1. Introduction

The systems for estimating the “Where you are looking at” has been extensively required in the various fields i.e. market researches, medical diagnosis, automobile industries.

The commonly-used method called a PCCR (Pupil Center Cornea Reflection) has fatal disadvantages of the possible calibration problems.

Our new invention, which uses a geometric model of the eyeball for the estimation of the point of gaze (PoG) by detecting the pupil contour, solves calibration problems of PCCR method.

2. The outline of our Invention

1. To detect a pupil contour based on the geometric model of the eyeball
2. To determine the three-dimensional position of the eye with a pupil profile
3. The PoG can be determined by using the 3-dimensional orientation of the GRP on eyeball surface.

3. Application Example (Market Researches)

Vending Machines
(customers behavior analysis)

Retail Shops
(purchase behavior analysis)

The valuable/useful marketing information can be obtained by processing the recorded data of PoG’s movements/trajectories.

4. Prospective Applications

1. Medical Diagnosis i.e. for developmental disorder
2. Supporting Systems for automatic operations i.e. machineries, automobiles
3. Entertainment & Amusement i.e. arcade games, simulation games

5. Patent Licensing Available

JST/ IP Management and Licensing Group  Phone: +81-3-5214-8486  E-mail: license@jst.go.jp

http://www.jst.go.jp/tt/EN/