CHINESE IT TERMINOLOGY MANAGEMENT IN HONG KONG

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1. INTRODUCTION

Terminology work, particularly the harmonization and standardization of terminology, has been carried out by subject specialists of all fields for centuries to facilitate efficient subject communication and knowledge organization. Wherever and whenever specialized information and specialized knowledge are being prepared, processed, represented, transformed and transferred, terminology is accorded a crucial role. Wright and Budin (1997:327) refer to terminology management as *"any deliberate manipulation of terminological information."*

However, the literature on terminology processing reveals much about the principles of adjusting in general but does not discuss the sources and circumstances of problems. Also, while a fair amount is known about terminology management in Europe and the US, relatively little has been written about in Hong Kong. There are considerable gaps in knowledge in this aspect, both with reference to Hong Kong's situation in general and in particular subject areas. To fill the gaps there are a series of questions which require answers. In terms of Chinese IT terminology, for example, we need to know:

- What are the terminology problems in Hong Kong?

- Why are there such problems?

- Who claims what to be problems?

- Who standardizes the Chinese IT terminology in Hong Kong?

- Why and how do they standardize terminology?

- What if any are the actual discourse problems in using the terminology?

- How do people in discourse, on-line and off-line, manage terminology?

The reason for this neglect is understandable: subject specialists who are capable of identifying and distinguishing the subtlety of technical concepts (such as IT) are not usually interested or linguistically trained to undertake this work; linguists, on the other hand, rarely have the detailed subject knowledge to produce reliable evidence for determining the regularities underlying processes of term formation and adjustment.

Terminology work in Hong Kong seems to be accorded little importance. Where there is no perceived need for terminology development, there are no funds for this work, and where there are no funds there can be no activities. In such cases it is only possible to develop theoretical positions. However, in the absence of testing grounds, these cannot then be developed into practical guidelines and methodologies. The type of terminology work done for many years in Europe, e.g., by TNC (a Swedish Terminological Centre) in Sweden and TSK (its Finnish equivalent) in Finland, is yet an uncharted domain of enquiry in Hong Kong; it is, therefore, not surprising that little progress has been made in developing standardized territory-wide applicable guidelines for the processing of technical terminology including those in IT areas.

Terminology work has always been described as an interdisciplinary activity (e.g. Sager, 1990:3; Cabré, 1999:9) rather than a subject in its own right. To address oneself to so large a subject in the context of globalization (one to which the next section is dedicated) is to invite trouble. As the subject could be approached in so many different ways, it is important at the outset to set the boundary for the analysis in this paper.

This paper aims at explaining links between kinds of Chinese IT terminology problems and kinds of decision-making. The paper relies on the language management model (cf. Jernudd and Neustupný 1987, 1991). This paper also aims at describing the Chinese IT terminology work carried out by standardization bodies in Hong Kong. It highlights the significance of terminology unification in achieving efficient communication in such an emerging revolutionary communications environment as that of Hong Kong today.

2. BACKGROUND TO THE STUDY

Cabré (1999:3) has noted a paradoxical phenomenon in terms of the status of languages in the context of globalization.

"On the one hand there is a trend towards monolingualism across cultures which is justified by the need for direct and efficient communication; on the other hand, national languages are being recognized as the natural tools of communication at all levels of usage, whether general or specialized."

The rapid development of IT as well as worldwide networking of databases has made parallel usage of several languages a matter of course. The very basic need for people to communicate demands a local language. Talk amongst the technologically élite in English is a discourse which has little meaning for a lot of people in many contexts of the society:

"I am convinced that exogenous languages cannot withstand the force of indigenous languages. Indigenous languages may be oppressed or their populations marginalized for whatever social, economic or political reasons to such extents that they perish. But as long as indigenous languages have support in a community of

speakers, their very presence and use exert pressure of acceptance and of being given a place and of extension of their use from within families into broader social and public contexts" (Jernudd 1997:18)

Like all kinds of businesses, IT of various sorts is expanding its influence across national boundaries into culturally and linguistically foreign territories. Localization follows in the wake of globalization. Most people would prefer to communicate in their own language. This is the same as the preference for people to buy products localized to their country, that is, products that have interfaces and documentation in their usual languages.

It might be true that talk amongst the technologically and educationally élites is in most cases conducted in English, which is the lingua franca in the domain of sciences and technologies. A discourse of such, however, has little meaning for a lot of people in many contexts of the society. Wang (2000:38) highlights the significance of translation (that is, localization) in the present stage of globalization since translation always stands between two languages and societies and thus it assumes an important role of *"intercultural communication in a context of globalization"*.

In Hong Kong, localization of IT terminology in a lot of cases surfaces as ad-hoc bilingual glossaries in newspapers or magazines. It also surfaces as issuance of formal glossaries by professional or governmental bodies. Since 1995, for example, the Hong Kong Computer Society has systematically been trying to further the use of standardized Chinese IT terms to promote effective communications within the trade. Three government bodies, namely the Information Technology Services Department, the Official Languages Agency, and the Curriculum Development Institute Council, have also since 1997 developed standardized IT bilingual glossaries for both internal and external communication.

