

TOWARDS MORE ADVANCED MT: POSITION PAPER.

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Currently, there seem to be two basic paradigms for advancing MT. The first involves finding a single magic (and usually semantic) key to the solution, the second inching forwards through gradual improvements on a variety of fronts. The first seems to me to offer no hope of success, primarily because it is not possible to move outside language in order to define a descriptive tool in non-linguistic terms. From within language, the information needed for an adequate translation comes from a variety of sources, each of which constitutes one of the fronts where improvement is possible; it would be simply perverse to choose to neglect any single one of these sources.

Thus I see a first possibility for an improvement in system design, with a blackboard architecture allowing each kind of information to contribute to the final result with no system enforced precedence of certain kinds of information. Furthermore, blackboard systems lend themselves to incrementality.

When it comes to considering the individual fronts, I think it would be fruitful to take very seriously the notion current in theoretical linguistics that much of syntactic and semantic structure is systematically projected from individual lexical items, and to investigate how the relevant information can be coded in the lexicon without incurring prohibitive cost.

There are also fronts where I think it would be misguided to invest a great deal of effort; one such is the attempt to define some set of semantic primitives, in whatever form, with pretensions to universality. The proposal to do so is notoriously seductive, but all previous attempts, for good theoretical reasons, have failed even to achieve consistency of coding: we should accept that all we are really using is a primitive vocabulary, and that its choice and use is specific to particular systems and their designers.

Advances must not only be made but must be seen to be made. Different applications in different work contexts require different kinds of systems and different degrees of automation. Any attempt to install a system unsuited to its operational environment is likely to end in a perception of failure, even though the system might, in some other context, be highly successful. Whilst these modest attempts at overall improvement are proceeding, an astute matching of application, work context and system design coupled with a strict avoidance of grandiose claims would do much to increase the number of recognizably successful operational systems.