

Recommendations for UCA & GC changes

L2/11-310

Subject:	Recommendations for UCA & GC changes
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In the course of doing 127-A061, we were able to resolve most of the issues, but some need decisions from the UTC.

**127-A061 Ken Whistler, Mark Davis
Update DUCET for UCA 6.1 (re changes for CLDR handling of punctuation and symbols).**

We are proposing the following changes so that we can complete the action.

1. Document the change in the UCA. This is really part of the same action, but best to make it explicit. It will include text that explains the following:

The UCA has the following order:

1. *ignorables*:
2. *whitespace*: *WhiteSpace=True*
3. *punctuation*: *gc=P*
4. *general_symbols*: *gc=S OR gc=Lm AND NOT gc=Sc*
5. *currency_symbols*: *gc=Sc*
6. *numbers*: *gc=N*
7. *others*: *anything >= 'a' (and ordered by script)*

Exceptions

1. If the nfkd decomposition of a character starts with :, (or [, it is treated as *punctuation*.
2. If the nfkd decomposition of a character starts with a character of type *numbers*, then use that instead of the actual type.
3. Numbers fall into three classes, and are treated differently according to those classes
 1. Those that behave like *general_symbols*
 2. Those that behave like *numbers* (Nd)
 3. Those that behave like *others*

2. The following characters were sorted as *punctuation* in the UCA. Recommended change to GC=P

general_symbols	So	Tibt	ཀླ	0F14	[0256.0020.0002]	TIBETAN MARK GTER TSHEG
general_symbols	So	Ethi	ገ	1360	[02B2.0020.0002]	ETHIOPIC SECTION MARK
general_symbols	So	Zyyy	⌘	10102	[02E2.0020.0002]	AEGEAN CHECK MARK

These are documented as punctuation, and are purely an oversight.

3. The following characters were sorted as *punctuation* in the UCA. Recommend either a change to GC=P (for the two So's below), or reordering all in the UCA to be with *general_symbols*.

general_symbols	So	Zyyy	§	00A7	[0368.0020.0002]	SECTION SIGN
punctuation	Po	Zyyy	⸰	2E39	[0369.0020.0002]	TOP HALF SECTION SIGN
general_symbols	So	Zyyy	¶	00B6	[036A.0020.0002]	PILCROW SIGN
punctuation	Po	Zyyy	⸱	204B	[036B.0020.0002]	REVERSED PILCROW SIGN

These could arguably go either way, but the GC should be consistent.

4. The following characters were sorted with *general_symbols* in the UCA. Functionally they straddle the lines, and we recommend changing them to be *ignorables* in the UCA.

others	Mc	Tibt	།	0F3E	[14C0.0020.0002]	TIBETAN SIGN YAR TSHES
others	Mc	Tibt	༎	0F3F	[14C1.0020.0002]	TIBETAN SIGN MAR TSHES

5. The following characters were sorted with numbers in the UCA. There are hundreds of related characters, sorting in *numbers*, that are No and clearly analogous. It is simply an oversight that they didn't get the same GC.

Proposed characters to change to GC=No.

general_symbols	So	Zyyy	ⓧ	3248	[15CE.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER TEN ON BLACK SQUARE
general_symbols	So	Zyyy	Ⓣ	3249	[15CF.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER TWENTY ON BLACK SQUARE
general_symbols	So	Zyyy	⓷	324A	[15D0.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER THIRTY ON BLACK SQUARE
general_symbols	So	Zyyy	Ⓩ	324B	[15D1.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER FORTY ON BLACK SQUARE
general_symbols	So	Zyyy	⓵	324C	[15D2.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER FIFTY ON BLACK SQUARE
general_symbols	So	Zyyy	⓶	324D	[15D3.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER SIXTY ON BLACK SQUARE
general_symbols	So	Zyyy	⓷	324E	[15D4.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER SEVENTY ON BLACK SQUARE
general_symbols	So	Zyyy	⓸	324F	[15D5.0020.0006] [15CD.0020.0006]	CIRCLED NUMBER EIGHTY ON BLACK SQUARE

Sample analogous character with GC=No.

numbers	No	Zyyy	Ⓣ	24F4	[15CF.0020.0006] [15CD.0020.0006]	NEGATIVE CIRCLED NUMBER TWENTY
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Background Information

There is no proposal for a change to these: this information is just FYI.

