

# Detection and Recognition of Hand Gesture for Wearable Applications in IoMTW

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**Abstract**— To support an efficient media consumption in a wearable device and IoT (Internet of Things) environment, the standardization of IoMTW (Internet of Media-Things and Wearables) is in the progress in MPEG (Moving Picture Experts Group). In this paper, we present a hand gesture detection and recognition algorithm to generate hand gesture-based commands for controlling the media consumption in smart glasses. In the proposed method, we use depth map and color image together to extract more accurate hand contour. We are going to present representation of the detected hand contour based on Bézier curve as metadata to provide an interoperable interface between a detection module and a recognition module. In a recognition module, the detected hand contour is reconstructed by parsing the delivered metadata. In the proposed recognition method, a set of hand gestures featured with diverse combination of open fingers and rotational angles can be recognized with quite stable performance in the proposed method. Finally, the recognized hand gesture is mapped into one of the pre-defined gesture commands.

**Keyword**— Internet of Media-Things and Wearable (IoMTW), Wearable, Smart Glasses, Hand Gesture Recognition



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