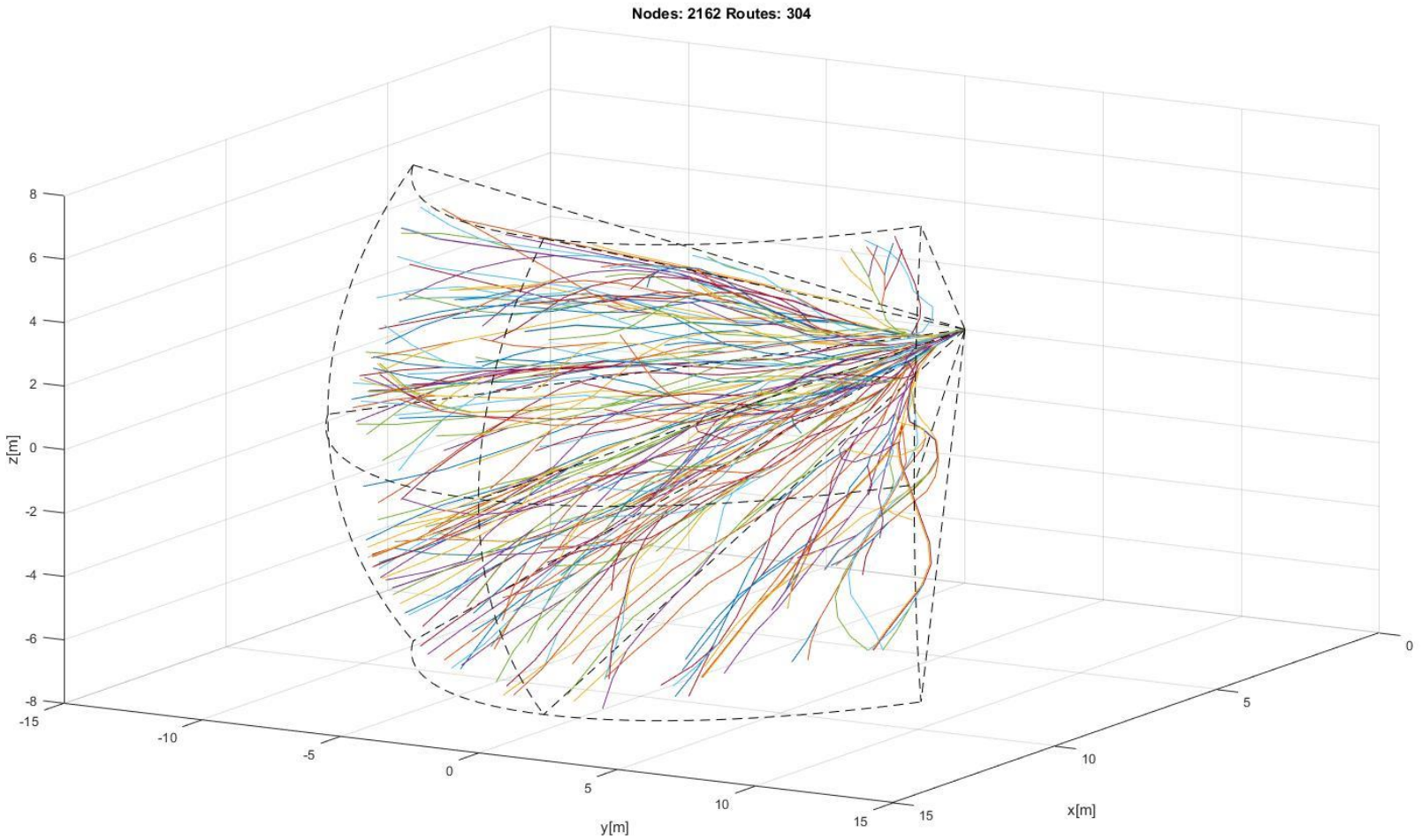
How I see world (Avoidance grid)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

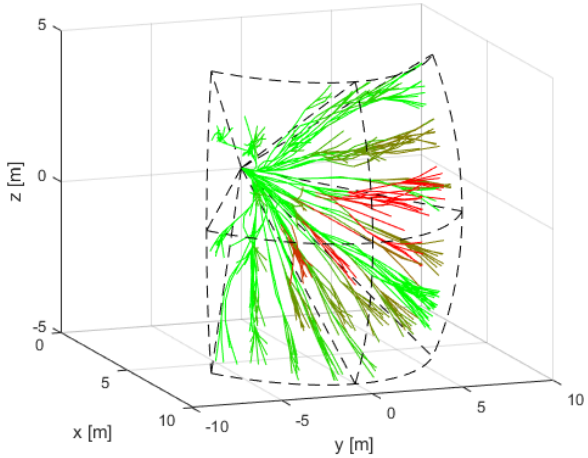
Where I can fly in my FOV (My reach set)

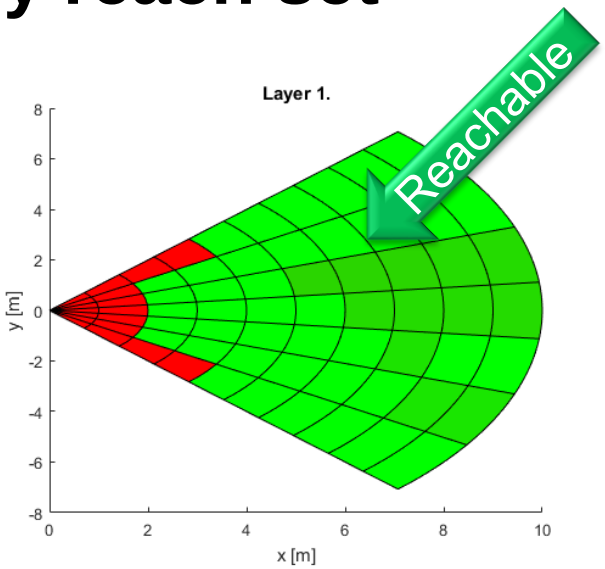


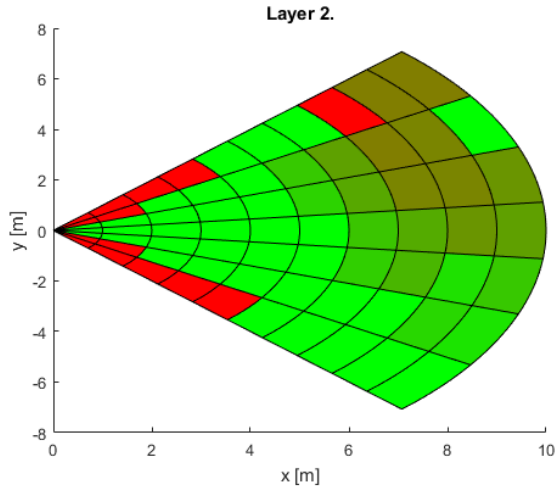
MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

