

**ISO/IEC JTC 1/SC 2**  
**Coded Character Sets**  
Secretariat: **Japan (JISC)**

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|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
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| <b>TITLE</b>        | Draft Disposition of comments on FPDAM 2 to ISO/IEC 14651:2001, Information technology -- International string ordering and comparison -- Method for comparing character strings and description of the common template tailorable ordering -- AMENDMENT 2 |             |
| <b>SOURCE</b>       | Mr. Alain LaBonte, Project Editor                                                                                                                                                                                                                          |             |
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ORGANISATION INTERNATIONALE DE NORMALISATION  
Международная организация по стандартизации  
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO/IEC JTC 1/SC 2/OWG-SORT  
ISO/CEI JTC 1/SC 2-AGT/TRI

Classement international et comparaison de chaînes de caractères  
International string ordering and comparison

ISO/IEC JTC 1/SC 2 N3774  
2004-12-22

**Title:** Draft Disposition of comments on FPDAM 2 to ISO/IEC 14651:2001  
**Source:** Mr. Alain LaBonté, Project Editor  
Mr. Ken Whistler, Co-Editor  
**Reference:** Document SC2 N3769 (Ballot results)  
**Action:** To be approved at the Xiamen SC2/OWG-SORT meeting  
**Distribution:** ISO/IEC JTC 1/SC 2  
**Status:** The FPDAM2 ballot passed by 13 against 2 (comments on the text received by 2 countries), not counting 2 abstentions; SC2 experts are requested to review this document prior to the final draft disposition of comments to be produced at the SC2/OWG-SORT meeting in Xiamen in January 2005

## Disposition of comments

*Comments (original comments [in gray] were copied from the PDF document received with the Acrobat copy function and therefore are unformatted)*

## Approvals with comments

### USA

#### US 1.

The character repertoire for this amendment must stay stable with Unicode 4.0.

**Accepted.**

## Disapprovals with comments

### Germany

#### DE 1.

Vote:

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Disapproval with comments. If the comments are satisfactorily resolved, the German vote will change to approval.

General comment

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Please keep the tables as much upwards compatible as possible, both from their technical contents and from their naming conventions (the latter for ease of the stability of tailorings). Deviations from that rule should be reasoned for in accompanying documentation.

Change of name

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Change of name <TONOS> --> <D030D>. Please keep the original name.

**Not accepted. U+030D is not the Greek tonos, so changing the name from <TONOS> was an explicit correction.**

#### DE 2.

Combining diacritics

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The combining diacritics ligature left half, ligature right half, double tilde left half and double tilde right half used to be treated as second level weight in FPDAM 1. Now they are treated as ignorable on the first three levels. Please change back to the previous behaviour.

**Not accepted. The changes are deliberate, because of the way these characters can only be used in certain combinations.**

**n lh g rh**

**where n and g are letters, and lh and rh are the left half and right half pieces of the diacritic. The right way to weight this is to give lh a weight as if it were a double diacritic, and then to ignore the rh. That is what is done in the table now.**

### DE 3.

#### Spurious first level weight assignments

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A number of first level weight assignments are made, but seem never to be used. Please either remove these assignments or add a comment to the effect that they are never used. These include:

<S0060> % GRAVE ACCENT  
<S00B4> % ACUTE ACCENT  
<S02DC> % SMALL TILDE  
<S005E> % CIRCUMFLEX ACCENT  
<S00AF> % MACRON  
<S203E> % OVERLINE  
<S02D8> % BREVE  
<S02D9> % DOT ABOVE  
<S00A8> % DIAERESIS  
<S02DA> % RING ABOVE  
<S02DD> % DOUBLE ACUTE ACCENT  
<S1FBF> % GREEK PSILI  
<S1FFE> % GREEK DASIA  
<S00B8> % CEDILLA  
<S02DB> % OGONEK  
<S005F> % LOW LINE  
<S2017> % DOUBLE LOW LINE  
<S1FC0> % GREEK PERISPOMENI  
<S309B> % KATAKANA-HIRAGANA VOICED SOUND MARK  
<S309C> % KATAKANA-HIRAGANA SEMI-VOICED SOUND MARK  
<S239B> % LEFT PARENTHESIS UPPER HOOK  
<S239C> % LEFT PARENTHESIS EXTENSION  
<S23A6> % RIGHT SQUARE BRACKET LOWER CORNER  
<S23A7> % LEFT CURLY BRACKET UPPER HOOK  
<S23A8> % LEFT CURLY BRACKET MIDDLE PIECE  
<S23A9> % LEFT CURLY BRACKET LOWER HOOK  
<S23AA> % CURLY BRACKET EXTENSION

**Accepted in principle. This was already the case in Amendment 1. A general comment will be added to say that some symbols are declared and attributed a weight while not necessarily used in the template, but can be used as hook-up (connection) symbols for creating the deltas.**

### DE 4.

#### Small capital letters

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Small capital letters (e. g. LATIN LETTER SMALL CAPITAL V, LATIN LETTER SMALL CAPITAL W, GREEK LETTER SMALL CAPITAL LAMDA) should be treated as case variants of their corresponding basic letters (v, w

and lamda in these cases), not as letters with a separate weight. This holds also true of letters such as LATIN LETTER SMALL CAPITAL B that were already sorted in FPDAM 1.

**Controversial. Could be accepted although this breaks the upwards compatibility principle stated in DE 1. Two considerations to balance:**

- **on one hand, this German comment is in agreement with the principles at the origin of ISO/IEC 14651;**
- **on the other hand there is currently absence of theory on treatment of small capitals tertiary weights).**

**Deferred to Xiamen meeting discussion.**

#### **DE 5.**

Modifier letters

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Make modifier letters ignorable on the first three levels.

**Partly accepted. The modification will be made only for non-letterlike modifiers. Deferred to Xiamen meeting discussion.**

#### **DE 6.**

Cyrillic letters

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Additions to the Cyrillic order should only done in synchronization with GOST and their pan-Cyrillic ordering requirements. Until such synchronization has been achieved, no additional Cyrillic letters should be added.

**Not accepted without more specific reference.**

#### **DE 7.**

Number signs

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Remove spurious weight assignments. Some numbers such as the Aegean numbers have reserved first-level weights which are never used because the numbers themselves are declared ignorable on the first three levels.

**Not accepted. See disposition of comment DE 3.**

## DE 8.

### Various symbols

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Ensure that the following symbols ignorable on the first three levels (all of them seem to be that already, in this case please remove or mark the spurious weight assignments).

<S239D> % LEFT PARENTHESIS LOWER HOOK  
<S239E> % RIGHT PARENTHESIS UPPER HOOK  
<S239F> % RIGHT PARENTHESIS EXTENSION  
<S23A0> % RIGHT PARENTHESIS LOWER HOOK  
<S23A1> % LEFT SQUARE BRACKET UPPER CORNER  
<S23A2> % LEFT SQUARE BRACKET EXTENSION  
<S23A3> % LEFT SQUARE BRACKET LOWER CORNER  
<S23A4> % RIGHT SQUARE BRACKET UPPER CORNER  
<S23A5> % RIGHT SQUARE BRACKET EXTENSION  
<S23A6> % RIGHT SQUARE BRACKET LOWER CORNER  
<S23A7> % LEFT CURLY BRACKET UPPER HOOK  
<S23A8> % LEFT CURLY BRACKET MIDDLE PIECE  
<S23A9> % LEFT CURLY BRACKET LOWER HOOK  
<S23AA> % CURLY BRACKET EXTENSION  
<S23AB> % RIGHT CURLY BRACKET UPPER HOOK  
<S23AC> % RIGHT CURLY BRACKET MIDDLE PIECE  
<S23AD> % RIGHT CURLY BRACKET LOWER HOOK  
<S23AE> % INTEGRAL EXTENSION  
<S23AF> % HORIZONTAL LINE EXTENSION  
<S23B0> % UPPER LEFT OR LOWER RIGHT CURLY BRACKET SECTION  
<S23B1> % UPPER RIGHT OR LOWER LEFT CURLY BRACKET SECTION  
<S23B2> % SUMMATION TOP  
<S23B3> % SUMMATION BOTTOM  
<S23B4> % TOP SQUARE BRACKET  
<S23B5> % BOTTOM SQUARE BRACKET  
<S23B6> % BOTTOM SQUARE BRACKET OVER TOP SQUARE BRACKET  
<S23B7> % RADICAL SYMBOL BOTTOM  
<S23B8> % LEFT VERTICAL BOX LINE  
<S23B9> % RIGHT VERTICAL BOX LINE  
<S23BA> % HORIZONTAL SCAN LINE-1  
<S23BB> % HORIZONTAL SCAN LINE-3  
<S23BC> % HORIZONTAL SCAN LINE-7  
<S23BD> % HORIZONTAL SCAN LINE-9  
<S23BE> % DENTISTRY SYMBOL LIGHT VERTICAL AND TOP RIGHT  
<S23BF> % DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM RIGHT  
<S23C0> % DENTISTRY SYMBOL LIGHT VERTICAL WITH CIRCLE  
<S23C1> % DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH CIRCLE  
<S23C2> % DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH CIRCLE  
<S23C3> % DENTISTRY SYMBOL LIGHT VERTICAL WITH TRIANGLE  
<S23C4> % DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH TRIANGLE  
<S23C5> % DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH TRIANGLE  
<S23C6> % DENTISTRY SYMBOL LIGHT VERTICAL AND WAVE  
<S23C7> % DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH WAVE  
<S23C8> % DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH WAVE

