

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

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1. Introduction. This document requests a change of the encoding model for Georgian from unicameral to bicameral. If accepted, 46 new characters will be added to the standard.

1.1. Background. As far back as 1999 (N1962 “Optimizing Georgian representation in the BMP of the UCS”, Michael Everson) aspects of the encoding of Georgian encoding had been identified as problematic, in particular because the UCS considered Nuskhuri and Mkhedruli to be “font variants” of an underlying “lower-case” Georgian. By 2003 a successful proposal (N2608R2, L2/03-230R2 “Proposal to add Georgian and other characters to the BMP of the UCS”, NSAI and GSDIT) was made to disunify Nuskhuri from Mkhedruli. In that document, the following statement was made:

Mkhedruli... is caseless, and no casing behaviour is expected or permitted by Georgian users. The *mtavruli* titling style of Mkhedruli... is not case; it is a style analogous to small caps or bold or italic. In this style, the distinction between letters with ascenders and descenders is not maintained, but all letters appear with an equal height standing on the baseline (example: ქართული ენა vs. ქართული ენა). *Mtavruli*-style letters are never used as “capitals”; a word is always entirely presented in *mtavruli* or not. *Mtavruli*-style is used in titles, newspaper headlines, and other kinds of headings. It might be suggested that non-plain text SMALL CAPS coding be used to represent Mkhedruli in *mtavruli*-style. (There is no other such small caps category that could be applied to Mkhedruli.)

This statement was not correct. A number of documents from the late 19th century and early 20th century make use of *mtavruli* characters in initial position in sentences, lines of verse, and for proper names and place-names. It is true that this usage is a minority usage, but nevertheless it cannot be represented in plain text.

Much more problematic, however, is the fact that Georgian users require to be able to mix Mkhedruli and *Mtavruli* very frequently and the workarounds available are not suitable for Georgian whether font developers or users, and because of the *the uptake of UCS-encoded Georgian fonts is by no means universal in Georgia*. This is a very serious problem. A very large number of popular Georgian fonts still widely-available use an ASCII-based mapping, and most of those come in pairs, named “Regular” on the one hand and “*Mtavruli*” or “Caps” on the other. Some of these have აბგდ on **abcd**, and დბგლ on **ABCD**. Some of them have (or also have) Mkhedruli mapped (correctly) to the appropriate UCS code positions and the *Mtavruli* mapped (incorrectly) to the Asomtavruli capital letters. Still other fonts have the *Mtavruli* characters in the Private Use Area because they have the

correct Asomtavruli and Nuskhuri characters encoded in the appropriate positions—and still need Mtavruli.

Both SC2 and the UTC saw, with regard to the proposal to add lower-case letters for Cherokee, that the Cherokee Nation’s Office of Translation, Language Technology Department, and Curriculum Development staff were regularly forced to use fancy text in order to increase the font size of letters in sentence-initial position and representing personal and place-names. They found this disruptive of their work-flow and impractical as fancy-text is less stable than plain text. Adding an upper-case for Cherokee In Georgia, the problem is much more acute. All sorts language support tools will fail for ASCII-based fonts and many other operations, and the developer community working with Georgian fonts has been spearheading a project to get these problems sorted out. This proposal is the culmination of their research.

2. Treatment of current Georgian text. At present Mkhedruli text is encoded as caseless, with the property “Lo” (Letter Other) rather than “Lu” (Letter Upper) or “Ll” (Letter Lower). There can be no controversy that if Mtavruli is added it must be the upper-case pair to Mkhedruli. The proposal is to change the Mkhedruli property “Lo” to “Ll”, and do add a set of matching characters for Mtavruli.

3. Property value. Changing from “Lo” to “Ll” and adding a new “Lu” set of characters would mean that Georgian case-folding would be the same as Latin, Greek, Cyrillic, Armenian, Coptic, Glagolitic, and Deseret: from upper-case to lower-case. In IDNA, current Georgian characters (which are PVALID) would be made lower-case, and would fold to new upper-case characters (which would *not* be PVALID).

4. Character encoding positions. The three columns U+1C90..U+1CBF between Cyrillic Extended-C and Sundanese Supplement are available for the characters to be encoded in the BMP. It is strongly suggested that these be assigned to a new Georgian Extensions block.

5. Ordering. Ordering will follow the similar characters in the sister Georgian scripts.

6. Glyph representation. Mkhedruli Georgian has x-height characters, as well as x-height characters with ascenders or descenders or both. Mtavruli letters have no descenders, and reach to a caps height a little above the ascender height. 43% of Georgian letters have closed counters and in Mtavruli these are also taller than their Mkhedruli counterparts—a baseline letter with an ascender is not identical to a Mtavruli capital (these are shaded purple in the example below).

აა ბბ ბგ დდ ეე ვვ ზზ თთ იი კკ ლლ მმ ნნ ოო პპ
ჟჟ რრ სს ტტ უუ ფფ ქქ ლლ ყყ შშ ჩჩ ცც ძძ წწ ჭჭ
ხხ ჯჯ კკ ცც ღღ ვვ ზზ თთ ფფ ზზ ხხ ცც წწ ძძ ოო

Georgian font designers *never* simply copy a baseline-with-descender letter unchanged when designing Mtavruli letters. It just doesn’t look right to them. And the difference is clear in the example above.

