

Universal Multiple-Octet Coded Character Set  
 International Organization for Standardization  
 Organisation Internationale de Normalisation  
 Международная организация по стандартизации

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 (Universal Scripts Project)****Author: Michael Everson****Status: National Body and Liaison Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Replaces: N3292****Date: 2008-01-28**

**1. Introduction.** The Javanese script, or *aksara Jawa*, is used for writing the Javanese language, the native language of one of the peoples of Java, known locally as *basa Jawa*. It is a descendent of the ancient Brahmi script of India, and so has many similarities with modern scripts of South Asia and Southeast Asia which are also members of that family. The Javanese script is also used for writing Sanskrit, Jawa Kuna (a kind of Sanskritized Javanese), and transcriptions of Kawi (the Kawi script itself is not unified with Javanese), as well as the Sundanese language, also spoken on the island of Java, and the Sasak language, spoken on the island of Lombok. Javanese script was in current use in Java until about 1945; in 1928 Bahasa Indonesia was made the national language of Indonesia and its influence eclipsed that of other languages and their scripts. Traditional Javanese texts are written on palm leaves; books of these bound together are called *lontar*, a word which derives from *ron* ‘leaf’ and *tal* ‘palm’.

**2.1. Consonant letters.** Consonants have an inherent *-a* vowel sound. Consonants combine with following consonants in the usual Brahmic fashion: the inherent vowel is “killed” by the PANGKON, and the following consonant is subjoined or postfixed, often with a change in shape:  $\text{ᮊ} \text{ndha} = \text{ᮊ} \text{NA} + \text{ᮓ} \text{PANGKON} + \text{ᮓ} \text{DA MAHAPRANA}$ ;  $\text{ᮊ} \text{nda} = \text{ᮊ} \text{NNA} + \text{ᮓ} \text{PANGKON} + \text{ᮓ} \text{DDA}$ ;  $\text{ᮊ} \text{mpa} = \text{ᮊ} \text{MA} + \text{ᮓ} \text{PANGKON} + \text{ᮓ} \text{PA}$ . The table below shows the base consonants and their conjunct forms. The table gives nominal forms and subjoined forms for all letters. A number of the Sanskrit or Kawi consonants are rather poorly attested. For example, the letter CA MURDA  $\text{ᮊ}$  (*cha*) is only found in non-initial position as  $\text{ᮊ}$  and some members of the retroflex and dental series are often omitted in books about the script. Sundanese orthography does not use  $\text{ᮊ}$  NYA in syllable-initial position; instead it uses  $\text{ᮊ} \text{nña}$  ( $\text{ᮊ} \text{NA} + \text{ᮓ} \text{PANGKON} + \text{ᮊ} \text{NYA}$ ; see Figure 14a). The letter  $\text{ᮊ}$  KA SASAK is used in the Sasak language for *qa*. The letter  $\text{ᮊ}$  NYA MURDA derives from original *jña* but is distinct from  $\text{ᮊ} \text{jña}$  (which is  $\text{ᮊ} \text{JA} + \text{ᮓ} \text{PANGKON} + \text{ᮊ} \text{NYA}$ ). The letter  $\text{ᮊ}$  RA AGUNG (‘honorific ra’) was historically used by some writers as a replacement for  $\text{ᮊ}$  RA when addressing or discussing royal persons.

NOTE: The vocalic letters *r*, *l*, and *ī* are treated as consonant letters in Javanese; they are not independent vowels with dependent vowel equivalents, as in Balinese or Devanagari. A separately-encoded vocalic letter *\*r̄* does not exist, but is formed by adding  $\text{ᮓ}$  TARUNG to PA

CEREK: 𑄘𑄚, 𑄘𑄚𑄚 (in Sundanese, 𑄘𑄚 TOLONG is used: 𑄘𑄚, 𑄘𑄚𑄚). Some orthographies do not use 𑄘 subjoined NGA LELET RASWADI, but instead use 𑄘 subjoined NGA LELET plus TARUNG (see the section on vowels below for more information on the use of TARUNG). In the table below, the abbreviation M means MURDA ‘head’; MP means MAHAPRANA ‘aspirate’; the abbreviations C for CEREK ‘close’, L for LELET ‘thick’, R for RASWADI ‘long’, S for SASAK ‘Sasak’, s for AGUNG ‘honorific’, are also used.

KA 𑄘𑄚	KA M 𑄘𑄚𑄚	GA 𑄘𑄚	GA M 𑄘𑄚𑄚	NGA 𑄘𑄚
CA 𑄘𑄚	CA M 𑄘𑄚𑄚	JA 𑄘𑄚	JA MP 𑄘𑄚𑄚	NYA 𑄘𑄚
TTA 𑄘𑄚	TTA MP 𑄘𑄚𑄚	DDA 𑄘𑄚	DDA MP 𑄘𑄚𑄚	NA M 𑄘𑄚𑄚
TA 𑄘𑄚	TA MP 𑄘𑄚𑄚	DA 𑄘𑄚	DA MP 𑄘𑄚𑄚	NA 𑄘𑄚
PA 𑄘𑄚	PA M 𑄘𑄚𑄚	BA 𑄘𑄚	BA M 𑄘𑄚𑄚	MA 𑄘𑄚
YA 𑄘𑄚	RA 𑄘𑄚	LA 𑄘𑄚	WA 𑄘𑄚	
SA M 𑄘𑄚𑄚	SA MP 𑄘𑄚𑄚	SA 𑄘𑄚	HA 𑄘𑄚	
PA C 𑄘𑄚	NGA L 𑄘𑄚	NGA L R 𑄘𑄚		
KA S 𑄘𑄚	NYA M 𑄘𑄚	RA A 𑄘𑄚		

**2.2. Independent vowel letters** are used as in other Brahmic scripts, with a few differences. In Kawi orthography, 𑄘 I KAWI and 𑄘 I are used for *i* and *ī* respectively, but in modern Javanese 𑄘 I and 𑄘 II are used for these. Again, 𑄘 TARUNG is used to compose 𑄘 *ā*, 𑄘 *ū*, and 𑄘 *au*. The independent vowel sign 𑄘 A can bear any of the vowel diacritics.

<i>a</i> 𑄘	<i>ā</i> 𑄘	<i>i</i> Kawi 𑄘	<i>ī</i> /i 𑄘	<i>ī</i> 𑄘	
<i>u</i> 𑄘	<i>ū</i> 𑄘	<i>e</i> 𑄘	<i>ai</i> 𑄘	<i>o</i> 𑄘	<i>au</i> 𑄘

**2.3. Dependent vowel signs** are used in a manner similar to that employed in the Myanmar script. The last two in the table below are found in Sundanese. Those vowels which contain multiple parts are encoded with multiple characters, so *keu* is 𑄘 KA + 𑄘 PEPET + 𑄘 TARUNG; *ko* is 𑄘 KA + 𑄘 TALING + 𑄘 TARUNG; *kau* is 𑄘 KA + 𑄘 DIRGA MURE + 𑄘 TARUNG; Sundanese *keu* is 𑄘 KA + 𑄘 PEPET + 𑄘 TOLONG:

<i>ka</i> 𑄘	<i>kā</i> 𑄘	<i>kě</i> 𑄘	<i>keu</i> 𑄘	<i>ki</i> 𑄘	<i>kī</i> 𑄘
<i>ku</i> 𑄘	<i>kū</i> 𑄘	<i>ke</i> 𑄘	<i>kai</i> 𑄘	<i>ko</i> 𑄘	<i>kau</i> 𑄘
			<i>keu</i> 𑄘	<i>ko</i> 𑄘	

NOTE 1: The correct string for 𑄘 *keu*, for instance, is 𑄘 KA + 𑄘 PEPET + 𑄘 TARUNG. The string 𑄘 KA + 𑄘 TARUNG + 𑄘 PEPET would be equivalent to this, although the character properties should be specified to prefer the former string over the latter. We propose to work with the UTC to specify this appropriately and correctly in the character properties, as their expertise in character properties is greater than ours.

NOTE 2: The Javanese encoding differs here from that for Balinese. The Balinese encoding maintained the composite model common to the major Indic scripts. This was done because the Balinese user community favoured an encoding model which respected the traditional Sanskrit phonetic analysis. For the Javanese users, on the other hand, one-to-one Sanskrit transliteration is not an important consideration; rather, the Javanese user community favoured an encoding model which was easier to implement and more logical in terms of glyph treatment. The Javanese and Balinese languages are quite different and there is no particular user requirement for one-to-one transliteration between them.

**2.4. Consonant signs.** The characters 𑀓 PANYANGGA, 𑀔 CECAK, and 𑀕 WIGNYAN are analogues to Devanagari CANDRABINDU, ANUSVARA, and VISARGA and behave in much the same way. Two medial consonant signs are used, 𑀖 PENGKAL and 𑀗 CAKRA, representing -y- and -r- respectively. They contrast with subjoined letters as 𑀘 ya and 𑀙 ra, which may belong to the following word, while PENGKAL and CAKRA are used in ordinary consonant clusters. The choice may also be a matter of *spelling*: the Arabic word *aqrab* ‘nearer’, for instance may be written 𑀓𑀕𑀓𑀕𑀓𑀕 *ak-rab* but is usually written 𑀓𑀕𑀓𑀕𑀓𑀕 *a-krab*.