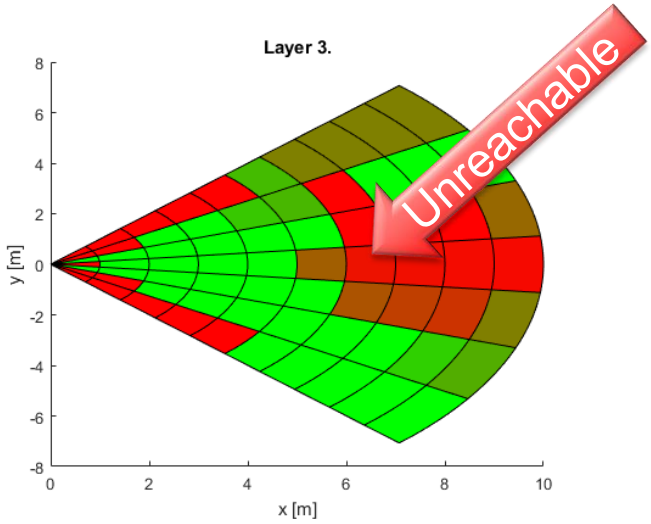
European Commission | Honeywell

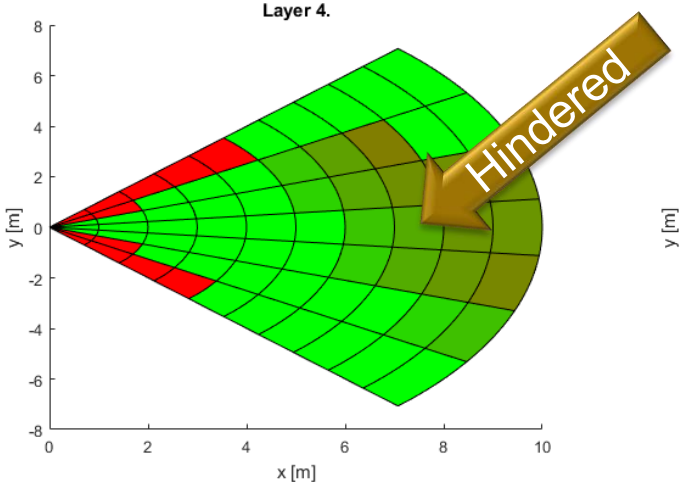
How I change my reach set

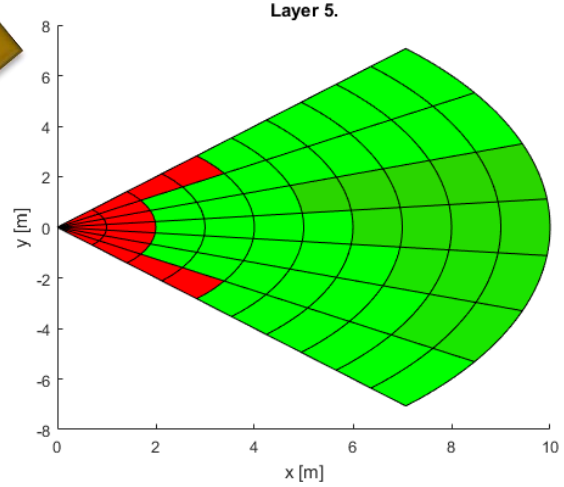








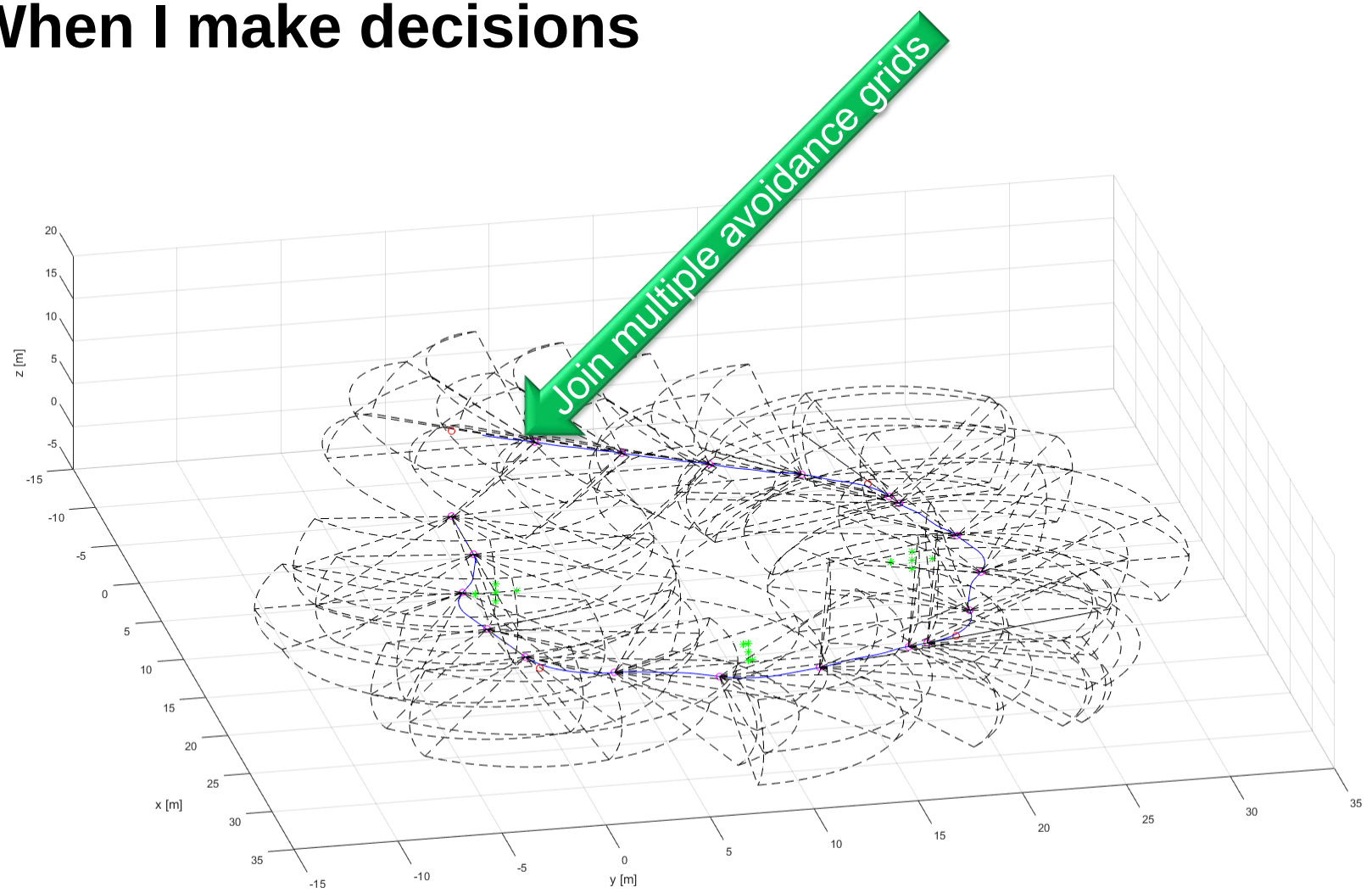




MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

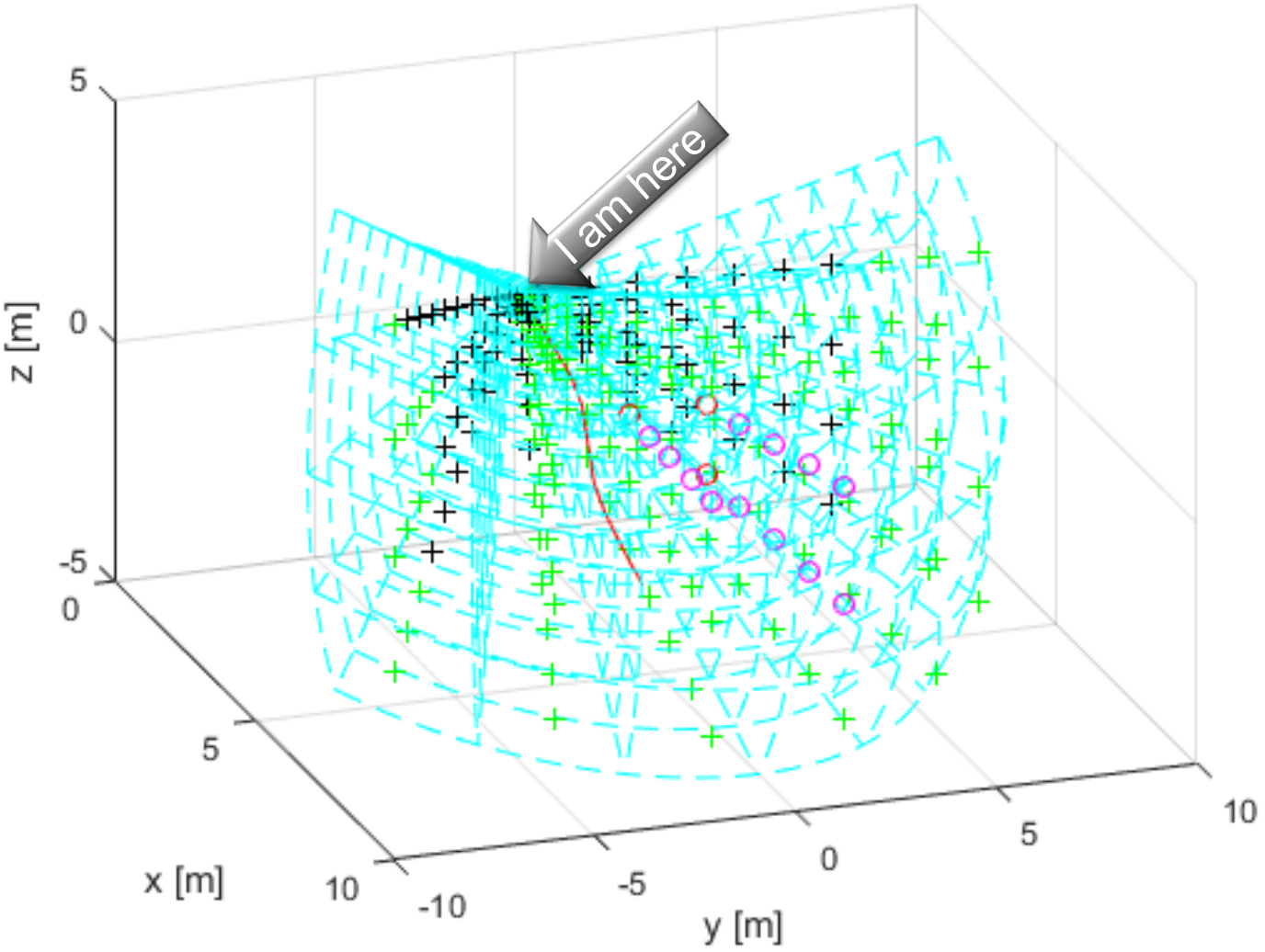
When I make decisions



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

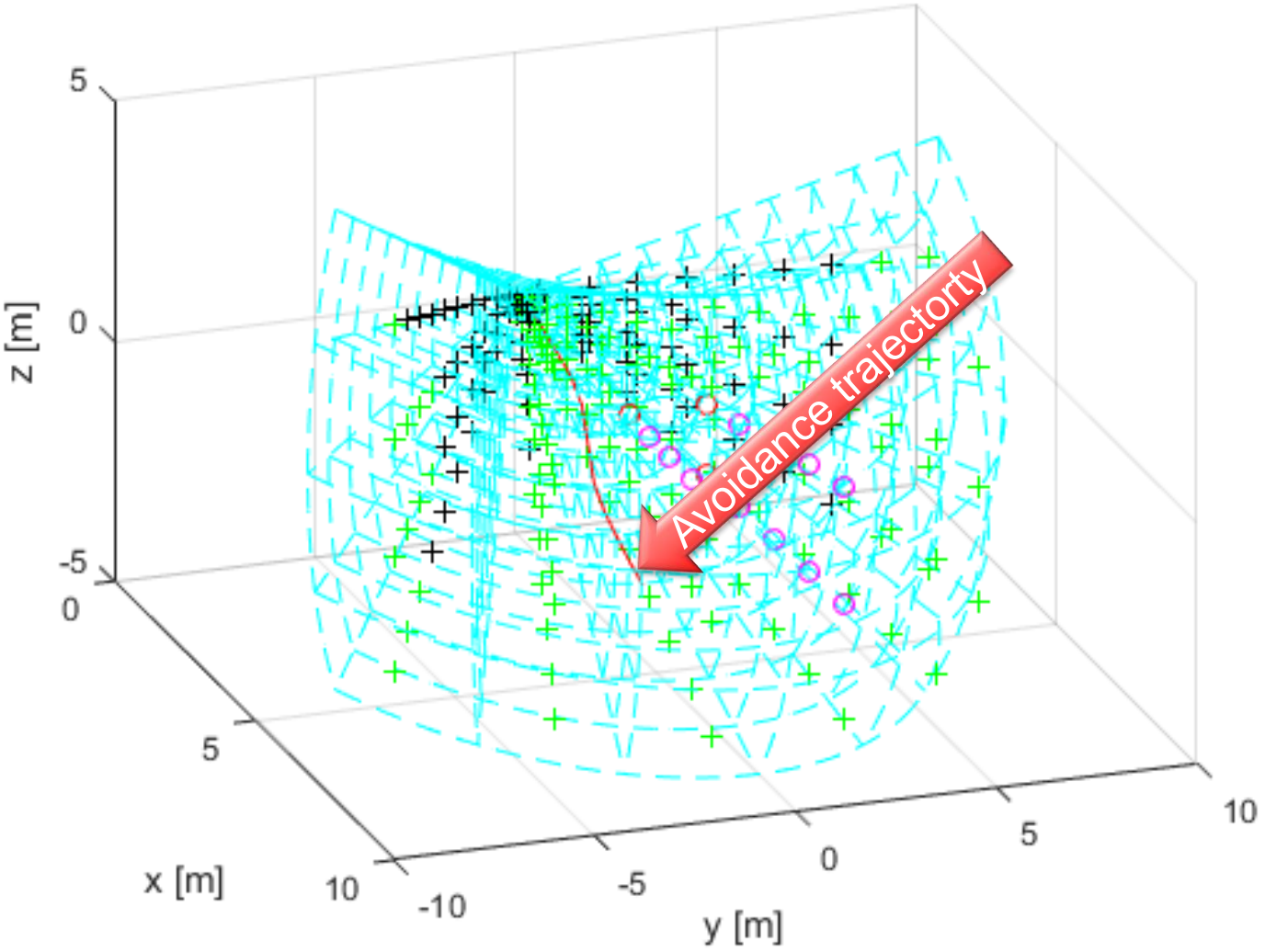
How I represent my world



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