N in *general_symbols* (numbers that behave like symbols in UCA)

Nl,Grek	𐅀...𐅁	10140...10141	GREEK ACROPHONIC ATTIC ONE QUARTER...GREEK ACROPHONIC ATTIC ONE HALF
Nl,Grek	𐅄...𐅇	10144...10147	GREEK ACROPHONIC ATTIC FIFTY...GREEK ACROPHONIC ATTIC FIFTY THOUSAND
Nl,Grek	𐅉...𐅎	10149...1014E	GREEK ACROPHONIC ATTIC TEN TALENTS...GREEK ACROPHONIC ATTIC FIVE THOUSAND TALENTS
Nl,Grek	𐅐...𐅗	10150...10157	GREEK ACROPHONIC ATTIC TEN STATERS...GREEK ACROPHONIC ATTIC TEN MNAS
Nl,Grek	𐅠...𐅲	10160...10172	GREEK ACROPHONIC TROEZENIAN TEN...GREEK ACROPHONIC THESPIAN FIVE THOUSAND
Nl,Grek	𐅴	10174	GREEK ACROPHONIC STRATIAN FIFTY MNAS
Nl,Latn	Ⓒ...Ⓓ	2180...2182	ROMAN NUMERAL ONE THOUSAND C D...ROMAN NUMERAL TEN THOUSAND
Nl,Latn	↴...↵	2186...2188	ROMAN NUMERAL FIFTY EARLY FORM...ROMAN NUMERAL ONE HUNDRED THOUSAND
Nl,Xpeo	𐏓...𐏕	103D3...103D5	OLD PERSIAN NUMBER TEN...OLD PERSIAN NUMBER HUNDRED
Nl,Xsux	𒐲...𒐳	12432...12433	CUNEIFORM NUMERIC SIGN SHAR2 TIMES GAL PLUS DISH...CUNEIFORM NUMERIC SIGN SHAR2 TIMES GAL PLUS MIN
Nl,Xsux	𒑖...𒑗	12456...12457	CUNEIFORM NUMERIC SIGN NIGIDAMIN...CUNEIFORM NUMERIC SIGN NIGIDAESH
Nl,Xsux	𒑚...𒑢	1245A...12462	CUNEIFORM NUMERIC SIGN ONE THIRD DISH...CUNEIFORM NUMERIC SIGN OLD ASSYRIAN ONE QUARTER
No,Arab	𐹩...𐹾	10E69...10E7E	RUMI NUMBER TEN...RUMI FRACTION TWO THIRDS
No,Armi	𐡛...𐡟	1085B...1085F	IMPERIAL ARAMAIC NUMBER TEN...IMPERIAL ARAMAIC NUMBER TEN THOUSAND
No,Beng	৯...০	09F4...09F9	BENGALI CURRENCY NUMERATOR ONE...BENGALI CURRENCY DENOMINATOR SIXTEEN
No,Brah	𑁛...𑁥	1105B...11065	BRAHMI NUMBER TEN...BRAHMI NUMBER ONE THOUSAND
No,Copt	ϣ	2CFD	COPTIC FRACTION ONE HALF
No,Ethi	፲...፳	1372...137C	ETHIOPIC NUMBER TEN...ETHIOPIC NUMBER TEN THOUSAND
No,Grek	𐅵...𐅸	10175...10178	GREEK ONE HALF SIGN...GREEK THREE QUARTERS SIGN

No,Ital	𐌢...𐌣	10322...10323	OLD ITALIC NUMERAL TEN...OLD ITALIC NUMERAL FIFTY
No,Khar	𐩄...𐩇	10A44...10A47	KHAROSHTHI NUMBER TEN...KHAROSHTHI NUMBER ONE THOUSAND
No,Mlym®	0D70...0D75	MALAYALAM NUMBER TEN...MALAYALAM FRACTION THREE QUARTERS
No,Orya	୧୩...୧୫	0B72...0B77	ORIYA FRACTION ONE QUARTER...ORIYA FRACTION THREE SIXTEENTHS
No,Phli	𐭼...𐭿	10B7C...10B7F	INSCRIPTIONAL PAHLAVI NUMBER TEN...INSCRIPTIONAL PAHLAVI NUMBER ONE THOUSAND
No,Phnx	𐤗...𐤙	10917...10919	PHOENICIAN NUMBER TEN...PHOENICIAN NUMBER ONE HUNDRED
No,Prti	𐭜...𐭟	10B5C...10B5F	INSCRIPTIONAL PARTHIAN NUMBER TEN...INSCRIPTIONAL PARTHIAN NUMBER ONE THOUSAND
No,Sarb	𐩾	10A7E	OLD SOUTH ARABIAN NUMBER FIFTY
No,Taml	ௐ...௧௩	0BF0...0BF2	TAMIL NUMBER TEN...TAMIL NUMBER ONE THOUSAND
No,Zyyy	।...≡	A830...A835	NORTH INDIC FRACTION ONE QUARTER...NORTH INDIC FRACTION THREE SIXTEENTHS
No,Zyyy	𐄐...𐄳	10110...10133	AEGEAN NUMBER TEN...AEGEAN NUMBER NINETY THOUSAND
No,Zyyy	𝍩...𝍱	1D369...1D371	COUNTING ROD TENS DIGIT ONE...COUNTING ROD TENS DIGIT NINE