**2.5. Syllable-final -r.** Javanese is similar to Balinese in the behaviour of final -r. The inherited Kawi form of the script used the 𑀚 LAYAR or *repha* character in the same way as many Brahmic scripts do: it formed the first element of a syllable, so *dharma* was written 𑀚𑀓𑀕𑀓𑀕𑀓𑀕, DA-MAHAPRANA + RA + PANGKON + MA, *dha-rma*. Because many syllables end in -r in the Javanese language, this written form was reanalyzed and so that word would be pronounced *dhamar*. In Javanese orthography, *dharma* is written 𑀚𑀓𑀕𑀓𑀕𑀓𑀕 and encoded DA-MAHAPRANA + LAYAR + MA, *dhar-ma*. The sequence DA-MAHAPRANA + RA + PANGKON + MA would yield \*𑀚𑀓𑀕𑀓𑀕𑀓𑀕. (Compare Kawi 𑀚𑀓𑀕𑀓𑀕 *dir-ya* ‘appear’ and 𑀚𑀓𑀕𑀓𑀕 *di-rya* ‘visible’.) In searching operations, LAYAR should be equivalent to RA, so that word-forms like 𑀚𑀓𑀕𑀓𑀕 *dahar* ‘eat’ and 𑀚𑀓𑀕𑀓𑀕𑀓𑀕 *dahara* ‘eaten’ will be found together. (The same applies to 𑀕 WIGNYAN, which should be equivalent to HA, so that word forms like 𑀕𑀓𑀕𑀓𑀕𑀓𑀕 *gabah* ‘grain of rice’ and 𑀕𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕 *gabahe* ‘that grain of rice’ will be found together.)

**3. Rendering.** There are many conjunct forms in Javanese, though most are fairly regular and easy to identify. Subjoined consonants and vowel signs below usually interact. For example, the vowel signs [u] and [u:] take different forms when combined with subscripted consonant clusters. The upper limit of consonant clusters is three, the last of which can be -ya, -wa, or -ra.

<i>ku</i> 𑀕𑀓	<i>kū</i> 𑀕𑀓𑀕	<i>kyu</i> 𑀕𑀓𑀕𑀓	<i>kyū</i> 𑀕𑀓𑀕𑀓𑀕	<i>kwu</i> 𑀕𑀓𑀕𑀓	<i>kwū</i> 𑀕𑀓𑀕𑀓𑀕
<i>kru</i> 𑀕𑀓𑀕𑀓	<i>krū</i> 𑀕𑀓𑀕𑀓𑀕	<i>kryu</i> 𑀕𑀓𑀕𑀓𑀕𑀓	<i>kryū</i> 𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>skru</i> 𑀕𑀓𑀕𑀓𑀕	<i>skrū</i> 𑀕𑀓𑀕𑀓𑀕𑀕

A number of base letters are augmented with 𑀔 CECAK TELU to represent foreign sounds. Some of these are well-attested.

<i>xa</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕	<i>ya</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>za</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>dza</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>fa/va</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕
<i>fa</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>'a</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>śa</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	<i>ha</i> 𑀘𑀓𑀕𑀓𑀕𑀓𑀕𑀓𑀕	

These represent Arabic خ, ذ, ف/ف, ز, غ (or غ), ش, and ح respectively. In rendering, the dots of these letters appear above the top character, which can cause some ambiguity in reading; 𑀘𑀓𑀕𑀓𑀕𑀓𑀕 is most likely to be *kza* KA + PANGKON + JA + CECAK-TELU, but could be read *xja* KA + CECAK-TELU + PANGKON +







The other order is based on the standard Sanskrit ordering. Note that 𑄢𑄢𑄢 RA AGUNG interfiles with 𑄢 RA.

𑄢𑄢𑄢 *a* > 𑄢𑄢𑄢 *ā* > 𑄢𑄢𑄢 *ě* > 𑄢𑄢𑄢 *ō* > 𑄢𑄢𑄢 *eu* > 𑄢𑄢 *i* > 𑄢𑄢 *i* > 𑄢𑄢 *i* > 𑄢𑄢 *u* > 𑄢𑄢 *ū* >  
 𑄢𑄢 *rě* > 𑄢𑄢 *rō* > 𑄢𑄢 *lē* > 𑄢𑄢 *lō* > 𑄢𑄢 *e* > 𑄢𑄢 *ai* > 𑄢𑄢 *o* > 𑄢𑄢 *ō* > 𑄢𑄢 *au* >  
 𑄢𑄢 *ka* > 𑄢𑄢 *xa* > 𑄢𑄢 *qa* > 𑄢𑄢 *kha* > 𑄢𑄢 *ga* > 𑄢𑄢 *ya* > 𑄢𑄢 *gha* > 𑄢𑄢 *na* > 𑄢𑄢 *'a* >  
 𑄢𑄢 *ca* > 𑄢𑄢 *cha* > 𑄢𑄢 *ja* > 𑄢𑄢 *za* > 𑄢𑄢 *jña* > 𑄢𑄢 *jha* > 𑄢𑄢 *ña* >  
 𑄢𑄢 *ṭa* > 𑄢𑄢 *ṭha* > 𑄢𑄢 *ḍa* > 𑄢𑄢 *ḍha* > 𑄢𑄢 *ṇa* >  
 𑄢𑄢 *ta* > 𑄢𑄢 *tha* > 𑄢𑄢 *da* > 𑄢𑄢 *dza* > 𑄢𑄢 *dha* > 𑄢𑄢 *na* >  
 𑄢𑄢 *pa* > 𑄢𑄢 *fa* > 𑄢𑄢 *pha* > 𑄢𑄢 *ba* > 𑄢𑄢 *bha* > 𑄢𑄢 *ma* >  
 𑄢𑄢 *ya* > 𑄢𑄢 *ra* >> 𑄢𑄢 *ṛa* > 𑄢𑄢 *la* > 𑄢𑄢 *wa* >  
 𑄢𑄢 *śa* > 𑄢𑄢 *ṣa* > 𑄢𑄢 *sa* > 𑄢𑄢 *ha* > 𑄢𑄢 *ḥa* >  
 𑄢𑄢 *-ā* > 𑄢𑄢 *-ě* > 𑄢𑄢 *-ō* > 𑄢𑄢 *-eu* > 𑄢𑄢 *i* > 𑄢𑄢 *i* > 𑄢𑄢 *u* > 𑄢𑄢 *ū* >  
 𑄢𑄢 *-rě* > 𑄢𑄢 *-rō* > 𑄢𑄢 *e* > 𑄢𑄢 *ai* > 𑄢𑄢 *o* > 𑄢𑄢 *ō* > 𑄢𑄢 *au* >

**7. Linebreaking.** Opportunities for linebreaking occur after any full orthographic syllable. Hyphens are not used. We propose to work with the UTC to specify this appropriately and correctly, as their expertise in character properties is greater than ours. The general syllabic pattern is ((C(N)F))C(N)((R)Y)(V(V))(Z) where C is a LETTER, N is CECAK TELU, F is VIRAMA, R is CAKRA, Y is PENGKAL, V is a VOWEL SIGN, Z is PANYANGGA or CECAK or LAYAR or WIGNYAN.

NOTE: In some printed texts, an epenthetic spacing 𑄢𑄢 TALING is placed at the end of a line when the next line begins with 𑄢𑄢 TALING (*e*) or 𑄢𑄢 TALING TARUNG (*o*), which is vaguely reminiscent of a specialized hyphenation (or of quire marking). This practice—which is similar to the German *Zucker* > *Zuk-ker* hyphenation problem—would be nearly impossible to implement in a free-flowing text environment such as a web page or a word-processing document, and the user community has agreed that they have no expectations that software would support this practice. Typographers wishing to duplicate a printed page could manually insert NBSP or NNBS before TALING at the end of a line, but this would not be orthographically correct.

## 8. Unicode Character Properties

A980;JAVANESE SIGN PANYANGGA;Mn;0;NSM;;;N;ardhacandra;;;  
 A981;JAVANESE SIGN CECAK;Mn;0;NSM;;;N;anusvara;;;  
 A982;JAVANESE SIGN LAYAR;Mn;0;L;;;N;repha;;;  
 A983;JAVANESE SIGN WIGNYAN;Mc;0;L;;;N;visarga;;;  
 A984;JAVANESE LETTER A;Lo;0;L;;;N;;;  
 A985;JAVANESE LETTER I KAWI;Lo;0;L;;;N;i;;;  
 A986;JAVANESE LETTER I;Lo;0;L;;;N;Kawi ii or i;;;  
 A987;JAVANESE LETTER II;Lo;0;L;;;N;ii;;;  
 A988;JAVANESE LETTER U;Lo;0;L;;;N;;;  
 A989;JAVANESE LETTER PA CERER;Lo;0;L;;;N;vocalic r;;;  
 A98A;JAVANESE LETTER NGA LELET;Lo;0;L;;;N;vocalic l;;;  
 A98B;JAVANESE LETTER NGA LELET RASWADI;Lo;0;L;;;N;vocalic ll;;;  
 A98C;JAVANESE LETTER E;Lo;0;L;;;N;;;  
 A98D;JAVANESE LETTER AI;Lo;0;L;;;N;;;  
 A98E;JAVANESE LETTER O;Lo;0;L;;;N;;;  
 A98F;JAVANESE LETTER KA;Lo;0;L;;;N;;;  
 A990;JAVANESE LETTER KA SASAK;Lo;0;L;;;N;qa;;;  
 A991;JAVANESE LETTER KA MURDA;Lo;0;L;;;N;kha;;;  
 A992;JAVANESE LETTER GA;Lo;0;L;;;N;;;  
 A993;JAVANESE LETTER GA MURDA;Lo;0;L;;;N;gha;;;  
 A994;JAVANESE LETTER NGA;Lo;0;L;;;N;;;  
 A995;JAVANESE LETTER CA;Lo;0;L;;;N;;;

