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HLV CHINESE INPUT APPLICATION SOFTWARE

5 FIELD OF INVENTION

 This invention is about a kind of input method,
 especially involving one called the HLV Chinese Pinyin
 System whereby certain letters of the English alphabet
10 are designated as phonetic symbols to mark the four
 tones of the Chinese Pinyin. This invention also
 involves designating radical codes for the Chinese
 characters as a form of enhanced Chinese input method.

15 DESCRIPTION OF THE PRIOR ART

 The Chinese Pinyin method is one of the easiest methods
 to learn among many other Chinese input methods. This
 is one of the important reasons why it is widely used.
 However, as there are no direct keys corresponding to
20 the four tones on the standard Western keyboard, tones
 are normally omitted during input. And so, due to the
 lost of tone differentiation, a serious phenomenon of
 code similarity occurs, thereby impeding the speed of
 inputting.

25 The Patent Application for Invention in China, No.
 94117853.6 (the applicant is a same person of this
 application) has made public the HLV Chinese Pinyin
 method which is based on the popular Chinese Pinyin
30 method, and in which tones are included in the input
 codes. In this way, it reduces to a certain extent of
 the phenomenon of code similarity and hence increases
 the speed of inputting Chinese characters
 correspondingly. However, as it is rather common to
35 find different Chinese characters having the same
 pronunciation and tones, and so, even by adding tones to
 the Pinyin, it still cannot settle the overall problem
 of code similarity. For example, the pronunciation of
 the different Chinese characters: 种、肿、冢 and 踵
40 is "zhong". And they are all in the 3rd tone. By using
 the said HLV Chinese Pinyin input method to input such
 Chinese characters, 4 characters matching the same input
 code will be presented to the user to choose.

45 SUMMARY OF THE INVENTION

 And so, the aim of this invention is to provide a kind
 of enhanced HLV Chinese Pinyin Input method to further

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reduce the problem of code similarity from happening, thereby improving the speed of input.

5 According to the purpose of this invention to reduce code similarity, one more code-letter representing the radical of Chinese characters will be added to the Pinyin derived from the existing HLV Chinese Pinyin method. Take the above example again. Notice that
10 although many Chinese characters can have the same pronunciation and tones, their radicals are normally different from one another. Therefore, by adding one more radical code-letter to the HLV Pinyin, the overall code becomes more unique and the problem of code
15 similarity can be eliminated under most circumstances.

15 The HLV Chinese Pinyin Input method requires only the standard Western keyboard for input. The alphabet keys of the said keyboard are separately or collectively used as keys to input consonants, vowels, tones and radicals. The
20 Input Method details the following steps to form a pinyin code:

- 25 (a) Key in the consonants of the Chinese characters using keys that represent the consonants of the Chinese characters.
- (b) Key in the vowels and tones of the Chinese characters using keys that represent the vowels and tones of the Chinese characters.
30
- (c) Key in the radical codes of the Chinese characters using keys that represent the radical codes of the Chinese characters.

35 The way of inputting vowels, tones and radical codes of Chinese characters in items (b) and (c) thereof mentioned above can be classified into the following conditions:

- 40 (1) It is not necessary to input tone codes for Chinese characters in neutral tones or first tones, simply input the radical codes of such Chinese characters after their Pinyins are formed;
- 45 (2) For Chinese characters with the vowels "a, o, e, ia, ie, ua, uo, üe, ao" and "iao", first key in the consonants using the consonant keys. Then key in the vowel using the vowel keys. After that, to indicate the 2nd, 3rd or 4th tone, key in "h", "l" or "v" respectively. Finally, key in the radical

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codes of the Chinese characters using the radical code keys;