Lm in *general_symbols* (letters that behave like symbols in UCA)

Lm,Deva	·	0971	DEVANAGARI SIGN HIGH SPACING DOT
Lm,Hani	々	3005	IDEOGRAPHIC ITERATION MARK
Lm,Hani	ㄣ	303B	VERTICAL IDEOGRAPHIC ITERATION MARK
Lm,Hira	ゝ...ゞ	309D...309E	HIRAGANA ITERATION MARK...HIRAGANA VOICED ITERATION MARK
Lm,Java	ꦲ꧀	A9CF	JAVANESE PANGRANGKEP
Lm,Kana	ゝ...ゞ	30FD...30FE	KATAKANA ITERATION MARK...KATAKANA VOICED ITERATION MARK
Lm,Khmr	្ក	17D7	KHMER SIGN LEK TOO
Lm,Lana	꠵	1AA7	TAI THAM SIGN MAI YAMOK
Lm,Lao	ໆ	0EC6	LAO KO LA
Lm,Mtei	ꯀ...ꯁ	AAF3...AAF4	MEETEI MAYEK SYLLABLE REPETITION MARK...MEETEI MAYEK WORD REPETITION MARK
Lm,Mymr	꠵꠵	AA70	MYANMAR MODIFIER LETTER KHAMTI REDUPLICATION
Lm,Tavt	꠵꠵	AADD	TAI VIET SYMBOL SAM
Lm,Thai	๑	0E46	THAI CHARACTER MAIYAMOK
Lm,Zyyy	'..."	02B9...02BA	MODIFIER LETTER PRIME...MODIFIER LETTER DOUBLE PRIME
Lm,Zyyy	ˆ...ˆ	02C6...02D1	MODIFIER LETTER CIRCUMFLEX ACCENT...MODIFIER LETTER HALF TRIANGULAR COLON

Lm,Zyyy	◌̣	02EC	MODIFIER LETTER VOICING
Lm,Zyyy	◌̣	0374	GREEK NUMERAL SIGN
Lm,Zyyy	◌̣...◌̣	3031...3035	VERTICAL KANA REPEAT MARK...VERTICAL KANA REPEAT MARK LOWER HALF
Lm,Zyyy	◌̣	30FC	KATAKANA-HIRAGANA PROLONGED SOUND MARK
Lm,Zyyy	◌̣...◌̣	A717...A71F	MODIFIER LETTER DOT VERTICAL BAR...MODIFIER LETTER LOW INVERTED EXCLAMATION MARK
Lm,Zyyy	◌̣	A788	MODIFIER LETTER LOW CIRCUMFLEX ACCENT
Lm,Zyyy	◌̣	FF70	HALFWIDTH KATAKANA-HIRAGANA PROLONGED SOUND MARK

Lm, S, P, N in *others* (above 'a') (behave like letters in UCA)

Lm,Arab	◌̣...◌̣	06E5...06E6	ARABIC SMALL WAW...ARABIC SMALL YEḤ
Lm,Armn		0559	ARMENIAN MODIFIER LETTER LEFT HALF RING
Lm,Cyrl	◌̣	1D78	MODIFIER LETTER CYRILLIC EN
Lm,Cyrl	◌̣	A67F	CYRILLIC PAYEROK
Lm,Geor	◌̣	10FC	MODIFIER LETTER GEORGIAN NAR
Lm,Grek	◌̣	037A	GREEK YPOGEGRAMMENI
Lm,Grek	β...χ	1D5D...1D61	MODIFIER LETTER SMALL BETA...MODIFIER LETTER SMALL CHI
Lm,Grek	β...χ	1D66...1D6A	GREEK SUBSCRIPT SMALL LETTER BETA...GREEK SUBSCRIPT SMALL LETTER CHI
Lm,Grek	θ	1DBF	MODIFIER LETTER SMALL THETA
Lm,Latn	h...y	02B0...02B8	MODIFIER LETTER SMALL H...MODIFIER LETTER SMALL Y
Lm,Latn	γ...ʘ	02E0...02E4	MODIFIER LETTER SMALL GAMMA...MODIFIER LETTER SMALL REVERSED GLOTTAL STOP
Lm,Latn	A...ʘ	1D2C...1D5C	MODIFIER LETTER CAPITAL A...MODIFIER LETTER SMALL AIN
Lm,Latn	i...v	1D62...1D65	LATIN SUBSCRIPT SMALL LETTER I...LATIN SUBSCRIPT SMALL LETTER V
Lm,Latn	ρ...ʘ	1D9B...1DBE	MODIFIER LETTER SMALL TURNED ALPHA...MODIFIER LETTER SMALL EZH
Lm,Latn	i	2071	SUPERSCRIPṬ LATIN SMALL LETTER I
Lm,Latn	n	207F	SUPERSCRIPṬ LATIN SMALL LETTER N
Lm,Latn	a...t	2090...209C	LATIN SUBSCRIPT SMALL LETTER A...LATIN SUBSCRIPT SMALL LETTER T
Lm,Latn	j...v	2C7C...2C7D	LATIN SUBSCRIPT SMALL LETTER J...MODIFIER LETTER CAPITAL V
Lm,Latn	ʘ	A770	MODIFIER LETTER US
Lm,Latn	Ɑ...Ɱ	A7F8...A7F9	MODIFIER LETTER CAPITAL H WITH STROKE...MODIFIER LETTER SMALL LIGATURE OE
Lm,Lisu:	A4F8...A4FD	LISU LETTER TONE MYA TI...LISU LETTER TONE MYA JEU
Lm,Mong	◌̣	1843	MONGOLIAN LETTER TODO LONG VOWEL SIGN

