

## Selecting a machine translation software vendor

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### INTRODUCTION

Machine translation (MT) is the process of translation via computer in an attempt to simulate the human translator's thought processes. Terms used somewhat interchangeably in the MT industry include: machine-assisted translation (MAT); computer translation (CT); computer-assisted (or computer-aided) translation (CAT); and automatic translation (AT). To date, there exists no fully automatic high-quality translation (FAHQT) system which can successfully simulate the human translator's thought processes correctly 100 per cent of the time. Therefore, the raw output of an MT system necessitates the involvement of a human translator to correct and polish it, grammatically and stylistically.

Thirty-five years ago, MT was the dream of business and academia and the nightmare of translators. In 1969, the ALPAC (Automatic Language Processing Advisory Committee) Report declared that MT was not feasible and it was no longer considered a threat to translators. Today, with artificial intelligence expanding computational limits, MT is a reality which neither translators nor managers can ignore.

The challenge now is selecting the right vendor. Aside from comparing productivity per hour and cost per word rates, which vary little among MT vendors, how can you be sure to choose the right one? The selection task is important; your decision will have a long life - approximately ten to fifteen years.

Here are some guidelines to get you started.

### 1. Target your problem

Identify the extent of your translation problem to determine if MT is a reasonable solution. How is translation currently handled? Internally by a staff of translators? Internally by whoever is available? Centralised in one location or decentralised throughout the country or the world? Is it handled by an outside translation service bureau? How much is being translated? How much should be translated? Into which languages? (Roughly, a minimum level of 1,000,000 words of yearly translation is needed to justify the cost of an MT system.) Determine if you have a short-term translation problem, where you need to translate only a few manuals or brochures, or a long-term problem which includes increased translation loads. Implementation and management of an MT system demands a commitment to translate the majority of source language documentation which is produced over several years. A one-year translation requirement (or one confined to one product line) might be better handled by a translation service bureau or freelance translator.

### 2. Establish a team and a team leader

Vendor selection is not a task usually performed efficiently by a team. However, a team is needed early in the evaluation process to provide input as to how MT will affect corporate functions. Designate a team leader to deal directly with the vendors. The leader's primary responsibility is the MT project; all findings are to be reported to the team for input and group concurrence. Establish a team of resource persons to ease inter- and intra-departmental functions. They will remain committed to the MT project through participation. Include a controller or financial analyst to assist in the preparation of financial justifications for presentation. Also include a system analyst who can advise the team leader on hardware configurations and system-to-system interfaces.

### 3. Investigate MT software and vendors

The decision you have to make concerns software, not hardware, so concentrate on the software performance. You can worry about the hardware configurations and interfaces after you have selected the MT software vendor.

Gather as much information about all the possible vendors before meeting them. This enables you to ask intelligent questions and avoid some of the standard sales hype. Information gathering can be accomplished in several ways:

- Run a Dun & Bradstreet listing on the vendors to get a feel for their financial history and officers.
- Attend vendor demonstrations at trade shows. Most MT vendors have show booths two or three times a year. This is a good opportunity to compare all of the vendors at the same time. Historically, the major MT vendors have participated in the American Translators Association and Society for Technical Communication yearly conventions, the Association of Translators and Interpreters conferences in Canada, and the Aslib/Translators Guild conference in London.
- Attend vendor seminars.
- Run database searches on MT through your library.
- Keep your ear to the ground. Networking with other translators is another way to gather information. In such a small industry, it is hard for vendors to keep secrets.

#### 4. Compare the vendors

Before contacting the vendors to compare them in depth, determine how you want your translation operations to flow. No one implementation is suitable for every situation. Subsidiary or operating company organisation, internal politics, costs and management will all influence your translation operational structure. Do you want all the translators centralised in one location, or decentralised in several locations, or semi-centralised with major processing in one location and minor processing in satellite locations? Get team agreement on the implementation and then evaluate which vendors fit your implementation mode. This allows the vendors to focus on your needs and allows you to judge them within your operational context.

