TECHNICAL
REPORT

ISO
TR 11941

Information and documentation — Transliteration of Korean script into Latin characters

Information et documentation — Translittération de l'écriture coréenne en caractères latins

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 11941, which is a Technical Report of type 2, was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 2, *Conversion of written languages*.

This document is being issued in the Technical Report (type 2) series of publications (according to subclause G.3.2.2 of part 1 of the ISO/IEC Directives, 1995) as a "prospective standard for provisional application" in the field of transliteration of Korean script because there is an urgent need for guidance on how standards in this field should be used to meet an identified need.

This document is not to be regarded as an "International Standard". It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to the ISO Central Secretariat.

A review of this Technical Report (type 2) will be carried out not later than three years after its publication with the options of: extension for another three years; conversion into an International Standard; or withdrawal.

Introduction

This Technical Report falls within the scope of a series of International Standards dealing with the conversion of systems of writing. The aim of this Technical Report and standards issued so far is to provide a means for international communication of written messages in a form which permits the automatic transmission and reconstitution of these by men or machines. The system of conversion, in this case, must be univocal and entirely reversible.

This means that no consideration should be given to phonetic and aesthetic matters nor to certain national customs: all these considerations are, indeed, ignored by the machine performing the function.

The adoption of this Technical Report for international communication leaves every country free to adopt for its own use a national standard which may be different, on condition that it be compatible with this Technical Report. The system proposed herein should make this possible and be acceptable to international use if the graphisms it creates are such that they may be converted automatically into the graphisms used in any strict national systems.

This Technical Report may be used by anyone who has a clear understanding of the system and is certain that it can be applied without ambiguity. The result obtained will not give a correct pronunciation of the original text in a person's own language but it will serve as a means of finding automatically the original graphism and thus allows anyone who has a knowledge of the original language to pronounce it correctly. Similarly one can only pronounce correctly a text written in, for example, English or Polish, if one has a knowledge of English or Polish.

The adoption of national standards compatible with this Technical Report will permit the representation, in an international publication, of the morphemes of each language according to the customs of the country where it is spoken. It will be possible to simplify this representation in order to take into account the number of the character sets available on different kinds of machines.

Information and documentation — Transliteration of Korean script into Latin characters

1 Scope

This Technical Report establishes a system for the transliteration of the characters of Korean script into Latin characters.

The Korean writing system may include Chinese characters and specifically Korean alphabetical characters. This Technical Report deals only with the transliteration of Korean characters. It does not provide a means to directly transcribe Chinese characters, nor a combination of Chinese characters and Korean characters. The pronunciation of a Chinese character is to be found in a standard Sino-Korean dictionary.

This Technical Report is intended to provide a means for international communication of written messages in Korean alphabetical characters in a form which permits the automatic transmission and reconstitution of these by men or machines.

2 General principles of conversion of writing systems

2.1 The words in a language, which are written according to a given script (the converted system), sometimes have to be rendered according to a different system (the conversion system) normally used for a different language. The procedure is often used for historical or geographical texts, cartographical documents and in particular bibliographical work where characters must be converted from different writing systems into a single alphabet to allow for alphabetical intercalation in bibliographies, catalogues, indexes, toponymic lists, etc.

It is indispensable in that it permits the univocal transmission of a written message between two countries using different writing systems or exchanging a message the writing of which is different from their own. It thereby permits transmission by manual, mechanical as well as electronic means.

The two basic methods of conversion of a system of writing are transliteration and transcription.

2.2 Transliteration is the process which consists of representing the characters[1] of an alphabetical or syllabic system of writing by the characters of a conversion alphabet.

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1) A character is an element of an alphabetical or other type of writing system that graphically represents a phoneme, a syllable, a word or even a prosodical characteristic of a given language. It is used either alone (e.g. a letter, a syllabic sign, an ideographical character, a digit, a punctuation mark) or in combination (e.g. an accent, a diacritical mark). A letter having an accent or a diacritical mark, for example â, è, ö, is therefore a character in the same way as a basic letter.

In principle, the conversion should be made character by character: each character of the converted graphical system is rendered by only one character of the conversion alphabet, this being the easiest way to ensure the complete and unambiguous reversibility of the conversion alphabet in the converted system.

