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## **HMM Adaptation for child speech synthesis using ASR data**

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### **Abstract**

Acquiring large amounts of child speech data is a particularly difficult task. One could therefore consider the possibility to add existing corpora of child speech data to the severely limited resources that are available for developing child voices. This paper reports on a feasibility study that was conducted to determine whether it is possible to synthesize good quality child voices using child speech data that was recorded for automatic speech recognition (ASR) purposes. A text-to-speech system was implemented using hidden Markov model based synthesis since it has proven to be a technique that is less susceptible to imperfect data. The paper describes how data was selected from the ASR corpus to build various child voices. The voices were evaluated to determine whether the data selection methods yield acceptable results within the context of model adaptation for child speech synthesis. The results show that, if data is selected according to particular criteria, ASR data could be used to develop child voices that are comparable to voices that were built using speech data specifically recorded for speech synthesis purposes.