### Universal Multiple-Octet Coded Character Set

International Ōrganization for Standardization Organisation internationale de normalisation Международная организация по стандартизации 國際標準化組織

L2/02-089

Doc Type: Working Group Document

Title: Proposal to add monogram, digram and tetragram characters to the UCS

Source: Richard S. Cook, Michael Everson, Michael Nylan

**Status: Expert Contribution** 

Date: 2002-02-11

### A. Administrative

1. Title

Proposal to add monogram, digram and tetragram characters to the UCS.

2. Requester's name

Richard S. Cook, Michael Everson, Michael Nylan

3. Requester type

Expert contribution.

4. Submission date

2002-02-11.

5. Requester's reference

6a. Completion

This is a complete proposal.

6b. More information to be provided?

No.

### **B.** Technical – General

1a. New script? Name?

No.

1b. Addition of characters to existing block? Name?

No.

2. Number of characters

1+5+81=87.

3. Proposed category

Category B1.

4. Proposed level of implementation and rationale

Base characters.

5a. Character names included in proposal?

Yes.

5b. Character names in accordance with guidelines?

Yes.

5c. Character shapes reviewable?

Yes. See below.

6a. Who will provide computerized font?

Cook & Everson.

6b. Font currently available?

Yes.

#### 6c. Font format?

TrueType, and PostScript Type 1 formats are available.

7a. Are references (to other character sets, dictionaries, descriptive texts, etc.) provided?

Yes.

7b. Are published examples (such as samples from newspapers, magazines, or other sources) of use of proposed characters attached?  $v_{as}$ 

7c. Proposed Unicode and ISO/IEC 10646 bibliographical citations:

See Walters (1983[1987]) and Nylan (1994) in the bibliography below.

8. Does the proposal address other aspects of character data processing? No.

# C. Technical – Justification

1. Contact with the user community?

Yes.

2. Information on the user community?

Chinese classicists and linguists.

3a. The context of use for the proposed characters?

Classical semantic and divinatory notation.

3b. Reference

See bibliography below.

4a. Proposed characters in current use?

Yes.

4b. Where?

Symbols originated in and have strong usage in China; today used world-wide.

5a. Characters should be encoded entirely in BMP?

No.

5b. Rationale

They are rather specialized.

6. Should characters be kept in a continuous range?

Yes.

7a. Can the characters be considered a presentation form of an existing character or character sequence?

No.

7b. Where?

7c. Reference

N.A.

8a. Can any of the characters be considered to be similar (in appearance or function) to an existing character?

No

8b. Where? / 8c. Reference

N.A.

9a. Combining characters or use of composite sequences included?

No.

9b. List of composite sequences and their corresponding glyph images provided?  ${\rm N.A.}$ 

10. Characters with any special properties such as control function, etc. included?

No.

# D.0. Background

At present although the following 78《易經》Yì Jīng symbols

- (1) 2 MONOGRAMS: --
- (3) 8 TRIGRAMS:
- (4) 64 HEXAGRAMS:

have all been encoded in the UCS1, the following 87《太玄經》 Tài Xuán Jīng symbols

- **(5)** 1 MONOGRAM •
- (**6**) 5 DIGRAMS ... ... ... ...
- (7) 81 TETRAGRAMS

<del></del>	7.7			***				
≣	≣	≡	≣	≣	票	☶	<b></b>	≣
≅	₽	₽	☳	■	蕻	- 55	≅	<b>535</b>
⊞	₽	₽	☲	<b>=</b>	<b></b>	⊞	頭	ⅲ
≝	Ħ	∺	≡	Ħ	Ħ	⊞	₩	Ħ
≌	Ħ	∺	壨	II	訊	55	瑟	##
≌	¥	₩	≌	22	23	<u></u>	题	111
≝	₩	<b>#</b>	≡	Ħ	Ħ	₩	₩	₩
≌	Ħ	∺	==	Ħ	Ħ	丝	题	***
≝	<u>#</u>	===	<u>===</u>	<u> </u>	E5E	<u>:::</u>	111	- 111

all derivative of the same tradition, remain as yet unencoded.

### Ancient origin

Usage of these unencoded symbols in China begins with a text called 《太玄經》 Tài Xuán Jīng ('the exceedingly arcane classic'). Composed by a man named 揚雄 Yáng Xióng (53BC-AD18), the first draft of this work was completed in 2BC (in the decade before the fall of the Western Han Dynasty). This text is today popularly known in the West under several titles, including *The Alternative I Ching* and *The Elemental Changes*. The symbols under consideration in this proposal represent a primary level of semantic notation in this ancient text, following in and expanding upon the traditions of the primary Chinese classic 《易經》 Yì Jīng.

