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(51) INT CL:
G09C 1/04 (2006.01) ***G06G 1/06*** (2006.01)

(56) Documents Cited:
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GB 07731/09

(58) Field of Search:
UK CL (Edition X) **G5X**
INT CL **G06G, G09C**
Other: **online: WPI, EPODOC, INTERNET**

(54) Abstract Title: **Linear slide rule for decoding symbolic data**

(57) A linear slide rule is used to decode symbolic data and preferably comprises a plurality of slidably mounted, inter-changeable data fascia plates 3, 4. The data fascia plates 3, 4 may contain symbolic data series, such as I Ching trigrams transcribed from data sources such as circular disks. The data may be embossed, cut or drilled on or into the data fascia plates 3, 4, which may be fabricated from a variety of materials such as plastic, wood or metal. The information contained in the data fascia plates 3, 4 is preferably decoded using a sliding cursor 5 divided into a grid comprising a specific pattern of opaque and transparent grid squares. The data that can be observed through the transparent grid squares of the cursor 5 may be tabulated into groups of data to form computer pixels, which may then be used to generate pictorial information. Mechanical, electrical, pneumatic or computing devices may be used to automate the decoding process.

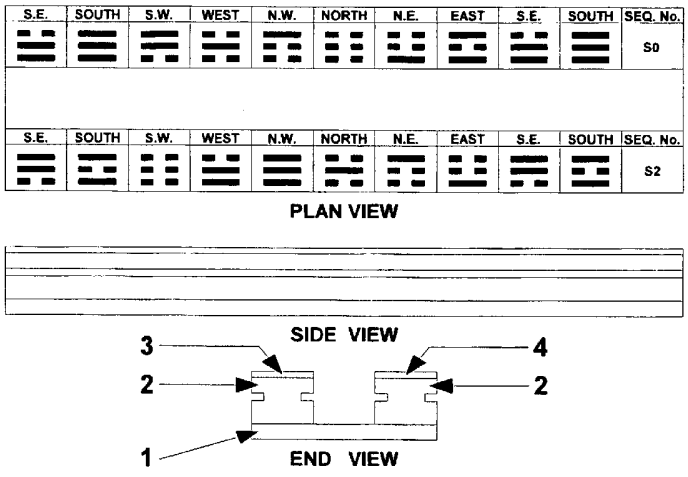

Figure 5

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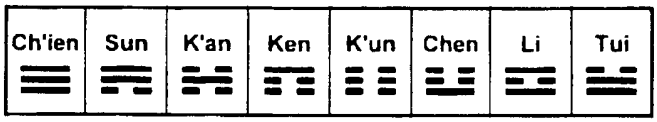


Figure 1

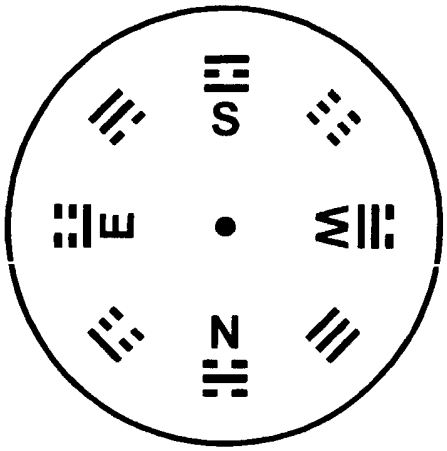


Figure 2

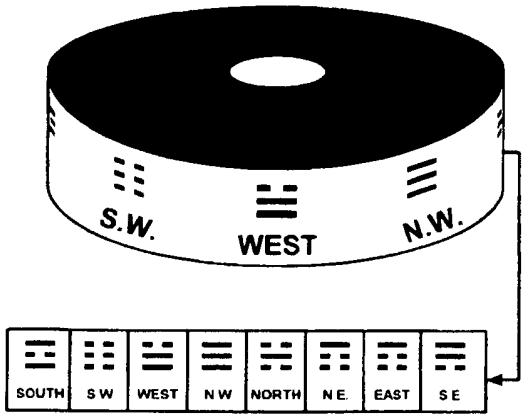


Figure 3

South	S.W.	West	N.W.	North	N.E.	East	S.E.
Ch'ien	Sun	K'an	Ken	K'un	Chen	Li	Tui
Li	K'un	Ken	Ch'ien	K'an	Sun	Chen	Tui
Li	K'un	Tui	Ch'ien	K'an	Ken	Chen	Sun

