From Sputnik to Eurotra

A Short history of MT according to Sergei Perschke

Sergei Perschke, head of Eurotra, describes the development of machine translation, from its origins to the birth of Eurotra:

Machine translation is a product of technology pull. When computers were being popularized at the end of the forties, developers were looking for applications. Translation was an obvious one; Wiener, von Neuman, they all talked about it.

Machine translation is also a product of technology push, as well. In 1958, the Russians put Sputnik into orbit. US secret services accused the government of not devoting enough resources to translating Russian technical documents. The first experiments in MT had begun only in 1956.

One of the first systems produced was at Georgetown University in Washington DC. That system went on to perform service at Oak Ridge National Labs and at the Joint Research Center of the European Committee – Euratom.

Aside from the low level of performance of the computers, this first effort had two drawbacks. One, the sponsoring agencies were general or military intelligence services – who weren't interested in advancing science but in results, and so imposed perhaps unrealistic contractual restrictions. And two, the computational side of MT was em phasized instead of linguistics. Computation was new, linguistics old, so the argument went; linguists didn't understand computers.

The problem was, of course, that computer specialists didn't understand linguistics. They had naive simplistic ideas of linguistics, seeing what they were doing as constructing a sort of electronic dictionary.

The result: a system which was computationally clever and linguistically simpleminded. You need good will and imagination to call what came out a "translation." Most successful translations were accidents.

Voices of discontent were raised. Then in 1966, the National Academy of Science published a report, the now infamous Alpac Report. The Alpac stated unequivocally that

1. machine translation is impossible;

2. and besides, machine translation is not needed – there were enough immigrants around in the US at cheap rates, the so-called "kitchen table translators."

So the US government stopped funding MT research. Europeans followed the US lead. Most projects in Europe stopped. Only two survived, Ariane at the University of Grenoble, and SUSY, at the University of Saarbrücken. Underfunded, they remained sub-critical.

When the first prototypes emerged in 1978, they were conceptually obsolete in both linguistic theory and computational technology.

Interest in machine translation grew in the mid-1970s when the European Commission in Luxembourg mandated an action program for the exchange of scientific and technical information. There again the problem of multilingualism reared its head.

Nobody has ever solved the problem of mulilinguality. There is no situation anywhere else in the world comparable to what exists in modern Europe. One language could never be imposed, it would cause political disaster. For 110% political reasons, Europeans need translation from all languages into all languages

Machine translation was considered the only way to get around the barrier of multilingualism. A committee evaluated all the alternatives and decided that if the community wanted a quick solution then select an American system, the one based on the Georgetown system, Systran. Even though obsolete, it was adopted short term. A research program was started to come up with a long-term solution. That research program was Eurotra.

From the day machine translation was first discussed to a Council decision in 1982 was ten years.