Lm,Nkoo	‘...’	07F4...07F5	NKO HIGH TONE APOSTROPHE...NKO LOW TONE APOSTROPHE
Lm,Olck	‘...᠑	1C78...1C7D	OL CHIKI MU TTUDDAG...OL CHIKI AHAD
Lm,Plrd	𖾓...𖾟	16F93...16F9F	MIAO LETTER TONE-2...MIAO LETTER REFORMED TONE-8
Lm,Samr	~	081A	SAMARITAN MODIFIER LETTER EPENTHETIC YUT
Lm,Tfng	“	2D6F	TIFINAGH MODIFIER LETTER LABIALIZATION MARK
Lm,Vaii	=	A60C	VAI SYLLABLE LENGTHENER
Lm,Yiii	ㄩ	A015	YI SYLLABLE WU
Lm,Zyyy	‘...ʼ	02BB...02C1	MODIFIER LETTER TURNED COMMA...MODIFIER LETTER REVERSED GLOTTAL STOP
Lm,Zyyy	”	02EE	MODIFIER LETTER DOUBLE APOSTROPHE
Lm,Zyyy	’	2E2F	VERTICAL TILDE
NI,Bamu	ꠄ...ꠈ	A6E6...A6EF	BAMUM LETTER MO...BAMUM LETTER KOGHOM
NI,Goth	𐍁	10341	GOTHIC LETTER NINETY
NI,Goth	𐍊	1034A	GOTHIC LETTER NINE HUNDRED
NI,Hani	十...卅	3038...303A	HANGZHOU NUMERAL TEN...HANGZHOU NUMERAL THIRTY
NI,Latn	二...二	2160...217F	ROMAN NUMERAL ONE...SMALL ROMAN NUMERAL ONE THOUSAND
NI,Runr	ᚠ...ᚦ	16EE...16F0	RUNIC ARLAUG SYMBOL...RUNIC BELGTHOR SYMBOL
No,Zyyy	㇀...㇄	3192...3195	IDEOGRAPHIC ANNOTATION ONE MARK...IDEOGRAPHIC ANNOTATION FOUR MARK
No,Zyyy	㊦...㊰	3280...3289	CIRCLED IDEOGRAPH ONE...CIRCLED IDEOGRAPH TEN
Sc,Arab	ﷰ	FDFC	RIAL SIGN
Sc,Zyyy	₹	20A8	RUPEE SIGN
So,Arab	ا...آ	06FD...06FE	ARABIC SIGN SINDHI AMPERSAND...ARABIC SIGN SINDHI POSTPOSITION MEN
So,Hang	㊦...㊰	3260...327E	CIRCLED HANGUL KYEOK...CIRCLED HANGUL IEUNG U
So,Hani	㇀...㇄	2E80...2E99	CJK RADICAL REPEAT...CJK RADICAL RAP
So,Hani	二...龟	2E9B...2EF3	CJK RADICAL CHOKE...CJK RADICAL C-SIMPLIFIED TURTLE
So,Hani	一...龠	2F00...2FD5	KANGXI RADICAL ONE...KANGXI RADICAL FLUTE
So,Hira	🈀	1F200	SQUARE HIRAGANA HOKA
So,Kana	㊦...㊰	32D0...32FE	CIRCLED KATAKANA A...CIRCLED KATAKANA WO
So,Kana	㊦...㊰	3300...3357	SQUARE APAATO...SQUARE WATTO
So,Talu	ᨗ...ᨛ	19DE...19DF	NEW TAI LUE SIGN LAE...NEW TAI LUE SIGN LAEV
So,Zyyy	%...%	2100...2101	ACCOUNT OF...ADDRESSED TO THE SUBJECT
So,Zyyy	%...%	2105...2106	CARE OF...CADA UNA
So,Zyyy	№	2116	NUMERO SIGN
So,Zyyy	SM...™	2120...2122	SERVICE MARK...TRADE MARK SIGN