<sup>&</sup>lt;sup>1</sup> U+268A..U+268F; U+2630..U+2637; U+4DC0..U+4DFF. See L2/01-283-WG2/N2363.

### Global usage

The proposed symbols appear today in many ancient and modern print and electronic publications, produced in Asia and elsewhere in the world. In comparison with the trigram and hexagram signs, these signs are less well-known and less widely used. For this reason it is suggested that they need not be encoded in the BMP, but rather these 87 symbols may be placed in the Notational Systems Block, in the range U+1D300..U+1D356 inclusive. The bibliographic references (below) provide a representative sample of works attesting usage in running roman and Chinese text. For Chinese sources, reprints of several annotated editions of *Tài Xuán Jīng* have been published in the 2,000 years since the original work appeared. Scanned images of exemplary pages from two of these, the Jin Dynasty text of 范望 Fàn Wàng (d. AD 264) and the Northern Song Dynasty text of 司馬光 Sīmă Guāng (1019-1086), appear in the appendix. As primary modern Western sources, the works of Walters and Nylan are cited with scans demonstrating usage.

### **Semantically distinct**

These symbols are semantically distinct written signs associated with specific words. Each of the 81 tetragrams has a unique monosyllabic name (see the tabulation below), and each tetragram name is intimately connected with interpretation of the 6 lines.

# **D.1. Proposed Signs**

#### 1 MONOGRAM:

The 1 monogram ••• in the current proposal is 1/3 of the complete monogram set, the other members of which ( — and ••) were previously encoded. See item "(1) 2 MONOGRAMS" above. The full *Tài Xuán Jīng* set of three monograms, including those previously encoded, is as follows:

#### 5 DIGRAMS:

The 5 digrams ... ... ... in the current proposal are 5/9 of the complete digram set, the other 4 members of which ( ... ... ... ... ) were previously encoded. See item "(2) 4 DIGRAMS" above. The full *Tài Xuán Jīng* set of nine digrams, including those previously encoded, is as follows:

#### 81 TETRAGRAMS:

The 81 tetragram symbols of this proposal constitute a complete set, *no* members of which have previously been encoded. Within this set of 81 signs, a subset of 16 signs is of importance to Yi  $J\bar{\imath}ng$  scholarship proper (as opposed to its  $T\dot{\imath}ai$   $Xu\acute{\imath}an$   $J\bar{\imath}ng$  derivative), namely, the Yi  $J\bar{\imath}ng$  tetragrams. These are used in the study of the so-called "nuclear trigrams", and it is of incidental benefit to Yi  $J\bar{\imath}ng$  scholars to see these 16 symbols encoded.

# D.2. Traditional Arrangement

The proposed ordering of these 87 signs follows the traditional Chinese arrangement, as presented in the principal modern editions (see bibliography). The ordering of the 81 tetragrams is as follows:

1		2	≡	3	≣	4	☶	5	≣	6	<b>=</b>	7	☶	8	₫	9	<b></b>
10	≣	11	₽	12	₽	13	☶	14	≣	15	₽	16	☶	17	≅	18	<b></b>
19	⊞	20	₩	21	₽	22	₩	23	₩	24	<b>F</b>	25	▥	26	逦	27	ⅲ
28	≡	29	≡	30	∷	31	≣	32	Ħ	33	∺	34	∺	35	₩	36	<b>==</b>
37	≌	38	₩	39	₩	40	壨	41	≣≣	42	訊	43	壨	44	题	45	###
46	≌	47	₩	48	₩	49	≌	50	Ħ	51	謡	52		53	颐	54	<b>III</b>
55	≝	56	∺	57	∷	58	≝	59	Ħ	60	∺	61	≝	62	₩	63	<b>:::</b>
64	≌	65	₩	66	₩	67	≝	68	ΪÏ	69	Ħ	70	噩	71	器	72	
73	≝	74	₩	75	₩	76	<u>:::</u>	77	₩	78	##	79	<u>:::</u>	80	謎	81	

It may be noted that the traditional ordering of these trinary symbols follows the same general pattern as that employed in the traditional ordering of *Yi Jing* monogram, trigram and hexagram symbols.

# **D.3. Traditional Names**

The names proposed here for the 1 monogram and 5 digrams are provided on the basis of the Chinese terms for the 3 monograms appearing in the traditional *Tai Xuan Jing* texts.

The names of the 81 tetragrams tabulated below (on PAGES 9-13) are those appearing in the Nylan (1994) translation.

