**Question Answering System with Fine Grain Answer Types and Search Refinement**

Iwate Prefectural University (Japan) / Faculty of Software and Information Science / David Ramamonjisoa

**Inputs:** a question in Japanese; a set of keywords

**Output:** a set of possible answers drawn from the corpus (newspaper resources: Mainichi and Yomiuri)

"How big was the size of the sank Russian atomic submarine Kursk?"

**Discussion**

For 200 questions, the result shows that only 38 answers are provided by the old system compared to 81 answers for the new system. The new system has better performance in the top 11 to 20 and top 21 to 50. The new system could retrieve 81 documents related to the 81 questions, in contrast to only 21 questions retrieved by the previous system. This proves that document search was improved to extract documents for each question. Correct Candidate Answers are found in 173 questions for 200 questions test.
A new question analysis and passage search technique were introduced to improve an existing Question Answering System. This system is then tested with the NTCIR-QAC2 corpus and then applied to NTCIR-QAC3. The system has shown a better performance in documents retrieval and question analysis in comparing to the older version. However, we realize that the answers extraction modules must be redesigned and reimplemented in order to make the system competitive. In the future, we are aiming to develop a cross-lingual question answering system.

**Conclusion and Future Work**

A new question analysis and passage search technique were introduced to improve an existing Question Answering System. This system is then tested with the NTCIR-QAC2 corpus and then applied to NTCIR-QAC3. The system has shown a better performance in documents retrieval and question analysis in comparing to the older version. However, we realize that the answers extraction modules must be redesigned and reimplemented in order to make the system competitive. In the future, we are aiming to develop a cross-lingual question answering system.