

ISO/IEC JTC 1/SC 2

CODED CHARACTER SETS

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### G5 CD Cover Page

Committee Draft ISO/IEC 10646-1/PDAM 28				
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### 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 <u>by 1999-01-29.</u>

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# **Character Set (UCS)**

## Information technology Universal Multiple-Octet Coded

### 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 entrles as follows:

IDEOGRAPHIC DESCRIPTORS 2FF0 - 2FFF

### Page 15, Clause 25, Figure 4

In Figure 4 (see Amendment 5), in the crosshatched 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

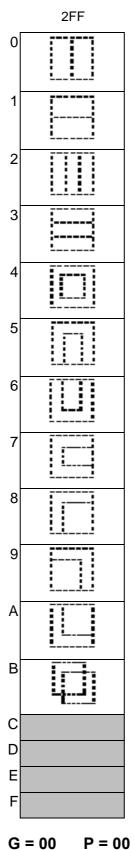


Table 247 - Row 2F: IDEOGRAPHIC DESCRIPTORS

Name

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

RIGHT241F1IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW242F2IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDDLE AND RIGHT243F3IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW244F4IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND245F5IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE246F6IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM BELOW247F7IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT248F8IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT249F9IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT250FAIDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT251FBIDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID252FC(This position shall not be used)253FD(This position shall not be used)	dec	hex	Name		dec	hex	
241 F1 DECORAPHIC DESCRIPTION CHARACTER LEFT TO   242 F2 IDECORAPHIC DESCRIPTION CHARACTER LEFT TO   243 F3 IDECORAPHIC DESCRIPTION CHARACTER ABOVE TO   244 F4 IDEDORAPHIC DESCRIPTION CHARACTER FULL   245 F5 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   246 F6 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   247 F7 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   248 F6 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   249 F7 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   249 F6 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   240 F6 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   241 F1 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   242 F2 F0   244 F1 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   245 F2 F0   246 F1 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   247 F2 F0 F0   248 F1 IDECORAPHIC DESCRIPTION CHARACTER SURROUND   247 F2 F0 F1	240	F0					
242 P2 DECOGRAPHIC DESCRIPTION CHARACTER LEFT TO MIDULE AND BELOW   243 F3 IDECOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND   244 F4 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE   245 F5 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   246 F6 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   247 F7 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   248 F8 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   249 F3 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   250 F4 IDECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT   251 F8 IDECORAPHIC DESCRIPTION CHARACTER OVERLAID FC0 LOWER LEFT   255 F7 (This position shall not be used)   256 F7 (This position shall not be used)   256 F4 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT   256 F7 (This position shall not be used)   257 F8 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   258 F7 (This position shall not be used)   259 F4 IDECORAPHIC DESCRIPTION CHARACTER SURACTER	241	F1	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO				
243 15 IDEOGRAPHIC DESCRIPTION CHARACTER FULL   244 F4 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   245 F5 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   246 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   247 F7 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   248 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   249 F9 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   249 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   249 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   250 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   251 F6 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   252 F7 (This position shall not be used)   254 F8 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND   255 F7 (This position shall not be used)   254 F4 (This position shall not be used)   255 F7 (This position shall not be used)   256 F4 (This position shall not be used)   257 F4 F5	242	F2	IDEOGRAPHIC DESCRIPTION CHARACTER LEFT TO				
245 F5 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE   246 F6 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   247 F7 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM UPER LEFT   248 F8 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM UPER LEFT   249 F9 IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM UPER RIGHT   250 FA IDECORAPHIC DESCRIPTION CHARACTER SURROUND FROM UPER RIGHT   251 F8 IDECORAPHIC DESCRIPTION CHARACTER OVERLAID   252 FC (This position shall not be used)   254 FE (This position shall not be used)   255 FF (This position shall not be used)	243	F3	IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO				
246 FROM ABOVE   247 F   157 IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LEFT   248 F8   154 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT   249 F9   150 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   251 F4   156 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   251 F6   158 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   251 F6   159 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   251 F8   159 IECOGRAPHIC DESCRIPTION CHARACTER OVERLAID   251 F7   151 F1   152 F6   153 F7   154 F6   155 F7   156 F1   157 F1   158 IECOGRAPHIC DESCRIPTION CHARACTER SURROUND   159 F1   150 F1   151 F1   152 F1   164 IECOGRA	244	F4	IDEOGRAPHIC DESCRIPTION CHARACTER FULL				
