

***Abstract: Person Tracking Sensor Based Multi-Channel Audio Panning for Multi-View Broadcasting Services***

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**Abstract**

In this paper, a person tracking sensor based multi-channel audio panning approach is proposed for multi-view broadcasting services. Multi-view broadcasting is realized by rendering the video sequences captured by a set of cameras from different viewpoints. In addition, a multi-channel audio panning technique is required for realistic audio rendering. Moreover, person-tracking techniques for estimating the detailed positions of users are also necessary to provide the users with realistic audio. Therefore, the proposed method is composed of two parts: a person-tracking method, which uses ultrasonic transducers and a receiver, and a multi-channel audio panning method, which is based on MPEG Surround parameters. To evaluate the performance of the proposed multi-channel audio panning technique, the directivity patterns are investigated and a MUSHRA test is performed. It is shown from these experiments that the proposed method provides better perceptual quality and localization performance than a conventional parameter-based audio panning method.

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