ISO/IEC JTC1/SC2 N** ISO/IEC JTC1/SC2/WG2 N****

ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html for guidelines and details before filling this form.

Please ensure you are using the latest Form from http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html.

See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html for latest Roadmaps.

A. Administrative
1. Title: Proposal of Japanese HENTAIGANA
2. Requester's name: ITSCJ SC2 Committee, IPSJ, JAPAN
Requester type (Member body/Liaison/Individual contribution): Member Body
4. Submission date: 2015-09-18
5. Requester's reference (if applicable):
6. Choose one of the following:
This is a complete proposal:
(or) More information will be provided later:
B. Technical – General
1. Choose one of the following:
a. This proposal is for a new script (set of characters):
Proposed name of script: HENTAIGANA
b. The proposal is for addition of character(s) to an existing block: Yes
Name of the existing block: Plane 01 Row B0: Kana Supplement (and one new block)
2. Number of characters in proposal:
3. Proposed category (select one from below - see section 2.2 of P&P document):
A-Contemporary X B.1-Specialized (small collection) B.2-Specialized (large collection)
C-Major extinct D-Attested extinct E-Minor extinct
F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usage symbols
4. Is a repertoire including character names provided?
a. If YES, are the names in accordance with the "character naming guidelines"
in Annex L of P&P document?
b. Are the character shapes attached in a legible form suitable for review? Yes
5. Fonts related:
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the
standard?
ITSCJ SC2 Committee, IPSJ, JAPAN
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
Information-technology Promotion Agency, Japan (http://mojikiban.ipa.go.jp/)
6. References:
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? Yes
b. Are published examples of use (such as samples from newspapers, magazines, or other sources)
of proposed characters attached? No
7. Special encoding issues:
Does the proposal address other aspects of character data processing (if applicable) such as input,
presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? No
8. Additional Information:
Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script
that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour
information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default
Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization
related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also
see Unicode Character Database (http://www.unicode.org/reports/tr44/) and associated Unicode Technical Reports
for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

Has this proposal for addition of chara- lf YES explain	cter(s) been submitted before?	No
	f the user community (for example: National Body,	
user groups of the script or charact	• • • • • • • • • • • • • • • • • • • •	Yes
	istry of Justice,	700
	tional Institute for Japanese Language and Linguistics et al.	
If YES, available relevant do		
3. Information on the user community for		
	chnology use, or publishing use) is included?	Yes
Reference:	<u>.</u> .	
4. The context of use for the proposed ch	aracters (type of use: common or rare)	Common
	in Japan's official family registry and residence registry.	
	storical study of the Japanese writing system and studies of	the history of
Japan.		
5. Are the proposed characters in current		Yes
If YES, where? Reference:	Ministry of Justice, Municipalities in Japan, National Ir	stitute for
	Japanese Language and Linguistics et al.	
	principles in the P&P document must the proposed character	
in the BMP?	<u>.</u> .	No
If YES, is a rationale provi	ded?	
If YES, reference:		
	pt together in a contiguous range (rather than being scattere	d)?
	e considered a presentation form of an existing	
character or character sequence?		No
If YES, is a rationale for its	s inclusion provided?	
If YES, reference:		
	e encoded using a composed character sequence of either	
existing characters or other propos	<u>-</u> -	No
If YES, is a rationale for its	s inclusion provided?	
If YES, reference:		<u>-</u>
10. Can any of the proposed character(s)	be considered to be similar (in appearance or function)	
to, or could be confused with, an ex	xisting character?	No
If YES, is a rationale for its	s inclusion provided?	
If YES, reference:		
11. Does the proposal include use of con	nbining characters and/or use of composite sequences?	No
If YES, is a rationale for such use p	rovided?	
If YES, reference:		
Is a list of composite sequences an	d their corresponding glyph images (graphic symbols) provid	ded?
If YES, reference:		
12. Does the proposal contain characters	with any special properties such as	_
control function or similar semantic	s?	No
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideogram		No
	nding unified ideographic characters identified?	
If YES, reference:	-	

Proposal for Japanese HENTAIGANAS

Japanese phonograms, widely known as "HIRAGANA" today, had been derived from handwritten cursive shapes of ancient Hanzi Ideographs. The meanings of the original Ideographs ("Mother Ideographs") are completely eliminated and they only carry sound.

In year 1900, Japanese government selected one phonogram for each phonetic value and announced not to use other phonograms in elementary education. Afterward, the selected phonograms are called "HIRAGANA" and others are called "HENTAIGANA", the meaning is variants of a HIRAGANA. HIRAGANAs already have code positions in UCS, in the HIRAGANA Block. Today, the use cases of HENTAIGANA are very limited, but they are still actually used especially in persons' names.

They are often used in the first names of female persons born before 1948¹. It is required by law in the Japanese family registration system to preserve records of persons for 150 years after they have passed away, so HENTAIGANAs used for these persons will still be needed for more than 150 years in administrative areas.

The other use cases are in academic studies, especially research on the history of Japanese literature, writing system, and transcriptions of historic documentations.

In both areas, processing HENTAIGANA in a digital environment is desired and, in many case, HENTAIGANAs are used assigned within private use area/plane in the UCS code space.

For enhancing interoperability of IT systems including e-government systems and fostering a fair competitive and open procurement environment, international standardization of HENTAIGANA cannot be avoided.

The attached chart is the repertory of HENTAIGANA which reflect administrative and academic needs.

¹ The Japanese government explicitly excluded HENTAIGANA from the character list, which can be used for newly born children's first names, in 1948.

[Sources of the repertory]

Mainly there are two different areas of sources.

One is the officially announced and used list for the Japanese family registration system. There are 168 HENTAIGANAs from this source.

The other is academic study. The Japan NB and several voluntary researchers gathered and consolidated HENTAIGANAs mainly used for printing purposes after the Meiji era ², and checked with several HENTAIGANA dictionaries containing examples of actual use cases. There are 275 HENTAIGANAs from this source.

The Japan NB consolidated these two different sources and made a repertory containing 299 HENTAIGANAs.

[Identification of HENTAIGANA]

Basically, a HENTAIGANA is identified by the pair of its phonetic value and its Mother Ideograph. Information of phonetic value and Mother Ideographs are included in the chart of repertory.

Proposed character names are reflected this.

Note 1. There possibly are numerous (infinite) shape variants for one HENTAIGANA because the shape of HENTAIGANA came from handwritten cursive style of ancient Hanzi Ideographs and the level of simplification can vary. So the Japan NB proposes basically a single glyph reference for each pair of phonetic value and Mother Ideograph. Visual representations of HENTAIGANAs in this proposal are only examples for rendering, and they can be rendered in a wide variety of ways.

Note 2. There are a few exceptions in this Japanese proposal to assign more than one code point for one pair of phonetic value and Mother

² 1868A.D. ∽ 1912A.D.

Ideograph. There are two reasons for this. Firstly: There are HENTAIGANA shape variants that the Japanese government have already officially assigned and used in the actual working systems. Secondly: In the history of the Japanese writing system, there are some functional differences corresponding to the degree of simplification of the Mother Ideographs.³

- Note 3. There are a few cases that one Mother Ideograph is associated with plural phonetic value. In this case, a different code positions will be associated with a very similar or identical visual representation.
- Note 4. Some HENTAIGANAs may be used with a voiced sound mark or semi-voiced sound mark. For such cases, COMBINING KATAKANA-HIRAGANA VOICED SOUND MARK (U+3099) and COMBINING KATAKANA-HIRAGANA SEMI-VOICED SOUND MARK (U+30A0) may be used with HENTAIGANAs.

³ Attached article by Takada, Yada and Saito is very useful to recognize the situation.

The past, present and future of Hentaigana Standardization for Information Interchange

Authors: TAKADA Tomokazu*, YADA Tsutomu†, SAITO Tatsuya‡ translation: Tatsuo Kobayashi (JNB), Daniel Kobayashi-Better (Osaka University)

Abstract

Hentaigana are variants of hiragana; these variants are rarely used in the present day. However, Hentaigana were used for personal names until 1947, creating a need for a standardized coded character set of Hentaigana for administrative uses such as the basic resident register. There is also a demand for the ability to input and display Hentaigana on computers for academic purposes such as in the historical study of the Japanese writing system and studies of the history of Japan. Using characters collected from letterpress printing and digital fonts, we defined a set of Hentaigana to be used in the exchange of academic information. This set includes some variants that originate from the same Chinese character in order to accurately portray functional distinction in Hentaigana use. We plan to submit a proposal to add this set along with the Hentaigana used for administrative purposes to the ISO/IEC 10646 standard on October 2015.