<S23C9> % DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL  
<S23CA> % DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL  
<S23CB> % DENTISTRY SYMBOL LIGHT VERTICAL AND TOP LEFT  
<S23CC> % DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM LEFT  
<S23CD> % SQUARE FOOT  
<S23CE> % RETURN SYMBOL  
<S23CF> % EJECT SYMBOL  
<S23D0> % VERTICAL LINE EXTENSION  
<S2596> % QUADRANT LOWER LEFT  
<S2597> % QUADRANT LOWER RIGHT  
<S2598> % QUADRANT UPPER LEFT  
<S2599> % QUADRANT UPPER LEFT AND LOWER LEFT AND LOWER RIGHT  
<S259A> % QUADRANT UPPER LEFT AND LOWER RIGHT  
<S259B> % QUADRANT UPPER LEFT AND UPPER RIGHT AND LOWER LEFT  
<S259C> % QUADRANT UPPER LEFT AND UPPER RIGHT AND LOWER RIGHT  
<S259D> % QUADRANT UPPER RIGHT  
<S259E> % QUADRANT UPPER RIGHT AND LOWER LEFT  
<S259F> % QUADRANT UPPER RIGHT AND LOWER LEFT AND LOWER RIGHT  
<S25F8> % UPPER LEFT TRIANGLE  
<S25F9> % UPPER RIGHT TRIANGLE  
<S25FA> % LOWER LEFT TRIANGLE  
<S25FB> % WHITE MEDIUM SQUARE  
<S25FC> % BLACK MEDIUM SQUARE  
<S25FD> % WHITE MEDIUM SMALL SQUARE  
<S25FE> % BLACK MEDIUM SMALL SQUARE  
<S25FF> % LOWER RIGHT TRIANGLE  
<S2614> % UMBRELLA WITH RAIN DROPS  
<S2615> % HOT BEVERAGE  
<S2616> % WHITE SHOGI PIECE  
<S2617> % BLACK SHOGI PIECE  
<S2672> % UNIVERSAL RECYCLING SYMBOL  
<S2673> % RECYCLING SYMBOL FOR TYPE-1 PLASTICS  
<S2674> % RECYCLING SYMBOL FOR TYPE-2 PLASTICS  
<S2675> % RECYCLING SYMBOL FOR TYPE-3 PLASTICS  
<S2676> % RECYCLING SYMBOL FOR TYPE-4 PLASTICS  
<S2677> % RECYCLING SYMBOL FOR TYPE-5 PLASTICS  
<S2678> % RECYCLING SYMBOL FOR TYPE-6 PLASTICS  
<S2679> % RECYCLING SYMBOL FOR TYPE-7 PLASTICS  
<S267A> % RECYCLING SYMBOL FOR GENERIC MATERIALS  
<S267B> % BLACK UNIVERSAL RECYCLING SYMBOL  
<S267C> % RECYCLED PAPER SYMBOL  
<S267D> % PARTIALLY-RECYCLED PAPER SYMBOL  
<S2680> % DIE FACE-1  
<S2681> % DIE FACE-2  
<S2682> % DIE FACE-3  
<S2683> % DIE FACE-4  
<S2684> % DIE FACE-5  
<S2685> % DIE FACE-6  
<S2686> % WHITE CIRCLE WITH DOT RIGHT  
<S2687> % WHITE CIRCLE WITH TWO DOTS  
<S2688> % BLACK CIRCLE WITH WHITE DOT RIGHT  
<S2689> % BLACK CIRCLE WITH TWO WHITE DOTS  
<S2690> % WHITE FLAG

<S2691> % BLACK FLAG  
<S26A0> % WARNING SIGN  
<S26A1> % HIGH VOLTAGE SIGN  
<S2768> % MEDIUM LEFT PARENTHESIS ORNAMENT  
<S2769> % MEDIUM RIGHT PARENTHESIS ORNAMENT  
<S276A> % MEDIUM FLATTENED LEFT PARENTHESIS ORNAMENT  
<S276B> % MEDIUM FLATTENED RIGHT PARENTHESIS ORNAMENT  
<S276C> % MEDIUM LEFT-POINTING ANGLE BRACKET ORNAMENT  
<S276D> % MEDIUM RIGHT-POINTING ANGLE BRACKET ORNAMENT  
<S276E> % HEAVY LEFT-POINTING ANGLE QUOTATION MARK ORNAMENT  
<S276F> % HEAVY RIGHT-POINTING ANGLE QUOTATION MARK ORNAMENT  
<S2770> % HEAVY LEFT-POINTING ANGLE BRACKET ORNAMENT  
<S2771> % HEAVY RIGHT-POINTING ANGLE BRACKET ORNAMENT  
<S2772> % LIGHT LEFT TORTOISE SHELL BRACKET ORNAMENT  
<S2773> % LIGHT RIGHT TORTOISE SHELL BRACKET ORNAMENT  
<S2774> % MEDIUM LEFT CURLY BRACKET ORNAMENT  
<S2775> % MEDIUM RIGHT CURLY BRACKET ORNAMENT  
<S27D0> % WHITE DIAMOND WITH CENTRED DOT  
<S27D1> % AND WITH DOT  
<S27D2> % ELEMENT OF OPENING UPWARDS  
<S27D3> % LOWER RIGHT CORNER WITH DOT  
<S27D4> % UPPER LEFT CORNER WITH DOT  
<S27D5> % LEFT OUTER JOIN  
<S27D6> % RIGHT OUTER JOIN  
<S27D7> % FULL OUTER JOIN  
<S27D8> % LARGE UP TACK  
<S27D9> % LARGE DOWN TACK  
<S27DA> % LEFT AND RIGHT DOUBLE TURNSTILE  
<S27DB> % LEFT AND RIGHT TACK  
<S27DC> % LEFT MULTIMAP  
<S27DD> % LONG RIGHT TACK  
<S27DE> % LONG LEFT TACK  
<S27DF> % UP TACK WITH CIRCLE ABOVE  
<S27E0> % LOZENGE DIVIDED BY HORIZONTAL RULE  
<S27E1> % WHITE CONCAVE-SIDED DIAMOND  
<S27E2> % WHITE CONCAVE-SIDED DIAMOND WITH LEFTWARDS TICK  
<S27E3> % WHITE CONCAVE-SIDED DIAMOND WITH RIGHTWARDS TICK  
<S27E4> % WHITE SQUARE WITH LEFTWARDS TICK  
<S27E5> % WHITE SQUARE WITH RIGHTWARDS TICK  
<S27E6> % MATHEMATICAL LEFT WHITE SQUARE BRACKET  
<S27E7> % MATHEMATICAL RIGHT WHITE SQUARE BRACKET  
<S27E8> % MATHEMATICAL LEFT ANGLE BRACKET  
<S27E9> % MATHEMATICAL RIGHT ANGLE BRACKET  
<S27EA> % MATHEMATICAL LEFT DOUBLE ANGLE BRACKET  
<S27EB> % MATHEMATICAL RIGHT DOUBLE ANGLE BRACKET  
<S27F0> % UPWARDS QUADRUPLE ARROW  
<S27F1> % DOWNWARDS QUADRUPLE ARROW  
<S27F2> % ANTICLOCKWISE GAPPED CIRCLE ARROW  
<S27F3> % CLOCKWISE GAPPED CIRCLE ARROW  
<S27F4> % RIGHT ARROW WITH CIRCLED PLUS  
<S27F5> % LONG LEFTWARDS ARROW  
<S27F6> % LONG RIGHTWARDS ARROW  
<S27F7> % LONG LEFT RIGHT ARROW



