Weighted Lazy Theta* with Optmiz.

Origin Position (geometry_msgs::Vector3)

Target Position (geometry_msgs::Vector3)

Input Map (Octomap, PointCloud, ...)

ThetaStar class

Path (vector3<geometry_msgs::Vector3>)

Trajectory (trajectory_msgs::MultiDOFJointTrajectory)

Debug topics (visualization_msgs::Marker)

Configuration (parameters from launch)

- WorkSpace [m]: [Xmax, Ymax, Zmax, Xmin, Ymin]. Centered at (0,0,0)
- Map Resolution [m]: Occupancy matrix step
- Inflations [m]: MAV Real size and Safe distances to the obstacles
- TimeOut [sec]: Max time to get a valid solution
- Initial point factor []: Factor to decrease the weight to the distance from the origin, giving more importance to explore towards the goal
- Altitude weight []: Weight to increase the cost of altitude changes
- Min inflated altitude [m]: Minimum altitude to inflate vertically (spurious at floor)
- Result trajectory parameters [m, m/s, rad/s]:

(Dxy, Dz)_{max} [m]: Max distance between waypoints (Dxy, Dz)_{tol} [m]: Tolerance to the waypoints distance

(Vxy, Vz)avrg [m/s]: Mean velocity

(Vxy, Vz)avrg_if [m/s]: Initial and final wps mean velocity

(Wyaw)avrg [rad/s]: Angular velocity

(Dyaw)tol [m]: Min distance between wps to set yaw Ahead