- 5 (3) For Chinese characters with the vowel "i" at the end, i.e. "i, ai, uai, ei" and "uei", first key in the consonants using the consonant keys. Then key in the vowel using the vowel keys. After that, to indicate the 2nd, 3rd or 4th tone, key in "h", "l" or "v" respectively. Finally, key in the radical codes of the Chinese characters using the radical code keys;
- 10
- 15 (4) For Chinese characters with the vowels "u" and "ü" at the end, i.e. "u, ou, iou" and "ü", first key in the consonants using the consonant keys. Then key in the vowel using the vowel keys. After that, to indicate the 2nd, 3rd or 4th tone, key in "h", "l" or "v" respectively. Finally, key in the radical codes of the Chinese characters using the radical code keys;
- 20
- 25 (5) For Chinese characters with the nasal vowel "n" at the end, i.e. "an, en, ian, üan, uan, uen, ün" and "in", first key in the consonants using the consonant keys. Then key in part of the vowels up to but not including the nasal vowel "n" using the vowel keys. Next, key in "h", "r" or "n" to indicate the 2nd, 3rd or 4th tones of the Chinese characters. Now complete the pinyin by keying in the nasal vowel "n". Finally, key in the radical codes of the Chinese characters using the radical code keys;
- 30
- 35 (6) For Chinese characters with the nasal vowel "ng" at the end, i.e. "ang, iang, uang, eng, ing, ueng, ong" and "iong", first key in the consonants using the consonant keys. Then key in part of the vowels up to but not including the nasal vowel "ng" using the vowel keys. To indicate the 2nd or 3rd tone, key in "h" or "r" respectively before completing the pinyin with "ng". To indicate the 4th tone, simply key in "nk" followed by nothing else. Finally, key in the radical codes of the Chinese characters using the radical code keys.
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From the above rules, it is shown that in the invention, the Enhanced HLV Chinese Pinyin Input System enables the consonant codes, vowel codes, tone codes and radical codes of Chinese characters to be input from a standard Western

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keyboard, hence reducing code similarity and improving input speed.

5 DETAILED DESCRIPTION OF THE PREFERRED ENVIRONMENT

A concrete example of this invention is described in detail below :-

10 In the traditional phonetic notation method for Chinese Pinyin, special symbols to indicate tones are marked on the top of the Pinyin. But when used with the standard Western keyboard to input Chinese characters, there are no special keys on the keyboard to directly represent the tones of the Pinyin. And so, other keys need to be used as substitutes.
15 In this invention, the Enhanced HLV Chinese Pinyin Input method uses certain letters out of the 26 letters of the English alphabet to represent the four tones of the Pinyin as well as the radical codes of Chinese characters. In order to avoid confusion in pronunciation after adding
20 tone-letters to the Pinyins, different letters are carefully selected to go with different vowels.

In this innovative invention, the way of handling the four tones of Pinyin, i.e. the 1st tone, 2nd tone, 3rd tone, 4th
25 tone, the neutral tone and radical codes, is as follows:

1. In this concrete example, the letters "h", "l", "v" and the letters representing the radical codes of the
30 Chinese characters are used to represent the tone symbols and character identification symbols respectively on this enhanced HLV Chinese Pinyin Input System. In general, the input method is as follows:

35 Input the consonants of the Chinese characters using the corresponding keys; then input the vowels of the Chinese characters; after that, key in the letters representing the tones; Lastly, key in the letters which represent the radicals. Thereof, no tone-letters are input
40 for the 1st tones; "h" is keyed in for the 2nd tones; "l" is keyed in for the 3rd tones and "v" is keyed in for the 4th tones. The neutral tones are the same as the 1st tones, no tone-letters are input for them. The way of coding the radicals of the Chinese characters is: Use the first
45 letter from the Pinyin of the radical to be its code. The codes of the radicals will be listed at the end of this Directions. For Chinese characters that are radicals themselves, such as "金、女、马" and etc., no radical code need be input.

In addition, according to the above stipulation, as no tone codes are to be input for Chinese characters in neutral tones or 1st tones, it may cause confusion between the radical tones and vowels of the Chinese characters. Take for example, the word "妈" which Pinyin is "ma". The consonant code is "m" and the vowel code is "a". As this is in the 1st tone, no tone code is required. And then, the radical code is "n" (The radical of "妈" is "女" and the first letter of its Pinyin is "n"). Therefore, according to the said method, the entire pinyin code for the word "妈" is "man". In such a case, it can be mistaken easily with "an", which is a nasal vowel. One solution for this is to list out all the possible Chinese characters for the user to choose, but this would increase the rate of code similarity. Another solution is, for Chinese characters in 1st tones and neutral tones, when the vowels of which are "a, o, e, ia, ie, ua, uo, üe, ü, ou, iou, ao, iao, i, ai, uai, ei, uei, an, en, ian, üan, uan, ün" and "in" meet with radical codes such as "h, l, n, w, y, g, k", add a ['] between the two code types as a separating symbol.