3. IS THERE A TERMINOLOGICAL PROBLEM?

3.1 Laissez-faire?

In Hong Kong today, almost everyone comes in contact with computers. We are increasingly adopting new communications environment such as the Internet, e-mail and video conferencing. In most cases, when it comes to what could be agreed as the Chinese term for a specific IT term, there is variation which requires choice by translators, editors, interpreters, technical writers, and terminologists. How should they choose? And if there is a gap, how should they proceed? The word *"internet"*, for instance, has been rendered into at least four different translations (data taken from *Chinese Database Development Bulletin* 《詞庫建設通訊》 #17, Sep 1998, published by the Hong Kong Chinese Language Society 香港中文語文學會 1998 年 9 月總第 17 期) and they include:

Translations	Pronunciation*	Literal meanings
1.互聯網	wuh lyuhn mohng / hu lian wang	互 mutually / 聯 united / 網 nets
2.互連網	wuh lihn mohng / hu lian wang	互 mutually / 連 linking up / 網 nets
3.網際網	mohng jai mohng / wang ji wang	網 net / 際 inter-; among / 網 nets
4.網間網	mohng gaan mohng / wang jian wang	網 net / 間 among; space in between / 網 nets

* top line denotes Cantonese pronunciation; bottom line denotes Putonghua (same for the next table)

The term *"Internet"* has even more Chinese names (ibidem):

Translations	Pronunciation	Literal meanings
1.互聯網	wuh lyuhn mohng / hu lian wang	互 mutually/ 聯 united/ 網 nets
2. 國際網絡	gwok jai mohng lohk / guo ji wang luo	國際 international/ 網絡 network
3.國際資訊網絡	gwok jai ji seun mohng lohk / guo ji zi xun wang luo	國際 international/ 資訊 information/ 網絡 network
4.國際互聯網	gwok jai wuh lyuhn mohng / guo ji hu lian wang	國際 international/ 互 mutually/ 聯 united/ 網 nets
5. 英特網	ying dahk mohng / ying te wang	英 特 ying te, transliteration of "Inter(net)"/ 網 nets
6. 因特網	yan dahk mohng / yin te wang	因 特 ying te, transliteration of "Inter(net)"/ 網 nets
7.交互網	gaau wuh mohng / jiao hu wang	交 cross;intersect/ 互 mutually/ 網 nets
8.全球互連網	chyuhn kauh wuh lyuhn mohng / quan qiu hu lian wang	全 球 global/ 互 mutually/ 聯 united/ 網 nets
9.國際電腦網絡	gwok jai dihn nouh mohng lohk / guo ji dian lao wang luo	國際 international/ 電腦 computer/ 網絡 network
10. 國際計算機互聯網	gwok jai gai syun gei wuh lyuhn mohng / guo ji ji suan ji hu lian wang	國際 international/ 計算機 computer/ 互 mutually/ 聯 united / 網 nets

Many English IT terms have been rendered into various different Chinese translations. Some language authorities claim this is a problem — something which we will discuss below. Examples abound: *Java* can be *jiawa yuyan* 佳娃語言, *guawa yuyan* 爪哇語言, or *Java-yuyan* Java 語言; a *mailing list* becomes *hanjian fasongqingdan* 函件發送清單, *youjian qingdan* 郵件清單, *youjian liebiao* 郵件列表,

or *youdi liebiao* 郵遞列表; *virtual reality* has more than ten Chinese names, such as *dianxiang* 電象, *xunishijing* 虛擬實景, *xunixianshi* 虛擬現實, *xunizhenshi* 虛擬真實, *xujing* 虛境, *nizhen* 擬真, *lingjing* 靈境 and *youzhenxianshi* 猶真現實; *Cyberspace* has even more, and they include: *wangluo kongjian* 網絡空間, *diannao gongjian* 電腦空間, *dianxiang kongjian* 電像空間, *duowei kongjian* 多維空間, *duowei xinxikongjian* 多維信息空間, *yidu kongjian* 異度空間, *wangluo xinxikongjian* 網絡信息空間, *dianzi kongjian* 電子空間, *saibo kongjian* 賽博空間, *shuzi shikong* 數字時空, *diannao shijie* 電腦世界, *wangluo shijie* 網絡世界, and so on![1]

3.2 The Problem: Can We Tolerate Ambiguity?

How do people handle this rich offering of vocabulary? Comments in the *Newsletter of East Asia Forum on Terminology* (3:1, 1999) highlights the difficulties in standardization work when faced with "bad" translations:

"'Bad' terms based on inappropriate translation, once established by popular usage, become hard to revise. We have to accept many of these bitter fruits while we meet with great resistance in popularizing the corrected version. Moreover, few term systems have been established that conform with the standards set out in GB terminological documents. Lots of inconsistency between the terminology of various fields of science and technology remain to be harmonized."

