



Standard Guide for Quality Assurance in Translation¹

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1. Scope

1.1 This guide identifies factors relevant to the quality of language translation services for each phase of a translation project. The guide is intended for use by all stakeholders, with varying levels of knowledge in the field of translation.

1.2 This guide is designed to provide a framework for agreement on specifications for translation projects. Within this framework, the participants in a service agreement can define the processes necessary to arrive at a product of desired quality to serve the needs and expectations of the end user.

1.3 This guide does not provide specific metrics.

1.4 This guide also includes a list of specification parameters that shall be considered before work begins.

1.5 Translation can be viewed in a number of contexts.

1.5.1 One is that of globalization, internationalization, localization, and translation (GILT), which takes products or services created for one audience and makes them suitable to various foreign language audiences, whether in the home country or around the globe. In the case of products or services that are accompanied by or contain textual material, this process must be sensitive to cultural aspects of the geographic region and language of specific markets, sometimes referred to as locales.

1.5.2 Translation can also be viewed in the context of various government practices, including communicating an identical, uniform message to many locales at the same time, that is, not altering the message even slightly for individual locales, and, in information gathering, retaining the original flavor of the source text, purposely avoiding localization.

1.5.3 Finally, translation can be viewed in a more general context. Although much translation is done in a GILT context or for government purposes (for example, diplomacy, law enforcement, health and human services, security, and so forth), there are many other types of translation performed for the understanding of materials (for example, journals, letters,

news broadcasts, and communications) that have been written in another language. Some types of translation may not include localization.

1.6 This guide offers an organized collection of information and does not recommend a specific course of action. This guide cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this guide can be applicable in all circumstances. This ASTM guide is not intended to represent or replace the standard of care by which the adequacy of a given professional service shall be judged, nor should this guide be applied without consideration of a project's unique aspects. The word "Standard" in the title of this guide means only that the guide has been approved through the ASTM International consensus process.

1.7 This guide does not address interpreting (also called interpretation), which involves spoken language as opposed to written language (see Guide F2089).

2. Referenced Documents

2.1 *ASTM Standards*:²

F2089 Practice for Language Interpreting

2.2 *ISO Standards*:³

ISO 1087-1 Terminology—Vocabulary—Part 1: Theory and Application

ISO 1087-2 Terminology—Vocabulary—Part 2: Computer Applications

ISO 9000 2005 Quality Management Systems—Fundamentals and Vocabulary

2.3 *DIN Standard*:⁴

DIN 2345 Translation Contracts

3. Terminology

3.1 *Definitions*:

3.1.1 *adaptation, n*—localization procedure through which the translator replaces a culture-specific aspect of a product,

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

⁴ Available from Beuth Verlag GmbH (DIN-- DIN Deutsches Institut für Normung e.V.), Burggrafenstrasse 6, 10787, Berlin, Germany.

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service, or document, such as a software utility, color, icon, or other cultural artifact from the source culture with an equivalent appropriate to the target culture to accommodate the expectations of the target audience.

3.1.1.1 *Discussion*—In some cases, the translator may have to create or supply an equivalent when the source text refers to something that does not apply to the target culture, for example, replacing a graphic image of a Caucasian using a product with an image of an Asian using the product or replacing an English thesaurus with a French thesaurus. Note that the term adaptation is sometimes used to refer to the adaptation of a translation to fit a particular medium when the original cannot be changed or recreated to accommodate a complete and faithful translation (for example, adapting the translation of a video script to suit a video originally shot in another language). Also, the term adaptation is sometimes used in the sense of internationalization in which a source text is adapted to facilitate translation.

3.1.2 *aligned text, n*—source text that has been segmented and for which the segments have been paired with their individual translations.

3.1.2.1 *Discussion*—The synonym is bitext when only two languages are involved, not parallel text or comparable text.

3.1.3 *back translation, n*—retranslation of a translated text back into its source language.

3.1.3.1 *Discussion*—A back translation will not result in a text that is identical to the source text, and furthermore, a back translation is not necessarily a good indicator of the quality of the translation.

3.1.4 *computer-assisted translation, (CAT), n*—translation in which a variety of computer programs (tools) are used to support the task of human translation.

3.1.4.1 *Discussion*—CAT tools include terminology extraction and management, text alignment, translation memory, term lookup showing context of use, indexing and frequency counts, and various specialized editing tools designed to protect code and facilitate translation of resource text.

3.1.5 *contraction, n*—natural decrease in the amount of text used in the target language to express the same semantic content (meaning) as compared to the corresponding segment in the source text. See *expansion*.

3.1.5.1 *Discussion*—The translation for the same concept expressed in different languages may require a different number of words, such as *clase de natación* (three words, Spanish) versus *swimming class* (two words, English) versus *simlektion* (one word, Swedish).

3.1.6 *controlled language, n*—subset of a language with restricted grammar, domain-specific vocabulary, and constrained style designed to allow domain specialists to formulate unambiguous texts pertaining to their subject field.

3.1.6.1 *Discussion*—Controlled language facilitates clear, concise, technical communication by for instance, adhering to a one term-one meaning principle. It can be accurately and efficiently analyzed by a computer, but is expressive enough to allow natural usage. Advantages can include consistency in style and reading level, reduced training times, increased

readability for non-native speakers, as well as improved machine translation effectiveness and translatability for human translators.

3.1.7 *editor, n*—bilingual member of the translation team who compares a completed translation to the source text for the purpose of validating the accuracy of the final target text, and gives detailed feedback.

3.1.7.1 *Discussion*—In many cases, the editor can also be asked to make changes when necessary to improve the naturalness of the language or accommodate the specified register of the translated text. The editing function is sometimes confused with proofreading, which is essentially a monolingual activity. Furthermore, there are several terms other than editor (for example, reviser, reviewer, and so forth) used to designate persons who perform various aspects of the editing activity.

