Computer terminology: problems in translating abbreviations and acronyms

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Abbreviations and acronyms abound in computer terminology to the extent that no other scientific or technological field contains a higher number of these particular types of words than this one. This poses a serious problem for translators and linguists since they must face the inexhaustible resourcefulness of the English language as regards this creative system. The Spanish language usually tends to follow English in technological matters and this is the case of computer terminology, so most of these words are never translated or are just partially adapted into our language. Throughout this paper I will focus on this rich and complex world of contracted words and on their multiple forms.

Acronyms are nowadays part of our everyday speech, but as most scholars have clearly shown, they were already used by the Greek and the Roman civilizations (M. Casado Velarde 1985; Petrucci 1989; Cannon 1989; F. Rodríguez and C. Garland 1992, etc.) although their number has considerably increased in the current century. The grammatical flexibility of the English language and its predominantly monosyllabic morphological structure have made it possible to use acronyms to an extent that other languages would find hard to reach. Acronyms are used today in nearly every cultural and scientific field of our lives (*T.V., C.D., E.U.*). Some of them have lost their specialized use and have been incorporated into the mainstream of our daily language, so the average speaker is usually unaware of their original nature, this being the case of *laser*. But many others are practically unknown to most of the ordinary people so the use of these terms, particularly in fields such as computers, becomes a mark of professional identity.

The world's biggest computer-producing company has an abbreviated name that is recognized everywhere on the planet: International Business Machines or *I.B.M.* The initials of this company served as a model for the name of a very famous computer, *H.A.L.*, in the movie *2001: A Space Odyssey* by Stanley Kubrick. H.A.L. was coined by putting together the previous letters of the initials I.B.M. in the alphabet (H-I, A-B, L-M) so this cinema director was actually placing emphasis on the power this fictional machine and of computers in general have in our world. Kubrick=s prediction has come true and current computer terminology constantly influences our language, as is clearly seen in the currently widespread use of words such as *Internet, e-mail, CD-ROM*, etc.

John A. Barry, an American computer engineer who worked in the past as the editor of a computer magazine at Silicon Valley, has clearly proved in a recently published book (Barry 1991: 93) how most of the currently existing computer companies invented their names by combining three or more words out of a reduced list formed by very few adjectives. There is even a company in San Francisco called *NameLab* that hires professional linguists, experts at combining morphemes, to come up with suggestions for catchy company names. One of these names they created was *Compaq*, a very successful company whose name suggests the combination of *computer* or *communications* and *package* in English.

But computer abbreviations are not restricted to company names, they may be shaped into any kind of English word, so they can be a common noun, an adjective, a compound, etc. This is due to the flexibility of the English language, which makes it possible to turn nouns into verbs, verbs into nouns, adjectives into adverbs, etc. Consequently, the functional shift of certain words and the paramount abundance of abbreviations in computer terminology prevent most newbies and computer-illiterate people from properly understanding the exact meaning of these texts. Ironically, these contracted forms are generally used for technical reasons in order to avoid wordy descriptions and too long names. But the sometimes abuse of abbreviations makes this language become a dark and indecipherable jargon for the majority of the people such as: "XERCOM today announces a CMOS-based EPROM module conforming to all MIL-SPEC Parameters and interfacing to ROMable/RAMable ASCII/ANSI devices" (Barry 1999: 38). Spanish may be rich in other word-formation processes but it lacks this capacity for creating new words by means of contracted forms. This is partly due to the morphological structure of our vocabulary, since Spanish words are mostly polysyllabic in contrast with the English counterparts, so it is difficult to translate most of these computer abbreviations from English into Spanish without losing the original structure and/or the connotations transmitted through such words.

Generally, one of the first problems we must face when dealing with abbreviations in computer terminology is that there is no agreement on the definition of all these terms (abbreviation, acronym, etc.) among scholars. The most widely accepted theory states that abbreviations are words composed by initial letters which are read as a series of initials (ai-es-pi for *I.S.P.* or Internet Service Provider) whereas acronyms are abbreviations which are read as a full word (rom for *ROM* or Read Only Memory). This idea is supported by several linguists (Bauer 1989; Aguado de Cea 1993, etc.), but other scholars disagree on this and use different terms for the same words. Adams in a widely celebrated book stated that "acronyms may be pronounced as words, for example UNESCO, or as a series of letters, for example BBC" (Adams 1973: 136).

