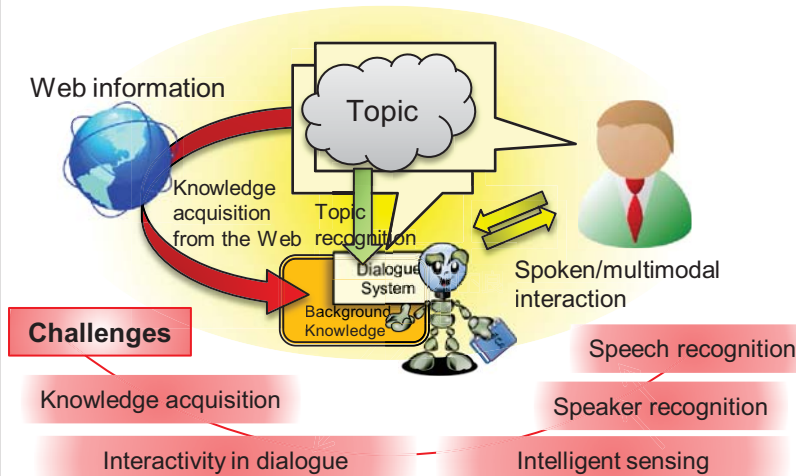


### Intelligent dialogue system structure



We are engaged in the research on spoken/multimodal dialogue system based on speech information processing.

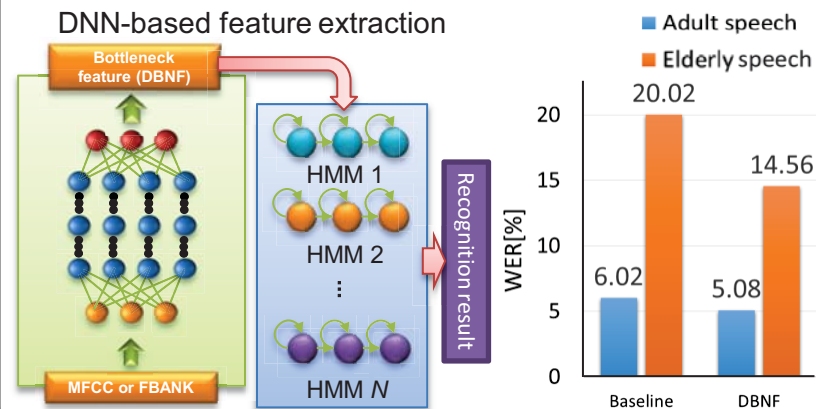
Robustness against the speech variety such as noises and age differences is a big topic. Adoption of neural networks based on deep learning (Deep Neural Network; DNN) is a promising way to tackle this problem. We achieved high performance using DNN-based feature extraction.

We also proposed a timing control method for system response generation. Such timing control enables novice users to use spoken dialogue system comfortably.

Integrative recognition method of speech and gesture is also proposed, to achieve integrative understanding of users' intent.

Based on these background technologies, we also study dialogue technologies and systems, for example, systems for elderly people and interfaces for semi-autonomous vehicles.

### Speech recognition – robustness against ages -



Keywords : speech recognition, multimodality, dialogue system

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