7. Title-case. Despite late-19th- and early-20th-century practice, titlecasing is not expected in modern Georgian. Accordingly, to prevent accidental text transformation due to operations which automatically title-case text, no title-casing specifications will be specified for Mkhedruli and Mtavruli. Late-19th- and early-20th-century practice is no longer usual (an never was *very* usual even when it was in use), and if it is desired to represent a particular text, the Mtavruli capitals will have to be typed in manually.

8. Orthography. No changes to modern Georgian orthography are contemplated in making this proposal. The current orthographic rules are very simple. Any word is written either in all-small (Mkhedruli) or in all-caps (Mtavruli). Within a sentence a given word might be written IN ALL CAPS (MTAVRULI) for emphasis. Nevertheless, actual Georgian practice has shown that treating Mtavruli as a font style (like bold or italic) simply doesn't work.

9. Support. All of the major type designers in Georgia would like to see this solution implemented. Moreover, this proposal already has preliminary support from the Ministry of Culture and some departments in other ministries: Akaki Razmadze and Nika Gujejiani have been working with a government organization called Georgia's Innovation and Technology Agency to inform other ministries. We are aware that this proposal may come as a surprise to SC2 and to the UTC. Further information and documentation of official support will be forthcoming.

10. Timeliness. Since the characters in this proposal are simply casing pairs of existing characters, and since early implementation would be advantageous to the user community, we favour the placement of the Georgian additions onto the *earliest possible* ballot.