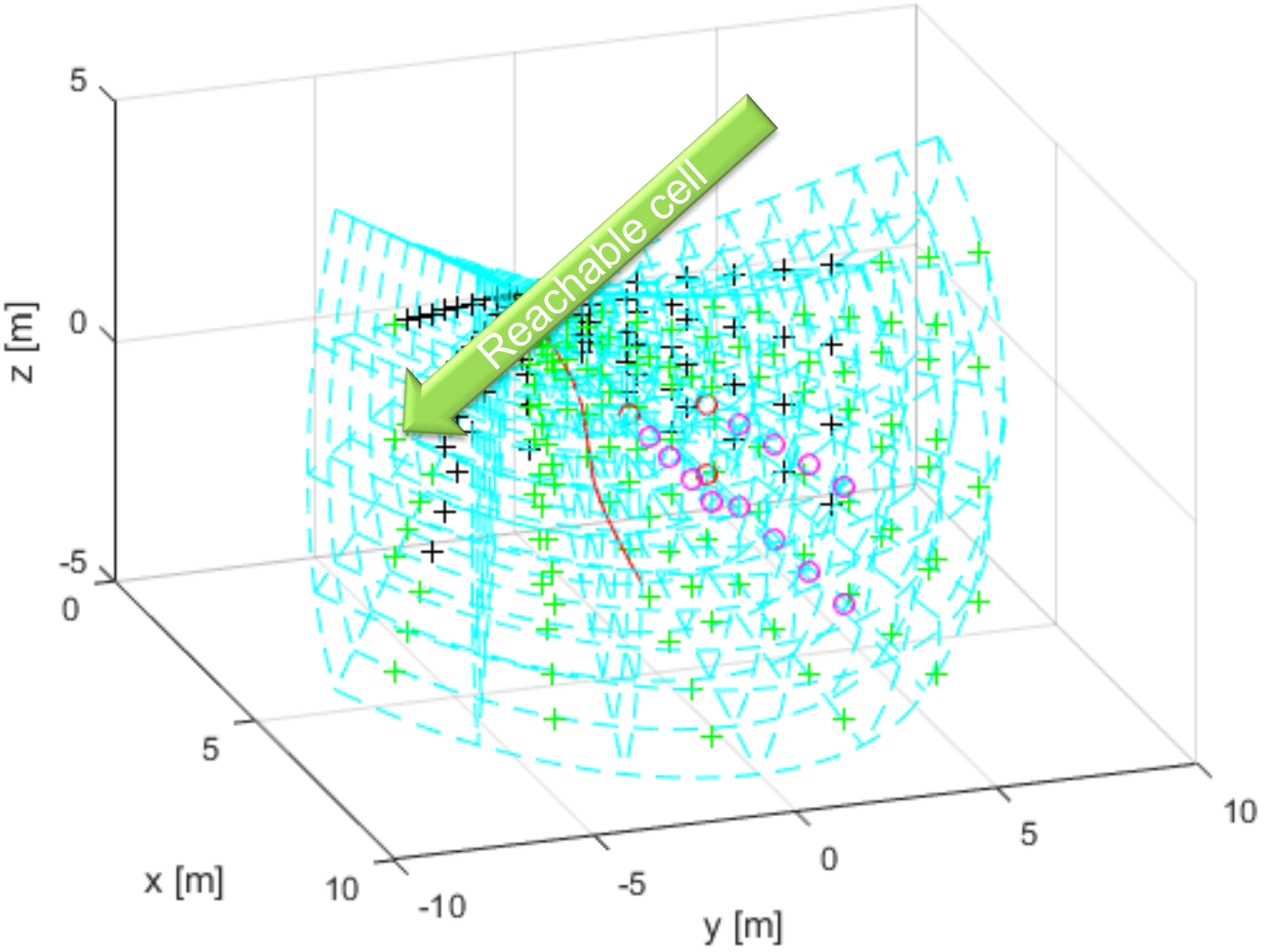
How I represent my world



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

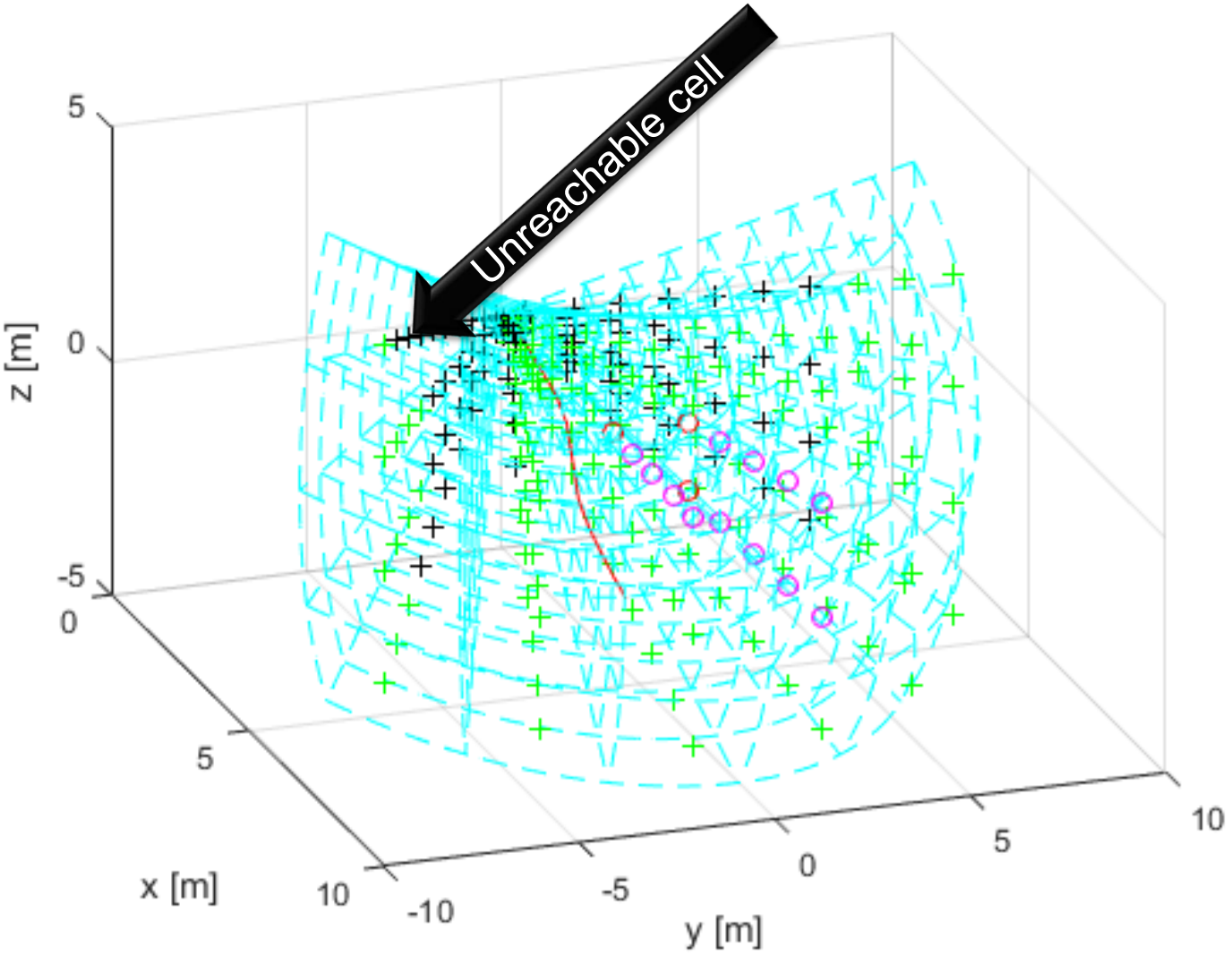
How I represent my world



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