E.g	妈	(mā)	the code is	("n" is the code for the
.			"ma'n"	radical 女);
	麻	(má)	the code is	("g" is the code for the
			"mahg"	radical 麻);
	马	(mǎ)	the code is	(马 itself is a
			"mal"	radical, so no radical
				code is added);
	骂	(mà)	the code is	("k" is the code for the
			"mavk"	radical 讠);
	吗	(ma)	the code is	("k" is the code for the
			"mak"	radical 讠).

2. Among vowels, some have "i" at the end and these include: "i, ai, uai, ei" and "uei". Regarding those Chinese characters that contain these vowels, the method of input is basically the same as what is described in Item 1 above. The only difference is in the 4th tone, where "y" is used to represent it before keying in the radical code.

E.g	败	(bài)	the code	("b" is the code for
.			is "baiyb"	the radical 贝);
	配	(pèi)	the code is	("y" is the code for
			"peiyy"	the radical 酉);

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3. Among vowels, some have "u" and "ü" at the end , and these include: "u, ou, iou" and "ü". Regarding those Chinese characters that contain these vowels, the method of input is basically the same as what is described in Item 1 above. The only difference is in the 4th tone, where a "w" is used to represent it before keying in the radical code.

E.g	布	(bù)	the code is	("j" is the code for
.			"buwj"	the radical 巾);
	又	(yòu)	the code	(又 is itself a
			is "youw"	radical, so no radical
				code is added);
	誉	(yù)	the code is	("y" is the code for
			"yuwy"	the radical 言).

- Among nasal vowels, some have "n" at the end and these include: "an, en, ian, üan, uan, uen, ün" and "n". Regarding the Chinese characters that contain these nasal vowels, first key in the letter keys representing consonants. Then key in the keys representing vowels up to but not including "n". Take the vowel "uan" as an example: First key in the "u" key and "a" key. Then key in the "h", "r" or "n" key so as to input the 2nd, 3rd or 4th tone respectively before keying in the last letter "n" of the nasal vowel. After that, key in the radical code of such Chinese character.

For Chinese characters in the 1st tone, and which contain the nasal vowel "n" at the end, the way of coding is the same as that described in Item 1 above.

E.g.	参	(cān)	the code is	("s" is the code for
			"cans"	the radical 叀);
	残	(cán)	the code	("d" is the code for
			is "cahnd"	the radical 歹);
	惨	(cǎn)	the code is	("x" is the code for
			"carnx"	the radical 忄);
	灿	(càn)	the code	("h" is the code for
			is "cannh"	the radical 火).

- Among nasal vowels, some have "ng" at the end and these include: "ang, iang, uang, eng, ing, ung, ong", and "iong". Regarding Chinese characters that contain these vowels, first key in the letter keys representing the consonants. Then, key in the keys representing nasal vowels up to but not including "ng". Take the vowel "iang" as an example: First key in the "i" key and "a" key, then key in "h" or

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- "r" to input the 2nd or 3rd tone respectively before keying in the last two letters of the nasal vowel; When inputting the Chinese character in the 4th tone, "ng" is to change to "nk". So, just key in the "n" and "k" keys. That is all.
- 5 Lastly, key in the radical code of the Chinese character.

For Chinese characters in the 1st tone, and which contain the nasal vowel "ng" at the end, the way of coding is the same as that described in Item 1 above.

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E.g.	风	(fēng)	the code is "feng"	(As the character 风 is itself a radical, no radical code is added.);
	逢	(féng)	the code is "fehngch"	("ch" is the code for the radical 辶);
	讽	(fěng)	the code is "ferngy"	("y" is the code for the radical 言);
	奉	(fèng)	the code is "fenkh"	("h" is the code for the horizontal stroke [一] of a Chinese character).

