Forth as a Micromouse Tool



quam difficile esse potest?

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Events and Classes



Micromouse Performance

Peak accelerations of the order of 10g for the latest mice Top speed of the order of 5 metres per second Overall weight less than 100 grams Battery endurance greater than 10 minutes Half size Maze Solvers need to have clearance in an 84mm gap

The Nature of the Problem

Mechanics

Electronics

Optics

Software

Mechanics

Small Low polar moment of inertia How many wheels?

Electronics

Motor drivers Sensor drivers

Optics

Spot size Field of view Multiplexing Ambient light

Software

Hard real time

Fast

Key features of Forth

Fast

Interactive

Consistent

Small

Good multitasker

Software concepts

Fixed point Mouse units Execution vectors Control algorithms Solving algorithm

Solving

Maze information Only hold it once : NORTHWALL? (n e --- f) GONORTH SOUTHWALL? ; Speed/ space tradeoff

Database

Flags for Southwall, Westwall, Visited, Solved and Found Redirection between Real Maze and Virtual Maze Mazes can be downloaded to test the algorithm

Editor

Done

If you have been, Thanks for listening.

Questions?