When communicating parties attribute different meanings to the same word, or when there is insufficient communication because of choice of imprecise expression or different or inappropriate translation, the consequences can be costly or dangerous. Sometimes it costs only a loss of face but in a technical context it could cost a lot!

The problems can potentially be compounded when the Chinese names are expressed differently in different Chinese-speaking regions, such as Hong Kong, Taiwan, China, Singapore, Malaysia, and so on. Ways of translating foreign terms into Chinese may be many. Translators and technical writers might wonder which name is more appropriate: 網絡空間 (*wangluo gongjian*/network space), 電腦空間 (*diannao gongjian*/computer space), 電像空間 (*dianxiang gongjian*/electronic space), 多維空間 (*duowei gongjian*/multi-dimensional space), etc., are all used to refer to the *Cyberspace*. Journalists and the public may not understand each other when 黑客 (*heike* / black guest) and 駭客 (*haike*/shocking, horrifying guest) are used for *hacker*; or when 電子信函 (*dianzi xinhan*/electronic letter), 電子信件 (*dianzi xinhan*/electronic mail), 電子函件 (*dianzi xinhan*/electronic correspondence), or 電子信箱

(*dianzi xinxiang*/electronic postbox) are used interchangeably for *email*, even though in the same language texts. News from 環球信息網 (*huanqiu xinxi wang*/globalized information network) may not be seen as identical to that from 環球網 (*huanqiu wang*/globalized network), 萬維網 (*wanwei wang*/multiple dimensional network), or 全球瀏覽系統 (*quanqiu liulang xitong*/worldwide browsing system), all of these in fact refer to *WWW*!

What problems do people claim there are? Who make such claims? Why? What are the actual discourse problems? Do claims and experience of problems coincide?

4. WHO CLAIM WHAT PROBLEMS?

This section examines how individual users such as terminologists, translators and subject specialists respond to terminology problems and what they claim to be the term problems by looking at the decision-making behavior for problem-solving, that is, the links between the kinds of language problem and kinds of decision-making.

4.1 Data Collection

During the course of this study the researcher has established a link with the China National Committee for Terms in Sciences and Technologies (CNCTST), an organization in China authorized by the State Council of the PRC Government to examine and approve, promulgate and supervise the scientific and technological terms on behalf of the Chinese government. CNCTST is based in Beijing and is charged with promoting the development of national standards as a means to facilitate communication, and is the principal standardization body for terms in sciences and technologies used in China. It also aims at comparing and analyzing terminology used in Hong Kong and Taiwan in the hope of unifying usage among different places in the long run.[2]
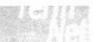
The data discussed in this section is mainly based on the analysis of questions and discussions extracted from journals published in both China and Hong Kong.[3] These journals discuss terminology issues from different perspectives by users (contributors) including subject experts, information specialists, terminologists and translators. There is data on "who asks what questions and on why",

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2 CNCTST has provided valuable information and materials to this study, including a generous donation of two complimentary copies each of their quarterly journal, the Chinese Science and Technology Terms Journal 科技術語□究, published between Dec1998 to Jun 2000.

3 They include: Chinese Science and Technology Terms Journal 科技術語□究 (published by the China National Committee for Terms in Sciences and Technologies 全國科學技術名詞審訂委員會); Chinese Science and Technology Translators Journal 中國科技翻譯 (Published by the Translators Association of the China National Science Academy 國際譯聯(FIT)會員組織中國科學院科技翻譯工作者協會); Chinese Language Review 中國語文通訊 (Published by the Hong Kong Chinese Language Society 香港中國語文學會); Database Development Bulletin Ciku Jianshe Tongxun 詞庫建設通訊 (Published by the Hong Kong Chinese Language Society 香港中國語文學會); Translation Quarterly 翻譯季刊 (Published by the Hong Kong Translation Society 香港翻譯學會)

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1 adapted from *Chinese Database Development Bulletin* 《詞庫建設通訊》 #17, Sep 1998, published by the Hong Kong Chinese Language Society 香港中文語文學會 1998 年 9 月總第 17 期; and *Chinese Science and Technology Terms Journal* 《科技術語研究》 #1, Dec 1998, published by the China National Committee for Terms in Sciences and Technologies (CNCTST) 全國科學技術名詞審訂委員會 1998 年 12 月總第 1 期

and "who claims what are the problems", and the data often includes notes on suggested adjustment. The articles reveal how subject specialists, linguists or translators evaluate Chinese IT terms, they reveal aspects of metalanguage and they offer evidence of peoples' theories, if any, about vocabulary, and reveal both linguistic and non-linguistic interests.

4.2 The Term Conflicts

We organize our discussion according to a classification of term conflicts that characterize sets of term problems:

1. Conflicts between a norm and its variants

2. Conflicts between official norm and common usage

3. Conflicts between two different norms carried by two populations

4. Conflicts in the norm itself

4.2.1 Conflicts Between a Norm and its Variants

Disk and disc

A major debate flared up around giving an appropriate name for "*disk*" and "*disc*". It was apparently initiated by journal issue No. 1, Mar 2000 of CNCTST, and was followed by a number of articles contributed by subject specialists.