A996;JAVANESE LETTER CA MURDA;Lo;0;L;;;;N;cha;;;  
A997;JAVANESE LETTER JA;Lo;0;L;;;;N;;;;;  
A998;JAVANESE LETTER NYA MURDA;Lo;0;L;;;;N;;jnya;;;  
A999;JAVANESE LETTER JA MAHAPRANA;Lo;0;L;;;;N;;jha;;;  
A99A;JAVANESE LETTER NYA;Lo;0;L;;;;N;;;;;  
A99B;JAVANESE LETTER TTA;Lo;0;L;;;;N;;;;;  
A99C;JAVANESE LETTER TTA MAHAPRANA;Lo;0;L;;;;N;;ttha;;;  
A99D;JAVANESE LETTER DDA;Lo;0;L;;;;N;;;;;  
A99E;JAVANESE LETTER DDA MAHAPRANA;Lo;0;L;;;;N;;ddha;;;  
A99F;JAVANESE LETTER NA MURDA;Lo;0;L;;;;N;;nna;;;  
A9A0;JAVANESE LETTER TA;Lo;0;L;;;;N;;;;;  
A9A1;JAVANESE LETTER TA MURDA;Lo;0;L;;;;N;;tha;;;  
A9A2;JAVANESE LETTER DA;Lo;0;L;;;;N;;;;;  
A9A3;JAVANESE LETTER DA MAHAPRANA;Lo;0;L;;;;N;;dha;;;  
A9A4;JAVANESE LETTER NA;Lo;0;L;;;;N;;;;;  
A9A5;JAVANESE LETTER PA;Lo;0;L;;;;N;;;;;  
A9A6;JAVANESE LETTER PA MURDA;Lo;0;L;;;;N;;pha;;;  
A9A7;JAVANESE LETTER BA;Lo;0;L;;;;N;;;;;  
A9A8;JAVANESE LETTER BA MURDA;Lo;0;L;;;;N;;bha;;;  
A9A9;JAVANESE LETTER MA;Lo;0;L;;;;N;;;;;  
A9AA;JAVANESE LETTER YA;Lo;0;L;;;;N;;;;;  
A9AB;JAVANESE LETTER RA;Lo;0;L;;;;N;;;;;  
A9AC;JAVANESE LETTER RA AGUNG;Lo;0;L;;;;N;;;;;  
A9AD;JAVANESE LETTER LA;Lo;0;L;;;;N;;;;;  
A9AE;JAVANESE LETTER WA;Lo;0;L;;;;N;;;;;  
A9AF;JAVANESE LETTER SA MURDA;Lo;0;L;;;;N;;sha;;;  
A9B0;JAVANESE LETTER SA MAHAPRANA;Lo;0;L;;;;N;;ssa;;;  
A9B1;JAVANESE LETTER SA;Lo;0;L;;;;N;;;;;  
A9B2;JAVANESE LETTER HA;Lo;0;L;;;;N;;;;;  
A9B3;JAVANESE SIGN CECAK TELU;Mn;7;NSM;;;;N;;nukta;;;  
A9B4;JAVANESE VOWEL SIGN TARUNG;Mc;0;L;;;;N;;aa;;;  
A9B5;JAVANESE VOWEL SIGN TOLONG;Mc;0;L;;;;N;;o;;;  
A9B6;JAVANESE VOWEL SIGN WULU;Mn;0;L;;;;N;;i;;;  
A9B7;JAVANESE VOWEL SIGN WULU MELIK;Mn;0;L;;;;N;;ii;;;  
A9B8;JAVANESE VOWEL SIGN SUKU;Mn;0;NSM;;;;N;;u;;;  
A9B9;JAVANESE VOWEL SIGN SUKU MENDUT;Mn;0;NSM;;;;N;;uu;;;  
A9BA;JAVANESE VOWEL SIGN TALING;Mc;0;NSM;;;;N;;e;;;  
A9BB;JAVANESE VOWEL SIGN DIRGA MURE;Mc;0;NSM;;;;N;;ai;;;  
A9BC;JAVANESE VOWEL SIGN PEPET;Mn;0;L;;;;N;;ae;;;  
A9BD;JAVANESE VOWEL SIGN KERET;Mn;0;NSM;;;;N;;re;;;  
A9BE;JAVANESE CONSONANT SIGN PENGKAL;Mn;0;NSM;;;;N;;medial ya;;;  
A9BF;JAVANESE CONSONANT SIGN CAKRA;Mn;0;NSM;;;;N;;medial ra;;;  
A9C0;JAVANESE PANGKON;Mc;9;NSM;;;;N;;;;;  
A9C1;JAVANESE LEFT RERENGGAN;Po;0;L;;;;N;;;;;  
A9C2;JAVANESE RIGHT RERENGGAN;Po;0;L;;;;N;;;;;  
A9C3;JAVANESE PADA ANDAP;Po;0;L;;;;N;;;;;  
A9C4;JAVANESE PADA MADYA;Po;0;L;;;;N;;;;;  
A9C5;JAVANESE PADA LUHUR;Po;0;L;;;;N;;;;;  
A9C6;JAVANESE PADA WINDU;Po;0;L;;;;N;;;;;  
A9C7;JAVANESE PADA PANGKAT;Po;0;L;;;;N;;;;;  
A9C8;JAVANESE PADA LINGSA;Po;0;L;;;;N;;danda;;;  
A9C9;JAVANESE PADA LUNGS;Po;0;L;;;;N;;double danda;;;  
A9CA;JAVANESE PADA ADEG;Po;0;L;;;;N;;;;;  
A9CB;JAVANESE PADA ADEG-ADEG;Po;0;L;;;;N;;;;;  
A9CC;JAVANESE PADA PISELEH;Po;0;L;;;;N;;;;;  
A9CD;JAVANESE TURNED PADA PISELEH;Po;0;L;;;;N;;;;;  
A9CF;JAVANESE PADA PANGRANGKEP;Po;0;L;;;;N;;;;;  
A9D0;JAVANESE DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;  
A9D1;JAVANESE DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;  
A9D2;JAVANESE DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;  
A9D3;JAVANESE DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;  
A9D4;JAVANESE DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;  
A9D5;JAVANESE DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;  
A9D6;JAVANESE DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;  
A9D7;JAVANESE DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;  
A9D8;JAVANESE DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;  
A9D9;JAVANESE DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;  
A9DE;JAVANESE PADA TIRTA TUMETES;Po;0;L;;;;N;;;;;  
A9DF;JAVANESE PADA ISEN-ISEN;Po;0;L;;;;N;;;;;

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











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






Figures.

