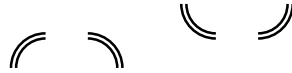


Proposal to Encode 4 Unencoded Big5 ETen Extension Box Drawing Characters

Night Koo, Luke036 (*Individual*) · 2026-07-31

This is a proposal to encoding the 4 box drawing characters of double arc quadrants in Big5 ETen Extension.



Background

Big5 is one of the legacy Traditional Chinese character sets that Unicode was designed to interoperate with through standardized mapping tables, which can be seen by the [official Big5-to-Unicode mapping files hosted on Unicode.org](#). This encoding was extended by ETen (倚天) corporation in its ETen Chinese System (倚天中文系統), which is a Traditional Chinese DOS-compatible system to Windows 3.1, to support additional characters that were not included in the original Big5 encoding. This extension will later be known as the Big5 ETen extension, which encodes additional characters at position 0xC6A1–0xC875 and 0xF9D6–0xF9FE and is the basis for further Big5 encoding extensions such as Windows codepage 950 (CP950), Big5-2003 and CNS 11643 (which is still in use in Taiwan currently).



Screenshot of ETen Chinese System 倚天中文系統

Among these, 0xC8A5-0xC8CC are 40 control characters for Array Input methods which are not in modern usage. The remaining characters are mostly encoded¹ except for 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD.

次常用字區

F9D5 𪛗	F9D6 碁	F9D7 銑	F9D8 裏	F9D9 墻	F9DA 恒
F9DB 粧	F9DC 嫺	F9DD 𠂇	F9DE 𠂈	F9DF 𠂉	F9E0 𠂊
F9E1 𠂋	F9E2 𠂌	F9E3 𠂍	F9E4 𠂎	F9E5 𠂏	F9E6 𠂐
F9E7 𠂑	F9E8 𠂒	F9E9 𠂓	F9EA 𠂔	F9EB 𠂕	F9EC 𠂖
F9ED 𠂗	F9EE 𠂘	F9EF 𠂙	F9F0 𠂚	F9F1 𠂛	F9F2 𠂜
F9F3 𠂝	F9F4 𠂞	F9F5 𠂟	F9F6 𠂠	F9F7 𠂡	F9F8 𠂢
F9F9 𠂣	F9FA 𠂤	F9FB 𠂥	F9FC 𠂦	F9FD 𠂧	F9FE 𠂨

狀態

內碼：BIG-5

字體：明體

字型：16 x 15

造字數：0

反白：目前選擇的字型

紅色：已被刪除的字型

選擇

F1：編輯字型

F2：編輯輸入碼

F3：複製字型

Del：刪除/復原

游標

↑ ↓ ← → -- 上下左右

PgUp/PgDn -- 上/下一頁

Ctrl PgUp/PgDn -- 上/下五頁

Ins -- 設定本頁起始字碼

Tab -- 切換字區

Esc -- 回字型選擇畫面

T
【英數】 【半形】
倚天

Unencoded Big5 ETen extension characters: 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD.

Previous Efforts to Map to Unicode

As Big5 is fully interoperable with Unicode, efforts were made to encode Big5 ETen extensions into Unicode too. The main representative of such effort is Windows CP950, which includes the ETen extension 0xF9D6–0xF9FE range and has [an official CP950-to-Unicode mapping files hosted on Unicode.org](https://unicode.org/mail-arch/unicode-ml/y2012-m05/0054.html).