3.1.8 *end user, n*—person who ultimately avails himself or herself of the translation, as opposed to various intermediate translation service providers who pass it on to the next client in a chain of suppliers (synonym—consumer; see also *requester*).

3.1.9 *expansion, n*—natural increase in the amount of text used in the target language to express the same semantic content (meaning) as compared to the corresponding segment in the source text. See *contraction*.

3.1.10 *gisting, n*—translation of a text for the purpose of providing the user with a general idea of the sense of the original, but without emphasis on details or stylistic elegance.

3.1.10.1 *Discussion*—Gisting may sometimes be synonymous with abstracting or summarizing, although gisting often reads less smoothly. Human translators can be requested to indicate the gist of a text, or an unedited machine translation can sometimes be produced for this purpose. This type of translation is sometimes called an *indicative translation*.

3.1.11 *globalization (GIIN), n*—the business processes and allocation of resources necessary for taking a product to various markets around the globe.

3.1.11.1 *Discussion*—Globalization includes making decisions regarding internationalization, localization, sales processes, and so forth. The abbreviation consists of the first and last letters of the term, with the number 11 inserted between them, signifying the eleven letters between the G and the N.

3.1.12 *glossary, n*—terminological list of designations from a subject field, frequently with equivalents in one or more languages (from ISO 1087).

3.1.13 *internationalization (I18N), n*—process of generalizing a product so that it can handle multiple languages and cultural conventions (such as non-Roman scripts, varying date/time/currency formats, and so forth) without the need for substantial modification.

3.1.13.1 *Discussion*—Internationalization facilitates localization by building in flexibility. Internationalization can also be performed on a document, as opposed to a product, to facilitate translation. The abbreviation consists of the first and last letters of the term, with the number 18 inserted between them, signifying the 18 letters between the I and the N.

3.1.14 *leveraging*, *n*—reuse of resources (for example, terminology, segment of translated text, or formatting templates) from previously translated text.

3.1.15 *linguist*, *n*—(1) a student or practitioner of linguistics, that is, of the science of language; (2) person proficient in more than one language.

3.1.16 *locale*, *n*—in common practice, the language and the geographic region (for example, Spanish in Colombia versus Spanish in Spain) of a given target audience for a translation.

3.1.16.1 *Discussion*—Locale can also relate to other items of information such as time and date formats, legally binding format restrictions, international telephone codes, and so forth.

3.1.17 *localization*, (*LION*), *n*—cross-cultural communication process of preparing locale-specific versions of a product or service, consisting of translation of textual material into the language and textual conventions of the target locale, and adaptation of nontextual materials as well as input, output, and delivery mechanisms to meet the cultural, technical, and regulatory requirements of that locale.

3.1.17.1 *Discussion*—Localization encompasses not only the translation and adaptation of computer software, but also the preparation of many types of products and services for particular locales. The abbreviation consists of the first and last letters of the term, with the number 10 inserted between them, signifying the ten letters between the L and N.

3.1.18 *machine translation (MT)*, *n*—mode of translation in which a computer program analyzes a source text and produces a target text, typically without human intervention at the actual time of translation.

3.1.18.1 *Discussion*—Except in the case of gisting, machine translation (also called *automated translation*) generally requires human participation before the computer processes the source text (called pre-editing) or after the translation is produced by the machine (called post-editing), or both. In machine translation, the translator supports the automatic translation process by adapting the source text to accommodate the machine or by post-editing the target text to accommodate the human reader. In computer-assisted translation (CAT), the machine supports the translator.

3.1.19 *markup*, *n*—any text, tag, or code that is added to the data of a document to convey information about it (from ISO 1087).

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<p>
<a href="http://www.wmata.com/" target="_blank">
<strong>Metrorail</strong>
</a>
<p>The region's rapid transit system stops adjacent to Terminals B and C.
Metrorail fare cards may be purchased from machines at either of two
Farecard plazas located on Level 2 near pedestrian bridges that lead into and
out of Terminals B and C. A third Farecard plaza for disabled and other
passengers using elevators, is under the Metro platform, midway between the
north and south mezzanines.</p>
<p>Click here for a map of the <a href="http://www.wmata.com/metrorail/
systemmap.htm" target="_blank">
<b>Washington DC area Metro</b>.</a></p>
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Normally Hidden Text Markup (Example of HTML Code from a Public Website in which the Markup Text Provides Formatting Instructions That Are Not Seen by the Viewer of the Corresponding Website)

3.1.20 *metric*, *n*—procedure providing a means of measuring the quality of a product or service that results in a composite numeric value.

3.1.21 *parallel text*, *n*—target language text that is comparable to the source text in terms of subject matter or text type (from DIN 2345, 3.2.3).

3.1.21.1 *Discussion*—This is also known as comparable text.

3.1.22 *post-editor*, *n*—translator who reviews a completed machine translation to validate the accuracy of the final target text with reference to the source text in order to ensure a defined degree of stylistic acceptability, and makes changes where necessary.

3.1.22.1 *Discussion*—Different criteria for acceptability can be defined for machine-translated text depending on the needs of the end user.

3.1.23 *post-project review*, *n*—review and performance evaluation procedure conducted at the end of a project to determine how well the project conformed to original specifications (synonym—postmortem).

3.1.23.1 *Discussion*—Post-project review is also designed to facilitate orderly project closeout. It can involve debriefing of project participants and integrating project resources (for example, terminology and translation memory data) into central data repositories so that they can be leveraged for later projects. This can help increase efficiency and ensure continuous improvement.

3.1.24 *project manager*, *n*—person who coordinates the various aspects of the project and ensures their proper execution.

