ISO/IEC JTC 1/SC 2
CODED CHARACTER SETS
SECRETARIAT: JAPAN (JISC)

DOC TYPE: Text for combined PDAM registration and consideration ballot or comment

TITLE: Combined PDAM registration and consideration ballot on WD for 10646-1/Amd. 28, Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane -- AMENDMENT 28: Ideographic description characters

SOURCE: Project Editor

PROJECT: JTC 1.02.18.01.28

STATUS: In accordance with Resolution M08.14, f), adapted at the eighth plenary meeting of SC 2, this document is circulated to SC 2 for a combined three-month CD registration and consideration ballot. Please return all votes and comments in electronic form directly to the SC 2 Secretariat by 1999-01-29.

ACTION ID: LB

DUE DATE: 1999-01-29

DISTRIBUTION: P, O and L Members of ISO/IEC JTC 1/SC 2
WG Conveners and Secretariats
Secretariat, ISO/IEC JTC 1
ISO/IEC ITTF

NO. OF PAGES: Cover+6+LB

ACCESS LEVEL: Open

WEB ISSUE #: 032

Contact: Secretariat ISO/IEC JTC 1/SC 2 - Toshiko KIMURA
IPSJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*
Room 308-3, Kikai-Shinko-Kaikan Bldg., 3-5-8, Shiba-Koen, Minato-ku, Tokyo 105-0011 JAPAN
Tel: +81 3 3431 2808; Fax: +81 3 3431 6493; E-mail: kimura@itscj.ipsj.or.jp; http://www.dkuug.dk/jtc1/sc2
*A Standard Organization accredited by JISC
**Committee Draft**  
ISO/IEC 10646-1/PDAM 28

<table>
<thead>
<tr>
<th>Date: 1998-10-22</th>
<th>Reference number: ISO/JTC 1/SC 2 N 3186</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supersedes document SC YY N XXXX</td>
<td></td>
</tr>
</tbody>
</table>

**THIS DOCUMENT IS STILL UNDER STUDY AND SUBJECT TO CHANGE. IT SHOULD NOT BE USED FOR REFERENCE PURPOSES.**

| ISO/IEC JTC 1/SC 2 Coded Character Sets Secretariat: Japan (JISC) | Circulated to P- and O-members, and to technical committees and organizations in liaison for:  
| - discussion at  
| X comment by  
| X voting by (P-members only) |
| **1999-01-29** |
| Please return all votes and comments in electronic form directly to the SC 2 Secretariat by the due date indicated. |

**ISO/IEC 10646-1/PDAM 28**

**Title:** Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane -- AMENDMENT 28: Ideographic description characters

**Project:** 1.02.18.01.28

**Introductory note:**  
At its eighth plenary meeting held in Redmond, Washington, USA, 1998-03-24/25, SC 2 resolved to develop this project (Resolution M08.13). JTC 1’s endorsement has been obtained as shown in JTC 1 N 5481. In accordance with Resolution M08.14, f), this document is circulated to the SC 2 members for a combined three-month CD registration and consideration ballot. Please return all votes and comments in electronic form directly to the SC 2 Secretariat **by 1999-01-29**.

**Medium:** Web

**No. of pages:** Cover+6+LB

Address Reply to: Secretariat ISO/IEC JTC 1/SC 2 - Toshiko KIMURA  
IPSJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*  
Room 308-3, Kakai-Shinko-Kaikan Bldg., 3-5-8, Shiba-Koen, Minato-ku, Tokyo 105-0011 JAPAN  
Tel: +81 3 3431 2808; Fax: +81 3 3431 6493; E-mail: kimura@itscj.ipsj.or.jp; http://www.dkuug.dk/jtc1/sc2  
*A Standard Organization accredited by JISC
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 DESCRIPTORS  2FF0 - 2FFF

---

Page 15, Clause 25, Figure 4

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

    Ideographic Descriptors

centred on a white background.