# Javanisch.

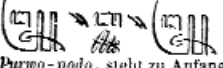
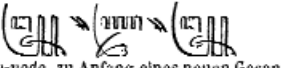
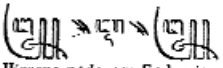
Gewöhnliche Buchstaben.			Anfangsbuchstaben.		
Gew. Figur	Pasangans	Name u. Laut	Gew. Figur	Pasangans	Name u. Laut
. 𑄂 . .	. 𑄂 . .	. hâ . .	. 𑄂 . .	—	. Nâ . .
. 𑄃 . .	. 𑄃 . .	. nâ . .	—	. 𑄃 . .	. Tjâ . .
. 𑄄 . .	. 𑄄 . .	. tjâ . .	. 𑄄 . .	—	. Kâ . .
. 𑄅 . .	. 𑄅 . .	. râ . .	. 𑄅 . .	. 𑄅 . .	. Tâ . .
. 𑄆 . .	. 𑄆 . .	. kâ . .	𑄆 oder 𑄆	—	. Sâ . .
. 𑄇 . .	. 𑄇 . .	. dâ . .	. 𑄇 . .	. 𑄇 . .	. Pâ . .
. 𑄈 . .	. 𑄈 . .	. tâ . .	. 𑄈 . .	—	. Njâ . .
. 𑄉 . .	. 𑄉 . .	. sâ . .	. 𑄉 . .	—	. Gâ . .
. 𑄊 . .	. 𑄊 . .	. wâ . .	. 𑄊 . .	—	. Bâ . .
. 𑄋 . .	. 𑄋 . .	. lâ . .	Alleinstehende Vocale.		
. 𑄌 . .	. 𑄌 . .	. pâ . .	𑄌	𑄍	𑄎
. 𑄍 . .	. 𑄍 . .	. dâ . .	a	i	u
. 𑄎 . .	. 𑄎 . .	. djâ . .	𑄏	𑄐	𑄑
. 𑄏 . .	. 𑄏 . .	. jâ . .	e	o	
. 𑄐 . .	. 𑄐 . .	. njâ . .	Angenommene Buchstaben.		
. 𑄑 . .	. 𑄑 . .	. mâ . .	Folgende vier Buchstaben mit dem Zeichen 𑄒 <i>Sastro-swooro</i> werden gesetzt, wenn solche in Wörtern vorkommen, welche aus dem Arabischen stammen, da es in der Javanischen Alphabete keine Buchstaben gibt, die dem Laut genügend entsprechen.		
. 𑄒 . .	. 𑄒 . .	. gâ . .	𑄒	châ	für den arabischen Buchstaben 𑄒
. 𑄓 . .	. 𑄓 . .	. bâ . .	𑄓	fâ	𑄓
. 𑄔 . .	. 𑄔 . .	. tâ . .	𑄔	zâ	𑄔
. 𑄕 . .	. 𑄕 . .	. ngâ . .	𑄕	ghâ	𑄕
~~~~~			Ziffern.		
. 𑄖 . .	. 𑄖 . .	<i>Pâ-tjere', rē</i>	𑄖	𑄗	𑄘
. 𑄗 . .	—	<i>Ngâ-lelet, lē</i>	𑄙	𑄚	𑄛
			4	5	6
			7	8	9
			0		

Vocal- und Lesezeichen <i>Sandangan</i> genannt.		
Figur	Name	Laut oder Bedeutung
	Pēpēt	ě
	Ulu oder Wulu	i
	Suku	u
	Taling	e
	Taling-Tarung	o
	Paten oder Pānkon	(benimmt einem Buchstaben den Vokallaut)
	Ságnjan oder Wignjan	h (steht am Ende einer Sylbe)
	Tjětja	ng (am Ende einer Sylbe)
	Lajar	r (am Ende einer Sylbe)
	Tjākra	r (zwischen einem Mitlauter und dem folgenden Laut)
	Kēret	rě (nach einem Mitlauter)
	Pīnkal	j (nach einem Mitlauter)

Podos oder Padas.	
Unter dieser Benennung hat die Javanische Schrift folgende Zeichen:	
 <i>Podo tuhur.</i> Mit diesem Zeichen beginnt der Höhere seinen Brief an den Niedern.  <i>Podo madjo.</i> wird auf dieselbe Weise zu Anfang eines Briefes gebraucht bei Personen von gleichem Range.  <i>Podo andap.</i> gebraucht der Niedere zu Anfang seines Briefes an den Höheren.  <i>Podo-bab.</i> zu Anfang eines neuen Abschnittes, eines Satzes.  <i>Podo-lingso.</i> das gewöhnliche Interpunktionszeichen, steht am Ende eines Satzes oder hinter für sich bestehenden Wörtern; in Gedichten oder Gesängen zu Ende der Verse als Trennungszeichen, da die Javanen ihre Verse hintereinander schreiben wie die Prosa. Am Schlusse eines Abschnittes wird es verdoppelt.	 <i>Podo antegging tjetlatu.</i> auch <i>dirgo muraras</i> genannt, steht zuweilen statt des <i>Podo-lingso</i> ; am meisten wird es gebraucht bei Zahlen, um diese von den vorhergehenden oder nachfolgenden Wörtern zu trennen.  <i>Ulu munda.</i> Ist der Vokal in der letzten Sylbe von einem Wort ein <i>Ulu</i> , so hat dieses Lautzeichen in der Mitte ein <i>Tjetja</i> .  <i>Suku mendul.</i> Ist der Vokal in der letzten Sylbe ein <i>Suku</i> , so hat dasselbe diese Gestalt.  <i>Dirgo mure</i> heisst das Zeichen über dem <i>Taling</i> oder <i>Taling-Tarung</i> , wenn dieser Vokal in der letzten Sylbe steht.  <i>Podo watjan anlegenno.</i> Unter dieser Benennung wird das <i>Tarung</i> auch als Trennungszeichen gebraucht.  <i>Piseleh ing tembang gede.</i> bei Gedichten ein Abtheilungszeichen.

 <i>Purwa-podo.</i> steht zu Anfang eines Gedichts.	 <i>Madjo-podo.</i> zu Anfang eines neuen Gesanges, wenn die Melodie und deshalb auch das Versmaass verwechselt werden.	 <i>Wasono-podo.</i> am Ende eines Gedichts.
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**Figure 1b.** Discussion of the Javanese alphabet from Ballhorn 1864. The basic dependent vowels and consonant signs are shown, along with a description of punctuation characters. *Purwa pada* is shown with ꦧꦑꦲ (cf. Figure 12).



































































































































































































































































Ligaturen.							
Nachstehende Ligaturen bestehen aus den Vocalzeichen <i>Suku</i> , <i>Tjokro</i> , <i>Keret</i> und <i>Pinkal</i> mit den gewöhnlichen Buchstaben und <i>Pasangans</i> , sowie aus Vocalzeichen mit Lesezeichen.							
<p>                              </p>	<p>                              </p>	<p>                              </p>	<p>                              </p>	<p>                              </p>	<p>                              </p>	<p>                              </p>	<p>                              </p>
<p>  </p>	<p>  </p>	<p>  </p>	<p>  </p>	<p>  </p>	<p>  </p>	<p>  </p>	<p>  </p>
<p>  Kleines <i>Pasangan</i> <i>Wo</i>, wird angewendet unter einem Buchstaben, welcher in dritter Reihe steht.   Diese kleinen Lesezeichen werden gesetzt unter Hülfsbuchstaben, welche in dritter Reihe stehen.   Kurzes <i>Lajar</i>, wird angewendet, wenn für das lange <i>Lajar</i> kein Raum ist.   Dieses Zeichen wird unter die Buchstaben <i>Wo</i> und <i>Ngo</i> gesetzt, um die Vokale <i>u</i> und <i>o</i> zu bilden, s. d. </p>							
Bemerkungen.							
<p>Die Javanen haben 20 Buchstaben, die von ihnen <i>Aksoro</i>, <i>Sastro</i> oder <i>Tjarakan</i> genannt und von der Linken zur Rechten, ohne an einander zu hängen, jeder für sich selbst bestehend, geschrieben wurden. Durch die vielen Hülfsbuchstaben, Vocal- u. Lesezeichen etc. besteht indessen die Schrift aus zahlreichen Charakteren. — Die <i>Pasangans</i>, welche im Alphabet vorkommen, stehen mit dem Zeichen <i>Paten</i> in genauester Beziehung, es sind dessen Stellvertreter; wenn nämlich mitten in einem Worte ein vocalloser Mitlauter vorkommt, so wird das <i>Paten</i> erfordert, um dem Mitlauter seinen Vocal zu nehmen; um aber durch dieses</p>				<p>Zeichen keine Trennung in dem Worte zu machen, gibt man, mit Weglassung des <i>Paten</i>, dem Buchstaben, welcher auf den vocallosen Mitlauter folgt, eine andere Gestalt oder einen andern Platz oder auch beides, und dieses Zeichen nennt man dann <i>Pasangan</i> (Hülfsbuchstaben). Da hierdurch die <i>Pasangans</i> größtentheils unter die gewöhnlichen Buchstaben, einige Vocal- und Lesezeichen aber über dieselben zu stehen kommen, so läuft die Javanische Schrift in drei Reihen; in welcher Reihe nun die verschiedenen Charaktere ihren Platz haben, ist hier im Alphabet durch Punkte angedeutet worden.</p>			