1. Foreword

ISO/IEC 10646(Universal Coded Set) has already encoded almost all currently used modern characters and scripts, and has continued to encode historic scripts. Hentaigana is one of such new challenge. In 2009, a Dutch expert submitted a proposal to add Hentaigana in UCS, from the view point of cultural heritage and Orientalism.

In Japan, there has been demand to some extent for using Hentaigana in the digital environment since mainframe era, and vendors have been holding some Hentaiganas as private use characters. The main use case for

^{*} National Institute for Japanese Language and Linguistics

[†] Osaka University

[‡] Senshu University

Hentaigana is the governmental treatment of personal names (mainly first name of females), and the requirement to standardize Hentaigana in UCS is arising from this use case.

Apart from the governmental usage and cultural heritage, there are requirements to standardize Hentaigana encoding in academic work, especially historical studies of Japanese characters and its writing system, and transcriptions¹ of Japanese historic documents for precise research. However, there is no stabilized set of Hentaigana yet. This survey is to establish a stabilized set of Hentaigana for these purposes.

In this paper we discuss the following

- (1) What is Hentaigana
- (2) A brief history of Hentaigana and encoding challenges
- (3) The process of selecting a Hentaigana set

2. What is Hentaigana

In the Japanese modern writing system, concerning Hiragana and Katakana usage, only one Hiragana letter corresponds to each phonetic value, with a few exceptions of ha/wa, e/he, o/wo, or long vowels.

However, this writing method came into widespread use very recently, considering the long history of Hiragana usage from 9th century. Around a thousand years until the end of 19th century, it was common for several letters to correspond to each phonetic value. The word "Hentaigana" is used two ways in the historic research of Japanese characters and its writing system. One is the writing system itself with multiple letters for one phonetic value. The other refers to any Hiragana letters that are not in common use. In this discussion, we will use the word "Hentaigana" in the latter meaning.

After 1900 A.D. (Meiji 33), Hentaigana faded out from the daily use in the Japanese writing system.

In this year, 1900 A.D. the Ministry of Education promulgated 「教授用仮名及び字体」(Kana for Use in Education) in 「小学校令施行規則」(文部省令第

14号) (Ordinance for Enforcement of the School Education Act (Ordinance of the Ministry of Education No.14)), which defined the Hiragana letters to be used in education. The hiragana letters defined in this promulgation are still in common use today.

As a matter of fact, this promulgation was only focused on elementary education, and the promulgation revoked in 1908 along with the writing rule of long vowels in on-yomi words using —, so there are no explicit law or ordinances that explicitly prescribe the use of Hentaigana in common Japanese, except for in persons' names.

However, even before promulgation regarding education, after Meiji 20, with the spread of movable-type printing, the use of Hentaigana had declined rapidly and the promulgation only confirmed the actual usage. In this way, the abolishing of this promulgation made no effect either in education or society in general, and the usage of Hentaigana faded away from the Japanese writing system. Currently, there is no disadvantage for anyone who lacks Hentaigana literacy. However, the use of Hentaigana has not completely disappeared from Japanese documents.

There still has been very few use case of Hentaiganas, for example Yukio Mishima, a famous postwar generation novelist, used a few Hentaigana in his manuscripts. The use of Hentaigana for persons' names, especially female names, is another vestige of the Hentaigana generation.

In addition, in the modern landscape, we can sometimes find uses of Hentaigana, in store names and logos. In this sense, Hentaigana is still alive in Japanese cultural scene.

That Japanese writing system finally changed to the modern Hiragana system (i.e. one tone value is represented by one Hiragana letter), is very reasonable in regard to the economics of language. If so, why was Hentaigana present in the writing system so long—more than one millennium? We will discuss this issue below.

The origin of Hentaigana is Man'yogana. Man'yogana is derived from Kanji ignoring their meaning, only inheriting their sound and shape, and are used to transcribe the Japanese language. When used as Man'yogana, the meaning of Kanji is abandoned, leading to the disappearance of any

difference between Kanji with the same or similar sound. There had been no strict rule to select one letter among many possible choices before the modern era. Man'yogana had many Kanji letters for each sound value. Hiragana inherited the characteristics of Man'yogana and had multiple letters for each tone value. As a matter of fact, there was a tendency in Man'yogana itself of a reduction in the variety of the Kanji letters for each sound value during the expansion of its area of use. However, before this reduction in variety, Hiragana itself developed shape modifications to make them visually different to Kanji.

Also, the fact that society in the Heian era, when Hiragana was developed, was relatively stable also contributed to the situation of Hiragana. Generally speaking, changes in the structure of writing system occur along with changes in society. With the increase of the population with literacy as social demand, a more rational writing system was developed for the new literate people. However, society in the Heian era remained stable for a long time, and there was no explicit development to reduce the letters for each phonetic value, rather they developed aesthetically. Hiragana letters were not reduced but increased in the Heian era.

In the case that there is more than one letter for each phonetic value, it is rational for people to create functional difference between them. Also, it is very natural to imagine people when writing would require some guidelines on how to use multiple letters for each phonetic value appropriately. There are many studies in historical research on the Japanese writing system about the functional differences among multiple letters for one phonetic value.

Examples are as follows:

(1) specific letters used in specific words

(2) different letters used for their position in a specific word (top, middle or bottom), or for particles.

- 〈シ〉 **太**-語頭/し-語中語尾₍₃₎
- 〈ハ〉 ^た-語頭/は-語中語尾/ **ハ**-助詞 (4)
- (3) different letters for the same phonetic value appearing in two adjacent lines

In addition, after the Middle Ages, we find examples where different letter shapes are used to distinguish differences in phonetic value.

(4) The difference of phonetic value is expressed with different of letter shapes.

After the use of Hentaigana had disappeared from common use, reprints of classical literature with movable type usually used only modern Hiragana. However, considering the functional usage of different letter shapes, there is possibility of losing very important information from original manuscript if only modern Hiragana is used in transcription. Moreover, looking at the example in (4), we can find that the functional difference of different letter shapes occurs not only between characters originating from two different Kanji, but also between two different letter shapes originating from the same Kanji.

The next example is a humorous anecdote from the Edo era. In modern sense, we can not find the difference, however, to completely understand the anecdote itself, we need to distinguish the difference of two letter shapes that represent the sound /to/. Punctuation marks are added by the author of this paper.

Note by translator: Very sorry without English translation, but it is very similar difficulty to translate James Joyce's "Finnegans Wake" into Japanese.

・大和国よしのあたりに、むすめ弐人持ける人、てうあひのあまり、姉の名 をしきぶと付、妹を<u>とちぎり</u>とよびける。ある人のいはく、「こなたの姉娘しきぶはきこへましたが、いもふとを<u>とちぎり</u>とはいかゞ」とたづねけ れば、「をのをのは謡御ぞんじないと見へました。それはもんもう也。井筒のうたひにありありとしるしおかれた、紀のありつねの娘はならびなきびじんゆへ、なり平心をつくされしよし、我等がむすめもあつぱれおとるまじきぞんじよりにてとちぎりと付申侯」といふ。「して其井づゝのうたひは」ととへば、しさいらしく、「その比は紀のあり常の娘とちぎりとうたひます」といはれた。(『軽口御前男』)

In the lyrics of 謡曲「井筒(izutsu)」, the text is 「紀有常の娘と契り」, however, the scatterbrain misunderstood the text to 「紀有常の娘『とちぎり』」i.e. 『とちぎり』 as the lady's proper name. This anecdote has four 「とちぎり」strings. The first three times use the Hentaigana letter 「止」 to suggest that 「とちぎり」 is a proper name, and the last time, uses 「と」 to declare that 「とちぎり」 means to have a love affair.

This is a very adequate example that in the pre modern Japanese writing system, sometimes letter shape differences carried very important functionality to enable rich exchange of information.

3. Hentaigana and coded character sets

Japanese coded character sets, such as JIS X 2028, JIS X 0212 and JIS X 0213, have no code positions for Hentaigana. However, in the 1970s, when he first Japanese first coded character set JIS X 0208 (was named JIS C 6226 when published) was published, Japanese main frame vendors treated Hentaigana as part of their private character set. In vendors' codebooks, Fujitsu includes 168 letters (FUJITSU JEF, 1980), NEC includes 152 letters (『日本電気標準文字セット辞書<拡張>』, 1983), and Hitachi includes 152 letters (『HITAC 文字パターン辞書/コードブック』,1987).

These Hentaigana are prepared to handle human proper names in practical works.

