

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

**Doc Type: Working Group Document****Title: Preliminary proposal for encoding the Javanese script in the UCS****Source: Michael Everson, SEI (Universal Scripts Project)****Status: Individual Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Date: 2007-07-31**

This is a preliminary proposal to encode the Javanese script in the BMP of the UCS.

**1. Introduction.** The Javanese script is used for writing the Javanese language, the native language of one of the peoples of Java. It is a descendent of the ancient Brahmic script from India; therefore it has some notable similarities with modern scripts of South Asia and Southeast Asia that also are descendent of the Brahmic script. Javanese script was in current use in Java until about 1945.

**2. Structure.** Vowel signs are used in a manner similar to that employed by other Brahmi-derived scripts. Consonants have an inherent *-a* vowel sound. Consonants combine with following consonants in the usual Brahmic fashion: the inherent vowel is “killed” by the PANGKONG, and the following consonant is subjoined or postfixed, often with a change in shape. The table below shows the base consonants and their conjunct forms. The set of extensions for foreign sounds also exists. Their conjunct forms remain to be verified. The table below gives nominal forms and subjoined forms for all letters; in orthography some of these forms (such as the nominal form of ~~ꦱꦱ~~ CHA which is only used as a subjoined consonant) are never used.

ka 𑄛	kha 𑄛	ga 𑄛	gha 𑄛	nga 𑄛
ca 𑄛	cha <del>ꦱꦱ</del>	ja 𑄛	jha 𑄛	nya 𑄛
tta 𑄛	ttha 𑄛	dda 𑄛	ddha 𑄛	nna 𑄛
ta 𑄛	tha 𑄛	da 𑄛	dha 𑄛	na 𑄛
pa 𑄛	pha 𑄛	ba 𑄛	bha 𑄛	ma 𑄛
ya 𑄛	ra 𑄛	la 𑄛	wa 𑄛	
ssa 𑄛	sha 𑄛	sa 𑄛	ha 𑄛	

**3. Ordering.** The traditional order of the Javanese script is: *ha na ca ra ka da ta sa wa la pa dha ja ya nya ma ga ba tha nga* and this order has some currency. (The order is *hana caraka, data sawala, padha jayanya, maga bathanga*, a sentence which means ‘There were (two) emissaries, they began to fight, their valour was equal, they both fell dead’.)

