ISO/IEC JTC 1/SC 2

CODED CHARACTER SETS

SECRETARIAT: JAPAN (JISC)

DOC TYPE: Text for FDAM ballot

TITLE: Revised Text of ISO/IEC 10646-1/FPDAM 28, Universal Multiple-Octet Coded Character Set (UCS) -- Part 1: Architecture and Basic Multilingual Plane -- AMENDMENT 28: Ideographic description characters

SOURCE: Mr. Bruce Paterson, Project Editor

PROJECT: JTC 1.02.18.01.28

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Information technology — Universal Multiple-Octet Coded Character Set (UCS) —

Part 1:

Architecture and Basic Multilingual Plane

AMENDMENT 28: Ideographic description characters

Page 11, Clause 19

In the list of Block names, after the entry BRAILLE PATTERNS (see Amd. 16) insert new entrIes as follows:

IDEOGRAPHIC DESCRIPTION CHARACTERS
2FF0 - 2FFF

Page 15, Clause 25, Figure 4 (see Amendment 5)

In Figure 4 (Amd.5), in the cross-hatched area for rows 28 to 2F, insert a zone corresponding to 2FF0 to 2FFF containing the words:

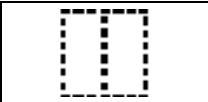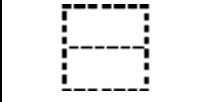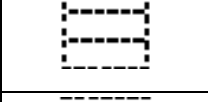Ideographic Description Characters
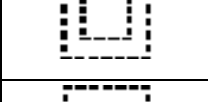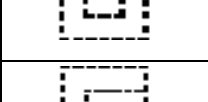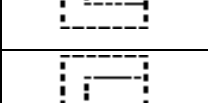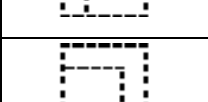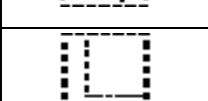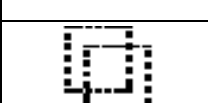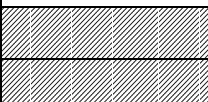
centred on a white background.

After page 113

Add the following new tables titled:

Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTION CHARACTERS

Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTION CHARACTERS

2FF

G = 00

P = 00

Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTION CHARACTERS

dec	hex	Name
240	F0	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT
241	F1	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW
242	F2	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT
243	F3	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW
244	F4	IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND
245	F5	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE
246	F6	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW
247	F7	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT
248	F8	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT
249	F9	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT
250	FA	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT
251	FB	IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID
252	FC	(This position shall not be used)
253	FD	(This position shall not be used)
254	FE	(This position shall not be used)
255	FF	(This position shall not be used)

dec	hex	Name

Page 700, Annex A

In the list of collection numbers and names, after
     206 NUMERIC SHAPE SELECTORS
insert a new entry as follows:
207 IDEOGRAPHIC DESCRIPTION
                 CHARACTERS 2FF0 - 2FFF

and in the the entry:
  251 SCRIPT-SPECIFIC FORMAT CHARACTERS
amend the second line to read:
       Collections 204 - 207

Page 708. Annex D - Alternate format characters

Add the following text at the end of the Annex.

D.3 Ideographic description characters

An Ideographic Description Character (IDC) is a graphic character, which is used with a sequence of other graphic characters to form an Ideographic Description Sequence (IDS). Such a sequence may be used to describe an ideographic character which is not specified within this International Standard.

The IDS describes the ideograph in the abstract form. It is not interpreted as a composed character and does not imply any specific form of rendering.

> NOTE - An IDS is not a character and therefore is not a member of the repertoire of ISO/IEC 10646.

D.3.1 Syntax of an ideographic description sequence

An IDS consists of an IDC followed by a fixed number of Description Components (DC). A DC may be any one of the following :
-    a coded ideograph
-    a coded radical
-    another IDS

> NOTE - The above description implies that any IDS may be nested within another IDS.

