MACHINE TRANSLATION: SESSION INTRODUCTION

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Having agreed, with gratitude and delight, to serve as chairman of the machine-translation session of this Conference, it became my duty to comment for the record on the set of four papers to be presented to us. Thus have events laid on me an opportunity to review, in a sense, the state of a field which was my professional home in earlier and headier days. The task has given me both enjoyment and knowledge, but few surprises.

More than two decades ago, scholars of the stature of the late Y. Bar-Hillel were stating in detail their perceptions of the futility of automated language translation by the methods then under development. Some years (and many "progress reports") later, others of us came to see that general translation, without the benefit of a robust and dominant semantics and pragmatics, was not thinkable. The very slow and scattered development of these latter, in both principle and substance, is the most fundamental impediment to the computer manipulation of language; in those tiny domains where the work has been done, the results are impressive--across a variety of methods.

Why isn't more of this work being done, with more focus? Perhaps both the potential market and the (mostly military) research sponsors are awed by the magnitude of the challenge, and skeptical of the payoffs. One might envision a world in which, once the skepticism has been answered, such answers would stimulate rather than intimidate research.

Meanwhile, we should be busy with other goals in mind, of which aids-to-translation is an obvious example. Two of the papers before us describe approaches to improving the human translation process. A third valiantly wades into the struggle with computational semantics. The fourth paper offers unsurprising results form an odd experiment. I should note that all I had available to me were the abstracts; my comments below reflect that limitation.

The Slocum paper is more a "statement of work" for a paper, rather than a substantive draft. We expect a report on the state of the Siemens-Texas translation project, and a defense of its approach in engineering terms. The good news in this paper is the commercial sponsorship of the work; the success of such a venture might stimulate stronger investment in natural-language projects and studies.

The Melby paper offers an architectural sketch of an open-ended translator's system which could include an MT system as one component. This modest paper deserves reading for the author's perspective on the professional translator.

The paper by Nishida and Doshita describes the use of Montague-style functional notation to create a sentence-level semantic interlingua. The obvious benefits in syntactic simplification are illustrated. An extended example, in Japanese, may be crucial for appreciating the scope and delicacy of the authors' work to date.

The paper by Somers discusses a project to do machine translation on a home computer, which turns out to be difficult.