

Efficient Translation Through the Use of Automation

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Whitepaper

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Introduction

In modern society, the reason we can purchase inexpensive manufactured items from clothing to soda is that they are mass-produced to keep costs low. Wherever possible, human labor has given way to machines, which perform work more quickly and effectively. A machine is able to perform the same task endlessly and with identical results every time, at a lower cost than a human performing the same task. This automation keeps costs low and quality high, and it's a hallmark of modern society.

Automation is not possible for every task we perform, however. Despite great progress in translation software, for example, human input is still required in order to ensure accuracy, due to the complex and subjective nature of language. Even in the translation industry, however, speed and accuracy are crucial, and one is useless without the other. Obviously, completing translation work quickly is worthless if the translation contains errors. And on the other hand, completing a painstakingly accurate translation won't do any good if it can't be accomplished quickly.

Even something as complex as translation work can take advantage of automation to make processes more efficient. Despite the human knowledge required for some of the work, most large, complex tasks we perform are composed of small, repetitive steps. These small tasks don't require actual human decision-making, and while individually they take little time to complete, the effort adds up. Implementing the proper automation strategy will allow you to forgo the constant repetition of those tasks. This results in cost reduction, predictability of quality, and reduction in the margin for error.

The translation process, for example, often involves dealing with a large number of files, each of which needs to be properly named and organized as part of the project. By allowing the computer to complete these small, routine tasks, the operator has more time available for the translation work itself. One of the best methods for automating tasks is the use of macros or scripts.

The Development of Macros and Scripts

The idea of automating tasks by computer has been around as long as computers themselves, which is unsurprising since computers were developed with task automation in mind. But users soon discovered that it's not just complex numerical equations computers are good for; their speed makes them ideal tools for small, repetitive tasks. As home computers became common in the 1980s, macros became popular as shortcuts for programmers, and then for average users. A number of programs such as SmartKey were soon written to help users create them.

There are several different types of macros. Keyboard/mouse macros map a sequence of keystrokes and/or mouse actions to an output sequence. A lengthy series of operations can therefore be performed multiple times very efficiently. They may be as simple as a shortcut key to save your work on insert your name into a document.

Other macros offer functionality more similar to that of a standalone program. These may take advantage of an application's built-in macro-creation functionality, and may involve scripting languages such as Visual Basic for Applications, which allows users to perform functions with most Microsoft Office products. There

are also dedicated macro or scripting applications which can perform independently within the operating system or other applications to perform tasks such as file naming and organization or even controlling the application itself.

Benefits of Automation

The most obvious benefit from using automation tools is saving time and therefore money. Not only does the use of tools such as macros mean an employee can spend more time performing skilled tasks, but in many cases both tasks can be completed simultaneously, meaning that you are essentially getting two workers for the cost of one while the script is running. A recent study performed by MultiLing showed that among one internal team, the consistent use of just three of their various automation tools results in annual savings of approximately \$20,000. These macros perform such tasks as creating .zip files of project deliverables, converting files to formats and encodings needed by developers and even dialing the phone.

In addition to direct cost savings, using automation realizes a number of other benefits for companies. As people perform the same tasks repeatedly, they tend to pay less attention each time, which inevitably results in mistakes being made. But when the task is performed by the computer, the result is equally accurate no matter how many times it is performed. Computers will never become bored with a task and give it less attention; there is a significantly reduced margin for human error.

The predictability that a macro brings to the result also facilitates the organization of files, because each file has been modified in the same manner. In the case of spreadsheet data formatting, for example, this means the resulting data is ready to be processed without concern regarding consistency. A zero in the data will never be read as an “o,” and every cell will have the same text layout. This predictability also has the added benefit of producing data that is accessible to additional macros, since macros and scripts not only produce predictable outputs, but require predictable inputs.

Macros are easy to create, using the many current macro-creation and scripting applications. They can

be created by any individual with a specific need, unlike a full software application that requires a more extensive programming knowledge to develop.

Another advantage realized through macro use is that the tasks they complete can be scheduled to either run at specific times, such as every Friday. They can also be programmed to operate in certain conditions, such as when the number of files in a given directory reaches a certain point or when a particular application is launched. This saves you additional time by not even needing to initiate macros every time they are needed.

Risks of Automation

Unfortunately macros have become known for their potential for viruses, namely those developed within the Microsoft Office environment. Because the macros execute functions automatically, they can be written in such a way as to compromise the security of a system. In the past, email viruses were often spread through the opening of attached files, which would then cause the macro to execute and infect the recipient’s system.

With current antivirus software, however, there is little risk of infection by macro. In addition, these risks relate to receiving an infected file from an outside source, rather than creating one yourself or purchasing one from a reputable vendor.

Another potential problem of automation comes from automation tools that fail to deliver anticipated gains in efficiency. In most cases, however, this can be addressed through proper strategic planning. A related issue is that of over-dependence on a particular tool, such as a macro, that is applied without regard for the original intent of the automation. In such cases, these tools may be applied in unnecessary situations, which may actually reduce efficiency. When automation tools become obsolete or superfluous, organizations should consider replacing them with new, relevant automation solutions.