<S27F8> % LONG LEFTWARDS DOUBLE ARROW  
<S27F9> % LONG RIGHTWARDS DOUBLE ARROW  
<S27FA> % LONG LEFT RIGHT DOUBLE ARROW  
<S27FB> % LONG LEFTWARDS ARROW FROM BAR  
<S27FC> % LONG RIGHTWARDS ARROW FROM BAR  
<S27FD> % LONG LEFTWARDS DOUBLE ARROW FROM BAR  
<S27FE> % LONG RIGHTWARDS DOUBLE ARROW FROM BAR  
<S27FF> % LONG RIGHTWARDS SQUIGGLE ARROW  
<S2900> % RIGHTWARDS TWO-HEADED ARROW WITH VERTICAL STROKE  
<S2901> % RIGHTWARDS TWO-HEADED ARROW WITH DOUBLE VERTICAL STROKE  
<S2902> % LEFTWARDS DOUBLE ARROW WITH VERTICAL STROKE  
<S2903> % RIGHTWARDS DOUBLE ARROW WITH VERTICAL STROKE  
<S2904> % LEFT RIGHT DOUBLE ARROW WITH VERTICAL STROKE  
<S2905> % RIGHTWARDS TWO-HEADED ARROW FROM BAR  
<S2906> % LEFTWARDS DOUBLE ARROW FROM BAR  
<S2907> % RIGHTWARDS DOUBLE ARROW FROM BAR  
<S2908> % DOWNWARDS ARROW WITH HORIZONTAL STROKE  
<S2909> % UPWARDS ARROW WITH HORIZONTAL STROKE  
<S290A> % UPWARDS TRIPLE ARROW  
<S290B> % DOWNWARDS TRIPLE ARROW  
<S290C> % LEFTWARDS DOUBLE DASH ARROW  
<S290D> % RIGHTWARDS DOUBLE DASH ARROW  
<S290E> % LEFTWARDS TRIPLE DASH ARROW  
<S290F> % RIGHTWARDS TRIPLE DASH ARROW  
<S2910> % RIGHTWARDS TWO-HEADED TRIPLE DASH ARROW  
<S2911> % RIGHTWARDS ARROW WITH DOTTED STEM  
<S2912> % UPWARDS ARROW TO BAR  
<S2913> % DOWNWARDS ARROW TO BAR  
<S2914> % RIGHTWARDS ARROW WITH TAIL WITH VERTICAL STROKE  
<S2915> % RIGHTWARDS ARROW WITH TAIL WITH DOUBLE VERTICAL STROKE  
<S2916> % RIGHTWARDS TWO-HEADED ARROW WITH TAIL  
<S2917> % RIGHTWARDS TWO-HEADED ARROW WITH TAIL WITH VERTICAL STROKE  
<S2918> % RIGHTWARDS TWO-HEADED ARROW WITH TAIL WITH DOUBLE VERTICAL STROKE  
<S2919> % LEFTWARDS ARROW-TAIL  
<S291A> % RIGHTWARDS ARROW-TAIL  
<S291B> % LEFTWARDS DOUBLE ARROW-TAIL  
<S291C> % RIGHTWARDS DOUBLE ARROW-TAIL  
<S291D> % LEFTWARDS ARROW TO BLACK DIAMOND  
<S291E> % RIGHTWARDS ARROW TO BLACK DIAMOND  
<S291F> % LEFTWARDS ARROW FROM BAR TO BLACK DIAMOND  
<S2920> % RIGHTWARDS ARROW FROM BAR TO BLACK DIAMOND  
<S2921> % NORTH WEST AND SOUTH EAST ARROW  
<S2922> % NORTH EAST AND SOUTH WEST ARROW  
<S2923> % NORTH WEST ARROW WITH HOOK  
<S2924> % NORTH EAST ARROW WITH HOOK  
<S2925> % SOUTH EAST ARROW WITH HOOK  
<S2926> % SOUTH WEST ARROW WITH HOOK  
<S2927> % NORTH WEST ARROW AND NORTH EAST ARROW  
<S2928> % NORTH EAST ARROW AND SOUTH EAST ARROW  
<S2929> % SOUTH EAST ARROW AND SOUTH WEST ARROW

<S292A> % SOUTH WEST ARROW AND NORTH WEST ARROW  
<S292B> % RISING DIAGONAL CROSSING FALLING DIAGONAL  
<S292C> % FALLING DIAGONAL CROSSING RISING DIAGONAL  
<S292D> % SOUTH EAST ARROW CROSSING NORTH EAST ARROW  
<S292E> % NORTH EAST ARROW CROSSING SOUTH EAST ARROW  
<S292F> % FALLING DIAGONAL CROSSING NORTH EAST ARROW  
<S2930> % RISING DIAGONAL CROSSING SOUTH EAST ARROW  
<S2931> % NORTH EAST ARROW CROSSING NORTH WEST ARROW  
<S2932> % NORTH WEST ARROW CROSSING NORTH EAST ARROW  
<S2933> % WAVE ARROW POINTING DIRECTLY RIGHT  
<S2934> % ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS  
<S2935> % ARROW POINTING RIGHTWARDS THEN CURVING DOWNWARDS  
<S2936> % ARROW POINTING DOWNWARDS THEN CURVING LEFTWARDS  
<S2937> % ARROW POINTING DOWNWARDS THEN CURVING RIGHTWARDS  
<S2938> % RIGHT-SIDE ARC CLOCKWISE ARROW  
<S2939> % LEFT-SIDE ARC ANTICLOCKWISE ARROW  
<S293A> % TOP ARC ANTICLOCKWISE ARROW  
<S293B> % BOTTOM ARC ANTICLOCKWISE ARROW  
<S293C> % TOP ARC CLOCKWISE ARROW WITH MINUS  
<S293D> % TOP ARC ANTICLOCKWISE ARROW WITH PLUS  
<S293E> % LOWER RIGHT SEMICIRCULAR CLOCKWISE ARROW  
<S293F> % LOWER LEFT SEMICIRCULAR ANTICLOCKWISE ARROW  
<S2940> % ANTICLOCKWISE CLOSED CIRCLE ARROW  
<S2941> % CLOCKWISE CLOSED CIRCLE ARROW  
<S2942> % RIGHTWARDS ARROW ABOVE SHORT LEFTWARDS ARROW  
<S2943> % LEFTWARDS ARROW ABOVE SHORT RIGHTWARDS ARROW  
<S2944> % SHORT RIGHTWARDS ARROW ABOVE LEFTWARDS ARROW  
<S2945> % RIGHTWARDS ARROW WITH PLUS BELOW  
<S2946> % LEFTWARDS ARROW WITH PLUS BELOW  
<S2947> % RIGHTWARDS ARROW THROUGH X  
<S2948> % LEFT RIGHT ARROW THROUGH SMALL CIRCLE  
<S2949> % UPWARDS TWO-HEADED ARROW FROM SMALL CIRCLE  
<S294A> % LEFT BARB UP RIGHT BARB DOWN HARPOON  
<S294B> % LEFT BARB DOWN RIGHT BARB UP HARPOON  
<S294C> % UP BARB RIGHT DOWN BARB LEFT HARPOON  
<S294D> % UP BARB LEFT DOWN BARB RIGHT HARPOON  
<S294E> % LEFT BARB UP RIGHT BARB UP HARPOON  
<S294F> % UP BARB RIGHT DOWN BARB RIGHT HARPOON  
<S2950> % LEFT BARB DOWN RIGHT BARB DOWN HARPOON  
<S2951> % UP BARB LEFT DOWN BARB LEFT HARPOON  
<S2952> % LEFTWARDS HARPOON WITH BARB UP TO BAR  
<S2953> % RIGHTWARDS HARPOON WITH BARB UP TO BAR  
<S2954> % UPWARDS HARPOON WITH BARB RIGHT TO BAR  
<S2955> % DOWNWARDS HARPOON WITH BARB RIGHT TO BAR  
<S2956> % LEFTWARDS HARPOON WITH BARB DOWN TO BAR  
<S2957> % RIGHTWARDS HARPOON WITH BARB DOWN TO BAR  
<S2958> % UPWARDS HARPOON WITH BARB LEFT TO BAR  
<S2959> % DOWNWARDS HARPOON WITH BARB LEFT TO BAR  
<S295A> % LEFTWARDS HARPOON WITH BARB UP FROM BAR  
<S295B> % RIGHTWARDS HARPOON WITH BARB UP FROM BAR  
<S295C> % UPWARDS HARPOON WITH BARB RIGHT FROM BAR  
<S295D> % DOWNWARDS HARPOON WITH BARB RIGHT FROM BAR  
<S295E> % LEFTWARDS HARPOON WITH BARB DOWN FROM BAR

