RAPID FILTER ADAPTATION FOR FREQUENCY-DOMAIN INDEPENDENT COMPONENT ANALYSIS IN VARIOUS CAR ENVIRONMENTS

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ABSTRACT

A computational complexity reduction method in a noise reduction algorithm using ICA [1] in car components is described. We examined a noise suppression system and a speech enhancement system that use frequency-domain independent component analysis (hereafter “FDICA”) in car compartments with speech input systems [2, 3]. To achieve real-time processing in a car, we must reduce the computational complexity. We solved this problem with real-time processing by controlling the adaptive timing.