In addition to the names proposed for the characters in the current proposal, additional alternative *Tai Xuan Jing* names for the previously encoded monograms and digrams are tabulated separately below (on PAGE 14).

# **E.0. Bibliographic References** (Selected)

FAN Wang 范望 (d. AD 264)

<264 《太玄經》范望注 The TXJ text with commentary by Fàn Wàng. [T'ai-pei?]: Chung kuo tzu hsueh ming chu chi ch'eng pien yin chi chin hui, [1977].UCB: EAL 1060.5617 v.87.

#### KNECHTGES, David R.

- 1982 *The Han Shu Biography of Yang Xiong (53BC-AD18)* translated and annotated by David R. Knechtges Occasional Paper, Arizona State University Center for Asian Studies, XIV (Tempe, Arizona). [pp. 46-47, 52-56 (which compare the TXJ to the Yijing)].
- 1976 The Han Rhapsody: A Study of the Fu of Yang Hsiung (53BC-AD18). Cambridge: Cambridge University Press.

#### NYLAN, Michael

- 200x "T'ai hsüan ching", in Early Chinese Texts: A Bibliographical Guide. Early China Monograph Series (in press).
- 2001 The five "Confucian" classics. New Haven: Yale University Press. UCB: Main Stack PL2462.Z6; N95 2001
- 1994 The elemental changes: the ancient Chinese companion to the I ching / the Tai hsuan ching of Master Yang Hsiung; text and commentaries translated by Michael Nylan. Albany, N.Y.: State University of New York Press. UCB: Grad Svcs BF1770.C5; Y3613 1994.
- 1993 The Canon of supreme mystery = [T'ai hsuan ching] / by Yang Hsiung; a translation with commentary of the T'ai hsuan ching by Michael Nylan. Albany: State University of New York Press. UCB: Main Stack BF1770.C5; Y3613 1993.
- 1992 The shifting center: the original "Great plan" and later readings. Sankt Augustin: Nettetal: Institut Monumenta Serica; Steyler Verlag. Monumenta serica monograph series; 24. UCB: East Asian AS441; .M6 no.24; Reading Room.
- "The First Neo-Confucianism: Yang Hsiung's Canon of Supreme Mystery (T'ai hsüan ching), c. 4 bc". (NYLAN, with Nathan SIVIN). Appearing in Chinese Ideas about Nature and Society: Studies in Honour of Derek Bodde (Hong Kong, 1987), pp. 41-49.

#### SIMA Guang 司馬光 (1019-1086)

11<sup>th</sup> c. 《太玄經》司馬光注 The TXJ text with commentary by Northern Song Dynasty Sīmă Guāng. UCB EAL 1150 4302.1 1798 4v.

#### WALTERS, Derek

1983 *The Alternative I Ching, Reconstructed and Translated by Derek Walters.* Great Britain, Wellingborough, Northamptonshire: The Aquarian Press, 1987. First published as *The T'ai Hsüan Ching*, 1983. ISBN 0-85030-659-0.

#### Xu Fuguan 徐復觀

1975 《揚雄論究》['Researches on YANG Xiong']. 兩漢思想史, (Hong Kong), II, 439-562.

### YANG Xiong 揚雄 (53BC-18AD)

c.2BC 《太玄經》 Tài Xuán Jīng ['the exceptionally abstruse, exceedingly arcane classic']. Composed in the transition period from Western to Eastern Han, it exists in a number of different editions, the primary of which are the FAN Wang and SIMA Guang commentary editions (see references above, and scanned examples below).

# F.O. Notes on the Scanned Examples

Appended to this proposal (on PAGES 15-19) are scanned images of representative texts attesting usage of the *Tai Xuan Jing* (TXJ) monograms, digrams and tetragrams.

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F.1.	FAN Wang 范望 (Reprint of 晉 Jin Dynasty Edition) This example is page 179 from an edition of the Fan Wang commentary on the	p.15
	TXJ, showing the 47th tetragram (named 文 Wén; [U+1D334],	
	"TETRAGRAM FOR PATTERN") at the head of a vertical column of running Chinese text.	
F.2.	SIMA Guang 司馬光 (Reprint of 北宋 Northern Song Dynasty Edition) This example is a page from a reprint of a Northern Song Dynasty commentary	p.16
	on the TXJ, showing the 2nd tetragram (named 周 Zhōu; [U+1D307],	
	"TETRAGRAM FOR FULL CIRCLE") at the head of a vertical column of running Chinese text.	
F.3.	Walters (1987:6) This example shows a numbered tabulation of the full set of 81 TXJ tetragrams.	p.17
F.4.	Walters (1987:54) This example shows the three TXJ monograms in running roman text.	p.17
F.5.	Walters (1987:47) This example shows several TXJ tetragrams in running roman text, followed by a tabulation of the TXJ digrams (here termed "bigrams").	p.18
F.6.	Nylan (1994:21) This example shows TXJ mongrams in running roman text.	p.19
F.7.	NYLAN (1994:28) This example shows TXJ tetragrams in mixed roman and Chinese text.	p.19

