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## Proposals from the Script Encoding Initiative

### Title

Proposal for encoding the Meitei Mayek script in the BMP of the UCS

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Universal Multiple-Octet Coded Character Set  
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**1. Introduction.** Meitei is a Tibeto-Burman language spoken chiefly in Manipur State in India, with Myanmar on its eastern border. Its earliest use is dated to between the 11th and 12th centuries CE. The script derives from the Tibetan group of scripts, themselves deriving from Gupta Brahmi. A stone inscription found at Khoibu in Tengnoupal District contains royal edicts of Kiyamba; the royal chronicle *Cheitharol Kumbaba* commenced from his time. King Khagemba (1597-1652) popularized the spread of education and the production of manuscripts in the script. The script continued to be used until to write the Meitei language until the late 18th century CE. King Garibnawas (1709-1748) embraced Hinduism during his reign and many Hindu texts, such as the *Rāmāyāna* and the *Mahābhārata*, were translated into the Meitei language written in the Meitei script. But after the Meitei adopted Hindu practices in 1729, many literary works written about the pre-Hindu religion as well as other historical documents were burnt, and Bengali script was adopted to write Meitei. The Meitei Mayek script has been revived in recent times, omitting nine letters which are not used in modern Meitei. There are, however, at least 437 pre-20th century inscriptions and manuscripts written in the traditional version of the script, so the encoded script must be able to support both traditional and modern repertoires. The Khoibu inscription shows that 35 base letters were used in the Meitei Mayek script from its inception. Although modern Meitei texts do not make use of the letters  $\text{Თ}$  *cha*,  $\text{Მ}$  *ña*,  $\text{Ჟ}$  *ṭa*,  $\text{Რ}$  *ṭha*,  $\text{Ს}$  *ḍa*,  $\text{Ტ}$  *ḍha*,  $\text{Უ}$  *ṇa*,  $\text{Ფ}$  *śa*, and  $\text{Ქ}$  *ṣa*, these characters are attested as historical letters and are therefore included here. This encoding caters for a “unified Meitei Mayek” script supporting both modern Meitei and historical Meitei texts.

Reviewers should note that the historical version of the script is more complicated than the modern version of the script, which is why there is somewhat more discussion of it in the document below than of the modern version. But it is the modern version which enjoys the most use at the present day.

**Structure.** The Meitei Mayek script was originally of the Brahmic type: consonants bear the inherent vowel, and vowel matras modify it. Unlike most other Brahmic scripts, Meitei Mayek makes use of explicit final consonants which have no inherent vowel. Consonant conjuncts are not formed productively in the modern script, although some conjuncts are known in earlier texts (see “Conjunct consonants” below). The MEITEI MAYEK KILLER does not cause conjunct formation, and is always visible when used. Its use is an optional feature of spelling. The use of the KILLER with letters (like  $\text{Ყ}$  TA) which have an explicit final consonant ( $\text{Მ}$  T) is not attested, and would not be expected because of the existence of explicit finals. In other contexts, the KILLER helps to show the absence of an inherent vowel—while  $\text{ᲧᲛ}$  may be read either *kara* or *kra*,  $\text{ᲧᲛᲛ}$  must be read *kra*. When word internal, the glyph of the KILLER



In modern orthography, the choice of spelling sometimes distinguishes words by tone.

- kan* 𑜀𑜃𑜫 ‘chariot’ (in older orthography 𑜀𑜃𑜫; not used today)
- kàn* 𑜀𑜃𑜫.𑜇 ‘mosquito’ with falling tone (in older orthography 𑜀𑜃𑜫; not used today)
- kai* 𑜀𑜃𑜫 ‘tiger’
- kài* 𑜀𑜃𑜫. ‘grain, barn’ with falling tone (in older orthography 𑜀𑜃𑜫; not considered proper today)
- kaw* 𑜀𑜃𑜫 ‘call’
- kàw* 𑜀𑜃𑜫. ‘short’ with falling tone (in older orthography 𑜀𑜃𑜫; not used today)

This encoding supports both orthographic conventions.

**Final consonants.** Final consonants are indicated in three ways: by explicit final consonants (𑜀 K, 𑜁 NG, 𑜂 T, 𑜃 N, 𑜄 P, 𑜅 M, 𑜆 L; 𑜇 is now often counted as a final Y, but it is independent I), by combining marks (◌◌ ANUSVARA, ◌◌ VISARGA, discussed under “Independent vowel signs”, above), and by 𑜈 I and 𑜉 U (and in traditional orthography 𑜊 O), which function as a final consonant without modification.