11. Unicode Character Properties.

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10D0;GEORGIAN LETTER AN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER AN;;1C90;;
10D1;GEORGIAN LETTER BAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER BAN;;1C91;;
10D2;GEORGIAN LETTER GAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER GAN;;1C92;;
10D3;GEORGIAN LETTER DON;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER DON;;1C93;;
10D4;GEORGIAN LETTER EN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER EN;;1C94;;
10D5;GEORGIAN LETTER VIN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER VIN;;1C95;;
10D6;GEORGIAN LETTER ZEN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER ZEN;;1C96;;
10D7;GEORGIAN LETTER TAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER TAN;;1C97;;
10D8;GEORGIAN LETTER IN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER IN;;1C98;;
10D9;GEORGIAN LETTER KAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER KAN;;1C99;;
10DA;GEORGIAN LETTER LAS;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER LAS;;1CA0;;
10DB;GEORGIAN LETTER MAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER MAN;;1CA1;;
10DC;GEORGIAN LETTER NAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER NAR;;1CA2;;
10DD;GEORGIAN LETTER ON;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER ON;;1CA3;;
10DE;GEORGIAN LETTER PAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER PAR;;1CA4;;
10DF;GEORGIAN LETTER ZHAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER ZHAR;;1CA5;;
10E0;GEORGIAN LETTER RAE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER RAE;;1CA6;;
10E1;GEORGIAN LETTER SAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER SAN;;1CA7;;
10E2;GEORGIAN LETTER TAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER TAR;;1CA8;;
10E3;GEORGIAN LETTER UN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER UN;;1CA9;;
10E4;GEORGIAN LETTER PHAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER PHAR;;1CA0;;
10E5;GEORGIAN LETTER KHAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER KHAR;;1CA1;;
10E6;GEORGIAN LETTER GHAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER GHAN;;1CA2;;
10E7;GEORGIAN LETTER QAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER QAR;;1CA3;;
10E8;GEORGIAN LETTER SHIN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER SHIN;;1CA4;;
10E9;GEORGIAN LETTER CHIN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER CHIN;;1CA5;;
10EA;GEORGIAN LETTER CAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER CAN;;1CA6;;
10EB;GEORGIAN LETTER JIL;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER JIL;;1CA7;;
10EC;GEORGIAN LETTER CIL;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER CIL;;1CA8;;
10ED;GEORGIAN LETTER CHAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER CHAR;;1CA9;;
10EE;GEORGIAN LETTER XAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER XAN;;1CA0;;
10EF;GEORGIAN LETTER JHAN;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER JHAN;;1CA1;;
10F0;GEORGIAN LETTER HAE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER HAE;;1CB0;;
10F1;GEORGIAN LETTER HE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER HE;;1CB1;;
10F2;GEORGIAN LETTER HIE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER HIE;;1CB2;;
10F3;GEORGIAN LETTER WE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER WE;;1CB3;;
10F4;GEORGIAN LETTER HAR;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER HAR;;1CB4;;
10F5;GEORGIAN LETTER HOE;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER HOE;;1CB5;;
10F6;GEORGIAN LETTER FI;Ll;0;L; ; ; ; ;N;GEORGIAN SMALL LETTER FI;;1CB6;;
10F7;GEORGIAN LETTER YN;Ll;0;L; ; ; ; ;N;;1CB7;;
10F8;GEORGIAN LETTER ELIFI;Ll;0;L; ; ; ; ;N;;1CB8;;
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10F9;GEORGIAN LETTER TURNED GAN;Ll;0;L; ; ; ; ;N; ; ; ;1CB9; ;
10FA;GEORGIAN LETTER AIN;Ll;0;L; ; ; ; ;N; ; ; ;1CBA; ;
10FD;GEORGIAN LETTER AEN;Ll;0;L; ; ; ; ;N; ; ; ;1CBD; ;
10FE;GEORGIAN LETTER HARD SIGN;Ll;0;L; ; ; ; ;N; ; ; ;1CBE; ;
10FF;GEORGIAN LETTER LABIAL SIGN;Ll;0;L; ; ; ; ;N; ; ; ;1CBF; ;
1C90;GEORGIAN MTAVRULI CAPITAL LETTER AN;Lu;0;L; ; ; ; ;N; ; ; ;10D0;
1C91;GEORGIAN MTAVRULI CAPITAL LETTER BAN;Lu;0;L; ; ; ; ;N; ; ; ;10D1;
1C92;GEORGIAN MTAVRULI CAPITAL LETTER GAN;Lu;0;L; ; ; ; ;N; ; ; ;10D2;
1C93;GEORGIAN MTAVRULI CAPITAL LETTER DON;Lu;0;L; ; ; ; ;N; ; ; ;10D3;
1C94;GEORGIAN MTAVRULI CAPITAL LETTER EN;Lu;0;L; ; ; ; ;N; ; ; ;10D4;
1C95;GEORGIAN MTAVRULI CAPITAL LETTER VIN;Lu;0;L; ; ; ; ;N; ; ; ;10D5;
1C96;GEORGIAN MTAVRULI CAPITAL LETTER ZEN;Lu;0;L; ; ; ; ;N; ; ; ;10D6;
1C97;GEORGIAN MTAVRULI CAPITAL LETTER TAN;Lu;0;L; ; ; ; ;N; ; ; ;10D7;
1C98;GEORGIAN MTAVRULI CAPITAL LETTER IN;Lu;0;L; ; ; ; ;N; ; ; ;10D8;
1C99;GEORGIAN MTAVRULI CAPITAL LETTER KAN;Lu;0;L; ; ; ; ;N; ; ; ;10D9;
1C9A;GEORGIAN MTAVRULI CAPITAL LETTER LAS;Lu;0;L; ; ; ; ;N; ; ; ;10DA;
1C9B;GEORGIAN MTAVRULI CAPITAL LETTER MAN;Lu;0;L; ; ; ; ;N; ; ; ;10DB;
1C9C;GEORGIAN MTAVRULI CAPITAL LETTER NAR;Lu;0;L; ; ; ; ;N; ; ; ;10DC;
1C9D;GEORGIAN MTAVRULI CAPITAL LETTER ON;Lu;0;L; ; ; ; ;N; ; ; ;10DD;
1C9E;GEORGIAN MTAVRULI CAPITAL LETTER PAR;Lu;0;L; ; ; ; ;N; ; ; ;10DE;
1C9F;GEORGIAN MTAVRULI CAPITAL LETTER ZHAR;Lu;0;L; ; ; ; ;N; ; ; ;10DF;
1CA0;GEORGIAN MTAVRULI CAPITAL LETTER RAE;Lu;0;L; ; ; ; ;N; ; ; ;10E0;
1CA1;GEORGIAN MTAVRULI CAPITAL LETTER SAN;Lu;0;L; ; ; ; ;N; ; ; ;10E1;
1CA2;GEORGIAN MTAVRULI CAPITAL LETTER TAR;Lu;0;L; ; ; ; ;N; ; ; ;10E2;
1CA3;GEORGIAN MTAVRULI CAPITAL LETTER UN;Lu;0;L; ; ; ; ;N; ; ; ;10E3;
1CA4;GEORGIAN MTAVRULI CAPITAL LETTER PHAR;Lu;0;L; ; ; ; ;N; ; ; ;10E4;
1CA5;GEORGIAN MTAVRULI CAPITAL LETTER KHAR;Lu;0;L; ; ; ; ;N; ; ; ;10E5;
1CA6;GEORGIAN MTAVRULI CAPITAL LETTER GHAN;Lu;0;L; ; ; ; ;N; ; ; ;10E6;
1CA7;GEORGIAN MTAVRULI CAPITAL LETTER QAR;Lu;0;L; ; ; ; ;N; ; ; ;10E7;
1CA8;GEORGIAN MTAVRULI CAPITAL LETTER SHIN;Lu;0;L; ; ; ; ;N; ; ; ;10E8;
1CA9;GEORGIAN MTAVRULI CAPITAL LETTER CHIN;Lu;0;L; ; ; ; ;N; ; ; ;10E9;
1CAA;GEORGIAN MTAVRULI CAPITAL LETTER CAN;Lu;0;L; ; ; ; ;N; ; ; ;10EA;
1CAB;GEORGIAN MTAVRULI CAPITAL LETTER JIL;Lu;0;L; ; ; ; ;N; ; ; ;10EB;
1CAC;GEORGIAN MTAVRULI CAPITAL LETTER CIL;Lu;0;L; ; ; ; ;N; ; ; ;10EC;
1CAD;GEORGIAN MTAVRULI CAPITAL LETTER CHAR;Lu;0;L; ; ; ; ;N; ; ; ;10ED;
1CAE;GEORGIAN MTAVRULI CAPITAL LETTER XAN;Lu;0;L; ; ; ; ;N; ; ; ;10EE;
1CAF;GEORGIAN MTAVRULI CAPITAL LETTER JHAN;Lu;0;L; ; ; ; ;N; ; ; ;10EF;
1CB0;GEORGIAN MTAVRULI CAPITAL LETTER HAE;Lu;0;L; ; ; ; ;N; ; ; ;10F0;
1CB1;GEORGIAN MTAVRULI CAPITAL LETTER HE;Lu;0;L; ; ; ; ;N; ; ; ;10F1;
1CB2;GEORGIAN MTAVRULI CAPITAL LETTER HIE;Lu;0;L; ; ; ; ;N; ; ; ;10F2;
1CB3;GEORGIAN MTAVRULI CAPITAL LETTER WE;Lu;0;L; ; ; ; ;N; ; ; ;10F3;
1CB4;GEORGIAN MTAVRULI CAPITAL LETTER HAR;Lu;0;L; ; ; ; ;N; ; ; ;10F4;
1CB5;GEORGIAN MTAVRULI CAPITAL LETTER HOE;Lu;0;L; ; ; ; ;N; ; ; ;10F5;
10B6;GEORGIAN MTAVRULI CAPITAL LETTER FI;Lu;0;L; ; ; ; ;N; ; ; ;10F6;
10B7;GEORGIAN MTAVRULI CAPITAL LETTER YN;Lu;0;L; ; ; ; ;N; ; ; ;10F7;
10B8;GEORGIAN MTAVRULI CAPITAL LETTER ELIFI;Lu;0;L; ; ; ; ;N; ; ; ;10F8;
10B9;GEORGIAN MTAVRULI CAPITAL LETTER TURNED GAN;Lu;0;L; ; ; ; ;N; ; ; ;10F9;
10BA;GEORGIAN MTAVRULI CAPITAL LETTER AIN;Lu;0;L; ; ; ; ;N; ; ; ;10FA;
10BD;GEORGIAN MTAVRULI CAPITAL LETTER AEN;Lu;0;L; ; ; ; ;N; ; ; ;10FD;
10BE;GEORGIAN MTAVRULI CAPITAL LETTER HARD SIGN;Lu;0;L; ; ; ; ;N; ; ; ;10FE;
10BF;GEORGIAN MTAVRULI CAPITAL LETTER LABIAL SIGN;Lu;0;L; ; ; ; ;N; ; ; ;10FF;

