This paper presents the Language Resource Management System for Asian WordNet Collaboration and Its Web Service Application, which addresses the need for a computational ontology and supports the development and dissemination of Asian WordNet (AWN) and its web service application. The system is designed to establish a network for cross-language WordNet development, allowing each node to be independently maintained and the service of each language WordNet can be called directly through the web service API. In case of cross-language implementation, the synset ID (or synset offset) defined by Princeton WordNet (PWN) is used to determine the linkage between the languages.

Motivation
- Need of a computational ontology
  - Implementation
- Quick start approach
  - Reusability
  - Less language resource
- Online collaborative environment
  - Social networking
  - Multilingual development
- Cross-language web service
  - Sharing
  - Interoperability
  - Evaluation
  - Dissemination

AWN lookup (Thai to Japanese):
1. When receiving the word entry, Web Service API will look for the attaching senses of Thai word in Thai WordNet database.
2. Following information of Thai word entry will be retrieved from the database.
   a. Synset of the Thai word
   b. Synset offsets of English WordNet
   c. POS with category of base type
   d. Synset of English word
3. The synset offsets of English WordNet will be submitted to Japanese server to look for the information of Japanese WordNet.
4. The corresponding synsets of Japanese word will be sent back to Thai server.
5. The visualization tool presents the WordNet structure of the retrieved Thai and Japanese WordNet.

Figure 3: TreebolicAWN Visualization
Figure 4: Minimum Information
Figure 5: Medium Information
Figure 6: All Information
Figure 7: Cross LanguageAWN through Web Service
Figure 8: WNMS Database Sharing through Web Service Protocol
Figure 9: AWN Playground for Multilingual Dictionary
Figure 10: WNMS Architecture

AWN Partners and Progress (as of May 3, 2010)

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