<S295F> % RIGHTWARDS HARPOON WITH BARB DOWN FROM BAR  
<S2960> % UPWARDS HARPOON WITH BARB LEFT FROM BAR  
<S2961> % DOWNWARDS HARPOON WITH BARB LEFT FROM BAR  
<S2962> % LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB DOWN  
<S2963> % UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT  
<S2964> % RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB DOWN  
<S2965> % DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON WITH BARB RIGHT  
<S2966> % LEFTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB UP  
<S2967> % LEFTWARDS HARPOON WITH BARB DOWN ABOVE RIGHTWARDS HARPOON WITH BARB DOWN  
<S2968> % RIGHTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB UP  
<S2969> % RIGHTWARDS HARPOON WITH BARB DOWN ABOVE LEFTWARDS HARPOON WITH BARB DOWN  
<S296A> % LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH  
<S296B> % LEFTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH  
<S296C> % RIGHTWARDS HARPOON WITH BARB UP ABOVE LONG DASH  
<S296D> % RIGHTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH  
<S296E> % UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON WITH BARB RIGHT  
<S296F> % DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT  
<S2970> % RIGHT DOUBLE ARROW WITH ROUNDED HEAD  
<S2971> % EQUALS SIGN ABOVE RIGHTWARDS ARROW  
<S2972> % TILDE OPERATOR ABOVE RIGHTWARDS ARROW  
<S2973> % LEFTWARDS ARROW ABOVE TILDE OPERATOR  
<S2974> % RIGHTWARDS ARROW ABOVE TILDE OPERATOR  
<S2975> % RIGHTWARDS ARROW ABOVE ALMOST EQUAL TO  
<S2976> % LESS-THAN ABOVE LEFTWARDS ARROW  
<S2977> % LEFTWARDS ARROW THROUGH LESS-THAN  
<S2978> % GREATER-THAN ABOVE RIGHTWARDS ARROW  
<S2979> % SUBSET ABOVE RIGHTWARDS ARROW  
<S297A> % LEFTWARDS ARROW THROUGH SUBSET  
<S297B> % SUPERSET ABOVE LEFTWARDS ARROW  
<S297C> % LEFT FISH TAIL  
<S297D> % RIGHT FISH TAIL  
<S297E> % UP FISH TAIL  
<S297F> % DOWN FISH TAIL  
<S2980> % TRIPLE VERTICAL BAR DELIMITER  
<S2981> % Z NOTATION SPOT  
<S2982> % Z NOTATION TYPE COLON  
<S2999> % DOTTED FENCE  
<S299A> % VERTICAL ZIGZAG LINE  
<S299B> % MEASURED ANGLE OPENING LEFT  
<S299C> % RIGHT ANGLE VARIANT WITH SQUARE  
<S299D> % MEASURED RIGHT ANGLE WITH DOT  
<S299E> % ANGLE WITH S INSIDE  
<S299F> % ACUTE ANGLE

<S29A0> % SPHERICAL ANGLE OPENING LEFT  
<S29A1> % SPHERICAL ANGLE OPENING UP  
<S29A2> % TURNED ANGLE  
<S29A3> % REVERSED ANGLE  
<S29A4> % ANGLE WITH UNDERBAR  
<S29A5> % REVERSED ANGLE WITH UNDERBAR  
<S29A6> % OBLIQUE ANGLE OPENING UP  
<S29A7> % OBLIQUE ANGLE OPENING DOWN  
<S29A8> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING UP AND RIGHT  
<S29A9> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING UP AND LEFT  
<S29AA> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING DOWN AND RIGHT  
<S29AB> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING DOWN AND LEFT  
<S29AC> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING RIGHT AND UP  
<S29AD> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING LEFT AND UP  
<S29AE> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING RIGHT AND DOWN  
<S29AF> % MEASURED ANGLE WITH OPEN ARM ENDING IN ARROW POINTING LEFT AND DOWN  
<S29B0> % REVERSED EMPTY SET  
<S29B1> % EMPTY SET WITH OVERBAR  
<S29B2> % EMPTY SET WITH SMALL CIRCLE ABOVE  
<S29B3> % EMPTY SET WITH RIGHT ARROW ABOVE  
<S29B4> % EMPTY SET WITH LEFT ARROW ABOVE  
<S29B5> % CIRCLE WITH HORIZONTAL BAR  
<S29B6> % CIRCLED VERTICAL BAR  
<S29B7> % CIRCLED PARALLEL  
<S29B8> % CIRCLED REVERSE SOLIDUS  
<S29B9> % CIRCLED PERPENDICULAR  
<S29BA> % CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF DIVIDED BY VERTICAL BAR  
<S29BB> % CIRCLE WITH SUPERIMPOSED X  
<S29BC> % CIRCLED ANTICLOCKWISE-ROTATED DIVISION SIGN  
<S29BD> % UP ARROW THROUGH CIRCLE  
<S29BE> % CIRCLED WHITE BULLET  
<S29BF> % CIRCLED BULLET  
<S29C0> % CIRCLED LESS-THAN  
<S29C1> % CIRCLED GREATER-THAN  
<S29C2> % CIRCLE WITH SMALL CIRCLE TO THE RIGHT  
<S29C3> % CIRCLE WITH TWO HORIZONTAL STROKES TO THE RIGHT  
<S29C4> % SQUARED RISING DIAGONAL SLASH  
<S29C5> % SQUARED FALLING DIAGONAL SLASH  
<S29C6> % SQUARED ASTERISK  
<S29C7> % SQUARED SMALL CIRCLE  
<S29C8> % SQUARED SQUARE  
<S29C9> % TWO JOINED SQUARES  
<S29CA> % TRIANGLE WITH DOT ABOVE  
<S29CB> % TRIANGLE WITH UNDERBAR

<S29CC> % S IN TRIANGLE  
 <S29CD> % TRIANGLE WITH SERIFS AT BOTTOM  
 <S29CE> % RIGHT TRIANGLE ABOVE LEFT TRIANGLE  
 <S29CF> % LEFT TRIANGLE BESIDE VERTICAL BAR  
 <S29D0> % VERTICAL BAR BESIDE RIGHT TRIANGLE  
 <S29D1> % BOWTIE WITH LEFT HALF BLACK  
 <S29D2> % BOWTIE WITH RIGHT HALF BLACK  
 <S29D3> % BLACK BOWTIE  
 <S29D4> % TIMES WITH LEFT HALF BLACK  
 <S29D5> % TIMES WITH RIGHT HALF BLACK  
 <S29D6> % WHITE HOURGLASS  
 <S29D7> % BLACK HOURGLASS  
 <S29D8> % LEFT WIGGLY FENCE  
 <S29D9> % RIGHT WIGGLY FENCE  
 <S29DA> % LEFT DOUBLE WIGGLY FENCE  
 <S29DB> % RIGHT DOUBLE WIGGLY FENCE  
 <S29DC> % INCOMPLETE INFINITY  
 <S29DD> % TIE OVER INFINITY  
 <S29DE> % INFINITY NEGATED WITH VERTICAL BAR  
 <S29DF> % DOUBLE-ENDED MULTIMAP  
 <S29E0> % SQUARE WITH CONTOURED OUTLINE  
 <S29E1> % INCREASES AS  
 <S29E2> % SHUFFLE PRODUCT  
 <S29E3> % EQUALS SIGN AND SLANTED PARALLEL  
 <S29E4> % EQUALS SIGN AND SLANTED PARALLEL WITH TILDE ABOVE  
 <S29E5> % IDENTICAL TO AND SLANTED PARALLEL  
 <S29E6> % GLEICH STARK  
 <S29E7> % THERMODYNAMIC  
 <S29E8> % DOWN-POINTING TRIANGLE WITH LEFT HALF BLACK  
 <S29E9> % DOWN-POINTING TRIANGLE WITH RIGHT HALF BLACK  
 <S29EA> % BLACK DIAMOND WITH DOWN ARROW  
 <S29EB> % BLACK LOZENGE  
 <S29EC> % WHITE CIRCLE WITH DOWN ARROW  
 <S29ED> % BLACK CIRCLE WITH DOWN ARROW  
 <S29EE> % ERROR-BARRED WHITE SQUARE  
 <S29EF> % ERROR-BARRED BLACK SQUARE  
 <S29F0> % ERROR-BARRED WHITE DIAMOND  
 <S29F1> % ERROR-BARRED BLACK DIAMOND  
 <S29F2> % ERROR-BARRED WHITE CIRCLE  
 <S29F3> % ERROR-BARRED BLACK CIRCLE  
 <S29F4> % RULE-DELAYED  
 <S29F5> % REVERSE SOLIDUS OPERATOR  
 <S29F6> % SOLIDUS WITH OVERBAR  
 <S29F7> % REVERSE SOLIDUS WITH HORIZONTAL STROKE  
 <S29F8> % BIG SOLIDUS  
 <S29F9> % BIG REVERSE SOLIDUS  
 <S29FA> % DOUBLE PLUS  
 <S29FB> % TRIPLE PLUS  
 <S29FE> % TINY  
 <S29FF> % MINY  
 <S2A00> % N-ARY CIRCLED DOT OPERATOR  
 <S2A01> % N-ARY CIRCLED PLUS OPERATOR  
 <S2A02> % N-ARY CIRCLED TIMES OPERATOR