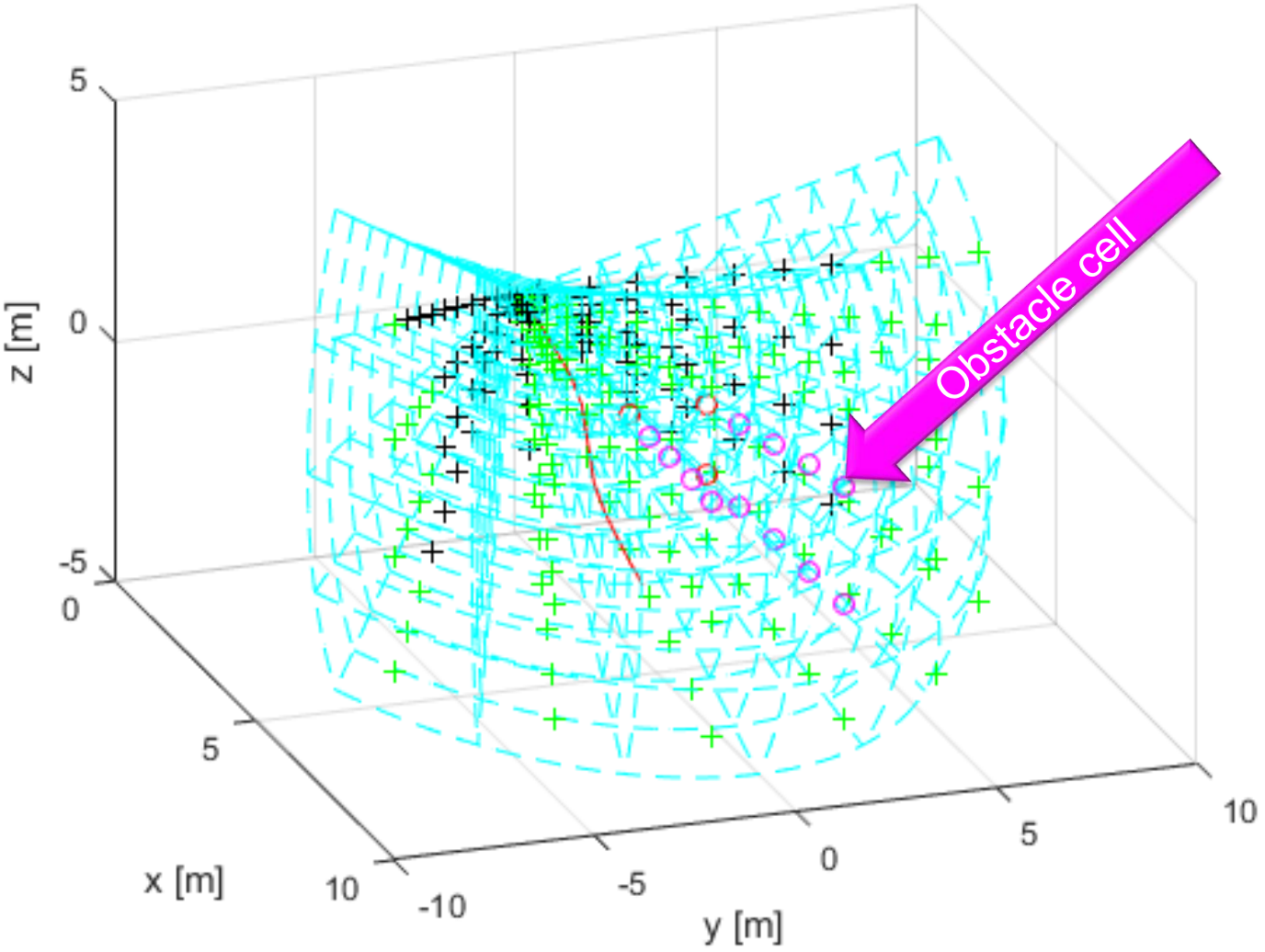
How I represent my world



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

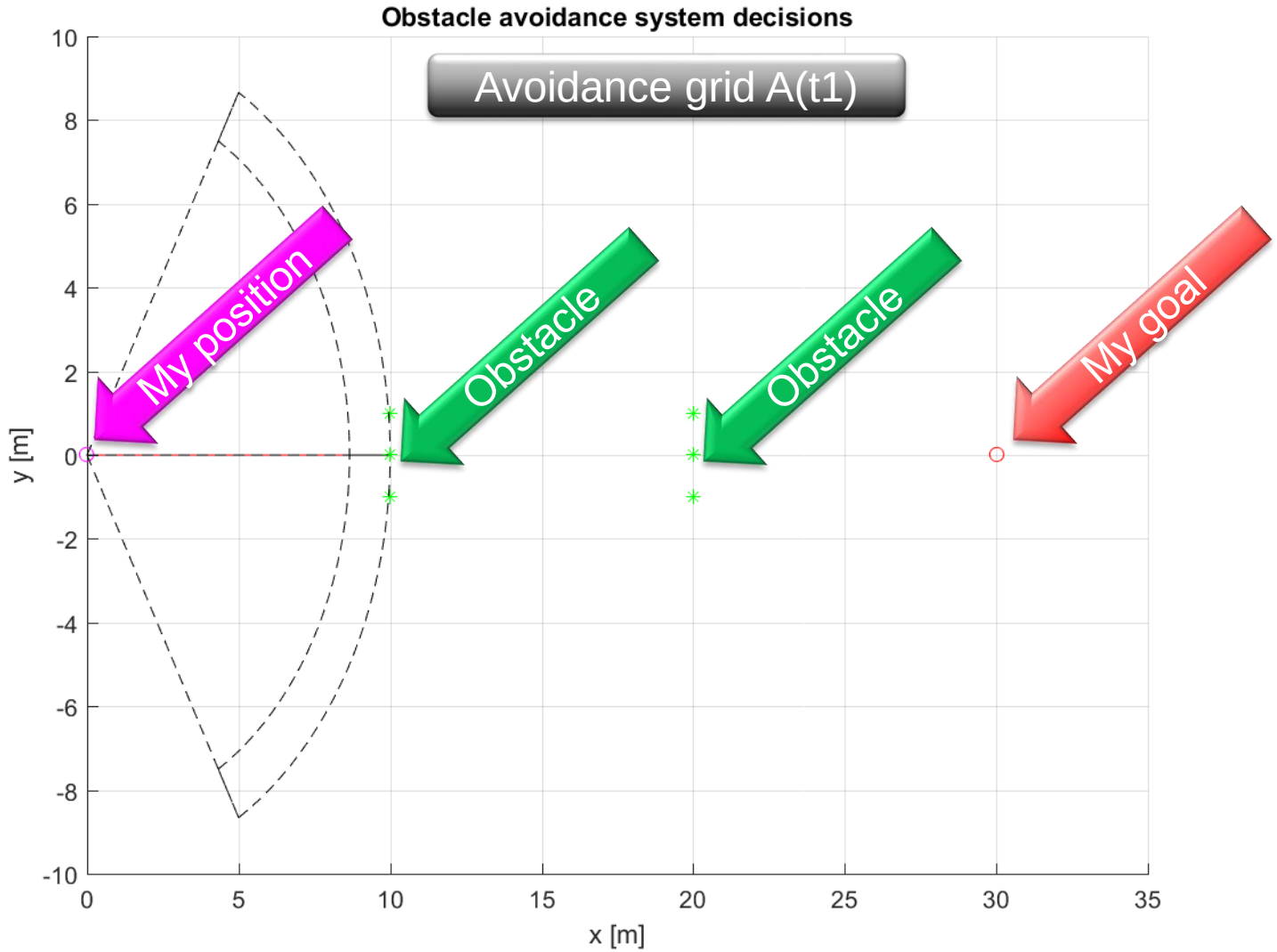
How I represent my world



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