Figure 4

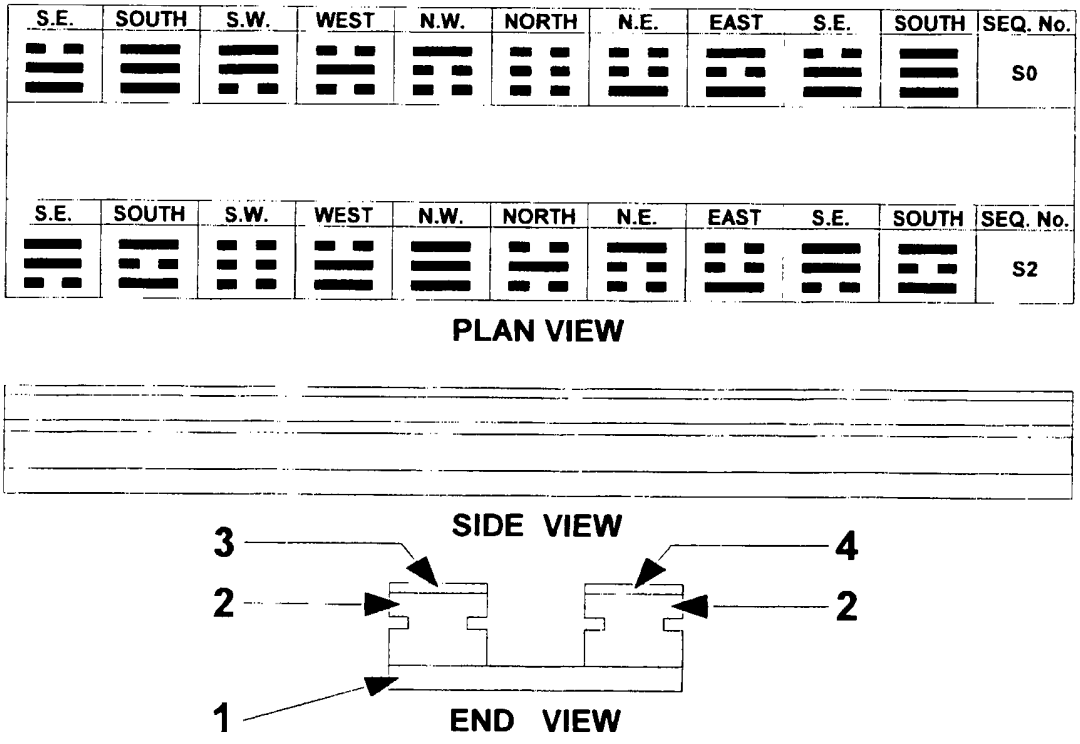
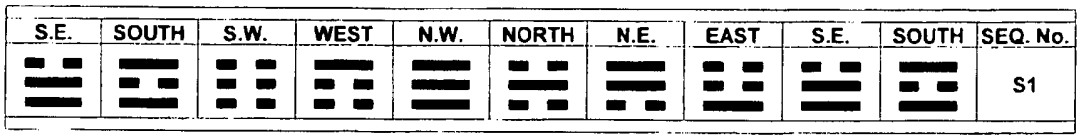
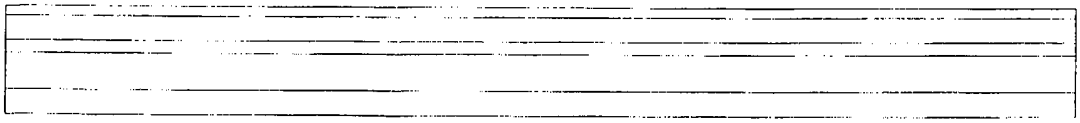


