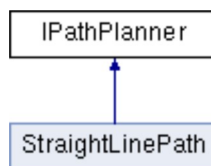# IPathPlanner Class Reference `abstract`

Inheritance diagram for IPathPlanner:

Public Member Functions

virtual std::vector< Eigen::Matrix4d >	**computePath** (const Eigen::Matrix4d &aStart, const Eigen::Matrix4d &aEnd, const double &aIncrement)=0 Method to Compute the 3 Dimensional path from start point to end point by desired increments (or less). More...

Protected Member Functions

virtual Eigen::Vector3d	**determineDirection** (const **Coordinate** &aStart, const **Coordinate** &aEnd, const double &aIncrement)=0 Method to Determine the direction the next point should be in. More...

Member Function Documentation

◆ computePath()

virtual std::vector<Eigen::Matrix4d>
IPathPlanner::computePath   (const Eigen::Matrix4d &   aStart,

                    const Eigen::Matrix4d &   aEnd,

                    const double &   aIncrement

)   `pure virtual`

Method to Compute the 3 Dimensional path from start point to end point by desired increments (or less).

Parameters

aStart	**Coordinate** of the Starting Point.
aEnd	**Coordinate** of the Ending Point.
aIncrement	double. The max distance between path points.

Returns

std::vector<Coordinate> The points corresponding to the path from start to end.

Implemented in **StraightLinePath**.

◆ determineDirection()

virtual Eigen::Vector3d IPathPlanner::determineDirection (const **Coordinate** &   aStart,

                    const **Coordinate** &   aEnd,

                    const double &   aIncrement

)   `protected` `pure virtual`

Method to Determine the direction the next point should be in.

Parameters

aStart	**Coordinate** of the Starting Point.
aEnd	**Coordinate** of the Ending Point.
aIncrement	double. The max distance between path points.

Returns

Coordinate The unit vector representing the direction of the next point along the path.

Implemented in **StraightLinePath**.

The documentation for this class was generated from the following file:

- C:/Users/ethan/Desktop/Doxygen Environment/ENPM808X_Midterm-master/include/**IPathPlanner.hpp**

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