Compare your language requirements to the vendor's offerings. Which language pair directions (e.g. English into French or French into English) are the vendors currently marketing? Which language pairs are in development; what are their delivery dates?

Determine the nature of the MT vendor's business. What is the vendor's track record? How many successful and unsuccessful installations has the vendor had? What is the vendor's financial stability: sales records, years in business, who are the investors, how is their balance sheet? Be prepared to sign a non-disclosure form to obtain this information.

Select your MT vendor by the same standards as you would select a business partner. You also need to research other aspects of their business.

- Investigate the vendor's business focus

What percentage of the vendor's business is from MT software? What percentage is from hardware leasing or sales? Does the vendor also offer other kinds of software, such as accounting packages? Does the vendor offer other services? Consulting? Translation? Software customising? Dictionary building? Be careful, 'one-stop shopping' offerings of varied software may indicate that the vendor is confused about the product line or its place in the market.

- Visit the vendor's offices

Pre-arrange the visitation schedule so the vendor knows what you want to accomplish. Use this opportunity to talk to management and to the R&D staff to get a feel for the company's direction. Take a page or two of your own documentation to run a sample translation. Make sure that the sample translation is run against the same dictionary that you will receive with the system so that you can approximate the translation level with which you will work when the system is installed.

- Research the customer installations

How many customer installations does the vendor have? Are they 'friendly' installations, that is, installations which can be contacted as references? Over what period of time were they installed? How many installations have been removed? Which installations are actual clients, paying for the system and committed to using it, as opposed to test installations which are evaluating the system but have not actually licensed it? Request the names of all the installations and call them to discuss their likes and dislikes of the system. Find out the size of these installations and compare them with the size of your proposed installation. How many terminals do they run concurrently? Which language directions? What is their throughput per hour and cost per word? Have they had any reactions from users of their translations? Have they had good vendor service? Would they recommend using an MT system; which vendors did they investigate?

Arrange visits to several users of each of your prospective MT systems. This is a necessary networking step for your future and very important information gathering for you. The perfect picture painted by the MT user via the telephone can turn out to be much less than perfect when you actually visit the installation.

Two notes of caution: first, insist on a user list from your prospective vendors. If the vendor is reluctant to

give you such a list or asks you not to contact the users, there may be a hidden problem. Dig it out. It can give you valuable insight to your own installation's possible problems and allow you to plan for them. Second, when you visit MT user installations, arrange some time alone with the user so you can candidly discuss your questions and concerns.

- Determine the installation plan

Your vendor will probably have installed more MT systems than you, so use that expertise. Sit down with the vendor and work out a critical path chart of the installation so you can clearly see what dates are to be met, which dates are critical to the project and what are the dependent and independent steps within the project (Figure 1). Agree on which steps are the vendor's responsibility and which are yours. Make sure the vendor has adequate resources allocated to the project. Find out how subsequent updates will be installed. Know as much as possible about the software and how it will be used at your site so that you can monitor its installation.

- Review the documentation

The documentation and its ease of use will be critical to solving problems after the software is installed. Calling the vendor with each little problem or unknown is time-consuming and costly. Review the vendor's documentation. Be familiar with its organisation and how it is used. Do not allow interpretation of the documentation to add to your list of translation problems.

- Investigate the support provided

Your account and customer support representatives will be your primary vendor contacts. How much previous translation experience do they have? Do they understand the system that they are selling and servicing? Do they understand the translation industry and the international language requirements for off-shore marketing?

Investigate the vendor's customer training programme. Be sure that the vendor has sufficient personnel to provide the initial training you require and any follow-up training you request.