FROM BELOW   F7 IFEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER LEFT   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   F9 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F6 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F6 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 F1   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 F1   F8 IEEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F9 IFF   F6 (This position shall not be used)   F7 (This position shall not be used)   F8 (This position shall not be used)   F9 (This position shall not be used)   F9 (This position shall not be used)	245	F5					
FROM LEFT   Pass   F8   F8   DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM UPPER RIGHT   F9 DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F6 DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 TEDGORAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT   F7 This Desition shall not be used)   F8 DEGGRAPHIC DESCRIPTION CHARACTER OVERLAID   F0 This position shall not be used)   F7 This position shall not be used)   F8 DEGGRAPHIC DESCRIPTION CHARACTER OVERLAID   F7 This position shall not be used)   F8 The position shall not be used)   F8 The position shall not be used)   F7 This position shall not be used)   F8 The position shall not be used)   F9 This position shall not be used)	246	F6	IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND				
FROM UPPER LEFT   P5   DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT   FA   DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT   F2   F6   DEGGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT   F2   F6   DEGGRAPHIC DESCRIPTION CHARACTER OVERLAID   F2   F7   This position shall not be used)   F25   F7   This position shall not be used)   F8   F9   Disposition shall not be used)   F6   F7   This position shall not be used)   F7   F7   This position shall not be used)   F8   F9   F6   T1   F7   T1   F8   F9   F7   T1   F8   F9   F9   F1   F1   F1   F1   F1   F1	247	F7					
FROM UPPER RIGHT FROM LOPECRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOVER LEFT FROM LOPECRAPHIC DESCRIPTION CHARACTER OVERLAID 252 FC (This position shall not be used) 253 FD (This position shall not be used) 255 FF (This position shall not be used) 256 FF (This position shall not be used) 257 FF (This position shall not be used) 258 FF (This position shall not be used) 259 FF (This position shall not be used) 250 FF (This position shall not be used) 251 FF (This position shall not be used) 252 FF (This position shall not be used) 253 FF (This position shall not be used) 254 FE (This position shall not be used) 255 FF (This position shall not be used) 255 FF (This position shall not be used) 256 FF (This position shall not be used) 257 FF (This position shall not be used) 258 FF (This position shall not be used) 259 FF (This position shall not be used) 250 FF (This position shall not be used) 250 FF (This position shall not be used) 251 FF (This position shall not be used) 252 FF (This position shall not be used) 253 FF (This position shall not be used) 254 FE (This position shall not be used) 255 FF (This position shall not be used) 255 FF (This position shall not be used) 256 FF (This position shall not be used) 257 FF (This position shall not be used) 258 FF (This position shall not be used) 259 FF (This position shall not be used) 250 FF (This position shall not be used) 250 FF (This position shall not be used) 251 FF (This position shall not be used) 252 FF (This position shall not be used) 253 FF (This position shall not be used) 254 FF (This position shall not be used) 255 FF (This position s	248	F8					
FROM LOWER LEFT DECORAPHIC DESCRIPTION CHARACTER OVERLAID This position shall not be used) TO (This position shall not be used) FF (This position shall not be used)	249	F9	FROM UPPER RIGHT				
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)   255 FF (This position shall not be used)   255 FF (This position shall not be used)   256 FF (This position shall not be used)	250	FA	FROM LOWER LEFT				
253 FD (This position shall not be used)   254 FE (This position shall not be used)   255 FF (This position shall not be used)   256 FF (This position shall not be used)   257 FF (This position shall not be used)   258 FF (This position shall not be used)   259 FF (This position shall not be used)	251 252						
255 FF (This position shall not be used)   255 Image: Control of the state of t	253	FD	(This position shall not be used)				
	254 255						
		n 00		Dian			

Row 2F

In the list of collection numbers and names, after 206 NUMERIC SHAPE SELECTORS

insert a new entry as follows: 207 IDEOGRAPHIC DESCRIPTORS 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.

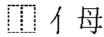
- the number of DCs used in the IDS that commences with that IDC,
- the definition of the proper usage of the IDC,
- the relative positions of the DCs in the visual representation of the ideograph that is being described in its abstract form.

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  $(D_1, D_2, D_3)$ .

### D3.2 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  $D_1$  on the left and  $D_2$  on the right.



上 is an example of an IDS which

represents the abstract form of 기막

### IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO BELOW (2FF1):

The IDS introduced by IDC-ATB describes the abstract form of the ideograph with  $D_1$  above  $D_2$ .

