1. Introduction

The most common robot gripper is as in this picture. Two flat often metal sheets pressing down on the tool it try to grab. No information on the shape, texture or features. In this work an attempt to create an sensor that could give robots an way to ’feel’

2. Conductive foam.

What is What is High Density Conductive Polyethylene Black Foam you might wonder. That foam is the foam you use to protect the Integrated circuits from static electricity.

3. How it works

How this works on a high abstraction is do tho three properties of the material. Firstly the material have a given resistance per meter. Secondly the material have empty holes. Third. Because the material is a foam the material could be squeezed thus short circuit the material the resistance is changing.

4. What was done

The approach to measure this is based an grid array of measurement pins inserted in to the bottom of the foam.

That grid of measurement pins in the foam could be abstracted down to a resistor map as shown. In the implementation as shown later the pins in this map will be altering from positive to negative. And by the implemented algorithm a image of the features in the pressed down figure could be shown.