# G.0. Acknowledgements

This proposal was prepared by Richard S. Cook <rscook@socrates.berkeley.edu> of the STEDT Project, in association with Michael Everson@evertype.com> and Prof. Michael Nylan <mnylan@socrates.Berkeley.edu> of the UC Berkeley History Department. Thanks also to Derek Walters <derekwalters@lineone.net> for his comments.

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For more information, please visit STEDT on the web at <a href="http://stedt.berkeley.edu/">http://stedt.berkeley.edu/</a> or send email to <stedt@socrates.berkeley.edu>.

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《太玄經》<TAI XUAN JING> MONOGRAM, DIGRAMS & TETRAGRAMS - U+1D300..U+1D356

Shou	Ming	Pinyin	USV	UName
	地	dì di4	[U+1D300]	MONOGRAM FOR EARTH
<b></b>	天地	tiāndì tian1di4	[U+1D301]	DIGRAM FOR HEAVENLY EARTH
	人地	réndì ren2di4	[U+1D302]	DIGRAM FOR HUMAN EARTH
	地天	<b>dìtiān</b> di4tian1	[U+1D303]	DIGRAM FOR EARTHLY HEAVEN
	地人	dìrén di4ren2	[U+1D304]	DIGRAM FOR EARTHLY HUMAN
• • • •	雙地	<b>shuāngdì</b> shuang1di4	[U+1D305]	DIGRAM FOR EARTH
	中	<b>zhōng</b> zhong1	[U+1D306]	TETRAGRAM FOR CENTRE
	周	<b>zhōu</b> zhou1	[U+1D307]	TETRAGRAM FOR FULL CIRCLE
≡	礥	xián xian2	[U+1D308]	TETRAGRAM FOR MIRED
	閑	xián xian2	[U+1D309]	TETRAGRAM FOR BARRIER
	少	shǎo shao3	[U+1D30A]	TETRAGRAM FOR KEEPING SMALL
	戾	lì 1i4	[U+1D30B]	TETRAGRAM FOR CONTRARIETY
	上	shàng shang4	[U+1D30C]	TETRAGRAM FOR ASCENT
	干	<b>gān</b> gan1	[U+1D30D]	TETRAGRAM FOR OPPOSITION
	狩	shū shu1	[U+1D30E]	TETRAGRAM FOR BRANCHING OUT
	羡	xiàn xian4	[U+1D30F]	TETRAGRAM FOR DEFECTIVENESS OR DISTORTION
	差	chà cha4	[U+1D310]	TETRAGRAM FOR DIVERGENCE
	童	<b>tóng</b> tong2	[U+1D311]	TETRAGRAM FOR YOUTHFULNESS

《太玄經》<TAI XUAN JING> MONOGRAM, DIGRAMS & TETRAGRAMS - U+1D300..U+1D356

Shou	Ming	Pinyin	USV	UName
=	增	<b>zēng</b> zeng1	[U+1D312]	TETRAGRAM FOR INCREASE
	鋭	ruì rui4	[U+1D313]	TETRAGRAM FOR PENETRATION
謡	達	<b>dá</b> da2	[U+1D314]	TETRAGRAM FOR REACH
<b>=</b>	交	ji <b>āo</b> jiao1	[U+1D315]	TETRAGRAM FOR CONTACT
==	耎	ru <b>ǎn</b> ruan3	[U+1D316]	TETRAGRAM FOR HOLDING BACK
<b></b>	傒	xī xi1	[U+1D317]	TETRAGRAM FOR WAITING
	從	<b>cóng</b> cong2	[U+1D318]	TETRAGRAM FOR FOLLOWING
	進	jìn jin4	[U+1D319]	TETRAGRAM FOR ADVANCE
₩	釋	shì shi4	[U+1D31A]	TETRAGRAM FOR RELEASE
■	格	<b>gé</b> ge2	[U+1D31B]	TETRAGRAM FOR RESISTANCE
==	夷	yí yi2	[U+1D31C]	TETRAGRAM FOR EASE
===	樂	lè le4	[U+1D31D]	TETRAGRAM FOR JOY
■	爭	<b>zhēng</b> zheng1	[U+1D31E]	TETRAGRAM FOR CONTENTION
<b>=</b>	務	wù wu4	[U+1D31F]	TETRAGRAM FOR ENDEAVOUR
	事	shì shi4	[U+1D320]	TETRAGRAM FOR DUTIES
	更	<b>gēng</b> geng1	[U+1D321]	TETRAGRAM FOR CHANGE
=	丝斤	duàn duan4	[U+1D322]	TETRAGRAM FOR DECISIVENESS
<b>=</b>	毅	yì yi4	[U+1D323]	TETRAGRAM FOR BOLD RESOLUTION