3.1.24.1 *Discussion*—The project manager can be either external or internal, depending on whether the translation service provider is an external vendor or an internal department within the requesting organization. There are cases in which there is a project manager on the requester side and one on the translation services provider (vendor) side. In some cases, the project manager and the translator are the same person. The responsibilities of the project manager are to ensure that all the specifications are clearly defined, assign terminology research as needed, and coordinate the members of the translation team, such as the translator, editor, and the desktop publishing specialist. Coordination also includes assuring that the project is completed on time, on budget, and in compliance with the agreed-upon specifications.

3.1.25 *proofreader*, *n*—reader of printed or electronic target text whose task is to find typographical and formatting errors and verify whether the text is understandable and reads well in the target language without reference to the source text.

3.1.26 *register*, *n*—set of properties associated with speech or writing that is characteristic of a particular type of linguistic text or speech and takes into account the nature of relationships among speakers, the subjects treated, and the degree of formality or familiarity of the text.

3.1.26.1 *Discussion*—Register can be associated with texts or even individual words or terms. Typical kinds of register are formal, informal, diplomatic, scholarly, household, colloquial, vulgar, and so forth.

3.1.27 *requester*, *n*—individual, department, company, or organization placing an order for a translation.

3.1.27.1 *Discussion*—Requesters can be external, representing outside clients, or internal, representing other departments within a given enterprise.

3.1.28 *reviewer, third-party*, *n*—See *third-party reviewer*.

3.1.29 *sight translation*, *n*—oral translation, often impromptu, of a written text from one language to another in the presence of the end user with little or no prior examination on the part of the translator.

3.1.30 *source language (SL)*, *n*—language from which a translation is produced.

3.1.30.1 *Discussion*—The source language together with the target language are commonly known as a language pair.

3.1.31 *source text, (ST)*, *n*—text to be translated (from DIN 2345).

3.1.32 *subject matter expert*, *n*—person with expertise in a subject area (for example, helicopters, nuclear waste).

3.1.33 *target language (TL)*, *n*—language in which the translation is written.

3.1.34 *target text (TT)*, *n*—text produced as the result of the translation process (from DIN 2345).

3.1.35 *term extraction*, *n*—identification and compilation of translation-relevant single or multiword terms from monolingual or aligned bilingual texts.

3.1.35.1 *Discussion*—Term extraction utilities are CAT tools designed to leverage terminological data as opposed to general language words found in new source texts or existing translations or parallel texts. Term extraction can also be performed manually.

3.1.36 *terminology*, *n*—set of designations belonging to the language of a given subject field.

3.1.36.1 *Discussion*—Designations can include single-word terms, multiword terms, phrases, collocations, or even formulae.

3.1.37 *terminology database*, *n*—database containing data related to concepts or their designations or both (from ISO 1087) (synonyms—terminological database and termbase).

3.1.38 *text type*, *n*—class to which a text is assigned based on its function, format, or the specific intention of the author with respect to the target audience.

3.1.38.1 *Discussion*—Text types can include, for instance, maintenance manuals, business letters, scholarly articles, or contracts; treaties, powers of attorney; engineering blueprints, user and product manuals; patient records, patient instructions, informed consent forms; annual reports, and financial statements.

3.1.39 *third-party reviewer*, *n*—person assigned by the requester or supplier to evaluate a completed translation for quality or end-user suitability.

3.1.39.1 *Discussion*—When the third-party reviewer is located in the target locale, this person is often known as an in-country reviewer.

3.1.40 *translation*, *n*—<product> result of the translation process (from DIN 2345).

3.1.41 *translation*, *n*—<process> process comprising the creation of a written target text based on a source text in such a way that the content and in many cases, the form of the two texts, can be considered to be equivalent.

3.1.41.1 *Discussion*—As opposed to interpreting, which involves the mediation of oral or gestural expression, translation involves written documents.

3.1.42 *translation competence*, *n*—ability to translate the source text into the target language completely and accurately by choosing an equivalent expression in the target language that both fully conveys and best matches the meaning intended in the source language for the intended audience and purpose.

3.1.43 *translation memory (TM)*, *n*—text-based resource consisting of aligned text segments (translation units) stored by a translation memory tool.

3.1.44 *translation memory tool*, *n*—computer program that facilitates comparison of new source text segments to previously translated source text in order to link them to existing translations.

3.1.44.1 *Discussion*—Translation memory tools align and store translated source texts paired with their respective target texts in machine-readable form for use in later translation projects.

3.1.45 *translation quality*, *n*—degree to which the characteristics of a translation fulfill the requirements of the agreed-upon specifications.

3.1.46 *translation service provider*, *n*—company, department, or individual approached by the requester, providing professional translation services into one or multiple languages for the requester.

3.1.46.1 *Discussion*—From the perspective of the requester, an outside translation service provider is often called a translation vendor.

3.1.47 *translation team*, *n*—group of specialists assembled for the purposes of managing and producing a translation project, made up of, for example, a project manager, translator(s), editor(s), proofreader(s), and possibly a terminologist, desktop publisher, graphic artist, software engineer(s), post-editor(s), and so forth.

3.1.48 *translator*, *n*—communication specialist who produces the target text.

3.1.49 *word count*, *n*—number of words in a text, that is, in the body, header, footer, text boxes, and so forth; more generally, the number of words in the content to be translated.

3.1.49.1 *Discussion*—In some markets, translations can be billed based on the word count of the source or the target text, whereby one word is generally a single string of characters, including symbols and so forth between two blank spaces. In syllabary languages (for example, Korean) and logographic languages (for example, Chinese), there is no clear automatically recognizable separation between words. As a consequence, translation into these languages is frequently billed on the basis of character count.

4. Significance and Use

4.1 *Audience*—This guide is intended to serve requesters and end users of translation, providers of such services, either

internal or external, and training institutions, so as to facilitate clear communication, thereby avoiding potential losses in time, money, and quality during the life of a translation project.

