

Recommendation for the Romanization of Japanese by International Standard (ISO 3602)[©]

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When translating a Japanese plant name to English, in order to keep and register Japanese meanings in English name, it is desirable that the name shall be correctly transliterated into Latin alphabet and to keep the position of the original name. Transliteration should avoid generating multiple meanings and an ambiguous meaning. International Standard 3602 system would be more useful than the modified Hepburn systems, when translating Japanese language into the Latin alphabet.

INTRODUCTION

This is an introduction to the transliteration of Japanese names. Japanese plant names shall be conserved for the conservation and identification of plants, and be transliterated into Latin alphabet in accord with single unified rule in order to keep a single Latin alphabet name for each plant. Currently, Japanese plant names are transliterated into English by many methods based on different rules and systems.

Cultivated plants are named in accordance with the rules in the International Code of Nomenclature for Cultivated Plants (ICNCP) (Brickell, 2004). When a cultivar or cultivar-group epithet in a modern language needs to be rendered in another script, it should be transliterated. Transliterating the Japanese script into the Latin alphabet must be in accord with the international standards.

Beginning in 2004, the new edition of ICNCP (Brickell, 2004) will specify modified Hepburn systems in Kenkyusha's New Japanese-English dictionaries (1954, 1974, 2003) for Japanese.

Detail definitions and those explanations of modified Hepburn systems are shown in Figs. 1-1 and 1-2, and International Standard 3602 system (ISO 360) is shown in Figs. 2, 3, 4, 5, 6-1, and 6-2. Sign differences among ISO 3602, modified Hepburn, and Hepburn are shown in Figs. 7-1 and 7-2.

A comparison of characteristics of modified Hepburn in Kenkyusha's New Japanese-English dictionary (2003) and ISO 3602 for Romanization of Japanese is shown in Fig. 8.

Instead of modified Hepburn, the Romanization of Japanese by ISO 3602 would be appropriate because of reasons described below.

IDENTITY OF WORD

In ISO 3602, published in 1989, Romanization of Japanese is directly from *kana* script to the Latin alphabet without deep consideration of the pronunciations as

shown in Figs. 4 and 5. In ISO 3602, explanations of applications of long vowels are shown in Fig. 6-1 and 6-2 and *Kana* digraphs representing long-vowel syllables are shown in Fig. 4, trigraphs in Fig. 5.

Modified Hepburn is Romanization from written Japanese language; however, the identification of the long vowels and non-Japanese words in transliteration is based on pronunciation of the words (see explanations in Figs. 1 and 2). Also, the pronunciation of place names and persons are variable and depend on individuals. As a result, a Romanized name may not be a single name. In addition, phonetic symbols for Japanese signs are not yet established. Special signs are requested for non-Japanese words (borrowed words) as shown in Fig. 7-2 in modified Hepburn in Kenkyusha's New Japanese-English dictionary (1954, 1974, 2003). Pronunciations are more variable and depend on person and occasion.

A plant name must be a single name in a script employing the Latin alphabet, and when the Latin alphabet name is reversed to original name from the transliterated name, the reversed name must also be the same name as original and single.

DEFINITION OF THE TRANSLITERATION RULE

The new edition of ICNCP (Brickell, 2004) will specify modified Hepburn system of Romanization as employed in Kenkyusha's New Japanese-English dictionary (1954, 1974, 2003).

However, the definitions and those explanations of modified Hepburn system in Kenkyusha's Japanese-English dictionary (1954, 1974, 2003) are not clear nor enough when compared with ISO 3602, especially in long vowels. The definitions and those explanations of modified Hepburn system in Kenkyusha's Japanese-English dictionary 4th edition (1974) are shown in Figs. 1-2. The definitions and those explanations in ISO 3602 are shown in Figs. 6-1 and 6-2.

AUTHORITY

The 5th edition of Kenkyusha's New Japanese-English dictionary (2003) does not show modified Hepburn, only Japanese and English are applied. Modified Hepburn would no longer be maintained by them.

