

HP Labs India

Research - Language Technologies and Applications

Speech Synthesis in Local Languages

Introduction

The growth of Information and Communications Technology (ICT) based applications in emerging economies is crucial but constrained by problems particular to these economies. Some of these problems can be resolved by providing ICT based services and products in local languages with voice enabled interfaces. Text-to-Speech (TTS) Systems play an important role in such services by facilitating the user to be able to listen to any information that she/he is interested in, rather than to read it from the screen. Thus, it can be effectively used where the literacy levels of the users are low. It can also provide voice output in contexts where visual interface may not be appropriate.

Work on development of TTS for Indian languages has been fairly limited due to lack of speech corpora available in these languages to carry out the required data-based research on prosodic and other linguistic aspects. Thus, good quality TTS in Indian Languages are not available.

Objective

To address this problem, HP Labs India is concentrating on developing Hindi and Indian English TTS System. A language-independent framework using the Festival TTS system ([link to festival site](#)) is being developed that can be extended to other languages.

Brief Description

The work in this area concentrates on:

- Creating a high quality Text to Speech System for Indian English and Hindi.
- Creating tools that will help in developing Natural Language Processing (NLP) and Speech Processing modules for TTS in other Indian languages.
- Creating and obtaining language specific lexicons for use in the NLP modules.
- Participation in collaborative efforts for developing multilingual TTS like the Local Language Speech technology initiative (LLSTI), UK.

Collaboration

- Local Language Speech Technology Initiative (LLSTI), UK.
- Indian Institute of Science, Bangalore
- International Institute of Information Technology, Hyderabad

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