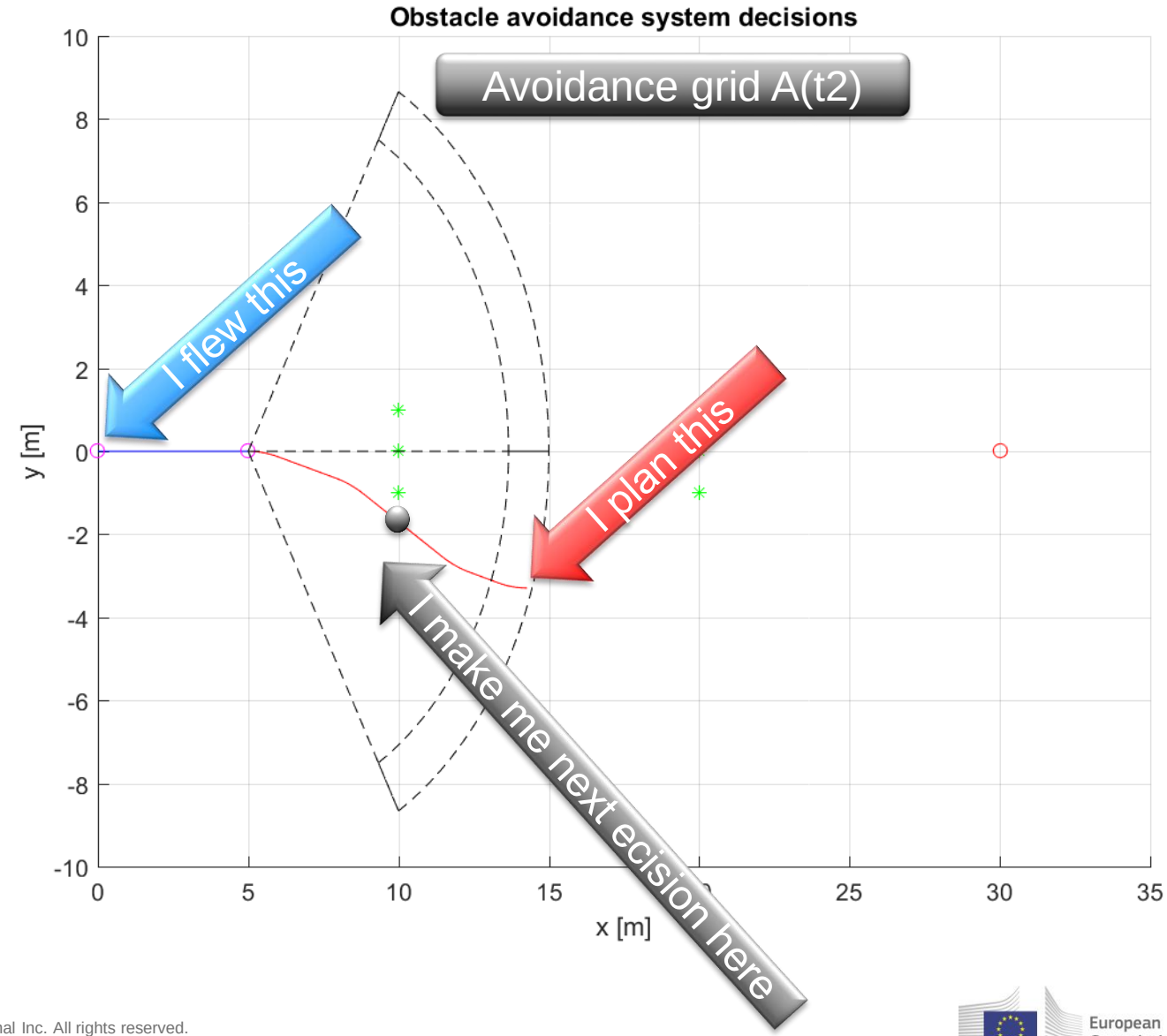
How I join multiple avoidance grids (1)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

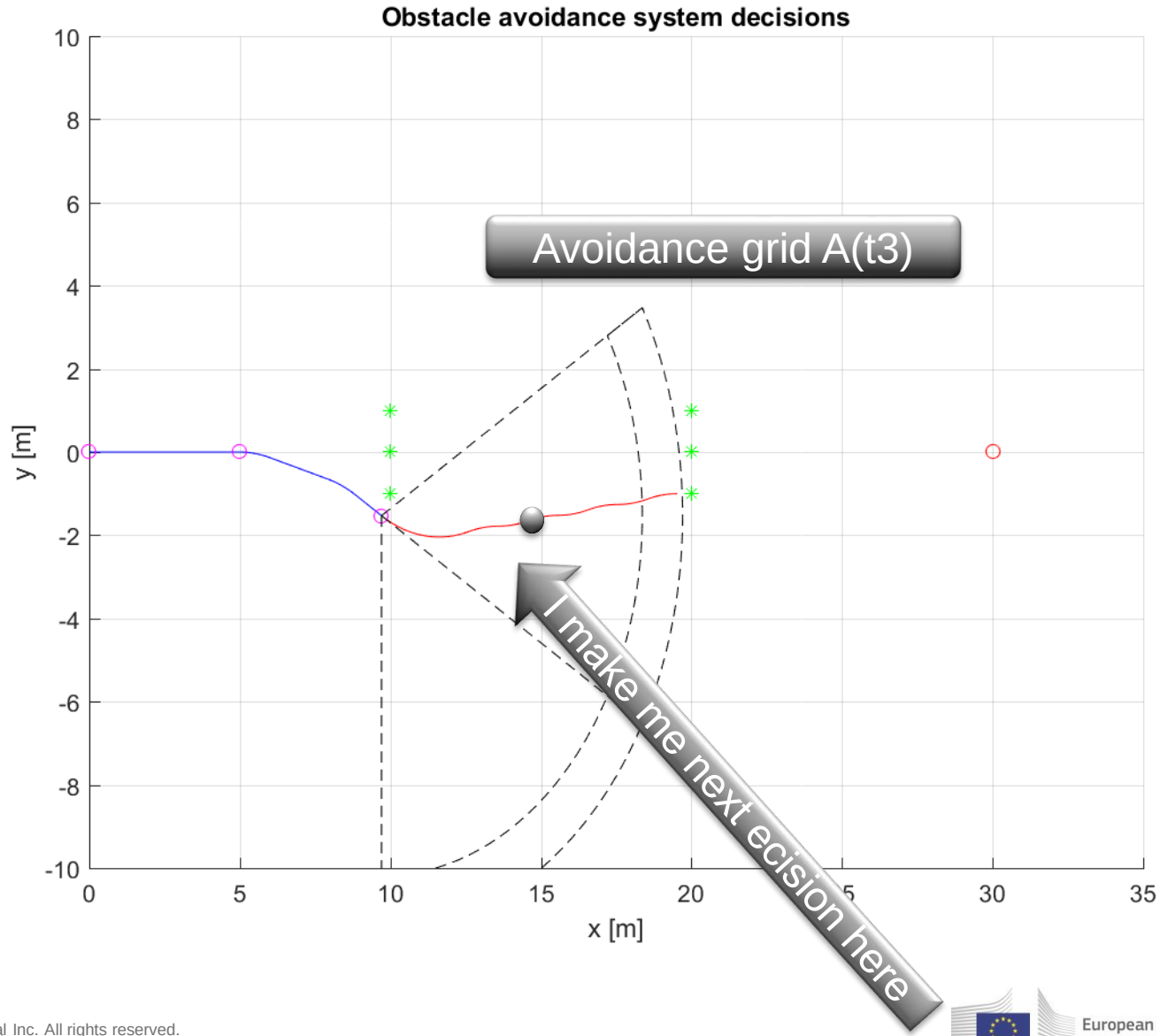
How I join multiple avoidance grids (2)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