The discussion has provoked heated debate, since a recommended solution to the problem of one single term will mean a solution to the naming of all the other terms and compound words derived from the concept of *disk* and *disc*, such as the correct naming of CD, CD-ROM, CD-DA, CD-R, VCD, DVD, etc. Participants to the discussion (and negotiations for a solution) on this particular issue are four subject specialists.[4]

Compact disc and its variants

The norms (i.e. the standard names that were announced by the IT Services Department in Hong Kong) for *compact disc* is 光碟 guang die (small bright plate), but there are also many variants to these norms, especially to the term *compact disc*. Debaters charge there is confusion in usage because of the availability of variants. One line of thinking (Zhang, Yang and Lin) proposes that *disk* should be translated into 碟 dié (small plate) and *disc* into 盤 pán (plate), as *disk* and *disc* denote different concepts in English. Another line of thinking (Tian) proposes that no differentiation should be made between the two terms in the translation, and both "*disk*" and "*disc*" should be rendered into one single translation.

Zhang claims that a serious confusion in the use of translations for two widely used terms *disc* and *disk* and

their derivatives such as CD, CD-ROM, VCD, DVD, etc., may be noted in discourse, especially in the contexts of "*science and technology, manufacturing, commercial communication and daily life*".[5] He observes that there are more than ten competing names for the term CD (compact disc), although he has not given any on-line discourse examples. The competing names include: CD 碟 (*CD die/CD small plate*), CD 盤 (*CD pan/CD plate*), 光碟 (*guangdie/small bright plate*), 壓印光碟 (*yayin guangdie/small pressed printed bright plate*), and 壓縮光盤 (*yasuo guangdie/small compressed bright plate*), etc. (ibidem). He diagnoses this as a term problem, since these terms deviate not only from the norm, but also from the original concepts denoted by the term *disc* and *disk*. Zhang evaluates the variation in usage as inadequate, and, therefore, a term problem; and CNCTST asks for suggestions for possible unique terms.

Zhang tries to analyze the source of the problem (ib.:10) as:

"*Disk and disc were two same words with the same meaning in the past in China and in overseas countries, especially before the widespread use of disc. There was no distinction between the two terms and so they were used interchangeably. Since the middle of 90s, however, disk and disc have been distinguished as separate terms by some influential and authoritative dictionaries of computing and related subjects published in the US and the UK.*".

He quotes definitions from references to support his evaluation that disc is "*a round, flat piece of non-magnetic, shiny metal encased in a plastic coating, designed to be read from and written to by optical (laser) technology*"; while disk is a "*round, flat piece of flexible plastic or inflexible metal coated with a magnetic material*".

He evaluates that *disc* and *disk* refer to two different concepts, and anticipates problems in discourse when the two terms are translated into one single Chinese name. From the terminology perspective, if that is the case, the one-to-one correspondence between the terminological and conceptual systems will be violated; the result of which will possibly be misunderstanding and communication breakdown. The need for a semantically motivated distinction between *disc* and *disk* is highlighted by Zhang as a means to solve the problem.

Zhang (ib.) hence proposes a solution to the problem:

"*Disk is used to signify cipan 磁盤 (magnetic plate) and its derived compounds, such as magnetic disk, cartridge disk, floppy disk, hard disk, and disk array; and disc is used specifically for guangdie 光碟 (small bright plate) and its derivatives, including optical disc, laser disc (LD), compact disc(CD), digital video disc(VCD), and disc array.*"

The adjustments he recommends is to render *disc* into guangdie 光碟 (small bright plate), or die 碟 (small plate) in

short; and *disk* into *cipan* 磁盤 (*magnetic plate*), or *pan* 盤 (*plate*) in short, so as to distinguish the differences of *disc* from *disk* in the conceptual systems to avoid misunderstanding in discourse.

As an authoritative standardization body in China, CNCTST collects views from all these participants in order to develop national standards as a means to facilitate communication. Fang Jing, the deputy head of the editorial office of CNCTST's journal, in one of her letter to the researcher, expresses her recommendation as:

> "The terms guangpan 光盤 (*bright plate*) and guangdie 光碟 (*small bright plate*) are problematic enough. We prepare to adopt the views as proposed by Lin and Yang in issue No.1,1998 and to collocate guang 光 (*bright*) with die 碟 (*small plate*), and ci 磁 (*magnetic*) with pan 盤 (*plate*). Cipan 磁盤 (*magnetic plate*) will become the equivalent for disk, and guangdie 光碟 (*small bright plate*) for disc. There are still different views here and we will later call upon a final meeting in order to standardize the names for them." (Fang Jing, letter to Aman Chiu, 30 June 2000)

4.2.2 Conflicts Between Official Norm and Common Usage

Another kind of term conflict concerns the enforcement of an official norm over a common usage. A case in point is the negotiation for a more appropriate name for *Internet*.

