

Applying an ontology approach and Kinect SDK to human posture description

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Abstract. Objective human posture estimation is an urgent problem and if resolved it supplies communications between psychiatrists or psychologists with their patients the data complementary to verbal information. A posture, as a part of human nonverbal behavior, holds valuable information tightly related to experiencing emotions. The most compelling reasons of using the nonverbal language instead of the verbal one are the results indicating an international nature of basic mimic representations, postures and gesture sets. Today it is physicians or experts who describe and estimate a human posture. This situation requires the development a computer-aided system of human posture estimation to make their investigations, registrations, quantity evaluations and processing of human posture data more objective. In our research we provide ways of building the posture ontology. We also studied characteristics of the software and hardware complex intended to register the human posture as a part of human nonverbal behavior as well as investigated methods of data post-processing.

Keywords: human motions recognition, human posture, Kinect, ontology approach

Abstract is also available on <http://www.radiotec.ru/catalog.php?cat=jr6&art=11951>