The Rewards of Sensory-based Robotic Path-Planning

Jason Lee, Edwin Olson, Ryan Morton, Robert Goeddel, and Mihai Bulic
Department of Computer Science and Engineering, University of Michigan, Ann Arbor, MI

In a previous project, we had constructed a robotics system that relied on GPS, which led to a significant degree of inaccuracy. To address these issues, we have enhanced our system by utilizing computer vision and a scanning laser. Our path-planning program provides waypoints where robots can take panoramas and the collection of images provides for complete visual coverage of the area.

A limitation that we have is that we can capture a limited number of images given our ability to manufacture robots and the time we have. Scanner compensates for this by performing a cost-and-benefit analysis, taking into account terrain, obstacles, and other objects of interest. Our research will advance autonomy and boost efficiency through cost containment and will further the field of artificial intelligence.

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Presenter's Name: Jason Lee
E-mail Address: blujay@umich.edu

Telephone numbers where you can be reached:
day: (248) 224-9191
evening: (248) 224-9191

Mentor's name and Department: Edwin Olson, Department of Computer Science

Faculty Sponsor Campus Address and Zip: 3737 CSE, 2260 Hayward St., Ann Arbor, MI 48109

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