British Standard (BS) 4812 (1972) shows specifications of modified Hepburn in the Romanization of Japanese; however, the definitions in BS and Kenkyusha's New Japanese-English dictionary are different in applications of "i" and "e", and signs for non-Japanese words (borrowed words) as shown in Figs. 7-1 and 7-2. British Standard is not a authority of modified Hepburn instead of Kenkyusha in this case.

The International Organization for Standardization is a worldwide federation of national standards bodies. International Standard Systems maintain the specification.

ETYMOLOGY

Hepburn system was established in 1867 by Dr. James Curtis Hepburn (1815-1911) (Hepburn, 1867). The system has many various rules and variations because it has been modified many times. And in those Hepburn systems, the rule of transliteration is relatively close to the philosophy on the English language. About 20 years ago, modified Hepburn systems were established in order to unify those many rules and BS. However, there are still many variations in rules in the modified Hepburn systems.

The ISO 3602 system is based on both Nihonsiki system (this system appears to have been established in 1885, place of publication not traced) and Kunreisiki

Simple signs

	H	K	R		H	K	R		H	K	R		H	K	R		H	K	R
1	あ	ア	a	2	い	イ	i	3	う	ウ	u	4	え	エ	e	5	お	オ	o
6	か	カ	ka	7	き	キ	ki	8	く	ク	ku	9	け	ケ	ke	10	こ	コ	ko
11	さ	サ	sa	12	し	シ	shi	13	す	ス	su	14	せ	セ	se	15	そ	ソ	so
16	た	タ	ta	17	ち	チ	chi	18	つ	ツ	tsu	19	て	テ	te	20	と	ト	to
21	な	ナ	na	22	に	ニ	ni	23	ぬ	ヌ	nu	24	ね	ネ	ne	25	の	ノ	no
26	は	ハ	ha	27	ひ	ヒ	hi	28	ふ	フ	fu	29	へ	ヘ	he	30	ほ	ホ	ho
31	ま	マ	ma	32	み	ミ	mi	33	む	ム	mu	34	め	メ	me	35	も	モ	mo
36	や	ヤ	ya					37	ゆ	ユ	yu					38	よ	ヨ	yo
39	ら	ラ	ra	40	り	リ	ri	41	る	ル	ru	42	れ	レ	re	43	ろ	ロ	ro
44	わ	ワ	wa													46	ん	ン	n
47	が	ガ	ga	48	ぎ	ギ	gi	49	ぐ	グ	gu	50	げ	ゲ	ge	51	ご	ゴ	go
52	ざ	ザ	za	53	じ	ジ	ji	54	ず	ズ	zu	55	ぜ	ゼ	ze	56	ぞ	ゾ	zo
57	だ	ダ	da	58	ぢ	ヂ	ji	59	づ	ヅ	zu	60	で	デ	de	61	ど	ド	do
62	ば	バ	ba	63	び	ビ	bi	64	ぶ	ブ	bu	65	べ	ベ	be	66	ぼ	ボ	bo
67	ぱ	パ	pa	68	ぴ	ピ	pi	69	ぷ	プ	pu	70	ぺ	ペ	pe	71	ぽ	ポ	po

Diagrams representing palatalized syllable.

	H	K	R			H	K	R			H	K	R		
1	きゃ	キヤ	kya			2	きゅ	キュ	kyu			3	きょ	キョ	kyo
4	しゃ	シャ	sha			5	しゅ	シュ	shu			6	しょ	ショ	sho
7	ちゃ	チャ	cha			8	ちゅ	チュ	chu			9	ちょ	チョ	cho
10	にゃ	ニヤ	nya			11	にゅ	ニュ	nyu			12	にょ	ニョ	nyo
13	ひゃ	ヒヤ	hya			14	ひゅ	ヒュ	hyu			15	ひょ	ヒョ	hyo
16	みゃ	ミヤ	mya			17	みゅ	ミュ	myu			18	みょ	ミョ	myo
19	りゃ	リヤ	rya			20	りゅ	リュ	ryu			21	りょ	リョ	ryo
22	ぎゃ	ギヤ	gya			23	ぎゅ	ギュ	gyu			24	ぎょ	ギョ	gyo
25	じゃ	ジャ	ja			26	じゅ	ジュ	ju			27	じょ	ジョ	jo
31	びゃ	ビヤ	bya			32	びゅ	ビュ	byu			33	びょ	ビョ	byo
34	ぴゃ	ピヤ	pya			34	ぴゅ	ピュ	pyu			35	ぴょ	ピョ	pyo

