Docket #: S02-125

Target Tracking System

This patented method enables a mobile observer robot to track an unpredictable moving target in an unknown indoor environment cluttered by obstacles. The algorithm computes a motion strategy based exclusively on current sensor information in real time – no global map or historical sensor data is required. This technology can be applied to a variety of fields, including military, surgical, commercial and consumer robotics, and computer animation.

Applications

- **Robotics:**
  - **Military** - missile control and visual tracking when there are obstacles that occclude the view
  - **Surveillance cameras**
  - **Consumer and household robotics**
  - **Graphic animation of digital actors** - to select successive viewpoints for displaying in a virtual environment
  - **Surgery** - controllable cameras to keep a patient's tissue under observation despite obstructions from people and instruments

Advantages

- **Avoids visual obstructions** - quickly adjust its trajectory to that of the target
- **Computationally efficient**

Publications

- "Real-Time Combinatorial Tracking of a Target Moving Unpredictably Among Obstacles." H.H. Gonzalez-Banos, C.Y. Lee, and J.C. Latombe. IEEE Int. Conf. on

Robotics and Automation, Washington D.C., May 2002.

Innovators

- Jean-Claude Latombe
- Cheng-Yu Lee
- Hector Gonzalez-Banos

Licensing Contact

Scott Elrod

Associate Director

Email