<S2A03> % N-ARY UNION OPERATOR WITH DOT  
<S2A04> % N-ARY UNION OPERATOR WITH PLUS  
<S2A05> % N-ARY SQUARE INTERSECTION OPERATOR  
<S2A06> % N-ARY SQUARE UNION OPERATOR  
<S2A07> % TWO LOGICAL AND OPERATOR  
<S2A08> % TWO LOGICAL OR OPERATOR  
<S2A09> % N-ARY TIMES OPERATOR  
<S2A0A> % MODULO TWO SUM  
<S2A0B> % SUMMATION WITH INTEGRAL  
<S2A0D> % FINITE PART INTEGRAL  
<S2A0E> % INTEGRAL WITH DOUBLE STROKE  
<S2A0F> % INTEGRAL AVERAGE WITH SLASH  
<S2A10> % CIRCULATION FUNCTION  
<S2A11> % ANTICLOCKWISE INTEGRATION  
<S2A12> % LINE INTEGRATION WITH RECTANGULAR PATH AROUND POLE  
<S2A13> % LINE INTEGRATION WITH SEMICIRCULAR PATH AROUND POLE  
<S2A14> % LINE INTEGRATION NOT INCLUDING THE POLE  
<S2A15> % INTEGRAL AROUND A POINT OPERATOR  
<S2A16> % QUATERNION INTEGRAL OPERATOR  
<S2A17> % INTEGRAL WITH LEFTWARDS ARROW WITH HOOK  
<S2A18> % INTEGRAL WITH TIMES SIGN  
<S2A19> % INTEGRAL WITH INTERSECTION  
<S2A1A> % INTEGRAL WITH UNION  
<S2A1B> % INTEGRAL WITH OVERBAR  
<S2A1C> % INTEGRAL WITH UNDERBAR  
<S2A1D> % JOIN  
<S2A1E> % LARGE LEFT TRIANGLE OPERATOR  
<S2A1F> % Z NOTATION SCHEMA COMPOSITION  
<S2A20> % Z NOTATION SCHEMA PIPING  
<S2A21> % Z NOTATION SCHEMA PROJECTION  
<S2A22> % PLUS SIGN WITH SMALL CIRCLE ABOVE  
<S2A23> % PLUS SIGN WITH CIRCUMFLEX ACCENT ABOVE  
<S2A24> % PLUS SIGN WITH TILDE ABOVE  
<S2A25> % PLUS SIGN WITH DOT BELOW  
<S2A26> % PLUS SIGN WITH TILDE BELOW  
<S2A27> % PLUS SIGN WITH SUBSCRIPT TWO  
<S2A28> % PLUS SIGN WITH BLACK TRIANGLE  
<S2A29> % MINUS SIGN WITH COMMA ABOVE  
<S2A2A> % MINUS SIGN WITH DOT BELOW  
<S2A2B> % MINUS SIGN WITH FALLING DOTS  
<S2A2C> % MINUS SIGN WITH RISING DOTS  
<S2A2D> % PLUS SIGN IN LEFT HALF CIRCLE  
<S2A2E> % PLUS SIGN IN RIGHT HALF CIRCLE  
<S2A2F> % VECTOR OR CROSS PRODUCT  
<S2A30> % MULTIPLICATION SIGN WITH DOT ABOVE  
<S2A31> % MULTIPLICATION SIGN WITH UNDERBAR  
<S2A32> % SEMIDIRECT PRODUCT WITH BOTTOM CLOSED  
<S2A33> % SMASH PRODUCT  
<S2A34> % MULTIPLICATION SIGN IN LEFT HALF CIRCLE  
<S2A35> % MULTIPLICATION SIGN IN RIGHT HALF CIRCLE  
<S2A36> % CIRCLED MULTIPLICATION SIGN WITH CIRCUMFLEX ACCENT  
<S2A37> % MULTIPLICATION SIGN IN DOUBLE CIRCLE  
<S2A38> % CIRCLED DIVISION SIGN

<S2A39> % PLUS SIGN IN TRIANGLE  
<S2A3A> % MINUS SIGN IN TRIANGLE  
<S2A3B> % MULTIPLICATION SIGN IN TRIANGLE  
<S2A3C> % INTERIOR PRODUCT  
<S2A3D> % RIGHTHAND INTERIOR PRODUCT  
<S2A3E> % Z NOTATION RELATIONAL COMPOSITION  
<S2A3F> % AMALGAMATION OR COPRODUCT  
<S2A40> % INTERSECTION WITH DOT  
<S2A41> % UNION WITH MINUS SIGN  
<S2A42> % UNION WITH OVERBAR  
<S2A43> % INTERSECTION WITH OVERBAR  
<S2A44> % INTERSECTION WITH LOGICAL AND  
<S2A45> % UNION WITH LOGICAL OR  
<S2A46> % UNION ABOVE INTERSECTION  
<S2A47> % INTERSECTION ABOVE UNION  
<S2A48> % UNION ABOVE BAR ABOVE INTERSECTION  
<S2A49> % INTERSECTION ABOVE BAR ABOVE UNION  
<S2A4A> % UNION BESIDE AND JOINED WITH UNION  
<S2A4B> % INTERSECTION BESIDE AND JOINED WITH INTERSECTION  
<S2A4C> % CLOSED UNION WITH SERIFS  
<S2A4D> % CLOSED INTERSECTION WITH SERIFS  
<S2A4E> % DOUBLE SQUARE INTERSECTION  
<S2A4F> % DOUBLE SQUARE UNION  
<S2A50> % CLOSED UNION WITH SERIFS AND SMASH PRODUCT  
<S2A51> % LOGICAL AND WITH DOT ABOVE  
<S2A52> % LOGICAL OR WITH DOT ABOVE  
<S2A53> % DOUBLE LOGICAL AND  
<S2A54> % DOUBLE LOGICAL OR  
<S2A55> % TWO INTERSECTING LOGICAL AND  
<S2A56> % TWO INTERSECTING LOGICAL OR  
<S2A57> % SLOPING LARGE OR  
<S2A58> % SLOPING LARGE AND  
<S2A59> % LOGICAL OR OVERLAPPING LOGICAL AND  
<S2A5A> % LOGICAL AND WITH MIDDLE STEM  
<S2A5B> % LOGICAL OR WITH MIDDLE STEM  
<S2A5C> % LOGICAL AND WITH HORIZONTAL DASH  
<S2A5D> % LOGICAL OR WITH HORIZONTAL DASH  
<S2A5E> % LOGICAL AND WITH DOUBLE OVERBAR  
<S2A5F> % LOGICAL AND WITH UNDERBAR  
<S2A60> % LOGICAL AND WITH DOUBLE UNDERBAR  
<S2A61> % SMALL VEE WITH UNDERBAR  
<S2A62> % LOGICAL OR WITH DOUBLE OVERBAR  
<S2A63> % LOGICAL OR WITH DOUBLE UNDERBAR  
<S2A64> % Z NOTATION DOMAIN ANTIRESTRICTION  
<S2A65> % Z NOTATION RANGE ANTIRESTRICTION  
<S2A66> % EQUALS SIGN WITH DOT BELOW  
<S2A67> % IDENTICAL WITH DOT ABOVE  
<S2A68> % TRIPLE HORIZONTAL BAR WITH DOUBLE VERTICAL STROKE  
<S2A69> % TRIPLE HORIZONTAL BAR WITH TRIPLE VERTICAL STROKE  
<S2A6A> % TILDE OPERATOR WITH DOT ABOVE  
<S2A6B> % TILDE OPERATOR WITH RISING DOTS  
<S2A6C> % SIMILAR MINUS SIMILAR  
<S2A6D> % CONGRUENT WITH DOT ABOVE