	10A	10B	10C	10D	10E	10F
0	Ⴀ 10A0	Ⴁ 10B0	Ⴂ 10C0	Ⴃ 10D0	Ⴄ 10E0	Ⴅ 10F0
1	Ⴆ 10A1	Ⴇ 10B1	Ⴈ 10C1	Ⴉ 10D1	Ⴊ 10E1	Ⴋ 10F1
2	Ⴌ 10A2	Ⴍ 10B2	Ⴎ 10C2	Ⴏ 10D2	Ⴐ 10E2	Ⴑ 10F2
3	Ⴒ 10A3	Ⴓ 10B3	Ⴔ 10C3	Ⴕ 10D3	Ⴖ 10E3	Ⴗ 10F3
4	Ⴘ 10A4	Ⴙ 10B4	Ⴚ 10C4	Ⴛ 10D4	Ⴜ 10E4	Ⴝ 10F4
5	Ⴟ 10A5	Ⴡ 10B5	Ⴢ 10C5	Ⴣ 10D5	Ⴤ 10E5	Ⴥ 10F5
6	჆ 10A6	Ⴧ 10B6		჈ 10D6	჉ 10E6	჊ 10F6
7	჋ 10A7	჌ 10B7	Ⴭ 10C7	჎ 10D7	჏ 10E7	ა 10F7
8	ბ 10A8	გ 10B8		ე 10D8	ვ 10E8	ზ 10F8
9	ი 10A9	კ 10B9		ლ 10D9	მ 10E9	ნ 10F9
A	პ 10AA	ჟ 10BA		რ 10DA	ს 10EA	ტ 10FA
B	უ 10AB	ფ 10BB		ქ 10DB	ღ 10EB	ყ 10FB
C	ჩ 10AC	ც 10BC		წ 10DC	ჭ 10EC	ხ 10FC
D	ჰ 10AD	ჱ 10BD	ჲ 10CD	ჳ 10DD	ჴ 10ED	ჵ 10FD
E	ჷ 10AE	ჸ 10BE		ჹ 10DE	ჺ 10EE	჻ 10FE
F	ჽ 10AF	ჾ 10BF		ჿ 10DF	რ 10EF	ს 10FF

Capital letters (Khutsuri)

This is the uppercase of the old ecclesiastical alphabet. The style shown in the code charts is known as Asomtavruli. See the Georgian Supplement block for lowercase Nuskhuri.