The handling rule of Hentaigana in personal names is included in 戸籍法施行規則 (Ordinance for Enforcement of the Family Register) Article 60 enacted on 1st January 1948. Article 60 is the rule to limit characters to be used for newly born children's names. Concerning Kana, after 1st Jury 1948,

Katanana or Hiragana (excluding Hentaigana) were permitted for use. In accordance with this rule, there had been no rule to prohibit Hentaigana for personal names before 31st December 1947. A person who has Hentaigana in his/her name and was born in 1947 would be 67 or 68 years old in 2016. Article 5 of 戸籍法施行規則 (Ordinance for Enforcement of the Family Register) also regulates to keep records of deceased or missing persons for 150 years. Accordingly, governance related to the family register needs to keep using Hentaigana around 200 years.

The Ministry of Justice regulated the Character/glyph set for the digitalized family registration system called 戸籍統一文字 (Unified Character Set for the Family Registry) in 法務省民一第 928 号民事局長通達 (Notice No. 928, issued by 1st Section, Civil Affairs Bureau, Ministry of Justice) promulgated on 1st April 2004.

In 戸籍統一文字, 168 Hentaigana letters are included. This repertory is very similar to the repertories included in vendor systems, and it can be inferred that this 戸籍統一文字 repertory inherits the Hentaigana used in mainframes. This fact raised the requirement to standardize Hentaigana in UCS.

In JIS, there once had been discussion about the inclusion of Hentaigana. In commentary for JIS X 0213:2000 (pp.512) there is some mention about Hentaigana.

4.4.5 Hentaigana Hentaigana is used in some areas, such as in text books for Japanese calligraphy, and there existed a small demand for standardization. However, it is very difficult to fix a set repertory of Hentaigana. Also it is very difficult to define stable glyph shapes from actual use cases that can be identified as graphic characters, and it is very difficult to clearly distinguish between Hentaigana and the handwritten shape of their original Kanji. For the above reasons, the committee finally decided not to include Hentaigana.

From this description, it can be understood that in order to standardize Hentaigana as coded characters, it is necessary to settle representative glyph shapes for each Hentaigana letter.

On the other hand, there was a proposal to include Hentaigana in UCS from

an individual Dutch expert in February 2009. This proposal is based on a Kanji searching software "Konjaku Mojikyo" and it includes 213 Hentaigana letters. In that occasion, JNB for ISO/IEC JTC1SC2 was requested to make comment for this proposal. The Japanese answer was as follows:

In Japan, there is still a requirement to standardize Hentaigana in coded character set standards especially in governmental use for personal names, however, the policy for sophisticated e-governmentization is still under discussion. This Japanese comment suspended the Hentaigana discussion in SC2.

4. Research and selection of Hentaigana set for academic purpose

Generally speaking, a character set for standardized coded character set should be sufficiently stable and fairly acceptable for a large number of people to use. This is the same for the historical study of the Japanese writing system and history of Japan (古文書学). Especially, it is very important to reach an agreement on a stable glyph shape as a graphic character between researchers, and for the repertory to be sufficiently usable for the purpose of historical study of the Japanese writing system and history of Japan.

To attain this goal, the selection of Hentaigana began with gathering Hentaigana letters used in modern letter press printing and digital fonts, and consulted dictionaries focused on Hentaigana².

Usually, we would imagine old handwritten shapes by famous masters when thinking of Hentaigana shape. However, handwritten shapes have considerable variations and it is very difficult to consolidate representative shapes. Accordingly, we started with letter press printing and digital fonts, which have more stable shapes to aid selection.

The gathered sets are as follows:

- (1) 精興社変体仮名 134字
- (2) 中西印刷変体仮名 154字
- (3) 築地活版五号明朝体活字変体仮名(明治27年)〔府川充男『聚珍録 第三編

仮名』(三省堂、2005年)より〕 115字

- (4) 教科書活字(明治 25 年・明治 27 年) [板倉雅宣『教科書体変遷史』(朗文堂、2003 年) より〕 明治 25 年:49 字 明治 27 年:50 字
- (5) 今昔文字鏡変体仮名 380字
- (6) Koin 変体仮名 [http://www10.plala.or.jp/koin/koinHentaigana.html] 335字
- (1) and (2) are the Hentaigana sets which the printers of 『大日本古文書』 and 『大日本古記録』³use. These sets seem to cover the requirements for the study of the history of Japan. (3) was published in 1894, the period when the design of letter press typefaces became stabilized. (4) was used in elementary school text books in the Meiji era, and seems to display a fundamental set of Hentaigana. (5) and (6) are popularly used by researchers, in the present day. These sets contain Hentaigana letters with the voiced and semi-voiced sound marks. However, in our Hentaigana set, these voiced and semi-voiced letters have been omitted because the needs of these letters for scholarly purpose are very low.

Note by tlk: In Japanese proposal to SC2, theoretically these voiced and semi-voiced Hentaigana letters can be rendered with UCS architecture and functionality in general.

More over, we added Hentaigana letters appearing in 12 previous studies on Kana character ⁴ and Hentaigana letters used by 東京大学史料編纂所 (Historiographical Institute, the University of Tokyo).

After gathering the candidate Hentaigana letters, grouping these letters according to their similarity in shape, we then, checked these with Hentaigana dictionaries. Hentaigana dictionaries referred to are as follows:

- (1) 『変体仮名の手引(改訂増補25版)』(中野幸一編、武蔵野書院、2009年)
- (2) 『字典かな (新装版)』(笠間影印叢刊刊行会編、笠間書院、2003年)
- (3) 『かな名跡大字典』(筒井茂徳編、角川書店、1981年)
- (4) 『かな連綿字典』(竹田悦堂監修・佐野榮輝編、雄山閣出版、1990-1992年)
- (5) 『用例かな大字典』(中田易直他編、柏書房、1978年)

All dictionaries have source information and text, therefore with this checking process, we could confirm the evidence of each Hentaigana.

With this process, we consolidated a 264 Hentaigana glyph repertory for academic use as follows:

あ	_(安) あ _(豪) え _(愛) 中 _(阿) (丙	に	(A) A (二) C (C) C (R) 次 (m) かよ
			_(而) る _(耳) す
V.	_(以) い (伊) 停 (意) き (移) 略	ね	(子)子(年) ひひ(熱) 於(編) 谷
う	(字) 字 字 (憂) を (有) さ (雲) を	の	_(乃) 乃 _(濃) ぱ _(能) お お _(農) 老
え	(江) (温) 奏 (縁) 経 (表) し (要) あ	は	(八)ハ(半)ず(婆)場(波)は(鑑)やち
お	_(於)		_(破) 破 (者) 表 を (葉) 桑 (頗) 既
カュ	_(佳) 徳 _{(加} か _(可) うう _(嘉)	ひ	(患) 型 (日) 阳 (比) 比 (避) 超 (非) 比
	(我) \$ (數) \$ (資) 愛 (閑) 第 (香) 春		_(飛) 花ゼ
	(編) 뿧		
き	(喜)を(機) 休養(支)よ(木)本(前)お	Š	(不) 分 (婦) 協 (布) ネ
	_(R) 52	^	_(倍) 偽 _(弊) 繁 _(遍) 色 _(邊) 色 _(部) へ
<	(A) 久く (h) れ (供) 代 (俱) 作 (具) を	ほ	(保)保口(報)択(率)を(實)支(本)なか
	(宋) 粒	ま	_(万) ズ _(末) 末よ _(滿) 協め _(萬) 系 _(麻) 麻
け	(介) ク (希) ネ (氣) 豪 (計) 计 (遺) き	み	_(三)
IJ	(古) お (故) あ (期) む (許) は	む	(无) え (無) 草 (牟) 年 (舞) 森
ð	(作) と (佐) 作 b (左) を (差) 巻 (散) あ	め	(免) 免 (面) (馬) 3
	(斜)种(沙)的	P	_(母) 母 (毛)ももも (皮) 女 (裳) 著
し	_(之) そし _(事) る _(四) に _(志)	P	_(也) やや (変) を (屋) を (耶) み
す	_(受) 凡 _(壽) 書 (敷) 数あ _(春) 奏も	ゆ	(曲) ゆゆ (遊) 登
	(A) (B) (B)	ょ	(余)年 (奥) ちを (餘) 特
世	(世)を 考 (勢) 努 (曜) 考	6	(羅) 程 (良) みら
そ	(所) ねる (會) そう (意) を (蘇) 春 (處) 安	ŋ	(利)わ(季)字(梨)架(理)足(里) 足
た	(堂) 老 (多) 為 と (當) あ		(piii) 热 复
ち	(千) チ (地) や (智) 8 (知) ち (致) み	る	(流) は (留) あるつ (果) ふ (類) れ
	(遲) 進		
2	(川) りつ (徒) に (津) は (都) れ	れ	WED CONTROL
て	(亨) ず(低) 径(傳) 传(天) 天てき(帝) ず	ろ	the the terms of t
	(三) 2 (轉) 格	わ	(飯橋 (和) わり (王) 見
٤	(土) と (度) 春 (東) 东 (登) を や (低) 程	ゐ	(典) 井升 (遺) 巻
	(等)	Ž	應奏 偏
な	(南) あ (名) 名 (奈) ふ ふ ふ る (楽) 菜	2	(平) チェ (尾)尾 (緒) 徳 (越) 茂 (遠)をと
	_(那) が の (難) 発		

Fig.1 The Hentaigana set for scholarly information exchange

The Hentaigana set for scholarly use consists of 47 phonetic values, 215

mother Kanji characters, 264 glyph shapes, and is arranged with three layers i.e. phonetic value, mother Kanji character and glyph.