So,Zyyy	FAX	213B	FACSIMILE SIGN
So,Zyyy	Ⓐ...Ⓩ	24B6...24E9	CIRCLED LATIN CAPITAL LETTER A...CIRCLED LATIN SMALL LETTER Z
So,Zyyy	⤴ ... ⤵	3196...319F	IDEOGRAPHIC ANNOTATION TOP MARK...IDEOGRAPHIC ANNOTATION MAN MARK
So,Zyyy	Ⓢ...Ⓣ	3244...3247	CIRCLED IDEOGRAPH QUESTION...CIRCLED IDEOGRAPH KOTO
So,Zyyy	PTE	3250	PARTNERSHIP SIGN
So,Zyyy	☾...☿	328A...32B0	CIRCLED IDEOGRAPH MOON...CIRCLED IDEOGRAPH NIGHT
So,Zyyy	Hg...IID	32CC...32CF	SQUARE HG...LIMITED LIABILITY SIGN
So,Zyyy	hPa...hPa	3371...33DF	SQUARE HPA...SQUARE A OVER M
So,Zyyy	gal	33FF	SQUARE GAL
So,Zyyy	🄫...🄮	1F12B...1F12E	CIRCLED ITALIC LATIN CAPITAL LETTER C...CIRCLED WZ
So,Zyyy	🄰...🅫	1F130...1F16B	SQUARED LATIN CAPITAL LETTER A...RAISED MD SIGN
So,Zyyy	🅰...🆚	1F170...1F19A	NEGATIVE SQUARED LATIN CAPITAL LETTER A...SQUARED VS
So,Zyyy	🇦...🇿	1F1E6...1F1FF	REGIONAL INDICATOR SYMBOL LETTER A...REGIONAL INDICATOR SYMBOL LETTER Z
So,Zyyy	🈁...🈂	1F201...1F202	SQUARED KATAKANA KOKO...SQUARED KATAKANA SA
So,Zyyy	🈐...🈺	1F210...1F23A	SQUARED CJK UNIFIED IDEOGRAPH-624B...SQUARED CJK UNIFIED IDEOGRAPH-55B6
So,Zyyy	🉐...🉑	1F250...1F251	CIRCLED IDEOGRAPH ADVANTAGE...CIRCLED IDEOGRAPH ACCEPT

L,M,P in ignorable (ignored in sorting)

Lm,Nkoo	_	07FA	NKO LAJANYALAN
Lm,Samr	ʻ	0824	SAMARITAN MODIFIER LETTER SHORT A
Lm,Samr	◌◌	0828	SAMARITAN MODIFIER LETTER I
Lm,Zyyy	-	0640	ARABIC TATWEEL
Lm,Zyyy	◌◌◌◌	FF9E...FF9F	HALFWIDTH KATAKANA VOICED SOUND MARK...HALFWIDTH KATAKANA SEMI-VOICED SOUND MARK
Lo,Arab	◌◌◌◌	FC5E...FC63	ARABIC LIGATURE SHADDA WITH DAMMATAN ISOLATED FORM...ARABIC LIGATURE SHADDA WITH SUPERSCRIPIT ALEF ISOLATED FORM
Lo,Arab	◌◌◌◌◌◌	FCF2...FCF4	ARABIC LIGATURE SHADDA WITH FATHA MEDIAL FORM...ARABIC LIGATURE SHADDA WITH KASRA MEDIAL FORM
Lo,Arab	◌◌◌◌◌◌	FE70...FE74	ARABIC FATHATAN ISOLATED FORM...ARABIC KASRATAN ISOLATED FORM
Lo,Arab	◌◌◌◌◌◌	FE76...FE7F	ARABIC FATHA ISOLATED FORM...ARABIC SUKUN MEDIAL FORM
Mc,Bali	ꦧꦶꦱꦲ	1B04	BALINESE SIGN BISAH
Mc,Beng	◌◌◌◌◌◌	0982...0983	BENGALI SIGN ANUSVARA...BENGALI SIGN VISARGA