In exceptional cases, when the number of characters used in the conversion system is smaller than the number of characters of the converted system, it is necessary to use digraphs or diacritical marks. In this case, arbitrary choices and the use of purely conventional marks shall be avoided as far as possible, and a certain phonetic logic shall be maintained in order to give the system a wide acceptance.

However, it must be accepted that the graphism obtained cannot always be correctly pronounced according to the phonetic habits of the language (or of all the languages) which usually use(s) the conversion alphabet. On the other hand this graphism shall be such that the reader who has a knowledge of the converted language may mentally restore unequivocally the original graphism and thus pronounce it.

2.3 Retransliteration is the process whereby the characters of a conversion alphabet are transformed back into those of the converted writing system. It is the exact opposite of the transliteration process in that the rules of a transliteration system are applied in reverse in order to reconvert the transliterated word to its original form.

2.4 Transcription is the process whereby the pronunciation of a given language is noted by the system of signs of a conversion language.

A transcription system is of necessity based on the orthographical conventions of the conversion language. Transcription is not strictly reversible.

Transcription may be used for the conversion of all writing systems. It is the only method that can be used for systems that are not entirely alphabetical or syllabic and for all ideophonographical systems of writing like Chinese.

2.5 To carry out **romanization** (the conversion of non-Latin writing systems to the Latin alphabet), either transliteration or transcription or a combination of the two may be used depending on the nature of the converted system.

2.6 A conversion system proposed for international use may call for compromise and the sacrifice of certain national customs. It is therefore necessary for each community of users to accept concessions, fully abstaining in every case from imposing as a matter of course solutions that are actually justified only by national practice (for example as regards pronunciation, orthography, etc.).

When a country uses two systems univocally convertible one into the other to write its own language, the system of transliteration thus implemented shall be taken a priori as a basis for the international standardized system, as far as it is compatible with the other principles exposed hereafter.

2.7 When necessary, the conversion systems should specify an equivalent for each character, not only the letters but also the punctuation marks, numbers, etc. Similarly, they should take into account the arrangement of the sequence of characters that make up the text, for example the direction of the script, and specify the way of distinguishing words and of using separation signs, following as closely as possible the customs of the language(s) which use the converted writing system.

2.8 When romanizing a script which has no upper-case characters, it is usual to capitalize some words, following national usage.

3 Principles of conversion for alphabetical writing systems

3.1 The conversion may be made at various levels.

The first level is that of completely reversible **stringent transliteration** which is necessary to attain in full the aim given in 2.2. This conversion applies all principles of transliteration without exception. However, whenever it is useful to distinguish the end or beginning of a syllable (a morpheme or a word), variants may be used. The conventional systems of stringent transliteration should be applied as such without any change to meet national or regional customs as regards pronunciation or orthography. They permit the univocal international transmission of messages by mechanical or electronic means.

To permit an international unequivocal communication, the principle of stringent conversion should be given priority. This can then be used as a basis for the establishment of rules for simplified conversion and for preparation of national standards.

The second level is that of **simplified conversion**. The simplification may be made necessary, for example, by the use of machines that do not accept all the alphabet characters required for stringent conversion. The method of conversion may allow national or regional variants, which may not permit complete reversibility. The simplified conversion may be the subject of International Standards or Technical Reports and other agreements.

The third level is that of **popular conversion** which, for example, should enable the same foreign names to be written in a uniform manner in the newspapers of a given country. It is obliged to take into account phonetic or graphic practices and therefore can only be national.

3.2 In cases where the same characters appear in one alphabet used with some differences by different languages, these characters would be transliterated in the same way, irrespective of the language they belong to.

3.3 If the converted alphabet gives a different form to the same character according to its place in the word (as is the case for example in the Arabic, Hebrew and Greek alphabets), the conversion alphabet will use only one character of constant form.