Figure 1c. Discussion of the Javanese alphabet from Ballhorn 1864. A set of typographic conjuncts is shown, with some notes about their use.

# JAVANISCH

Gew. Zeichen	Ligaturzeichen	Umschrift	Name	Zeichen	Umschrift	Bemerkungen	Zeichen	Umschrift																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
			<b>Vokal- und Lesenzeichen (Sanḍangan)</b>			<b>Alleinstehende Vokale</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<b>Anfangsbuchstaben</b>			<p><b>Allgemeines.</b> Die javanische Sprache, die von der Bevölkerung Mittel- und Ostjawas gesprochen wird, d. h. von etwa 18 Millionen Menschen, ist ein Zweig des malaiisch-polynesischen Sprachstammes und eine Tochter der altjavanischen oder Kawisprache. Das Javanische enthält eine beträchtliche Menge Lehnwörter aus dem Sanskrit, ohne daß der grammatische Bau dadurch gestört wird. Die javanische Schrift hat sich regelmäßig aus der alten Kawischrift entwickelt, welche ihrerseits auf ein südindisches Alphabet zurückgeht. Die Schrift läuft von links nach rechts in drei Reihen, wobei die gewöhnlichen Zeichen die mittlere, die Ligaturzeichen die untere und einige Vokal- und Lesenzeichen die obere Reihe bilden, wie dies oben durch punktierte Linien angedeutet ist. Um dem Konsonanten den Vokallaut zu nehmen, werden in manchen Fällen statt des Zeichens Patēn die Ligaturzeichen angewendet.</p> <p><b>Ziffern.</b></p> <table> <tr> 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	᱆	᱇	᱈	᱉	᱊	᱋	᱌	ᱍ	ᱎ	ᱏ	᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ	ᱛ	ᱜ	ᱝ	ᱞ	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ	ᱯ	ᱰ	ᱱ	ᱲ	ᱳ	ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ	ᱻ	ᱼ	ᱽ	᱾	᱿	᳀	᳁	᳂	᳃	᳄	᳅	᳆	᳇	᳈	᳉	᳊	᳋	᳌	᳍	᳎	᳏	᳐	᳑	᳒	᳓	᳔	᳕	᳖	᳗	᳘	᳙	᳚	᳛	᳜	᳝	᳞	᳟	᳠	᳡	᳢	᳣	᳤	᳥	᳦	᳧	᳨	ᳩ	ᳪ	ᳫ	ᳬ	᳭	ᳮ	ᳯ	ᳰ	ᳱ	ᳲ	ᳳ	᳴	ᳵ	ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾	᳿	ᮓ	ᮔ	ᮕ	ᮖ	ᮗ	ᮘ	ᮙ	ᮚ	ᮛ	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	᯺	᯻	᯼	᯽	᯾	᯿	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃	
ᮘ	ᮙ	ᮚ	ᮛ	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃	᱄	᱅	᱆	᱇	᱈	᱉	᱊	᱋	᱌	ᱍ	ᱎ	ᱏ	᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ	ᱛ	ᱜ	ᱝ	ᱞ	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ	ᱯ	ᱰ	ᱱ	ᱲ	ᱳ	ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ	ᱻ	ᱼ	ᱽ	᱾	᱿	᳀	᳁	᳂	᳃	᳄	᳅	᳆	᳇	᳈	᳉	᳊	᳋	᳌	᳍	᳎	᳏	᳐	᳑	᳒	᳓	᳔	᳕	᳖	᳗	᳘	᳙	᳚	᳛	᳜	᳝	᳞	᳟	᳠	᳡	᳢	᳣	᳤	᳥	᳦	᳧	᳨	ᳩ	ᳪ	ᳫ	ᳬ	᳭	ᳮ	ᳯ	ᳰ	ᳱ	ᳲ	ᳳ	᳴	ᳵ	ᳶ	᳷	᳸	᳹	ᴀ	ᴁ	ᴂ	ᴃ	ᴄ	ᴅ	ᴆ	ᴇ	ᴈ	ᴉ	ᴊ	ᴋ	ᴌ	ᴍ	ᴎ	ᴏ	ᴐ	ᴑ	ᴒ	ᴓ	ᴔ	ᴕ	ᴖ	ᴗ	ᴘ	ᴙ	ᴚ	ᴛ	ᴜ	ᴝ	ᴞ	ᴟ	ᴠ	ᴡ	ᴢ	ᴣ	ᴤ	ᴥ	ᴦ	ᴧ	ᴨ	ᴩ	ᴪ	ᴫ	ᴬ	ᴭ	ᴮ	ᴯ	ᴰ	ᴱ	ᴲ	ᴳ	ᴴ	ᴵ	ᴶ	ᴷ	ᴸ	ᴹ	ᵀ	ᵁ	ᵂ	ᵃ	ᵄ	ᵅ	ᵆ	ᵇ	ᵈ	ᵉ	ᵋ	ᵌ	ᵍ	ᵎ	ᵏ	ᵐ	ᵑ	ᵒ	ᵓ	ᵔ	ᵕ	ᵖ	ᵗ	ᵘ	ᵙ	ᵚ	ᵛ	ᵜ	ᵝ	ᵞ	ᵠ	ᵡ	ᵢ	ᵣ	ᵤ	ᵥ	ᵦ	ᵧ	ᵨ	ᵩ	ᵪ	ᵫ	ᵬ	ᵭ	ᵮ	ᵯ	ᵰ	ᵱ	ᵲ	ᵳ	ᵴ	ᵵ	ᵶ	ᵷ	ᵸ	ᵹ	ᶀ	ᶁ	ᶂ	ᶃ	ᶄ	ᶅ	ᶆ	ᶇ	ᶈ	ᶉ	ᶋ	ᶌ	ᶍ	ᶎ	ᶏ	ᶐ	ᶑ	ᶒ	ᶓ	ᶔ	ᶕ	ᶖ	ᶗ	ᶘ	ᶙ	ᶚ	ᶛ	ᶜ	ᶝ	ᶞ	ᶟ	ᶠ	ᶡ	ᶢ	ᶣ	ᶤ	ᶥ	ᶦ	ᶧ	ᶨ	ᶩ	ᶪ	ᶫ	ᶬ	ᶭ	ᶮ	ᶯ	ᶰ	ᶱ	ᶲ	ᶳ	ᶴ	ᶵ	ᶶ	ᶷ	ᶸ	ᶹ	᷀	᷁	᷂	᷃	᷄	᷅	᷆	᷇	᷈	᷉	᷊	᷋	᷌	᷍	᷎	᷏	᷐	᷑	᷒	ᷓ	ᷔ	ᷕ	ᷖ	ᷗ	ᷘ	ᷙ	ᷚ	ᷛ	ᷜ	ᷝ	ᷞ	ᷟ	ᷠ	ᷡ	ᷢ	ᷣ	ᷤ	ᷥ	ᷦ	ᷧ	ᷨ	ᷩ	ᷪ	ᷫ	ᷬ	ᷭ	ᷮ	ᷯ	ᷰ	ᷱ	ᷲ	ᷳ	ᷴ	᷵	᷶	᷷	᷸	᷹	᷺	᷻	᷼	᷽	᷾	᷿	ᮓ	ᮔ	ᮕ	ᮖ	ᮗ	ᮘ	ᮙ	ᮚ	ᮛ	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	᯺	᯻	᯼	᯽	᯾	᯿	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃	᱄	᱅	᱆	᱇	᱈	᱉	᱊	᱋	᱌	ᱍ	ᱎ	ᱏ	᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ	ᱛ	ᱜ	ᱝ	ᱞ	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ	ᱯ	ᱰ	ᱱ	ᱲ	ᱳ	ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ	ᱻ	ᱼ	ᱽ	᱾	᱿	᳀	᳁	᳂	᳃	᳄	᳅	᳆	᳇	᳈	᳉	᳊	᳋	᳌	᳍	᳎	᳏	᳐	᳑	᳒	᳓	᳔	᳕	᳖	᳗	᳘	᳙	᳚	᳛	᳜	᳝	᳞	᳟	᳠	᳡	᳢	᳣	᳤	᳥	᳦	᳧	᳨	ᳩ	ᳪ	ᳫ	ᳬ	᳭	ᳮ	ᳯ	ᳰ	ᳱ	ᳲ	ᳳ	᳴	ᳵ	ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾	᳿	ᮓ	ᮔ	ᮕ	ᮖ	ᮗ	ᮘ	ᮙ	ᮚ	ᮛ	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	᯺	᯻	᯼	᯽	᯾	᯿	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃	᱄	᱅	᱆	᱇	᱈	᱉	᱊	᱋	᱌	ᱍ	ᱎ	ᱏ	᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ	ᱛ	ᱜ	ᱝ	ᱞ	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ	ᱥ	ᱦ	ᱧ	ᱨ	ᱩ	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ	ᱯ	ᱰ	ᱱ	ᱲ	ᱳ	ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ	ᱻ	ᱼ	ᱽ	᱾	᱿	᳀	᳁	᳂	᳃	᳄	᳅	᳆	᳇	᳈	᳉	᳊	᳋	᳌	᳍	᳎	᳏	᳐	᳑	᳒	᳓	᳔	᳕	᳖	᳗	᳘	᳙	᳚	᳛	᳜	᳝	᳞	᳟	᳠	᳡	᳢	᳣	᳤	᳥	᳦	᳧	᳨	ᳩ	ᳪ	ᳫ	ᳬ	᳭	ᳮ	ᳯ	ᳰ	ᳱ	ᳲ	ᳳ	᳴	ᳵ	ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾	᳿	ᮓ	ᮔ	ᮕ	ᮖ	ᮗ	ᮘ	ᮙ	ᮚ	ᮛ	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	᯺	᯻	᯼	᯽	᯾	᯿	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃					

## JAVANISCH

Ligaturen						
Verbindung mit Suku	                       	                       	                       	                       	                       	      

**Figure 2b.** Discussion of the Javanese alphabet from the Reichsdruckerei 1924. A set of typographic conjuncts is shown, with some notes about their use, and some comments about punctuation. The PISELEH is shown, described as ‘a division sign used in poetry’.



〈表 2〉 カウイ文字表

〈母音字〉

𑀓 a    𑀔 ā    𑀕 (eig. 𑀕) i    𑀖 ī  
 𑀗 u    𑀘 ū    𑀙 r (rè)    𑀚 r̄ (rō)  
 𑀛 l (lè)    𑀜 l (lō)    𑀝 e    𑀞 ai    𑀟 o.

〈子音字〉

𑀠 ka    𑀡 kha    𑀢 ga    𑀣 gha    𑀤 na  
 𑀥 ca    𑀦 cha    𑀧 ja    𑀨 jha    𑀩 na  
 𑀪 ta       𑀫 da       𑀬 na  
 𑀭 la    𑀮 tha    𑀯 da    𑀰 dha    𑀱 na  
 𑀲 pa    𑀳 pha    𑀴 ba    𑀵 bha    𑀶 ma  
 𑀷 ya    𑀸 ra    𑀹 la    𑀺 wa  
 𑀻 ca    𑀼 sa    𑀽 sa    𑀾 ha

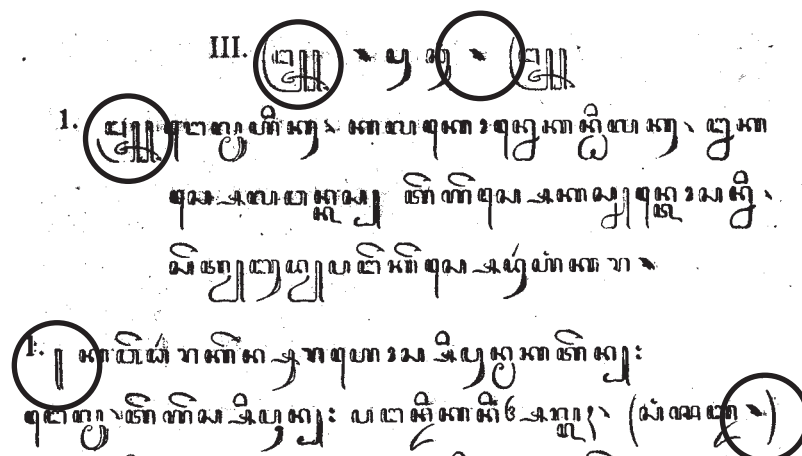
**Figure 3.** The Javanese alphabet as used for Kawi, from Kôno et al. 2001.

No base-letter for CA MURDA, TTA MAHAPRANA, or DDA MAHAPRANA is shown, and the same glyph is used for DDA and DA MAHAPRANA.

Fremde Buchstaben.

Haksārā	Entsprechendes Zeichen der Sprache, der es entlehnt ist (Arabisch, resp. Malayisch)	Transcription und Aussprache
𑀭	ح (arabisch)	h
𑀮	خ "	k
𑀯	ذ "	d
𑀰	ز "	j
𑀱	ش "	s
𑀲	غ "	g
𑀳	ف "	p
𑀴	ع (malayisch)	ng

**Figure 4.** Extended Javanese letters for foreign sounds, from Bohatta 1892.



**Figure 5.** In the title, the characters PADA LUHUR and PADA LUNSI are used, flanking the word *pucung* ‘song’. The PADA ANDAP is shown beginning the poem, and the ADEG-ADEG is shown at the beginning of the main section. In the last line generic parentheses are shown, indicating their correct size and placement in Javanese text.

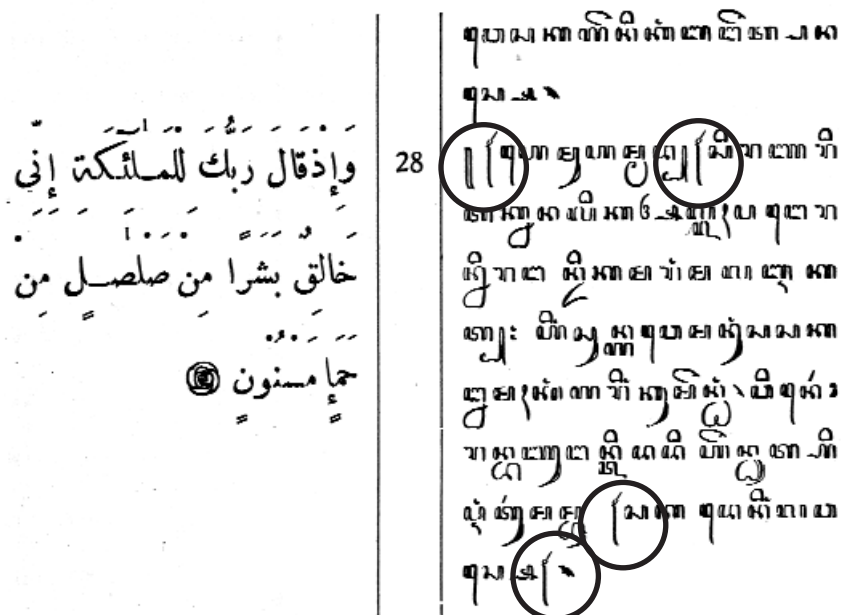
