

Dual-pivot pose determination of human head based on head movement

ABSTRACT

The pose determination is very important especially for system such as face tracking, face recognition, face analysis and even face modeling system. Pose determination is a pre-requisite step for establishing face orientation of which will be used in determining the shape and structure of the face. Existing rotation-based pose determination that describes head movement using a single pivot point cannot describe rotation that involves changes in pivot point. In addressing the issue, this paper suggests a pose determination technique via usage of two pivot points. The paper will propose a definition for dual-pivot pose determination, suggest approaches to calculate head movement along these pivots, show a brief application for the dual-pivot and give comment on advantages and disadvantages of dual- pivot points.

Keyword: Pose determination; Dual-pivot; Head movements; Face analysis; Face recognition