

Kimerling Group at MIT Challenge Introduction Script

How does this toy drone fly without hitting the walls? It's made with a number of tiny sensors that control its movement.

Even an average house has a variety of sensors:

- A thermostat that determines when to activate the heating and cooling systems
- Temperature sensors that tell when the oven has reached its final temperature and when the refrigerator needs to turn on or off
- Humidity sensors that regulate the operation of a dehumidifier and a clothes dryer

Sensors that use infrared radiation are found in a number of devices, for example, a television remote sends infrared signals to a sensor on the TV. Infrared sensors also prevent a garage door from closing when an obstacle is in the way. The automobile in the garage depends on many sensors that measure temperature, pressure, oxygen level, rotation speed and more.

As our world becomes increasingly connected, there is a growing need for sensors of all kinds to help control the Internet of Things. Sensors need to be small to keep the overall device size manageable. Scientists and engineers are now working to develop and build microsensors and even nanosensors to keep the world of the future running smoothly.