4.2 Translation Supply Chain—The end user of a translation (the person who actually reads the target-language text) is often not the person who requests the translation. The requester, who can be an individual or hold nearly any position within an organization, may not know the target language or even the source language and thus may not be able to evaluate the translation personally. Likewise, the translation service provider contacted by the requester may not be the person who actually translates the document. Thus, it is important to have a standard guide for relationships between the requester and the translation service provider(s) so that certain questions are answered before starting a translation project—questions for which answers are critical to the successful delivery of a quality translation through the translation supply chain to the end user. That chain often includes the following parties: end user, requester, project manager, translator, editor, and any other additional personnel needed to complete the project (please see definitions in Section 3). In some cases, the same person may perform more than one function. For example, the end user and the requester can be the same person, and the project manager and the translator can be the same individual.

4.3 Importance of Specifications—Quality translation cannot be defined on the premise that there is only one correct, high-quality translation for any given source text. Certainly, there can be many different incorrect translations, but there can also be a variety of correct ones, depending on the specifications defined for a given project and the choices made by the individual translator. This guide includes a list of parameters (see Section 8) that need to be addressed and documented in writing to obtain a set of specifications that can be used to evaluate the quality of a particular translation. Specifications are defined in terms of the purpose of the translation and the needs and expectations of the end user. A set of specifications is not a metric, but could be used as the basis for defining a metric.

5. Introduction to Translation

5.1 The process of translation begins with a text (called the source text) and results in the creation of a text (called the target text) in another language. The aim of the process is to produce a target text (called the translation) that corresponds to the source text, according to the criteria agreed upon in advance.

5.1.1 For the purposes of this guide, quality is defined as the degree to which the characteristics of a translation fulfill the requirements of the agreed-upon specifications (based on the ISO 9000 definition).

5.1.2 Although quality is defined in an extremely flexible manner as adherence to agreed-upon specifications, the process described in the production phase should be followed if high quality is desired. At a minimum, project management, translation, and editing tasks performed by highly qualified individuals at all stages should be considered the default to obtain a translation that meets high quality standards. Any deviation from these defaults should be considered only for

very specific purposes when a particular type of quality is acceptable because of the particular needs of the requester. All parties shall agree in full to any such deviation to ensure that the appropriate type of quality is specified and delivered to all parties' satisfaction.

6. Selecting a Translation Service Provider

6.1 A translation project is a joint effort of the requester and the translation service provider. Thus, the first task for the requester is the selection of a translation service provider. Of course, the requester may have an ongoing relationship with a provider. In this section, selection of a provider and the subsequent phases of a translation project are addressed, and Fig. 1 is a graphic representation of these phases. See Sections 7, 8, 9, and 10 for phase details.

6.2 Selecting a Translation Service Provider—In selecting a translation service provider, requesters should first evaluate their needs both in terms of a particular project and ongoing translation requirements. The requester should keep in mind that if an individual translator is hired, agreement should be reached as to how all the default tasks for quality, as defined in Section 5, shall be performed. A translation company may or may not provide the entire range of services described in Section 9. When considering available translation service providers, requesters are confronted with the challenge of selecting a translation service provider they deem capable of delivering a product that satisfies all specifications that have been agreed upon. In addition to standard business considerations, when requesters are in the process of analyzing their needs with respect to a decision to hire either an individual or a company for a specific translation project, the requester should determine:

6.2.1 Whether the requester's translation needs are ongoing or very sporadic;

6.2.2 The translation service provider's ability to handle the type and size of project in question (for example, one or multiple languages, number of tasks required, how much active project management is needed, and so forth);

6.2.3 The number of resources needed for the project and the translation service provider's ability to provide those resources;

6.2.4 Whether the requester wishes to retain responsibility for some or all project management activities;

6.2.5 Special technical requirements (for example, use of certain tools, output to certain formats, and so forth); and

6.2.6 Whether there are any special security and confidentiality requirements (for example, background checks on translators or performing translation at a specific office).

6.2.7 Sections 6.3 – 6.8 describe competencies that are relevant in selecting a translation service provider.

6.3 Source Language and Target Language Competence:

6.3.1 Knowledge of the source language and target language, more specifically, reading comprehension in the source language and writing ability in the target language, are necessary but not sufficient criteria for selecting a translator or editor.