In Spanish, this matter is even more complex as some linguists have introduced new terms into this debate, so some scholars use nouns such as *sigla* versus *sigloide* (Velarde 1985), *abreviatura* versus *literaciones* (Rodríguez 1993), etc. To complicate matters and partly as a result of this lack of clear-cut definitions, linguists also disagree on where is to be found the bound-

ary between this particular type of process and other word-formation processes, i.e., abbreviation and blending, abbreviation and derivation, etc. Therefore, I will follow in this article the most widely accepted theory provided by Bauer (1989) as previously explained.

On the whole, some of the most distinctive features of abbreviations are their ephemeral and unpredictable nature and their scarce productivity. It takes a long time to accept a new word and bring it into the standard form of a language, but abbreviations, and particularly computer abbreviations, appear almost every day as new soft- and hardware products are constantly created and most of them bear a contracted form such as: *IRC, MS-DOS, WWW*, etc. Some of these computer abbreviations were created a few decades ago and are still widely used, so they have been part of this jargon for a relatively long time, this being the case of *ASCII* (American Standard Code for Information Interchange), *RAM* (Random Access Memory), *PC* (Personal Computer), etc. But there are also computer abbreviations which have come out to light very recently such as *www* (world wide web), or *MP3* (MPEG-1 Audio Layer-3).

Generally speaking, we may classify contracted forms depending on their phonological realization into abbreviations and acronyms. Abbreviations are pronounced as a series of letters and their use has been constantly increasing in computer terminology such as *AGP, BPS, CGI, CD, DNS, FTP, HTML, HTTP, IP, IRC, MP3, PGP, PPP, SMTP*, etc.[1]

These examples represent a very reduced number of computer abbreviations as their number may rise to hundreds if you search on the databases of some of the net sites present on the Internet. Some of them are very popular like *PC* that stands for Personal Computer, so its translation into Spanish seems to be quite easy, *ordenador personal*[2], and the resulting Spanish abbreviation should be O.P. But this abbreviation has never been used. So there are two options in this case, the first one is providing the full expanded form in Spanish, i.e., *ordenador personal*, but the abbreviated form here is lost; a second very common option is to use the English abbreviation but with a Spanish pronunciation, so PC /pi: si:/ becomes PC pronounced in Spanish as *pecé*. Similarly, the popular initials www (world wide web) were unsuccessfully translated by the *Instituto Cervantes* as *mmm* (*malla máxima mundial*), so the wordplay (a letter repeated three times) would be maintained, but the English *www* is still the most common option in our language. These are cases of pure English borrowings, as these words are taken into Spanish with-

out any previous adaptation to the common rules governing our own system. The only traces of a possible adaptation are the plural morpheme, like in PCs, and the graphical accent sometimes included on the last syllable, *un pecé*.

However, some of these English abbreviations are partially translated into Spanish by placing a noun before them, but in most cases the noun is redundant as it generally means exactly the same as the last initial of the English abbreviation. There are several examples in the Spanish jargon such as LCD (liquid crystal display or *pantalla de cristal líquido*) which is often translated into Spanish as *pantalla LCD* where *pantalla* and the *D* in display have the same meaning.

Finally there is a very reduced group of abbreviations that have been successfully translated into Spanish and its contracted nature has been maintained, namely CRT (Cathode Ray Tube) and TRC in Spanish for *Tubo de Rayos Catódicos*, or the most widely accepted option, the Spanish synonym *pantalla*. But this represents an exception to the common tendency which is the first case, i.e. the adoption of pure English abbreviations.

Acronyms make a second important group among these contracted forms. In this case the initials are pronounced as a full word, not just as a series of letters and they are never translated into Spanish, which adopts them in their pure form even if their phonological realization differs considerably from our common rules. Examples are *ASCII, BIT, CAD, FAQS, GIF, LAN, MUD, RAM, ROM, UNIX*, etc.

The case of ASCII was mentioned previously. Spanish computer professionals tend to reproduce the same pronunciation as their English counterparts so they say *aski*. A similar example is *FAQS* for Frequently Asked Questions often included in some software programs as *Preguntas Más Frecuentes* but they are never contracted into *PMF* in Spanish when they are translated.

Like abbreviations, acronyms are sometimes preceded by a noun such as GIF (Graphics Interchange Format) which on some occasions is partially translated as *formato GIF* so that again the last F and *formato* in Spanish are repetitive. The most well-known examples in this case are probably RAM (Random Access Memory) and ROM (Read Only Memory) which are adapted into Spanish as *la memoria RAM/ROM* where *memoria* and the *M* of RAM and ROM are yet again redundant.