Mc,Brah	𑀀	11000	BRAHMI SIGN CANDRABINDU
Mc,Brah	𑀂	11002	BRAHMI SIGN VISARGA
Mc,Deva	◌ः	0903	DEVANAGARI SIGN VISARGA
Mc,Gujr	◌ઃ	0A83	GUJARATI SIGN VISARGA
Mc,Guru	◌ॐ	0A03	GURMUKHI SIGN VISARGA
Mc,Java	ꦶꦱꦂꦠ	A983	JAVANESE SIGN WIGNYAN
Mc,Khmr	◌្រ	17C7...17C8	KHMER SIGN REAHMUK...KHMER SIGN YUUKALEAPINTU
Mc,Knda	◌ಃ	0C82...0C83	KANNADA SIGN ANUSVARA...KANNADA SIGN VISARGA
Mc,Kthi	𑂂	11082	KAITHI SIGN VISARGA
Mc,Mlym	◌ഃ	0D02...0D03	MALAYALAM SIGN ANUSVARA...MALAYALAM SIGN VISARGA
Mc,Mtei	◌ꯀ	ABEC	MEETEI MAYEK LUM IYEK
Mc,Mymr	◌း	1038	MYANMAR SIGN VISARGA
Mc,Orya	◌ଂ	0B02...0B03	ORIYA SIGN ANUSVARA...ORIYA SIGN VISARGA
Mc,Saur	◌ઁ	A880...A881	SAURASHTRA SIGN ANUSVARA...SAURASHTRA SIGN VISARGA
Mc,Shrd	𑆂	11182	SHARADA SIGN VISARGA
Mc,Sinh	◌ඃ	0D82...0D83	SINHALA SIGN ANUSVARAYA...SINHALA SIGN VISARGAYA
Mc,Sund	◌ꦱꦠ	1B82	SUNDANESE SIGN PANGWISAD
Mc,Takr	𑚬	116AC	TAKRI SIGN VISARGA
Mc,Telu	◌ଌ	0C01...0C03	TELUGU SIGN CANDRABINDU...TELUGU SIGN VISARGA
Mc,Tibt	◌ཱ	0F7F	TIBETAN SIGN RNAM BCAD
Mc,Zyyy	◌॑	1CE1	VEDIC TONE ATHARVEDIC INDEPENDENT SVARITA
Mc,Zyyy	◌॒	1CF2...1CF3	VEDIC SIGN ARDHAVISARGA...VEDIC SIGN ROTATED ARDHAVISARGA
Mc,Zyyy	𝅥...𝅦	1D165...1D166	MUSICAL SYMBOL COMBINING STEM...MUSICAL SYMBOL COMBINING SPRECHGESANG STEM
Mc,Zyyy	𝅭...𝅲	1D16D...1D172	MUSICAL SYMBOL COMBINING AUGMENTATION DOT...MUSICAL SYMBOL COMBINING FLAG-5
Me,Cyrl	◌Ꞇ	0488...0489	COMBINING CYRILLIC HUNDRED THOUSANDS SIGN...COMBINING CYRILLIC MILLIONS SIGN
Me,Cyrl	◌ꞇ	A670...A672	COMBINING CYRILLIC TEN MILLIONS SIGN...COMBINING CYRILLIC THOUSAND MILLIONS SIGN
Me,Zinh	◌⦶	20DD...20E0	COMBINING ENCLOSING CIRCLE...COMBINING ENCLOSING CIRCLE BACKSLASH
Me,Zinh	◌⦷	20E2...20E4	COMBINING ENCLOSING SCREEN...COMBINING ENCLOSING UPWARD POINTING TRIANGLE
Mn,Arab	◌ٲ	0610...061A	ARABIC SIGN SALLALLAHOU ALAYHE WASSALLAM...ARABIC SMALL KASRA
Mn,Arab	◌ٴ	0656...065E	ARABIC SUBSCRIPT ALEF...ARABIC FATHA WITH TWO DOTS