Lautwert	Kawi	Javan.		Redjang-Schrift	Lampung-Schrift	Batak	Bugines-makassar.	Tagala	Bisaya	Singhales.
		Gewohnl. Zeichen	Zeichen in Ligatur							
a	𑀓𑀶	𑀓𑀶				𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ɛ	𑀓𑀶	𑀓𑀶				𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
u	𑀓𑀶	𑀓𑀶				𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
e	𑀓𑀶	𑀓𑀶				𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
o	𑀓𑀶	𑀓𑀶				𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ka	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
kha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ga	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
gha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
na	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ɛa	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
cha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ɟa	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ɟha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
na	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ta	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
tha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
da	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
dha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
na	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ta	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
tha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
da	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
dha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
na	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
pa	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
pha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ba	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
bha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ma	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ya	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ra	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
la	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
va	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
sa	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ša	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ʒa	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶
ha	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶	𑀓𑀶

Abb. 387

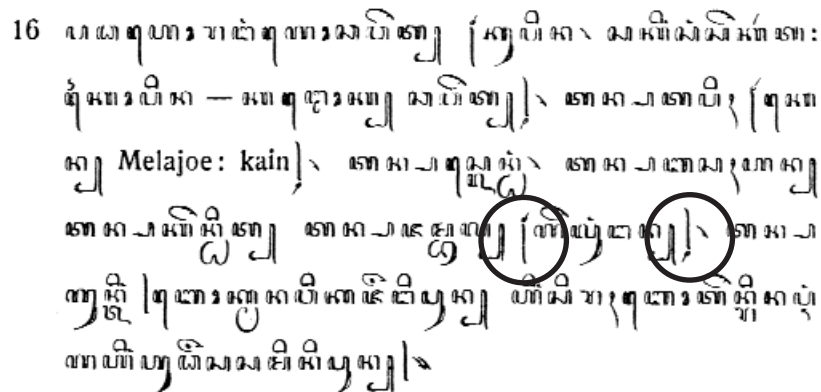
Figure 6. Chart showing the history of Javanese and related scripts from Jensen 1969.

𑀓𑀶𑀓𑀶𑀓𑀶 KD. 𑀓𑀶𑀓𑀶𑀓𑀶 KN.  
 𑀓𑀶𑀓𑀶 KD. 1e 𑀓𑀶𑀓𑀶 𑀓𑀶𑀓𑀶 K. 𑀓𑀶𑀓𑀶 N.  
 2e " 𑀓𑀶𑀓𑀶 KN.  
 𑀓𑀶𑀓𑀶 𑀓𑀶𑀓𑀶 en 𑀓𑀶𑀓𑀶 𑀓𑀶𑀓𑀶 KN.

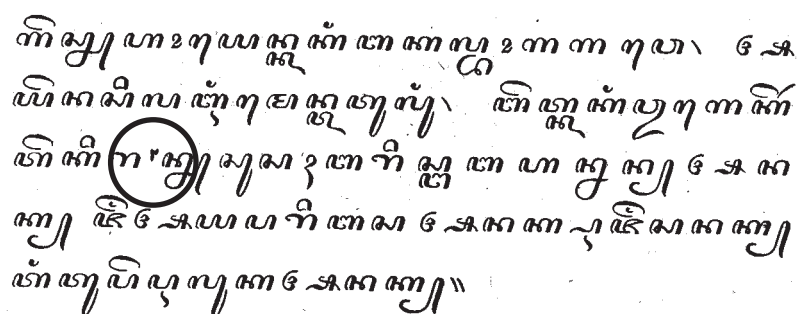
Figure 7. Paired ADEGs are shown here, acting as parentheticals.



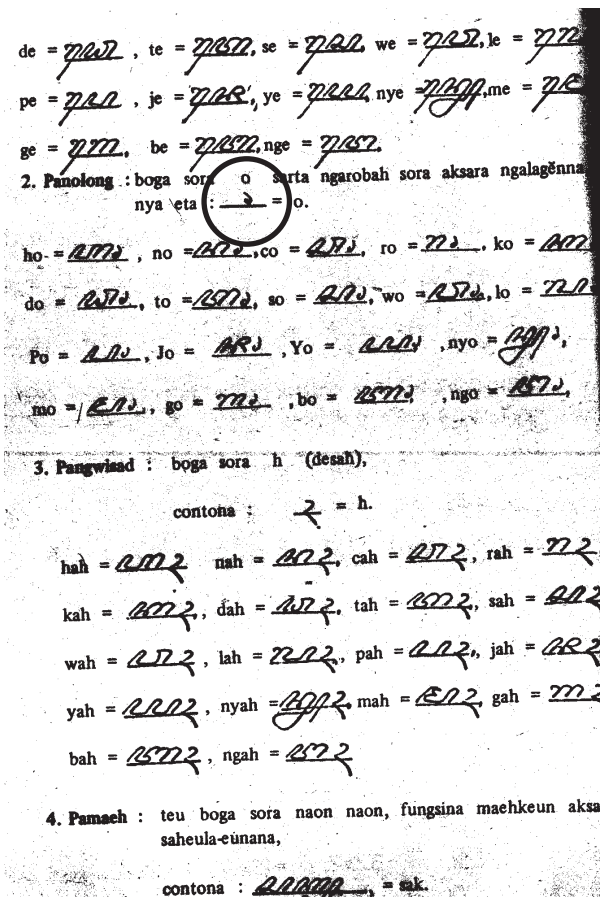
**Figure 8.** Some text from the Qur'an with Javanese translation.  
The ADEG-ADEG is shown as are two pairs of PADA PISELEH.



**Figure 9.** Paired PADA PISELEH and TURNED PADA PISELEH are shown here, acting as parentheticals.  
The final in each pair is followed by PADA LINGSA.



**Figure 10.** The reduplication mark PADA PANGRANGKEP is shown here in the third line of this text in Sundanese, indicating that *kira* should be read *kira-kira* 'approximately'.



hak = ..., nanas = ..., cacak = ...  
 arak = ..., rakyat = ...  
 kakap = ..., dakwa = ..., takwa = ...  
 lambat = ..., paksa = ...  
 jaksa = ..., yaksa = ...  
 nyakal = ..., maksud = ...  
 gambar = ..., bantal = ...  
 ngambang = ...

Tanda baca nu kombinasi/dikombinasikeun antara panolong jeung pamépét, disebutna **paneuhung**, boga sora eu.

contona : eu.  
 heu = ..., neu = ..., ceu = ..., reu = ...  
 keu = ..., deu = ..., teu = ..., seu = ...  
 weu = ..., leu = ..., peu = ..., jeu = ...  
 yeu = ..., nyeu = ..., meu = ..., geu = ...  
 heu = ..., ngeu = ...

Figure 11. A Sundanese grammar book showing TOLONG used by itself to indicate *o* and following PEPET to indicate *eu*.

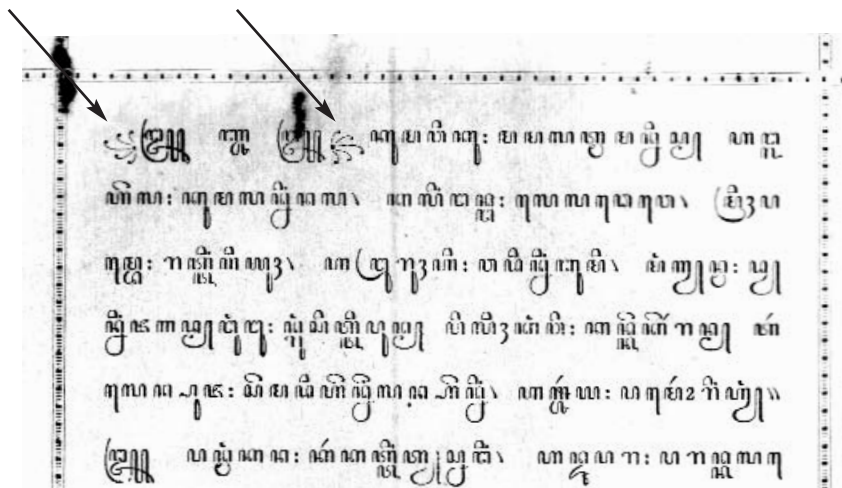


Figure 12. Example of a rather elegant typeface showing LEFT RERENGGAN and RIGHT RERENGGAN the first line surrounding *purwa pada*, shown with *bca* (cf. Figure 1b).

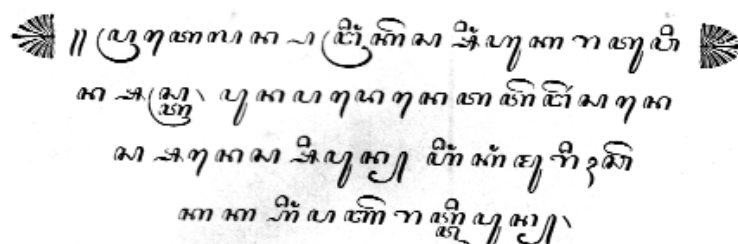


Figure 13. Example showing a different glyph style of LEFT RERENGGAN and RIGHT RERENGGAN.





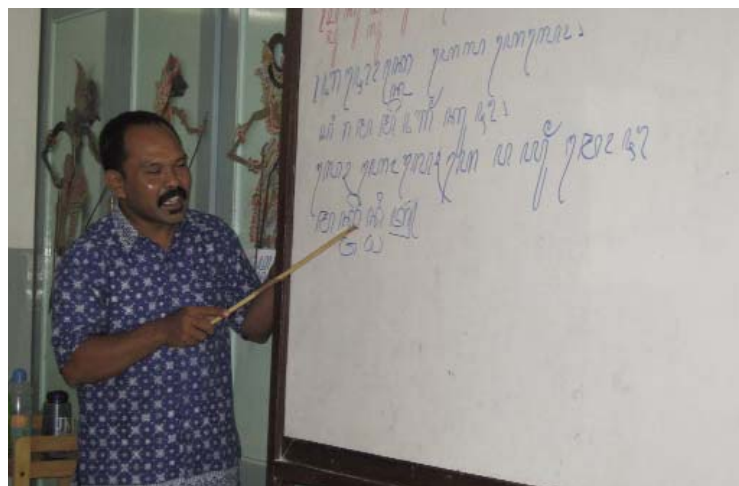




**Figure 17.** A street-sign in Surakarta.



**Figure 18.** Plaque in Javanese script, from the Mayor of Surakarta's office.



**Figure 19a.** Javanese language teacher in a primary school in Surakarta.



**Figure 19b.** Javanese language class in a primary school in Surakarta.

## Row A9: JAVANESE DRAFT

	A98	A99	A9A	A9B	A9C	A9D	A9E	A9F
0	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
1	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
2	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
3	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
4	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
5	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
6	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
7	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
8	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
9	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		
A	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ			
B	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ			
C	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ			
D	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ			
E	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ		ꦱꦏ		
F	ꦱ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ	ꦱꦏ		

## Row A9: JAVANESE DRAFT

hex	Name
80	JAVANESE SIGN PANYANGGA (ardhacandra)
81	JAVANESE SIGN CECAK (anusvara)
82	JAVANESE SIGN LAYAR (repha)
83	JAVANESE SIGN WIGNYAN (visarga)
84	JAVANESE LETTER A
85	JAVANESE LETTER I KAWI
86	JAVANESE LETTER I
87	JAVANESE LETTER II
88	JAVANESE LETTER U
89	JAVANESE LETTER PA CERER (vocalic r)
8A	JAVANESE LETTER NGAL LET (vocalic l)
8B	JAVANESE LETTER NGAL LET RASWADI (vocalic ll)
8C	JAVANESE LETTER E
8D	JAVANESE LETTER AI
8E	JAVANESE LETTER O
8F	JAVANESE LETTER KA
90	JAVANESE LETTER KA SASAK (qa)
91	JAVANESE LETTER KA MURDA (kha)
92	JAVANESE LETTER GA
93	JAVANESE LETTER GA MURDA (gha)
94	JAVANESE LETTER NGA
95	JAVANESE LETTER CA
