

What is 'PIVOT' ?

TSUJII, Jun-ichi

Dept. of Electrical Engineering, Kyoto Univ., Kyoto, Japan

One of the recurring controversies among us has been between the adoption of Interlingual approach and the adoption of the transfer approach. The controversies seem to be quite relevant to the future development of MT systems. We will discuss some of crucial points of the discussion.

Types of 'PIVOT'

(a) PIVOT as Interpretation Results: For very restricted domain of translation, we can establish symbolic systems for representing certain aspects of meanings relevant to the subject fields and the discourse types. The symbolic systems can also be used for reasonings, problem solvings, etc. in the subject fields.

- The telephone conversations for hotel reservation
- dialogues between doctors and patients

The representations are dependent on subject fields and document types. This approach may lead us to very high quality translation. [*Interpretation Based Approach*]

(b) PIVOT as Design Methodology: For developing multilingual MT systems, you may have to communicate with researchers who do not have any knowledge about your language and whose language you do not know at all. In such cases, it may be inevitable to have a standard language to communicate.

'English' is a candidate of such a standard. 'English' may evolve to be a 'PIVOT', by being precisely defined during the development of the multilingual MT systems. However, the PIVOT is still dependent on language groups. [*Standard Language Approach*]

(c) PIVOT as Conceptual Primitives: Conceptual decompositions such as Schank's CD. This approach may lead to the 'PIVOT' which is independent both on subject fields and language groups. However, I personally believe, there is a long way to go to have the set of primitives by which we can identify the whole meaning of single lexical items. Note also that this approach tries to capture core meanings of lexical items, while the other two distinguish many different meanings of single lexical items depending on subject fields or language groups. [*Lexical Decomposition Approach*]

[1] J. TSUJII: Future Directions of Machine Translation, in Proc. of COLING 86, 1986.