**Unicode Character Properties**

A980;JAVANESE SIGN CECEK CANDRA;Mn;0;NSM;;;N;ardhacandra;;;  
A981;JAVANESE SIGN CECEK;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 AKARA;Lo;0;L;;;;;N;;a;;;
A985;JAVANESE LETTER AKARA TARUNG;Lo;0;L;;;;;N;;aa;;;
A986;JAVANESE LETTER IKARA;Lo;0;L;;;;;N;;i;;;
A987;JAVANESE LETTER IKARA TARUNG;Lo;0;L;;;;;N;;ii;;;
A988;JAVANESE LETTER UKARA;Lo;0;L;;;;;N;;u;;;
A989;JAVANESE LETTER UKARA TARUNG;Lo;0;L;;;;;N;;uu;;;
A98A;JAVANESE LETTER PA CERЕК;Lo;0;L;;;;;N;;vocalic r;;;
A98B;JAVANESE LETTER PA CERЕК DIRGA;Lo;0;L;;;;;N;;vocalic rr;;;
A98C;JAVANESE LETTER NGA LELET;Lo;0;L;;;;;N;;vocalic l;;;
A98D;JAVANESE LETTER NGA LELET DIRGA;Lo;0;L;;;;;N;;vocalic ll;;;
A98E;JAVANESE LETTER EKARA;Lo;0;L;;;;;N;;e;;;
A98F;JAVANESE LETTER AIKARA;Lo;0;L;;;;;N;;ai;;;
A990;JAVANESE LETTER OKARA;Lo;0;L;;;;;N;;o;;;
A991;JAVANESE LETTER OKARA TARUNG;Lo;0;L;;;;;N;;au;;;
A992;JAVANESE LETTER KA;Lo;0;L;;;;;N;;;;;
A993;JAVANESE LETTER KA MURDA;Lo;0;L;;;;;N;;kha;;;
A994;JAVANESE LETTER GA;Lo;0;L;;;;;N;;;;;
A995;JAVANESE LETTER GA MURDA;Lo;0;L;;;;;N;;gha;;;
A996;JAVANESE LETTER NGA;Lo;0;L;;;;;N;;;;;
A997;JAVANESE LETTER CA;Lo;0;L;;;;;N;;;;;
A998;JAVANESE LETTER CA MURDA;Lo;0;L;;;;;N;;cha;;;
A999;JAVANESE LETTER JA;Lo;0;L;;;;;N;;;;;
A99A;JAVANESE LETTER JHA;Lo;0;L;;;;;N;;jha;;;
A99B;JAVANESE LETTER NYA;Lo;0;L;;;;;N;;;;;
A99C;JAVANESE LETTER TTA;Lo;0;L;;;;;N;;;;;
A99D;JAVANESE LETTER TTHA;Lo;0;L;;;;;N;;;;;
A99E;JAVANESE LETTER DDA;Lo;0;L;;;;;N;;;;;
A99F;JAVANESE LETTER DDHA;Lo;0;L;;;;;N;;;;;
A9A0;JAVANESE LETTER NA MURDA;Lo;0;L;;;;;N;;nna;;;
A9A1;JAVANESE LETTER TA;Lo;0;L;;;;;N;;;;;
A9A2;JAVANESE LETTER TA MURDA;Lo;0;L;;;;;N;;tha;;;
A9A3;JAVANESE LETTER DA;Lo;0;L;;;;;N;;;;;
A9A4;JAVANESE LETTER DHA;Lo;0;L;;;;;N;;;;;
A9A5;JAVANESE LETTER NA;Lo;0;L;;;;;N;;;;;
A9A6;JAVANESE LETTER PA;Lo;0;L;;;;;N;;;;;
A9A7;JAVANESE LETTER PA MURDA;Lo;0;L;;;;;N;;pha;;;
A9A8;JAVANESE LETTER BA;Lo;0;L;;;;;N;;;;;
A9A9;JAVANESE LETTER BA MURDA;Lo;0;L;;;;;N;;bha;;;
A9AA;JAVANESE LETTER MA;Lo;0;L;;;;;N;;;;;
A9AB;JAVANESE LETTER YA;Lo;0;L;;;;;N;;;;;