The first layer, phonetic value does not reflect the historical change of phonetic values, but simply reflects the current phonetic values corresponding to modern Hiragana letters.

The second layer of mother Kanji characters, shows original Kanji from which Hentaigana is generated by modification to a cursive style. Usually, Hentaigana letters are displayed with their original Kanji characters, so the table contains the original Kanji character with corresponding Hentaigana. Accordingly, one phonetic value corresponds to multiple original Kanji characters. The ordering of the original Kanji characters is by their radical and stroke count.

The third layer is "glyph". Hentaigana sometimes has different glyphs origination from the same original Kanji character. Referred in section two, these different glyphs with one original Kanji character have different functions in the writing system. Hence, in this Hentaigana set, needed different glyphs with the same original Kanji character have been included as necessary (ex. For mother Kanji 「可」,「つ」 and 「つ」 are correspond). Also, classical texts sometimes contain one original Kanji character or one glyph used for multiple phonetic values. For these cases, in this table, we displayed only one phonetic value. For example, Hentaigana 「を」 is used for /YA/ and /YO/, but in this table only /YA/ is displayed. This issue should be discussed and resolved through the process of standardization. Cases that one glyph used for multiple phonetic values are as follows:

悪 (ゑ):あ、を

家(ぶ):か、け

期 (が):こ、き

徒(た):つ、と

等(ず):と、ら

而 (る):に、て

子(み):ね、こ

馬 (3):め、ま

夜(**粒**): や、よ 无(**え**): む、も、ん

Note by translator: JNB proposal resolved this issue, with assigning different identifier for the pairs of phonetic value and original Kanji character.

5. Future plan

Japan National Body for ISO/IEC JTC1/SC2 is going to submit the consolidated proposal with the 168 governmental use set and an additional 118 academic use set, making a total of 286 Hentaigana letters, to be standardized in ISO/IEC 10646.

References

- 1) 矢田勉. 国語文字・表記史の研究. 汲古書院. 2012. 825p.
- 2) 迫野虔徳. 定家の「仮名もじ遣」. 語文研究. 1974, no. 37, p. 39-46.
- 3) 安田章. 仮名文字遣と国語史研究. 三省堂. 2009. 312p.
- 4) 伊坂淳一. 藤原俊成の用字法・試論—自筆本『廣田社歌合』における機能的 用字法— (I) (II). 学苑.
- 1988, no. 577, 578, p. 179-189, 59-71.
- 5) 鈴木真喜男「. 地」のかな一定家自筆本における―. 国語研究. 1958, no. 8, p. 59-65.
- 6) 長谷川千秋. 直音と拗音を書き分ける仮名文字遣. 国語国文. 1997, vol. 66, no. 7, p. 36-52.
- 7) 蔵野嗣久. 天正狂言本の「つ」の仮名について. 安田女子大学紀要. 1973, no. 3, p. 39-43.
- 8) 日本工業標準調査会. 7 ビット及び 8 ビットの 2 バイト情報交換用符号化拡張 漢字集合 JIS X 0213:2000. 日
- 本規格協会. 2000. 541p.
- 9) 平本健二. 電子行政における文字環境の整備. 情報管理. 2015, vol. 57, no. 11, p. 799-808. http://doi.
- org/10.1241/johokanri.57.799, (accessed 2015-07-08).

10) 小林龍生. 字体と字形のはざまで: 文字情報基盤整備事業を例として. 情報 管理. 2015, vol. 58, no. 3, p.

176-184. http://doi.org/10.1241/johokanri.58.176, (accessed 2015-07-08).

¹ In this paper "transcription" means to rewrite texts in manuscripts and wood cut printings into modern style texts using modern character shape and design. Sometimes, through adding punctuation marks and replacing Hiragana strings into Kanji, transcripter's interpretation would be included.

[translator's note]

This article is originally carried in "Journal of Information Processing and Management" 2051 vol.58 no.6 published by Japanese Science and Technology Agency (JST).

² This project was conducted as the research project 「文字環境のモデル化と社会言語科学への応用」(from Oct. 2009). The members are 銭谷真人(国語研),小助川貞次(富山大),當山日出夫(立命館大),Yada, Saito, Takada.

³ Hentaigana is used in transcription of 和歌(waka) and 仮名消息(Kanashousoku).

⁴ 池田亀鑑『古典の批判的処置に関する研究』(岩波書店,1941年),山田俊雄『日本語の歴史 別巻 言語史研究入門』(平凡社,1976年),浜田啓介「板行の仮名字体―その収斂的傾向について一」(『国語学』118,1979年),築島裕『日本語の世界 5 仮名』(中央公論社,1981年),玉村禎郎「『春色梅兒誉美』における仮名の用字法」(『国語文字史の研究 2』,和泉書院,1994年),松下なるみ「平仮名の字体と字源」(『漢字百科大事典』,明治書院,1996年),久保田篤「『浮世風呂』の平仮名の用字法」(『成蹊国文』30,1997年),内田宗一「黄表紙・洒落本の仮名字体」(『国語文字史の研究 4』,和泉書院,1998年),内田宗一「『偐紫田舎源氏』の仮名字体―作者自筆稿本と板本の比較考察」(『待兼山論叢文学篇』32,1998年),内田宗一「馬琴作合巻『金比羅船利生纜』の仮名字体」(『国語文字史の研究 5』,和泉書院,2000年),久保田篤「江戸板本の表記の多様性一洒落本『傾城買二筋道』の場合」(『成蹊国文』42,2009年)

Serial #	Proposed Glyph reference	Character Name	UCS	Phonetic value	UCS of the Hiragana representing phonetic value	Mother Ideograph	UCS of the Mother Ideograph
1	あ	HENTAIGANA LETTER A VARIANT1	U+XXXXX	あ	U+3042	安	U+5B89
2	÷~	HENTAIGANA LETTER A VARIANT2	U+XXXXX	あ	U+3042	惡	U+60E1
3	や	HENTAIGANA LETTER A VARIANT3	U+XXXXX	あ	U+3042	愛	U+611B
4	ら	HENTAIGANA LETTER A VARIANT4	U+XXXXX	あ	U+3042	阿	U+963F
5	W	HENTAIGANA LETTER I VARIANT1	U+XXXXX	い	U+3044	以	U+4EE5
6	净	HENTAIGANA LETTER I VARIANT2	U+XXXXX	い	U+3044	伊	U+4F0A
7	(بحود	HENTAIGANA LETTER I VARIANT3	U+XXXXX	い	U+3044	意	U+610F
8	B	HENTAIGANA LETTER I VARIANT4	U+XXXXX	い	U+3044	移	U+79FB
9	1	HENTAIGANA LETTER U VARIANT1	U+XXXXX	ò	U+3046	宇	U+5B87
10	Ž,	HENTAIGANA LETTER U VARIANT2	U+XXXXX	j	U+3046	宇	U+5B87
11	To	HENTAIGANA LETTER U VARIANT3	U+XXXXX	ð	U+3046	憂	U+6182
12	30	HENTAIGANA LETTER U VARIANT4	U+XXXXX	ò	U+3046	有	U+6709
13	Rw	HENTAIGANA LETTER U VARIANT5	U+XXXXX	ò	U+3046	雲	U+96F2
14	₹2	HENTAIGANA LETTER E VARIANT1	U+XXXXX	え	U+3048	江	U+6C5F
15	<u> </u>	HENTAIGANA LETTER E VARIANT2	U+XXXXX	え	U+3048	盈	U+76C8
16	镪	HENTAIGANA LETTER E VARIANT3	U+XXXXX	え	U+3048	縁	U+7E01
17	え	HENTAIGANA LETTER E VARIANT4	U+XXXXX	え	U+3048	衣	U+8863
18	لہ	HENTAIGANA LETTER E VARIANT5	U+XXXXX	え	U+3048	衣	U+8863
19	あ	HENTAIGANA LETTER E VARIANT6	U+XXXXX	え	U+3048	要	U+8981
20	花	HENTAIGANA LETTER O VARIANT1	U+XXXXX	お	U+304A	於	U+65BC
21	な	HENTAIGANA LETTER O VARIANT2	U+XXXXX	お	U+304A	於	U+65BC
22	re Te	HENTAIGANA LETTER O VARIANT3	U+XXXXX	お	U+304A	隱	U+96B1
23	ぼ	HENTAIGANA LETTER KA VARIANT1	U+XXXXX	か	U+304B	佳	U+4F73
24	カゥ	HENTAIGANA LETTER KA VARIANT2	U+XXXXX	か	U+304B	加	U+52A0
25	16	HENTAIGANA LETTER KA VARIANT3	U+XXXXX	か	U+304B	可	U+53EF
26	う	HENTAIGANA LETTER KA VARIANT4	U+XXXXX	か	U+304B	可	U+53EF
27	ナか	HENTAIGANA LETTER KA VARIANT5	U+XXXXX	か	U+304B	嘉	U+5609
28	Ž1	HENTAIGANA LETTER KA VARIANT6	U+XXXXX	か	U+304B	家	U+5BB6
29	\$3	HENTAIGANA LETTER KA VARIANT7	U+XXXXX	か	U+304B	我	U+6211

