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BARGE–IN FREE SPOKEN DIALOGUE INTERFACE USING NULLSPACE–BASED SOUND FIELD CONTROL AND BEAMFORMING (ThuAmPO4)

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✴ Abstract :

This paper describes a new small–scale interface for a barge–in free spoken dialogue system combining a multichannel sound field control and a microphone array, in which the response sound from the system can be canceled out at the microphone points. The conventional method inhibits the user from moving because the system forces the user to stay in the fixed position where the response sound is reproduced. However, since the proposed method doesn't arrange the control points for the reproduction of the response sound to the user, the user's move is allowed. Furthermore, relaxation of the strict reproduction for the response sound enables us to design a stable system with fewer loudspeakers than the conventional method. Proposed method shows higher performances in the speech recognition experiments.

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