碁	銑	裏	墻	恒	粧	嫺	𠂇	𠂈	𠂉	𠂊	𠂋	𠂌	𠂍	𠂎	𠂏	𠂐	𠂑
F9D6	F9D7	F9D8	F9D9	F9DA	F9DB	F9DC	F9DD	F9DE	F9DF	F9E0	F9E1	F9E2	F9E3	F9E4	F9E5	F9E6	F9E7
𠂒	𠂓	𠂔	𠂕	𠂖	𠂗	𠂘	𠂙	𠂚	𠂛	𠂜	𠂝	𠂞	𠂟	𠂠	𠂡	𠂢	𠂣
F9E8	F9E9	F9EA	F9EB	F9EC	F9ED	F9EE	F9EF	F9F0	F9F1	F9F2	F9F3	F9F4	F9F5	F9F6	F9F7	F9F8	F9F9
𠂤	𠂥	𠂦	𠂧	𠂨													
F9FA	F9FB	F9FC	F9FD	F9FE													

Full ETen extension 0xF9D6–0xF9FE range. 《文鼎 PostScript 中文字庫 Big-5 字碼本》

¹ There is another set of duplicate characters with similar glyphs that are not relevant in this proposal. See <https://unicode.org/mail-arch/unicode-ml/y2012-m05/0054.html>

However, looking at the mapping tables, we can see that there are several duplicates when mapping the box drawing characters between 0xF9D6–0xF9FE range, among them are 0xF9FA–0xF9FD. The CP950.txt records read as such:

```
0xA27E 0x256D #BOX DRAWINGS LIGHT ARC DOWN AND RIGHT
0xA2A1 0x256E #BOX DRAWINGS LIGHT ARC DOWN AND LEFT
0xA2A2 0x2570 #BOX DRAWINGS LIGHT ARC UP AND RIGHT
0xA2A3 0x256F #BOX DRAWINGS LIGHT ARC UP AND LEFT
0xF9FA 0x256D #BOX DRAWINGS LIGHT ARC DOWN AND RIGHT
0xF9FB 0x256E #BOX DRAWINGS LIGHT ARC DOWN AND LEFT
0xF9FC 0x2570 #BOX DRAWINGS LIGHT ARC UP AND RIGHT
0xF9FD 0x256F #BOX DRAWINGS LIGHT ARC UP AND LEFT
```

As the original Big5 specification shown below, 0xA27E/0xA2A1–0xA2A3 is quite different with 0xF9FA–0xF9FD in the Big5 ETen extension, where 0xA27E/0xA2A1–0xA2A3 shows single quadrant arcs and 0xF9FA–0xF9FD shows a double quadrant arcs.

A 2 7 3	┐	A 2 7 4	┌	A 2 7 5	└	A 2 7 6	┘
A 2 7 7	┌	A 2 7 8	┐	A 2 7 9	┘	A 2 7 A	└
A 2 7 B	└	A 2 7 C	┌	A 2 7 D	┐	A 2 7 E	┘
A 2 A 1	┘	A 2 A 2	└	A 2 A 3	┐	A 2 A 4	┌
A 2 A 5	┐	A 2 A 6	└	A 2 A 7	┘	A 2 A 8	┌
A 2 A 9	┐	A 2 A A	└	A 2 A B	┘	A 2 A C	┌
A 2 A D	┐	A 2 A E	└	A 2 A F	┘	A 2 B 0	┌

[*Big Five Specification \(IRG N2774\)*](#)

This poses a problem where conversion from CP950 to Unicode will cause data loss due to the absence of the original ETen characters.

Another effort in such encoding is the Big5-2003 and its successor CNS 11643. An [unofficial conversion table of Big5-2003 to Unicode](#) is provided on Mozilla Taiwan community page, which listed the records as below:

```
0xA27E 0x256D
0xA2A1 0x256E
0xA2A2 0x2570
0xA2A3 0x256F
0xF9FA 0x2554
0xF9FB 0x2557
0xF9FC 0x255A
0xF9FD 0x255D
```

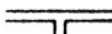
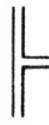
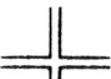
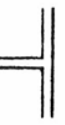
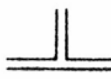
This encoding looks to actively separate 0xA27E/0xA2A1–0xA2A3 and 0xF9FA–0xF9FD, which matches what the Big5 ETen extensions starts out to do: encode additional characters not yet encoded in Big5 itself. However, it still fell short as the Unicode mapping actually crashed with another set of characters – this time within the ETen extension itself.