Modified Katakana Used only in representing Non-Japanese words.

K	R	K	R	K	R	K	R	K	R
ツァ	tsa	ティ	ti	トゥ	tu	ツェ	tse	ツォ	tso
ファ	fa	フィ	fi			フェ	fe	フォ	fo
		ディ	di	ドゥ	du				
				デュ	dyu				
				フュ	fyu				
						シェ	she		
						チェ	che		
						ジェ	je		

Figure 1-1. Romanization of Japanese in Kenkyusha's New Japanese-English dictionary 4th edition (In Modified Hepburn). Legends: H = hirakana, K = katakana, R = Romanized.

1. In Romanization, long vowels are marked with a macron.

: Ā ā (あー)、Ū ū (うー)、Ō ō (おー)

Ex. Obāsan(お祖母さん)、Kūki(空気)、Tōkyō(東京)、Ryōri(料理)、
Nēsan(姉さん).

1-1. For Non-Japanese, long vowels are marked with a macron.

: Ī ī (イー)、Ē ē (エー)

Ex. bīru(ビール)、Nijima(新島)、kēki(ケーキ).

1-2. 経験、性格、英語 shall be written as keiken, seikaku, eigo.

2. Preceding “b”, “m”, or “p” internally, syllabic-final “n” is romanized “n” rather than “m”.

Ex. shinbun(新聞)、bonbori(ぼんぼり)、manmaru(真ん丸)、denpō(電報).

2-1. When preceding a vowel or “y” in the same word, syllabic-final “n” is followed by an apostrophe.

Ex. gen'in(原因)、kan'yaku(簡約)、ten'yō(転用)、shin'ichi(伸一)、
Kin'yōbi(金曜日)

3. When bugging an inherent consonant, the consonant in question is doubled.

Ex. Nippon(日本)、gekkō(月光)、gekkū(月給)、kokkai(国会)、tosshin(突進).

3-1. In case of the consonant of “ch”, “t” is added without doubling “c”.

Ex. mitchaku(密着)、netchū(熱中)、shutchō(出張).

Figure 1-2. Definitions and those explanations of Romanization of Japanese in Kenkyu-sha's New Japanese-English dictionary 4th edition.

Legend : H = *hirakana* K = *katakana* R = *romanized*

	H	K	R		H	K	R		H	K	R		H	K	R		H	K	R
1	あ	ア	a	2	い	イ	i	3	う	ウ	u	4	え	エ	e	5	お	オ	o
6	か	カ	ka	7	き	キ	ki	8	く	ク	ku	9	け	ケ	ke	10	こ	コ	ko
11	さ	サ	sa	12	し	シ	si	13	す	ス	su	14	せ	セ	se	15	そ	ソ	so
16	た	タ	ta	17	ち	チ	ti	18	つ	ツ	tu	19	て	テ	te	20	と	ト	to
21	な	ナ	na	22	に	ニ	ni	23	ぬ	ヌ	nu	24	ね	ネ	ne	25	の	ノ	no
26	は	ハ	ha	27	ひ	ヒ	hi	28	ふ	フ	fu	29	へ	ヘ	he	30	ほ	ホ	ho
31	ま	マ	ma	32	み	ミ	mi	33	む	ム	mu	34	め	メ	me	35	も	モ	mo
36	や	ヤ	ya					37	ゆ	ユ	yu					38	よ	ヨ	yo
39	ら	ラ	ra	40	り	リ	ri	41	る	ル	ru	42	れ	レ	re	43	ろ	ロ	ro
44	わ	ワ	wa													45	を	ヲ	o
																46	ん	ン	n
47	が	ガ	ga	48	ぎ	ギ	gi	49	ぐ	グ	gu	50	げ	ゲ	ge	51	ご	ゴ	go
52	ざ	ザ	za	53	じ	ジ	zi	54	ず	ズ	zu	55	ぜ	ゼ	ze	56	ぞ	ゾ	zo
57	だ	ダ	da	58	ぢ	ヂ	zi	59	づ	ヅ	zu	60	で	デ	de	61	ど	ド	do
62	ば	バ	ba	63	び	ビ	bi	64	ぶ	ブ	bu	65	べ	ベ	be	66	ぼ	ボ	bo
67	ぱ	パ	pa	68	ぴ	ピ	pi	69	ぷ	プ	pu	70	ぺ	ペ	pe	71	ぽ	ポ	po
								72	っ	ツ	*								