**Conjunct consonants.** Conjuncts sometimes occur in pre-1800 texts. Although the reformed, modern script does not form conjuncts, the encoding model for Meitei Mayek includes a VIRAMA to form conjuncts in older orthography, which behaves as other Brahmic scripts do. For example, 𑜀 NGA + ◌◌ VIRAMA + 𑜂 HA = 𑜀𑜂 *nha*; 𑜄 PA + ◌◌ VIRAMA + 𑜅 RA = 𑜄𑜅 *pra*; 𑜅 MA + ◌◌ VIRAMA + 𑜂 HA = 𑜅𑜂 *mha*; and 𑜆 SSA + ◌◌ VIRAMA + 𑜆 NNA = 𑜆𑜆 *ṣṇa*. An example: 𑜄𑜃𑜫 𑜂𑜃𑜫 𑜀𑜃𑜫 *Sri Jay Sinh*, which could be spelled in modern orthography 𑜄𑜃𑜫 𑜂𑜃𑜫 𑜀𑜃𑜫 *Sri Jay Sinh*. An inventory of conjuncts is a matter for specialists in traditional Meitei, and as such they are not discussed further here. The letter 𑜀 *kśa* which as in other Brahmic scripts has its own place at the end of the alphabet, is written as 𑜀 KA + ◌◌ VIRAMA + 𑜄 SHA. In modern Meitei fonts which do not support conjuncts, this would render simply as 𑜀◌◌𑜄 (assuming that the font supported a glyph for SHA).

**Character names.** The name of the script itself has a number of different names and spellings: *Meitei Mayek*, is found alongside *Methei* and *Meetei* as well as the older *Manipuri*. In the modern version of the script, each letter but the last is named after a part of the body:

Letter	Name	Translit.	IPA	Gloss
𑜀 KA	𑜀𑜃𑜫	<i>kok</i>	/kɔk/	‘head’
𑜂 SA	𑜂𑜃𑜫	<i>sam</i>	/səm/	‘hair’
𑜃 LA	𑜃𑜃𑜫	<i>lāi</i>	/lai/	‘forehead’
𑜄 MA	𑜄𑜃𑜫	<i>mit</i>	/mit/	‘eye’
𑜅 PA	𑜅𑜃𑜫	<i>pa</i>	/pa/	‘eyelash’
𑜆 NA	𑜆𑜃𑜫	<i>na</i>	/na/	‘ear’
𑜇 CA	𑜇𑜃𑜫	<i>cil</i>	/cil/	‘lips’
𑜈 TA	𑜈𑜃𑜫	<i>til</i>	/til/	‘saliva’
𑜉 KHA	𑜉𑜃𑜫	<i>khou</i>	/kʰəu/	‘throat’
𑜊 NGA	𑜊𑜃𑜫	<i>ngou</i>	/ŋəu/	‘pharynx’
𑜋 THA	𑜋𑜃𑜫	<i>thou</i>	/tʰəu/	‘chest’
𑜌 WA	𑜌𑜃𑜫	<i>wāi</i>	/wai/	‘navel’
𑜍 YA	𑜍𑜃𑜫	<i>yang</i>	/jaŋ/	‘backbone’
𑜎 HA	𑜎𑜃𑜫	<i>huk</i>	/huk/	‘lower spine’
𑜏 U	𑜏𑜃𑜫	<i>un</i>	/un/	‘skin’
𑜐 I	𑜐𑜃𑜫	<i>i</i>	/i/	‘blood’
𑜑 PHA	𑜑𑜃𑜫	<i>pham</i>	/pʰəm/	‘placenta’
𑜒 A	𑜒𑜃𑜫	<i>atiya</i>	/ətija/	‘sky’.

The unified version of the script uses the Brahmic names for the convenience of implementers who may find familiar names helpful.

**Digits and punctuation.** Digits have distinctive forms in Meitei Mayek. Five punctuation marks are attested for Meitei Mayek: the | DANDA, || DOUBLE DANDA, and ≈ QUESTION MARK are in current use, but the & SYLLABLE REPETITION MARK and Ƶ WORD REPETITION MARK seem to have fallen out of use. The shape of the DOUBLE DANDA shows some variation; the width varies from the distance between the verticals in 𑌪 GA and those in 𑌦 M. (Like the other minority scripts Balinese, Lepcha, Ol Chiki, Saurashtra, Kayah Li, Lanna, and Cham, the MEITEI MAYEK DANDA and MEITEI MAYEK DOUBLE DANDA are encoded as script-specific characters for Meitei Mayek. A unification with the Devanagari DANDAS is inappropriate; in particular, the use of those in Bengali script—as well as the existence of another pair of Bengali-specific DANDAS which are likely to require encoding—could cause confusion to Meitei Mayek users, who feel very strongly about the uniqueness of their script and its relation to Bengali.) The symbol 𑌛 ANJI is a philosophical symbol representing the primordial act of creation between the male and the female principles and is similar to the DEVANAGARI OM; N. Debendra Singh 1990 gives it this name and lists it first in a table of consonants, preceding 𑌫 KA. It is used emblematically to represent the auspicious. Generic ASCII punctuation is also expected in Meitei Mayek fonts: ! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ ` [ \ ] ^ \_ { | } ~.