30	经	HENTAIGANA LETTER KA VARIANT8	U+XXXXX	か	U+304B	歟	U+6B5F
31	爱	HENTAIGANA LETTER KA VARIANT9	U+XXXXX	か	U+304B	賀	U+8CC0
32	Sari	HENTAIGANA LETTER KA VARIANT10	U+XXXXX	か	U+304B	閑	U+9591
33	杏	HENTAIGANA LETTER KA VARIANT11	U+XXXXX	か	U+304B	香	U+9999
34	カァ 3	HENTAIGANA LETTER KA VARIANT12	U+XXXXX	か	U+304B	駕	U+99D5
35	莼	HENTAIGANA LETTER KI VARIANT1	U+XXXXX	き	U+304D	喜	U+559C
36	载	HENTAIGANA LETTER KI VARIANT2	U+XXXXX	き	U+304D	幾	U+5E7E
37	淺	HENTAIGANA LETTER KI VARIANT3	U+XXXXX	き	U+304D	幾	U+5E7E
38	J	HENTAIGANA LETTER KI VARIANT4	U+XXXXX	ŧ	U+304D	支	U+652F
39	÷2	HENTAIGANA LETTER KI VARIANT5	U+XXXXX	ŧ	U+304D	期	U+671F
40	ホ	HENTAIGANA LETTER KI VARIANT6	U+XXXXX	ŧ	U+304D	木	U+6728
41	お	HENTAIGANA LETTER KI VARIANT7	U+XXXXX	き	U+304D	祈	U+7948
42	岩	HENTAIGANA LETTER KI VARIANT8	U+XXXXX	き	U+304D	貴	U+8CB4
43	5c	HENTAIGANA LETTER KI VARIANT9	U+XXXXX	き	U+304D	起	U+8D77
44	久	HENTAIGANA LETTER KU VARIANT1	U+XXXXX	<	U+304F	久	U+4E45
45	Ź	HENTAIGANA LETTER KU VARIANT2	U+XXXXX	<	U+304F	久	U+4E45
46	れ	HENTAIGANA LETTER KU VARIANT3	U+XXXXX	<	U+304F	九	U+4E5D
47	烂	HENTAIGANA LETTER KU VARIANT4	U+XXXXX	<	U+304F	供	U+4F9B
48	{\g	HENTAIGANA LETTER KU VARIANT5	U+XXXXX	<	U+304F	倶	U+5036
49	Ŕ	HENTAIGANA LETTER KU VARIANT6	U+XXXXX	<	U+304F	具	U+5177
50	お	HENTAIGANA LETTER KU VARIANT7	U+XXXXX	<	U+304F	求	U+6C42
51	Ŋ	HENTAIGANA LETTER KE VARIANT1	U+XXXXX	け	U+3051	介	U+4ECB
52	ち	HENTAIGANA LETTER KE VARIANT2	U+XXXXX	け	U+3051	介	U+4ECB
53	Ži.	HENTAIGANA LETTER KE VARIANT3	U+XXXXX	け	U+3051	家	U+5BB6
54	尧	HENTAIGANA LETTER KE VARIANT4	U+XXXXX	け	U+3051	希	U+5E0C
55	Ž.	HENTAIGANA LETTER KE VARIANT5	U+XXXXX	け	U+3051	氣	U+6C23
56	it	HENTAIGANA LETTER KE VARIANT6	U+XXXXX	け	U+3051	計	U+8A08
57	多	HENTAIGANA LETTER KE VARIANT7	U+XXXXX	け	U+3051	遣	U+9063
58	さ	HENTAIGANA LETTER KO VARIANT1	U+XXXXX	IJ	U+3053	古	U+53E4
59	チ	HENTAIGANA LETTER KO VARIANT2	U+XXXXX	IJ	U+3053	子	U+5B50
60	tos	HENTAIGANA LETTER KO VARIANT3	U+XXXXX	Ĺ	U+3053	故	U+6545
L		<u> </u>	1				

61	72	HENTAIGANA LETTER KO VARIANT4	U+XXXXX	ī	U+3053	期	U+671F
62	17	HENTAIGANA LETTER KO VARIANT5	U+XXXXX	IJ	U+3053	許	U+8A31
63	区	HENTAIGANA LETTER SA VARIANT1	U+XXXXX	さ	U+3055	乍	U+4E4D
64	を	HENTAIGANA LETTER SA VARIANT2	U+XXXXX	さ	U+3055	佐	U+4F50
65	は	HENTAIGANA LETTER SA VARIANT3	U+XXXXX	5	U+3055	佐	U+4F50
66	مهي	HENTAIGANA LETTER SA VARIANT4	U+XXXXX	さ	U+3055	左	U+5DE6
67	そ	HENTAIGANA LETTER SA VARIANT5	U+XXXXX	5	U+3055	差	U+5DEE
68	あ	HENTAIGANA LETTER SA VARIANT6	U+XXXXX	5	U+3055	散	U+6563
69	种	HENTAIGANA LETTER SA VARIANT7	U+XXXXX	5	U+3055	斜	U+659C
70	ゆ	HENTAIGANA LETTER SA VARIANT8	U+XXXXX	さ	U+3055	沙	U+6C99
71	بخ	HENTAIGANA LETTER SI VARIANT1	U+XXXXX	l	U+3057	之	U+4E4B
72	(HENTAIGANA LETTER SI VARIANT2	U+XXXXX	l	U+3057	之	U+4E4B
73	ş	HENTAIGANA LETTER SI VARIANT3	U+XXXXX	J	U+3057	事	U+4E8B
74	B	HENTAIGANA LETTER SI VARIANT4	U+XXXXX	l	U+3057	凹	U+56DB
75	煮	HENTAIGANA LETTER SI VARIANT5	U+XXXXX	L	U+3057	忐	U+5FD7
76	衫	HENTAIGANA LETTER SI VARIANT6	U+XXXXX	l	U+3057	新	U+65B0
77	孙	HENTAIGANA LETTER SU VARIANT1	U+XXXXX	す	U+3059	受	U+53D7
78	喜	HENTAIGANA LETTER SU VARIANT2	U+XXXXX	す	U+3059	卡	U+58FD
79	戡	HENTAIGANA LETTER SU VARIANT3	U+XXXXX	す	U+3059	數	U+6578
80	あ	HENTAIGANA LETTER SU VARIANT4	U+XXXXX	す	U+3059	數	U+6578
81	善	HENTAIGANA LETTER SU VARIANT5	U+XXXXX	す	U+3059	春	U+6625
82	を	HENTAIGANA LETTER SU VARIANT6	U+XXXXX	す	U+3059	春	U+6625
83	した	HENTAIGANA LETTER SU VARIANT7	U+XXXXX	す	U+3059	須	U+9808
84	VE	HENTAIGANA LETTER SU VARIANT8	U+XXXXX	す	U+3059	須	U+9808
85	E	HENTAIGANA LETTER SE VARIANT1	U+XXXXX	t	U+305B	世	U+4E16
86	ネ	HENTAIGANA LETTER SE VARIANT2	U+XXXXX	t	U+305B	世	U+4E16
87	世	HENTAIGANA LETTER SE VARIANT3	U+XXXXX	せ	U+305B	世	U+4E16
88	弱	HENTAIGANA LETTER SE VARIANT4	U+XXXXX	せ	U+305B	勢	U+52E2
89	教	HENTAIGANA LETTER SE VARIANT5	U+XXXXX	せ	U+305B	聲	U+8072
90	Jo	HENTAIGANA LETTER SO VARIANT1	U+XXXXX	そ	U+305D	所	U+6240
91	ね	HENTAIGANA LETTER SO VARIANT2	U+XXXXX	そ	U+305D	所	U+6240
		•					