Supplements

- (1) Romanized *wa* when used for the grammatical particle so pronounced.
- (2) Romanized *e* when used for the grammatical particle so pronounced.
- (3) を(ヲ) is used only for the grammatical particle denoting direct object complement, but romanized *o*.
- (4) ぢ(ヂ) and づ(ヅ) are used as voiced ち(チ) and つ(ツ) when adjacent to ち(チ) and つ(ツ) respectively or in certain compound words but they are romanized into *zi* and *zu* respectively.

* If small-sized っ (character 72 of Figure 2) is used before a syllable beginning with a consonant (e.g. こ = ko), this sign is written slightly to the right of centre (or slightly lower when writing sideways); it is then transcribed by the duplication of that consonant, e.g. がっこう = gakkō.

Figure 2. Simple kana signs representing non-palatalized syllables.

Legend : H = *hirakana* K = *katakana* R = *romanized*

	H	K	R		H	K	R		H	K	R
1	きゃ	キャ	kya	2	きゅ	キュ	kyu	3	きょ	キョ	kyo
4	しゃ	シャ	sha	5	しゅ	シュ	syu	6	しよ	シヨ	syo
7	ちゃ	チャ	tya	8	ちゅ	チュ	tyu	9	ちよ	チヨ	tyo
10	にゃ	ニャ	nya	11	にゅ	ニュ	nyu	12	によ	ニヨ	nyo
13	ひゃ	ヒャ	hya	14	ひゅ	ヒュ	hyu	15	ひよ	ヒヨ	hyo
16	みゃ	ミャ	mya	17	みゅ	ミュ	myu	18	みよ	ミヨ	myo
19	りゃ	リャ	rya	20	りゅ	リュ	ryu	21	りよ	リヨ	ryo
22	ぎゃ	ギャ	gya	23	ぎゅ	ギュ	gyu	24	ぎよ	ギヨ	gyo
25	じゃ	ジャ	zya	26	じゅ	ジュ	zyu	27	じよ	ジヨ	zyo
28	ぢゃ	ヂャ	zya	29	ぢゅ	ヂュ	zyu	30	ぢよ	ヂヨ	zyo
31	びゃ	ビャ	bya	32	びゅ	ビュ	byu	33	びよ	ビヨ	byo
34	びゃ	ビャ	pya	34	びゅ	ビュ	pyu	35	びよ	ビヨ	pyo

Supplements

- (1) These digraphs consist of a normal script and a succeeding smaller や(ヤ), ゆ(ユ), よ(ヨ) written slightly to the right of centre (or slightly lower when writing sideways).
- (2) ぢゃ(ヂャ), ぢゅ(ヂュ) and ぢよ(ヂヨ) are used as voiced ちゃ(チャ), ちゅ(チュ) and ちよ(チヨ) respectively in compound words but they are romanized *zya*, *zyu* and *zyo* respectively.

Figure 3. Kana digraphs representing palatalized syllables.