6. As to several specially designated personal pronouns, where their Chinese characters have vowels at the end, that is, "他、她、它", their radical codes should be input prior to the consonants and vowels of the Chinese characters.
- 15

E.g.	他	(tā)	the code is "Rta"	("R" is the code for the radical 亻);
	她	(tā)	the code is "Nta"	("N" is the code for the radical 女);
	它	(tā)	the code is "Gta"	("G" is the code for the radical 宀);

- There is still a variation to the vowel "ü". In other words, "yu" is used to represent "ü", such as lyu = lü.
- 20

- A feature of this invention's input system is that Pinyins are input one by one and input of words in groups is not necessary. This makes the speed of inputting is very fast.
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As seen from the aforementioned description, after adopting the way of encoding Chinese characters from the Chinese

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Input method described in this innovative invention, all inputs are using the 26 letters of the English alphabets, besides using ['] to separate the tones from the radical codes of the Chinese characters. Therefore, this input
5 method will be a good help in latinizing Chinese characters. It is an audio-visual input method. Furthermore, the standard English keyboard with its 26 alphabets is most commonly used and easiest in inputting. Therefore, in comparison with other input methods that use
10 numeric keys or special symbol keys to indicate the tones and radicals of Chinese characters, this method is entirely different and makes inputs much faster. An Appendix relating to a Table of Radical Codes of Chinese Characters
15 is attached to illustrate the above described input method.

20

Appendix

Table of Radical Codes of Chinese Characters

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
<u>1 stroke</u>					
一	Horizontal stroke	héng	h	一、才	
丨	Vertical stroke	shù	sh	中	
丿	Left-falling stroke	pie	p	九	
丶	Dot stroke	diǎn	d	之	
乙 (乙 飞 刀 儿)	Turning strokes	zhé	zh	乙、了、乜	
<u>2 stroke</u>					
十 (古)	Radical 十	shí	sh	十、克	
厂 (后)	Radical 厂	chǎng	ch	厂、厅、后	
区	Radical 区	fāng	f	区	
卜	Radical 卜	bù	b	卜、卦	
占	Deformed 卜; upper component of a character	bù tóu	bt	上	
同 (用)	Radical 同	jíong	j	冈、用	
八	Radical 八	bā	b	分	
兰	Deformed 八; Upper component of a character	bā tóu	bt	兰	
人	Radical 人	rén	r	人、今	
仁	Deformed 人; Side component of a character	rén páng	rp	休	

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
入	Radical 入	rù	r	入、𠂔	
勹	Radical 勹	bāo	b	包	"勹" and "包" has the same pronunciation.
儿	Radical 儿	er	r	儿、先	
匕	Radical 匕	bǐ	b	旨	
几 (风)	Radical 几	jǐ	j	几、凭、凤	
京	Dot-horizontal stroke; Top component of a character	tóu	t	市	According to the book "Zihui", "京" is pronounced as "tóu". It means the look-out tower above a gate.
冰	Side component of the character "冰".	bīng	b	冰、冷	
冫	Top component of the character "冫".	mì tóu	mt	冫、冫	
讠	Simplified form of "言"; Side component of a character.	yián páng	yp	话	
(言	Radical 言	yián	y	言、誉	)
凶	Radical 凶	kǎn	k	凶	
卩 (危)	Radical 卩	jié	j	卫、卷	
部 (在左)	Deformed "阜"; Left side component of a character	fù páng	fp	队	
(阜	Radical 阜	fù	f	阜	)
部 (在右)	Deformed "邑"; Right side component of a character	yì páng	yp	邦	
(邑	Radical 邑	yì	y	邑	)
刀	Radical 刀	dāo	d	刀、刃	
危	Deformed "刀"; Top component of a character	dāo tóu	dt	危	
剑	Deformed "刀"; Side component of a character	dāo páng	dp	剑	

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
力	Radical 力	lì	l	力、助	
厶	Radical of the character "私"	sì	s	么、牟	"厶" and "私" have the same pronunciation and meaning.
又	Radical 又	yòu	y	又、邓	
廴	Side component of the character "延"	yán páng	yp	延	According to the book "Jiyun", "廴" is pronounced as "yin", and it has the same meaning of "延".
3 stroke					
干	"干" used as side component of a character.	gān	g	干、刊	
土	Radical 土	tǔ	t	土、去	
场	Deformed "土"; Side component of a character	tǔ páng	tp	场	
士	Radical 士	shì	sh	士、志	
工	Radical 工	gōng	g	工、功	
艹	Top part of the character "草".	cǎo tóu	ct	芒、草	
寸	Radical 寸	cùn	c	寸、封	
弁	Radical 弁	gōng	g	弊	According to the book "Shuowen", "弁" means hands jointed to show respect. According to the book "Tangyun", pronounced as "gong".
大	Radical 大	dà	d	大、太	
尢 (尢)	Radical 尢	yóu	y	尢、尫	
兀 (尧)	Radical 兀	wù	w	兀、尧	
弋	Radical 弋	yì	y	弋、式	According to the book "Yunhui", "弋" means to shoot the flying birds and it is pronounced as "yi".
小	Radical 小	xiǎo	x	小、尘	
光	Deformed "小"; Top component of a character	xiǎo tóu	xt	光	