92	Fa Sa	HENTAIGANA LETTER SO VARIANT3	U+XXXXX	そ	U+305D	曾	U+66FE
-	<u>。</u> ろ					-	
93		HENTAIGANA LETTER SO VARIANT4	U+XXXXX		U+305D	曾	U+66FE
94	极	HENTAIGANA LETTER SO VARIANT5	U+XXXXX	そ	U+305D	楚	U+695A
95	禄	HENTAIGANA LETTER SO VARIANT6	U+XXXXX	そ	U+305D	蘇	U+8607
96	タ	HENTAIGANA LETTER SO VARIANT7	U+XXXXX	そ	U+305D	處	U+8655
97	2	HENTAIGANA LETTER TA VARIANT1	U+XXXXX	た	U+305F	堂	U+5802
98	<u> </u>	HENTAIGANA LETTER TA VARIANT2	U+XXXXX	た	U+305F	多	U+591A
99	2	HENTAIGANA LETTER TA VARIANT3	U+XXXXX	た	U+305F	多	U+591A
100	高	HENTAIGANA LETTER TA VARIANT4	U+XXXXX	た	U+305F	钷	U+7576
101	7	HENTAIGANA LETTER TI VARIANT1	U+XXXXX	ち	U+3061	千	U+5343
102	炝	HENTAIGANA LETTER TI VARIANT2	U+XXXXX	ち	U+3061	地	U+5730
103	*Z	HENTAIGANA LETTER TI VARIANT3	U+XXXXX	ち	U+3061	智	U+667A
104	か	HENTAIGANA LETTER TI VARIANT4	U+XXXXX	ち	U+3061	知	U+77E5
105	ち	HENTAIGANA LETTER TI VARIANT5	U+XXXXX	ち	U+3061	知	U+77E5
106	3/2	HENTAIGANA LETTER TI VARIANT6	U+XXXXX	ち	U+3061	致	U+81F4
107	E	HENTAIGANA LETTER TI VARIANT7	U+XXXXX	ち	U+3061	遲	U+9072
108	l^{\imath})	HENTAIGANA LETTER TU VARIANT1	U+XXXXX	っ	U+3064	Л	U+5DDD
109	~	HENTAIGANA LETTER TU VARIANT2	U+XXXXX	っ	U+3064	Л	U+5DDD
110	た	HENTAIGANA LETTER TU VARIANT3	U+XXXXX	<u>ر</u>	U+3064	徒	U+5F92
111	ほ	HENTAIGANA LETTER TU VARIANT4	U+XXXXX	っ	U+3064	津	U+6D25
112	打	HENTAIGANA LETTER TU VARIANT5	U+XXXXX	J	U+3064	都	U+90FD
113	3	HENTAIGANA LETTER TE VARIANT1	U+XXXXX	て	U+3066	亭	U+4EAD
114	12	HENTAIGANA LETTER TE VARIANT2	U+XXXXX	て	U+3066	低	U+4F4E
115	结	HENTAIGANA LETTER TE VARIANT3	U+XXXXX	て	U+3066	傳	U+50B3
116	天	HENTAIGANA LETTER TE VARIANT4	U+XXXXX	て	U+3066	天	U+5929
117	T	HENTAIGANA LETTER TE VARIANT5	U+XXXXX	τ	U+3066	天	U+5929
118	Z	HENTAIGANA LETTER TE VARIANT6	U+XXXXX	て	U+3066	天	U+5929
119	ā	HENTAIGANA LETTER TE VARIANT7	U+XXXXX	て	U+3066	帝	U+5E1D
120	2	HENTAIGANA LETTER TE VARIANT8	U+XXXXX	て	U+3066	弖	U+5F16
121	る	HENTAIGANA LETTER TE VARIANT9	U+XXXXX	て	U+3066	而	U+800C
122	お	HENTAIGANA LETTER TE VARIANT10	U+XXXXX	て	U+3066	轉	U+8F49

г		T	1		_		
123	上	HENTAIGANA LETTER TO VARIANT1	U+XXXXX	٤	U+3068	土	U+571F
124	を	HENTAIGANA LETTER TO VARIANT2	U+XXXXX	٤	U+3068	度	U+5EA6
125	た	HENTAIGANA LETTER TO VARIANT3	U+XXXXX	٤	U+3068	徒	U+5F92
126	药	HENTAIGANA LETTER TO VARIANT4	U+XXXXX	٤	U+3068	東	U+6771
127	8Z	HENTAIGANA LETTER TO VARIANT5	U+XXXXX	٤	U+3068	登	U+767B
128	of E	HENTAIGANA LETTER TO VARIANT6	U+XXXXX	٢	U+3068	登	U+767B
129	23	HENTAIGANA LETTER TO VARIANT7	U+XXXXX	٢	U+3068	砥	U+7825
130	か	HENTAIGANA LETTER TO VARIANT8	U+XXXXX	٢	U+3068	等	U+7B49
131	も	HENTAIGANA LETTER NA VARIANT1	U+XXXXX	な	U+306A	南	U+5357
132	名	HENTAIGANA LETTER NA VARIANT2	U+XXXXX	な	U+306A	名	U+540D
133	东	HENTAIGANA LETTER NA VARIANT3	U+XXXXX	な	U+306A	奈	U+5948
134	ふ	HENTAIGANA LETTER NA VARIANT4	U+XXXXX	な	U+306A	奈	U+5948
135	る	HENTAIGANA LETTER NA VARIANT5	U+XXXXX	な	U+306A	奈	U+5948
136	菜	HENTAIGANA LETTER NA VARIANT6	U+XXXXX	な	U+306A	菜	U+83DC
137	B2	HENTAIGANA LETTER NA VARIANT7	U+XXXXX	な	U+306A	那	U+90A3
138	M	HENTAIGANA LETTER NA VARIANT8	U+XXXXX	な	U+306A	那	U+90A3
139	Z/E	HENTAIGANA LETTER NA VARIANT9	U+XXXXX	な	U+306A	難	U+96E3
140	A A	HENTAIGANA LETTER NI VARIANT1	U+XXXXX	1:	U+306B	丹	U+4E39
141	7	HENTAIGANA LETTER NI VARIANT2	U+XXXXX	1:	U+306B	П	U+4E8C
142	くこ	HENTAIGANA LETTER NI VARIANT3	U+XXXXX	17	U+306B	仁	U+4EC1
143	党	HENTAIGANA LETTER NI VARIANT4	U+XXXXX	i.	U+306B	兒	U+5152
144	1	HENTAIGANA LETTER NI VARIANT5	U+XXXXX	1:	U+306B	鰯	U+723E
145	J	HENTAIGANA LETTER NI VARIANT6	U+XXXXX	1:	U+306B	鰯	U+723E
146	る	HENTAIGANA LETTER NI VARIANT7	U+XXXXX	1:	U+306B	而	U+800C
147	3	HENTAIGANA LETTER NI VARIANT8	U+XXXXX	17	U+306B	耳	U+8033
148	努	HENTAIGANA LETTER NU VARIANT1	U+XXXXX	ಡ	U+306C	努	U+52AA
149	ぬ	HENTAIGANA LETTER NU VARIANT2	U+XXXXX	ಡ	U+306C	奴	U+5974
150	忽	HENTAIGANA LETTER NU VARIANT3	U+XXXXX	ぬ	U+306C	怒	U+6012
151	チ	HENTAIGANA LETTER NE VARIANT1	U+XXXXX	ね	U+306D	子	U+5B50
152	Ì	HENTAIGANA LETTER NE VARIANT2	U+XXXXX	ね	U+306D	年	U+5E74
153	Ì	HENTAIGANA LETTER NE VARIANT3	U+XXXXX	ね	U+306D	年	U+5E74
_							