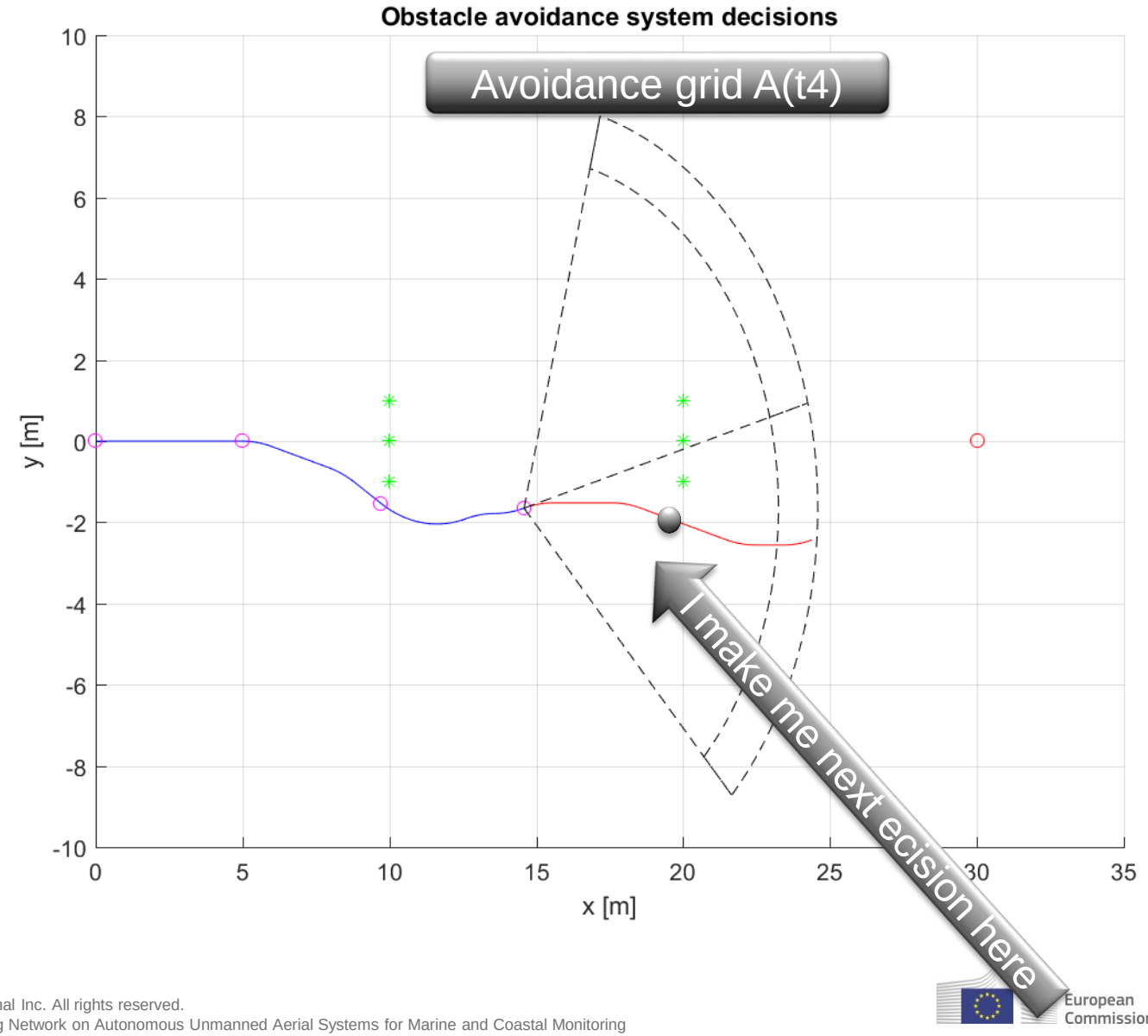
How I join multiple avoidance grids (3)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

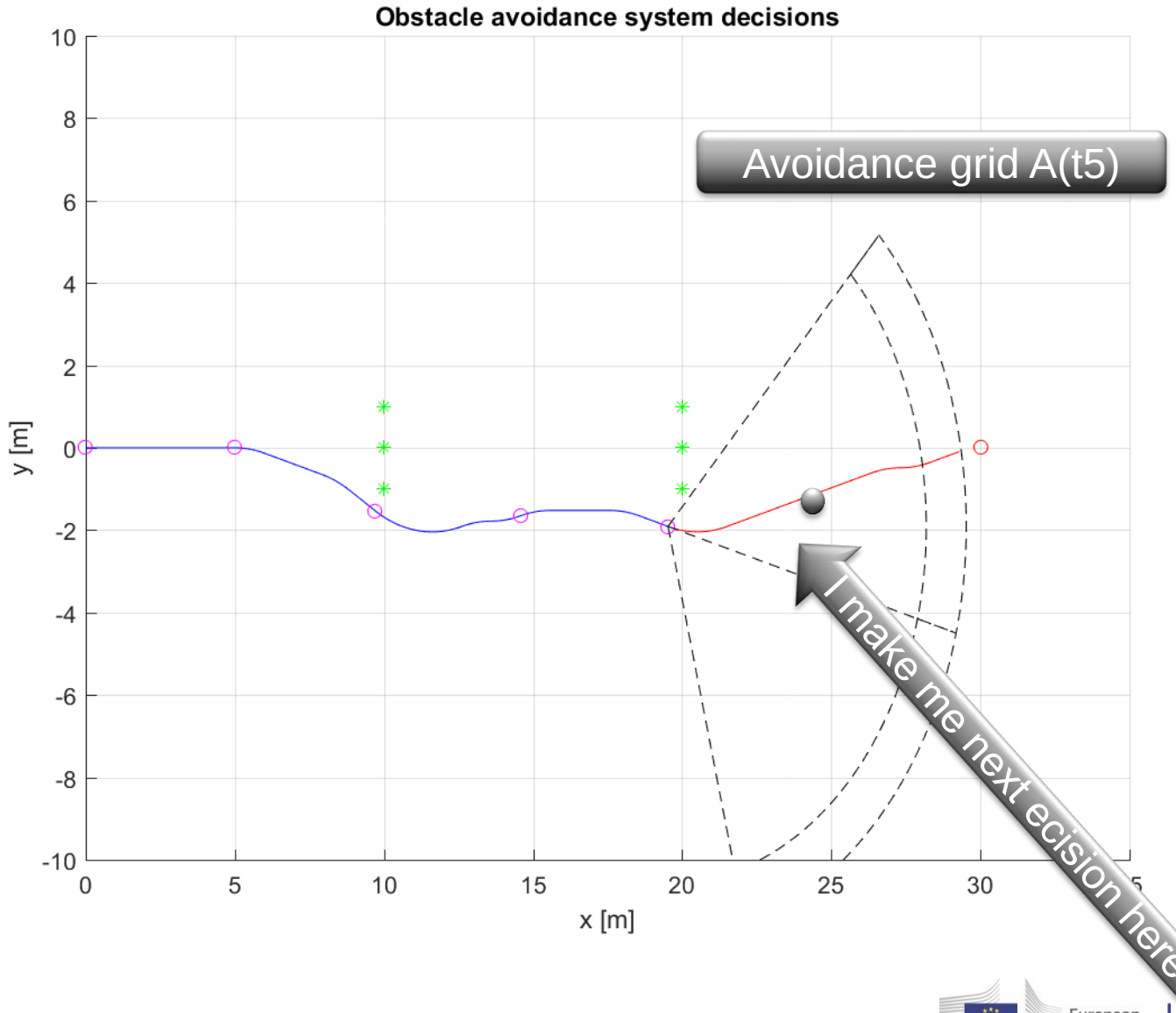
How I join multiple avoidance grids (4)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