Each IDC has four properties as summarized in Table-D.1 below.
-    the number of DCs used in the IDS that commences with that IDC,
-    the definition of its acronym,
-    the syntax of the corresponding IDS,
-    the relative positions of the DCs in the visual representation of the ideograph that is being described in its abstract form.

The syntax of the IDS introduced by each IDC is indicated in the "IDS Acronym and Syntax" column of the table by the abbreviated name of the IDC (e.g. IDC-LTR) followed by the corresponding number of DCs, i.e. $(D_1 D_2)$ or $(D_1 D_2 D_3)$.

> NOTE - An IDS is restricted to no more than 16 characters in length. Also no more than six ideographs and/or radicals occur between any two instances of an IDC character within an IDS.

D.3.2 Individual definitions of the ideographic description characters

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT (2FF0):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 on the left and D_2 on the right.

IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW (2FF1):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 above D_2.

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT (2FF2):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 on the left of D_2, and D_2 on the left of D_3.

IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW (2FF3):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 above D_2, and D_2 above D_3.

IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND (2FF4):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 surrounding D_2 .

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE (2FF5):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 above D_2, and surrounding D_2 on both sides.

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW (2FF6):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 below D_2, and surrounding D_2 on both sides.

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT (2FF7):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 on the left of D_2, and surrounding D_2 above and below.

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT (2FF8):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 at the top left corner of D_2, and partly surrounding D_2 above and to the left.

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT (2FF9):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 at the top right corner of D_2, and partly surrounding D_2 above and to the right.

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT (2FFA):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 at the bottom left corner of D_2, and partly surrounding D_2 below and to the left.

IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID (2FFB):

The IDS introduced by this character describes the abstract form of the ideograph with D_1 and D_2 overlaying each other.

Add Table D.1 (see overleaf) after the preceding text.

Page 729, Annex E

After the entry IDEOGRAPHIC DEPARTING TONE MARK *insert the following character name entries:*
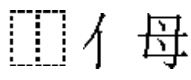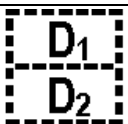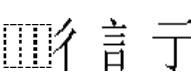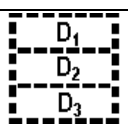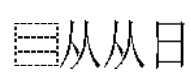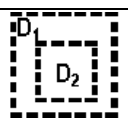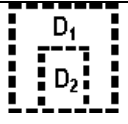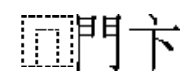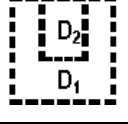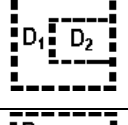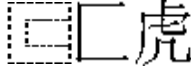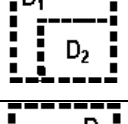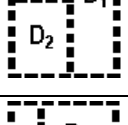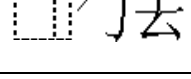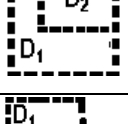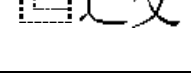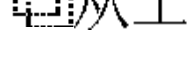
2FF1   IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW
2FF3   IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW
2FF4   IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND
2FF2   IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT
2FF0   DEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT
2FFB   IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID
2FF5   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE
2FF6   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW
2FF7   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT
2FFA   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT
2FF8   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT
2FF9   IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT

Page 751, Annex L

After the entry for GB 2312-1980 *insert new entry as follows.*

GBK (*Guo Biao Kuo*) *Han character internal code extension specification: Jishu Biaozhun Chubanshe* (Technical Standards Publishing)