A9AC;JAVANESE LETTER RA;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 GEDE;Lo;0;L;;;;;N;;ssa;;;
A9B1;JAVANESE LETTER SA;Lo;0;L;;;;;N;;;;;
A9B2;JAVANESE LETTER HA;Lo;0;L;;;;;N;;;;;
A9B3;JAVANESE SIGN REREKAN;Mn;7;NSM;;;;;N;;nukta;;;
A9B4;JAVANESE VOWEL SIGN TARUNG;Mc;0;L;;;;;N;;aa;;;
A9B5;JAVANESE VOWEL SIGN WULU;Mn;0;L;;;;;N;;i;;;
A9B6;JAVANESE VOWEL SIGN WULU MELIK;Mn;0;L;;;;;N;;ii;;;
A9B7;JAVANESE VOWEL SIGN SUKU;Mn;0;NSM;;;;;N;;u;;;
A9B8;JAVANESE VOWEL SIGN SUKU MENDUT;Mn;0;NSM;;;;;N;;uu;;;
A9B9;JAVANESE VOWEL SIGN PA CERЕК;Mn;0;NSM;;;;;N;;vocalic r;;;
A9BA;JAVANESE VOWEL SIGN PA CERЕК TARUNG;Mc;0;NSM;;;;;N;;vocalic rr;;;
A9BB;JAVANESE VOWEL SIGN NGA LELET;Mn;0;NSM;;;;;N;;vocalic l;;;
A9BC;JAVANESE VOWEL SIGN NGA LELET TARUNG;Mc;0;NSM;;;;;N;;vocalic ll;;;
A9BD;JAVANESE VOWEL SIGN TALING;Mc;0;NSM;;;;;N;;e;;;
A9BE;JAVANESE VOWEL SIGN TALING DIRGA MURE;Mc;0;NSM;;;;;N;;ai;;;
A9BF;JAVANESE VOWEL SIGN TALING TARUNG;Me;0;NSM;;;;;N;;o;;;
A9C0;JAVANESE VOWEL SIGN TALING DIRGA MURE TARUNG;Me;0;NSM;;;;;N;;au;;;
A9C1;JAVANESE VOWEL SIGN PEPET;Mn;0;L;;;;;N;;ae;;;
A9C2;JAVANESE VOWEL SIGN PEPET TARUNG;Mc;0;L;;;;;N;;oe;;;
A9C3;JAVANESE SIGN PANGKONG;Mc;9;NSM;;;;;N;;;;;
A9C4;JAVANESE LETTER NYA MURDA;Lo;0;L;;;;;N;;;;;
A9C5;JAVANESE LETTER RRA;Lo;0;L;;;;;N;;;;;
A9C6;JAVANESE CONSONANT SIGN CAKRA KERET;Mn;0;NSM;;;;;N;;;;;
A9C7;JAVANESE CONSONANT SIGN PENGKAL;Mn;0;NSM;;;;;N;;medial ya;;;
A9C8;JAVANESE CONSONANT SIGN CAKRA;Mn;0;NSM;;;;;N;;medial ra;;;
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 ADEG;Po;0;L;;;;;N;;;;;  
A9DF;JAVANESE PADA ADEG ADEG;Po;0;L;;;;;N;;;;;  
A9DA;JAVANESE PADA LUHUR;Po;0;L;;;;;N;;section;;;;  
A9DB;JAVANESE PADA MADYA;Po;0;L;;;;;N;;honorific section;;;;  
A9DB;JAVANESE PADA ANDHAP;Po;0;L;;;;;N;;noble section;;;;  
A9DB;JAVANESE PADA PANCAK;Po;0;L;;;;;N;;;;;  
A9DB;JAVANESE PADA PANGKAT;Po;0;L;;;;;N;;;;;  
A9DE;JAVANESE PADA LINGSA;Po;0;L;;;;;N;;danda;;;;  
A9DF;JAVANESE PADA LUNGS;Po;0;L;;;;;N;;double danda;;;;  
A9DB;JAVANESE PADA DIRGA;Po;0;L;;;;;N;;;;;  
A9DB;JAVANESE ANGKA DUA;Po;0;L;;;;;N;;;;;

