Abstract

We use a mobile phone equipped with embedded camera and a projector, to allow real time hand detection and 3D reconstruction. We present a modern implementation of the classical Pong game projected on a flat surface (like a nearby wall), and a 3D coded light reconstruction system.

Device Description

Samsung Galaxy Beam – is an android based smartphone that has a built in projector and camera. We installed a prism on the projector such that the screen is projected into the camera’s range of view.

Demonstration Space

The Future

To the best of our knowledge this is the first known use of a commodity cellular phone that uses an inbuilt projector to perform real time structured light projections coupled with real time image processing. This combination between state of the art hardware and software will allow a whole new field of applications based on natural user interface that are ultra-portable and inexpensive.