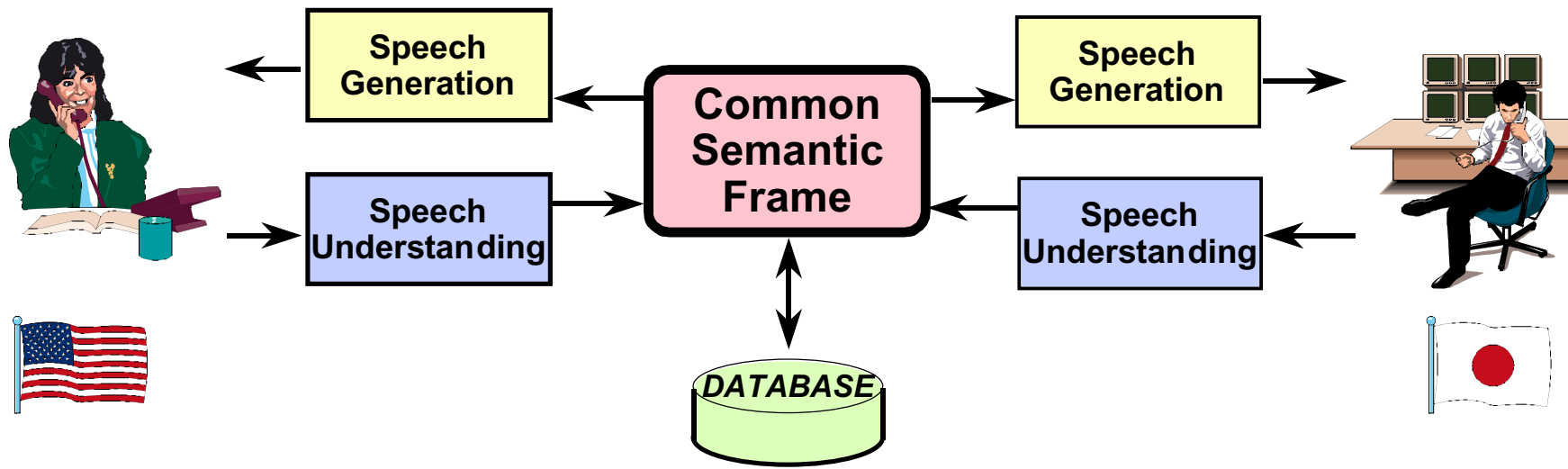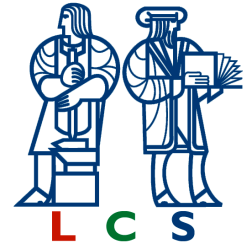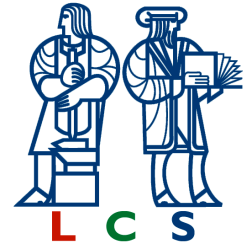# Project Overview

- Explore language-independent approaches to speech understanding and generation
- Develop necessary human-language technologies to enable porting of conversational interfaces from English to Japanese
- Use existing Jupiter weather-information domain as test case

Progress Through December 1999

- Initial Mokusei prototype completed:
  - Speech recognition (ASR) (2200 word vocabulary)
    - Japanese phonological rules created
    - Interpolated English and Japanese acoustic models
    - Conventional word class and NL-derived n-grams explored
  - Natural language (NL) understanding
    - Improved coverage on training data (95% of 2400 utts)
    - "Trace" mechanism used for faster parsing
  - Additional 50 Japanese cities added to database
- 1000 spontaneous utterances collected from native speakers interacting with system

Research Plan for the Next Six Months

- Collect spontaneous speech data from more speakers interacting with the Mokusei system

- Refine system component capabilities:
  - More robust acoustic and language models for ASR
  - Improved coverage for language understanding
  - More sophisticated language generation

- Expansion of weather content for Japan