96	JAVANESE LETTER CA MURDA (cha)
97	JAVANESE LETTER JA
98	JAVANESE LETTER NYA MURDA (jnya)
99	JAVANESE LETTER JA MAHAPRANA (jha)
9A	JAVANESE LETTER NYA
9B	JAVANESE LETTER TTA
9C	JAVANESE LETTER TTA MAHAPRANA (ttha)
9D	JAVANESE LETTER DDA
9E	JAVANESE LETTER DDA MAHAPRANA (ddha)
9F	JAVANESE LETTER NA MURDA (nna)
A0	JAVANESE LETTER TA
A1	JAVANESE LETTER TA MURDA (tha)
A2	JAVANESE LETTER DA
A3	JAVANESE LETTER DA MAHAPRANA (dha)
A4	JAVANESE LETTER NA
A5	JAVANESE LETTER PA
A6	JAVANESE LETTER PA MURDA (pha)
A7	JAVANESE LETTER BA
A8	JAVANESE LETTER BA MURDA (bha)
A9	JAVANESE LETTER MA
AA	JAVANESE LETTER YA
AB	JAVANESE LETTER RA
AC	JAVANESE LETTER RA AGUNG
AD	JAVANESE LETTER LA
AE	JAVANESE LETTER WA
AF	JAVANESE LETTER SA MURDA (sha)
B0	JAVANESE LETTER SA MAHAPRANA (ssa)
B1	JAVANESE LETTER SA
B2	JAVANESE LETTER HA
B3	JAVANESE SIGN CECAK TELU
B4	JAVANESE VOWEL SIGN TARUNG (aa)
B5	JAVANESE VOWEL SIGN TOLONG (o)
B6	JAVANESE VOWEL SIGN WULU (i)
B7	JAVANESE VOWEL SIGN WULU MELIK (ii)
B8	JAVANESE VOWEL SIGN SUKU (u)
B9	JAVANESE VOWEL SIGN SUKU MENDUT (uu)
BA	JAVANESE VOWEL SIGN TALING (e)
BB	JAVANESE VOWEL SIGN DIRGA MURE (ai)
BC	JAVANESE VOWEL SIGN PEPET (ae)
BD	JAVANESE VOWEL SIGN KERET (vocalic r)
BE	JAVANESE CONSONANT SIGN PENGKAL (medial ya)
BF	JAVANESE CONSONANT SIGN CAKRA (medial ra)
C0	JAVANESE PANGKON (virama)
C1	JAVANESE LEFT RERENGKAN
C2	JAVANESE RIGHT RERENGKAN
C3	JAVANESE PADA ANDAP
C4	JAVANESE PADA MADYA
C5	JAVANESE PADA LUHUR
C6	JAVANESE PADA WINDU
C7	JAVANESE PADA PANGKAT
C8	JAVANESE PADA LINGSA
C9	JAVANESE PADA LUNGS
CA	JAVANESE PADA ADEG
CB	JAVANESE PADA ADEG-ADEG
CC	JAVANESE PADA PISELEH
CD	JAVANESE TURNED PADA PISELEH
CE	(This position shall not be used)
CF	JAVANESE PADA PANGRANGKEP
D0	JAVANESE DIGIT ZERO
D1	JAVANESE DIGIT ONE
D2	JAVANESE DIGIT TWO
D3	JAVANESE DIGIT THREE
D4	JAVANESE DIGIT FOUR
D5	JAVANESE DIGIT FIVE
D6	JAVANESE DIGIT SIX
D7	JAVANESE DIGIT SEVEN
D8	JAVANESE DIGIT EIGHT

## A. Administrative

1. Title

**Proposal for encoding the Javanese script in the BMP of the UCS2.**

Requester's name

**Indonesia, Ireland, and UC Berkeley Script Encoding Initiative (Universal Scripts Project)**

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

**National Body and Liaison contribution.**

4. Submission date

2008-01-28

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

**Javanese.**

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

**91.**

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?

**Jason Glavy and 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, N3292 was a preliminary proposal. Jeroen Hellingman made proposals for Javanese dated 1993-06-10 and 1998-03-10; Michael Everson made a code table available at <http://www.evertype.com/informal.html> on 2005-02-02.**

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?

**From the Yayasan Ajisaka:**

**Hadiwaratama** (ITB Javanese & Sundanese Script expert), **Ki Demang Sakawaten** (Javanese Script ICT Programmer), **Bagiono Djokosumbogo** (Planning and International Cooperation Bureau Department of National Education), **Sutadi Purnadipura** (PEPADI - Indonesian Association for Puppet Play Master; Chairman), **Donny Harimurti** (NGO Bali Galang; Founder).

**From the Komite Basa Jawi:**

**Djoko Santoso** (Javanese Language Committee; Chairman), **Dwijahadipura** (Javanese Language Committee), **Partodipuro** (Javanese Language Committee), **Purwatmodipuro** (Javanese Language Committee; Expert Board), **RM. Agus Darmodjo** (Javanese Language Committee), **Sudiyatmono** (PEPADI - Indonesian Association for Puppet Play Master; Javanese Literature Expert and Writer), **Sunarno** (Javanese Language Committee), **Suryono** (Javanese Language Committee), **Wilapadipuro** (Javanese Language Committee), **Wirasta Reksadipura** (Javanese Language Committee; Senior Advisor)

**From the Preparatory Committee:**

**Sardi** (Vocational Education Development Centre for Arts and Craft; Director), **Ki Sondong Mandali** (Yayasan Sekar Jagad).

**From the meeting in Surakarta, held at Balai Kota, City Hall of the Mayor of Surakarta City, Central Java Province, 2007-09-05:**

**Agus Dono** (Office of Tourism and Culture), **Alfiady H.** (State University of Yogyakarta; Lecturer), **Anggarini** (Secondary School Teacher), **B. Luriyanto** (Primary School Teacher), **Bambang Suhendro** (Conservatory School Student), **Bambang Sulanjari** (Teacher's College; Lecturer), **Bani Sudardi** (State University of Surakarta; Professor), **Bb. Ikhwanto** (Uninet; Lecturer), **Budhi Muhanto** (PEPADI - Indonesian Association for Puppet Play Master; Vice Chairman), **Drs. Rianto. SH.** (Government Representative of East Java), **FX. Ibnu Budhi** (Office of Tourism and Culture; Linguist), **Giyarni** (Primary School Teacher), **Hartiningsih** (Secondary School Teacher - Kediri), **Hastin** (NGO Swagatra; Treasurer), **Imam Sutardjo** (State University of Surakarta; Lecturer), **Irsan HG** (Office of Education and Culture), **Kasmadi** (Conservatory School Teacher), **KRH. Darmodipuro** (Radya Pustaka Royal Museum of Surakarta (RMS); Director), **Langgeng** (Conservatory School Teacher), **Margono** (Junior Secondary School; Public Relations), **Mujiyono** (Secondary School Teacher), **Muzizah** (National Language Center; Philologist), **Rohanah** (Mayor's Office; Head of Administration), **Santadipura** (Javanese Bangun Tuwuh Magazine; Chief Editor), **Seta** (Secondary School Teacher - Kediri), **Slamet Ishadi** (Senior Secondary High School Teacher), **Sri Iriana** (Cultural Office), **Suci Yulianti MM.** (Permadani (a cultural NGO)), **Suharsini PW** (NGO Swagatra; Treasurer), **Sukarman** (State University of Surabaya; Lecturer), **Sulis D.** (Office of Tourism and Culture), **Supanta** (Uninet; Lecturer), **Supriyanto Waluyo** (Mangkunegaran Palace), **Surana** (Faculty of Literature and Culture; Lecturer), **Suroto** (Office of Traffic and Transportation; Section Head), **Susila Adi** (Office of National Education Central Java Provincial Government), **Suwondo** (Office of Social Welfare), **Waliyono** (Office of Youth and Sport; Linguist), **Widada** (Language Centre of Semarang; Chairman), **Winarno Kusumo** (The Palace of Surakarta; Vice Chairman).