A final subgroup under this heading would be represented by those very few acronyms which had an alternative in Spanish such as Bit, resulting from the combination of binary and digit, which could be translated according to the *Real Academia Española* as *bitio, bite* or *dibín*. This is a clear example of an early computer word that appeared at a time when abbreviations were not as abundant as they are today so that institutions of several languages attempted to translate them. Unfortunately these proposals for a Spanish contracted translation have been even more unsuccessful than in the previous case so few people nowadays say *bitios*, they prefer to use the English term *bits* instead.

There is a third group of contracted forms that should be treated separately as their structure has some special connota-

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1. For the definition of all abbreviations and acronyms that are mentioned throughout this paper see Fernández Calvo (1996), Alarcón Álvarez, E. (1999) and Gil Pizarro (1999).

2. Both terms, *computadora* and *ordenador*, are of foreign origin. *Computadora* is the word widely used in American Spanish and comes from English whereas *ordenador* is the Spanish translation of its French counterpart *ordinateur*. Spanish used to follow the French language in the coining of new computer terms during the earlier times. This is the reason why American and European Spanish sometimes differ in matters of computer terminology: *computadora, ordenador, computación-informática*, etc

tion. There is generally a wordplay involved that is hard to maintain when translated into Spanish. This is the case of *ICQ*, one of the most popular chat programs, which, if pronounced in English as a series of letters (ai-sik-yu), becomes a very meaningful sentence in English (I seek you or *yo te busco*), which is what most chatters do on the net through chat programs, i.e., they seek someone. So this name is an example of a deliberate wordplay by means of a contracted form which cannot be translated into Spanish without losing part of its meaning. Here the most reasonable option seems to be to treat it as a trademark, since it is a commercial software program, and therefore to keep its original nature and then explain the word-game involved in it by means of a footnote. Another example of word play-based contracted form is *CU-SeeMee* which finds a very common translation into Spanish as *te veo-me ves* but here the translation corresponds to the expanded form so the visual wordplay of a combination of an abbreviation and two terms is lost. A radical example of impossible translation into Spanish is represented by the popular software program *WYSIWYG* (What You See Is What You Get) which in English is pronounced as a full word (wi-zi-wig) and thus should be treated like an acronym. It seems impossible to pronounce such a series of consonants in Spanish as this type of phonological construction never appears in our language so the only possibility left is to keep the original English form and to provide a translation in Spanish as is usually done: *Lo que ves es lo que tienes.*

As was stated before, the flexibility of English makes it possible to combine abbreviations and acronyms into more than just one single contracted form to the extent that computer jargon also abounds in abbreviated compounds which are usually separated by a hyphen or a slash in case both parts of it are abbreviations such as *CD-ROM, CD-RW, TCP/IP,* or a full noun precedes the contracted form such as *Active X* or *User ID,* or the contracted form comes first immediately before a noun that can be separated such as *IP address* or it can be hyphenated as in *e-mail, e-com, e-business, e-zine* (from *electronic*), *I-phone,* or these abbreviated compounds can even include a number, therefore adopting multiple forms through different combinations (abbreviation plus number/s, full noun plus abbreviation plus number, hyphens, etc) as in *Accelerator D3, MP3, W3, POP3,* etc.

There is finally a last group of contracted forms which result from the abbreviation of one part of the word, so they do not keep only the initial letters but also whole syllables while dropping others at the same time. This process is known as blending and English computer terminology is rich in such word formations. Some of these words have been successfully translated into Spanish as in the case of *emoticon* (emotion and icon) and *emoticono,* or *modem* (modulator and demodulator) and *módem.* But others have caused more problems for their translation and several alternatives exist as in the case of *netizen* where a wordplay is clearly intended (Internet and citizen), which has been usually translated into Spanish as *ciudadano de la red* even if a more original options were proposed as *ciuredano* (the middle syllable *red*

indicates the second part of the blending, *red* for Internet) or *ciberciudadano.* But there are also some blends which for some reason did not find a proper translation into Spanish, since the resulting translation widely adopted in Spanish makes it lose its contracted nature like *transceivers* (transmitters-receivers), which is usually translated by separating its components as *transmisores-receptores,* though *transceptores* would be closer to the original meaning and structure in English.

The world of abbreviations and acronyms in computer terminology is a complex but attractive one. It is a complex world because of their multiple combinations and their unpredictable nature and because most of these forms are hard to translate into other languages without losing part of their nature or their meaning. But contracted forms also represent a very creative word-formation process which takes the professional and the speaker in general into a world of imagination and creativity where language becomes a game where one must play with words just as children usually do.

One of the most important challenges for the next century will be to adapt our tongues to our future purposes and computer abbreviations in general will increase considerably in those languages spoken by the technologically most advanced countries. Only imagination can help us solve these problems related to translation, because as Milton said "Invention almost the only literary labour which blindness cannot obstruct".

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