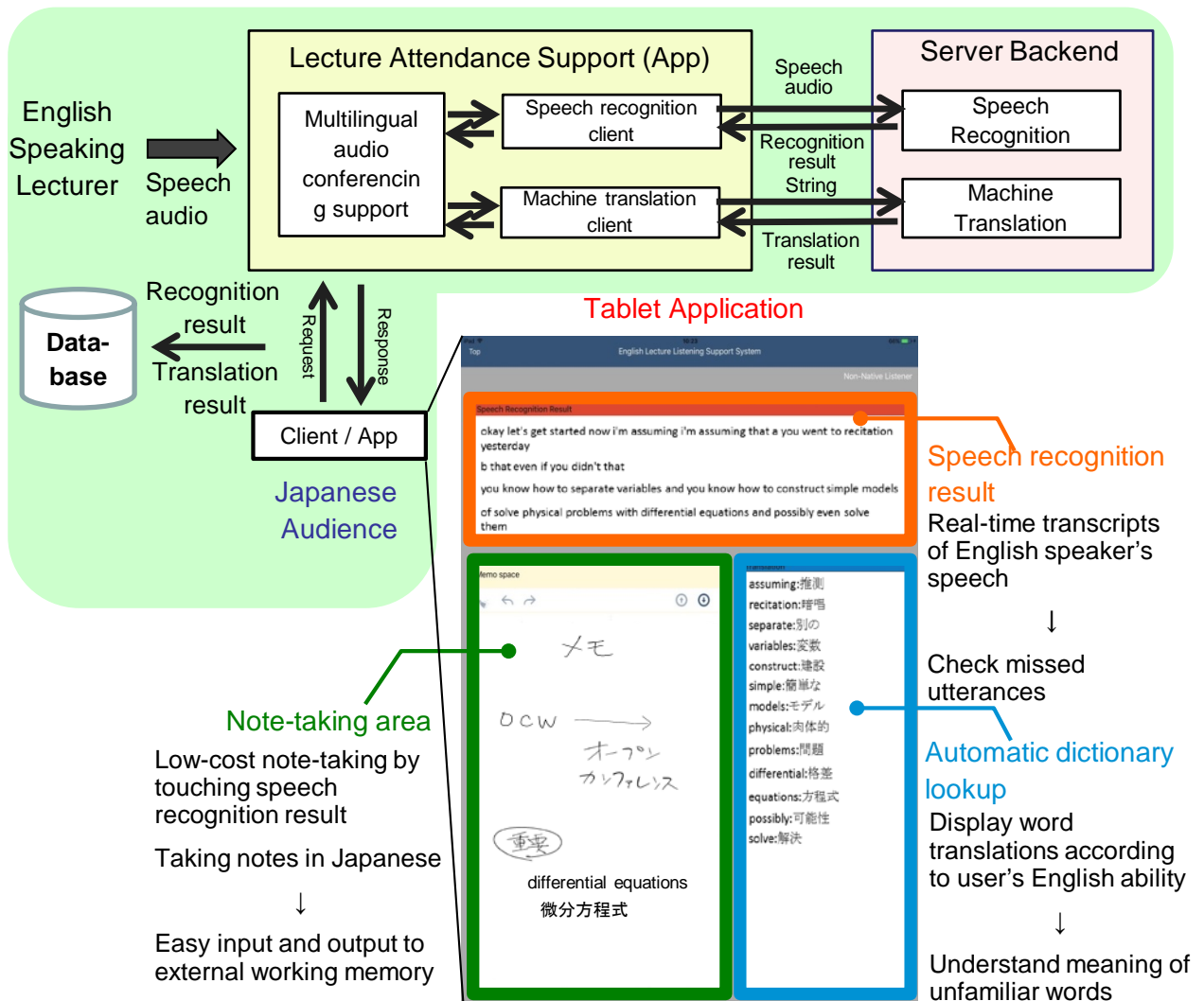


~Assistive Technology for Non-native Speakers~

Abstract

Non-native English speakers face considerable cognitive load when attending English lectures. While information technology can help in comprehension, simply using the technology further increases the non-native's burden. In this exhibition, we introduce an effective support method to **reduce non-native speakers' cognitive load** in English lectures. We designed a system that can increase non-native speakers' **working memory capacity** in English language lectures by using **speech recognition** and **machine translation** technology. The system allows non-native attendees to understand the content of the lecture more comprehensively. Our aim is to introduce easy to use, state-of-the-art, and useful speech recognition and machine translation technologies to larger body of **ICT technology** users. Furthermore, our future goal is to **break down the language barriers** between native and non-native speakers.



[Reference]

- [1] N. Yamashita, T. Ishida, "Effects of machine translation on collaborative work," in *Proc. CSCW'06*, pp. 515-524, 2006.
- [2] N. Yamashita, A. Echenique, T. Ishida, A. Hautsaari, "Lost in transmittance: How transmission lag enhances and deteriorates multilingual collaboration," in *Proc. CSCW'13*, pp. 923-934, 2013.
- [3] G. Gao, N. Yamashita, A. Hautsaari, S. Fussell, "Improving multilingual collaboration by displaying how non-native speakers use automated transcripts and bilingual dictionaries," in *Proc. CHI'15*, pp. 3463-3472, Honorable Mention Award, 2015.

[Contact]

Naomi Yamashita Innovative Communication Laboratory, Interaction Research Group
 E-mail : yamashita.naomi(at)lab.ntt.co.jp