**Collating order.** The traditional Brahmic order would have been used for ordering Meitei Mayek, and Sanskrit texts in Meitei Mayek script are likely to follow this practice. Contemporary Meitei uses a different order, given below. As this order omits a number of letters, they are given at the end in their Brahmic order. Localized software for Meitei users should follow this order. The letters which are not used in the modern orthography are given in [square brackets]. The KILLER is ignored in sorting.

𑌫 ka < 𑌣 sa < 𑌤 la < 𑌥 ma < 𑌦 pa < 𑌧 na < 𑌨 ca < 𑌩 ta < 𑌪 kha < 𑌫 na < 𑌬 tha < 𑌭 wa < 𑌮 ya < 𑌯 ha < 𑌰 u < 𑌱 i < 𑌲 pha < 𑌳 a < 𑌴 ga < 𑌵 jha < 𑌶 ra < 𑌷 ba < 𑌸 ja < 𑌹 da < 𑌺 gha < 𑌻 dha < 𑌼 bha [ < 𑌽 e < 𑌾 o < 𑌿 cha < 𑍀 ña < 𑍁 ʃa < 𑍂 ʈha < 𑍃 ɟa < 𑍄 ɗha < 𑍅 ɳa < 𑍆 ʂa < 𑍇 kʂa < 𑍈 u < 𑍉 ū < 𑍊 i < 𑍋 ī < 𑍌 ā < 𑍍 e < 𑍎 o < 𑍏 ou < 𑍐 ei < 𑍑 āi < 𑍒 au < 𑍓 āu < 𑍔 ɣh < 𑍕 k < 𑍖 l < 𑍗 m < 𑍘 p < 𑍙 n < 𑍚 t < 𑍛 ñ < 𑍜 m̄.

**Linebreaking.** Opportunities for hyphenation occur after any full orthographic syllable. Meitei Mayek punctuation marks can be expected to have behaviour similar to that of Devanagari DANDA and DOUBLE DANDA.

### Unicode Character Properties

```
1C80;MEITEI MAYEK LETTER A;Lo;0;L;;;;N;;atiya;;;
1C81;MEITEI MAYEK LETTER I;Lo;0;L;;;;N;;;;;
1C82;MEITEI MAYEK LETTER U;Lo;0;L;;;;N;;un;;;
1C83;MEITEI MAYEK LETTER E;Lo;0;L;;;;N;;;;;
1C84;MEITEI MAYEK LETTER O;Lo;0;L;;;;N;;;;;
1C85;MEITEI MAYEK LETTER KA;Lo;0;L;;;;N;;kok;;;
1C86;MEITEI MAYEK LETTER KHA;Lo;0;L;;;;N;;khou;;;
1C87;MEITEI MAYEK LETTER GA;Lo;0;L;;;;N;;gok;;;
1C88;MEITEI MAYEK LETTER GHA;Lo;0;L;;;;N;;ghou;;;
1C89;MEITEI MAYEK LETTER NGA;Lo;0;L;;;;N;;ngou;;;
1C8A;MEITEI MAYEK LETTER CA;Lo;0;L;;;;N;;cil;;;
1C8B;MEITEI MAYEK LETTER CHA;Lo;0;L;;;;N;;;;;
1C8C;MEITEI MAYEK LETTER JA;Lo;0;L;;;;N;;jil;;;
1C8D;MEITEI MAYEK LETTER JHA;Lo;0;L;;;;N;;jham;;;
1C8E;MEITEI MAYEK LETTER NYA;Lo;0;L;;;;N;;;;;
1C8F;MEITEI MAYEK LETTER TTA;Lo;0;L;;;;N;;;;;
1C90;MEITEI MAYEK LETTER TTHA;Lo;0;L;;;;N;;;;;
1C91;MEITEI MAYEK LETTER DDA;Lo;0;L;;;;N;;;;;
1C92;MEITEI MAYEK LETTER DDHA;Lo;0;L;;;;N;;;;;
1C93;MEITEI MAYEK LETTER NNA;Lo;0;L;;;;N;;;;;
1C94;MEITEI MAYEK LETTER TA;Lo;0;L;;;;N;;til;;;
1C95;MEITEI MAYEK LETTER THA;Lo;0;L;;;;N;;thou;;;
1C96;MEITEI MAYEK LETTER DA;Lo;0;L;;;;N;;dil;;;
```