0xF9DD 0x2554

0xF9DF 0x2557

0xF9E3 0x255A

0xF9E5 0x255D

								
F9DD	F9DE	F9DF	F9E0	F9E1	F9E2	F9E3	F9E4	F9E5

Overlapped Big5 ETen encoding. 《文鼎 PostScript 中文字庫 Big-5 字碼本》

This mapping is still present in the successor of Big5-2003, which is CNS 11643.

字形資訊 8-6573 , [𠃊] , U+2554

字形 字碼 其他資訊 造字下載

字形	本機字型	全字庫字型
		

字碼	CNS	Unicode	BIG-5 2003	EUC
	8-6573	2554 	F9FA	8EA8E5F3

字形資訊 8-6576 , [𠃌] , U+2557

字形 字碼 其他資訊 造字下載

字形	本機字型	全字庫字型
		

字碼	CNS	Unicode	BIG-5 2003	EUC
	8-6576	2557 	F9FB	8EA8E5F6

字 形 資 訊
8-6579 , [𠃍] , U+255A

字形
字碼
其他資訊
造字下載

字形

本機字型
全字庫字型

字碼

CNS	Unicode	BIG-5 2003	EUC
8-6579	255A	F9FC	8EA8E5F9

字 形 資 訊
8-657C , [𠃎] , U+255D

字形
字碼
其他資訊
造字下載

字形

本機字型
全字庫字型

字碼

CNS	Unicode	BIG-5 2003	EUC
8-657C	255D	F9FD	8EA8E5FC

Big5-2003 to Unicode mapping in [CNS 11643](#)

The CNS 11643 site could not find any Big5 characters at codepoint 0xF9DD, 0xF9DF, 0xF9E3, and 0xF9E5. From the CNS 11643 plane 8 encoding layout shown below, we can see the encoding follows the Unicode order (or CNS 14649). The rest of the box drawing characters uses the Big5 ETen extension codepoint for Big5-2003 field.

8-6571	8-6572	8-6573	8-6574	8-6575	8-6576	8-6577	8-6578	8-6579	8-657A
8-657B	8-657C	8-657D	8-657E	8-6621	8-6622	8-6623	8-6624	8-6625	8-6626
8-6627	8-6628	8-6629	8-662A	8-662C	8-662D	8-662E	8-662F	8-6630	8-6631

[CNS 11643 plane 8 – box drawing characters](#)

Thus, it is reasonable to speculate that during the encoding Big5-2003 into CNS 11643, the reference source changed from Big5-centric to Unicode-centric due to the usage of Unicode box drawing block ordering. In the process, the many-to-one mapping of [Big5-2003 to Unicode] is reversed to one-to-one mapping of [Unicode to Big5-2003], and the Big5-2003 records of 0xF9FA–0xF9FD overrode those of 0xF9DD, 0xF9DF, 0xF9E3, and 0xF9E5 as they are nearer to the end of Big5-2003 encoding. This issue is not present in the [unofficial Unicode to Big5-2003 mapping file](#) on the Mozilla Taiwan community page, which suggest that 0xF9DD, 0xF9DF, 0xF9E3, and 0xF9E5 are the originally intended target of U+2554, U+2557, U+255A and U+255D due to the same representative glyph shapes.

In short, we can see that efforts to encode the characters of 0xF9FA–0xF9FD in Big5 ETen encoding had caused interoperability issues between different Big5 extensions without an official Unicode encoding.

```
D:\>py
Python 3.11.9 (tags/v3.11.9:de54cf5, Apr 2 2024, 10:12:12) [MSC v.1938 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> b"\xF9\xFA".decode("cp950").encode("cp950")
b'\xa2~'
>>> b"\xF9\xFB".decode("cp950").encode("cp950")
b'\xa2\xa1'
>>> b"\xF9\xFC".decode("cp950").encode("cp950")
b'\xa2\xa2'
>>> b"\xF9\xFD".decode("cp950").encode("cp950")
b'\xa2\xa3'
>>> |
```

Screenshot of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD does not survive round-trip encoding from CP950 to Unicode to CP950 in Python 3.11 using the official Unicode CP950.txt

Usage

The characters 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD of Big5 ETen extension were in use during the Big5 era on ETen Chinese System and later CP950. Text editing software of the era exchange texts using Big5 encodings will use either Big5 with ETen extensions or CP950, which both contains the characters. Input methods also provided this character for typesetting tables.