10A0	Ⴀ	GEORGIAN CAPITAL LETTER AN
10A1	Ⴁ	GEORGIAN CAPITAL LETTER BAN
10A2	Ⴂ	GEORGIAN CAPITAL LETTER GAN
10A3	Ⴃ	GEORGIAN CAPITAL LETTER DON
10A4	Ⴄ	GEORGIAN CAPITAL LETTER EN
10A5	Ⴅ	GEORGIAN CAPITAL LETTER VIN
10A6	Ⴆ	GEORGIAN CAPITAL LETTER ZEN
10A7	Ⴇ	GEORGIAN CAPITAL LETTER TAN
10A8	Ⴈ	GEORGIAN CAPITAL LETTER IN
10A9	Ⴉ	GEORGIAN CAPITAL LETTER KAN
10AA	Ⴊ	GEORGIAN CAPITAL LETTER LAS
10AB	Ⴋ	GEORGIAN CAPITAL LETTER MAN
10AC	Ⴌ	GEORGIAN CAPITAL LETTER NAR
10AD	Ⴍ	GEORGIAN CAPITAL LETTER ON
10AE	Ⴎ	GEORGIAN CAPITAL LETTER PAR
10AF	Ⴏ	GEORGIAN CAPITAL LETTER ZHAR
10B0	Ⴐ	GEORGIAN CAPITAL LETTER RAE
10B1	Ⴑ	GEORGIAN CAPITAL LETTER SAN
10B2	Ⴒ	GEORGIAN CAPITAL LETTER TAR
10B3	Ⴓ	GEORGIAN CAPITAL LETTER UN
10B4	Ⴔ	GEORGIAN CAPITAL LETTER PHAR
10B5	Ⴕ	GEORGIAN CAPITAL LETTER KHAR
10B6	Ⴖ	GEORGIAN CAPITAL LETTER GHAN
10B7	Ⴗ	GEORGIAN CAPITAL LETTER QAR
10B8	Ⴘ	GEORGIAN CAPITAL LETTER SHIN
10B9	Ⴙ	GEORGIAN CAPITAL LETTER CHIN
10BA	Ⴚ	GEORGIAN CAPITAL LETTER CAN
10BB	Ⴛ	GEORGIAN CAPITAL LETTER JIL
10BC	Ⴜ	GEORGIAN CAPITAL LETTER CIL
10BD	Ⴝ	GEORGIAN CAPITAL LETTER CHAR
10BE	Ⴞ	GEORGIAN CAPITAL LETTER XAN
10BF	Ⴟ	GEORGIAN CAPITAL LETTER JHAN
10C0	Ⴠ	GEORGIAN CAPITAL LETTER HAE
10C1	Ⴡ	GEORGIAN CAPITAL LETTER HE
10C2	Ⴢ	GEORGIAN CAPITAL LETTER HIE
10C3	Ⴣ	GEORGIAN CAPITAL LETTER WE
10C4	Ⴤ	GEORGIAN CAPITAL LETTER HAR
10C5	Ⴥ	GEORGIAN CAPITAL LETTER HOE

Additional letter

10C7 ზ GEORGIAN CAPITAL LETTER YN

Additional letter for Ossetian

10CD ზ GEORGIAN CAPITAL LETTER AEN

Mkhedruli

This is the modern secular alphabet, which is caseless.

10D0	Ⴠ	GEORGIAN LETTER AN
10D1	Ⴡ	GEORGIAN LETTER BAN
10D2	Ⴢ	GEORGIAN LETTER GAN
10D3	Ⴣ	GEORGIAN LETTER DON
10D4	Ⴤ	GEORGIAN LETTER EN
10D5	Ⴥ	GEORGIAN LETTER VIN
10D6	჆	GEORGIAN LETTER ZEN
10D7	Ⴧ	GEORGIAN LETTER TAN
10D8	჈	GEORGIAN LETTER IN
10D9	჉	GEORGIAN LETTER KAN
10DA	჊	GEORGIAN LETTER LAS
10DB	჋	GEORGIAN LETTER MAN
10DC	჌	GEORGIAN LETTER NAR
10DD	Ⴭ	GEORGIAN LETTER ON
10DE	჎	GEORGIAN LETTER PAR

10DF	჏	GEORGIAN LETTER ZHAR
10E0	ა	GEORGIAN LETTER RAE
10E1	ბ	GEORGIAN LETTER SAN
10E2	გ	GEORGIAN LETTER TAR
10E3	დ	GEORGIAN LETTER UN
10E4	ე	GEORGIAN LETTER PHAR
10E5	ვ	GEORGIAN LETTER KHAR
10E6	ზ	GEORGIAN LETTER GHAN
10E7	თ	GEORGIAN LETTER QAR
10E8	ი	GEORGIAN LETTER SHIN
10E9	კ	GEORGIAN LETTER CHIN
10EA	ლ	GEORGIAN LETTER CAN
10EB	მ	GEORGIAN LETTER JIL
10EC	ნ	GEORGIAN LETTER CIL
10ED	ო	GEORGIAN LETTER CHAR
10EE	პ	GEORGIAN LETTER XAN
10EF	ჟ	GEORGIAN LETTER JHAN
10F0	რ	GEORGIAN LETTER HAE

Archaic letters

10F1	Ⴇ	GEORGIAN LETTER HE
10F2	Ⴈ	GEORGIAN LETTER HIE
10F3	Ⴉ	GEORGIAN LETTER WE
10F4	Ⴊ	GEORGIAN LETTER HAR
10F5	Ⴋ	GEORGIAN LETTER HOE
10F6	Ⴌ	GEORGIAN LETTER FI

