Maestría en Ciencias de la Computación
Camera Calibration using OpenCV

Diego Alonso Javier Quispe , David Choqueluque Román
Universidad Católica San Pablo
{ diego.javier, david.choqueluque}@ucsp.edu.pe
Arequipa,Perú

***Abstract*— The are many applications to machine vision, and is important to know the relation between the image of some object and its physical dimension in the space. The main idea to this work is obtain a good camera calibration procedure using a special grid determinated by circles. We developed the algorithm in c++ using OpenCV.**

Key words: Canny algorithm, OpenCV

I. INTRODUCTION

II. THEORETICAL FRAMEWORK

II-A. Canny algorithm

The canny algorithm was developed in 1986 and their main objective is the edge detection. This algoritm has three criteria, there are:

1. A **detection** criterion express the fact of avoiding the elimination of important edges and not suppying false edges.
2. The **location** criterion establishes that the distance between the real position and the location of the edfe should be minimized.
3. The **answer** criterion that integrates multiple answers to corresponse a unique edge.

III. METHODS

III-A. Canny

We tried the OpenCv function **CannyThreshold** to get the edges and show the result. You could see the detected edges in the **Fig. 1**.

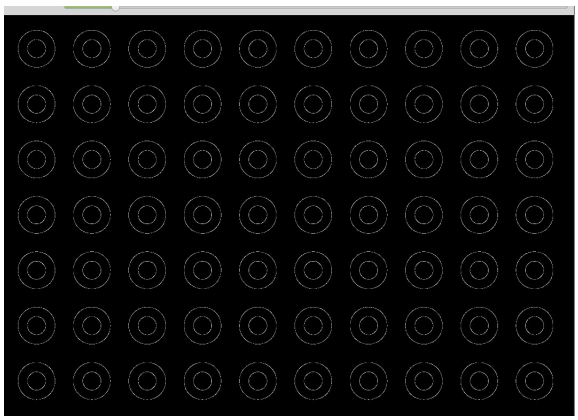

Fig. 1. Canny Algorithm.

III-B. Find Contours

We use the OpenCv function **threshold** and **findContours** to get all the contours. You could see the detected edges in the **Fig. 2**.

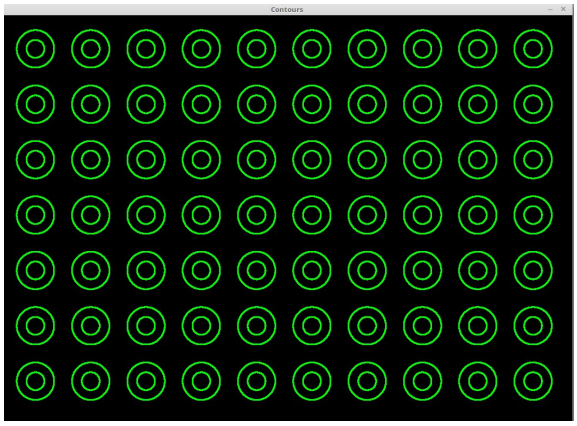

Fig. 2. Find Contour.

REFERENCES