<S2A6E> % EQUALS WITH ASTERISK  
<S2A6F> % ALMOST EQUAL TO WITH CIRCUMFLEX ACCENT  
<S2A70> % APPROXIMATELY EQUAL OR EQUAL TO  
<S2A71> % EQUALS SIGN ABOVE PLUS SIGN  
<S2A72> % PLUS SIGN ABOVE EQUALS SIGN  
<S2A73> % EQUALS SIGN ABOVE TILDE OPERATOR  
<S2A77> % EQUALS SIGN WITH TWO DOTS ABOVE AND TWO DOTS BELOW  
<S2A78> % EQUIVALENT WITH FOUR DOTS ABOVE  
<S2A79> % LESS-THAN WITH CIRCLE INSIDE  
<S2A7A> % GREATER-THAN WITH CIRCLE INSIDE  
<S2A7B> % LESS-THAN WITH QUESTION MARK ABOVE  
<S2A7C> % GREATER-THAN WITH QUESTION MARK ABOVE  
<S2A7D> % LESS-THAN OR SLANTED EQUAL TO  
<S2A7E> % GREATER-THAN OR SLANTED EQUAL TO  
<S2A7F> % LESS-THAN OR SLANTED EQUAL TO WITH DOT INSIDE  
<S2A80> % GREATER-THAN OR SLANTED EQUAL TO WITH DOT INSIDE  
<S2A81> % LESS-THAN OR SLANTED EQUAL TO WITH DOT ABOVE  
<S2A82> % GREATER-THAN OR SLANTED EQUAL TO WITH DOT ABOVE  
<S2A83> % LESS-THAN OR SLANTED EQUAL TO WITH DOT ABOVE RIGHT  
<S2A84> % GREATER-THAN OR SLANTED EQUAL TO WITH DOT ABOVE LEFT  
<S2A85> % LESS-THAN OR APPROXIMATE  
<S2A86> % GREATER-THAN OR APPROXIMATE  
<S2A87> % LESS-THAN AND SINGLE-LINE NOT EQUAL TO  
<S2A88> % GREATER-THAN AND SINGLE-LINE NOT EQUAL TO  
<S2A89> % LESS-THAN AND NOT APPROXIMATE  
<S2A8A> % GREATER-THAN AND NOT APPROXIMATE  
<S2A8B> % LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN  
<S2A8C> % GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN  
<S2A8D> % LESS-THAN ABOVE SIMILAR OR EQUAL  
<S2A8E> % GREATER-THAN ABOVE SIMILAR OR EQUAL  
<S2A8F> % LESS-THAN ABOVE SIMILAR ABOVE GREATER-THAN  
<S2A90> % GREATER-THAN ABOVE SIMILAR ABOVE LESS-THAN  
<S2A91> % LESS-THAN ABOVE GREATER-THAN ABOVE DOUBLE-LINE EQUAL  
<S2A92> % GREATER-THAN ABOVE LESS-THAN ABOVE DOUBLE-LINE EQUAL  
<S2A93> % LESS-THAN ABOVE SLANTED EQUAL ABOVE GREATER-THAN  
ABOVE SLANTED EQUAL  
<S2A94> % GREATER-THAN ABOVE SLANTED EQUAL ABOVE LESS-THAN  
ABOVE SLANTED EQUAL  
<S2A95> % SLANTED EQUAL TO OR LESS-THAN  
<S2A96> % SLANTED EQUAL TO OR GREATER-THAN  
<S2A97> % SLANTED EQUAL TO OR LESS-THAN WITH DOT INSIDE  
<S2A98> % SLANTED EQUAL TO OR GREATER-THAN WITH DOT INSIDE  
<S2A99> % DOUBLE-LINE EQUAL TO OR LESS-THAN  
<S2A9A> % DOUBLE-LINE EQUAL TO OR GREATER-THAN  
<S2A9B> % DOUBLE-LINE SLANTED EQUAL TO OR LESS-THAN  
<S2A9C> % DOUBLE-LINE SLANTED EQUAL TO OR GREATER-THAN  
<S2A9D> % SIMILAR OR LESS-THAN  
<S2A9E> % SIMILAR OR GREATER-THAN  
<S2A9F> % SIMILAR ABOVE LESS-THAN ABOVE EQUALS SIGN  
<S2AA0> % SIMILAR ABOVE GREATER-THAN ABOVE EQUALS SIGN  
<S2AA1> % DOUBLE NESTED LESS-THAN  
<S2AA2> % DOUBLE NESTED GREATER-THAN  
<S2AA3> % DOUBLE NESTED LESS-THAN WITH UNDERBAR



<S2AA4> % GREATER-THAN OVERLAPPING LESS-THAN  
<S2AA5> % GREATER-THAN BESIDE LESS-THAN  
<S2AA6> % LESS-THAN CLOSED BY CURVE  
<S2AA7> % GREATER-THAN CLOSED BY CURVE  
<S2AA8> % LESS-THAN CLOSED BY CURVE ABOVE SLANTED EQUAL  
<S2AA9> % GREATER-THAN CLOSED BY CURVE ABOVE SLANTED EQUAL  
<S2AAA> % SMALLER THAN  
<S2AAB> % LARGER THAN  
<S2AAC> % SMALLER THAN OR EQUAL TO  
<S2AAD> % LARGER THAN OR EQUAL TO  
<S2AAE> % EQUALS SIGN WITH BUMPY ABOVE  
<S2AAF> % PRECEDES ABOVE SINGLE-LINE EQUALS SIGN  
<S2AB0> % SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN  
<S2AB1> % PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO  
<S2AB2> % SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO  
<S2AB3> % PRECEDES ABOVE EQUALS SIGN  
<S2AB4> % SUCCEEDS ABOVE EQUALS SIGN  
<S2AB5> % PRECEDES ABOVE NOT EQUAL TO  
<S2AB6> % SUCCEEDS ABOVE NOT EQUAL TO  
<S2AB7> % PRECEDES ABOVE ALMOST EQUAL TO  
<S2AB8> % SUCCEEDS ABOVE ALMOST EQUAL TO  
<S2AB9> % PRECEDES ABOVE NOT ALMOST EQUAL TO  
<S2ABA> % SUCCEEDS ABOVE NOT ALMOST EQUAL TO  
<S2ABB> % DOUBLE PRECEDES  
<S2ABC> % DOUBLE SUCCEEDS  
<S2ABD> % SUBSET WITH DOT  
<S2ABE> % SUPERSET WITH DOT  
<S2ABF> % SUBSET WITH PLUS SIGN BELOW  
<S2AC0> % SUPERSET WITH PLUS SIGN BELOW  
<S2AC1> % SUBSET WITH MULTIPLICATION SIGN BELOW  
<S2AC2> % SUPERSET WITH MULTIPLICATION SIGN BELOW  
<S2AC3> % SUBSET OF OR EQUAL TO WITH DOT ABOVE  
<S2AC4> % SUPERSET OF OR EQUAL TO WITH DOT ABOVE  
<S2AC5> % SUBSET OF ABOVE EQUALS SIGN  
<S2AC6> % SUPERSET OF ABOVE EQUALS SIGN  
<S2AC7> % SUBSET OF ABOVE TILDE OPERATOR  
<S2AC8> % SUPERSET OF ABOVE TILDE OPERATOR  
<S2AC9> % SUBSET OF ABOVE ALMOST EQUAL TO  
<S2ACA> % SUPERSET OF ABOVE ALMOST EQUAL TO  
<S2ACB> % SUBSET OF ABOVE NOT EQUAL TO  
<S2ACC> % SUPERSET OF ABOVE NOT EQUAL TO  
<S2ACD> % SQUARE LEFT OPEN BOX OPERATOR  
<S2ACE> % SQUARE RIGHT OPEN BOX OPERATOR  
<S2ACF> % CLOSED SUBSET  
<S2AD0> % CLOSED SUPERSET  
<S2AD1> % CLOSED SUBSET OR EQUAL TO  
<S2AD2> % CLOSED SUPERSET OR EQUAL TO  
<S2AD3> % SUBSET ABOVE SUPERSET  
<S2AD4> % SUPERSET ABOVE SUBSET  
<S2AD5> % SUBSET ABOVE SUBSET  
<S2AD6> % SUPERSET ABOVE SUPERSET  
<S2AD7> % SUPERSET BESIDE SUBSET  
<S2AD8> % SUPERSET BESIDE AND JOINED BY DASH WITH SUBSET

