

Title	カラオケのための伴奏用楽器に関する研究
Author(s)	堀江, 歩
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Description	Supervisor: 西本 一志, 先端科学技術研究科, 修士(知識科学)

Abstract

Percussion instruments such as tambourines and maracas are often used to enliven karaoke performances. However, in order to play these instruments well enough to enhance the singers' singing, experience and a sense of rhythm are indispensable. Therefore, this study proposes an accompaniment instrument for non-singers that can be easily and appropriately played by people who are not familiar with playing musical instruments. The proposed system, Aqua Tambourine, estimates the beat that the player is trying to play based on the vibration frequency obtained from the player's shaking of the tambourine, and outputs the performance sound with appropriate timing according to the music being sung. In this study, a comparison experiment was conducted by using Aqua Tambourine and an ordinary tambourine for actual karaoke accompaniment. As a result, it was confirmed that Aqua Tambourine was able to accompany the singer without disturbing the rhythm of the singer by tapping the beat at the appropriate timing compared to a normal tambourine. It was also clear that the tambourine player's tension was eased by not disturbing the singer, and he was able to play the tambourine casually. However, there was some disagreement that the Aqua Tambourine restricted musical creativity, suggesting that it may have hindered the excitement of the karaoke performance. As for future prospects, the first step is to improve the system so that it can handle tambourine swings other than 4-beat, 8-beat, and 16-beat swings. In addition, we will consider functions that will enable Aqua Tambourine to make karaoke even more exciting than it is now.