Mn,Hang	· ...:	302E...302F	HANGUL SINGLE DOT TONE MARK...HANGUL DOUBLE DOT TONE MARK
Mn,Hebr	◌...◌	0591...05BD	HEBREW ACCENT ETNAHTA...HEBREW POINT METEG
Mn,Hebr	◌	05BF	HEBREW POINT RAFA
Mn,Hebr	◌...◌	05C1...05C2	HEBREW POINT SHIN DOT...HEBREW POINT SIN DOT
Mn,Hebr	◌...◌	05C4...05C5	HEBREW MARK UPPER DOT...HEBREW MARK LOWER DOT
Mn,Hebr	◌	05C7	HEBREW POINT QAMATS QATAN
Mn,Hebr	◌	FB1E	HEBREW POINT JUDEO-SPANISH VARIKA
Mn,Java	· .../	A980...A982	JAVANESE SIGN PANYANGGA...JAVANESE SIGN LAYAR
Mn,Java		A9B3	JAVANESE SIGN CECAK TELU
Mn,Kali	· ...	A92B...A92D	KAYAH LI TONE PLOPHU...KAYAH LI TONE CALYA PLOPHU
Mn,Khar	𐨍...𐨏	10A0D...10A0F	KHAROSHTHI SIGN DOUBLE RING BELOW...KHAROSHTHI SIGN VISARGA
Mn,Khar	𐨸...𐨺	10A38...10A3A	KHAROSHTHI SIGN BAR ABOVE...KHAROSHTHI SIGN DOT BELOW
Mn,Khmr	· ...	17B4...17B5	KHMER VOWEL INHERENT AQ...KHMER VOWEL INHERENT AA
Mn,Khmr	◌	17C6	KHMER SIGN NIKAHIT
Mn,Khmr	◌...◌	17C9...17D1	KHMER SIGN MUUSIKATOAN...KHMER SIGN VIRIAM
Mn,Khmr	◌	17D3	KHMER SIGN BATHAMASAT
Mn,Khmr	◌	17DD	KHMER SIGN ATTHACAN
Mn,Knda	◌	0CBC	KANNADA SIGN NUKTA
Mn,Kthi	𑂀...𑂁	11080...11081	KAITHI SIGN CANDRABINDU...KAITHI SIGN ANUSVARA
Mn,Kthi	𑂺	110BA	KAITHI SIGN NUKTA
Mn,Lana	· .../	1A74...1A7C	TAI THAM SIGN MAI KANG...TAI THAM SIGN KHUEN-LUE KARAN
Mn,Lana		1A7F	TAI THAM COMBINING CRYPTOGRAMMIC DOT
Mn,Lao	◌...◌	0EC8...0ECD	LAO TONE MAI EK...LAO NIGGAHITA
Mn,Lepc		1C37	LEPCHA SIGN NUKTA
Mn,Limb	◌...◌	1939...193B	LIMBU SIGN MUKPHRENG...LIMBU SIGN SA-I
Mn,Mand	◌...◌	0859...085B	MANDAIC AFFRICATION MARK...MANDAIC GEMINATION MARK
Mn,Mong	...	180B...180D	MONGOLIAN FREE VARIATION SELECTOR ONE...MONGOLIAN FREE VARIATION SELECTOR THREE
Mn,Mymr	· ...	1036...1037	MYANMAR SIGN ANUSVARA...MYANMAR SIGN DOT BELOW
Mn,Mymr		108D	MYANMAR SIGN SHAN COUNCIL EMPHATIC TONE
Mn,Nkoo	· ...	07EB...07F3	NKO COMBINING SHORT HIGH TONE...NKO COMBINING DOUBLE DOT ABOVE
Mn,Orya	◌	0B01	ORIYA SIGN CANDRABINDU
Mn,Orya	◌	0B3C	ORIYA SIGN NUKTA

Mn,Samr	◌̇...◌̇	0818...0819	SAMARITAN MARK OCCLUSION...SAMARITAN MARK DAGESH
Mn,Samr	◌̄...◌̄	081C...0823	SAMARITAN VOWEL SIGN LONG E...SAMARITAN VOWEL SIGN A
Mn,Samr	◌̆...◌̆	0825...0827	SAMARITAN VOWEL SIGN SHORT A...SAMARITAN VOWEL SIGN U
Mn,Samr	◌̇...◌̇	0829...082D	SAMARITAN VOWEL SIGN LONG I...SAMARITAN MARK NEQUDAA
Mn,Shrd	𑆀...𑆁	11180...11181	SHARADA SIGN CANDRABINDU...SHARADA SIGN ANUSVARA
Mn,Sund	◌̇...◌̇	1B80...1B81	SUNDANESE SIGN PANYECEK...SUNDANESE SIGN PANGLAYAR
Mn,Sylo		A80B	SYLOTI NAGRI SIGN ANUSVARA
Mn,Syrc	◌̇	0711	SYRIAC LETTER SUPERSCRIPT ALAPH
Mn,Syrc	◌̇...◌̇	0730...074A	SYRIAC PTHAHA ABOVE...SYRIAC BARREKH
Mn,Takr	𑚫	116AB	TAKRI SIGN ANUSVARA
Mn,Takr	𑚷	116B7	TAKRI SIGN NUKTA
Mn,Taml	◌̇	0B82	TAMIL SIGN ANUSVARA
Mn,Tavt	◌̇	AABF	TAI VIET TONE MAI EK
Mn,Tavt	◌̇	AAC1	TAI VIET TONE MAI THO
Mn,Tfng	◌̇	2D7F	TIFINAGH CONSONANT JOINER
Mn,Thai	◌̇...◌̇	0E47...0E4E	THAI CHARACTER MAITAIKHU...THAI CHARACTER YAMAKKAN
Mn,Tibt	◌̇...◌̇	0F18...0F19	TIBETAN ASTROLOGICAL SIGN -KHYUD PA...TIBETAN ASTROLOGICAL SIGN SDONG TSHUGS
Mn,Tibt	◌̇	0F35	TIBETAN MARK NGAS BZUNG NYI ZLA
Mn,Tibt	◌̇	0F37	TIBETAN MARK NGAS BZUNG SGOR RTAGS
Mn,Tibt	◌̇	0F39	TIBETAN MARK TSA -PHRU
Mn,Tibt	◌̇	0F7E	TIBETAN SIGN RJES SU NGA RO
Mn,Tibt	◌̇...◌̇	0F82...0F83	TIBETAN SIGN NYI ZLA NAA DA...TIBETAN SIGN SNA LDAN
Mn,Tibt	◌̇...◌̇	0F86...0F87	TIBETAN SIGN LCI RTAGS...TIBETAN SIGN YANG RTAGS
Mn,Tibt	◌̇	0FC6	TIBETAN SYMBOL PADMA GDAN
Mn,Zinh	◌̇...◌̇	0300...0362	COMBINING GRAVE ACCENT...COMBINING DOUBLE RIGHTWARDS ARROW BELOW
Mn,Zinh	◌̇...◌̇	0485...0486	COMBINING CYRILLIC DASIA PNEUMATA...COMBINING CYRILLIC PSILI PNEUMATA
Mn,Zinh	◌̇...◌̇	064B...0655	ARABIC FATHATAN...ARABIC HAMZA BELOW
Mn,Zinh	◌̇	065F	ARABIC WAVY HAMZA BELOW
Mn,Zinh	◌̇	0670	ARABIC LETTER SUPERSCRIPT ALEF
Mn,Zinh	◌̇...◌̇	0951...0952	DEVANAGARI STRESS SIGN UDATTA...DEVANAGARI STRESS SIGN ANUDATTA
Mn,Zinh	◌̇...◌̇	1CD0...1CD2	VEDIC TONE KARSHANA...VEDIC TONE PRENKHA
Mn,Zinh	◌̇...◌̇	1CD4...1CE0	VEDIC SIGN YAJURVEDIC MIDLINE SVARITA...VEDIC TONE RIGVEDIC KASHMIRI INDEPENDENT SVARITA