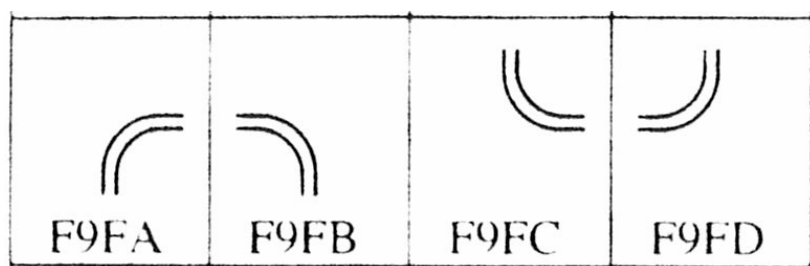


Screenshot of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD in 文新字庫 software on Windows 95

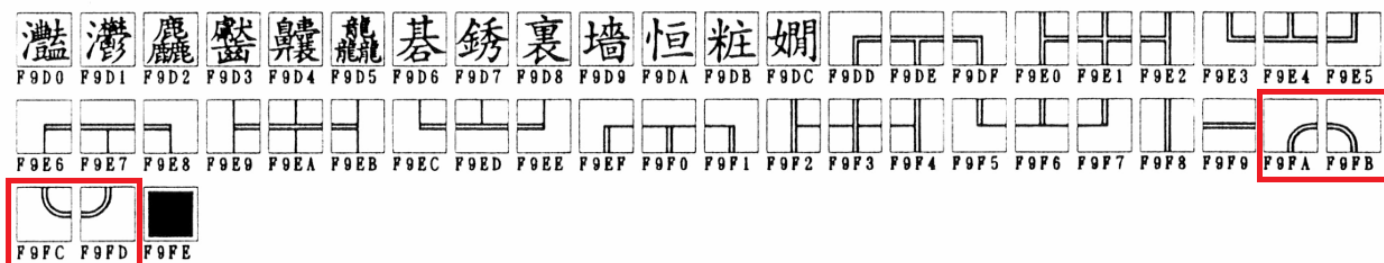
These characters are also included in Big5 fonts of the era and also in the modern Adobe-CNS1 character collection at CID+14092 to CID+14095, demonstrating its current use albeit not mapped to Unicode.



Screenshot of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD in Adobe-CNS1

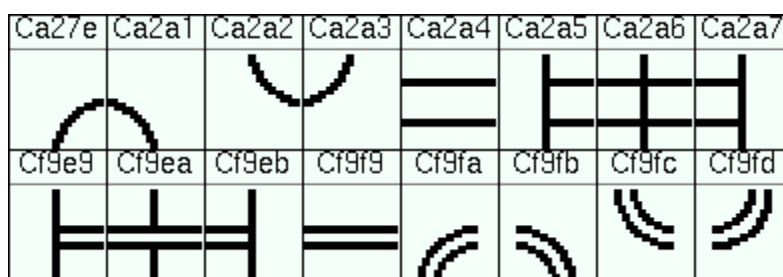


*Sample glyphs of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD for Arphic Technology.
《文鼎 PostScript 中文字庫 Big-5 字碼本》*



Sample glyphs of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD for DynaComware.

