

Marker Tracking for Video Based AR

Summary

In AR System, Virtual Object are added to Real scene to improve person perception. Virtual & real info. must be aligned strictly in combination of scenes.

The key of AR is 3D registration technology which based on tracking Artificial marker. User Linear programming theory, this paper present a tracking in AR

The key issue of AR is tracking & registration

AR system — sensor tracking
(tracking method) — computer vision

Working principle of Marker Based AR

- 1) The live feed ^{video} ~~video~~ of real scene captured
- 2) image processing
- 3) If image found (specific shape), it will be matched

- 4) position and direction of camera can be calculated
- 5) virtual fig is drawn
- 6) final opp consist of virtual fig & image of real world.

Marker used in marker based AR for 3D registration are mostly black & white planar. Typical type of marker used is AR tool kit and ARTag.

This paper present tracing method which can recognise vertex of any polygon in AR system.

Role in project

We are developing a marker based mobile AR application for students to visualize concept of cone box in 3D. This paper show us to tracing & registration / mapping of objects. It also help us to design the marker based AR application. Since it give all steps to build an AR marker based application.