Additional letters for Mingrelian and**Svan**

10F7	Ⴍ	GEORGIAN LETTER YN
10F8	Ⴎ	GEORGIAN LETTER ELIFI

Additional letters

10F9	Ⴏ	GEORGIAN LETTER TURNED GAN
10FA	Ⴐ	GEORGIAN LETTER AIN

Punctuation

10FB ∴ GEORGIAN PARAGRAPH SEPARATOR

Modifier letter

10FC Ⴑ MODIFIER LETTER GEORGIAN NAR
≈ <super> 10DC 6

Additional letters for Ossetian and**Abkhaz**

10FD	Ⴑ	GEORGIAN LETTER AEN
10FE	Ⴒ	GEORGIAN LETTER HARD SIGN
10FF	Ⴓ	GEORGIAN LETTER LABIAL SIGN

	1C9	1CA	1CB
0	Ⴀ 1C90	Ⴁ 1CA0	Ⴂ 1CB0
1	Ⴃ 1C91	Ⴄ 1CA1	Ⴅ 1CB1
2	Ⴆ 1C92	Ⴇ 1CA2	Ⴈ 1CB2
3	Ⴉ 1C93	Ⴊ 1CA3	Ⴋ 1CB3
4	Ⴌ 1C94	Ⴍ 1CA4	Ⴎ 1CB4
5	Ⴏ 1C95	Ⴐ 1CA5	Ⴑ 1CB5
6	Ⴒ 1C96	Ⴓ 1CA6	Ⴔ 1CB6
7	Ⴕ 1C97	Ⴖ 1CA7	Ⴗ 1CB7
8	Ⴘ 1C98	Ⴙ 1CA8	Ⴚ 1CB8
9	Ⴛ 1C99	Ⴜ 1CA9	Ⴝ 1CB9
A	Ⴞ 1C9A	Ⴟ 1CAA	Ⴀ 1CBA
B	Ⴁ 1C9B	Ⴂ 1CAB	
C	Ⴃ 1C9C	Ⴄ 1CAC	
D	Ⴅ 1C9D	Ⴆ 1CAD	Ⴇ 1CBD
E	Ⴈ 1C9E	Ⴉ 1CAE	Ⴊ 1CBE
F	Ⴋ 1C9F	Ⴌ 1CAF	Ⴍ 1CBF

Capital letters (Mtavruli)

This is the special uppercase of the Mkhedruli alphabet. It is normally only used in "all caps" for titling purposes. See the Georgian block for lowercase Mkhedruli.

1C90	Ⴀ	GEORGIAN MTAVRULI CAPITAL LETTER AN
1C91	Ⴁ	GEORGIAN MTAVRULI CAPITAL LETTER BAN
1C92	Ⴂ	GEORGIAN MTAVRULI CAPITAL LETTER GAN
1C93	Ⴃ	GEORGIAN MTAVRULI CAPITAL LETTER DON
1C94	Ⴄ	GEORGIAN MTAVRULI CAPITAL LETTER EN
1C95	Ⴅ	GEORGIAN MTAVRULI CAPITAL LETTER VIN
1C96	Ⴆ	GEORGIAN MTAVRULI CAPITAL LETTER ZEN
1C97	Ⴇ	GEORGIAN MTAVRULI CAPITAL LETTER TAN
1C98	Ⴈ	GEORGIAN MTAVRULI CAPITAL LETTER IN
1C99	Ⴉ	GEORGIAN MTAVRULI CAPITAL LETTER KAN
1C9A	Ⴊ	GEORGIAN MTAVRULI CAPITAL LETTER LAS
1C9B	Ⴋ	GEORGIAN MTAVRULI CAPITAL LETTER MAN
1C9C	Ⴌ	GEORGIAN MTAVRULI CAPITAL LETTER NAR
1C9D	Ⴍ	GEORGIAN MTAVRULI CAPITAL LETTER ON
1C9E	Ⴎ	GEORGIAN MTAVRULI CAPITAL LETTER PAR
1C9F	Ⴏ	GEORGIAN MTAVRULI CAPITAL LETTER ZHAR
1CA0	Ⴐ	GEORGIAN MTAVRULI CAPITAL LETTER RAE
1CA1	Ⴑ	GEORGIAN MTAVRULI CAPITAL LETTER SAN
1CA2	Ⴒ	GEORGIAN MTAVRULI CAPITAL LETTER TAR
1CA3	Ⴓ	GEORGIAN MTAVRULI CAPITAL LETTER UN
1CA4	Ⴔ	GEORGIAN MTAVRULI CAPITAL LETTER PHAR
1CA5	Ⴕ	GEORGIAN MTAVRULI CAPITAL LETTER KHAR
1CA6	Ⴖ	GEORGIAN MTAVRULI CAPITAL LETTER GHAN
1CA7	Ⴗ	GEORGIAN MTAVRULI CAPITAL LETTER QAR
1CA8	Ⴘ	GEORGIAN MTAVRULI CAPITAL LETTER SHIN
1CA9	Ⴙ	GEORGIAN MTAVRULI CAPITAL LETTER CHIN
1CAA	Ⴚ	GEORGIAN MTAVRULI CAPITAL LETTER CAN
1CAB	Ⴛ	GEORGIAN MTAVRULI CAPITAL LETTER JIL
1CAC	Ⴜ	GEORGIAN MTAVRULI CAPITAL LETTER CIL
1CAD	Ⴝ	GEORGIAN MTAVRULI CAPITAL LETTER CHAR
1CAE	Ⴞ	GEORGIAN MTAVRULI CAPITAL LETTER XAN
1CAF	Ⴟ	GEORGIAN MTAVRULI CAPITAL LETTER JHAN
1CB0	Ⴀ	GEORGIAN MTAVRULI CAPITAL LETTER HAE
1CB1	Ⴁ	GEORGIAN MTAVRULI CAPITAL LETTER HE
1CB2	Ⴂ	GEORGIAN MTAVRULI CAPITAL LETTER HIE
1CB3	Ⴃ	GEORGIAN MTAVRULI CAPITAL LETTER WE
1CB4	Ⴄ	GEORGIAN MTAVRULI CAPITAL LETTER HAR
1CB5	Ⴅ	GEORGIAN MTAVRULI CAPITAL LETTER HOE
1CB6	Ⴆ	GEORGIAN MTAVRULI CAPITAL LETTER FI