		Legend :				H = hirakana				K = katakana				R = romanized									
		H	K	R	H	K	R	H	K	R	H	K	R	H	K	R							
1	ああ	アア	あ	2	いい	イイ	い	3	うう	ウウ	う	4	ええ	エエ	え	5	おお	オオ	o	6	おう	オウ	o
7	かあ	カア	ka	8	きい	キイ	ki	9	くう	クウ	ku	10	けえ	ケエ	ke	11	こお	コオ	ko	12	こう	コウ	ko
13	さあ	サア	sa	14	しい	シイ	si	15	すう	スウ	su	16	せえ	セエ	se	17	そお	ソオ	so	18	そう	ソウ	so
19	たあ	タア	ta	20	ちい	チイ	ti	21	つう	ツウ	tu	22	てえ	テエ	te	23	とお	トオ	to	24	とう	トウ	to
25	なあ	ナア	na	26	にい	ニイ	ni	27	ぬう	ヌウ	nu	28	ねえ	ネエ	ne	29	のお	ノオ	no	30	のう	ノウ	no
31	はあ	ハア	ha	32	ひい	ヒイ	hi	33	ふう	フウ	fu	34	へえ	ヘエ	he	35	ほお	ホオ	ho	36	ほう	ホウ	ho
37	まあ	マア	ma	38	みい	ミイ	mi	39	むう	ムウ	mu	40	めえ	メエ	me	41	もお	モオ	mo	42	もう	モウ	mo
43	やあ	ヤア	ya					44	ゆう	ユウ	yu					45	よお	ヨオ	yo	46	よう	ヨウ	yo
47	らあ	ラア	ra	48	りい	リイ	ri	49	るう	ルウ	ru	50	れえ	レエ	re	51	ろお	ロオ	ro	52	ろう	ロウ	ro
53	わあ	ワア	wa																				
54	があ	ガア	ga	55	ぎい	ギイ	gi	56	ぐう	グウ	gu	57	げえ	ゲエ	ge	58	ごお	ゴオ	go	59	ごう	ゴウ	go
60	ざあ	ザア	za	61	じい	ジイ	ji	62	ずう	ズウ	zu	63	ぜえ	ゼエ	ze	64	ぞお	ゾオ	zo	65	ぞう	ゾウ	zo
66	だあ	ダア	da	67	ぢい	ヂイ	ji	68	づう	ヅウ	zu	69	でえ	デエ	de	70	どお	ドオ	do	71	どう	ドウ	do
72	ばあ	バア	ba	73	びい	ビイ	bi	74	ぶう	ブウ	bu	75	べえ	ベエ	be	76	ぼお	ボオ	bo	77	ぼう	ボウ	bo
78	ぱあ	パア	pa	79	びい	ビイ	bi	80	ぶう	ブウ	pu	81	ぺえ	ペエ	pe	82	ぽお	ポオ	po	83	ぽう	ポウ	po

Supplements	(1) These kana digraphs consist of two normal scripts.	Examples of romanization :
おかあさん	okaa-san	okii
くつき	kukki	otou-san
ねえさん	neesan	kougyou
ながあめ	nagaame	kuu
いんいん	in in	iu
きいろ	kiiro	kusareen
ほしい	hoishi	omou

(2) When there is a morpheme boundary between vowels, they should not be rewritten in the form of a long vowel with a circumflex accent, even when they are similarly pronounced.

Examples of romanization :

Figure 4. Kana digraphs representing long-vowel syllables.