**From the meeting in Yogyakarta, held at Sonobudaya Museum, Yogyakarta, 2007-09-06:**

**Affendy Widayat** (Yogyakarta State University; Lecturer), **Dhiyan Prastiyono** (Faculty of Culture - Gajahmada University; Lecturer), **Dulkaeni** (Sasmita Magazine), **Eni Lestari R** (Sonobudoyo Museum), **Ery S** (Sonobudoyo Museum), **Haryana HW** (Gajah Mada University; Lecturer), **Kartiman** (Vocational Education Development Centre for Arts and Crafts; Lecturer), **Kirdiono** (Sonobudoyo Museum), **Kusharyanti** (Observer), **Manu J.W.** (Gajah Mada University), **Martono** (Sonobudoyo Museum), **Mudiyono** (Sonobudoyo Museum), **Pardiyono** (Sonobudoyo Museum), **Slamet Riyadi** (Language Centre of Yogyakarta; Lecturer), **Sri Pratiwi** (Sonobudoyo Museum), **Subagyo** (Observer), **Sugeng** (Junior Secondary School Teacher), **Suhardjendra** (NGO Bejana; Teacher), **Sulastri** (Senior Secondary High School Teacher), **Sumadji** (Culture Park), **Sumardi** (Gajah Mada University; Lecturer), **Sumarwantini** (Senior Secondary High School Teacher), **Sunardi S** (Yogyakarta State University; Lecturer), **Tatang** (Sonobudoyo Museum), **Tirto Suwondo** (Language Centre of Yogyakarta; Teacher), **Tugini Triharyati** (Office of National Education), **Warih** (Secondary School Teacher), **Winarso WS.** (Office of Tourism and Cultural Affairs), **Yudha Atmaka** (Observer), **Yuni Istiyani** (Observer).

2c. If YES, available relevant documents

**Attendance sheets attached.**

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

**Javanese is used on the island of Java in Indonesia.**

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

**Used to write the Javanese language. Latin is also used.**

4b. Reference

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

**Yes.**

5b. If YES, where?

**In Java.**

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

**Contemporary 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

**See discussion of PADA PANGRANGKEP and of Javanese digits above.**

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)?

**Yes.**

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

**No.**

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?



**DAFTAR HADIR**  
DALAM RANGKA KUNJUNGAN TIM REGISTRASI  
**UNICODING AKSARA JAWA**  
SURAKARTA, 5 SEPTEMBER 2007



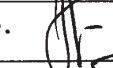
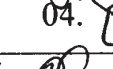

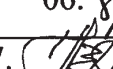
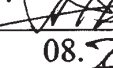

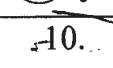
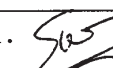

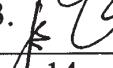
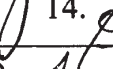
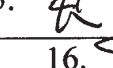
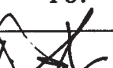
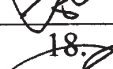
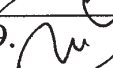
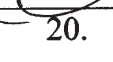

Lembar: \_\_\_\_

NO.	N A M A	INSTANSI	JABATAN	T. TANGAN
01.	Margono	SMP N 12 Ska	Humas	01.
02.	Sulis D	Diponegoro		02.
03.	Agus Doro	Dir. P & C	Kebudayaan	03.
04.	Giyarni	SDN JAGALAN	KS	04.
05.	INTON H G	Dis. Pak	K. Y.	05.
06.	B. Lusiyantri	SD Pongor Lohar	Guron	06.
07.	B.B. IK/COM/10	UNIVER.	Kodori	07.
08.	Supanta	"	"	08.
09.	KRH. Darmodipura	Musur		09.
10.	IMAM SUTADIP	UNS	Doan	10.
11.	Wilapadipura	KBI	Beli	11.
12.	LONEGONE	SM		12.
13.	Suei Yulegali MM	PERMADANI	Bendah	13.
14.	Sambang Suhana	SMKI	Wahy Lihua	14.
15.	Dr. Reanti, str	Pemrop. Jutan	Stat	15.
16.	Fx. Umar Pardi	Dir. Keb. Ppdy	Indishe	16.
17.	Headly H.	CDK GK	Stat	17.
18.	Rd. Agus Darmodip	Koranta Brn		18.
19.	II/IOAH	Sowpos		19.
20.	Hari D Utom	KIR		20.

Panitia Pelaksana:

**DAFTAR HADIR**  
DALAM RANGKA KUNJUNGAN TIM REGISTRASI  
**UNICODING AKSARA JAWA**  
SURAKARTA, 7 SEPTEMBER 2007

Lembar: \_\_\_\_\_

NO.	N A M A	INSTANSI	JABATAN	T. TANGAN
01.	Avrilia	Sekopas FM		01. 
02.	Supriyanto WAEVY	Puro M. N	Sekretaris	02. 
03.	Hartiningih	SMP N 4 KEDIRI	GURU	03. 
04.	<del>Rim R</del>	<del>Solo</del>		04. 
05.	Luhur P	Solo OS	Reporter	05. 
06.	SRI IRIANA	BIR	Sw. Rini H	06. 
07.	Drs Samudhanda	SMA 27	Pengajar	07. 
08.	Suryono Hp	Komite B J	Humas	08. 
09.	Wijaharipura	Kom. Bani Ju		09. 
10.	Jocugro Srd	Komite Bani Dilek		10. 
11.	NANO	SINDO	Rp	11. 
12.	SUROTO, P	DLIAJ	Kasi	12. 
13.	Katmodi	Smkn 2 Solo	Guru	13. 
14.	Partodipurno	KBJ. Ska.	Sekretaris	14. 
15.	SURANA	FBS - Unesa	Dosen	15. 
16.	Waiyom	Dikpora	Seas BLS	16. 
17.	Suharsini Pu	Swagohu	Bunt.	17. 
18.	HASTIN SSTSW	Swagohu	Sekr. II	18. 
19.	Jenlot. S	PTRN	Apolda	19. 
20.				20.

Panitia Pelaksana:



SKPD : DINAS KEBUDAYAAN PROVINSI  
DAERAH ISTIMEWA YOGYAKARTA

DAFTAR HADIR SIDANG

Hari, Tanggal :

J a m :

Tempat :

Acara :

No.	Nama	Instansi	Gol	Tanda Tangan	
1	Sugeng	SMI NI Dep CI	IV/1	1.	
2	Dhijan Prastiyon	FIB ugm		2	shy
3	SUMADI	TAMAN BUDAYA		3	
4	HADIWARATAMA	ITB		4	
5	Donny Harimurti	Bali Galang		5	
6	Susilo Adi	Dinas Pda K Par Antay		6	
7	Ex Ucu And P.	Ditbud Prop. DIY		7	
8	Supulanti	M. Gondokusumo		8	
9	Pakary 2	M. Sams Buday		9	
10	Nwo Pan	Gondokusumo		10	
11	KIRIDNO			11	
12	Namaro W9.	Ditbud Prop DIY		12	
13	Afendy wld nyal	Uguy		13	
14	Burhan Cusson	Uguy		14	
15	Kusnargant			15	
16	Muni Khani			16	
17	Nyda Atmaka			17	
18					
19					
20					
21					

Yogyakarta,

Mengetahui dan Menyetujui :  
Pengguna Anggaran/Kuasa Pengguna Anggaran

Bendahara Pengeluaran

SKPD : DINAS KEBUDAYAAN PROVINSI  
DAERAH ISTIMEWA YOGYAKARTA

DAFTAR HADIR SIDANG

Hari, Tanggal :

J a m :

Tempat :

Acara :

No.	Nama	Instansi	Gol	Tanda Tangan
1	Sugeng	SNIP N 1 Depok	II/a	1.
2	Agus Prasetyo	SNIP N 1 Depok	III/c	2.
3	Wahid Riyadi	Balar Kentoran	III/b	3.
4	Tirto Suwondo	Balar Bohor	III/b	4.
5	Haryana Hm.	UGM	IV/c	5.
6	Sumard	BPSDI	III/c	6.
7	Sumarwanti	SMA N 1 YG.	III/c	7.
8	Maria J.W.	P.I.B. UGM		8.
9	Dulkafeni	Majelis Sesi		9.
10	Wendy	SMK 1 Depok		10.
11	Triharyo	Dinas Bud. Prop.	III/c	11.
12	Widiyanta	TURI		12.
13	Isrwidhono	TURI		13.
14	Karalyono	Sone Gualays		14.
15	Ery S.			15.
16	Michael Everson	IRLANDIA		16.
17	KARTIMAN	PPPP TK -SB Jga		17.
18	Subatni	SMIT WILUK		18.
19	Subagyo			19.
20	MARTONO	Museum Neg. Sorobudoyo		20.
21	Emi Lertari R			21.

Yogyakarta,

Mengetahui dan Menyetujui :  
Pengguna Anggaran/Kuasa Pengguna Anggaran

Bendahara Pengeluaran