г		ı	1				
154	a	HENTAIGANA LETTER NE VARIANT4	U+XXXXX	ね	U+306D	年	U+5E74
155	招	HENTAIGANA LETTER NE VARIANT5	U+XXXXX	ね	U+306D	根	U+6839
156	12	HENTAIGANA LETTER NE VARIANT6	U+XXXXX	ね	U+306D	熱	U+71B1
157	称	HENTAIGANA LETTER NE VARIANT7	U+XXXXX	ね	U+306D	禰	U+79B0
158	乃	HENTAIGANA LETTER NO VARIANT1	U+XXXXX	0	U+306E	乃	U+4E43
159	佬	HENTAIGANA LETTER NO VARIANT2	U+XXXXX	Ø	U+306E	濃	U+6FC3
160	H	HENTAIGANA LETTER NO VARIANT3	U+XXXXX	0	U+306E	能	U+80FD
161	H	HENTAIGANA LETTER NO VARIANT4	U+XXXXX	Ø	U+306E	能	U+80FD
162	老	HENTAIGANA LETTER NO VARIANT5	U+XXXXX	Ø	U+306E	農	U+8FB2
163	n	HENTAIGANA LETTER HA VARIANT1	U+XXXXX	は	U+306F	八	U+516B
164	\$	HENTAIGANA LETTER HA VARIANT2	U+XXXXX	は	U+306F	半	U+534A
165	場	HENTAIGANA LETTER HA VARIANT3	U+XXXXX	は	U+306F	婆	U+5A46
166	ほ	HENTAIGANA LETTER HA VARIANT4	U+XXXXX	は	U+306F	波	U+6CE2
167	É	HENTAIGANA LETTER HA VARIANT5	U+XXXXX	は	U+306F	盤	U+76E4
168	De la companya della companya della companya de la companya della	HENTAIGANA LETTER HA VARIANT6	U+XXXXX	は	U+306F	盤	U+76E4
169	减	HENTAIGANA LETTER HA VARIANT7	U+XXXXX	は	U+306F	破	U+7834
170	え	HENTAIGANA LETTER HA VARIANT8	U+XXXXX	は	U+306F	者	U+8005
171	て	HENTAIGANA LETTER HA VARIANT9	U+XXXXX	は	U+306F	者	U+8005
172	蒙	HENTAIGANA LETTER HA VARIANT10	U+XXXXX	は	U+306F	葉	U+8449
173	BE	HENTAIGANA LETTER HA VARIANT11	U+XXXXX	は	U+306F	頗	U+9817
174	42	HENTAIGANA LETTER HI VARIANT1	U+XXXXX	Ŋ	U+3072	悲	U+60B2
175	19	HENTAIGANA LETTER HI VARIANT2	U+XXXXX	V	U+3072	日	U+65E5
176	比	HENTAIGANA LETTER HI VARIANT3	U+XXXXX	V	U+3072	比	U+6BD4
177	<i>8</i> 4	HENTAIGANA LETTER HI VARIANT4	U+XXXXX	V	U+3072	避	U+907F
178	43	HENTAIGANA LETTER HI VARIANT5	U+XXXXX	V	U+3072	非	U+975E
179	žis	HENTAIGANA LETTER HI VARIANT6	U+XXXXX	V	U+3072	飛	U+98DB
180	む	HENTAIGANA LETTER HI VARIANT7	U+XXXXX	v	U+3072	飛	U+98DB
181	な	HENTAIGANA LETTER HU VARIANT1	U+XXXXX	స్	U+3075	不	U+4E0D
182	B	HENTAIGANA LETTER HU VARIANT2	U+XXXXX	స్	U+3075	婦	U+5A66
183	多	HENTAIGANA LETTER HU VARIANT3	U+XXXXX	స	U+3075	布	U+5E03
184	倍	HENTAIGANA LETTER HE VARIANT1	U+XXXXX	^	U+3078	倍	U+500D
-		•	-				

-			1	· · · · · · · · · · · · · · · · · · ·			
185	繁	HENTAIGANA LETTER HE VARIANT2	U+XXXXX	^	U+3078	弊	U+5F0A
186	紫	HENTAIGANA LETTER HE VARIANT3	U+XXXXX	^	U+3078	弊	U+5F0A
187	夣	HENTAIGANA LETTER HE VARIANT4	U+XXXXX	^	U+3078	遍	U+904D
188	25	HENTAIGANA LETTER HE VARIANT5	U+XXXXX	^	U+3078	邊	U+908A
189	迈	HENTAIGANA LETTER HE VARIANT6	U+XXXXX	^	U+3078	邊	U+908A
190	^ ,	HENTAIGANA LETTER HE VARIANT7	U+XXXXX	^	U+3078	部	U+90E8
191	保	HENTAIGANA LETTER HO VARIANT1	U+XXXXX	ほ	U+307B	保	U+4FDD
192	VA	HENTAIGANA LETTER HO VARIANT2	U+XXXXX	ほ	U+307B	保	U+4FDD
193	択	HENTAIGANA LETTER HO VARIANT3	U+XXXXX	ほ	U+307B	報	U+5831
194	S P	HENTAIGANA LETTER HO VARIANT4	U+XXXXX	ほ	U+307B	奉	U+5949
195	葼	HENTAIGANA LETTER HO VARIANT5	U+XXXXX	ほ	U+307B	窭貝	U+5BF6
196	办	HENTAIGANA LETTER HO VARIANT6	U+XXXXX	ほ	U+307B	本	U+672C
197	4	HENTAIGANA LETTER HO VARIANT7	U+XXXXX	ほ	U+307B	本	U+672C
198	Œ.	HENTAIGANA LETTER HO VARIANT8	U+XXXXX	ほ	U+307B	豊	U+8C4A
199	ズ	HENTAIGANA LETTER MA VARIANT1	U+XXXXX	ま	U+307E	万	U+4E07
200	求	HENTAIGANA LETTER MA VARIANT2	U+XXXXX	ま	U+307E	末	U+672B
201	ま	HENTAIGANA LETTER MA VARIANT3	U+XXXXX	ま	U+307E	末	U+672B
202	ほ	HENTAIGANA LETTER MA VARIANT4	U+XXXXX	ま	U+307E	滿	U+6EFF
203		HENTAIGANA LETTER MA VARIANT5	U+XXXXX	ま	U+307E	滿	U+6EFF
204	第	HENTAIGANA LETTER MA VARIANT6	U+XXXXX	ま	U+307E	萬	U+842C
205	3	HENTAIGANA LETTER MA VARIANT7	U+XXXXX	ま	U+307E	馬	U+99AC
206	亷	HENTAIGANA LETTER MA VARIANT8	U+XXXXX	ま	U+307E	麻	U+9EBB
207	ح	HENTAIGANA LETTER MI VARIANT1	U+XXXXX	み	U+307F	Ξ	U+4E09
208	は	HENTAIGANA LETTER MI VARIANT2	U+XXXXX	み	U+307F	微	U+5FAE
209	Z	HENTAIGANA LETTER MI VARIANT3	U+XXXXX	H	U+307F	美	U+7F8E
210	Z	HENTAIGANA LETTER MI VARIANT4	U+XXXXX	み	U+307F	美	U+7F8E
211	み	HENTAIGANA LETTER MI VARIANT5	U+XXXXX	み	U+307F	美	U+7F8E
212	ス	HENTAIGANA LETTER MI VARIANT6	U+XXXXX	み	U+307F	見	U+898B
213	オ	HENTAIGANA LETTER MI VARIANT7	U+XXXXX	み	U+307F	身	U+8EAB
214	Z	HENTAIGANA LETTER MU VARIANT1	U+XXXXX	ť	U+3080	无	U+65E0
215	Ř	HENTAIGANA LETTER MU VARIANT2	U+XXXXX	ŧ٢	U+3080	无	U+65E0