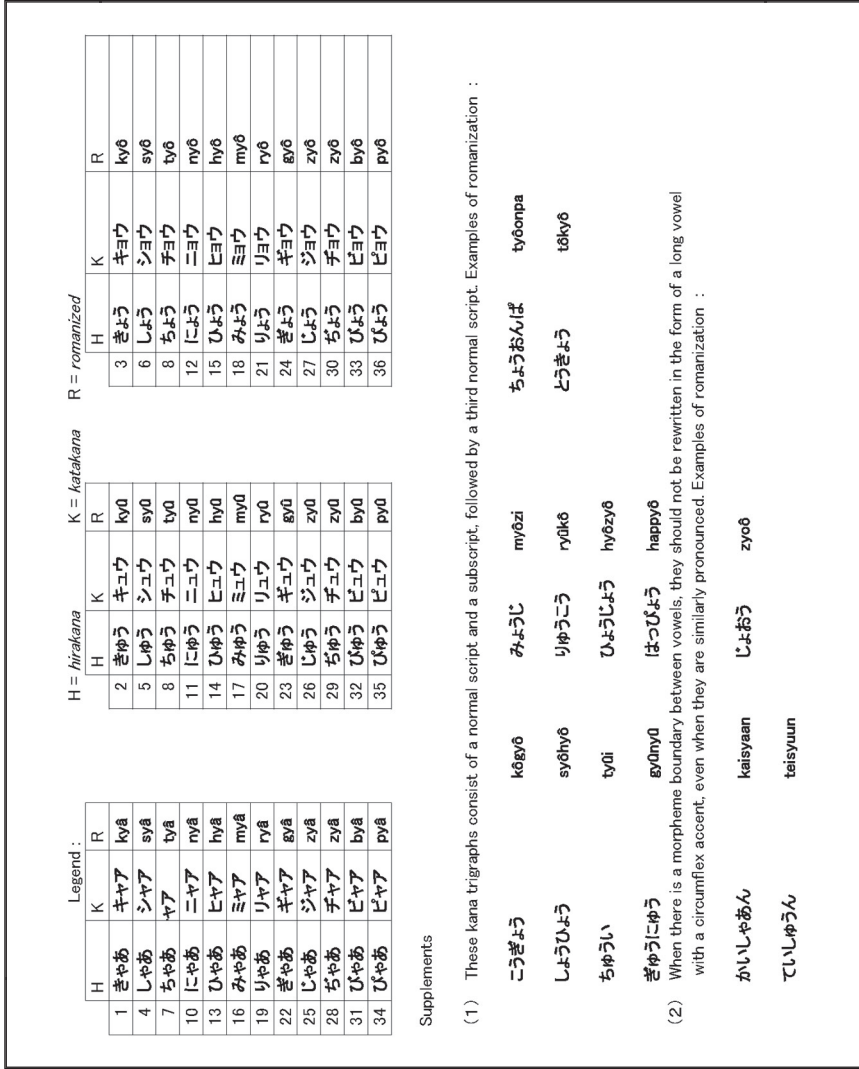


Figure 5. Kana trigraphs representing palatalized long-vowel syllables.

1. Explanation and definitions

This International Standard refers only to the transcription of *kana* into the Latin alphabet. Romanizers are expected to know the rules governing the relations between *kanzi* and *kana*.

2. System employed

- 2·1. The system of romanization employed shall be as it appears in Figure 2, Figure 3, Figure 4 and Figure 5. Owing to some characteristics of the *kana* script, this system of conversion is not strictly reversible.
- 2·2. Those figures (2, 3, 4 and 5) exclude some special signs expressing direct and foreign sounds in *kana*.

3. Morpheme boundaries

In certain exceptional cases, two *kana* scripts can be regarded as either forming a digraph denoting one syllable or representing two independent syllables. A train of three *kana* scripts こうし, for example, containing a digraph こう and し, can be interpreted as representing the word “*kôsi*”, meaning “lattice”, or “*kousi*”, meaning “calf”. In Japanese dictionaries, the separation of a digraph is shown by some mark, e.g. a dot or a hyphen. Thus the above example may be shown by こ・うし for “*kousi*”, and こうし for “*kôsi*”.

4. General rule of application

4·1. Word division

In all Japanese documents, a sentence in *kanzi* and *kana* is spelt in a sequence without divisions by words, in romanized Japanese texts separation into words is necessary.

4·2. Capitalization

Initial capital letters are used at the beginning of a sentence and for all proper nouns, following national practice.