Internet: hulianwang VS yintewang

The term *hulianwang* 互聯網 (*mutually united nets*) has been used widely to refer to the English term *Internet*. *Hulianwang* 互聯網 (*mutually united nets*) is also a standard name used in Hong Kong. CNCTST in Beijing unanimously placed itself in 1997 behind using *yintewang* 因特網 ("*yinte*" *nets*), which is the transliteration for *Internet*, but some users note it as a term problem, and want the simple *hulianwang* 互聯網 (*mutually united nets*) to remain.

Fang (1999) criticizes the prescriptive function of CNCTST when *Internet* officially became *yintewang* 因特網 ("*yinte*" *nets*). He also pinpoints a mostly likely cause for the continued use of *hulianwang* 互聯網 (*mutually united nets*) to refer to *Internet* in discourse, especially in daily life:

> "I am in school every day, and in here you almost cannot hear the word yintewang, since hulianwang has already become part of our school life here. Every time when I return to the town or the village, I can only hear hulianwang, and not yintewang. Let's imagine how difficult it is for people to understand you when you utter the suave word yintewang to a worker or a farmer? Are you making fun of their knowledge?"

Even when *Internet* was officially named *yintewang* 因特網 ("*yinte*" *nets*), however, it was still referred to, in common usage, as *hulianwang* 互聯網 (*mutually united nets*) according to Fang. As long as people communicate with each other, *hulianwang* 互聯網 (*mutually united nets*) serves as a name in common usage to make sure the term refers to the English term *Internet* and thus the concept denoted

by it. This is particularly so as the memory of referring *hulianwang* 互聯網 (*mutually united nets*) to *Internet* still remains in people's minds. Communication may simply break down, Fang claims, if people choose to use the "*suave word yinte wang*" officially announced by the government to refer to *Internet*.

Confusion supposedly motivated this claimed term conflict. The simplest adjustment at the moment of discourse (e.g. with a worker) is simply to ask "which *net*" (*Hulian* NET vs *Yinte* NET) one is referring to? In the overt management debate, the equivalent sequence of consideration could be described as follows: the expression *yintewang* 因特網 ("*yinte*" *nets*) is noted as a deviation from the common usage *hulianwang* 互聯網 (*mutually united nets*), and is therefore evaluated as inadequate and the adjustment to the common usage *hulianwang* 互聯網 (*mutually united nets*) is suggested which in turn could be implemented as an agreed name which enhances efficient communication. On this ground Fang criticizes the misjudgment shown by CNCTST in suggesting the renaming of *Internet* into a name which is unfamiliar in common usage.

4.2.3 Conflicts Between Two Different Norms Carried by Two Populations

Term problems in cross-regional communication

Another case to be considered is the existence of overt norms specific to markets. For instance, the norm in China or Taiwan may not be exactly the same as the norm in Hong Kong. Would term conflicts arise from the use of regionalisms or geographically restricted terms? Terminology management may emcompass cases where one single form has to be chosen among two or more variants which are also accepted usage but in a different region or territory. In Hong Kong, one could say that certain IT terms are standardized in the sense that the civil service is required to use only one specific "official version" as listed in a government issued glossary, even if it runs against the rules of other official Chinese languages in China mainland or Taiwan. Thus, the term *Internet* is called *hulianwang* 互聯網 (*mutually united nets*) in Hong Kong as standardized by the Official Language Agency and the IT Services Department, although the standardization body in China would dictate another name *yintewang* 因特網 ("*yinte*" *nets*) and in Taiwan *guoji wangji wangluo* 國際網際網絡 (*international inter-network*).

The adjustment of switching to a "variant norm"

In contact discourse, deviations from the norm of one region are noted by certain users who are well aware of the differences in norms in different places. The choice of terms of one variety over another in the course of communication, for instance, is a technique to avoid misunderstandings that may occur from the use of words which are perceived differently in the varieties in Hong Kong and China. In such a case, a switching into what I should call a "variant norm" depending on who the audience are

becomes a strategy that is implemented discoursally to facilitate communication. In China, for example, the two terms *internet* and *Internet* have different Chinese names as they refer to different concepts. The standard name for *Internet* is *yintewang* 因特網 ("*yinte*" *nets*) and the one for *internet* is *hulianwang* 互聯網 (*mutually united nets*). In Hong Kong, however, no differentiation is being made to distinguish *internet* from *Internet*, and the name *hulianwang* 互聯網 (*mutually united nets*) is used to refer to both. Another example is the term *information technology*, the standardized name for which in use in China is *xinxi jishu* 信息技術 (*information/data technology*), but *zixin keji* 資訊科技 (*information science and technology*) in Hong Kong.

A norm conflict is noted as a problem, and a repair strategy of switching is selected as adjustment. This can be illustrated by discourse reproduced from the exchanges of faxes between the researcher and CNCTST.