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
口	Radical 口	kou	k	口、吸	
(口口	Double "口"; Used as top component of a character.	kou tóu	kt	哭	)
囗 (囗)	The frame of the character "国".	kuàng	k	国、囗	"囗" is the archaic character of "国"; It means a place is surrounded and formed a country, "国".
山	Radical 山	shān	sh	山、峰	
巾	Radical 巾	jīn	j	巾、帆	
彳	Radical 彳	chì	ch	征	According to "Shuowen", "彳" means to walk slowly with small steps. According to "Tangyun", it is pronounced as "chì".
彡	Radical 彡	shān	sh	形	According to "Shuowen", "彡" means a kind of drawing decorated with feathers. According to Jiyun, it is pronounced as "shan".
夕 (多)	Radical 夕	xī	x	夕、名、够	
各 (在上)	Radical 各; Used as the top part of a character	zhì	zh	冬	According to "Shuowen", "各" means to follow up from the back. And according to "Jiyun", it is pronounced as "zhì".
复 (在下)	Radical 复; Used as the bottom part of a character	sui	s	复	According to "Jiyun", "复" means to walk slowly. According "Yunpian", it is an ancient writing of the character "缓".
饣	Simplified form of the character "食"; Side component of a character.	shí páng	sp	饭	
(食	Radical 食	shí	sh	食、餐	)
状	Simplified form of the character "爿"; Side radical of a character.	pán páng	pp	状	
(爿	Radical 爿	pán	p	爿、戕	)
广	Radical 广	guǎng	g	广	
门	Radical 门	mén	m	门、闪	
宀	Top structural component of the character "宫".	gàitóu	gt	宅、宫	"宀" is pronounced as "mián". It is the top cover of the characters "室", "家", "宫" and "寓" etc.
辶	Deformed "走"; Side component of a character	chuò páng	cp	迅	
(走	Radical 走	chuò	ch	走	)

