FORUM ON MACHINE TRANSLATION

Machine Translation already does Work

Margaret King
ISSCO
54, rte des Acacias
CH-1227 Geneva, Switzerland

PANELIST STATEMENT

The first difficulty in answering a question like "Does machine translation work is that the question itself is ill-
posed. It takes for granted that there is one single thing
called machine translation and that everyone is agreed about
what it is. But in fact, even a cursory glance at the systems
already around, either in regular operational use or under
development, will reveal a wide range of different types of
systems.

If we take first the dimension determined by who/what
does most of the work, the machine or the translator or
revisor, at one end of the scale are systems where the human
does not intervene at all during the process of translation -
"batch" systems for convenience here. Even amongst the
batch systems there is considerable variety: the degree of
pre-editing permitted or required varies greatly, as does the
amount of post-editing foreseen. Some systems insist that
anything translated by the machine should require no post-
editing, and thus (sometimes) reject as unsuitable for
machine treatment a part of the text. Others take it for
granted that machine translation will normally be post-edited,
just as human translation is normally revised. Some systems
aim at giving nothing more than a very rough raw trans-
lation, to be used by the human translator only as a starting
point for producing his own translation. Some systems re-
quire that the document to be translated conform to a
restricted syntax, others leave the author relatively free.

Next comes a class of systems that one might style
"interactive" systems, where the bulk of the work is still
done by the machine, but where the system interacts with a
human to a greater or lesser degree. Such systems may ask
the human, for example, to resolve an ambiguity in the
source text, to choose between a set of target language
terms. Here, the ideal system might well be simply to provide
a restricted term bank, or an agreement, it should never have been allowed near a
machine translation system in the first place, and the translation
should be thrown away). In such a situation, an inter-
active system, on the other hand, is likely to be unsuitable,
since the main problem is the bulk of work to be done, and
the translator or revisor is better occupied dealing with those
documents unsuitable for machine treatment or revising
where necessary than in sitting in front of a screen watching
the machine at work.

In a different situation, however, where what is required
is very high quality translation, and where the volume of
translation to be done is a less pressing problem, so that
the main concern is in rationalising the translator's work whilst
contingently increasing his productivity, an interactive sys-
tem may prove to be the ideal choice, especially if the text
is a mixture of repetitive material which it is boring
and time-wasting) to translate manually each time it ap-
ppears and quite delicate text requiring great care.

In yet another situation the major problem may be the
typical length of documents, combined with a need for speed
and a need for terminological accuracy, so that a single docu-
ment is split over a number of translators working indepen-
dently, but all must use the same translation for certain
terms. Here, the ideal system might well be simply to provide
all the translators with access to a clever text-processor from
within which they could access easily a common term bank,
with all the rest being left to the translator.

There is no need to labour the point: different set-ups
have different problems to solve, and therefore, whether they
know it or not, need different kinds of machine translation
systems.

Now we can return to the original question: machine
translation works when the machine translation system is
able to resolve in a significant measure the particular trans-
lation problems in a particular situation. To put this more crudely, no-one should try to persuade the translator of Faust that a batch translation system will do him any good at all, and no-one should try to persuade the translation service that churns out several hundred invitations to meetings every day that an automated dictionary look-up facility will solve their problems.

Once this is realized, the puzzle contained in people asking questions like whether it is a good idea to work on machine translation in a world where it is demonstrably the case that machine translation systems exist and are counted satisfactory by their users begins to go away. The successful systems are those where what is provided by the system matches what is required to solve the real problem, where the system developers realistically assessed what they could offer, went ahead and provided that, and where those who commissioned the construction or purchase of a system had expectations matched by what was actually delivered.

A final question to those who claim that it is somehow dangerous or irresponsible to promise to produce a machine translation system. If one promises and fails (apart of course from the general principle that one should always try to fulfill one's promises and not to promise what one cannot deliver), why is that more damaging to the field than working on speech-recognition and failing?