Table D.1: Properties of ideographic description characters

Character Name: IDEOGRAPHIC DESCRIPTION CHARACTER ...	no. of DCs	IDS Acronym and Syntax	Relative positions of DCs	Example of IDS	IDS example represents:
LEFT TO RIGHT	2	IDC-LTR D_1 D_2			
ABOVE TO BELOW	2	IDC-ATB D_1 D_2			
LEFT TO MIDDLE AND RIGHT	3	IDC-LMR D_1 D_2 D_3			
ABOVE TO MIDDLE AND BELOW	3	IDC-AMB D_1 D_2 D_3			
FULL SURROUND	2	IDC-FSD D_1 D_2			
SURROUND FROM ABOVE	2	IDC-SAV D_1 D_2			
SURROUND FROM BELOW	2	IDC-SBL D_1 D_2			
SURROUND FROM LEFT	2	IDC-SLT D_1 D_2			
SURROUND FROM UPPER LEFT	2	IDC-SUL D_1 D_2			
SURROUND FROM UPPER RIGHT	2	IDC-SUR D_1 D_2			
SURROUND FROM LOWER LEFT	2	IDC-SLL D_1 D_2			
OVERLAID	2	IDC-OVL D_1 D_2			

* NOTE: D_1 and D_2 overlap each other. This diagram does not imply that D_1 is on the top left corner and D_2 is on the bottom right corner.

G8 Explanatory Report

EXPLANATORY REPORT	ISO/IEC 10646-1/FDAM 28
ISO/IEC JTC 1/SC 2 **N 3363**	
Will supersede: SC 2 N 3312	Secretariat: JAPAN (JISC)

This form should be sent to ITTF, together with the committee draft, by the secretariat of the joint technical committee or sub-committee concerned.

The accompanying document is submitted for circulation to member body vote as an FDIS, following consensus of the P-members of the committee obtained on:

1999-08-13

by postal ballot initiated on: 1999-04-07

P-members in favour: (22) Brazil; Canada; China; Denmark; Egypt; Finland; France; Germany; Greece; Ireland; Israel; Italy, Japan; Korea, Rep. of; Netherlands; Norway; Poland; Romania, Russian Federation; Sweden; UK; USA

P-members voting against: (0)

P-members abstaining: (1)Australia

P-members who did not vote (14): Armenia, Austria; Belgium; Iceland; India; Iran, Islamic Republic of; Morocco; Singapore; Slovenia; Thailand; Tunisia; Turkey; Viet Nam; Yugoslavia

Remarks:
History

- Project subdivision - SC 2 Resolution M08.13 (SC 2 N 3077), JTC 1 endorsement: JTC 1 N 5481
- Combined PDAM registration and consideration - Letter ballot: SC 2 N 3186, Summary of voting: SC 2 N 3241, Disposition of comments report : SC 2 N 3282
- FPDAM - Letter ballot: SC 2 N 3312, Summary of voting: SC 2 N 3347, Disposition of Comments Report: SC 2 N 3362

On the recommendation of WG 2 (Res. M37.3 of the Copenhagen meeting, 1999-09-13/16), this document is submitted to ITTF for a two-month FDAM ballot.

Project: JTC 1.02.18.01.28

I hereby confirm that this draft meets the requirements of part 3 of the IEC/ISO Directives

Date: 1999-09-24

Name and signature of secretary:

Toshiko Kimura
Secretariat, ISO/IEC JTC 1/SC 2

Information technology - Universal Multiple-Octet Coded Character Set (UCS)

Part 1: Architecture and Basic Multilingual Plane
Amendment 28: Ideographic description sequences

[Editor's note: The following text is prepared on the assumption that the 12 characters in this PDAM are assigned to Row 20 of the BMP, in the Block GENERAL PUNCTUATION.]

Page 84. TABLE 35 - Row 20: GENERAL PUNCTUATION
Insert the following graphic character symbols at the indicated positions in the table, replacing the existing entries which are indicated by a hatched fill.

2048	
2049	
204A	
204B	
204C	
204D	
204E	
204F	
2050	
2051	
2052	
2053	

Insert the following graphic character names at the indicated positions in the table, replacing the existing entries which read "(This position shall not be used)".

hex	Name
48	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT
49	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW
4A	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT
4B	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW
4C	IDEOGRAPHIC DESCRIPTION CHARACTER OVERALL AROUND
4D	IDEOGRAPHIC DESCRIPTION CHARACTER DOWN TO ENCOMPASS
4E	IDEOGRAPHIC DESCRIPTION CHARACTER UP TO ENCOMPASS
4F	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT TO ENCOMPASS
50	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT DOWN ENCOMPASS
51	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT DOWN ENCOMPASS
52	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT UP ENCOMPASS
53	IDEOGRAPHIC DESCRIPTION CHARACTER EMBEDMENT

Page 708. Annex D - Alternate format characters

Add the following text at the end of the Annex.