Additional letters for Mingrelian and Svan

1CB7	Ⴇ	GEORGIAN MTAVRULI CAPITAL LETTER YN
1CB8	Ⴈ	GEORGIAN MTAVRULI CAPITAL LETTER ELIFI

Additional letters

1CB9	Ⴉ	GEORGIAN MTAVRULI CAPITAL LETTER TURNED GAN
1CBA	Ⴊ	GEORGIAN MTAVRULI CAPITAL LETTER AIN

Additional letters for Ossetian and Abkhaz

1CBD	Ⴋ	GEORGIAN MTAVRULI CAPITAL LETTER AEN
1CBE	Ⴌ	GEORGIAN MTAVRULI CAPITAL LETTER HARD SIGN
1CBF	Ⴍ	GEORGIAN MTAVRULI CAPITAL LETTER LABIAL SIGN

	2D0	2D1	2D2
0	Ⴕ 2D00	ჟ 2D10	რ 2D20
1	ყ 2D01	ლ 2D11	ბ 2D21
2	ვ 2D02	ე 2D12	ო 2D22
3	ფ 2D03	ყ 2D13	ყ 2D23
4	ჩ 2D04	ძ 2D14	ყ 2D24
5	წ 2D05	ჩ 2D15	ძ 2D25
6	ხ 2D06	ნ 2D16	
7	თ 2D07	ყ 2D17	ზ 2D27
8	რ 2D08	ყ 2D18	
9	კ 2D09	ბ 2D19	
A	ლ 2D0A	ე 2D1A	
B	ძ 2D0B	ძ 2D1B	
C	ჩ 2D0C	წ 2D1C	
D	შ 2D0D	ვ 2D1D	ზ 2D2D
E	უ 2D0E	ე 2D1E	
F	ყ 2D0F	ჯ 2D1F	

Small letters (Khutsuri)

This is the lowercase of the old ecclesiastical alphabet. See the Georgian block for uppercase Asomtavruli.

2D00	Ⴕ	GEORGIAN SMALL LETTER AN
2D01	ყ	GEORGIAN SMALL LETTER BAN
2D02	ვ	GEORGIAN SMALL LETTER GAN
2D03	ფ	GEORGIAN SMALL LETTER DON
2D04	ჩ	GEORGIAN SMALL LETTER EN
2D05	წ	GEORGIAN SMALL LETTER VIN
2D06	ხ	GEORGIAN SMALL LETTER ZEN
2D07	თ	GEORGIAN SMALL LETTER TAN
2D08	რ	GEORGIAN SMALL LETTER IN
2D09	კ	GEORGIAN SMALL LETTER KAN
2D0A	ლ	GEORGIAN SMALL LETTER LAS
2D0B	ძ	GEORGIAN SMALL LETTER MAN
2D0C	ჩ	GEORGIAN SMALL LETTER NAR
2D0D	შ	GEORGIAN SMALL LETTER ON
2D0E	უ	GEORGIAN SMALL LETTER PAR
2D0F	ყ	GEORGIAN SMALL LETTER ZHAR
2D10	ჟ	GEORGIAN SMALL LETTER RAE
2D11	ლ	GEORGIAN SMALL LETTER SAN
2D12	ე	GEORGIAN SMALL LETTER TAR
2D13	ყ	GEORGIAN SMALL LETTER UN
2D14	ძ	GEORGIAN SMALL LETTER PHAR
2D15	ჩ	GEORGIAN SMALL LETTER KHAR
2D16	ნ	GEORGIAN SMALL LETTER GHAN
2D17	ყ	GEORGIAN SMALL LETTER QAR
2D18	ყ	GEORGIAN SMALL LETTER SHIN
2D19	ბ	GEORGIAN SMALL LETTER CHIN
2D1A	ე	GEORGIAN SMALL LETTER CAN
2D1B	ძ	GEORGIAN SMALL LETTER JIL
2D1C	წ	GEORGIAN SMALL LETTER CIL
2D1D	ვ	GEORGIAN SMALL LETTER CHAR
2D1E	ე	GEORGIAN SMALL LETTER XAN
2D1F	ჯ	GEORGIAN SMALL LETTER JHAN
2D20	რ	GEORGIAN SMALL LETTER HAE
2D21	ბ	GEORGIAN SMALL LETTER HE
2D22	ო	GEORGIAN SMALL LETTER HIE
2D23	ყ	GEORGIAN SMALL LETTER WE
2D24	ყ	GEORGIAN SMALL LETTER HAR
2D25	ძ	GEORGIAN SMALL LETTER HOE

Additional letter

2D27 ჳ GEORGIAN SMALL LETTER YN

Additional letter for Ossetian

2D2D з GEORGIAN SMALL LETTER AEN



Figure 4. Book spines in Mkhedruli and in Mtavri capital.