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# JAVANISCH

Gew. Zeichen	Ligaturzeichen	Umschrift	Name	Zeichen	Umschrift	Bemerkungen	Zeichen	Umschrift																						
ha	ha	hā	<b>Vokal- und Lesezeichen (Saṅḡangan)</b>				<b>Alleinstehende Vokale</b>																							
na	na	nā	Pēpēt		ě			a																						
tja	tja	tjā	Wulu		i			i																						
ra	ra	rā	Suku		u			u																						
ka	ka	kā	Taling		e			e																						
da	da	dā	Taling-Tarung		o			o																						
sa	sa	sā	Patēn oder Pangkon			nimmt einem Buchstaben den Vokallaut an Ende einer Silbe	<b>Zeichen für arabische Laute</b>																							
wa	wa	wā	Wigñan		h			h																						
pa	pa	pā	Tjētjak		ng	am Ende einer Silbe		k																						
da	da	dā	Layar		r	am Ende einer Silbe		ḡ																						
dja	dja	djā	Tjākrā		r	zwischen einem Mitlaut und dem folgenden Laut		j																						
ya	ya	yā	Kērēt		rě	nach einem Mitlaut		s																						
ma	ma	mā	Pingkal		yā	nach einem Mitlaut		g																						
ga	ga	gā						p																						
ba	ba	bā						ng																						
ta	ta	tā																												
na	na	nā																												
re	re	rě																												
le	le	lē																												
<b>Anfangsbuchstaben</b>																														
na	na	Nā																												
na	na	Tjā																												
ka	ka	Kā																												
ta	ta	Tā																												
sa	sa	Sā																												
sa	sa																													
pa	pa	Pā																												
na	na	Njā																												
ga	ga	Gā																												
ba	ba	Bā																												
			<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 Lesezeichen 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 style="width: 100%; text-align: center;"> <tr> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> <td>na</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>0</td> <td>0</td> </tr> </table> <p><b>Interpunktion.</b></p> <p>: Komma    \ halbe Pause    ≧ ganze Pause       Abschnitt</p> <p><b>Literatur.</b> Bohatta, Lehrbuch der Javanischen Sprache, Wien o. J. (Die Kunst der Polyglottie, herausgegeben von A. Hartlebens Verlag).</p>						na	na	na	na	na	na	na	na	na	na	na	1	2	3	4	5	6	7	8	9	0	0
na	na	na	na	na	na	na	na	na	na	na																				
1	2	3	4	5	6	7	8	9	0	0																				

Figure 1a. Discussion of the Javanese alphabet from a German source.



〈表 2〉 カウイ文字表

〈母音字〉

𑄂 a	𑄃 ā	𑄄 (eig. 𑄅) i	𑄆 ī
𑄇 u	𑄈 ü	𑄉 r (rě)	𑄊 r̄ (rö)
𑄋 l (lē)	𑄌 l̄ (lö)	𑄍 e	𑄎 ai
			𑄏 o.

〈子音字〉

𑄐 ka	𑄑 kha	𑄒 ga	𑄓 gha	𑄔 ṅa
𑄕 ca	𑄖 cha	𑄗 ja	𑄘 jha	𑄙 ṅa
𑄚 ṭa		𑄛 ḍa		𑄜 ṇa
𑄝 ta	𑄞 tha	𑄟 da	𑄠 dha	𑄡 na
𑄢 pa	𑄣 pha	𑄤 ba	𑄥 bha	𑄦 ma
𑄧 ya	𑄨 ra	𑄩 la	𑄪 wa	

Figure 2. The Javanese alphabet as used for Sanskrit, from Kôno et al. 2001.

**Fremde Buchstaben.**

Haksārā		Entsprechendes Zeichen der Sprache, der es entlehnt ist (Arabisch, resp. Malayisch)	Transcription und Aussprache
𑄛	𑄛	ح (arabisch)	h
𑄜	𑄜	ك (arabisch)	k
𑄝	𑄝	د (arabisch)	d
𑄞	𑄞	ز (arabisch)	j
𑄟	𑄟	ش (arabisch)	s
𑄠	𑄠	غ (arabisch)	g
𑄡	𑄡	ڤ (malayisch)	p
𑄢	𑄢	ڠ (malayisch)	ng

Figure 3. Extended Javanese letters for foreign sounds, from a German source.

