

# The usefulness of ICTs in interpreting practice

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## Abstract

*Drawing from recent developments and studies on the use of Information and Communication Technologies (ICTs) in interpreting practice, this paper is aimed at analysing and discussing the usefulness of Computer-Assisted Interpreting (CAI). The currently available technology will be explored in order to analyse the application of ICTs to interpreting practice, with the objective of assessing which technologies may assist interpreters in their real-life work, which forms of interpreting may benefit from these technological advancements, and to which extent interpreting rendition would benefit from the use of these new technologies.*

*The author will also consider the possible future application of ICTs in interpreting and on the way in which this sector may change in the future, in light of the need for this professional field to look to the future of communication and adapt accordingly to the trends of the Third Millennium.*

## 1. Introduction

Technology in the 21st century permeates everyday life. In the past two decades, the widespread incorporation of Information and Communication Technologies (ICTs) – that is computers, digital tools and the Internet – into society, has reshaped our way of living and working. The introduction of new technologies has led to a revolution in communica-

tion and in the way information is disseminated and accessed. Communicative exchanges are faster, the distance between interlocutors has been shortened, and information is always readily available. These technological advances have had a profound impact on the way business is performed in many fields and many professions have had to adapt to the new technological demands. Consequently, also the fields of translation and interpreting have followed in these global footsteps by incorporating the use of ICTs in their practice.

The aim of this paper is to analyse and discuss the impact technologies may have had on interpreting practice and what the future may hold in light of the need for this professional field to look to the future of communication and adapt accordingly to the trends of the Third Millennium. Both simultaneous (SI) and liaison interpreting (LI) will be considered and for the purpose of this paper, the term liaison interpreting will be used to refer to any form of interpreting outside the conference setting.

## 2. Interpreting and Technology

Interpreting is one of the most intense cognitive activities in which the human brain can engage (Mouzourakis 2000: 5) and interpreters perform an extremely strenuous task, where much effort is at stake in terms of decoding, memorizing and encoding a message. Interpreting is not a mere linguistic activity where words are transferred from one language to another. Performance is influenced by linguistic proficiency as well as knowledge of non-linguistic factors, namely, non-verbal expressions and gestures that come into play during an interpreting session that only the human mind and experience can grasp.

Interpreter performance is, undoubtedly, also facilitated by an adequate working environment and the availability of reliable equipment. In this respect, interpreting practice has undergone some changes over the years, but these developments have not yet been significant enough. One reason behind this may be the fact that interpreting is the second oldest profession in the world (Baigorri-Jalón 2004: 165) and may thus be slower in adjusting to technological transformation.

The first technological advance that changed interpreting occurred in the first half of the 20th century, when equipment for SI was introduced (Bowen 1994). Since then, interpreting booths have improved significantly in terms of soundproofing, console design and sound quality. Consoles have become increasingly digitalized, favouring quicker channel selection, more efficient microphone functions and clearer voice inputs and outputs. LI, on the other hand, can be performed without equipment and has only recently benefited from some of the new technological advances of the Third Millennium.

Overall, however, technological developments in interpreting have been extremely gradual, particularly if compared with the pace of technological adaptation that has characterized written translation. As Berber states (2008: 3), translation has received all the benefits of new inventions since the beginning of the information era in the 1980s. First the use of computers and word processing, then online access and transmission of documents and finally the introduction of Computer-Assisted Translation (CAT) have transformed the way in which translation is performed, facilitating the translation process, helping translators speed up their work and meet the constantly growing demand for translation because of globalization.

