# IEEE/ACL Workshop on Spoken Language Technology, Aruba, Dec. 11-13, 2006

## Closing Remarks:
## How to Continue?

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**yesterday's panel discussion:**

**Do we make enough progress?**
**Do we have enough interaction between speech and NLP people?**

**underlying aspects:**

- **How can we make (more) progress?**

- **What is the history?**
  **a lot of things have changed!**

**comparison:**

- **1985: IEEE workshop on automatic speech recognition (and understanding),**
  **Arden House, Harriman, NY (and other events)**

- **2006: IEEE/ACL workshop on spoken language technology, Aruba,**
  **(and other events)**

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**IEEE workshop on ASR, Arden House, Harriman, NY, 1985:**

**state of the art for ASR:**

- **IBM: speaker-dep. isolated-word recognizer for 5000-word vocabulary**

- **other groups: 10-1000 words: constrained grammar, speaker-dependent**

**interaction and 'areas of contact' between speech and NLP people:**

- **phonetic knowledge in acoustic recognition (phoneticians!)**

- **language models: (non-statistical!) grammars, augmented/recursive TNs, ...**

- **NOTHING in MT or dialogue modelling (no ATIS task yet!)**

- **what did NOT exist:**
  - **evaluation metrics and campaigns**
  - **no common databases**

**'strong' belief of experts and funding agencies:**
      **expert systems are the future for ASR, MT and NLP!**

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# Today and This Workshop

**many areas of interaction between speech and NLP:**

- **language modelling**

- **machine translation**

- **spoken language understanding**

- **dialogue modelling**

- **information retrieval**

- **question-answering**

- **text summarization**

- **language generation**

- **multi-modal communication**

**observation:**
**– data-driven and statistical concepts have moved (from speech ?)**
  **to virtually all NLP related tasks**
**– problem?: no advocates of non-statistical approaches here**

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# Do we make enough progress?
# Do we have enough interaction speech-NLP people?

**Should we recommend specific methods or approaches?**
**?? good idea ??**

- **AI approaches to both ASR and MT (in 80-90's):**
  **strongly recommended by so-called experts!**

- **leave that to the scientists (and evaluations!)**
  **diversity is good!**

- **instead: define framework and conditions for research**

**Framework and conditions for progress, e.g. in ASR and MT?**

- **agreement on common tasks**

- **agreement on common evaluation measures**

- **common databases and evaluation campaigns**

**?lack of common databases: for language understanding and dialog modelling**

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# How can we work more efficiently?

**two aspects:**
**– as a community ?**
**– in terms of speech-NLP interaction?**

**specific proposals:**

- **? common/public framework for software for ASR, MT and NLP:
  'reference system'**

- **? (more) specific tutorials for bridging the 'gap' between speech and NLP**

- **? common goals/tasks**

- **? databases
  e.g. for speech/language understanding and dialog modelling**

- **...**

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# Future Steps

**workshop:**

- **idea: IEEE/ACL workshop biannual event interleaved with IEEE ASRU workshop**

- **what structure?**

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**THE END**