6.3.2 Indicators of source language and target language competence may include the following:

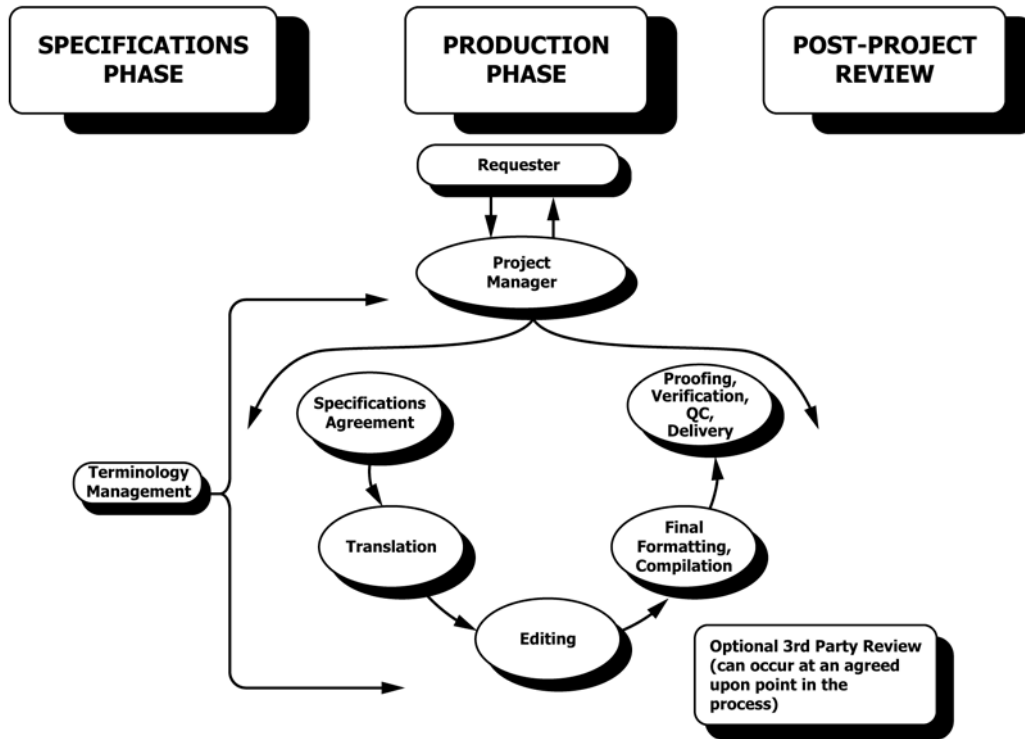


FIG. 1 Project Phases

6.3.2.1 Test scores or certifications, such as the following:

- (1) United States Defense Language Proficiency Test,
- (2) United States Foreign Service Speaking Proficiency Test, and
- (3) Test of English as a Foreign Language (TOEFL).

NOTE 1—It is important to bear in mind that language competence diminishes over time with little or no use; thus, old test scores may no longer be an accurate reflection of current competence in the source or target language.

6.3.2.2 Number of years of study of language and translation (for example, four or more years of college study minimum for gisting and abstracts, usually more for other kinds of tasks).

6.3.2.3 Years of experience as a translator working with the language combination in question.

6.3.2.4 Years of residence in the countries where the target language is spoken, and in many cases, where the source language is spoken.

NOTE 2—It is often recommended that translators translate into their native language. Thus, the target language should in most cases be the native language of the translator. Note that people who have learned the language at home but have studied in another language (for example, people who have learned Language A at home but have pursued their high school and college education in Language B) may not have the fluency and vocabulary needed to translate into Language A. Conversely, native speakers of Language A who have successfully completed university-level studies in Language B and have resided in a country in which Language B is spoken can be very good translators into Language B despite being non-native speakers.

6.4 Translation Competence—Proficiency in two languages is important but does not necessarily guarantee translation competence. Not all individuals who exhibit language proficiency have the ability to choose an equivalent expression in

the target language that both fully conveys and best matches the meaning intended in the source language for the audience and purpose of the translation (translation competence is sometimes referred to as congruity judgment). A specified level of translation competence may in some circumstances be required of a translator.⁵ Training in translation processes and tools may also be required. Indicators of translation competence can include the following:

6.4.1 Certification from an association belonging to the *Fédération Internationale des Traducteurs* (International Federation of Translators), such as the American Translators Association.

6.4.2 A degree in translation from a recognized institution of higher learning.

6.4.3 *Experience*—Years of experience can be a strong indicator of translation competence.

6.4.4 *References*—Personal references may be helpful, particularly if the task is similar to those the translator has performed for the person providing the reference and that person has the expertise to judge the quality of the translation.

6.4.5 *Sample Translations Done by the Translator*—If the requester has a trusted reviewer, then the requester may ask a new translator to provide samples of his or her work for evaluation.

6.4.6 Thorough knowledge of the translation process, and terminology pertaining thereto, including the content of this guide.

⁵ For instance, the ILR Skill Level Description for Translation Performance document (referenced in Appendix X1) describes performance levels for translators ranging from 0 (zero) for a person who has no practical ability to translate even isolated words, to 5 (five) for a master translator held in high regard by peers.

6.5 *Task-Type Competence*—Translations are needed for different purposes and audiences, which places different demands on translators and requires different skill sets. Some examples of translation-related activities are:

6.5.1 Polished translation (for example, marketing materials, books, and legally binding documents),

6.5.2 Information translation (for example, translation of e-mails and documents for personal use),

6.5.3 Gisting and abstracts (for example, summaries of materials),

6.5.4 Extraction of information (for example, answering questions and summarizing specific information in the target language based on examination of source texts), and

6.5.5 Identification of topics (for example, sorting documents).

6.6 *Subject Field Competence*—Subject field competence is very important. Texts associated with many disciplines involve specific terminology, sentence structures, formats, and practices. They demand a good understanding of the subject matter for the translation to be accurate.

6.7 *Text-Type Competence*—In addition to subject matter, the type of text involved in a given translation task places different demands on the translator. Some translators specialize in specific text types, such as patents or scientific articles. It is important to determine a translator's expertise and preferences before assigning a given job. The following are some examples of text types:

6.7.1 Treaties, contracts, powers of attorney;

6.7.2 Engineering blueprints, installation and maintenance manuals, and user and product manuals;

6.7.3 Patient records, patient instructions, and informed consent forms;

6.7.4 Annual reports and financial statements; and

6.7.5 Creative texts, such as advertising or marketing.

6.8 *Translation Technology Competence*—Since translation requesters often ask that translations be produced and submitted via electronic means, it is advisable that translation service providers have competence in the following technologies:

6.8.1 Electronic data storage and retrieval,

6.8.2 Word processing with appropriate fonts and formatting,

6.8.3 Computer-assisted translation (CAT) tools (translation memory, terminology databases, and so forth), and

6.8.4 Electronic data transfer (e-mail, FTP, and so forth).

7. Description of Project Phases

7.1 In Fig. 1, the steps that should be taken together by the requester and translation service provider to achieve a reliable final product that meets the agreed-upon specifications are shown. These steps are divided into three phases: the specifications phase, the production phase, and the post-project review phase. Note that in some circumstances, the specifications phase of the project may specifically state that the deliverable is a translation that is not fully edited, formatted, and quality controlled, in which case some steps of this process may be omitted. However, in such cases, it is even more important that both the requester and the translation service

provider agree on the exact specifications for the final deliverable, which by definition may be of lesser quality than if the entire process had been followed.