In one of her letters to the co-author (Aman Chiu), Fang Jing at CNCTST notes a deviation of the term *zixinkeji* 資訊科技 (*information science and technology*) made by the researcher in his previous letter against the overt norm, which is *xinxijishu* 信息技術 (*information/data technology*) used in China. This constitutes a term conflict and thus inadequacy established.

The correction adjustments Fang adopts is to switch to the variant that is adopted by the reader/hearer of the language, although she as a terminologist also makes a remark about the conceptual differences (thus another term problem noted) between the two terms. She said:

"...*Concerning your request about a English-Chinese database on zixinkeji* 資訊科技 (*the conceptual equivalence between zixinkeji* 資訊科技 *and xinxijishu* 信息技術, *the term used by us, is another topic which calls for discussion*)..." (...關於□想要的英漢資訊科技術語詞庫的事("資訊"與我們叫的"信息技術"□念對應問題也是應□討的問題)...)

In communicating with the co-author, Fang chooses to switch to the norm used in Hong Kong (by the audience she is communicating with), although she also lists the norm used in China in brackets. Standardization of Chinese technical terms is introduced in different regions, and there is a fundamental regional conflict between the need for naming and the desire to unify names. In his reply to CNCTST, Chiu manages his language in the same manner:

"...*I have been working on this research about zixin keji* 資訊科技 (*information science and technology*) (*in your term* "*xinxi jishu* 信息技術 (*information/data technology*)") *terminology after I quitted my job as a lexicographer*..." (我辭掉了詞典編輯工作以後, 就集中做這項資訊科技(您們叫"信息技術")名詞研究工作...)

"...*Concerning your question about the translation of disc and disk, I have posted the question onto hulianwang* 互聯網 (*the Internet*) (*in your term* "*yintawang* 因特網") *for discussion*..."

(關於您提到的 *disc* 和 *disk* 的翻譯問題, 我就此已把這問題放在互聯網 (您們叫"因特網") 上討論...)

Another example can be cited (Wang 1999:5): the editor of the CNCTST journal switches to the norm expected by the audience of the journal by adding a note to the term made by a contributor from Singapore. The adjustment of switching is a problem-solution technique in anticipation of the incomprehensibility of a foreign norm, that is *wangji wangluo* 網際網絡 (inter-nets network) used in Singapore for the term *Internet*, to the audience in China.

One can imagine that in discourse contact situations, with different norms being adopted by the two communicating parties, there are instances when one has to make certain adjustments (switching to a variant norm in the above cases) in one's writing (or speech production), either for the reason of a production or reception problem, the negotiation of meanings or in order to achieve certain intentions, that is, successful communication.

4.2.4 Conflicts in the Norm Itself

Inadequacy of existing norm: *Cyberport*

Terminology management also encompasses cases where the standard status (norm) that consensus terms acquire is challenged, because of their being evaluated as "inadequate" in meaning. In such a case, a semantic interest directly motivates the adjustment to recommend a new norm to replace the existing one. One of the most convincing illustrations of this phenomenon is the Chinese term *shumagang* 數碼港 (digital port), a translation adopted by the Hong Kong government to refer to the equally new coinage *Cyberport*.

The Chinese rendering is perceived as "inadequate" by Wu (1999). (Wu is a former translator in United Nation and currently editor of an electronic publication.) *Shumagang* 數碼港 (digital port) was reanalyzed as literally meaning "*digital port*", and so does not convey the complete sense of *Cyberport*, which should cover two layers of meanings, including not only the "*digital*" but also the "*analog*" perspectives. Wu analyzes the term as:

"*The term cyber in English has the meanings of both telecommunications and control, the means to which include modern telecommunications technology, i.e. digital and analog.* 數碼 *shuma simply covers the digital side of the meaning.*" (英語裡 *cyber* — 詞有電子通信和控制的意義, 其手段則包括 *digital* [數字, 數碼] 和 *analog* [模擬]等現代電信技術. 數碼僅包括 *digital* 數字部分而已.)

The semantic reanalysis of the term *Cyberport* has led Wu to believe that the existing norm *shumagang* 數碼港 is semantically inadequate and ambiguous because it covers only "half" of the meaning of the original term *Cyberport*.

In this case, a certain term conflict motivated by the evaluator's semantic interests is noted, and is followed by evaluation from which an inadequacy is established. The evaluation is made against the standard status of the consensus term *shumagang* 數碼港, with an reanalysis of the

semantic content of the original concept. An adjustment is thereafter recommended for implementation.

"It would then be better to render Cyberport into dianxingang 電信(電訊)港 *(literally: telecommunication port), as this corresponds better to the semantic components of the term."* (也許把 Cyberport 譯爲電信(電訊)港更符合 Cyberport 的具體內涵.)