D.3 Ideogaphic description sequences

An Ideographic Description Character (IDC) is a graphic character, which is used with a sequence of other graphic characters to form an Ideographic Description Sequence (IDS). Such a sequence may be used to describe an ideographic character which is not specified within this International Standard.

The IDS describes the ideograph in the abstract form. It is not interpreted as a composed character and does not have any rendering implication.

The twelve IDCs that are defined here are assigned to code positions 0000 0248 to 0000 0253.

D3.1 Syntax of an IDS
An IDS consists of an IDC followed by a fixed number of Description Components (DC). A DC may be any one of the following :
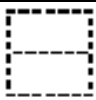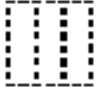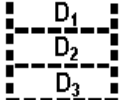
-    A coded ideograph
-    A coded radical
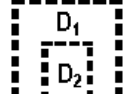-   A coded ideographic component
-    Another IDS
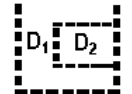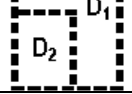
Each IDC has 3 properties as summarized in Table-XXX below.
-    The number of DCs used in the IDS that commences with that IDC,
-    The definition of the proper usage of the IDC,
-    -The relative positions of the DCs in the visual representation of the ideograph that is being described in its abstract form.
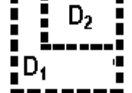
The syntax of the IDS introduced by each IDC is indicated in the "IDS syntax" column of the table by the abbreviated name of the IDC (e.g.IDC-LTR) followed by two or three numbered DCs (DC1, DC2, DC3).

Table XXX

Symbol	Name (Aconym)	# of DCs	IDS Syntax	Relative positions of DCs
	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT (IDC-LTR)	2	IDC-LTR D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW (IDC-ATB)	2	IDC-ATB D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT (IDC-LMR)	3	IDC-LMR D1 D2 D3	
	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW (IDC-AMB)	3	IDC-AMB D1 D2 D3	

|				
	IDEOGRAPHIC DESCRIPTION CHARACTER OVERALL AROUND (IDC-OVA)	2	IDC-OVA D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER DOWN TO ENCOMPASS (IDC-DTE)	2	IDC-DTE C1 C2	
	IDEOGRAPHIC DESCRIPTION CHARACTER UP TO ENCOMPASS (IDC-UTE)	2	IDC-UTE D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT TO ENCOMPASS (IDC-RTE)	2	IDC-RTE D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT DOWN ENCOMPASS (IDC-RDE)	2	IDC-RDE D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT DOWN ENCOMPASS (IDC-LDE)	2	IDC-LDE D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT UP ENCOMPASS (IDC-RUE)	2	IDC-RUE D1 D2	
	IDEOGRAPHIC DESCRIPTION CHARACTER EMBEDMENT (IDC-EMB)	2	IDC-EMB D1 D2	

*Note: D1 and D2 are overlapping with each other. This graphic symbol does not imply at all that D1 is on the top left corner and D2 is on the bottom right corner.

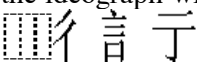D3.2 Descriptions of the ideographic description characters.