《太玄經》<TAI XUAN JING> MONOGRAM, DIGRAMS & TETRAGRAMS - U+1D300..U+1D356

Shou	Ming	Pinyin	USV	UName
=	裝	zhuāng zhuang1	[U+1D324]	TETRAGRAM FOR PACKING
	<b></b>	zhòng zhong4	[U+1D325]	TETRAGRAM FOR LEGION
==	密	mì mi4	[U+1D326]	TETRAGRAM FOR CLOSENESS
<b>=</b>	親	qīn qinl	[U+1D327]	TETRAGRAM FOR KINSHIP
<b>=</b>	斂	li <b>ǎn</b> lian3	[U+1D328]	TETRAGRAM FOR GATHERING
<b>=</b>	彊	<b>qiáng</b> qiang2	[U+1D329]	TETRAGRAM FOR STRENGTH
	睟	suì sui4	[U+1D32A]	TETRAGRAM FOR PURITY
<b>=</b>	盛	shèng sheng4	[U+1D32B]	TETRAGRAM FOR FULLNESS
<b>!!!</b>	居	j <b>ū</b> ju1	[U+1D32C]	TETRAGRAM FOR RESIDENCE
	法	f <b>ǎ</b> fa3	[U+1D32D]	TETRAGRAM FOR LAW OR MODEL
	應	yìng ying4	[U+1D32E]	TETRAGRAM FOR RESPONSE
==	迎	<b>yíng</b> ying2	[U+1D32F]	TETRAGRAM FOR GOING TO MEET
==	遇	yù yu4	[U+1D330]	TETRAGRAM FOR ENCOUNTERS
₹.	空電	<b>zào</b> zao4	[U+1D331]	TETRAGRAM FOR STOVE
==	大	<b>dà</b> da4	[U+1D332]	TETRAGRAM FOR GREATNESS
	廓	kuò kuo4	[U+1D333]	TETRAGRAM FOR ENLARGEMENT
	文	wén wen2	[U+1D334]	TETRAGRAM FOR PATTERN
	禮	lĭ 1i3	[U+1D335]	TETRAGRAM FOR RITUAL

《太玄經》<TAI XUAN JING> MONOGRAM, DIGRAMS & TETRAGRAMS - U+1D300..U+1D356

Shou	Ming	Pinyin	USV	UName
==	逃	táo tao2	[U+1D336]	TETRAGRAM FOR FLIGHT
==	唐	<b>táng</b> tang2	[U+1D337]	TETRAGRAM FOR VASTNESS OR WASTING
<b>==</b>	常	cháng chang2	[U+1D338]	TETRAGRAM FOR CONSTANCY
<u>==</u>	度	<b>dù</b> du4	[U+1D339]	TETRAGRAM FOR MEASURE
==	永	<b>yŏng</b> yong3	[U+1D33A]	TETRAGRAM FOR ETERNITY
<b></b>	毘	<b>kūn</b> kun1	[U+1D33B]	TETRAGRAM FOR UNITY
	減	ji <b>ǎn</b> jian3	[U+1D33C]	TETRAGRAM FOR DIMINISHMENT
	唫	j <b>ìn</b> jin4	[U+1D33D]	TETRAGRAM FOR CLOSED MOUTH
₩	守	shou3	[U+1D33E]	TETRAGRAM FOR GUARDEDNESS
≡	翕	xī xil	[U+1D33F]	TETRAGRAM FOR GATHERING IN
==	聚	j <b>ù</b> ju4	[U+1D340]	TETRAGRAM FOR MASSING
===	積	jī ji1	[U+1D341]	TETRAGRAM FOR ACCUMULATION
	餙	shì shi4	[U+1D342]	TETRAGRAM FOR EMBELLISHMENT
	疑	yí yi2	[U+1D343]	TETRAGRAM FOR DOUBT
<b>:::</b>	視	shì shi4	[U+1D344]	TETRAGRAM FOR WATCH
	沈	chén chen2	[U+1D345]	TETRAGRAM FOR SINKING
	內	nèi nei4	[U+1D346]	TETRAGRAM FOR INNER
	去	<b>qù</b> qu4	[U+1D347]	TETRAGRAM FOR DEPARTURE