7.2 To ensure a high degree of quality from a process point of view, all steps shown inside the ovals in Fig. 1 must be followed. Terminology management is shown to one side inasmuch as this step may be integrated into other steps for shorter projects without jeopardizing the final quality of the translation. However, it should apply throughout the entire project to ensure terminological consistency.

7.3 The third-party reviewer is shown to one side in Fig. 1 because a third-party review is not always necessary for a quality translation. Typical situations in which third-party review may be desirable include when working with an unknown translation service provider or when accuracy is especially critical (for example, marketing materials, instructions for medical devices, and so forth). Moreover, when there is a third-party review, it can take place in different phases of the process, depending on the agreed-upon specifications. If there is to be a review, it is imperative that the review process be defined during the specifications phase, the third-party reviewer be carefully selected based on qualifications and past performance, and the review take place at the stage specified for that particular project. For consistency and efficiency, the third-party reviewer shall be aware of the specifications and follow them.

7.4 Regardless of size, all translation projects will require the interaction of the requester and the project manager. Effective communication between the requester and the project manager is imperative to the success of a project. The more complex the project and the more people involved, the more critical communication becomes.

7.5 The project manager, who may also in some cases be the translator, drives the entire project, in addition to communicating progress to all internal and external parties involved and to the requester. The project manager is responsible for ensuring that the specifications are met. The requester, in turn, is also responsible for providing assistance in a prompt and reliable manner to the project manager as required, so that specifications can be met.

8. Specifications Phase

8.1 *Translation Parameters*—Before a translation project starts, the requester and the translation service provider should agree on relevant information about content to be translated, specifications for project deliverables, and other aspects of the project. Even if the requester does provide initial requirements to the translation service provider, the requester is encouraged to work with the provider to develop mutually agreed, clear specifications in order to avoid a mismatch of expectations concerning the final product. This section provides parameters that may be used to develop checklists and templates to facilitate negotiation of specifications. There are three main parameter types:

8.1.1 *Product Parameters:*

8.1.1.1 Source content information (8.2).

8.1.1.2 Target content requirements (8.3).

8.1.2 *Process Parameters* (8.4).

8.1.3 *Project Parameters*:

8.1.3.1 Project environment (8.5).

8.1.3.2 Project stakeholder relationships (8.6).

8.2 *Source Content Information*:

8.2.1 *General Characteristics*—The requester should provide the document to be translated. If not available during the specifications phase, a detailed description is needed from the requester. Preliminary specifications may be developed based on that description, subject to confirmation when the actual document is received.

8.2.1.1 *Source Language*—The language of the source content should be identified, as well as the locale. For example, an English text could be written for a U.S., British, or other English-speaking locale.

8.2.1.2 *Text Type (presentational form, genre, file format, and intention of text)*—The requester should identify the presentational form (for example, printed book or brochure, website content, user interface strings), the genre (for example, annual report, maintenance manual, patent), the file format (for example, Word, InDesign, scanned pdf), and the intention of the text (for example, to inform, to persuade, or to make a personal statement).

8.2.1.3 *Audience*—The specifications should include the audience for whom the text was written.

8.2.1.4 *Purpose*—The specifications should address the purpose for which the text was written, such as to inform, persuade, or serve some other function relative to the intended audience (8.2.1.2).

8.2.2 *Specialized Language*—A description of any domain-specific language usage in the source content.

8.2.2.1 *Subject Field*—The subject field(s), also known as domain(s), of the source content should be identified (for example, law, medicine, advertising and marketing, finance).

8.2.2.2 *Terminology*—Subject field-specific terms may be identified in the source content.

8.2.3 *Volume*—The size of the source content to be translated should be clearly indicated in words, characters, or some other verifiable and agreed-upon unit.

8.2.4 *Complexity*—Any aspects of the source content likely to make the translation project difficult should be discussed. Some possible considerations include graphics in which the text is not separable from the image, passages that use nonstandard language, and the degree of readability or legibility.

8.2.5 *Origin*—The origin of the source content should be identified. At a general level, it should be specified whether the text is an original work, a modification of older content, a translation from content in another language, etc.

8.3 *Target Content Requirements*—The requester and translation service provider should agree on requirements for the translation product, independent of the process used to produce it.

8.3.1 *Target Language Requirements*—Any requirements for the language of the target text. By default — fluent language text that follows target locale conventions for grammar, spelling and punctuation—is the requirement. Any exception should be noted.

8.3.1.1 Both the target *language* and *locale* should be specified.

8.3.1.2 *Target Terminology*—Any unusual terms, or terms that must be translated in a particular way for this project, should be included in a bilingual terminology database (term-base) that is supplied by the requester or developed by the provider. If more than one termbase is to be used, their relative priority should be agreed upon. If the provider is expected to develop terminology resources, this expectation must be made explicit in *Additional Tasks* (see 8.4.2).

8.3.2 *Audience*—The intended target audience should be described, noting any significant differences between source and target audiences. The target audience is also referred to as end user elsewhere in this Guide.

8.3.3 *Purpose*—When the purpose of the translation differs from the purpose of the source content, the difference(s) should be highlighted.

8.3.4 *Content Correspondence*—The type of *correspondence* between source and target content must be agreed on; namely, how closely the target content should resemble the original. The requester may want a sentence-by-sentence translation of the source content (full correspondence), a brief summary (summary correspondence), or some other type of correspondence.

8.3.4.1 The requester should indicate whether the target text should retain traces of the source language and culture; or whether it should disguise the fact that it is a translated text. Approaches range from close adherence to the source text (for example, for a university transcript) to significant adaptation to the target culture (for example, for a software interface).