4 Transliteration tables

Table 1 — Consonants

No.	Korean	Latin	
		Method I	**Method II**
1	ㄱ	k	g
2	ㅋ	kh	k
3	ㄲ	kk	gg
4	ㄷ	t	d
5	ㅌ	th	t
6	ㄸ	tt	dd
7	ㅂ	p	b
8	ㅍ	ph	p
9	ㅃ	pp	bb
10	ㅈ	c	j
11	ㅊ	ch	c
12	ㅉ	cc	jj
13	ㅅ	s	s
14	ㅆ	ss	ss
15	ㅎ	h	h
16	ㅇ	zero	zero
17	ㄴ	n	n
18	ㄹ	r / l	r / l
19	ㅁ	m	m

Table 2 — Vowels

No.	Korean	Latin
20	ㅏ	a
21	ㅓ	eo
22	ㅗ	o
23	ㅜ	u
24	ㅡ	eu
25	ㅣ	i
26	ㅐ	ae
27	ㅔ	e
28	ㅚ	oe
29	ㅑ	ya
30	ㅕ	yeo
31	ㅛ	yo
32	ㅠ	yu
33	ㅒ	yae
34	ㅖ	ye
35	ㅘ	wa
36	ㅝ	weo
37	ㅟ	wi
38	ㅙ	wae
39	ㅞ	we
40	ㅢ	yi

Notes to tables 1 and 2

1) Consonant characters are transliterated either by Method I or by Method II. Those two methods shall not be used concurrently.

2) The Korean character No. 16 'ㅇ' (pronounced as i'eung) is transliterated in three ways depending on its position in the syllable and in a polysyllabic word. It is not transliterated when in the initial position of a word. (It is described as "zero" in table 1, No. 16, Consonants.)

EXAMPLE — 애기 (baby) aeki - Method I, aegi - Method II

In the final position of a syllable, it is transliterated "ng".

EXAMPLE — 방 (room) pang - Method I, bang - Method II

In other positions it is transliterated by an apostrophe [see 4a) i) and 4b) i)].

EXAMPLE — 아이 (child) a'i - Method I and Method II

3) The Korean character No. 18 'ㄹ' is transliterated r/l depending on its position in the syllable. The Latin character "r" is used in the initial position, and "l" is used in all other positions.

4) Whenever ambiguity appears at syllable boundaries, an apostrophe is used to mark the beginning of the next syllable in a polysyllabic word.

4a) If Method I is applied, ambiguity appears and therefore the addition of an apostrophe is needed in the following three cases.

i) When the zero-consonant character 'ㅇ'(No. 16) appears at the initial position of a non-initial syllable of a polysyllabic word.

EXAMPLE — 아이 a'i   고양이 ko'yang'i   굽이 kup'i   꽃이 kkoch'i

Compare: 밖에 pakke'e   강에 kang'e   앉아라 anc'ara

           박게 pakke   간게 kanke   안자라 ancara

           바께 pa'kke

ii) When the five double consonants ㄲ ㄸ ㅃ ㅉ ㅆ (Nos. 3, 6, 9, 12, 14) appear at the initial positions of the non-initial syllables of polysyllabic words.

EXAMPLE — 아까 a'kka   흰떡 hyin'tteok   오빠 o'ppa   어찌 eo'cci

           아씨 a'ssi

iii) When the four aspirated consonants ㅋ ㅌ ㅍ ㅊ (Nos. 2, 5, 8, 11) appear at the initial positions of the non-initial syllables of polysyllabic words.

EXAMPLE — 유쾌하다 yu'khwaehata   애타다 ae'thata   아프다 a'pheuta

           기차다 ki'chata

Compare: 동녘에 tongnyeokh'e   같이 kath'i   앞에 aph'e   꽃에 kkoch'e

4b) If Method II is applied, ambiguity appears and therefore the addition of an apostrophe is needed in the following two cases.

i) When the zero-consonant character 'ㅇ'(No. 16) appears at the initial position of a non-initial syllable of a polysyllabic word.

EXAMPLE — 아이 a'i   고양이 go'yang'i   굽이 gub'i   꽃이 ggoc'i

Compare: 밖에 bagg'e   강에 gang'e   앉아라 anj'ara

           박게 bagge   간게 gange   안자라 anjara

           바께 ba'gge

ii) When the five double consonants ㄲ ㄸ ㅃ ㅉ ㅆ (Nos. 3, 6, 9, 12, 14) appear at the initial positions of the non-initial syllables of polysyllabic words.

EXAMPLE — 아까 a'gga   흰떡 hyin'ddeog   오빠 o'bba   어찌 eo'jji

           아씨 a'ssi