《華康中文字集字碼對照表〈Big-5 碼〉》



Screenshot of 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD in various Traditional Chinese fonts

Proposed Characters

This proposal suggests Unicode to consider encoding 0xF9FA, 0xF9FB, 0xF9FC and 0xF9FD of Big5 ETen extension in either the Symbols for Legacy Computing block at **U+1FBFB..1FBFE**. If the block is unavailable, then Symbols for Legacy Computing Supplement may be considered. The encoding order follows the original Big5 ETen extension.



U+1FBFB BOX DRAWINGS DOUBLE ARC DOWN AND RIGHT



U+1FBFC BOX DRAWINGS DOUBLE ARC DOWN AND LEFT



U+1BFD BOX DRAWINGS DOUBLE ARC UP AND RIGHT



U+1BFE BOX DRAWINGS DOUBLE ARC UP AND LEFT

Unicode Character Properties

The proposed characters should have the following Unicode properties matching U+256D..2570 in Box Drawing block.

1FBFB;BOX DRAWINGS DOUBLE ARC DOWN AND
RIGHT;So;0;ON;;;;N;FORMS DOUBLE ARC DOWN AND RIGHT;;;;

1FBFC;BOX DRAWINGS DOUBLE ARC DOWN AND
LEFT;So;0;ON;;;;N;FORMS DOUBLE ARC DOWN AND LEFT;;;;

1BFD;BOX DRAWINGS DOUBLE ARC UP AND RIGHT;So;0;ON;;;;N;FORMS
DOUBLE ARC UP AND RIGHT;;;;

1BFE;BOX DRAWINGS DOUBLE ARC UP AND LEFT;So;0;ON;;;;N;FORMS
DOUBLE ARC UP AND LEFT;;;;

Digital Font

An OpenType font is attached in this document. The glyphs are positioned at codepoints U+E000..E003.

Additional Changes

This proposal also suggests TCA to communicate with CNS 11643 to update the Big5-2003 fields for affected characters.

Glyph	Unicode	CNS 11643	Current Big5-2003	Proposed Big5-2003
	U+2554	8-6573	F9FA	F9DD
	U+2557	8-6576	F9FB	F9DF
	U+255A	8-6579	F9FC	F9E3
	U+255D	8-657C	F9FD	F9E5
	U+1FBFB (proposed)		-	F9FA
	U+1FBFC (proposed)		-	F9FB
	U+1BFBD (proposed)		-	F9FC
	U+1BFBE (proposed)		-	F9FD

Acknowledgements

Thanks to Luke036 for providing the various software screenshots and physical document evidences.

Thanks to Ken Lunde for providing the various Big5 documents.

Additional Evidences



358 快樂樂用 PE II / PE III

圖形	內碼	圖形	內碼	圖形	內碼
碁	F9D6	𠂇	F9E8	𠂈	F9FA
鏽	F9D7	𠂉	F9E9	𠂊	F9FB
裏	F9D8	𠂋	F9EA	𠂌	F9FC
墻	F9D9	𠂍	F9EB	𠂎	F9FD
恒	F9DA	𠂏	F9EC	■	F9FE
粧	F9DB	𠂐	F9ED		
嫻	F9DC	𠂑	F9EE		
𠂒	F9DD	𠂓	F9EF		
𠂔	F9DE	𠂕	F9F0		
𠂖	F9DF	𠂗	F9F1		
𠂘	F9E0	𠂙	F9F2		
𠂚	F9E1	𠂛	F9F3		
𠂜	F9E2	𠂝	F9F4		
𠂞	F9E3	𠂟	F9F5		
𠂠	F9E4	𠂡	F9F6		
𠂢	F9E5	𠂣	F9F7		
𠂤	F9E6	𠂥	F9F8		
𠂦	F9E7	𠂧	F9F9		