《太玄經》<TAI XUAN JING> MONOGRAM, DIGRAMS & TETRAGRAMS - U+1D300..U+1D356

Shou	Ming	Pinyin	USV	UName
==	晦	huì hui4	[U+1D348]	TETRAGRAM FOR DARKENING
	瞢	méng meng2	[U+1D349]	TETRAGRAM FOR DIMMING
==	窮	<b>qióng</b> qiong2	[U+1D34A]	TETRAGRAM FOR EXHAUSTION
===	割	<b>gē</b> gel	[U+1D34B]	TETRAGRAM FOR SEVERANCE
===	止	zhĭ zhi3	[U+1D34C]	TETRAGRAM FOR STOPPAGE
===	堅	ji <b>ān</b> jian1	[U+1D34D]	TETRAGRAM FOR HARDNESS
<b>=</b>	成	chéng cheng2	[U+1D34E]	TETRAGRAM FOR COMPLETION
<b>=</b>	劉	zhì zhi4	[U+1D34F]	TETRAGRAM FOR CLOSURE
<b>=</b>	失	shī shil	[U+1D350]	TETRAGRAM FOR FAILURE
<b>==</b>	劇	j <b>ù</b> ju4	[U+1D351]	TETRAGRAM FOR AGGRAVATION
==	馬[[	xùn xun4	[U+1D352]	TETRAGRAM FOR COMPLIANCE
===	將	ji <b>āng</b> jiang1	[U+1D353]	TETRAGRAM FOR ON THE VERGE
<b>==</b>	難	nán nan2	[U+1D354]	TETRAGRAM FOR DIFFICULTIES
	勤	<b>qín</b> qin2	[U+1D355]	TETRAGRAM FOR LABOURING
	養	<b>yǎng</b> yang3	[U+1D356]	TETRAGRAM FOR FOSTERING

《太玄經》<TAI XUAN JING> MONOGRAMS & DIGRAMS: ADDITIONAL INFORMATIVE NOTES

Shou	Ming	Pinyin	USV	UName
	天	tiān tian1	[U+2672]	MONOGRAM FOR YANG *TaiXuanJing MONOGRAM FOR HEAVEN
	人	rén ren2	[U+2673]	MONOGRAM FOR YIN *TXJ MONOGRAM FOR MAN
	地	dì di4	[U+1D300]	MONOGRAM FOR EARTH
	雙天	shuāngtiān shuang1tian1	[U+2674]	DIGRAM FOR GREATER YANG *TXJ DIGRAM FOR HEAVEN
	天人	tiānrén tian1ren2	[U+2676]	DIGRAM FOR LESSER YANG *TXJ DIGRAM FOR HEAVENLY HUMAN
	天地	tiāndì tian1di4	[U+1D301]	DIGRAM FOR HEAVENLY EARTH
	人天	réntiān ren2tian1	[U+2675]	DIGRAM FOR LESSER YIN *TXJ DIGRAM FOR HUMAN HEAVEN
	雙人	shuāngrén shuang1ren2	[U+2677]	DIGRAM FOR GREATER YIN *TXJ DIGRAM FOR HUMAN
	人地	réndì ren2di4	[U+1D302]	DIGRAM FOR HUMAN EARTH
	地天	dìtiān di4tian1	[U+1D303]	DIGRAM FOR EARTHLY HEAVEN
	地人	dìrén di4ren2	[U+1D304]	DIGRAM FOR EARTHLY HUMAN
	雙地	shuāngdì shuang1di4	[U+1D305]	DIGRAM FOR EARTH

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Source: Fan Wang (Reprint of Jin Dynasty edition) UCB EAL 1060 5617 v.87

周 而 顺 生 始 也 謂 隨

闕 思

Source: Sima Guang (Reprint of Northen Song Dynasty edition) UCB EAL 1150 4302.1 1798 4v.

_	TI			JEN	_	T'IEN		
73 CHENG	64 CH'EN	55 CHIEN	46 k'UO	37 TSUI	28 KENG	19 ts'ung	10 HSIEN	1 CHUNG
74	65	56	47	38	29	20	11	2
75	66	57	48	39	30	21	12	3
76	67	58	49	40	31	22	13	4
77	68	59	50	41	32	23	14	5
78	70	60	51	42	33	24	15	7
80	71	62	53	44	35	26	17	8
81	72	63	54	45	36	27	18	9

The 81 Tetragrams, arranged in T'ien.

