

2018 International Conference on Intelligent & Innovative Computing Applications  
(ICONIC), Holiday Inn Mon Tresor, Mauritius, 6-7 December 2018

Rhonda: The architecture of a multilingual speech-to-speech translation pipeline

Louw, Johannes A; Moodley, Avashlin

**Abstract**

Speech-to-speech translation can be described as converting a speech signal from a source language into a speech signal of the same meaning or intent into a target language. This process is achieved by the coordinated cooperation of individual Human Language Technology components, where the most important components to a speech translation system are automatic speech recognition, machine translation and text-to-speech. In this paper we present and discuss the design and architectural building blocks of the Rhonda speech-to-speech translation system, as well as their interactions with each other to facilitate speech-to-speech translation in a reliable, scalable and possibly distributed manner.