《快樂樂用 PE2/PE3》ISBN 957-22-0375-4

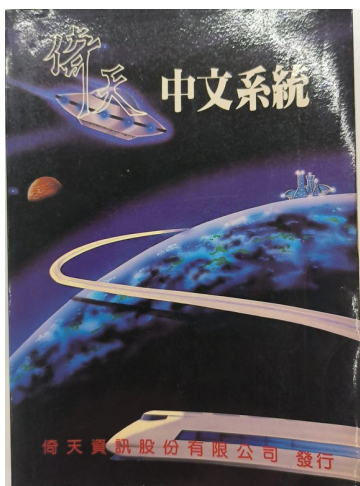
使用者造字區內碼對照表

第一段使用者造字區內碼對照表

BIG-5 F9D7 DY 銹 JT 銹	BIG-5 F9D6 DY 碁 JT 碁	BIG-5 DY JT	BIG-5 DY JT	BIG-5 DY JT	BIG-5 DY JT	BIG-5 DY JT	BIG-5 DY JT
BIG-5 F9DF DY 冫 JT	BIG-5 F9DE DY 冫 JT	BIG-5 F9DD DY 冫 JT	BIG-5 F9DC DY 嫵 JT 嫵	BIG-5 F9DB DY 粧 JT 粧	BIG-5 F9DA DY 恒 JT 恒	BIG-5 F9D9 DY 墻 JT 墻	BIG-5 F9D8 DY 裏 JT 裏
BIG-5 F9E7 DY 冫 JT	BIG-5 F9E6 DY 冫 JT	BIG-5 F9E5 DY 冫 JT	BIG-5 F9E4 DY 冫 JT	BIG-5 F9E3 DY 冫 JT	BIG-5 F9E2 DY 冫 JT	BIG-5 F9E1 DY 冫 JT	BIG-5 F9E0 DY 冫 JT
BIG-5 F9EF DY 冫 JT	BIG-5 F9EE DY 冫 JT	BIG-5 F9ED DY 冫 JT	BIG-5 F9EC DY 冫 JT	BIG-5 F9EB DY 冫 JT	BIG-5 F9EA DY 冫 JT	BIG-5 F9E9 DY 冫 JT	BIG-5 F9E8 DY 冫 JT
BIG-5 F9F7 DY 冫 JT	BIG-5 F9F6 DY 冫 JT	BIG-5 F9F5 DY 冫 JT	BIG-5 F9F4 DY 冫 JT	BIG-5 F9F3 DY 冫 JT	BIG-5 F9F2 DY 冫 JT	BIG-5 F9F1 DY 冫 JT	BIG-5 F9F0 DY 冫 JT
BIG-5 DY JT	BIG-5 F9FE DY 冫 JT	BIG-5 F9FD DY 冫 JT	BIG-5 F9FC DY 冫 JT	BIG-5 F9FB DY 冫 JT	BIG-5 F9FA DY 冫 JT	BIG-5 F9F9 DY 冫 JT	BIG-5 F9F8 DY 冫 JT