Source: Walters (1987: 6,54)

The bottom, or Chia line, of the Shou can now be written as T'ien, and is written as an unbroken line, —.

If the number of stalks in the remainder pile is 4, then there would have been one remainder of Two in the manipulations.

Two is the number of Jen, and therefore the bottom line is written as a singly broken line, - .

If the number of stalks in the remainder pile is 5, this indicates that there was one remainder of Three. Three is the number of Ti; and the bottom line of the Shou is written as a line broken into three, ••••

For example, tetragram 11 \( \sum\_{\text{eq}} \) could be regarded as a doubling of bigram 2.

Similarly, tetragram 31 is the fourth bigram repeated, \equiv .

While tetragram 13, shows bigram 2 in the upper half and bigram 4 in the lower half.

Each of the nine bigrams form at least one tetragram by doubling itself; in some cases (when the lines are dissimilar) it is possible to form another bigram by reversal, or reflection. The auspices of the tetragrams can therefore be interpreted in the light of the component bigrams, and the prevalence, or otherwise, of good and bad omens.

Bigram		The Doubled bigram		The Reflected bigram		Reversals of the bigrams	
1	=	1				41	81
2	==	11		29		31	
3		21		57	==	71	=
4		31		13	===	11	==
5	= =	41	==			1 =	81
6		51		69	:::	71	:::
7		61	===	25		21	#
8		71	:::	53		51	:::
9		81	:::			1	41

Illustration of the Doubles and Reflections of the Bigrams.

The combinations of bigrams which form the 81 Shou can be read off the following table, also known as the '9×9 Magic Square of Integers'. (The use of the expression 'Magic Square' has in this case nothing to do with magic squares in the mathematical sense of the word.)

Source: Walters (1987)

Source: Nylan (1994:21)

The resultant graphic symbols look like this:

twice-broken line [corresponding to Man]
unbroken line [corresponding to Heaven]
once-broken line [corresponding to Earth]
once-broken line [corresponding to Earth]

### Translation of the Mystery

No. 73. Completion / Ch'eng  Nov. 11-Nov. 15 (A.M.)	No. 76. Aggravation / Chü  Nov. 24 (P.M.)—Nov. 28	No. 79. Difficulties / Nan  Let
No. 74. Closure / Chih <b>製 ==</b> Nov. 15 (p.m.)—Nov. 19	No. 77. Compliance / Hsün 斯加 Nov. 29–Dec. 3 (A.M.)	No. 80. Laboring / Ch'in 動 Dec. 12 (р.м.)-Dec. 16
No. 75. Failure / Shih  Rov. 20–Nov. 24 (A.M.)	No. 78. On the Verge / Chiang  Dec. 3 (P.M.)—Dec. 7	No. 81. Fostering / Yang  Dec. 17-Dec. 21 (A.M.)

Source: Nylan (1994:28)

**Row 1D3: TAI XUAN JING TETRAGRAMS** 

	1D30	1D31	1D32	1D33	1D34	1D35
0		==	<b></b>	E		<b>:</b>
1		<b>III</b>	≡	H	<b>:</b>	<u> </u>
2	<del></del>	<b>III</b>	Ħ	III.	∷	iii
3		IIII	Ш	:III	:::	
4		III		<b>::::</b>	<b>:</b>	<b>:::</b>
5	***	III	Ш	H		
6		H	##	III	#	<b></b>
7	=	:::1		<b>!!!</b> !	::::	
8	=	<b>=</b>	Ħ	H	<u>==</u>	
9		III	<b>II</b> ::	<b> </b>	iii	
Α	Ħ	<b>IIII</b>	<b>!!!</b>	E	##	
В	==	III	<b>    </b>	<b>!!!!</b>	<b>≅</b>	
С	=	III	<b>::::</b>	:III	##	
D	=	<b>:::</b>	≣	:1113	<b>:::</b>	
E	=	<b>≡</b>	III.	<b>:::</b>	≝	
F	=	<u></u>	<b>!!!</b>	<b>    </b>	<b>:::</b>	