Computer-Assisted Interpreting (CAI) – the parallel of CAT – is indeed an acronym that has been a part of interpreters' vocabulary for the past two decades, but seems to have had little practical application in the profession. To date a limited number of studies has been dedicated to the practical use of ICT in interpreting (Berber 2008, Braun 2006, Andres and Falk 2009, Moser-Mercer 2005 a and b, Kalina 2010). More research has, instead, been focused on telephone interpreting (Andres and Falk 2009, Kelly 2008, Ko 2006, Lee 2007, Rosenberg 2007, Wadensjö 1999), on Computer-Assisted Interpreter Training (CAIT) and the development of efficient software programmes designed specifically to support trainees in developing their interpreting skills either in the classroom or for self-study (Gran *et al.* 2002, de Manuel Jerez 2003, Blasco Mayor 2005, Sandrelli and de Manuel Jerez 2007). So far, CAIT has proven to have had a positive effect on students' performance (Sandrelli and de Manuel Jerez 2007). It may be thus assumed that, in the practice of the profession, interpreting rendition may benefit from the use of technological aids. CAI may indeed be a major breakthrough in the interpreting field as it may provide a powerful solution enabling interpreters to improve both the quality and productivity of their interpretation services (Kelly 2009, Dynamic Language Newsletter 2008 at [www.dynamiclanguage.com](http://www.dynamiclanguage.com)).

However, questions have been raised, by both practitioners and researchers, on whether technological tools can actually improve interpreters' performance and professionalism and many interpreters have shown some degree of reluctance to the use of ICTs in their profession, as shown by Berber in her survey on the use of ICTs in professional interpreting settings (2008: 9).

Nonetheless, technology-driven changes are a reality of the Third Millennium and, whilst some of these advances have already led to some transformations in interpreting practice as will be discussed in section 2.1, other changes are likely to permeate the sector at a number of levels in the future.

## 2.1. Technological changes in interpreting

One of the main technological revolutions that has affected interpreting practice is the boom of the World Wide Web. The wealth of information available on the Internet in the 21st century is unprecedented, thus providing interpreters with specific thematic information and terminology during the preliminary preparation phase, helping them to deal more effectively with the complexity and variability of the subject matters they are asked to interpret. As Mouzourakis (2000: 4) states, the complex task of interpretation includes several factors, among which preparation plays an important part. Having the necessary information at their disposal before the interpreting task is crucial to interpreters to guarantee a good performance and today, access to information is no longer a difficulty.

Ready access to Internet has changed preparation and background knowledge acquisition: whereas in the past interpreters would spend hours tracking down information and found it particularly difficult to obtain up-to-date facts, they are now confronted with a surfeit of data. (Donovan 2006: 4)

The new goal pursued by CAI in the digital era for all forms of interpreting is the same objective Quicheron called for in 1995, when describing the future interpreter booth for the year 2000, that is, to have access to the maximum amount of information in the booth by electronic means.

In her article *Moving toward machine interpretation*, Kelly (2009) explains that computers and new technologies offer potential for easing some of the transfer burdens related to interpreting tasks, in that they can help interpreters in their real-time work providing them with quick access to a broader range of information in electronic dictionaries, databases and glossaries. These *powerful* technological CAI tools include terminology aids, such as laptops, notebooks, small handheld PDAs (Personal Digital Assistants) or similar instruments with Internet accessibility that may facilitate interpreters' work.

Theoretically, these tools should represent the most effective information interface when interpreting, but is their practical use feasible and does rendition benefit? The main drawback of the use of these tools is that it is still considered, at least in the booth, to some extent as unnatural (Donovan 2006: 5), presumably because it may be time-consuming and distracting in an activity that requires concentration and fast-paced decoding and delivery. The interpreter at work may not have the time or the cognitive ability to look up a word online or in his/her electronic dictionary, or detect and choose the correct translation of a specific term among the myriad of possible solutions that are generally offered by dictionaries. As Donovan specifies (2006: 5) the difficulty lies in sorting through the sheer mass of information. Online dictionaries or databases provide a wealth of information, which includes not only multiple variants but also fields of meaning and dates of acceptance (cfr. The

