

Mary Hood
Doggie's New Playmate

Dogs are constantly looking for their human companions to set everything aside and pay attention solely to them, but who has time to do that as often as their canine friend would wish? This engineering project focuses on building a robot that plays with a dog using minimal human interaction. Using a LEGO Mindstorms, I built and programmed a robot that would maneuver around my house, towing a toy. When the dog pulls on the toy the robot drives a little further, and then dispenses a treat. The only need for human interaction is replacing the dog treat and re-tying the toy. My robot also had my voice programmed into it, encouraging the dog towards the toy, which made her less hesitant towards the robot. Initially, I intended the robot to follow a taped line around my house, but I was forced to modify my robot when the sensor malfunctioned. I encountered several other problems involving the programming of the robot, but thanks to the versatility of the program software I was able to adapt to the circumstances. throughout my project I discovered that the dog was much more interested in the robot when she was in a playful mood, and she was sometimes hesitant to interact with the robot, likely due to the noise it emitted. Tested on two small dogs, both were very receptive to playing with the robot after about thirty minutes of human encouragement and training. I believe this could be successful with any playful dog.