- Ensure that the MT system integrates with your documentation system

When properly implemented and equipped with fairly stable

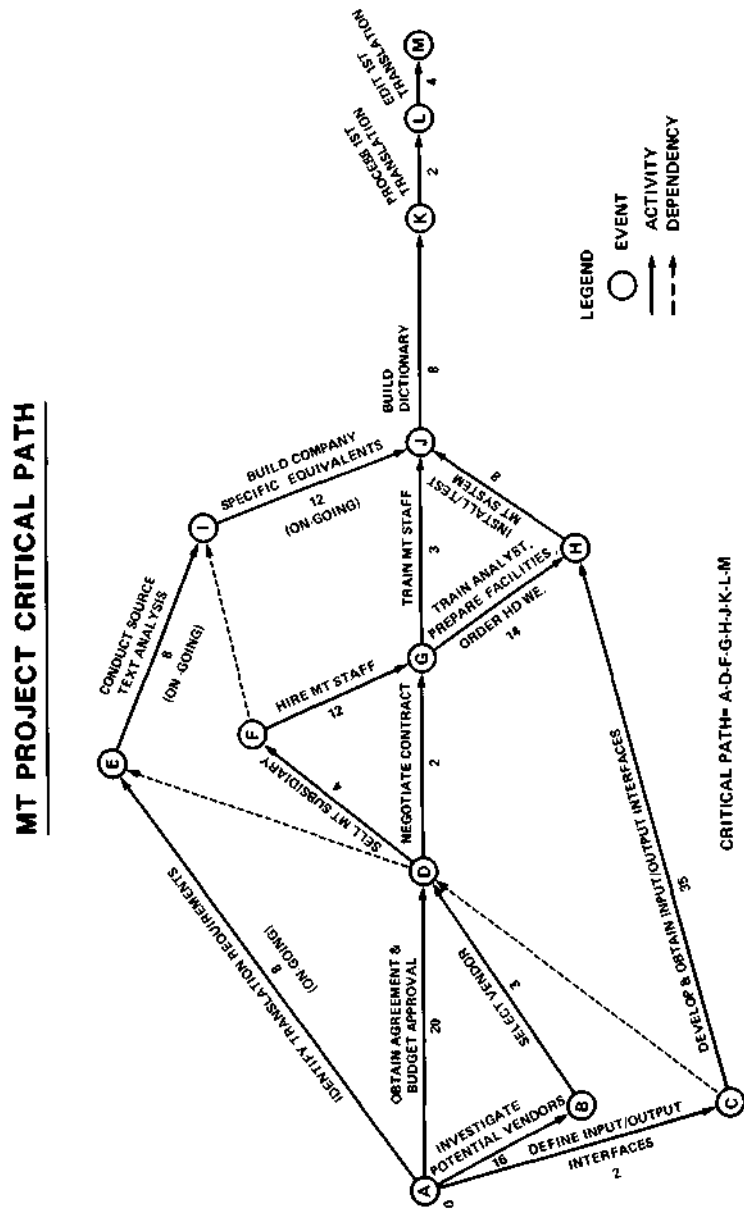


Figure 1. Critical path

dictionaries, an MT system should provide at least a 3:1 productivity increase over manual translation methods. The ratio increases to 4:1 when MT is fully integrated into a computer-aided publishing (CAP) system. This increase is realised when text can be transmitted electronically from the original source into the MT system and later electronically passed into a typesetter.

Investigate how your CAP system will integrate into the MT system. Chances are good that the vendor will have already worked out an MT/CAP interface for at least one type of system. If your CAP system is different, have your team system analyst work with the vendor's technical people to ensure that they have a full understanding of the interface required. Determine which interface sections are your responsibility and which sections are the responsibility of the MT and CAP system vendors. Ask for a written cost and manpower estimate from each vendor for the interface. The system integration pieces of this puzzle are essential to achieve the highest productivity from your MT system.

- Understand the warranty and contract

How does cancellation of the maintenance affect the warranty? Does moving the hardware cancel the warranty? What are the cancellation limits to the contract? Can the vendor change licensing charges to you without penalty?

Have a legal adviser read the warranty and explain it so that there are no surprises as to the vendor's policies on system bugs, documentation errors, and vendor or user problems. Understand your legal obligations and those of the vendor.