三八天 is an example of an IDS which 全

represents the abstract form of 不

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

The IDS introduced by IDC-LMR describes the abstract form of the ideograph with  $D_1$  on the left of  $D_2$ , and  $D_2$  on the left of  $D_3$ .



「 〒 丁 is an example of an IDS which 注す

represents the abstract form of III

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

The IDS introduced by IDC-AMB describes the abstract form of the ideograph with  $D_1$  above  $D_2$ , and  $D_2$  above  $D_3$ .

■从从日 is an example of an IDS which

represents the abstract form of 畄

### IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND (2FF4):

The IDS introduced by IDC-FSD describes the abstract form of the ideograph with  $\mathsf{D}_1$  surrounding  $\mathsf{D}_2$  .



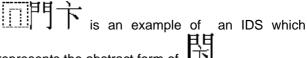
is an example of an IDS which

represents the abstract form of

m of 吃.

### IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM ABOVE (2FF5):

IDC-SAV 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 IDC-SBL describes the abstract form of the ideograph with  $D_1$  below  $D_2$ , and surrounding  $D_2$  on both sides.

is an example of an IDS which

represents the abstract form of

### 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.

ールロ is an example of an IDS which

represents the abstract form of U

### 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.

is an example of an IDS which

represents the abstract form of /郊

### 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.

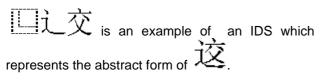


is an example of an IDS which

represents the abstract form of

### 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.



### 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.

represents the abstract form of  $\frac{1}{2}$ .

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 LEFT TO MIDDLE AND RIGHT

IDEOGRAPHIC DESCRIPTION CHARACTER ABOVE TO MIDDLE AND BELOW

IDEOGRAPHIC DESCRIPTION CHARACTER FULL SURROUND IDEOGRAPHIC DESCRIPTION CHARACTER 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 RIGHT

IDEOGRAPHIC DESCRIPTION CHARACTER SURROUND FROM LOWER LEFT IDEOGRAPHIC DESCRIPTION CHARACTER OVERLAID

Table D.1: Properties of ideographic description characters

	-		
Character Name: IDEOGRAPHIC DESCRIPTION CHARACTER	no. of DCs	IDS Acronym and Syntax	Relative positions of DCs
LEFT TO RIGHT	2	IDC-LTR D <sub>1</sub> D <sub>2</sub>	$D_1D_2$
ABOVE TO BELOW	2	IDC-ATB D <sub>1</sub> D <sub>2</sub>	D <sub>1</sub> D <sub>2</sub>
LEFT TO MIDDLE AND RIGHT	3	IDC-LMR D <sub>1</sub> D <sub>2</sub> D <sub>3</sub>	$D_1 D_2 D_3$
ABOVE TO MIDDLE AND BELOW	3	IDC-AMB D <sub>1</sub> D <sub>2</sub> D <sub>3</sub>	D <sub>1</sub> D <sub>2</sub> D <sub>3</sub>
FULL SURROUND	2	$IDC$ -FSD $D_1 D_2$	D <sub>1</sub> D <sub>2</sub>
SURROUND FROM ABOVE	2	IDC-SAV D <sub>1</sub> D <sub>2</sub>	D <sub>1</sub> D <sub>2</sub>
SURROUND FROM BELOW	2	IDC-SBL D <sub>1</sub> D <sub>2</sub>	D <sub>2</sub> D <sub>1</sub>
SURROUND FROM LEFT	2	IDC-SLT D <sub>1</sub> D <sub>2</sub>	D <sub>1</sub> D <sub>2</sub>
SURROUND FROM UPPER LEFT	2	IDC-SUL D <sub>1</sub> D <sub>2</sub>	D <sub>1</sub> D <sub>2</sub>
SURROUND FROM UPPER RIGHT	2	IDC-SUR D <sub>1</sub> D <sub>2</sub>	D <sub>2</sub>
SURROUND FROM LOWER LEFT	2	IDC-SLL D <sub>1</sub> D <sub>2</sub>	D <sub>2</sub> D <sub>1</sub>
OVERLAID	2	IDC-OVL D <sub>1</sub> D <sub>2</sub>	D <sub>1</sub> D <sub>2</sub> *

\* 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.

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