The existing norm is evaluated according to a theory of semantics by analyzing the degree of correspondence in content between the original and its translation, and also on the basis of the pragmatic function of the concrete act of translation. All these factors are immediately interest-based, arising from the evaluator's linguistic theories, and therefore normative in character and they determine both the translator's management strategy and the criteria used in the evaluation of the resulting translation.

5. STANDARDIZATION BODIES AND THE END PRODUCTS

5.1 Professional Bodies

It is no coincidence that the development of Chinese IT terms in Hong Kong occurred thanks to the interests of computer subject specialists. Subject matter and methodology develop when there is a need, and are pursued to the extent that they are the result of clear social needs. Like many other countries, technical terms, such as IT terms, are typically authorized by a professional organization. In this regard, terminology concerns specialists on special purpose language.

Hong Kong Computer Society (HKCS)

Since 1995, the Hong Kong Computer Society has systematically been trying to further the use of standardized Chinese computer and IT terms to promote effective communications within the trade. Clear designation of translation equivalents at the institutional level, and the recognition of these names internally among the specialists within the society, were excellent starting points. Agnes Mak, when elected as President to the society in 1995, stressed that there was *"a need to establish the standardization of IT terminology database for Chinese"* (*South China Morning Post*, November 27, 1995) and this need had since then become one of the three essential goals for the society to achieve.

In 1994 the Hong Kong Computer Society won a contract from Hong Kong Industry Department with the Department of Computer Science and Engineering of the Chinese University of Hong Kong (CUHK) to implement a database on the set of standardized Chinese computer and IT related terminology. They focus on coordinating efforts made by several educational groups. The database was edited and revised by the China Computer Association (CCA) and endorsed by the China National Committee for Terms in Natural Sciences. The development of the project was funded by the Hong Kong Industrial Department, and sponsored by Sun Microsystems, Inc, a technology solutions provider, and Sybase, Inc, an e-commerce applications provider.

The first phase of the Standard Chinese Computer Terminology Project was successfully carried out and the public could get access to the system through the HKCS website. With input from CCA of China and CUHK, HKCS has developed an intelligent database for computer terms incorporating different names used in Hong Kong and China. The whole database serves to promote efficient internal communication within the trade.

5.2 Governmental Standardization Bodies

Besides being authorized by a professional body, technical terms are also typically authorized by a government body - an agency at the government level that tries to influence directly the territory's attention to the use of standardized terms. In Hong Kong the standardization is being done separately by a number of government departments. They are agencies concerned with IT language problems and they produce standards for their own internal use, through the compilation of bilingual glossaries of IT terms. At this level, the broad target audience in the marketplace, that is civil servants and the public, is clearly identified. That it offers a broad direction can be regarded as terminology management at government level because it helps to co-ordinate all the internal language/terminology activities in relation to the use of Chinese IT terms, and define the general direction of language activities in which the departments are to be engaged - that is the translation activities in which an appropriate use of terms (i.e., a norm) is required.

Primarily there are three standardization bodies within the government which carry out terminology work on Chinese IT terms, and they are:

- The Information Technology Services Department (ITSD)

- The Official Languages Agency (OLA)

- The Curriculum Development Institute Council, Education Department (CDIC)

5.2.1 The Information Technology Services Department (ITSD)

As primarily functioned to *"lead the Government and facilitate the community both in the development and the exemplary usage of information technology"*, according to its website, the goals of ITSD include 1) promoting and enabling the extensive adoption and use of information technology in the Government; 2) enabling individuals, businesses and the Government to interact easily and securely through the use of information technology; and 3) promoting the wider use of information technology in the community.

In order to achieve these goals, the website reveals that ITSD has produced products and services in order to be *"compatible with IT strategy and meet evolving needs of departments and programmes"*. One of the services they provide to the government bureaux is a compilation of a bilingual IT glossary. The glossary provides a reference of over 800

English-Chinese IT terms commonly used in the Government. HKITSD, when answering a question from the authors about the use of the glossary, claims that it is "*a set of standardized Chinese Information Technology (IT) terms being used in the Government of the Hong Kong Special Administrative Region*".

5.2.2 The Official Languages Agency (OLA)

Another standardization body is OLA, one of the goals of which is "to be recognised in the civil service as the authority on the use of Chinese and on translation between the two official languages", according to its website. To achieve this goal they have developed various writing aids, reference materials and support services to assist civil servants either to promote use of Chinese in their office, or to use Chinese in their work. They publish guidebooks on official Chinese writings, such as official correspondence, memoranda, file minutes, circulars, and notices. Their products also include 20 volumes of English-Chinese glossaries of terms commonly used in government departments. They cover different subject areas, including education, finance, meterorology, and trade and industry. In 1997 they produced the Information Technology Glossary, which is the latest publication among the whole list.

In the IT glossary there contains some 2,000 entries on subjects related to information technology. In the explanatory notes of the glossary it mentions that the glossary "*serves primarily to provide Chinese Language Officers with a handy translation aid and to standardize the Chinese translation of these terms*".

