Title: Finalized Mapping between Characters of ISO 6862 – Table 1 and ISO/IEC 10646-1 (UCS)
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References: ISO/TC46/SC4/WG1 N 246, ISO/TC46/SC4/WG1 N 227 (revised 1998-05-29) and ISO/IEC JTC1/SC2 N3130 (Application for Registration No. 217)
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Action: For information
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1. Background

On May 9, 2000, ISO/TC 46/SC 4/WG 1 reviewed documents that compared mappings of the characters of TC 46 character set standards and character sets which were sources for these standards to ISO/IEC 10646. Based on these comparative analyses, WG1 agreed on final mappings for eight of the TC 46 character set standards.

This document is a modification of *Analysis of Proposed Mapping between Characters of ISO 6862 – Table 1 and ISO/IEC 10646-1 (UCS)* prepared for the WG1 meeting (ISO/TC46/SC4/WG1 N 246)**.**

2. Mapping of Characters

The following table shows the final WG1 decisions compared to N227.

ISO 6862 – Table 1		Mappings		Status
Code	**Character name**	**N 227**	**Final**	
2/1	Negation: oblique	0338	0338	
2/2	Negation: long bar	20D2	20D2	
2/3	Negation: short bar	20D3	20D3	
2/4	Negation: horizontal	0335	0335	
2/5	Circle, overlay	20DB	20D8	Correction

ISO 6862 – Table 1		Mappings		Status
Code	**Character name**	**N 227**	**Final**	
2/6	Circle, anti-clockwise arrow	20DA	20DA	
2/7	Circle, clockwise arrow	20D9	20D9	
2/8	Anti-clockwise arrow	20D4	20D4	
2/9	Superior dot	0307	0307	
2/10	Superior double dot	0308	0308	
2/11	Superior vector left	20D6	20D6	
2/12	Superior hat	0302	0302	
2/13	Superior v	030C	030C	
2/14	Superior vector right	20D7	20D7	
2/15	Clockwise arrow	20D5	20D5	
3/0	Multiply	00D7	00D7	
3/1	Plus or minus	00B1	00B1	
3/2	Equivalent to	2236	223C	Correction
3/3	Asymptotic to	2248	2248	
3/4	Identical with	2261	2261	
3/5	Less than or equal to	2264	2264	
3/6	Less than or greater than	2276	2276	
3/7	Less than or equivalent to	2272	2272	
3/8	Much less than	226A	226A	
3/9	Parallel to	2225	2225	
3/10	Right angle	221F	221F	
3/11	Increment	2206	2206	
3/12	Degree	00B0	00B0	
3/13	Left angle bracket	3008	2329	Accepted
3/14	Left open bracket	301A	301A	
3/15	Sum of	2211	2211	
4/0	Divide	00F7	00F7	

ISO 6862 – Table 1		Mappings		Status
Code	**Character name**	**N 227**	**Final**	
4/1	Minus or plus	2213	2213	
4/2	Asymptotically equal to	2243	2243	
4/3	Similar to	2245	2245	
4/4	Approximately equal to	224F	224F	
4/5	Greater than or equal to	2265	2265	
4/6	Greater than or less than	2277	2277	
4/7	Greater than or equivalent to	2273	2273	
4/8	Much greater than	226B	226B	
4/9	Orthogonal to	22A5	22A5	
4/10	Angle	2220	2220	
4/11	Backward finite difference operator	2207	2207	
4/12	Per mille	2030	2030	
4/13	Angle bracket, right	3009	232A	Accepted
4/14	Open bracket, right	301B	301B	
4/15	Product	220F	220F	
5/0	Plus	002B	002B	
5/1	Proper inclusion in set	2282	2282	Accepted
5/2	Identity or inclusion in set	2286	2286	
5/3	Set membership	2208	2208	
5/4	Union of sets between limits	222A	22C3	
5/5	For all	2200	2200	
5/6	Complement	2201	2201	
5/7	Increases; exponent	2191	2191	
5/8	Left arrow	2190	2190	
5/9	Anti-clockwise	21B6	21B6	