1C97;MEITEI MAYEK LETTER DHA;Lo;0;L;;;;;N;;dhou;;;
 1C98;MEITEI MAYEK LETTER NA;Lo;0;L;;;;;N;;;;;
 1C99;MEITEI MAYEK LETTER PA;Lo;0;L;;;;;N;;;;;
 1C9A;MEITEI MAYEK LETTER PHA;Lo;0;L;;;;;N;;pham;;;
 1C9B;MEITEI MAYEK LETTER BA;Lo;0;L;;;;;N;;;;;
 1C9C;MEITEI MAYEK LETTER BHA;Lo;0;L;;;;;N;;bham;;;
 1C9D;MEITEI MAYEK LETTER MA;Lo;0;L;;;;;N;;mit;;;
 1C9E;MEITEI MAYEK LETTER YA;Lo;0;L;;;;;N;;yang;;;
 1C9F;MEITEI MAYEK LETTER RA;Lo;0;L;;;;;N;;rai;;;
 1CA0;MEITEI MAYEK LETTER LA;Lo;0;L;;;;;N;;lai;;;
 1CA1;MEITEI MAYEK LETTER WA;Lo;0;L;;;;;N;;wai;;;
 1CA2;MEITEI MAYEK LETTER SHA;Lo;0;L;;;;;N;;;;;
 1CA3;MEITEI MAYEK LETTER SSA;Lo;0;L;;;;;N;;;;;
 1CA4;MEITEI MAYEK LETTER SA;Lo;0;L;;;;;N;;sam;;;
 1CA5;MEITEI MAYEK LETTER HA;Lo;0;L;;;;;N;;huk;;;
 1CA6;MEITEI MAYEK VOWEL SIGN AA;Mn;0;Nsm;;;;;N;;aatap;;;
 1CA7;MEITEI MAYEK VOWEL SIGN I;Mc;0;L;;;;;N;;inap;;;
 1CA8;MEITEI MAYEK VOWEL SIGN II;Mc;0;L;;;;;N;;;;;
 1CA9;MEITEI MAYEK VOWEL SIGN U;Mn;0;Nsm;;;;;N;;unap;;;
 1CAA;MEITEI MAYEK VOWEL SIGN UU;Mn;0;Nsm;;;;;N;;;;;
 1CAB;MEITEI MAYEK VOWEL SIGN E;Mc;0;L;;;;;N;;yetnap;;;
 1CAC;MEITEI MAYEK VOWEL SIGN EI;Mc;0;Nsm;;;;;N;;ceinap;;;
 1CAD;MEITEI MAYEK VOWEL SIGN AAI;Mn;0;Nsm;;;;;N;;;;;
 1CAE;MEITEI MAYEK VOWEL SIGN O;Mc;0;L;;;;;N;;otnap;;;
 1CAF;MEITEI MAYEK VOWEL SIGN OU;Mc;0;L;;;;;N;;sounap;;;
 1CB0;MEITEI MAYEK VOWEL SIGN AU;Mc;0;L;;;;;N;;;;;
 1CB1;MEITEI MAYEK VOWEL SIGN AAU;Mc;0;L;;;;;N;;;;;
 1CB2;MEITEI MAYEK SIGN ANUSVARA;Mc;0;L;;;;;N;;nung;;;
 1CB3;MEITEI MAYEK SIGN VISARGA;Mc;0;L;;;;;N;;;;;
 1CB4;MEITEI MAYEK HEAVY TONE;Mc;0;L;;;;;N;;lum iyek;;;
 1CB5;MEITEI MAYEK KILLER;Mn;0;Nsm;;;;;N;;apun iyek;;;
 1CB6;MEITEI MAYEK LETTER K;Lo;0;L;;;;;N;;kok lonsum;;;
 1CB7;MEITEI MAYEK LETTER NG;Lo;0;L;;;;;N;;ngou lonsum;;;
 1CB8;MEITEI MAYEK LETTER T;Lo;0;L;;;;;N;;til lonsum;;;
 1CB9;MEITEI MAYEK LETTER N;Lo;0;L;;;;;N;;na lonsum;;;
 1CBA;MEITEI MAYEK LETTER P;Lo;0;L;;;;;N;;pa lonsum;;;
 1CBB;MEITEI MAYEK LETTER M;Lo;0;L;;;;;N;;mit lonsum;;;
 1CBC;MEITEI MAYEK LETTER L;Lo;0;L;;;;;N;;lai lonsum;;;
 1CBF;MEITEI MAYEK SIGN VIRAMA;Mn;9;NSM;;;;;N;;;;;
 1CC0;MEITEI MAYEK DIGIT ZERO;Nd;0;L;0;0;0;N;;;;;
 1CC1;MEITEI MAYEK DIGIT ONE;Nd;0;L;1;1;1;N;;;;;
 1CC2;MEITEI MAYEK DIGIT TWO;Nd;0;L;2;2;2;N;;;;;
 1CC3;MEITEI MAYEK DIGIT THREE;Nd;0;L;3;3;3;N;;;;;
 1CC4;MEITEI MAYEK DIGIT FOUR;Nd;0;L;4;4;4;N;;;;;
 1CC5;MEITEI MAYEK DIGIT FIVE;Nd;0;L;5;5;5;N;;;;;
 1CC6;MEITEI MAYEK DIGIT SIX;Nd;0;L;6;6;6;N;;;;;
 1CC7;MEITEI MAYEK DIGIT SEVEN;Nd;0;L;7;7;7;N;;;;;
 1CC8;MEITEI MAYEK DIGIT EIGHT;Nd;0;L;8;8;8;N;;;;;
 1CC9;MEITEI MAYEK DIGIT NINE;Nd;0;L;9;9;9;N;;;;;
 1CCA;MEITEI MAYEK ANJI;Po;0;L;;;;;N;;;;;
 1CCB;MEITEI MAYEK SYLLABLE REPETITION MARK;Po;0;L;;;;;N;;;;;
 1CCC;MEITEI MAYEK WORD REPETITION MARK;Po;0;L;;;;;N;;;;;
 1CCD;MEITEI MAYEK DANDA;Po;0;L;;;;;N;;ceikhan iyek;;;
 1CCE;MEITEI MAYEK DOUBLE DANDA;Po;0;L;;;;;N;;ceikhei iyek;;;
 1CCF;MEITEI MAYEK QUESTION MARK;Po;0;L;;;;;N;;ahang khudam;;;