Interactive Terminology for Europe *termbase* at [iate.europa.eu](http://iate.europa.eu)), and thus, interpreters may find it difficult to look through such vast material. In addition, as Veisbergs (2007: 80) states, should the right word be found it may not be possible to incorporate it smoothly in speech. Even the help of the fellow colleague in the booth may sometimes prove useless in real-time oral translation, and may even slow down the interpreting process. The interpreter, when hearing something unknown, is often alone and has nothing to resort to but his/her own memory and mind (*ibid*: 77). A simultaneous interpreter at work cannot wait for more than half a second for a missing word otherwise his/her narrative would sound broken and the short memory be overburdened; a liaison interpreter, sitting in close proximity to his/her interlocutors, may find it impracticable to access glossaries or *termbases* through his/her handheld device either while listening to the source message or while delivering the target translation. For both types of interpreters, typing an unknown word on a laptop or PDA requires an additional time-consuming effort which would affect the already existing efforts that interpreters support during their work. The activity of searching for the right term may result in distraction and loss of concentration for the interpreter. In liaison settings, in particular, this distraction may even irritate the interlocutors and may cause the interpreter to miss out on essential non-verbal language and lose the *human closeness* that is the much praised characteristic and facilitator of LI (Wadensjö 1998: 145-150).

However, real-time terminology accessibility may sometimes be effective for the interpreter at work especially in the event of the repeated occurrence of terminology in both LI and SI settings. Moreover, CAI advocates state that the use of PDAs in liaison-interpreted encounters may, for example, be beneficial to the overall outcome of the interpretation because it reduces the time interpreters may need to ask for clarification (Kelly 2009: 5) in case of unclear concepts or utterances.

With regards to SI, a study conducted by Berber (2009: 71-84) on the use of ICTs by conference interpreters showed that some members of the profession are:

[...] more skeptical about the effectiveness of ICT on their work, some even referring to its interfering to listening and concentration or being altogether against considering ICT an integral or important part of interpreting. (*ibid*: 82)

but others, who stated to work largely with pen and paper, explained that:

[...] just as they make an extraordinary use of pen and paper for support, so should ICT be used, as support, not expecting to do the job for you. (*ibid*: 82)

This state of the art shows that, despite some wariness, part of the profession is aware of the importance of understanding new technologies and their impact on the profession with a view to increasingly be able to match today's working requirements of technology-driven, fast-paced services.

## 2.2. Machine Interpreting

Like the developments in the field of Machine Translation (MT), the movement toward Machine Interpreting (MI) will be incremental. Yet, while it is unfamiliar territory for most who concentrate on written language, some promising efforts to automate conversion have already taken place in the oral communication realm. (Kelly 2009: 16)

Despite the concern this statement may raise, practitioners ought to look to the potential support these instruments may provide in interpreting practice.

Companies such as BBN, IBM and SRI have developed what are known as speech-to-speech translation systems, which, as Dillinger and Gerber (2009) explain in their article on the use of machine translation in the US Government, are enabled by impressive leaps in speech recognition and machine translation technology and allow free flowing conversation between any two speakers of the source and target languages. These systems are the second generation technology that has come to life as a further development of the first CAI devices that were created to enable one-way oral translation through previously created authoritative translations.

One of the most widely used of these handheld devices is the *Voxtec Phraselator*, which is an interactive tool whereby users “utter a phrase or combination of phrases that they know to be among the material in the interpreting system” and the device “retrieves the translation and plays it out loud” (Dillinger and Gerber 2009: 10). These devices are currently primarily used by the US military deployed in conflict areas and have been designed to enable communication with the local forces and populations; they are especially important in situations where reading and writing are not practical, such as at military checkpoints, at medical intakes, when communicating in the dark or dealing with illiterate people.

The development of these tools for use in the field in difficult situations is understandable and, admittedly, very useful. However, their creators may need to focus their attention on possible drawbacks, such as inaccurate pronunciation and incorrect or incomprehensible translation, as illustrated in the example in Figure 1. It displays a BBN broadcast monitoring system, which is mainly used for television and web-based news sources in Arabic, and works with speech recognition software that transcribes the text and then automatically translates it into English in near real time (Dillinger and Gerber 2009: 9).

Dillinger and Gerber go on to say that this host of tools and technologies can facilitate interpreting in many more environments and invite to explore their commercial use.

Speech recognition software programmes may find a useful application in the interpreting sector. Undoubtedly, the potential of the human mind



Figure 1. Automatic translation from Arabic into English with BBN software (Dillinger and Gerber 2009)

and its ability to go beyond words and grasp meaning and nuances and clarify misunderstanding can never be replaced by machines, but these may provide fast-paced support to practitioners.