倉頡字典

《倉頡字典》ISBN 957-8858-10-8



C-4 附錄三 BIG-5 特殊符號對照表

F9D6 碁	F9D7 鏤	F9D8 裏	F9D9 墻	F9DA 恒	F9DB 粧
F9DC 嫵	F9DD 𠂇	F9DE 𠂇	F9DF 𠂇	F9E0 𠂇	F9E1 𠂇
F9E2 𠂇	F9E3 𠂇	F9E4 𠂇	F9E5 𠂇	F9E6 𠂇	F9E7 𠂇
F9E8 𠂇	F9E9 𠂇	F9EA 𠂇	F9EB 𠂇	F9EC 𠂇	F9ED 𠂇
F9EE 𠂇	F9EF 𠂇	F9F0 𠂇	F9F1 𠂇	F9F2 𠂇	F9F3 𠂇
F9F4 𠂇	F9F5 𠂇	F9F6 𠂇	F9F7 𠂇	F9F8 𠂇	F9F9 𠂇
F9FA 𠂇	F9FB 𠂇	F9FC 𠂇	F9FD 𠂇	F9FE 𠂇	
C6E7 あ	C6E8 あ	C6E9 い	C6EA い	C6EB う	C6EC う
C6ED え	C6EE え	C6EF お	C6F0 お	C6F1 か	C6F2 が
C6F3 き	C6F4 ぎ	C6F5 く	C6F6 ぐ	C6F7 け	C6F8 げ
C6F9 こ	C6FA ご	C6FB き	C6FC ぎ	C6FD し	C6FE じ
C740 す	C741 ず	C742 せ	C743 ぜ	C744 そ	C745 ぞ
C746 た	C747 だ	C748 ち	C749 ぢ	C74A っ	C74B っ
C74C づ	C74D て	C74E で	C74F と	C750 ど	C751 な
C752 に	C753 ぬ	C754 ね	C755 の	C756 は	C757 ば
C758 ぱ	C759 ひ	C75A び	C75B び	C75C ふ	C75D ぶ
C75E ぷ	C75F へ	C760 べ	C761 ぺ	C762 ほ	C763 ぼ
C764 ぽ	C765 ま	C766 み	C767 む	C768 め	C769 も
C76A や	C76B や	C76C ゆ	C76D ゆ	C76E よ	C76F よ
C770 ら	C771 り	C772 る	C773 れ	C774 ろ	C775 わ
C776 わ	C777 ろ	C778 ゑ	C779 を	C77A ん	C77B ア
C77C ア	C77D イ	C77E イ	C7A1 ウ	C7A2 ウ	C7A3 エ
C7A4 エ	C7A5 オ	C7A6 オ	C7A7 カ	C7A8 ガ	C7A9 キ

《倚天中文系統》

Row F9	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4																
5																
6																
7																
A																
B																
C																
D																
E																
F																

CJKV Information Processing Second Edition, ISBN 978-0-596-51447-1,
[Appendix E PDF p52.](#)

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646²

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	Proposal to Encode 4 Unencoded Big5 ETen Extension Box Drawing Characters
2. Requester's name:	<i>Night Koo</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual</i>
4. Submission date:	<i>2026-07-31</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	☒
(or) More information will be provided later:	☐

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	
Proposed name of script:	
b. The proposal is for addition of character(s) to an existing block:	☒
Name of the existing block:	<i>Symbols for Legacy Computing</i>
2. Number of characters in proposal:	<i>4</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary ☒ B.1-Specialized (small collection) ☐ B.2-Specialized (large collection) ☐	
C-Major extinct ☐ D-Attested extinct ☐ E-Minor extinct ☐	
F-Archaic Hieroglyphic or Ideographic ☐ G-Obscure or questionable usage symbols ☐	
4. Is a repertoire including character names provided?	
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	
b. Are the character shapes attached in a legible form suitable for review?	☒
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Attached in this document</i>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>Submitter under SIL OFL</i>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	☒
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	
7. Special encoding issues:	
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

² Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	
If YES explain	
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?	✓
If YES, with whom?	Big5 experts
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	
Reference:	
4. The context of use for the proposed characters (type of use; common or rare)	✓
Reference:	
5. Are the proposed characters in current use by the user community?	✓
If YES, where? Reference:	Big5 encoding
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	✓
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
11. Does the proposal include use of combining characters and/or use of composite sequences?	
If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	
If YES, reference:	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	

UnicodeData.txt

```
1 1FBFB;BOX DRAWINGS DOUBLE ARC DOWN AND RIGHT;So;0;ON;;;;;N;FORMS DOUBLE ARC DOWN
AND RIGHT;;;
2 1FBFC;BOX DRAWINGS DOUBLE ARC DOWN AND LEFT;So;0;ON;;;;;N;FORMS DOUBLE ARC DOWN
AND LEFT;;;
3 1BFD;BOX DRAWINGS DOUBLE ARC UP AND RIGHT;So;0;ON;;;;;N;FORMS DOUBLE ARC UP AND
RIGHT;;;
4 1BFDE;BOX DRAWINGS DOUBLE ARC UP AND LEFT;So;0;ON;;;;;N;FORMS DOUBLE ARC UP AND
LEFT;;;
+4
```