SUMMARY OF SESSION 9 – FUTURE PLANS

Clifford Weinstein, chairman

Charles Wayne presented overviews for both the Spoken Language and Written Language Programs. Under the Spoken Language Program, he emphasized the integration of speech and natural language technology into Spoken Language Systems. The need for common corpora and tasks, as well as systematic, objective performance evaluation, was stressed for both the Spoken and Written Language Programs. In the SLS area, some of the key goals were outlined for technical advances, including: moving from read speech to spontaneous speech, from fixed to expandable vocabulary, from a limited grammar to a habitable natural grammar, from a single utterance to interactive dialogue, and from high word recognition accuracy to high utterance understanding accuracy. A goal for 1993 was set forth for 90% speaker–independent understanding of natural, task–oriented utterances with a 5,000 word vocabulary. In the Written Language Program description, the continuing need for performance goals and evaluations extending beyond the June 1989 Message Understanding Conference was emphasized. New directions which were mentioned included: learning techniques for greater robustness and faster porting, and (possibly) machine translation as a framework for system integration.

A general discussion followed, on topics including: SLS plan; role of SLS demonstration tasks; Written Language Program plan; speech recognition technology; natural language technology; corpora for both spoken and written language; and possible DoD applications. In the discussion on near–term DoD applications of SLS, it was argued that the technology for spoken language understanding, still in its infancy, should first be developed in the context of the demonstration tasks and systems, before transition to real applications.

The topic of common SLS corpus and task was raised, and engendered much discussion with many points of view. Jack Godfrey of Texas Instruments set the background for this discussion by describing TI's current efforts in collecting pilot data on the BBN personnel management database query task. A great deal of discussion ensued on whether this was an appropriate common task, and a variety of other possible tasks were discussed. It was agreed that these issues would need to be resolved in smaller working groups,

Charles Wayne closed the session with brief descriptions of two speculative new ideas being discussed at DARPA/ISTO. The first, "Spoon–Size Microsystems," focuses on very small systems (e.g., wristwatch–size speech recognition) which would be built on a dual–use (DoD and non–DoD) technology. The second, the "Invisible Assistant", is a system which, though extremely compact, could interact with people using speech and imagery as an intelligent aid.

For the record, this session coincided with the San Francisco earthquake, and those leaving the session saw earthquake pictures, rather than the canceled World Series game, on television.