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TABLE XX - Row 1C: MEITEI MAYEK

	1C8	1C9	1CA	1CB	1CC
0	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ
1	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ
2	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ
3	ᱰ	ᱱ	ᱲ	ᱳ	ᱴ
4	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ
5	ᱼ	ᱽ	᱾	᱿	᱀
6	᱁	᱂	᱃	᱄	᱅
7	᱇	᱈	᱉	᱊	᱋
8	ᱍ	ᱎ	ᱏ	᱐	᱑
9	᱓	᱔	᱕	᱖	᱗
A	᱙	ᱚ	ᱛ	ᱜ	ᱝ
B	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ
C	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ
D	ᱫ	ᱬ	ᱭ		ᱮ
E	ᱰ	ᱱ	ᱲ		ᱳ
F	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ

G = 00  
P = 00



# Figures


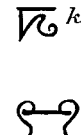
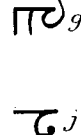
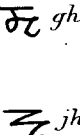

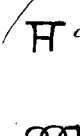

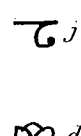
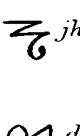
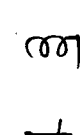
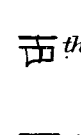
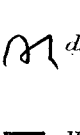
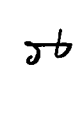
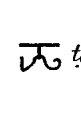
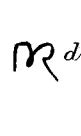
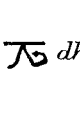
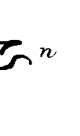
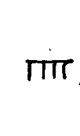
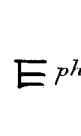
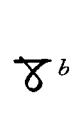
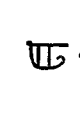
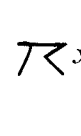

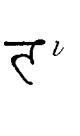
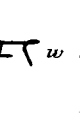


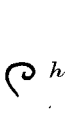
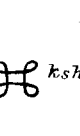
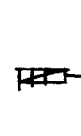

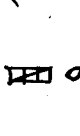

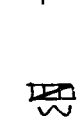
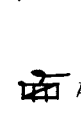
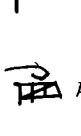
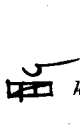

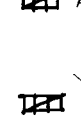



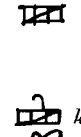
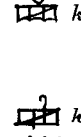

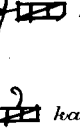
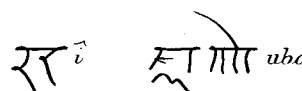

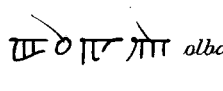
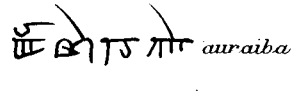

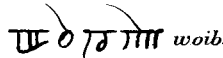

 <i>k</i>	 <i>kh</i>	 <i>g</i>	 <i>gh</i>	 <i>n</i>
 <i>ch</i>	 <i>chh</i>	 <i>j</i>	 <i>jh</i>	 <i>ñ</i>
 <i>t</i>	 <i>th</i>	 <i>d</i>	 <i>dh</i>	 <i>ñ</i>
 <i>t</i>	 <i>th</i>	 <i>d</i>	 <i>dh</i>	 <i>ñ</i>
 <i>p</i>	 <i>ph</i>	 <i>b</i>	 <i>bh</i>	 <i>m</i>
 <i>a</i>	 <i>y</i>	 <i>r</i>	 <i>l</i>	 <i>w or u</i>
 <i>s</i>	 <i>s</i>	 <i>sh</i>	 <i>h</i>	 <i>ksh</i>
 <i>kâ</i>	 <i>ki</i>	 <i>kî</i>	 <i>ke</i>	 <i>ku</i>
 <i>kû</i>	 <i>koi</i>	 <i>kai</i>	 <i>kau</i>	 <i>kao</i>
 <i>kang</i>	 <i>ko</i>	 <i>kâng</i>	 <i>kîng</i>	 <i>kîng</i>
 <i>keng</i>	 <i>kung</i>	 <i>kûng</i>	 <i>kong</i>	 <i>hang</i>
 <i>ilba</i>	 <i>uba</i>	 <i>u</i>		
 <i>olba</i>	 <i>auraiiba</i>	 <i>ae</i>		
 <i>woiba</i>	 <i>yaeba</i>	 <i>wa</i>		

Figure 1. Sample from Damant 1877.