Macro Creation Tools

The two most common macro development tools in use today for Windows-based machines are MacroExpress and AutoIt. For a beginner,

MacroExpress is the easiest to use, although it does require a licensing fee to use beyond the first month. It allows the user to build a macro using a large set of pre-programmed actions. Through its wizard like interface, a novice can produce a decent macro in minutes. Autolt is free, though less intuitive. It has a larger range of actions and scripts that can be used in building macros, which can then be turned into executables that can easily be shared with anyone. Those familiar with C++ or a scripting language will feel right at home with Autolt.

Both applications offer significant abilities to generate powerful and time saving scripts. There are also many off-the-shelf applications available which provide macro-like functionality, though limited in scope. For example, Bulk Rename Utility is a simple yet extensive application that allows for renaming massive amounts of files in a single click. Such applications can be used stand-alone or in conjunction with other more complex scripts to give the user significant automation flexibility.

Identifying Tasks for Automation

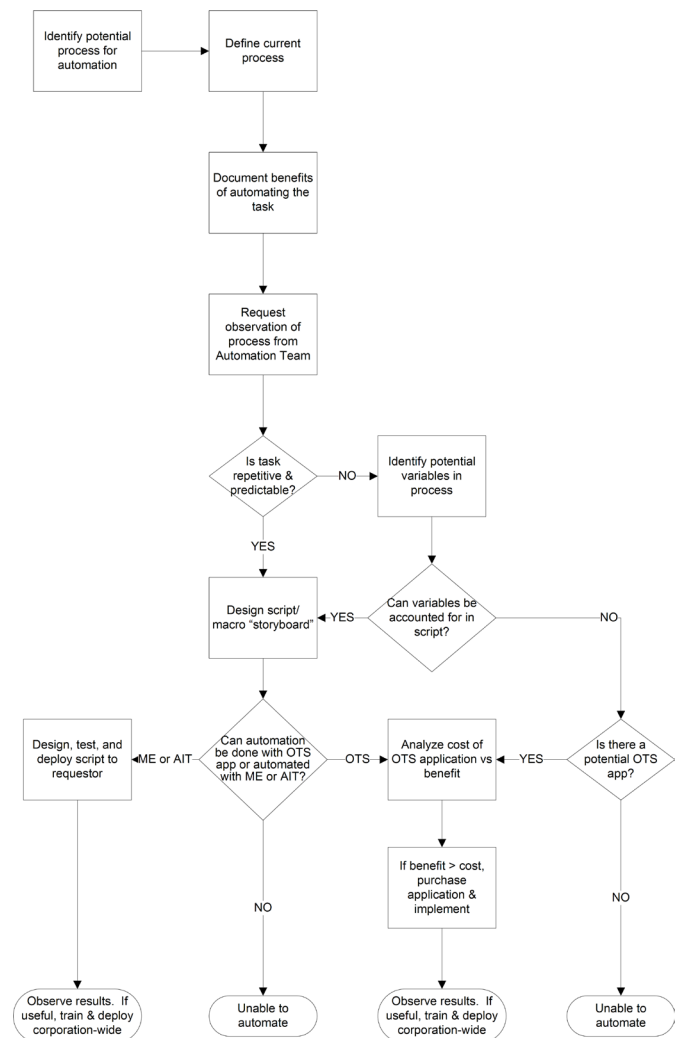
In order to identify tasks that can potentially be automated, you will need to evaluate your business processes. First, look for a task that is repeated on a regular basis, and carefully document it and its constituent processes. Identify the potential benefits of automating the task.

Next, identify potential variables in the process. If the variables are limited and conform to simple parameters, you can begin to consider the design for the macro itself

Next, consider whether there is an off-the-shelf solution for the issue. If so, consider the cost compared to the benefits you will realize from the automation.

Also, consider whether you could automate the process yourself, and how the cost and reliability would compare with the off-the-shelf solution.

If you decide to purchase or create the solution, carefully observe the results. Note the benefits and determine whether it would be advantageous to deploy the solution to others within your business.



Automation Feasibility Decision Tree

OTS = Off-the-shelf | ME = MacroExpress | AIT = Autolt

Conclusion

Macros offer a simple, effective automation solution that can save you time and therefore money in your office. These small, easy-to-create pieces of software can be adapted to any number of commonly performed tasks, from simple functions within an application to file organization within the operating system. By evaluating business processes and applying automation where possible, companies can save money, experience fewer errors and enjoy increased workplace efficiency.

About MultiLing

Founded in 1988 in Provo, Utah, MultiLing Corporation has developed into one of the premier players in the language services and technology industry. MultiLing operates translation centers in over 30 countries, providing translation, localization, and globalization services and translation technology to customers worldwide. Current clients include many Fortune 500 companies such as Dell, Procter & Gamble, IBM, Siemens, GE Healthcare, Loewe, Münchner Rück, and Renault-Samsung.

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Mr. Coombs joined MultiLing Corporation in 1999 and has served as Desktop Publishing Manager, Localization Manager and Project Manager. He currently serves as the Vice President of Project Management where he leads teams specializing in managing large-scale translation and localization projects for companies such as Dell, AMD, LSI Logic, Procter & Gamble, Promise Technology, and GE Medical Systems. During the last few years, Mr. Coombs has been heavily involved in the development of MultiLing's Fortis translation memory system, the Semantis terminology management system and the GoldenEye project tracking/workflow system. He is also a member of the Project Management Institute.

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