Festival and Festvox Framework Tools for Marathi Text-to-Speech Synthesis

Volume 132
Number 4

Year of Publication: 2015

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10.5120/ijca2015907413
{bibtex}2015907413.bib{/bibtex}

Abstract

We describe in detail a Grapheme-to-Phoneme (G2P) converter required for the development of a good quality Marathi Text-to-Speech (TTS) system. The Festival and Festvox framework is chosen for developing the Marathi TTS system. Since Festival does not provide complete language processing support specific to various languages, it needs to be augmented to facilitate the development of TTS systems in certain new languages. Because of this, a generic G2P converter has been developed. In the customized Marathi G2P converter, we have handled schwa deletion and compound word extraction. In the experiments carried out to test the Marathi G2P on a text segment of 2485 words, 91.47% word phonetisation accuracy is obtained. This Marathi G2P has been used for phonetising large text corpora which in turn is used in designing an inventory of phonetically rich sentences. The sentences ensured a good coverage of the phonetically valid di-phones using only 1.3% of the complete text corpora.

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Index Terms

Computer Science  
Pattern Recognition
Keywords

Grapheme-to-Phoneme (G2P), TTS, Festival, festvox, di-phone, ICT.