𑑦 wú 𑑧 wù 𑑨 wo

ベンガル地方からのヒンドゥー教ヴィシュヌ信仰の普及に伴い、18~19世紀以降、サンスクリット語、ベンガル語、ヒンディー語など、インド・アリア系の語彙を大量に受容することになった。インド・アリア系の言語に親しんだ階層のメイテイ語には、有声有気の頭子音素/bh, dh, gh/など、外来の音韻が加わることもあった。しかし、もともと異音としてメイテイ語にあった/b, d, g, z/以外は、新しい音韻として定着してはいない。借用語の表記上の区別にとどまっています、綴り発音として用いられたにすぎない。

こうして、借用語表記のために採用された文字を加えて、次のような字母表(頭子音字)が作られた。

𑑦	k	𑑧	kh	𑑨	g	𑑩	gh	𑑪	ñ
𑑫	c	𑑬	ch	𑑭	j	𑑮	jh	𑑯	ñ̄
𑑰	ṭ	𑑱	ṭh	𑑲	ḍ	𑑳	ḍh	𑑴	ṇ
𑑵	t	𑑶	th	𑑷	d	𑑸	dh	𑑹	n
𑑺	p	𑑻	ph	𑑼	b	𑑽	bh	𑑾	m
𑑿	a	𑒀	y	𑒁	r	𑒂	l	𑒃	w
𑒄	ś	𑒅	ṣ	𑒆	s	𑒇	h	𑒈	ks

本来のメイテイ語にはなかった子音結合を表記する綴り字(kw, kr, ky, kl, rk, sk, ñk, kṛ, sn, tm)なども考案された。

尾子音字は、次の通りである。

𑒉	-k	𑒊	-ñ	𑒋	-ñ̄
𑒌	-t	𑒍	-n	𑒎	-l
𑒏	-p	𑒐	-m		
𑒑	-y	𑒒	-w		

母音符号は、次の通りである(⟨k-⟩についての場合)。

𑒓	ka	𑒔	kā	𑒕	kí	𑒖	ki
𑒗	kú	𑒘	kù	𑒙	ke	𑒚	ko

二重母音表記は、次の通りである(⟨'⟩についての場合)。

'ay	'ai	𑒛	𑒜
'ây	'ái	𑒝	𑒞
'oy		𑒟	
'úy	'ùy	𑒠	𑒡
'âu	'áw	𑒢	𑒣
'au		𑒤	

⟨-oy, -au⟩を除いて、声調の書き分けをする。前者が'light tone'、後者が'heavy tone'である。

なお、頭子音字にも尾子音字にも異字体がいくつか認められる。たとえば、

k-	𑒉	𑒉	𑒉	ñ-	𑒊	𑒊		
th-	𑑭	𑑭	n-	𑒍	𑒍			
ph-	𑑻	𑑻	m-	𑑽	𑑽	w-	𑒃	𑒃

などである。

〈表〉1980年認可の旧マニプール文字

〈子母(頭子音字)〉(27字)

𑑦	k	𑑧	s	𑑨	l
𑑩	m	𑑪	p	𑑫	n
𑑬	c	𑑭	t	𑑮	kh
𑑯	ñ	𑑰	th	𑑱	r
𑑲	y	𑑳	h	𑑴	w
𑑵	y	𑑶	ph	𑑷	'
𑑸	g	𑑹	jh	𑑺	r
𑑻	b	𑑼	j	𑑽	d
𑑾	gh	𑑿	dh	𑒀	bh

〈尾子音字〉(8字)

𑒉	-k	𑒊	-l	𑒋	-m	𑒌	-p
𑒍	-n	𑒎	-t	𑒏	-ñ	𑒐	-y

〈母音符号〉(8個)

-ò	-o	-í	-i	≥	-â	-°	-e	𑒓	-u
𑒗	-au	𑒙	-ai	𑒚	-am				

また、インド系文字<sup>▼</sup>に一般的な省略表記も見られる。𑒛 𑒜 > 𑒛 𑒜 papú, 𑒉 𑒊 > 𑒉 𑒊 keke (p, k はそれぞれ再読文字)。

1980年4月、マニプール州知事により認可された「メイテイ・マイェック」(メイテイ文字=旧マニプール文字)の字母表を掲げる(〈表〉)。これは、この伝統的な民族文字復興をめざしてメイテイ文字専門委員会が知事に提出した報告書に示されたものである(母音符号の書き分けによる声調表記は廃している)。

句読点は、句点を|、読点を||で表わす。

数字(1~10)は、次の通りである。

𑒓	1	𑒔	2	𑒕	3	𑒖	4	𑒗	5
𑒘	6	𑒙	7	𑒚	8	𑒛	9	𑒜	10

このメイテイ文字の改良版をメイテイ語の話し手の間に普及させようという運動があり、州都インパールの町にはメイテイ文字による看板なども見かけられるようになった。しかし、現地でも、メイテイ語の文字体系をベンガル文字による現行の新マニプール文字から旧マニプール文字(メイテイ文字)に替えることは難しいであろうと見る人が少なくない。現行の文字体系の普及度がきわめて高いからである。

一方、1992年、インドの連邦政府は、憲法を改正しマニプール州の希望に沿ってマニプール語(メイテイ語)を連邦公用語に指定した。このマニプール語は、ベンガル文字による現行の新マニプール文字によるものを想定している。

17世紀にベンガル文字がマニプールに伝わった時、

Figure 3. Sample from The Sansendo Encyclopaedia, showing old and new orthographies for Meitei.