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
录 (归 彖)	Radical 录	jì	j	归、录、彖	According to "Shuowen", "录" was actually written as "彖"; It means the head of a pig. According to "Jiyun", it is pronounced as "shì".
尸	Radical 尸	shī	sh	尸、尽	
弓	Radical 弓	gōng	g	弓、弹	
己 (巳 巳)	Radical 己	jǐ	j	忌、导、异	
子	Radical 子	zǐ	z	子、孔	
凵	Radical 凵	chē	ch	凵	
女	Radical 女	nǚ	n	女、妇	
飞	Radical 飞	fēi	f	飞	
马	Radical 马	mǎ	m	马	
(丝	Radical 丝	sī	s	丝	)
丝	Simplified form of "丝"; Side component of a character	sī páng	sp	纤	
(糸	Radical 糸	mì	m	糸、紫	"糸" is pronounced as "mì"; It means fine silk)
幺	Radical 幺	yāo	y	幺、幼	
㐁	Radical 㐁	chuān	ch	㐁、巢	
4 stroke					
王	Radical 王	wáng	w	王、主	
珍 (琴)	Deformed "王" or "玉"; Side component of a character	wáng yù (páng)	wv	珍、琴	
(玉	Radical 玉	yù	v	玉、璧	)
无 (既)	Radical 无	wú	w	无、既	
韦	Radical 韦	wéi	w	韦、韪	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
木	Radical 木	mù	m	木、楼	
支	Radical 支	zhī	zh	支、翅	
犬	Radical 犬	quǎn	q	犬、猋	
(狗	Deformed "犬"; Side component of a character	quǎn páng	qp	狗	)
歹	Radical 歹	dǎi	d	歹、残	
车	Radical 车	chē	ch	车、轨	
牙	Radical 牙	yá	y	牙、邪	
戈	Radical 戈	gē	g	戈、我	
比	Radical 比	bǐ	b	比、毕	
瓦	Radical 瓦	wǎ	w	瓦、瓶	
止	Radical 止	zhǐ	zh	止、歧	
支	Radical 支	pū	p	支、𠂔	According to "Shuowen", it means to tap and according to "Tangyun", it is pronounced as "pu".
收	It belongs to radical "支"; Side component of a character	pū páng	pp	收	According to "Guangyun", "收" is same as "支".
日 (日)	Radical 日 and 日	riyuè	rv	日、时; 日、最	
冒	Upper component of the character "冒".	màotóu	mt	冒、冕	"冒" and "冕" have the same pronunciation.
贝	Radical 贝	bèi	b	财	
水 (泰)	Radical 水	shuǐ	sh	水、浆、泰	
(氵	"氵" symbolizes "水"; Side component of a character	shuǐ páng	sp	江	)
见	Radical 见	jiàn	j	见、规	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
手 (看)	Radical 手	shou	sh	手、摯、看	
(提	"提" symbolizes "手"; Side component of a character	shou páng	sp	提	)
牛	Radical 牛	niu	n	牛、牧	
毛	Radical 毛	máo	m	毛、毡	
气	Radical 气	qì	q	气、氛	
长 (肆)	Radical 长	cháng	ch	长、肆	
片	Radical 片	piàn	p	片、版	
斤	Radical 斤	jīn	j	斤、欣	
爪	Radical 爪	zhǎo	zh	爪	
(爫)	Deformed "爪"; Upper component of a character	zhǎo tóu	zt	孚	
父	Radical 父	fù	f	父、爸	
月 (有)	"月", side component of a character; It includes the meaning of "肉".	ròu yuè (páng)	rv	肝、期、有	
(肉	Radical 肉	ròu	r	肉、胥	)
氏	Radical 氏	shì	sh	氏、昏	
风	Radical 风	fēng	f	风	
风 (颶)	Side component of a character.	fēng páng	fp	颶、飘	
欠	Radical 欠	qiàn	q	欠、歉	
殳	Radical 殳	shù	sh	殳、殿	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
文	Radical 文	wén	w	文、吝	
方	Radical 方	fāng	f	方、放	
火	Radical 火	huo	h	火、烘	
灠	"灠" symbolizes "火"; Bottom component of a character	huo di	hd	热	
斗	Radical 斗	dou	d	斗、斜	
户	Radical 户	hù	h	户、肩	
心	Radical 心	xin	x	心、忍	
恭	Deformed "心"; Bottom component of a character.	xin di	xd	恭	
(忄)	Deformed "心"; Side component of a character.	xin páng	xp	忱)	
母 (母)	Radical 母	wù	w	母、每	
5 stroke					
示	Radical 示	shì	sh	示、祭	
礻	Deformed "示", side component of a character.	shì páng	sp	祈	
甘	Radical 甘	gān	g	甘、某	
石	Radical 石	shí	sh	石、砂	
龙	Radical 龙	lóng	l	龙、聋	
业	Radical 业	yè	y	业、邨	
目	Radical 目	mù	m	目、眇	
田	Radical 田	tián	t	田、男	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
罗	Deformed "网"; Upper component of a character.	wǎng tóu	wt	罗	"罗" is the ancient character of "网". It is a deformed character which is different from the cardinal number "四".
皿	Radical 皿	min	m	皿、盅	
钅	Simplified form of "金"; Side Component of a character	jīn páng	jp	针	
(金	Radical 金	jīn	j	金、鉴	)
生	Radical 生	shēng	sh	生、甥	
矢	Radical 矢	shǐ	sh	矢、知	
禾	Radical 禾	hé	h	禾、和	
白	Radical 白	bái	b	白、百	
瓜	Radical 瓜	guā	g	瓜、瓢	
鸟	Radical 鸟	liǎo	l	鸟、鸭	
疒	Side radical of the character "病".	bīng páng	bp	疗	
立	Radical 立	lì	l	立、站	
穴	Radical 穴	xué	x	穴、空	
疋 (疏)	Radical 疋	yǎ	y	疋、蛋、疏	"疋" is the ancient character of "雅". It is also pronounced as "pi".
皮	Radical 皮	pí	p	皮、皱	
登	Radical 登	bō	b	登	According to "Shuowen", "登" means to get a thorn in one's foot and it is pronounced as "bo".
矛	Radical 矛	máo	m	矛、柔	
6 stroke					
耒	Radical 耒	lǐ	l	耒、耘	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
老	Radical 老	lǎo	l	老、耆	
(老	Upper component of "老".	lǎo tóu	lt	考	)
耳	Radical 耳	r	r	耳、取	
臣	Radical 臣	chén	ch	臣、卧	
西	Radical 西	xi	x	西、要	
而	Radical 而	er	r	而、耐	
页	Radical 页	yé	y	页、颁	
至	Radical 至	zhì	zh	至	
(虎	Radical 虎	hu	h	虎、彪	)
虎	Upper component of "虎".	hu tóu	ht	虑	
虫	Radical 虫	chóng	ch	虫、虾	
缶	Radical 缶	fou	f	缶、缸	
舌	Radical 舌	shé	sh	舌、乱	
竹	Radical 竹	zhú	zh	竹	
笔	Deformed "竹", upper component of a character.	zhútóu	zt	笔	
臼	Radical 臼	jiù	j	臼、倪	
自	Radical 自	zì	z	自、臭	
血	Radical 血	xuè	x	血、衅	
舟	Radical 舟	zhou	zh	舟、船	

Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
色	Radical 色	sè	s	色、艳	
齐	Radical 齐	qí	q	齐、剂	
衣	Radical 衣	yī	y	衣、袋	
(衤)	Deformed "衣" ; Side component of a character.	yī páng	yp	衫	)
羊 (羴)	Radical 羊	yáng	y	羊、差、群	
美	Deformed "羊" ; upper component of a character.	yángtóu	yt	美	
米	Radical 米	mǐ	m	米、料	
聿 (聿)	Radical 聿	yù	v	聿、肄、肃	According to "Shuowen", it is a writing instrument. According to "Zhengyun", it is pronounced as "yù".
艮	Radical 艮	gèn	g	艮、良	
羽	Radical 羽	yǔ	v	羽、翌	
<u>7 stroke</u>					
麦	Radical 麦	mài	m	麦、麸	
走	Radical 走	zǒu	z	走、起	
赤	Radical 赤	chì	ch	赤、赦	
豆	Radical 豆	dòu	d	豆、豉	
酉	Radical 酉	yǒu	y	酉、酌	
辰	Radical 辰	chén	ch	辰、唇	
豕	Radical 豕	shǐ	sh	豕、豨	
卤	Radical 卤	lǔ	l	卤、鹵	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
里	Radical 里	lǐ	l	里、野	
足	Radical 足	zú	z	足、趺	
跑	Deformed "足" ; Side component of a character.	zú páng	zp	跑	
身	Radical 身	shēng	sh	身、躬	
悉	Radical 悉	biàn	b	悉	According to "Shuowen", 悉 means to differentiate. (悉 is different from the character 采).
谷	Radical 谷	gǔ	g	谷、欲	
豸	Radical 豸	zhì	zh	豸、豹	
龟	Radical 龟	guī	g	龟	
角	Radical 角	jiǎo	j	角、触	
辛	Radical 辛	xīn	x	辛、辜	
8 stroke					
青	Radical 青	qīng	q	青、静	
朝	Side component of the character "朝".	zhāo páng	zp	朝	
雨	Radical 雨	yǔ	y	雨、雪	
非	Radical 非	fēi	f	非、悲	
齿	Radical 齿	chǐ	ch	齿、龄	
黽	Radical 黽	mǐn	m	黽、鼃	
隹	Radical 隹	zhuī	zh	隹、售	
鱼	Radical 鱼	yú	y	鱼、鲜	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
隶	Radical 隶	lì	l	隶	
<u>9 stroke</u>					
革	Radical 革	gé	g	革、鞋	
面	Radical 面	miàn	m	面、面见	
韭	Radical 韭	jiu	j	韭	
骨	Radical 骨	gu	g	骨、骼	
香	Radical 香	xiang	x	香、馥	
鬼	Radical 鬼	gui	g	鬼、魂	
音	Radical 音	yin	y	音、韵	
首	Radical 首	shou	sh	首、馗	
<u>10 stroke</u>					
髟	Radical 髟	biao	b	髟、髦	
鬲	Radical 鬲	gé	g	鬲、隔	According to the books "Guangyun" and "Zhengyun", "鬲" is pronounced as "ge".
高	Radical 高	gao	g	高、敲	
<u>11 stroke</u>					
黄	Radical 黄	huáng	h	黄、黄占	
麻	Radical 麻	má	m	麻、磨	
鹿	Radical 鹿	lù	l	鹿、麒	