G = 00 P = 01

### **Row 1D3: TAI XUAN JING TETRAGRAMS**

hex	Name	hex	Name
00	MONOGRAM FOR EARTH	59	(This position shall not be used)
01 02	DIGRAM FOR HEAVENLY EARTH DIGRAM FOR HUMAN EARTH	5A 5B	(This position shall not be used) (This position shall not be used)
03	DIGRAM FOR EARTHLY HEAVEN	5C	(This position shall not be used)
04 05	DIGRAM FOR EARTHLY HUMAN DIGRAM FOR EARTH	5D 5E	(This position shall not be used) (This position shall not be used)
06	TETRAGRAM FOR CENTRE	5F	(This position shall not be used)
07 08	TETRAGRAM FOR FULL CIRCLE TETRAGRAM FOR MIRED		
09	TETRAGRAM FOR BARRIER		
0A 0B	TETRAGRAM FOR KEEPING SMALL		
0C	TETRAGRAM FOR CONTRARIETY TETRAGRAM FOR ASCENT		
0D	TETRAGRAM FOR OPPOSITION		
0E 0F	TETRAGRAM FOR BRANCHING OUT TETRAGRAM FOR DEFECTIVENESS OR DISTORTION		
10	TETRAGRAM FOR DIVERGENCE		
11 12	TETRAGRAM FOR YOUTHFULNESS TETRAGRAM FOR INCREASE		
13	TETRAGRAM FOR PENETRATION		
14 15	TETRAGRAM FOR REACH TETRAGRAM FOR CONTACT		
16	TETRAGRAM FOR HOLDING BACK		
17	TETRAGRAM FOR WAITING		
18 19	TETRAGRAM FOR FOLLOWING TETRAGRAM FOR ADVANCE		
1A	TETRAGRAM FOR RELEASE		
1B 1C	TETRAGRAM FOR RESISTANCE TETRAGRAM FOR EASE		
1D	TETRAGRAM FOR JOY		
1E 1F	TETRAGRAM FOR CONTENTION TETRAGRAM FOR ENDEAVOUR		
20	TETRAGRAM FOR DUTIES		
21 22	TETRAGRAM FOR CHANGE		
23	TETRAGRAM FOR DECISIVENESS TETRAGRAM FOR BOLD RESOLUTION		
24	TETRAGRAM FOR PACKING		
25 26	TETRAGRAM FOR LEGION TETRAGRAM FOR CLOSENESS		
27	TETRAGRAM FOR KINSHIP		
28 29	TETRAGRAM FOR GATHERING TETRAGRAM FOR STRENGTH		
2A	TETRAGRAM FOR PURITY		
2B 2C	TETRAGRAM FOR FULLNESS TETRAGRAM FOR RESIDENCE		
2D	TETRAGRAM FOR LAW OR MODEL		
2E 2F	TETRAGRAM FOR RESPONSE		
30	TETRAGRAM FOR GOING TO MEET TETRAGRAM FOR ENCOUNTERS		
31	TETRAGRAM FOR STOVE		
32 33	TETRAGRAM FOR GREATNESS TETRAGRAM FOR ENLARGEMENT		
34	TETRAGRAM FOR PATTERN		
35 36	TETRAGRAM FOR RITUAL TETRAGRAM FOR FLIGHT		
37	TETRAGRAM FOR VASTNESS OR WASTING		
38 39	TETRAGRAM FOR CONSTANCY TETRAGRAM FOR MEASURE		
3A	TETRAGRAM FOR ETERNITY		
3B 3C	TETRAGRAM FOR UNITY TETRAGRAM FOR DIMINISHMENT		
3D	TETRAGRAM FOR CLOSED MOUTH		
3E 3F	TETRAGRAM FOR GUARDEDNESS TETRAGRAM FOR GATHERING IN		
40	TETRAGRAM FOR MASSING		
41 42	TETRAGRAM FOR ACCUMULATION TETRAGRAM FOR EMBELLISHMENT		
43	TETRAGRAM FOR DOUBT		
44	TETRAGRAM FOR WATCH		
45 46	TETRAGRAM FOR SINKING TETRAGRAM FOR INNER		
47	TETRAGRAM FOR DEPARTURE		
48 49	TETRAGRAM FOR DARKENING TETRAGRAM FOR DIMMING		
4A	TETRAGRAM FOR EXHAUSTION		
4B 4C	TETRAGRAM FOR SEVERANCE TETRAGRAM FOR STOPPAGE		
4D	TETRAGRAM FOR HARDNESS		
4E 4F	TETRAGRAM FOR COMPLETION TETRAGRAM FOR CLOSURE		
50	TETRAGRAM FOR FAILURE		
51	TETRAGRAM FOR AGGRAVATION		
52 53	TETRAGRAM FOR COMPLIANCE TETRAGRAM FOR ON THE VERGE		
54	TETRAGRAM FOR DIFFICULTIES		
55 56	TETRAGRAM FOR LABOURING TETRAGRAM FOR FOSTERING		
57	(This position shall not be used)		
58	(This position shall not be used)		
C 00		Diama 04	Day 40