Lautwert	Manipuri	Lautwert	Manipuri
a	𑜀	𑜀	𑜀
i	𑜁	𑜁	𑜁
u	𑜂	𑜂	𑜂
e	𑜃	𑜃	𑜃
o	𑜄	𑜄	𑜄
ā	𑜅	𑜅	𑜅
ka	𑜆	𑜆	𑜆
kha	𑜇	𑜇	𑜇
ga	𑜈	𑜈	𑜈
gha	𑜉	𑜉	𑜉
na	𑜊	𑜊	𑜊
ēa	𑜋	𑜋	𑜋
ēha	𑜌	𑜌	𑜌
ḡa	𑜍	𑜍	𑜍
ḡha	𑜎	𑜎	𑜎
ṅa	𑜏	𑜏	𑜏
ṅha	𑜐	𑜐	𑜐
ṣa	𑜑	𑜑	𑜑
ṣha	𑜒	𑜒	𑜒
ṭa	𑜓	𑜓	𑜓
ṭha	𑜔	𑜔	𑜔
ḍa	𑜕	𑜕	𑜕
ḍha	𑜖	𑜖	𑜖

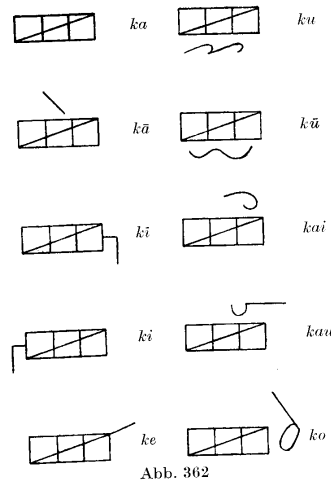


Figure 4. Samples from Jensen, following Greerson's report in the *Linguistic Survey of India*.

Appendix III  
Meitei writing systems

Meitei is written in either the Meitei Mayek or Bengali script. The accepted date for the earliest use of Meitei Mayek is between the 11th and 12th centuries (Ch. Manihar Singh 1984: 23). In the classification of scripts provided by K. S. Singh and Manoharan (1993: 26–29), Meitei Mayek is part of the Tibetan group of scripts, which originated from the Gupta Brahmi script. The original Brahmi script was modified to accommodate the phonemic distinctions of Meitei.

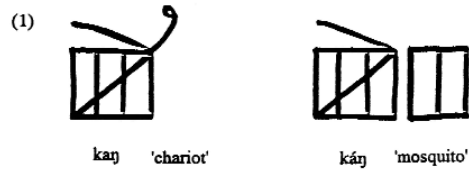
Like other Brahmi scripts, Meitei Mayek is syllabic. Each vowel has two representations: an independent grapheme at the beginning of a word and a diacritic off of the consonant it combines with to form a syllable when it occurs elsewhere. See Tables 1 and 2.

Table 1. Vowel graphemes in Meitei Mayek

𑜀	𑜁	𑜂	𑜃
𑜄	𑜅	𑜆	𑜇

When tone is taken into consideration, there are twelve contrastive vowel sounds in Meitei. As seen in Table 1, it is possible to represent the differences between high and low tone *i* and *u* but no way of indicating distinctions between *a* and *á*, *ə* and *ḡ*, *e* and *é* and *o* and *ó*.

In contemporary versions of Meitei Mayek, tone distinctions are often indicated with conventions currently in use in writing Meitei in the Bengali script. For example, the distinction between high and low tone *a*, *e*, *ə*, *o* can be indicated before *η* by using a distinct syllable final grapheme for *η* before the high tone vowel. This is illustrated in (1).



It is not clear how, or if, tone distinctions in other environments are signalled. In examples provided to me by Th. Harimohon Singh, minimal tone pairs such as *ta-* 'fall' and *tá-* 'hear' cannot be distinguished in writing.

Table 2. Non-syllable initial vowels in Meitei Mayek with the shape *kV*

𑜆	𑜆	𑜆	𑜆
ka	ki	kí	ku
𑜆	𑜆	𑜆	
kú	ke	ko	

Diphthongs in initial position are represented by a juxtaposition of a glide and a vowel and, as was the case with vowels, not all relevant tone distinctions are represented. Graphemes for diphthongs in initial position and the diacri-

Figure 5a. Discussion in Chelliah 1997 describing traditional Meitei orthography.

tics used with consonants are illustrated in Table 3 and 4 respectively.

