



Reactive Robotic Gripper

Robotics

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Description of the Technology:

The Reactive Robotic Gripper is a standard gripper with several light beam sensors. The gripper's design is based on reactive algorithms that determine the actions of the actuators directly from sensors' information. The sensors consist of two infrared emitting diodes and two infrared detectors per jaw. The gripper probes the object to locate a good grasp position, without moving the object significantly. The goal is to do as little motion as possible to find a good grasp.

Features and Benefits:

The main advantages:

- Performance
- Nondisturbance - The gripper does not damage the manipulated objects
- Flexibility - The gripper can handle a wide range of part shapes
- Small size

Applications:

The Reactive Robotic Gripper will find ready applications in such diverse areas as manufacturing, space-applications (grasping a satellite and reorienting), telerobotics, hazardous and toxic material handling, medical applications (in surgery to hold and keep body parts relatively immobile) as well as a part of a prosthetic arm. Additionally, because of its relative low-cost, we also expect it to find usage in household appliances like VCR's and CD players (moving tapes and CD's from carousels to the device).

Patent Status:

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