<S2AD9> % ELEMENT OF OPENING DOWNWARDS  
<S2ADA> % PITCHFORK WITH TEE TOP  
<S2ADB> % TRANSVERSAL INTERSECTION  
<S2ADD> % NONFORKING  
<S2ADE> % SHORT LEFT TACK  
<S2ADF> % SHORT DOWN TACK  
<S2AE0> % SHORT UP TACK  
<S2AE1> % PERPENDICULAR WITH S  
<S2AE2> % VERTICAL BAR TRIPLE RIGHT TURNSTILE  
<S2AE3> % DOUBLE VERTICAL BAR LEFT TURNSTILE  
<S2AE4> % VERTICAL BAR DOUBLE LEFT TURNSTILE  
<S2AE5> % DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE  
<S2AE6> % LONG DASH FROM LEFT MEMBER OF DOUBLE VERTICAL  
<S2AE7> % SHORT DOWN TACK WITH OVERBAR  
<S2AE8> % SHORT UP TACK WITH UNDERBAR  
<S2AE9> % SHORT UP TACK ABOVE SHORT DOWN TACK  
<S2AEA> % DOUBLE DOWN TACK  
<S2AEB> % DOUBLE UP TACK  
<S2AEC> % DOUBLE STROKE NOT SIGN  
<S2AED> % REVERSED DOUBLE STROKE NOT SIGN  
<S2AEE> % DOES NOT DIVIDE WITH REVERSED NEGATION SLASH  
<S2AEF> % VERTICAL LINE WITH CIRCLE ABOVE  
<S2AF0> % VERTICAL LINE WITH CIRCLE BELOW  
<S2AF1> % DOWN TACK WITH CIRCLE BELOW  
<S2AF2> % PARALLEL WITH HORIZONTAL STROKE  
<S2AF3> % PARALLEL WITH TILDE OPERATOR  
<S2AF4> % TRIPLE VERTICAL BAR BINARY RELATION  
<S2AF5> % TRIPLE VERTICAL BAR WITH HORIZONTAL STROKE  
<S2AF6> % TRIPLE COLON OPERATOR  
<S2AF7> % TRIPLE NESTED LESS-THAN  
<S2AF8> % TRIPLE NESTED GREATER-THAN  
<S2AF9> % DOUBLE-LINE SLANTED LESS-THAN OR EQUAL TO  
<S2AFA> % DOUBLE-LINE SLANTED GREATER-THAN OR EQUAL TO  
<S2AFB> % TRIPLE SOLIDUS BINARY RELATION  
<S2AFC> % LARGE TRIPLE VERTICAL BAR OPERATOR  
<S2AFD> % DOUBLE SOLIDUS OPERATOR  
<S2AFE> % WHITE VERTICAL BAR  
<S2AFF> % N-ARY WHITE VERTICAL BAR  
<S2B00> % NORTH EAST WHITE ARROW  
<S2B01> % NORTH WEST WHITE ARROW  
<S2B02> % SOUTH EAST WHITE ARROW  
<S2B03> % SOUTH WEST WHITE ARROW  
<S2B04> % LEFT RIGHT WHITE ARROW  
<S2B05> % LEFTWARDS BLACK ARROW  
<S2B06> % UPWARDS BLACK ARROW  
<S2B07> % DOWNWARDS BLACK ARROW  
<S2B08> % NORTH EAST BLACK ARROW  
<S2B09> % NORTH WEST BLACK ARROW  
<S2B0A> % SOUTH EAST BLACK ARROW  
<S2B0B> % SOUTH WEST BLACK ARROW  
<S2B0C> % LEFT RIGHT BLACK ARROW  
<S2B0D> % UP DOWN BLACK ARROW  
<S268A> % MONOGRAM FOR YANG

<S268B> % MONOGRAM FOR YIN  
<S268C> % DIGRAM FOR GREATER YANG  
<S268D> % DIGRAM FOR LESSER YIN  
<S268E> % DIGRAM FOR LESSER YANG  
<S268F> % DIGRAM FOR GREATER YIN  
<S2630> % TRIGRAM FOR HEAVEN  
<S2631> % TRIGRAM FOR LAKE  
<S2632> % TRIGRAM FOR FIRE  
<S2633> % TRIGRAM FOR THUNDER  
<S2634> % TRIGRAM FOR WIND  
<S2635> % TRIGRAM FOR WATER  
<S2636> % TRIGRAM FOR MOUNTAIN  
<S2637> % TRIGRAM FOR EARTH  
<S4DC0> % HEXAGRAM FOR THE CREATIVE HEAVEN  
<S4DC1> % HEXAGRAM FOR THE RECEPTIVE EARTH  
<S4DC2> % HEXAGRAM FOR DIFFICULTY AT THE BEGINNING  
<S4DC3> % HEXAGRAM FOR YOUTHFUL FOLLY  
<S4DC4> % HEXAGRAM FOR WAITING  
<S4DC5> % HEXAGRAM FOR CONFLICT  
<S4DC6> % HEXAGRAM FOR THE ARMY  
<S4DC7> % HEXAGRAM FOR HOLDING TOGETHER  
<S4DC8> % HEXAGRAM FOR SMALL TAMING  
<S4DC9> % HEXAGRAM FOR TREADING  
<S4DCA> % HEXAGRAM FOR PEACE  
<S4DCB> % HEXAGRAM FOR STANDSTILL  
<S4DCC> % HEXAGRAM FOR FELLOWSHIP  
<S4DCD> % HEXAGRAM FOR GREAT POSSESSION  
<S4DCE> % HEXAGRAM FOR MODESTY  
<S4DCF> % HEXAGRAM FOR ENTHUSIASM  
<S4DD0> % HEXAGRAM FOR FOLLOWING  
<S4DD1> % HEXAGRAM FOR WORK ON THE DECAYED  
<S4DD2> % HEXAGRAM FOR APPROACH  
<S4DD3> % HEXAGRAM FOR CONTEMPLATION  
<S4DD4> % HEXAGRAM FOR BITING THROUGH  
<S4DD5> % HEXAGRAM FOR GRACE  
<S4DD6> % HEXAGRAM FOR SPLITTING APART  
<S4DD7> % HEXAGRAM FOR RETURN  
<S4DD8> % HEXAGRAM FOR INNOCENCE  
<S4DD9> % HEXAGRAM FOR GREAT TAMING  
<S4DDA> % HEXAGRAM FOR MOUTH CORNERS  
<S4ddb> % HEXAGRAM FOR GREAT PREPONDERANCE  
<S4DDC> % HEXAGRAM FOR THE ABYSMAL WATER  
<S4DDD> % HEXAGRAM FOR THE CLINGING FIRE  
<S4DDE> % HEXAGRAM FOR INFLUENCE  
<S4DDF> % HEXAGRAM FOR DURATION  
<S4DE0> % HEXAGRAM FOR RETREAT  
<S4DE1> % HEXAGRAM FOR GREAT POWER  
<S4DE2> % HEXAGRAM FOR PROGRESS  
<S4DE3> % HEXAGRAM FOR DARKENING OF THE LIGHT  
<S4DE4> % HEXAGRAM FOR THE FAMILY  
<S4DE5> % HEXAGRAM FOR OPPOSITION  
<S4DE6> % HEXAGRAM FOR OBSTRUCTION  
<S4DE7> % HEXAGRAM FOR DELIVERANCE