8.3.4.2 A generalized translation requires another type of content correspondence. It avoids region-specific expressions that could cause confusion and attempts to produce target content that can be used in various areas around the world.

8.3.4.3 Customization for a specific locale, in addition to disguising the fact that the content is a translation, involves the adaptation of non-textual material, such as converting amounts in euros to dollars for a US audience and selecting appropriate colors. In some cases, such as marketing materials, this approach is appropriately taken to an extreme and is called transcreation; the marketing approach for a French audience may be substantially different from that for an Australian one.

8.3.5 *Register*—The *register* of content considers the “tone” of voice or degree of linguistic formality.

8.3.6 *Format*—The format of the target content should be specified whenever it differs from that of the source content. Two subtypes may be specified:

8.3.6.1 *File Format*—Specifies what file format should be used for delivery (for example, a source PDF delivered as a LibreOffice file).

8.3.6.2 *Output Modality*—Specifies the method of delivery (for example, displayed as subtitles, speech to text, small screen) along with any requirements imposed by the modality (for example, length, physical space, or formatting limitations). The acceptability of shortening or loss of information should be explicitly stated.

8.3.7 *Style*—There are two aspects of style that should be agreed upon by the requester and translation service provider:

8.3.7.1 *Style Guide*—Indicates whether a formal style guide, such as the Chicago Manual of Style or a company guide, must be followed in the translation; and

8.3.7.2 *Style Relevance*—Specifies how important stylistic concerns are in the translation. For some translations (such as translations used for information-only purposes) style may not matter, while for others (such as translations where the persuasiveness of text is important) style may be a crucial element.

8.3.8 *Layout*—Any differences between source and target layout should be specified.

8.4 *Process Parameters*—Process parameters concern which production tasks are to be performed and by whom, regardless of how and where.

8.4.1 *Typical Tasks*—Three categories of tasks are typically performed during a translation project:

8.4.1.1 *Preparation*—Some tasks are performed before the production phase begins, such as identifying terms in the source text or converting a PDF file to a text file so that it is machine processable. These tasks may need to be completed in order to finalize the specifications.

8.4.1.2 *Initial Translation*—The first step is to produce an initial translation, sometimes called a draft.

8.4.1.3 *In-process Quality Assurance*—The initial translation should undergo a quality-assurance process. The specifications should indicate which tasks will be performed during quality assurance—these typically include bilingual editing (revision), monolingual editing (review), and proofreading—and by whom. Bilingual editing involves a comparison of the source content and the target content, according to the value of the content correspondence parameter. Monolingual editing is sometimes done by a subject matter expert.

8.4.2 *Additional Tasks*—Any additional tasks that are required should be indicated in the specifications, along with who is responsible for each. Additional tasks may include ancillary services (for example, creating or updating a terminology database to be delivered to the requester), desktop publishing, translation quality evaluation, and software testing.

8.5 *Project Environment Parameters*—Project environment parameters specify how or where the production tasks are to be performed. The following three aspects may be specified as needed:

8.5.1 *Technology*—This parameter specifies any technology that may be used during the translation process.

8.5.2 *Reference Materials*—Any additional resources the provider may need from the requester. Examples include translation memory databases, termbases that supplement the project-specific terminology specified in 8.3.1.2, and any related documents with which the translation must be consistent.

8.5.3 *Workplace Requirements*—In cases such as sensitive source content, the requester may specify the location where the work will be performed, any security measures that must be taken, and any confidentiality requirements that must be followed.

8.6 *Project Stakeholder Relationship Parameters*—The *project stakeholder relationship* parameters deal with the

expectations of the requester and the provider which are not limited to deadline and cost.

8.6.1 *Permissions*—Permissions cover certain legal aspects of a project regarding usage rights.

8.6.1.1 *Legal Factors*—Copyright issues should be specified in advance; liability, if any, should be clarified, and any potential conflict of interest should be disclosed. Ownership of translation components (such as target content, terminology databases, and translation memory databases) should be clarified in advance as well. It is generally understood that the requester will be the owner of the final product, but some types of translation, such as the translation of published books, might require a different arrangement.

8.6.1.2 *Recognition*—Recognition addresses whether the provider(s) will be credited for translation in the published translation and how. If recognized by name in the product, the provider(s) should be given sign-off rights on the final product.

8.6.1.3 *Restrictions*—Any limitations on the use of materials after the end of the project should be specified, such as a requirement to destroy all copies of the source and target texts after delivery to the requester or the stipulation that by-products such as translation memories or terminology databases not be used for other projects.

8.6.2 *Submissions*—The submissions parameter covers general aspects of what is required of a provider.

8.6.2.1 *Qualifications* may be detailed in a preliminary set of specifications before a qualified provider is selected. Qualifications may also specify requirements for persons involved in the project such as citizenship, academic credentials or professional certification. Certification can be awarded to a translator or a company by a third party standard setting organization, typically not for profit.

NOTE 3—Of the approximately 6000 languages currently spoken throughout the world, there are currently translator certification examinations in only a small proportion.

8.6.2.2 *Deliverables*—A comprehensive list of specifications for the deliverables based on the nature of the project should be agreed upon in advance. If a certified translation is requested, the requirements of the organization where the translation will be used should be specified since the local requirements will control. For instance, in the United States, a Certified Translation is often a written translation that is accompanied by a Certificate of Accuracy issued by the translation service provider, which can be a company, department or individual. For example, it could say that the translation service provider has translated the document to the best of its ability and include a list of credentials or other statements of process the provider chooses to specify.

8.6.2.3 *Delivery Method*—The method to be used to deliver content, whether physical or electronic, should be specified.

8.6.2.4 *Delivery Deadline(s)*—Any deadline(s) for delivery of project components. Deadlines often include milestones in advance of a final deadline.