4·3. Letter “n” at the end of a syllable

When preceding a vowel or “y” in the same word, an “n” (*kana* ん or ン) ending a syllable is followed by an apostrophe; for example, *kan'ô* (“cherry-blossom viewing”), *kin'yû* (“finance”). When the “n” initiates a syllable, it is written without an apostrophe; e.g. *kinyû* (“entry”), *kanô* (“possible”).

Figure 6-1. Definitions and those explanations of the International Standard 3602: 1989 (E).

4-4. Doubled consonants

If small-sized つ (character 72 of Figure 2) is used before a syllable beginning with a consonant (e.g. こ = *ko*), this sign is written slightly to the right of centre (or slightly lower when writing sideways); it is then transcribed by the duplication of that consonant, e.g. が^つこう = *gakkô*.

4-5. Long vowels

In *kana* spelling, long vowels are represented by certain digraphs (see Figure 4) or trigraphs (see Figure 5). There are, however, exceptional cases in *kana* spelling where digraphs do not represent real digraphs but two independent syllables for the reasons given in clause 3. Whenever doubtful, it is recommended to consult a dictionary.

In romanization, long vowels are shown by the addition of a circumflex to the vowel, e.g. a long *o* becomes *ô*.

In borrowed words shown in *katakana*, a lengthening bar (ー) is used after the *kana* script, e.g. カー (not カア) = *kâ*, ビール (not ビイル) = *bîru*, and ソース (not ソウス) = *sôsu*.

These bars are always transcribed by a circumflex.

NOTE

A scheme for stringent transliteration would differ from this transcription system on the following items:

Figure 2, characters 26 and 29 would be romanized always as *ha* and *he* respectively.

Figure 2, character 45 would be written as *wo*.

Figure 2, character 58 and 59 would be written as *dî* and *du* respectively.

Figure 3, character 28, 29 and 30 would be written as *dya*, *dyu* and *dyo* respectively.

In 4-5., the lengthening bar would be transliterated by a macron on the preceding vowel, e.g. *bîru* (not *biru*) [In borrowed words shown in *katakana*, a lengthening bar (ー) is used after the *kana* script, e.g. カー (not カア) = *kâ*, ビール (not ビイル) = *bîru*, and ソース (not ソウス) = *sôsu*. These bars are always transcribed by a macron.]

Figure 6-2. Definitions and those explanations of the International Standard 3602: 1989 (E) (Continued).

Japanese		ISO	Modified Hepburn		Hepburn
hirakana	kanji	ISO	Kenkyusya	BS	Hepburn
し		si	shi	shi	shi
ち		ti	chi	chi	chi
つ		tu	tsu	tsu	tsu
ふ		hu	fu	fu	fu
じ		zi	ji	ji	ji
ぢ		zi	ji	ji	ji
しゃ		sya	sha	sha	sha
しゅ		syu	shu	shu	shu
しょ		syo	sho	sho	sho
ちゃ		tya	cha	cha	cha
ちゅ		tyu	chu	chu	chu
ちょ		tyo	cho	cho	cho
じゃ		zya	ja	ja	ja
じゅ		zyu	ju	ju	ju
じょ		zyo	jo	jo	jo
ぢゃ		zya	ja	ja	ja
ぢゅ		zyu	ju	ju	ju
ぢょ		zyo	jo	jo	jo
いい		î	ii	ii	ī, î or ii
ちいさい	小さい	tîsai	chiisai	chiisai	chiisai
きいろ	黄色	kiiro	kiiro	kiiro	kiiro
ビール		bîru	bîru	biru	bîru, bîru or biiru
ええ		ê	ē	ē	ē or ê
ねえさん	姉さん	nêsan	nêsan	—	nêsan or nêsan
またべえ	又兵衛	matabê	—	matabê	matabê or matabê
さっち	察知	satti	satchi	satchi	satchi
みっちゃく	密着	mittiyaku	mitchaku	mitchaku	mitchaku
しんぶん	新聞	sinbun	shinbun	shinbun	shimbun or shinbun
ほのお	炎	honô	honoo	honô	honoo
おおどろぐ	大道具	ôdôgu	ôdôgu	—	ôdôgu or ôdôgu
ばあや	婆や	bâya	bâya	—	bâya or bâya
じいや	爺や	zîya	jîiya	—	jîiya
ひいらぎ	椋	hîragi	hiiragi	—	hiiragi
しいたけ	椎茸	sîtake	shiitake	—	shiitake
にいなめさい	新嘗祭	nînamesai	niinamesai	—	niinamesai
うつくしい	美しい	utukusî	utsukushii	—	utsukushii
フィリピン		—	firipin	firipin	firipin
フィルター		—	firutâ	firutâ	firutâ
アクアラング		akuarangu	akuarangu	akwarangꞤ	