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Form of strokes	Name of Radicals	Pronunciation	Radical Codes	Examples of Characters	Notes
<u>12 stroke</u>					
鼎	Radical 鼎	dīng	d	鼎、鬲	
黑	Radical 黑	hēi	h	黑、墨	
黍	Radical 黍	shǔ	sh	黍、黏	
<u>13 stroke</u>					
鼓	Radical 鼓	gǔ	g	鼓、瞽	
鼠	Radical 鼠	shǔ	sh	鼠、鼯	
<u>14 stroke</u>					
鼻	Radical 鼻	bí	b	鼻、鼷	
<u>15 stroke</u>					
龠	Radical 龠	yuè	v	龠	
<u>New created radicals :</u>					
亦	Upper structural component of a character.	yìtóu	yt	奕	
尚 (尝)	Upper structural component of a character.	shàngtóu	st	裳、尝	
丘	Radical 丘	qiū	q	丘、乒	

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CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

5 1. An enhanced HLV Chinese Pinyin input method for which
a standard Western keyboard is used to input Chinese
characters. The keys of the said keyboard are
respectively used as consonant keys, vowel keys, tone
keys and radical keys of the Chinese characters, which
10 includes the following steps:

- (a) Key in the consonants of the Chinese characters
by using keys that represent the consonant of the
Chinese characters.
15
- (b) Key in the vowels and tones of the Chinese
characters by using keys that represent the vowels
and tones of the Chinese characters.
- (c) Key in the radical codes of the Chinese
characters by using keys that represent the radical
codes of the Chinese characters.
20

The method of inputting vowels, tones and radical
25 codes of the Chinese characters in item (b) and (c)
thereof mentioned above can be classified into the
following conditions.

- (1) It is not necessary to input tone codes for
Chinese characters in neutral tones or first
tones. It is sufficient to input the radical
codes of such Chinese characters after their
Pinyins are formed;
30
- (2) For Chinese characters with the vowel "a, o,
e, ia, ie, ua, uo, üe, ao " and "iao", after
the consonants are keyed in using the
consonants keys, the vowel is then keyed in
by using the vowel keys. Thereafter, in order
40 to indicate the 2nd, 3rd or 4th tone, the
letters "h", "l" or "v" is then keyed
respectively. Finally, the radical codes of
the Chinese characters are then keyed in by
using the radical code keys;
45
- (3) For Chinese characters with the vowel "i" at
the end, i.e. "i, ai, uai, ei" and "uei", the
consonants are first keyed in by using the
consonant keys, followed by the vowel using

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5 the vowel keys. Thereafter, in order to indicate the 2nd, 3rd or 4th tone, the letters "h", "l", or "v" is then keyed in respectively. Finally the radical codes of the Chinese characters are then keyed in by using the radical code keys;

10 (4) For Chinese characters with the vowel "u" and "ü" at the end, i.e. "u, ou, iou" and "ü", the consonants are first keyed in by using the consonant keys, followed by the vowel using the vowel keys. Thereafter, in order to indicate the 2nd, 3rd or 4th tone, the letters "h", "l", or "v" is then keyed in
15 respectively. Finally the radical codes of the Chinese characters are then keyed in by using the radical code keys;

20 (5) For Chinese characters with the nasal vowel "n" at the end, i.e. "an, en, ian, üan, uan, uen, ün" and "in", the consonants are first keyed in using the consonant keys. Thereafter, part of the vowels (but excluding the nasal vowel "n") are keyed in by using the
25 vowel keys. The next step is to key in "h", "r" or "n" so as to indicate the 2nd, 3rd or 4th tones of the Chinese characters. To complete the pinyin the nasal vowel "n" is then keyed in. Finally, the radical codes of
30 the Chinese characters are keyed in by using the radical code keys;

35 (6) For Chinese characters with the nasal vowel "ng" at the end, i.e. "ang, iang, uang, eng, ing, ueng, ong" and "iong", the consonants are first keyed in by using the consonant keys. Thereafter, part of the vowels (but excluding the nasal vowel "ng") are keyed in using the
40 vowel keys. To indicate the 2nd or 3rd tone, "h" or "r" is then keyed in respectively before completing the pinyin with "n" or "g". To indicate the 4th tone, "n" and "k" are keyed in. Finally, the radical codes of the Chinese characters are keyed in by using the
45 radical code keys.