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT:

The IDS introduced by IDC-LTR describes the abstract form of the ideograph with D1 on the left hand side and D2 on the right-hand side. ⿰亻母 is an example of an IDS which represents the abstract from of 侮.
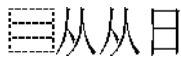
IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW :

The IDS introduced by IDC-ATB describes the abstract form of the ideograph with D1 on top of D2. ⿱八天 is an example of an IDS which represents the abstract from of 关.
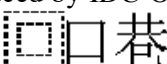
IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT :

The IDS introduced by IDC-LMR describes the abstract form of the ideograph with D1 on the left-hand side of D2, and D2 on the left-hand of D3. ⿲亻言亍 is an example of an IDS which represents the abstract from of 衔.
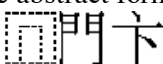
IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW :

The IDS introduced by IDC-AMB describes the abstract form of the ideograph with D1 on top of D2, and D2 on top of D3. ⿳从从日 is an example of an IDS which represents the abstract from of 昚.
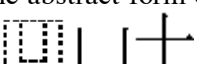
IDEOGRAPHIC DESCRIPTION CHARACTER OVERALL AROUND :

The IDS introduced by IDC-OVA describes the abstract form of the ideograph with D1 outside of D2 . ⿴口巷 is an example of an IDS which represents the abstract from of 圈.
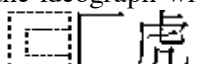
IDEOGRAPHIC DESCRIPTION CHARACTER DOWN TO ENCOMPASS :

IDC-DTE describes the abstract form of the ideograph with D1 on top of D2, and D2 is encompassed by D1. ⿵門卞 is an example of an IDS which represents the abstract from of 閛.
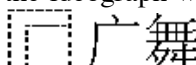
IDEOGRAPHIC DESCRIPTION CHARACTER UP TO ENCOMPASS :

The IDS introduced by IDC-UTE describes the abstract form of the ideograph with D2 on top of D1, and D2 is encompassed by D1. ⿶凵士 is an example of an IDS which represents the abstract from of 凷.
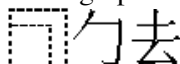
IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT TO ENCOMPASS :

The IDS introduced by IDC-RTE describes the abstract form of the ideograph with D1 on the left-hand side of D2, and D2 is encompassed by D1. ⿷匚虎 is an example of an IDS which represents the abstract from of 虍.

IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT DOWN ENCOMPASS:

The IDS introduced by IDC-RDE describes the abstract form of the ideograph with D1 on top and left corner of D2, and D2 is encompassed by D1. ⿸广舞 is an example of an IDS which represents the abstract from of 廡.
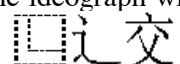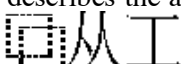
IDEOGRAPHIC DESCRIPTION CHARACTER LEFT DOWN ENCOMPASS:

The IDS introduced by IDC-LDE describes the abstract form of the ideograph with D1 on the right top corner of D2, and D2 is encompassed by D1. 口勹去 is an example of an IDS which represents the abstract from of 匈.

IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT UP ENCOMPASS:

The IDS introduced by IDC-RUE describes the abstract form of the ideograph with D1 on left bottom corner of D2, and D2 is encompassed by D1. 口辶交 is an example of an IDS which represents the abstract from of 这.

IDEOGRAPHIC DESCRIPTION CHARACTER EMBEDMENT :

The IDS introduced by IDC-EMB describes the abstract form of the ideograph with D1 and D2 overlaying each other. 口从工 is an example of an IDS which represents the abstract from of 巫.

Page 700, Annex A.
In the list of collection numbers, after the entry: 87 BURMESE (see Amendment 26) insert the following new entry: xx IDEOGRAPHIC DESCRIPTION CHARACTERS   0248 - 0253

Page 729, Annex E.
After the entry IDEOGRAPHIC DEPARTING TONE MARK insert the character names from the list given under "Page 86" above in alphabetical order.

IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW

IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW

IDEOGRAPHIC DESCRIPTION CHARACTER DOWN TO ENCOMPASS

IDEOGRAPHIC DESCRIPTION CHARACTER EMBEDMENT

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT DOWN ENCOMPASS

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT

IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT

IDEOGRAPHIC DESCRIPTION CHARACTER OVERALL AROUND

IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT UP ENCOMPASS

IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT DOWN ENCOMPASS

IDEOGRAPHIC DESCRIPTION CHARACTER RIGHT TO ENCOMPASS

IDEOGRAPHIC DESCRIPTION CHARACTER UP TO ENCOMPASS