Table 3. Syllable initial diphthongs in Meitei Mayek

ay	aw
ay	aw
uy	uy
oy	

Table 4. Non-syllable initial diphthongs in Meitei Mayek illustrated with [k]

kay 'tiger'	kay 'shame'	káy 'break'
kaw 'call'	káy 'break'	káy 'break'
	OR	
kay 'shame'		kay 'shame'
	OR	
kaw 'forget'		kaw 'forget'
	OR	
káw 'kick'		káw 'kick'
kuy 'long'		kúy 'distant past'
	OR	
koy 'roam'		koy 'roam'
	OR	
kóy 'garden'		kóy 'garden'

Figure 5b. Discussion in Chelliah 1997 describing traditional Meitei orthography.

Table 5. Consonant graphemes in Meitei Mayek

ka	kha	ga	gha	nga
cha	cha	ja	jha	nya
ta	tha	da	dha	na
pa	pha	ba	bha	ma
ya	ra	la	wa	sa
sa	ha	ksa		

Consonants have two representations, a grapheme for syllable initial position and a grapheme for non-initial position. Syllable initial consonant graphemes are given in Table 5. Note that the consonant is read as a combination of the consonant and a schwa. Syllable final consonant graphemes are given in Table 6.

Table 6. Syllable final consonant graphemes in Meitei Mayek

p	m	w	t
n	l	y	k

I provide a sample of handwritten Meitei Mayek in (2) which illustrates a marginally different style of the script (note the graphemes for [y] and [n]). Explanation of different styles of Meitei Mayek is given in Tensuba (1993). A longer example of the Meitei Mayek, with interlinear and free translation in English, can be found in Grierson (1903–1928: 32–39).

Figure 5c. Discussion in Chelliah 1997 describing traditional Meitei orthography.







ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ

ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ

ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ ।

ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
 ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ

ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ ॥

ᱟᱱᱟᱜ ᱡᱷᱟᱨᱠᱷᱚ  
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Figure 9. A poem from an anthology of Meitei literature in modern Meitei Mayek orthography.

## A. Administrative

1. Title

**Proposal to encode the Meitei Mayek script in the BMP of the UCS**

2. Requester's name

**UC Berkeley Script Encoding Initiative (Universal Scripts Project)**

3. Requester type (Member body/Liaison/Individual contribution)

**Liaison contribution.**

4. Submission date

**2007-08-07**

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

**Yes.**

6b. More information will be provided later

**No.**

## B. Technical – General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

**Yes.**

1b. Proposed name of script

**Meitei Mayek.**

1c. The proposal is for addition of character(s) to an existing block

**No.**

1d. Name of the existing block

2. Number of characters in proposal

**78.**

3. Proposed category (A-Contemporary; 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)

**Category A.**

4a. Is a repertoire including character names provided?

**Yes.**

4b. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?

**Yes.**

4c. Are the character shapes attached in a legible form suitable for review?

**Yes.**

5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?

**Michael Everson.**

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

**Michael Everson, Fontographer.**

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

**Yes.**

6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

**Yes.**

7. 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)?

**Yes.**

8. 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/Public/UNIDATA/UnicodeCharacterDatabase.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

**See above.**

## C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

**Yes. See N3158, N2042.**

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

**Yes.**

2b. If YES, with whom?

**Shobhana Chelliah, Pravabati Chingangbam, T. M. Khumancha, Swaran Lata, Tabish Qureshi, Sohini Ray, Surmangol Sharma, Chungkham Yashawanta Singh, Leihaorambam Sarbajit Singh, S. Imoba Singh**

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

**Speakers of Meitei.**

4a. The context of use for the proposed characters (type of use; common or rare)

**Commonly used for modern texts as well as study of historical texts.**

4b. Reference

5a. Are the proposed characters in current use by the user community?

**Yes.**

5b. If YES, where?

**In Manipur State in India.**

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**Yes.**

6b. If YES, is a rationale provided?

**Yes.**

6c. If YES, reference

**Modern use and accordance with the Roadmap.**

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**Yes.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No.**

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No.**

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**Yes.**

10b. If YES, is a rationale for its inclusion provided?

**Yes.**

10c. If YES, reference

**Like the other minority scripts Balinese, Lepcha, Ol Chiki, Saurashtra, Kayah Li, Lanna, and Cham, the MEITEI MAYEK DANDA and MEITEI MAYEK DOUBLE DANDA are encoded as script-specific characters for Meitei Mayek. A unification with the Devanagari DANDAS is inappropriate; in particular, the use of those in Bengali script (as well as the existence of another pair of Bengali-specific DANDAS which are likely to require encoding) could cause confusion to Meitei Mayek users, who feel very strongly about the uniqueness of their script and its relation to Bengali.**

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

**No.**

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

**No.**

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No.**

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?