- Determine if the vendor is stable

It is important that the MT vendor is a stable company, financially and developmentally in both management and personnel. You want your vendor to be in business for at least the same period that you are licensing the software. Aside from being financially sound, it is important for the vendor to have a stable R&D group and a clear product development plan. Review their five-year plan to determine if future products fit your needs. Investigate the turnover rate of the R&D staff and overall management. Make sure the vendor's staff truly know the field. Good staff usually produce good software and that is where your interest lies.

- Analyse costs

Sophistication of the software, support offered with the licensing fee, and level of application and availability are all

reflected in the vendor's pricing schedule. Remember that you are allowed to use the software for either a fixed term or indefinitely, but you do not own it.

Compare 'apples' with 'apples'. Do not try to compare per word licensing fees against yearly licensing fees - bring them to a common denominator. Work out how many words per year you will translate. Your productivity rates (words per hour translated) can be projected by using the learning curve (Figure 2). Editing of MT output is labour-intensive and the learning curve allows you to project the efficiency of the translator's editing task. The more efficient the translator becomes, the less time it will take to edit the MT output. To compare vendor hardware and software costs over a period of time, use a tool, such as net present value, to reduce the financials to a common factor. Each vendor assesses these areas in the licensing fees. Costs for maintenance and support may be automatically included in the fees or scheduled out separately.

Software licensing alone does not make up the costs of MT. Hardware costs, maintenance, overheads and personnel all add to the project expense. When you add up costs, be prepared to see the highest costs in personnel.

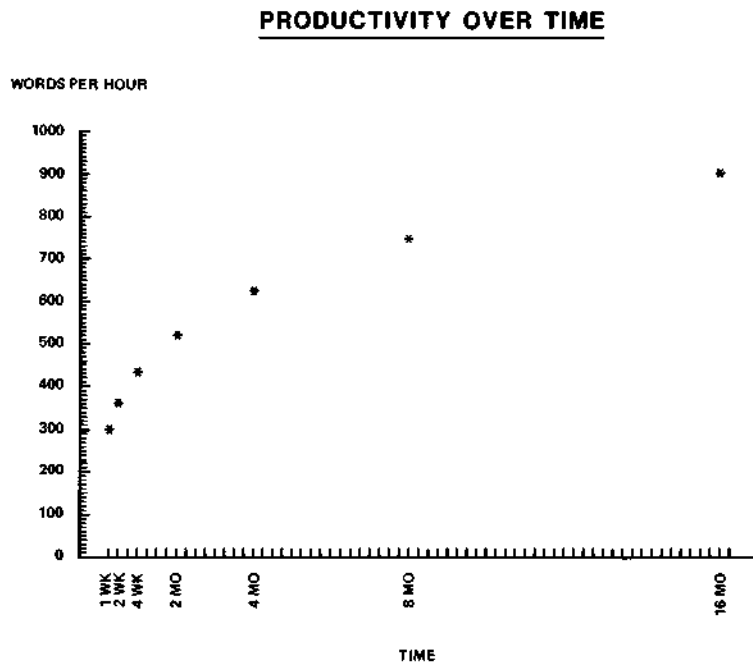


Figure 2. Learning curve



To justify the project financially, work with the team controller to determine whether to buy or lease the hardware. In addition, determine the rate of return, payback and estimated savings of MT over manual translation costs using your projected translation volumes.

### 5. Make the decision

In making your decision, do not overlook standard business etiquette. Do you enjoy dealing with the vendors? Are they responsive to your needs, professional, and helpful in working out solutions? Working with them in a long-term project is a two-way street; they must care for your organisation and success as much as you do and vice-versa.

Going through all of these steps pays off when it is time to present the project for full approval. It is likely that you will need to make several executive presentations before your project is properly approved and funded. By following these suggestions, you will have the information you need to make and back up your MT vendor selection.

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