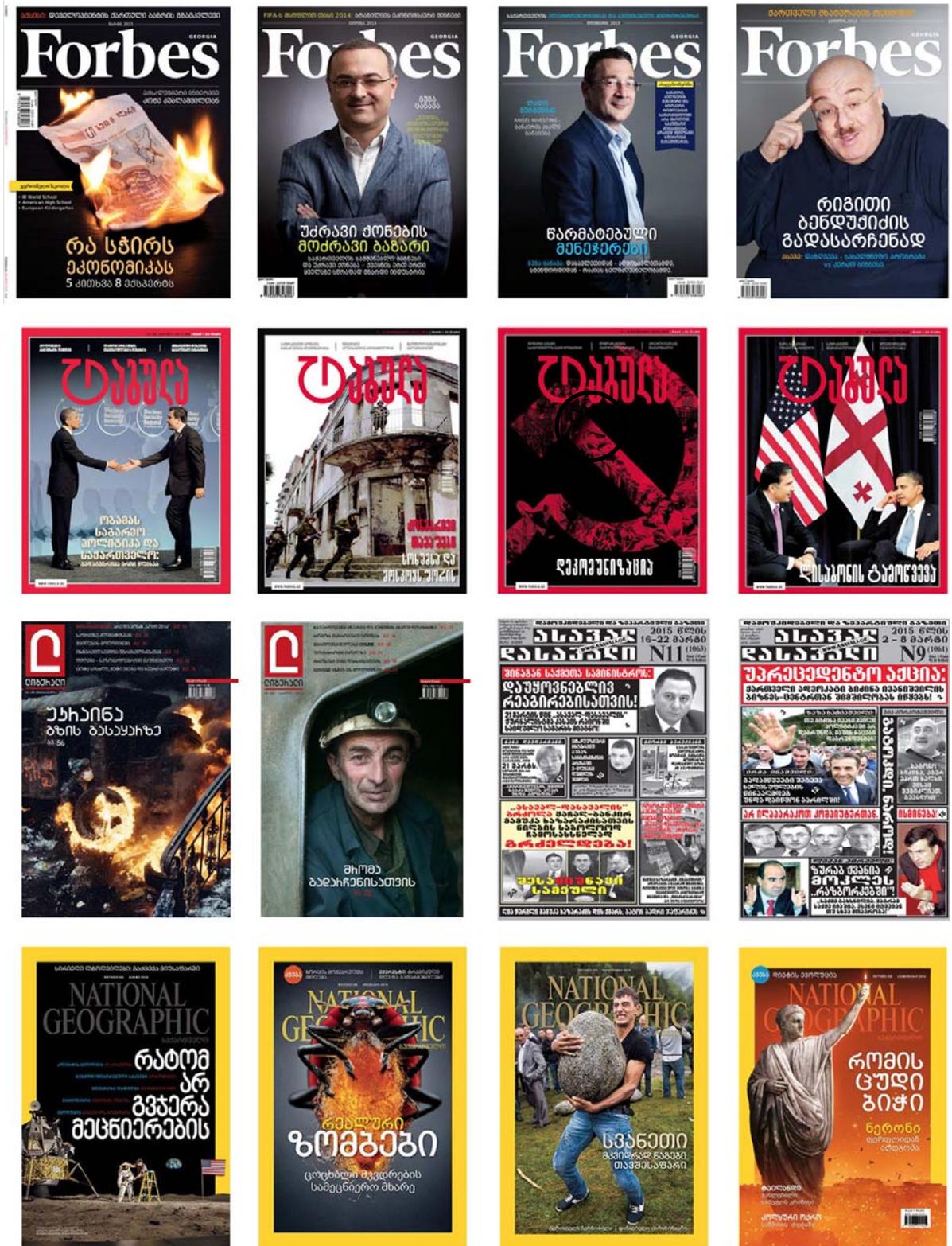


Figure 5. Magazine covers in Mkhedruli and in Mtavruli capitals.



Figure 6. Roadsign with Mtskheta capitals and Latin capitals.



Figure 7. Advertisement with Mtskheta, Mtskheta capitals, and Latin capitals.

A. Administrative

1. Title

Proposal for the addition of Georgian characters to the UCS

2. Requester's name

Michael Everson, Nika Gujejiani, Akaki Razmadze

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

Individual contribution.

4. Submission date

2016-01-24

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)

No.

1b. Proposed name of script

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

No

1d. Name of the existing block

A new Georgian Extended block

2. Number of characters in proposal

46.

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)

Category A.

4a. Is a repertoire including character names provided?

Yes.

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

Yes.

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

Yes.

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

Michael Everson.

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

Michael Everson, Fontographer.

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

Yes.

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

Yes.

7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?

Yes.

8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database <http://www.unicode.org/Public/UNIDATA/UnicodeCharacterDatabase.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

See above.

C. Technical – Justification

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

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?

The co-authors have consulted widely.

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?

Georgian speakers and writers.

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

Very common.

4b. Reference

See above.

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

Yes.

5b. If YES, where?

Everywhere.

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

Optimization of case-pairing.

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. The previous identification of Georgian as mono-case was incorrect.

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?

No.

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?