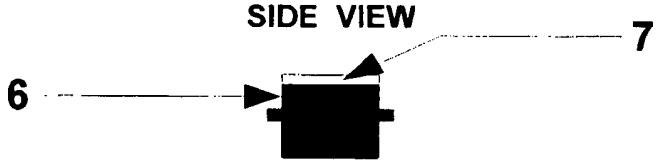
Figure 5



PLAN VIEW

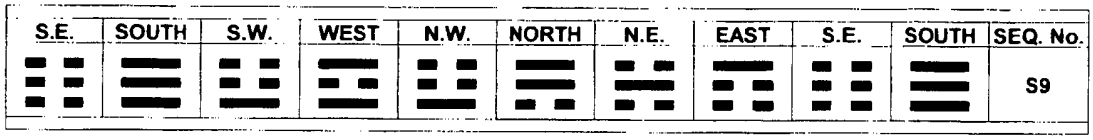


SIDE VIEW



END VIEW

Figure 6



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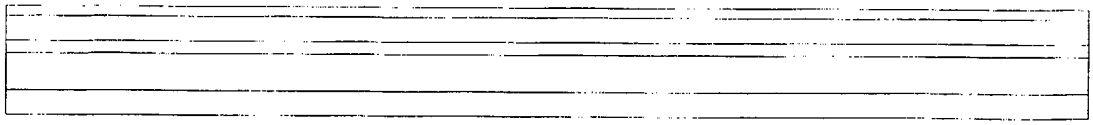
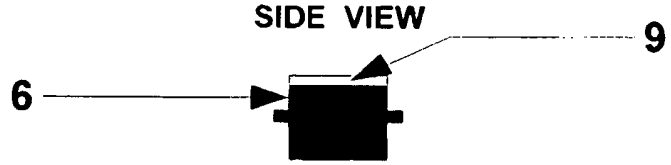
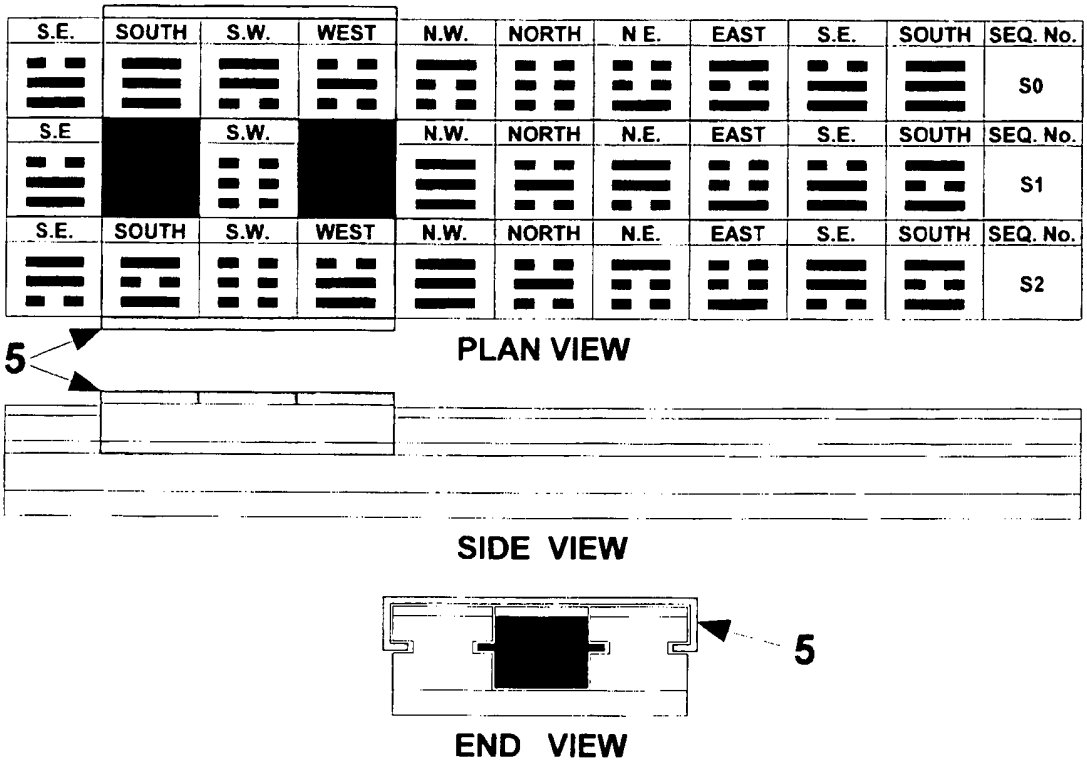