Mn,Zinh	ॠ	1CE2...1CE8	VEDIC SIGN VISARGA SVARITA...VEDIC SIGN VISARGA ANUDATTA WITH TAIL
Mn,Zinh		1CED	VEDIC SIGN TIRYAK
Mn,Zinh	ॠ	1CF4	VEDIC TONE CANDRA ABOVE
Mn,Zinh	◌̣◌̣◌̣	1DC0...1DC9	COMBINING DOTTED GRAVE ACCENT...COMBINING ACUTE-GRAVE-ACUTE
Mn,Zinh	◌̣◌̣◌̣	1DCB...1DD1	COMBINING BREVE-MACRON...COMBINING UR ABOVE
Mn,Zinh	◌̣◌̣◌̣	1DFC...1DFF	COMBINING DOUBLE INVERTED BREVE BELOW...COMBINING RIGHT ARROWHEAD AND DOWN ARROWHEAD BELOW
Mn,Zinh	◌̣◌̣◌̣	20D0...20DC	COMBINING LEFT HARPOON ABOVE...COMBINING FOUR DOTS ABOVE
Mn,Zinh	↔	20E1	COMBINING LEFT RIGHT ARROW ABOVE
Mn,Zinh	◌̣*	20E5...20F0	COMBINING REVERSE SOLIDUS OVERLAY...COMBINING ASTERISK ABOVE
Mn,Zinh	◌̣◌̣◌̣	302A...302D	IDEOGRAPHIC LEVEL TONE MARK...IDEOGRAPHIC ENTERING TONE MARK
Mn,Zinh	◌̣◌̣◌̣	3099...309A	COMBINING KATAKANA-HIRAGANA VOICED SOUND MARK...COMBINING KATAKANA-HIRAGANA SEMI-VOICED SOUND MARK
Mn,Zinh	◌̣◌̣◌̣	FE00...FE0F	VARIATION SELECTOR-1...VARIATION SELECTOR-16
Mn,Zinh	◌̣◌̣◌̣	FE20...FE26	COMBINING LIGATURE LEFT HALF...COMBINING CONJOINING MACRON
Mn,Zinh	𐇽	101FD	PHAISTOS DISC SIGN COMBINING OBLIQUE STROKE
Mn,Zinh	𝅧...𝅩	1D167...1D169	MUSICAL SYMBOL COMBINING TREMOLO-1...MUSICAL SYMBOL COMBINING TREMOLO-3
Mn,Zinh	𝅻...𝆂	1D17B...1D182	MUSICAL SYMBOL COMBINING ACCENT...MUSICAL SYMBOL COMBINING LOURE
Mn,Zinh	𝆅...𝆋	1D185...1D18B	MUSICAL SYMBOL COMBINING DOIT...MUSICAL SYMBOL COMBINING TRIPLE TONGUE
Mn,Zinh	𝆪...𝆭	1D1AA...1D1AD	MUSICAL SYMBOL COMBINING DOWN BOW...MUSICAL SYMBOL COMBINING SNAP PIZZICATO
Mn,Zinh	󠄀...󠇯	E0100...E01EF	VARIATION SELECTOR-17...VARIATION SELECTOR-256
Po,Mong	ᠠ	180A	MONGOLIAN NIRUGU
Po,Zyyy	ॠ	1CD3	VEDIC SIGN NIHSVASA