Voice recognition software programmes may be particularly helpful in SI: their installation in booth consoles or on laptops may be useful to create *termbases* through the detection of new or specialised terminology during real-time interpretation, which could be recorded and stored in their source and target versions.

A *termbase* that may be shared and constantly updated by practitioners may become a very useful tool for all interested interpreters. This advance would be particularly important since terminology access for interpreters is a necessity and terminology management is a fundamental part of an interpreter's job and professional development. The terminology needed by interpreters is often highly technical and specialised and, in some cases, even novel (Benhamida 1990, cited in Veisbergs 2007: 81), which means interpreters can be faced with words that cannot be easily found in standard dictionaries. For all these reasons, pooling interpreters' terminology resources can be of help for future reference to practicing professionals.

Moreover, having extendable *termbases* at hand which enable interpreters to retrieve a term quickly by the push of a button and see it

displayed on a screen in the booth could be highly useful and lighten the workload. Clearly, it may be argued that even this solution may hinder the interpreter's work in terms of timing, concentration and detection of the correct term that would fit the context. The main advantage would be the speed of application.

### 2.3. Remote Interpreting

Communication has changed dramatically since the 1980s and further transformations will affect the way in which we interact with the world around us and with others.

Technological changes affecting interpreting have taken place with the increasing use of distance communication technology and the advent of call conferencing, video conferencing and Skype. Indeed, distance or remote interpreting is increasingly becoming widespread as a consequence of the evolution of teleconferencing technologies, which link communicative partners at two or more locations, creating new opportunities for real-time interaction without the need for physical co-presence (Braun 2006: 1).

The most basic and oldest form of distance interpreting is telephone interpreting (TI), which was first introduced in 1973 in Australia to help immigrants arriving to the country (Kelly 2008: 5). Initially, TI could only be used to connect interlocutors from two locations, facilitating bi-lateral communication. Today, with the advent of mobile communication and round-the-clock access to broadband/Wi-Fi connections, these technologies have evolved to the extent that distance multilateral audio and video communication is possible, enabling more than two participants – including the interpreter – located in different parts of the world to interact verbally and visually.

The need for remote interpreting (RI) is developing for various reasons, the main one being cost-efficiency. International organisations, primarily the United Nations and the European Union, have already shown some interest in this form of interpreting at an experimental level and may eventually resort to RI to cut the costs of their interpreting services and, for the EU, to tackle the problem of a shortfall in booths following the rise in the number of working language combinations. As Donovan states (2006: 5),

[...] this seems a very likely development for reasons of cost (saving on travelling expenses) and spaces (particularly given the number of booths required at the European Institutions). There are also environmental considerations, with growing concern about air travel, as evidenced in a recent advertisement (France Telecom, April 2006) which read “replacer une réunion per un visioconférence, c’est aussi protéger un iceberg”.

To date, however, RI has only had a few practical applications, even though it is cost-efficient and timesaving. It provides quicker access to interpreters in areas and for languages where or for which no on-site local qualified interpreters are available (Andres and Falk 2009: 20). From the clients' perspective, RI has its advantages in that it can help reduce costs by saving on the interpreters' travel and accommodation expenses. From the interpreters' point of view, working remotely means being able to work from the office or from home without the need to travel long distances, and also possibly being able to take on more assignments.

All this, however, does not come without its disadvantages. RI is, in fact, regarded as one of the most difficult forms of interpreting due to the relevant drawbacks it presents. A number of experiments with remote conference interpreting have been conducted since the 1970s by the United Nations and more recently by the European Union. The first major remote interpreting experiments were the Paris-Nairobi ("Symphonie Satellite") experiment by UNESCO in 1976 and the New York-Buenos Aires experiment by the United Nations in 1978 (Moser-Mercer 2005 b: 5). A series of experiments was conducted by the European Institutions in the second half of the 1990s and then in 2000 and 2001 (ibid: 5). The United Nations explored the issue again in 1999 (United Nations 1999) and the European Parliament carried out the latest, most comprehensive study in 2005 (European Parliament 2005).