216	む	HENTAIGANA LETTER MU VARIANT3	U+XXXXX	む	U+3080	武	U+6B66
217	स्	HENTAIGANA LETTER MU VARIANT4	U+XXXXX	む	U+3080	無	U+7121
218	军	HENTAIGANA LETTER MU VARIANT5	U+XXXXX	む	U+3080	牟	U+725F
219	森	HENTAIGANA LETTER MU VARIANT6	U+XXXXX	ţ	U+3080	舞	U+821E
220	免	HENTAIGANA LETTER ME VARIANT1	U+XXXXX	め	U+3081	免	U+514D
221	Q	HENTAIGANA LETTER ME VARIANT2	U+XXXXX	め	U+3081	面	U+9762
222	3	HENTAIGANA LETTER ME VARIANT3	U+XXXXX	Ø	U+3081	馬	U+99AC
223	Ř	HENTAIGANA LETTER MO VARIANT1	U+XXXXX	ŧ	U+3082	无	U+65E0
224	Z	HENTAIGANA LETTER MO VARIANT2	U+XXXXX	ŧ	U+3082	无	U+65E0
225	母	HENTAIGANA LETTER MO VARIANT3	U+XXXXX	ŧ	U+3082	母	U+6BCD
226	€	HENTAIGANA LETTER MO VARIANT4	U+XXXXX	ŧ	U+3082	毛	U+6BDB
227	يق	HENTAIGANA LETTER MO VARIANT5	U+XXXXX	ŧ	U+3082	毛	U+6BDB
228	B	HENTAIGANA LETTER MO VARIANT6	U+XXXXX	ŧ	U+3082	毛	U+6BDB
229	交	HENTAIGANA LETTER MO VARIANT7	U+XXXXX	ŧ	U+3082	茂	U+8302
230	参	HENTAIGANA LETTER MO VARIANT8	U+XXXXX	ŧ	U+3082	裳	U+88F3
231	\$	HENTAIGANA LETTER YA VARIANT1	U+XXXXX	や	U+3084	也	U+4E5F
232	や	HENTAIGANA LETTER YA VARIANT2	U+XXXXX	や	U+3084	也	U+4E5F
233	柜	HENTAIGANA LETTER YA VARIANT3	U+XXXXX	や	U+3084	夜	U+591C
234	PS:	HENTAIGANA LETTER YA VARIANT4	U+XXXXX	や	U+3084	屋	U+5C4B
235	8 ³	HENTAIGANA LETTER YA VARIANT5	U+XXXXX	や	U+3084	耶	U+8036
236	涿	HENTAIGANA LETTER YA VARIANT6	U+XXXXX	や	U+3084	耶	U+8036
237	lts	HENTAIGANA LETTER YU VARIANT1	U+XXXXX	ゆ	U+3086	游	U+6E38
238	ゆ	HENTAIGANA LETTER YU VARIANT2	U+XXXXX	ゆ	U+3086	由	U+7531
239	@	HENTAIGANA LETTER YU VARIANT3	U+XXXXX	ゆ	U+3086	由	U+7531
240	赶	HENTAIGANA LETTER YU VARIANT4	U+XXXXX	ゆ	U+3086	遊	U+904A
241	代	HENTAIGANA LETTER YO VARIANT1	U+XXXXX	ょ	U+3088	代	U+4EE3
242	年	HENTAIGANA LETTER YO VARIANT2	U+XXXXX	ょ	U+3088	余	U+4F59
243	柜	HENTAIGANA LETTER YO VARIANT3	U+XXXXX	よ	U+3088	夜	U+591C
244	5	HENTAIGANA LETTER YO VARIANT4	U+XXXXX	よ	U+3088	與	U+8207
245	5	HENTAIGANA LETTER YO VARIANT5	U+XXXXX	ょ	U+3088	與	U+8207
246	ર્ટ	HENTAIGANA LETTER YO VARIANT6	U+XXXXX	ょ	U+3088	與	U+8207
-							

Г	Lh			,		AA	11.0040
247	神	HENTAIGANA LETTER YO VARIANT7	U+XXXXX	ょ	U+3088	餘	U+9918
248	オ	HENTAIGANA LETTER RA VARIANT1	U+XXXXX	'n	U+3089	等	U+7B49
249	程	HENTAIGANA LETTER RA VARIANT2	U+XXXXX	'n	U+3089	羅	U+7F85
250	Ŕ	HENTAIGANA LETTER RA VARIANT3	U+XXXXX	'n	U+3089	良	U+826F
251	B	HENTAIGANA LETTER RA VARIANT4	U+XXXXX	6	U+3089	良	U+826F
252	5	HENTAIGANA LETTER RA VARIANT5	U+XXXXX	6	U+3089	良	U+826F
253	<i>\$</i> 9	HENTAIGANA LETTER RI VARIANT1	U+XXXXX	Ŋ	U+308A	利	U+5229
254	わ	HENTAIGANA LETTER RI VARIANT2	U+XXXXX	Ŋ	U+308A	利	U+5229
255	李	HENTAIGANA LETTER RI VARIANT3	U+XXXXX	Ŋ	U+308A	李	U+674E
256	架	HENTAIGANA LETTER RI VARIANT4	U+XXXXX	Ŋ	U+308A	梨	U+68A8
257	猩	HENTAIGANA LETTER RI VARIANT5	U+XXXXX	Ŋ	U+308A	理	U+7406
258	F	HENTAIGANA LETTER RI VARIANT6	U+XXXXX	Ŋ	U+308A	里	U+91CC
259	数	HENTAIGANA LETTER RI VARIANT7	U+XXXXX	Ŋ	U+308A	離	U+96E2
260	15.	HENTAIGANA LETTER RU VARIANT1	U+XXXXX	る	U+308B	流	U+6D41
261	る	HENTAIGANA LETTER RU VARIANT2	U+XXXXX	る	U+308B	留	U+7559
262	る	HENTAIGANA LETTER RU VARIANT3	U+XXXXX	る	U+308B	留	U+7559
263	つ	HENTAIGANA LETTER RU VARIANT4	U+XXXXX	る	U+308B	留	U+7559
264	3,	HENTAIGANA LETTER RU VARIANT5	U+XXXXX	る	U+308B	累	U+7D2F
265	\$2	HENTAIGANA LETTER RU VARIANT6	U+XXXXX	る	U+308B	類	U+985E
266	辞	HENTAIGANA LETTER RE VARIANT1	U+XXXXX	れ	U+308C	禮	U+79AE
267	n	HENTAIGANA LETTER RE VARIANT2	U+XXXXX	れ	U+308C	禮	U+79AE
268	多	HENTAIGANA LETTER RE VARIANT3	U+XXXXX	ħ	U+308C	連	U+9023
269	霓	HENTAIGANA LETTER RE VARIANT4	U+XXXXX	れ	U+308C	麗	U+9E97
270	2	HENTAIGANA LETTER RO VARIANT1	U+XXXXX	3	U+308D	呂	U+5442
271	ろ	HENTAIGANA LETTER RO VARIANT2	U+XXXXX	ろ	U+308D	呂	U+5442
272	あ	HENTAIGANA LETTER RO VARIANT3	U+XXXXX	ろ	U+308D	婁	U+5A41
273	楊	HENTAIGANA LETTER RO VARIANT4	U+XXXXX	ろ	U+308D	樓	U+6A13
274	韵	HENTAIGANA LETTER RO VARIANT5	U+XXXXX	ろ	U+308D	路	U+8DEF
275	おる	HENTAIGANA LETTER RO VARIANT6	U+XXXXX	ろ	U+308D	露	U+9732
276	傷	HENTAIGANA LETTER WA VARIANT1	U+XXXXX	わ	U+308F	倭	U+502D
277	Fn	HENTAIGANA LETTER WA VARIANT2	U+XXXXX	わ	U+308F	和	U+548C

_							
278	わ	HENTAIGANA LETTER WA VARIANT3	U+XXXXX	わ	U+308F	和	U+548C
279	Ð	HENTAIGANA LETTER WA VARIANT4	U+XXXXX	わ	U+308F	王	U+738B
280	5	HENTAIGANA LETTER WA VARIANT5	U+XXXXX	わ	U+308F	王	U+738B
281	井	HENTAIGANA LETTER WI VARIANT1	U+XXXXX	ゐ	U+3090	井	U+4E95
282	升	HENTAIGANA LETTER WI VARIANT2	U+XXXXX	ゐ	U+3090	井	U+4E95
283	ろ	HENTAIGANA LETTER WI VARIANT3	U+XXXXX	ゐ	U+3090	居	U+5C45
284	3	HENTAIGANA LETTER WI VARIANT4	U+XXXXX	ゐ	U+3090	爲	U+7232
285	娄	HENTAIGANA LETTER WI VARIANT5	U+XXXXX	ゐ	U+3090	遺	U+907A
286	刻	HENTAIGANA LETTER WE VARIANT1	U+XXXXX	ゑ	U+3091	惠	U+60E0
287	ぼ	HENTAIGANA LETTER WE VARIANT2	U+XXXXX	ゑ	U+3091	衞	U+885E
288	諂	HENTAIGANA LETTER WE VARIANT3	U+XXXXX	ゑ	U+3091	衞	U+885E
289	南	HENTAIGANA LETTER WE VARIANT4	U+XXXXX	ゑ	U+3091	衞	U+885E
290	す	HENTAIGANA LETTER WO VARIANT1	U+XXXXX	を	U+3092	乎	U+4E4E
291	કૃ	HENTAIGANA LETTER WO VARIANT2	U+XXXXX	を	U+3092	乎	U+4E4E
292	尾	HENTAIGANA LETTER WO VARIANT3	U+XXXXX	を	U+3092	尾	U+5C3E
293	È	HENTAIGANA LETTER WO VARIANT4	U+XXXXX	を	U+3092	惡	U+60E1
294	法	HENTAIGANA LETTER WO VARIANT5	U+XXXXX	を	U+3092	緒	U+7DD2
295	拨	HENTAIGANA LETTER WO VARIANT6	U+XXXXX	を	U+3092	越	U+8D8A
296	を	HENTAIGANA LETTER WO VARIANT7	U+XXXXX	を	U+3092	遠	U+9060
297	Y	HENTAIGANA LETTER WO VARIANT8	U+XXXXX	を	U+3092	遠	U+9060
298	Z	HENTAIGANA LETTER N VARIANT1	U+XXXXX	6	U+3093	无	U+65E0
299	Ž	HENTAIGANA LETTER N VARIANT2	U+XXXXX	<i>ل</i>	U+3093	无	U+65E0
-		•					