5.2.3 Curriculum Development Institute Council (CDIC)

Computer education in Hong Kong had a modest start in 1982 when Computer Studies was implemented in Secondary 4 and 5 as a measure to broaden the school curriculum. In 1987, Computer Literacy was offered to junior secondary students as well to provide them with some basic training in computer education. In 1992, AS-Level Computer Applications and A-Level Computer Studies were introduced along with other new sixth form subjects as a result of the new sixth form curriculum in Hong Kong schools. The syllabuses of the four computer subjects are designed to develop students' knowledge about computers and information technology skills including telecommunications.

To support teaching in CMI and to facilitate communication and understanding, An English-Chinese and Chinese-English Glossary of Terms Commonly Used in the Teaching of Computer Subjects in Secondary Schools was developed by the Computer Education Team within the Curriculum Development Institute Council and issued by the Education Department in 1999. The glossary provides Chinese translations of English terms commonly used in the teaching of Computer Subjects at all levels in secondary schools, and it covers IT terminology.

5.3 The Big Question: What are the actual problems?

Indirectly, glossaries proposed by these professional or governmental authoritative bodies may exercise a strong harmonizing influence on usage in special subject fields such as IT by the simple fact that a single glossary such as the one developed by ITSD or OLA may become the preferred terminological reference work for IT and its related subjects and thereby establish a virtual standard. Because of their leading position and role representing the government, such names can be seen as endorsement from authority and thus considered standard names regardless of the co-existence of any popular alternative names. With terminology work carried out by different bodies in different ways, not only the degree of consistency among these bodies becomes an issue that matters. Equally important is the way they do the work, the principles they follow, as well as the methodology they adopt in carrying out the terminology work.

The big question is whether these standardization bodies know what actual discourse problems there are in the use of terminology, and what actual usage is.

From the glossaries prepared by the above four standardization bodies, there was no mention about any criteria of terminological collection and the scope of its collection. It seems the selection criteria of what items to be included in an IT database differs from one to another. A terminological database should be a dynamic entity which is regularly undergoing changes as records are entered, completed, modified and deleted. How regularly are these databases kept up to date to reflect changes in usage?

A clear distinction is being made between terminology as evidenced from usage in a diversity of pragmatic situations and the idealizing tendency which sees a one-to-one correspondence between terminological and conceptual system. The top-down listing and implied prescription of terms can be understood in view of the development of the glossaries for very specific purposes by government agencies or departments in Hong Kong which thus have a directive rather than an advisory function.

However, one of the modern attitudes to terminology work is that terms have linguistic variants in spoken and written language and within the same text type and so it is "*essential to list these variants in descriptions of terminology*"(Sager, 1990). This is in nowhere mentioned in any of the four databases.

Government agencies have not issued any detailed descriptions of the procedures to be adopted in naming a new entity and making this name known. In Hong Kong there is little, if any, guidance about naming and even less about compiling glossaries. Government agencies regularly issue glossaries of terms as standards, but very few have firm guidelines for the selection, definition and publication of terminology.

There is great diversity between the glossaries. The perception that variation is a problem was also clearly demonstrated by the discussions of term problems related above. If standardized uniformity is the goal, the fact that

variation is perceived as troublesome is of course a tautology. However, selection of the *one standard* term generates much intellectual concern with suitable criteria with which to evaluate the best candidate term.

What does not emerge and what in the authors' opinion should be the primary criterion is whether a term functions well in discourse. Once terms are in circulation, communication processes will reveal which terms are troublesome and require adjustment, even sanction of removal when another is available. The process is that of discourse management through which language users note, evaluate, adjust, and as the case may be, implement such language as is troublesome in subsequent turns of discourse. Those are the problems that should occupy the attention of term management agencies in their advisory capacity.

Term management agencies are likely to be successful in their normative, standardization capacity when they register unproblematic usage and bring representatives of specialist groups together to order and define that vocabulary in order to produce glossaries specific to that specialist group.

For general IT "terminology", the language user is always right as long as communication flows without problems of understanding.

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IT Education's (Hong Kong Education Department) website:
http://www.ited.ed.gov.hk/index_english
ITSD's website:
http://www.info.gov.hk/itsd/about/evmv.htm
OLA's website: http://www.info.gov.hk/ola/english
TNC's website: http://www.tnc.se

ESTONIAN TERMINOLOGY SOCIETY (ETER)

The Estonian Terminology Society (Eter) was founded on July 19, 2001 in Tallinn, Estonia. The founding members of Eter are private (natural) persons and companies (legal persons) whose common interest is to promote and develop terminology and professional language in Estonia.

The objectives of the Society are the following:

- Co-ordination of terminological activities in Estonia in co-operation with the Institute of Estonian Language and in compliance with relevant legislation in force;

- Organisation of co-operation with the international network of terminology organisations;

- Integration and development of existing terminology collections (databases, libraries);

- Promotion of activities related to LSP planning;

- Provision of terminological services (term recommendations, advice on term usage), expert evaluations, translations of specialized and technical texts, distribution of terminological information);