<S4DE8> % HEXAGRAM FOR DECREASE  
<S4DE9> % HEXAGRAM FOR INCREASE  
<S4DEA> % HEXAGRAM FOR BREAKTHROUGH  
<S4DEB> % HEXAGRAM FOR COMING TO MEET  
<S4DEC> % HEXAGRAM FOR GATHERING TOGETHER  
<S4DED> % HEXAGRAM FOR PUSHING UPWARD  
<S4DEE> % HEXAGRAM FOR OPPRESSION  
<S4DEF> % HEXAGRAM FOR THE WELL  
<S4DF0> % HEXAGRAM FOR REVOLUTION  
<S4DF1> % HEXAGRAM FOR THE CAULDRON  
<S4DF2> % HEXAGRAM FOR THE AROUSING THUNDER  
<S4DF3> % HEXAGRAM FOR THE KEEPING STILL MOUNTAIN  
<S4DF4> % HEXAGRAM FOR DEVELOPMENT  
<S4DF5> % HEXAGRAM FOR THE MARRYING MAIDEN  
<S4DF6> % HEXAGRAM FOR ABUNDANCE  
<S4DF7> % HEXAGRAM FOR THE WANDERER  
<S4DF8> % HEXAGRAM FOR THE GENTLE WIND  
<S4DF9> % HEXAGRAM FOR THE JOYOUS LAKE  
<S4DFA> % HEXAGRAM FOR DISPERSION  
<S4DFB> % HEXAGRAM FOR LIMITATION  
<S4DFC> % HEXAGRAM FOR INNER TRUTH  
<S4DFD> % HEXAGRAM FOR SMALL PREPONDERANCE  
<S4DFE> % HEXAGRAM FOR AFTER COMPLETION  
<S4DFF> % HEXAGRAM FOR BEFORE COMPLETION  
<S1D300> % MONOGRAM FOR EARTH  
<S1D301> % DIGRAM FOR HEAVENLY EARTH  
<S1D302> % DIGRAM FOR HUMAN EARTH  
<S1D303> % DIGRAM FOR EARTHLY HEAVEN  
<S1D304> % DIGRAM FOR EARTHLY HUMAN  
<S1D305> % DIGRAM FOR EARTH  
<S1D306> % TETRAGRAM FOR CENTRE  
<S1D307> % TETRAGRAM FOR FULL CIRCLE  
<S1D308> % TETRAGRAM FOR MIRE  
<S1D309> % TETRAGRAM FOR BARRIER  
<S1D30A> % TETRAGRAM FOR KEEPING SMALL  
<S1D30B> % TETRAGRAM FOR CONTRARIETY  
<S1D30C> % TETRAGRAM FOR ASCENT  
<S1D30D> % TETRAGRAM FOR OPPOSITION  
<S1D30E> % TETRAGRAM FOR BRANCHING OUT  
<S1D30F> % TETRAGRAM FOR DEFECTIVENESS OR DISTORTION  
<S1D310> % TETRAGRAM FOR DIVERGENCE  
<S1D311> % TETRAGRAM FOR YOUTHFULNESS  
<S1D312> % TETRAGRAM FOR INCREASE  
<S1D313> % TETRAGRAM FOR PENETRATION  
<S1D314> % TETRAGRAM FOR REACH  
<S1D315> % TETRAGRAM FOR CONTACT  
<S1D316> % TETRAGRAM FOR HOLDING BACK  
<S1D317> % TETRAGRAM FOR WAITING  
<S1D318> % TETRAGRAM FOR FOLLOWING  
<S1D319> % TETRAGRAM FOR ADVANCE  
<S1D31A> % TETRAGRAM FOR RELEASE  
<S1D31B> % TETRAGRAM FOR RESISTANCE  
<S1D31C> % TETRAGRAM FOR EASE

<S1D31D> % TETRAGRAM FOR JOY  
<S1D31E> % TETRAGRAM FOR CONTENTION  
<S1D31F> % TETRAGRAM FOR ENDEAVOUR  
<S1D320> % TETRAGRAM FOR DUTIES  
<S1D321> % TETRAGRAM FOR CHANGE  
<S1D322> % TETRAGRAM FOR DECISIVENESS  
<S1D323> % TETRAGRAM FOR BOLD RESOLUTION  
<S1D324> % TETRAGRAM FOR PACKING  
<S1D325> % TETRAGRAM FOR LEGION  
<S1D326> % TETRAGRAM FOR CLOSENESS  
<S1D327> % TETRAGRAM FOR KINSHIP  
<S1D328> % TETRAGRAM FOR GATHERING  
<S1D329> % TETRAGRAM FOR STRENGTH  
<S1D32A> % TETRAGRAM FOR PURITY  
<S1D32B> % TETRAGRAM FOR FULLNESS  
<S1D32C> % TETRAGRAM FOR RESIDENCE  
<S1D32D> % TETRAGRAM FOR LAW OR MODEL  
<S1D32E> % TETRAGRAM FOR RESPONSE  
<S1D32F> % TETRAGRAM FOR GOING TO MEET  
<S1D330> % TETRAGRAM FOR ENCOUNTERS  
<S1D331> % TETRAGRAM FOR STOVE  
<S1D332> % TETRAGRAM FOR GREATNESS  
<S1D333> % TETRAGRAM FOR ENLARGEMENT  
<S1D334> % TETRAGRAM FOR PATTERN  
<S1D335> % TETRAGRAM FOR RITUAL  
<S1D336> % TETRAGRAM FOR FLIGHT  
<S1D337> % TETRAGRAM FOR VASTNESS OR WASTING  
<S1D338> % TETRAGRAM FOR CONSTANCY  
<S1D339> % TETRAGRAM FOR MEASURE  
<S1D33A> % TETRAGRAM FOR ETERNITY  
<S1D33B> % TETRAGRAM FOR UNITY  
<S1D33C> % TETRAGRAM FOR DIMINISHMENT  
<S1D33D> % TETRAGRAM FOR CLOSED MOUTH  
<S1D33E> % TETRAGRAM FOR GUARDEDNESS  
<S1D33F> % TETRAGRAM FOR GATHERING IN  
<S1D340> % TETRAGRAM FOR MASSING  
<S1D341> % TETRAGRAM FOR ACCUMULATION  
<S1D342> % TETRAGRAM FOR EMBELLISHMENT  
<S1D343> % TETRAGRAM FOR DOUBT  
<S1D344> % TETRAGRAM FOR WATCH  
<S1D345> % TETRAGRAM FOR SINKING  
<S1D346> % TETRAGRAM FOR INNER  
<S1D347> % TETRAGRAM FOR DEPARTURE  
<S1D348> % TETRAGRAM FOR DARKENING  
<S1D349> % TETRAGRAM FOR DIMMING  
<S1D34A> % TETRAGRAM FOR EXHAUSTION  
<S1D34B> % TETRAGRAM FOR SEVERANCE  
<S1D34C> % TETRAGRAM FOR STOPPAGE  
<S1D34D> % TETRAGRAM FOR HARDNESS  
<S1D34E> % TETRAGRAM FOR COMPLETION  
<S1D34F> % TETRAGRAM FOR CLOSURE  
<S1D350> % TETRAGRAM FOR FAILURE  
<S1D351> % TETRAGRAM FOR AGGRAVATION

<S1D352> % TETRAGRAM FOR COMPLIANCE  
<S1D353> % TETRAGRAM FOR ON THE VERGE  
<S1D354> % TETRAGRAM FOR DIFFICULTIES  
<S1D355> % TETRAGRAM FOR LABOURING  
<S1D356> % TETRAGRAM FOR FOSTERING

**Partly accepted. They will be made ignorable at the first three levels. However for the suggestion to remove unused symbols, see disposition of comment DE 3.**

## **Korea**

### **KR 1.**

Summary: Some problems with the current CTT (Common Template Table) of ISO/IEC 14651 RE Hangeul

1. Five categories of Hangeul letters/syllables in UCS letters syllables

- 
- 1) Hangeul IPF-Johab letters 240 --  
- U+11xx (U+1100 - 11FF)
  - 2) Hangeul Wanseong syllables -- 11,172  
- U+A/B/C/Dxxx (U+AC00 - D7A3)
  - 3) Hangeul Compatibility CV-Johab letters 94 --  
- U+31xx (U+3131 - 318E)
  - 4) Hangeul Half-width CV-Johab letters 52 --  
U+FFxx (U+FFA0 - FFDC)
  - 5) Hangeul Enclosed (Parenthesized 28 29  
/Circled) syllables/letters)  
U+32xx (U+3200-321C, 3260-327B)  
\* IPF=initial-peak-final, CV=consonant-vowel
2. Problems with the current CTT of ISO/IEC 14651 RE Hangeul  
\* Details not shown
- 2.1 Hangeul Compatibility CV-Johab (U+31xx)
  - 2.2 Hangeul Halfwidth CV-Johab letters (U+FFxx)

**Not accepted. In absence of explanation on the problems and of suggestions on how to fix them, it is not clear what has to be done. The Korean national body is invited to prepare a more elaborate contribution for the next amendment if a problem is perceived that really calls for a modification of the template table. In the meanwhile, it is always possible to build a national delta to describe what is expected in Korea, if all expectations are not satisfied currently. It is to be noted that the declaration of a delta is always mandatory to conform to the international standard.**

## **ISO (ITTF)**

### **ISO 1.**

Cover – editorial comment – The words "International Standard" should be replaced with "Amendment" until publication stage. The words "Final Proposed Draft Amendment 2" should be deleted.

**Accepted. The FDAM will show these modifications.**

**\*\*\*\*\* End of this disposition of comments \*\*\*\*\***