**Row A9: JAVANESE DRAFT**

	A98	A99	A9A	A9B	A9C	A9D	A9E	A9F
0	ꦱ꧀	ꦱꦺ	ꦱꦏꦏ	ꦱꦼ	ꦱꦺꦺꦴ	ꦱꦺꦴ	ꦱꦺꦴꦺ	
1	ꦱꦺꦴꦴ	ꦱꦺꦴꦲ	ꦱꦺꦴꦩ	ꦱꦺꦴꦩ	ꦱꦺꦴꦩꦶ	ꦱꦺꦴꦩ	ꦱꦺꦴꦩꦺ	
2	ꦱꦺꦴꦲꦺ	ꦱꦺꦴꦩꦏ	ꦱꦺꦴꦩꦲ	ꦱꦺꦴꦩꦏꦏ	ꦱꦺꦴꦩꦏꦶ	ꦱꦺꦴꦩꦏꦺ	ꦱꦺꦴꦩꦏꦺꦴ	
3	ꦱꦺꦴꦲꦺꦴ	ꦱꦺꦴꦩꦏꦏ	ꦱꦺꦴꦩꦏꦺ	ꦱꦺꦴꦩꦏꦶꦴ	ꦱꦺꦴꦩꦏꦶꦴꦴ	ꦱꦺꦴꦩꦏꦶꦴꦺ	ꦱꦺꦴꦩꦏꦶꦴꦺꦴ	
4	ꦱꦺꦴꦲꦺꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺ	ꦱꦺꦴꦩꦏꦏꦺ	ꦱꦺꦴꦩꦏꦏꦶꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦺ	ꦱꦺꦴꦩꦏꦏꦶꦴꦺꦴ	
5	ꦱꦺꦴꦲꦺꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴ		
6	ꦱꦺꦴꦲꦺꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴ		
7	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴ		
8	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴ		
9	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
A	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
B	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
C	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
D	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
E	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		
F	ꦱꦺꦴꦲꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦺꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ	ꦱꦺꦴꦩꦏꦏꦶꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴꦴ		

Row A9: JAVANESE DRAFT

hex	Name
80	JAVANESE SIGN CECAK CANDRA (ardhacandra)
81	JAVANESE SIGN CECAK (anusvara)
82	JAVANESE SIGN LAYAR (repha)
83	JAVANESE SIGN WIGNYAN (visarga)
84	JAVANESE LETTER A
85	JAVANESE LETTER AA
86	JAVANESE LETTER I
87	JAVANESE LETTER II
88	JAVANESE LETTER U
89	JAVANESE LETTER UU
8A	JAVANESE LETTER PA CEREK (vocalic r)
8B	JAVANESE LETTER PA CEREK DIRGA (vocalic rr)
8C	JAVANESE LETTER NGA LELET (vocalic l)
8D	JAVANESE LETTER NGA LELET DIRGA (vocalic ll)
8E	JAVANESE LETTER E
8F	JAVANESE LETTER AI
90	JAVANESE LETTER O
91	JAVANESE LETTER AU
92	JAVANESE LETTER KA
93	JAVANESE LETTER KA MURDA (kha)
94	JAVANESE LETTER GA
95	JAVANESE LETTER GA MURDA (gha)
96	JAVANESE LETTER NGA
97	JAVANESE LETTER CA
98	JAVANESE LETTER CA MURDA (cha)
99	JAVANESE LETTER JA
9A	JAVANESE LETTER JHA
9B	JAVANESE LETTER NYA
9C	JAVANESE LETTER TTA
9D	JAVANESE LETTER TTHA
9E	JAVANESE LETTER DDA
9F	JAVANESE LETTER DDHA
A0	JAVANESE LETTER NA MURDA (nna)
A1	JAVANESE LETTER TA
A2	JAVANESE LETTER TA MURDA (tha)
A3	JAVANESE LETTER DA
A4	JAVANESE LETTER DHA
A5	JAVANESE LETTER NA
A6	JAVANESE LETTER PA
A7	JAVANESE LETTER PA MURDA (pha)
A8	JAVANESE LETTER BA
A9	JAVANESE LETTER BA MURDA (bha)
AA	JAVANESE LETTER MA
AB	JAVANESE LETTER YA
AC	JAVANESE LETTER RA
AD	JAVANESE LETTER LA
AE	JAVANESE LETTER WA
AF	JAVANESE LETTER SA MURDA (sha)
B0	JAVANESE LETTER SA GEDE (ssa)
B1	JAVANESE LETTER SA
B2	JAVANESE LETTER HA
B3	JAVANESE SIGN NUKTA (triple cecak)
B4	JAVANESE VOWEL SIGN TARUNG (aa)
B5	JAVANESE VOWEL SIGN WULU (i)
B6	JAVANESE VOWEL SIGN WULU MELIK (ii)
B7	JAVANESE VOWEL SIGN SUKU (u)
B8	JAVANESE VOWEL SIGN SUKU MENDUT (uu)
B9	JAVANESE VOWEL SIGN KERET (vocalic r)
BA	JAVANESE VOWEL SIGN KERET TARUNG (vocalic rr)
BB	JAVANESE VOWEL SIGN VOCALIC L
BC	JAVANESE VOWEL SIGN VOCALIC LL TARUNG
BD	JAVANESE VOWEL SIGN TALING (e)
BE	JAVANESE VOWEL SIGN TALING DIRGA MURE (ai)
BF	JAVANESE VOWEL SIGN TALING TARUNG (o)
C0	JAVANESE VOWEL SIGN TALING DIRGA MURE TARUNG (au)
C1	JAVANESE VOWEL SIGN PEPET (ae)
C2	JAVANESE VOWEL SIGN OE
C3	JAVANESE PANGKONG (virama)
C4	JAVANESE LETTER NYA MURDA (jnya murda)
C5	JAVANESE LETTER RRA
C6	JAVANESE CONSONANT SIGN KERET
C7	JAVANESE CONSONANT SIGN MEDIAL YA
C8	JAVANESE CONSONANT SIGN MEDIAL RA
C9	(This position shall not be used)
CA	(This position shall not be used)
CB	(This position shall not be used)
CC	(This position shall not be used)
CD	(This position shall not be used)
CE	(This position shall not be used)
CF	(This position shall not be used)
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