The results of these studies have shown that interpreters describe the experience of RI as negative, both physically and physiologically. As Mouzourakis (2000: 6) explains, the major disadvantage that is frequently mentioned is the unavoidable loss of visual information. By working from a screen, the interpreter is forced to perform an unfamiliar task, that of obtaining non-verbal clues from the speaker or the audience through a screen which often displays a fixed angle. These studies revealed that interpreters experience unusual fatigue, eyestrain and nausea, as well as loss of concentration, motivation and a feeling of alienation (Mouzourakis 2006: 52). These problems, as Mouzourakis goes on to explain, are unlikely to derive from inadequate sound and video quality, but rather from the condition of remoteness: the physical and psychological distance from the conference venue makes interpreters feel a loss of control.

And what about remote liaison interpreting? The general claim and belief is that RI may be more suited and feasible in liaison-mediated encounters. Nonetheless, remoteness may also have its drawbacks in these settings. As it has been shown mainly with studies on telephone interpreting (Mintz 1998, Swaney 1997, Vidal 1998, Wadensjö 1999), the lack of human contact with the interlocutors entails a loss of *closeness among participants* that is so important in these forms of interpreting. Remote liaison interpreters, even if they benefit from a video link, do not have the same type of contact or may not receive the same non-verbal clues that are so necessary to understand the meaning or intention of an

utterance. It would also be difficult for them to grasp the interlocutors' reaction, which is often fundamental to see if the information has been understood. This lack of closeness could place more strain on the interpreters, who may experience increased difficulty in interacting, managing speaking turns, and requesting further clarifications and may develop a sense of alienation and loss of control. These open issues need to be further researched to enable interpreters to cope with the new challenges of RI. As Andres and Falk (2009: 24) state, it is indisputable that the use of this form of interpreting is on the increase and for certain settings, RI may in the long run become a genuine alternative to traditional face-to-face interpreting.

### 3. Tentative conclusions: the possible future application of technology in interpreting

In an age where fast delivery of services, time saving and cost-cutting are a priority, it is highly probable that the interpreting sector will change in order to accommodate to the new trends. The ongoing spread of technologies is likely to reshape the future of interpreting, possibly leading to a wider use of the new forms of interpreting (LI and RI) in preference to the more traditional ones. "Does this mean that the simultaneous interpreter will be banned from the conference room and have to work from a video conference studio, just as the consecutive interpreter sitting in the conference room with the delegates was replaced by the simultaneous interpreter in the booth?" (Kurz 2000 in Andres and Falk 2009: 10). This may be the future working scenario for interpreters, given the search for cost-efficiency and the increased use of English as the *lingua franca* of communication and RI may become the preferred form of mediation in a foreseeable future.

As Donovan (2006: 5) explains, part of the profession expresses reservations about RI mainly for fear that interpreters will be ejected from meetings and relegated to remote backrooms and as she continues to say:

This mirrors early attitudes to simultaneous interpreting which was met with hostility and suspicion on the part of many interpreters. [...] They feared understandably that the new method would place them entirely in the background [...]. A similar pattern of rejection, fear and distrust can be seen over a possible shift from simultaneous to remote interpretation. (ibid: 5)

On the other hand, other conference interpreters state that the use of ICT ensures competitiveness in this age of fast information and the conference interpreter who cannot use ICT is at a disadvantage (Berber 2009: 83).

Technological development today is inevitable and the interpreting sector certainly needs to adapt if it wishes to keep up and meet new

market demands. Indeed, the full incorporation of technology in interpreting is still in its early days and more studies are needed to assess whether it can lighten and facilitate interpreters' work. The challenge for those concerned with interpreting studies is to constantly research the use of ICTs and CAI tools in interpreting, assess their feasibility, study the new strategies interpreters may need to learn to adopt and, eventually, transfer this new knowledge to the practice of training interpreters.

Clearly, what must be borne in mind at all times is the undisputed uniqueness of the human presence in interpreting practice. Interpreting – the oldest form of intercultural communication – can never become an alienating profession that will be performed through CAI tools, but rather a profession that will be increasingly supported by new technologies.

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