ISO 6862 – Table 1		Mappings		Status
Code	**Character name**	**N 227**	**Final**	
5/10	Mutually implies	2194	2194	
5/11	Left arrow over right arrow	22C6	21C6	Correction
5/12	Functional relationship	22A6	21A6	Correction
5/13	Double arrow, upward	21D1	21D1	
5/14	Is implied by	21D0	21D0	
5/15	Infinity	221E	221E	
6/0	Minus	2212	2212	
6/1	Properly includes in set	2283	2283	
6/2	Contains as subset	2287	2287	
6/3	Contains	220B	220B	
6/4	Intersection of classes or sets between limits	2229	22C2	Accepted
6/5	There exists	2203	2203	
6/6	Empty set	2205	2205	
6/7	Decreases	2193	2193	
6/8	Approaches	2192	2192	
6/9	Clockwise	21B7	21B7	
6/10	Vertical relationship	2195	2195	
6/11	Right arrow over left arrow	21C4	21C4	
6/12	Anti-parallel	21C5	21C5	
6/13	Double arrow, downward	21D3	21D3	
6/14	Implies	21D2	21D2	
6/15	Radical	221A	221A	
7/0	Prime	2032	2032	
7/1	Double prime	2033	2033	
7/2	Triple prime	2034	2034	

ISO 6862 – Table 1		Mappings		Status
Code	**Character name**	**N 227**	**Final**	
7/3	Logical or	2228	2228	
7/4	Logical and	2227	2227	
7/5	Logical not	00AC	00AC	
7/6	Planck constant	210E	210E	
7/7	Implies	22A2	22A2	
7/8	Integral	222B	222B	
7/9	Double integral	222C	222C	
7/10	Triple integral	222D	222D	
7/11	Partial differentiation	2202	2202	
7/12	Planck constant divided by 2 pi	210F	210F	
7/13	Aleph	2135	2135	
7/14	Composite function	2218	2218	

3. WG1 Action: Correction of Errors

2/5 Circle, overlay
Correction of typographical error.

3/2 Equivalent to
Correction of typographical error.

5/11 Left arrow over right arrow
Correction of typographical error.

5/12 Functional relationship
Correction of typographical error.

4. WG1 Action: Acceptance of Proposed Mappings

3/13 Left angle bracket

A character in the *Miscellaneous Technical* block is preferable to a character in the *CJK Symbols and Punctuation* block.

4/13 Right angle bracket

A character in the *Miscellaneous Technical* block is preferable to a character in the *CJK Symbols and Punctuation* block.

5/1 Proper inclusion in set

ISO/IEC JTC1/SC2/WG2 rejected the addition of a new character based on the related Table 2 character 5/5 Is included in set, accepting the US recommendation that both characters are variants, and should be mapped to U+2282, SUBSET OF. WG1 accepted this mapping with the proviso that it should be changed if unique mappings for both characters were identified.

5/4 Union of sets between limits

ISO/IEC JTC1/SC2/WG2 rejected the addition of a new character based on the Table 2 character 5/4 Sum or union of classes or sets, accepting the US recommendation both characters were variants and should be mapped to U+222A, UNION. Unique mappings for both characters were identified when the American Mathematical Society proposed additional mathematical symbols for the Unicode Standard.

6/1 Properly includes in set

ISO/IEC JTC1/SC2/WG2 rejected the addition of a new character based on the related Table 2 character 6/5 Includes in set, accepting the US recommendation that both characters are variants, and should be mapped to U+2283 SUPERSET OF. WG1 accepted this mapping with the proviso that it should be changed if unique mappings for both characters were identified.

6/4 Intersection of classes or sets between limits

ISO/IEC JTC1/SC2/WG2 rejected the addition of a new character based on the Table 2 character 6/4 Product of intersection of classes or sets, accepting the US recommendation that both character s are variants and should be mapped to U+2229, INTERSECTION. Unique mappings for both characters were identified when the American Mathematical Society proposed additional mathematical symbols for the Unicode Standard.