Figure 7-1. Difference of signs among ISO, Modified Hepburn, and Hepburn.

Supplements

Z: tsa ツァ, fa ファ, ti ティ, fi フィ, di ディ, tu トウ, du ドウ, dyu デュ, fyu フユ,
tse ツェ, fe フェ, she シェ, che チェ, je ジェ, tso ツォ, and fo フォ,

are requested in Modified Hepburn in Kenkyusha's New Japanese-English dictionary as special signs for None-Japanese words.

Y: tsa ツァ, fa ファ, ti ティ, fi フィ, di ディ, tu トウ, du ドウ, dyu デュ, fyu フユ,
tse ツェ, fe フェ, she シェ, che チェ, je ジェ, tso ツォ, fo フォ, wa ウァ,
kwa クァ, kwa クワ, fya ファ, va ヴァ, vya ヴャ, gwa グァ, gwa グワ, va ヴ,
wi ウィ, kwi クィ, tsi ツィ, wi キ, vi ヴィ, vi ヴキ, gwi グィ, vi キ", wyu ウユ,
tsyu ツユ, tyu テユ, vu ヴ, vyu ヴユ, ye イェ, we ウェ, kye キェ, kwe クェ,
nye ニェ, hye ヒェ, fye フィェ, mye ミェ, rye リェ, we エ, ve ヴェ, vye ヴィェ,
gye ギェ, gwe グェ, bye ビェ, ve エ", pye ピェ, wo ウォ, kwo クォ, fyo フォ,
wo ヲ, vo ヴォ, vyo ヴョ, vo ヴラ, gwo グォ, geo ゲォ, geyo ゲョ, and vo ヲ"

are requested in Modified Hepburn in BS as special signs for None-Japanese words.

Figure 7-2. Difference of signs among ISO, Modified Hepburn, and Hepburn. (Continued).

system (modified Nihonsiki system by Japanese government) (Konoe, 1937). These systems are based on *kana* signs, which consist of one vowel and one consonant as in Fig. 2. The ISO 3602 is a simple system when compared with Hepburn and modified Hepburn systems and this system's rule of transliteration is close to the philosophy of the Japanese language. This rule is so easy that even children will be able to understand it. Miss transliterations by ISO 3602 will be less than that by modified Hepburn systems when Japanese propagators want to translate and register a cultivar name in Japanese into English.

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Characteristics		ISO	Modified Hepburn
1	Identity of word(1 word from 1 word)	YES (only 1 word)	NO (multi words)
2	Transliterating source	Letters	Phonemes
3	Definition of the transliterating rule	Detailed and clear	Rough and unclear
4	Authority	ISO	Kenkyushya
5	Etymology	Japanese	English
6	Understandability of the transliterating rule for		
	English speaker in Japanese	Understandable	Familiar
	Old Japanese and children	Understandable	Difficult
7	Relation to Japanese language	Closed	Less closed
8	Closed language	Portuguese, Spanish	English

note : 1. Definitions of the Modified Hepburn in BS and Kenkyusha's New Japanese-English dictionary are different in application of "r" and "ii", and "g" and "e", and signs for Non-Japanese words.

Figure 8. Characteristics of Modified Hepburn in Kenkyusha's New Japanese-English dictionary and ISO for Romanization of Japanese.