hex	Name
D9	JAVANESE DIGIT NINE
DA	JAVANESE PADA ADEG
DB	JAVANESE PADA ADEG ADEG
DC	JAVANESE PADA LUHUR
DD	JAVANESE PADA MADYA
DE	JAVANESE PADA ANDAP
DF	JAVANESE PADA PANCAK
E0	JAVANESE PADA PANGKAT
E1	JAVANESE PADA LINGSA (danda)
E2	JAVANESE PADA LUNGSI (double danda)
E3	JAVANESE PADA DIRGA
E4	JAVANESE ANGKA DUA
E5	(This position shall not be used)
E6	(This position shall not be used)
E7	(This position shall not be used)
E8	(This position shall not be used)
E9	(This position shall not be used)
EA	(This position shall not be used)
EB	(This position shall not be used)
EC	(This position shall not be used)
ED	(This position shall not be used)
EE	(This position shall not be used)
EF	(This position shall not be used)
F0	(This position shall not be used)
F1	(This position shall not be used)
F2	(This position shall not be used)
F3	(This position shall not be used)
F4	(This position shall not be used)
F5	(This position shall not be used)
F6	(This position shall not be used)
F7	(This position shall not be used)
F8	(This position shall not be used)
F9	(This position shall not be used)
FA	(This position shall not be used)
FB	(This position shall not be used)
FC	(This position shall not be used)
FD	(This position shall not be used)
FE	(This position shall not be used)
FF	(This position shall not be used)



## A. Administrative

1. Title

**Preliminary proposal for encoding the Javanese script in the BMP of the UCS2.**

Requester's name

**Michael Everson**

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

**Individual contribution.**

4. Submission date

**2007-07-31**

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

**No.**

6b. More information will be provided later

**Yes.**

## 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

**94.**

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.

**No.**

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?

**Donny Harimurti, Jeroen Hellingman.**

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?

**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?

**No.**

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

10c. If YES, reference

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?