---

After page 113

Add the following new tables titled:

Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTORS
Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTORS

<table>
<thead>
<tr>
<th>2FF</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>![Image]</td>
</tr>
<tr>
<td>1</td>
<td>![Image]</td>
</tr>
<tr>
<td>2</td>
<td>![Image]</td>
</tr>
<tr>
<td>3</td>
<td>![Image]</td>
</tr>
<tr>
<td>4</td>
<td>![Image]</td>
</tr>
<tr>
<td>5</td>
<td>![Image]</td>
</tr>
<tr>
<td>6</td>
<td>![Image]</td>
</tr>
<tr>
<td>7</td>
<td>![Image]</td>
</tr>
<tr>
<td>8</td>
<td>![Image]</td>
</tr>
<tr>
<td>9</td>
<td>![Image]</td>
</tr>
<tr>
<td>A</td>
<td>![Image]</td>
</tr>
<tr>
<td>B</td>
<td>![Image]</td>
</tr>
<tr>
<td>C</td>
<td>![Image]</td>
</tr>
<tr>
<td>D</td>
<td>![Image]</td>
</tr>
<tr>
<td>E</td>
<td>![Image]</td>
</tr>
<tr>
<td>F</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

G = 00  P = 00
### Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTORS

<table>
<thead>
<tr>
<th>dec</th>
<th>hex</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>240</td>
<td>F0</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT</td>
</tr>
<tr>
<td>241</td>
<td>F1</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW</td>
</tr>
<tr>
<td>242</td>
<td>F2</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT</td>
</tr>
<tr>
<td>243</td>
<td>F3</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW</td>
</tr>
<tr>
<td>244</td>
<td>F4</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND</td>
</tr>
<tr>
<td>245</td>
<td>F5</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE</td>
</tr>
<tr>
<td>246</td>
<td>F6</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW</td>
</tr>
<tr>
<td>247</td>
<td>F7</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT</td>
</tr>
<tr>
<td>248</td>
<td>F8</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT</td>
</tr>
<tr>
<td>249</td>
<td>F9</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT</td>
</tr>
<tr>
<td>250</td>
<td>FA</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT</td>
</tr>
<tr>
<td>251</td>
<td>FB</td>
<td>IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID</td>
</tr>
<tr>
<td>252</td>
<td>FC</td>
<td>(This position shall not be used)</td>
</tr>
<tr>
<td>253</td>
<td>FD</td>
<td>(This position shall not be used)</td>
</tr>
<tr>
<td>254</td>
<td>FE</td>
<td>(This position shall not be used)</td>
</tr>
<tr>
<td>255</td>
<td>FF</td>
<td>(This position shall not be used)</td>
</tr>
</tbody>
</table>
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 DESCRIBERS 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 have any rendering implication.

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
- a coded ideographic component
- another IDS

Each IDC has 3 properties as summarized in Table-
D.1 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 acronym & syntax" column of
the table by the abbreviated name of the IDC
(e.g. IDC-LTR) followed by two or three numbered
DCs (D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub>).

D.3.2 Individual definitions of the ideographic
description characters.

IDEOGRAPHIC DESCRIPTION CHARACTER
LEFT TO RIGHT (2FF0):
The IDS introduced by IDC-LTR describes the
abstract form of the ideograph with D<sub>1</sub> on the left
and D<sub>2</sub> on the right.

IDEOGRAPHIC DESCRIPTION CHARACTER
ABOVE TO BELOW (2FF1):
The IDS introduced by IDC-ATB describes the
abstract form of the ideograph with D<sub>1</sub> above
D<sub>2</sub>.

IDEOGRAPHIC DESCRIPTION CHARACTER
LEFT TO MIDDLE AND RIGHT (2FF2):
The IDS introduced by IDC-LMR describes the
abstract form of the ideograph with D<sub>1</sub> on the left
of D<sub>2</sub>, and D<sub>2</sub> on the left of D<sub>3</sub>.

IDEOGRAPHIC DESCRIPTION CHARACTER
ABOVE TO MIDDLE AND BELOW (2FF3):
The IDS introduced by IDC-AMB describes the
abstract form of the ideograph with D<sub>1</sub> above
D<sub>2</sub>, and D<sub>2</sub> above D<sub>3</sub>.

IDEOGRAPHIC DESCRIPTION CHARACTER
FULL SURROUND (2FF4):
The IDS introduced by IDC-FSD describes the
abstract form of the ideograph with D<sub>1</sub> surrounding
D<sub>2</sub>.

IDEOGRAPHIC DESCRIPTION CHARACTER
SURROUND FROM ABOVE (2FF5):
IDC-SAV describes the abstract form of the
ideograph with D<sub>1</sub> above D<sub>2</sub>, and surrounding D<sub>2</sub>
on both sides.
**IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW (2FF6):**
The IDS introduced by IDC-SBL describes the abstract form of the ideograph with D\(_1\) below D\(_2\), and surrounding D\(_2\) on both sides.

![Example](example1.png) is an example of an IDS which represents the abstract form of ![Example](example2.png).

**IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT (2FF7):**
The IDS introduced by IDC-SLT describes the abstract form of the ideograph with D\(_1\) on the left of D\(_2\), and surrounding D\(_2\) above and below.

![Example](example3.png) is an example of an IDS which represents the abstract form of ![Example](example4.png).

**IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT (2FF8):**
The IDS introduced by IDC-SUL 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.

![Example](example5.png) is an example of an IDS which represents the abstract form of ![Example](example6.png).

**IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT (2FF9):**
The IDS introduced by IDC-SUR 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.

![Example](example7.png) is an example of an IDS which represents the abstract form of ![Example](example8.png).

**IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT (2FFA):**
The IDS introduced by IDC-SLL 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.

![Example](example9.png) is an example of an IDS which represents the abstract form of ![Example](example10.png).

**IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID (2FFB):**
The IDS introduced by IDC-OVL describes the abstract form of the ideograph with D\(_1\) and D\(_2\) overlaying each other.

![Example](example11.png) is an example of an IDS which represents the abstract form of ![Example](example12.png).

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:

- IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO RIGHT
- IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW
- IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW
- IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW
- IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND
- IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND FROM ABOVE
- IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW
- IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT
- IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT
- IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT
- IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID
<table>
<thead>
<tr>
<th>Character Name: IDEOGRAPHIC DESCRIPTION CHARACTER ...</th>
<th>no. of DCs</th>
<th>IDS Acronym and Syntax</th>
<th>Relative positions of DCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT TO RIGHT</td>
<td>2</td>
<td>IDC-LTR D₁, D₂</td>
<td><img src="LEFT_TO_RIGHT" alt="Diagram" /></td>
</tr>
<tr>
<td>ABOVE TO BELOW</td>
<td>2</td>
<td>IDC-ATB D₁, D₂</td>
<td><img src="ABOVE_TO_BELOW" alt="Diagram" /></td>
</tr>
<tr>
<td>LEFT TO MIDDLE AND RIGHT</td>
<td>3</td>
<td>IDC-LMR D₁, D₂, D₃</td>
<td><img src="LEFT_TO_MIDDLE_AND_RIGHT" alt="Diagram" /></td>
</tr>
<tr>
<td>ABOVE TO MIDDLE AND BELOW</td>
<td>3</td>
<td>IDC-AMB D₁, D₂, D₃</td>
<td>![Diagram](ABOVE_TO_MIDDLE_AND BELOW)</td>
</tr>
<tr>
<td>FULL SURROUND</td>
<td>2</td>
<td>IDC-FSD D₁, D₂</td>
<td><img src="FULL_SURROUND" alt="Diagram" /></td>
</tr>
<tr>
<td>SURROUND FROM ABOVE</td>
<td>2</td>
<td>IDC-SAV D₁, D₂</td>
<td>![Diagram](SURROUND_FROM ABOVE)</td>
</tr>
<tr>
<td>SURROUND FROM BELOW</td>
<td>2</td>
<td>IDC-SBL D₁, D₂</td>
<td>![Diagram](SURROUND_FROM BELOW)</td>
</tr>
<tr>
<td>SURROUND FROM LEFT</td>
<td>2</td>
<td>IDC-SLT D₁, D₂</td>
<td><img src="SURROUND_FROM_LEFT" alt="Diagram" /></td>
</tr>
<tr>
<td>SURROUND FROM UPPER LEFT</td>
<td>2</td>
<td>IDC-SUL D₁, D₂</td>
<td><img src="SURROUND_FROM_UPPER_LEFT" alt="Diagram" /></td>
</tr>
<tr>
<td>SURROUND FROM UPPER RIGHT</td>
<td>2</td>
<td>IDC-SUR D₁, D₂</td>
<td><img src="SURROUND_FROM_UPPER_RIGHT" alt="Diagram" /></td>
</tr>
<tr>
<td>SURROUND FROM LOWER LEFT</td>
<td>2</td>
<td>IDC-SLL D₁, D₂</td>
<td><img src="SURROUND_FROM_LOWER_LEFT" alt="Diagram" /></td>
</tr>
<tr>
<td>OVERLAID</td>
<td>2</td>
<td>IDC-OVL D₁, D₂</td>
<td><img src="OVERLAID" alt="Diagram" /></td>
</tr>
</tbody>
</table>

* Note: D₁ and D₂ overlap each other. This diagram does not imply that D₁ is on the top left corner and D₂ is on the bottom right corner.