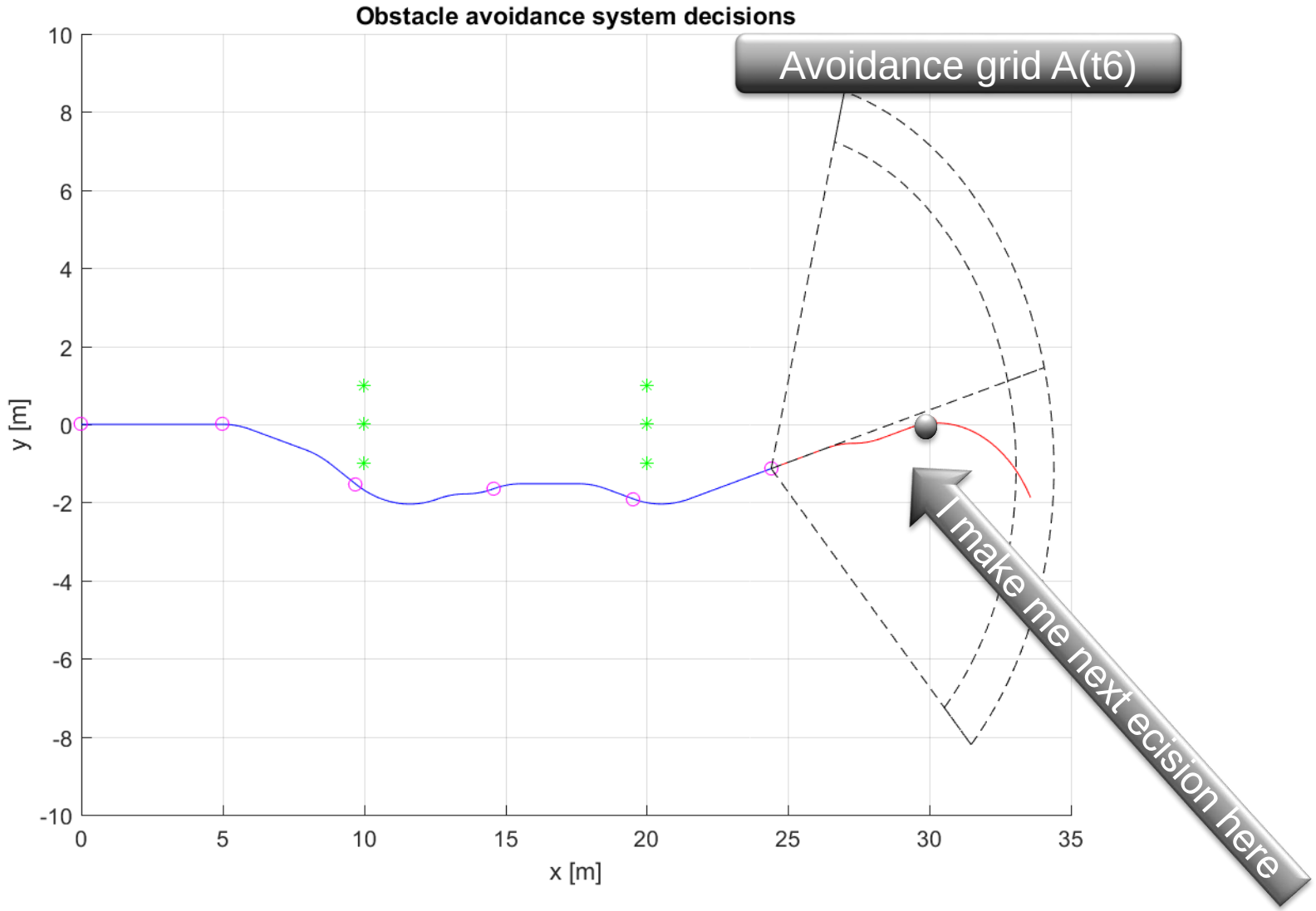
How I join multiple avoidance grids (5)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

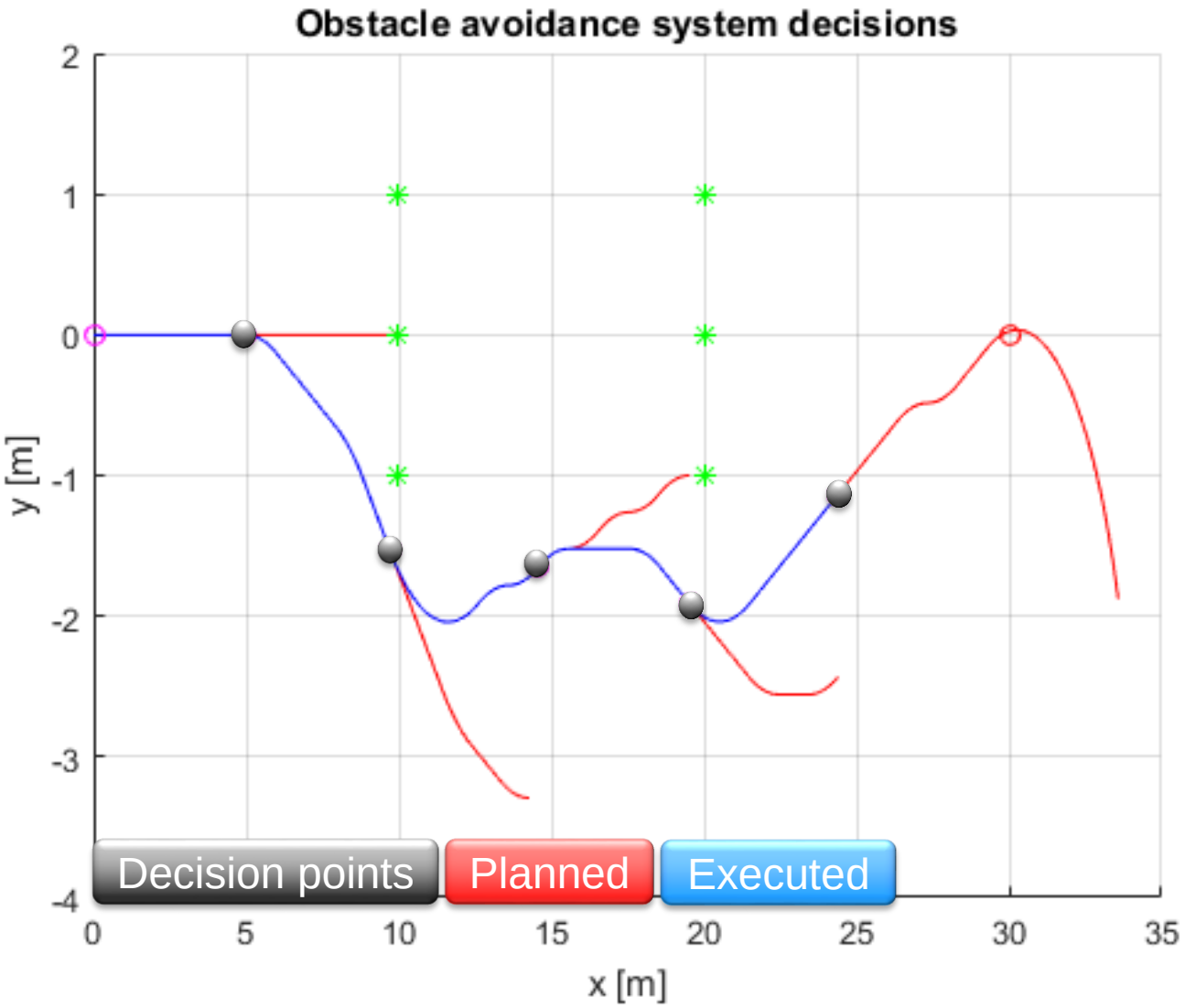
How I join multiple avoidance grids (6)



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell

How I avoided obstacles



MarineUAS - Innovative Training Network on Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring
This project has received funding from European Union`s Horizon 2020 research and innovation programme, under the Marie Sklodowska-Curie grant agreement No 642153

European Commission | Honeywell