8.6.3 *Expectations*—The *expectations* parameter covers general aspects of what is expected of the requester in two areas:

8.6.3.1 *Compensation* to the provider for work performed, including billing and funds transfer procedures if relevant.

8.6.3.2 *Communication* during the project, so that the provider and the requestor each have a contact person or persons and method of communication specified to handle any questions that may arise.

9. Production Phase

9.1 In the production phase, typical steps are addressed that may be necessary for a given translation project depending on its size, purpose, and intended audience, with particular emphasis on confirming compliance with project specifications.

9.2 Translation projects vary greatly in size, complexity, and the number of individuals involved in the process. In some cases, more than one function is performed by one individual. A simple translation project may consist of one source text to be translated into one target language by one translator with no leveraging of previous translations. A complex project may include training of authors, controlled language, document management, consultation with subject matter experts, several target languages, tool selection, many interrelated source documents, multiple file formats, and so forth. However, the same basic process applies in most cases. The process flow shown in Fig. 1 illustrates the major steps in the production phase of a translation project, as well as the interaction between the translation service provider and the requester. These steps are described in 9.3 – 9.9.

9.3 *Specifications Agreement*—At the start of the production phase, the project manager should review the agreed-upon specifications so as to plan the work and assign resources to ensure that such specifications are met. Both the requester and the translation service provider share the responsibility for checking all project-related materials for completeness, processability and clarity. The requester has the responsibility of resolving any deficiencies.

9.4 *Terminology*—In practice, some terminology may be agreed upon in advance, but the process has to be flexible. If the requester has a terminology database, glossaries, or other sources of terminology, they should be made available to the translation service provider at the outset of the project. If such resources do not exist, the translation service provider will create a glossary, at a minimum, to ensure consistency and accuracy of terminology used throughout the translation. Once the initial glossary is created and approved, it will be used as a guideline to produce the translation. During the translation process, additional terms may be gathered and added to the glossary or terminology database, or both. Requester and translation service provider should agree on ownership of the glossary and terminology database, as well as who pays for development and maintenance of same. Within the process shown in Fig. 1, terminology management can take place during several phases of the project.

9.5 *Translation*—This step varies greatly based on tools and methods used, availability of source text in electronic format, languages required, and so forth. If the use of specific tools or software programs, or both, are required by the requester, this should be agreed upon in advance during the specifications

phase. Otherwise, selection of tools and processes within the translation, editing, and proofreading phases is left up to the translation service provider, as long as the deliverable meets the requester’s expectations and agreed-upon specifications. The most important factor in ensuring success during the translation phase consists of selecting the appropriate translator(s) and tools for the job. Selection of the tools will depend largely on the type of project.

9.6 *Editing*—The editing phase is the first opportunity to confirm specifications compliance. Editing involves a two-step process. First, the editor shall compare the target text to the source text and confirm that the target text is complete, accurate, and free from misinterpretations of the source text and that the appropriate terminology has been used throughout. Second, the editor shall read the target text in its entirety, checking for overall coherence and readability, and referring back to the source text only when necessary. Some editors prefer to edit using printed copy, whereas others may prefer, or situations may dictate, that editing be performed electronically. Tool or method and editor selection are the most important factors related to this phase.

9.7 *Formatting and Compilation*—Formatting and compilation vary greatly depending on applications used, languages required, and the characteristics of the project. A marketing brochure may require formatting in a specific desktop publishing application using an existing template and graphics, while online help for a software program will require compiling and debugging. In some cases, the formatting of the target text will be different from the formatting of the source text, as defined in the specifications.

9.8 *Proofreading and Verification*—Proofreading can either be a separate step or part of the quality control step (see 9.9); however, it should not be used as a substitute for editing. Proofreading focuses on checking for typographical errors, incorrect hyphenation and spelling, and improper formatting. No change in content should be made without reference to the source text. Proofreading can be performed after the editing phase or in conjunction with the editing phase if the project is short, simple, and does not require extra formatting. When there is a separate formatting phase, proofreading for both linguistic and formatting features should be performed after formatting is completed. This often becomes verification when, in addition to proofreading for linguistic and formatting issues, functionality is also tested (for example, verifying that all hyperlinks work in a localized website). Depending on the specifications and the complexity of the project, this may be a multiphase process.

9.9 *Quality Control (QC)*—QC is but one step in the quality assurance (QA) process. QA implies that quality awareness governs all aspects of the project from start to finish while it is being carried out. Translation QA includes writing clear translation specifications and adhering to them throughout the process. QC consists of random sampling or a full check of final deliverables or both as the last step in the process. If

quality assurance processes are properly implemented, the QC step is short and simple.

10. Post-Project Review

10.1 Post-project review occurs after project completion and delivery and involves the evaluation of project performance in comparison with original project specifications. The goal is to refine best practices and ensure continuous improvement.

10.2 The post-project review is an opportunity, after project completion, for the requester, translation service provider, and other parties involved in the project to discuss which aspects of the project were successful and indicate a need for future improvement.

11. Keywords

11.1 bilingual; globalization; glossary; internationalization; interpretation; interpreting; language proficiency; language translation; linguist; localization; metric; native speaker; quality assurance; quality control; service agreement; source language; specifications; target language; terminology; terminology management; translation; translation competence; translation memory; translation process; translation quality; translation service provider; translation vendor; translator

APPENDIX

(Nonmandatory Information)

X1. RELATED READING

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ISO CD 639-3:2005, Code for the representation of languages—Part 3: Alpha-3 code for comprehensive coverage of languages.

ISO 3166-1:1997, Codes for the representation of names of countries and their subdivisions—Part 1: Country codes.

ISO 3166-2:1998, Codes for the representation of names of countries and their subdivisions—Part 2: Country subdivision code.

ISO 3166-3:1999, Codes for the representation of names of countries and their subdivisions—Part 3: Code for formerly used names of countries.

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