SIDE VIEW



END VIEW

Figure 7


S.E.
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S.W.
WEST
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NORTH
N E.
EAST
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SEQ. No.
S0
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S.W.
N.W.
NORTH
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EAST
S.E.
SOUTH
SEQ. No.
S1
S.E.
SOUTH
S.W.
WEST
N.W.
NORTH
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EAST
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SEQ. No.
S2
5
PLAN VIEW
SIDE VIEW
5
END VIEW

Figure 8

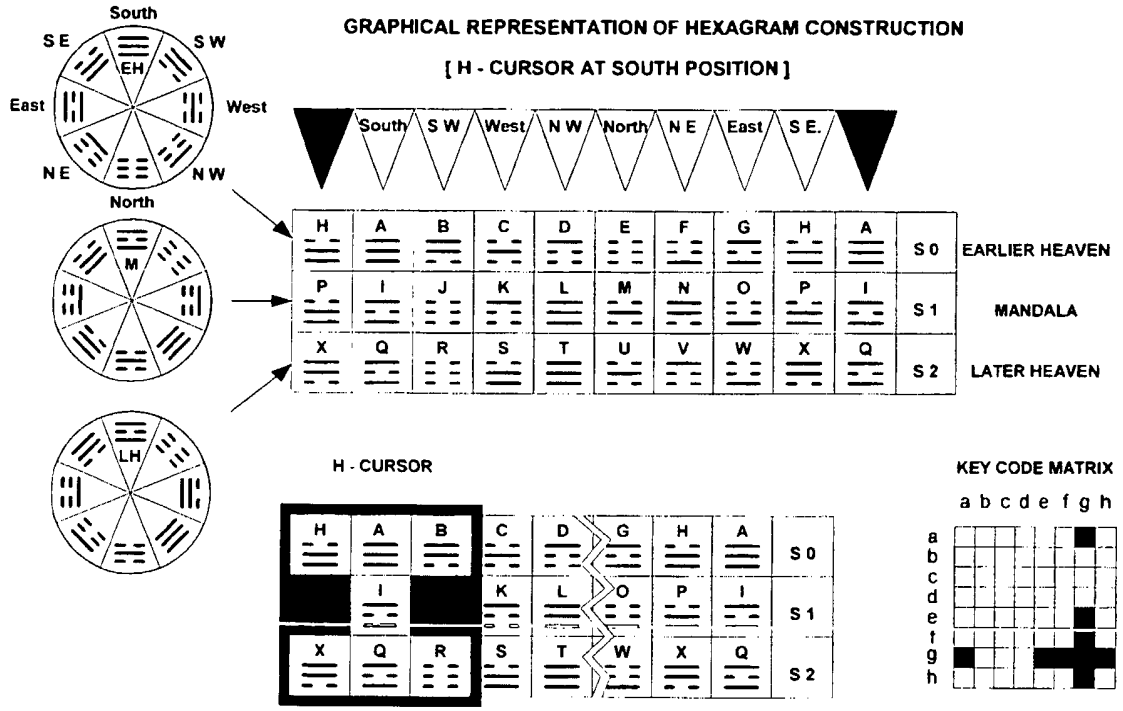


Figure 9

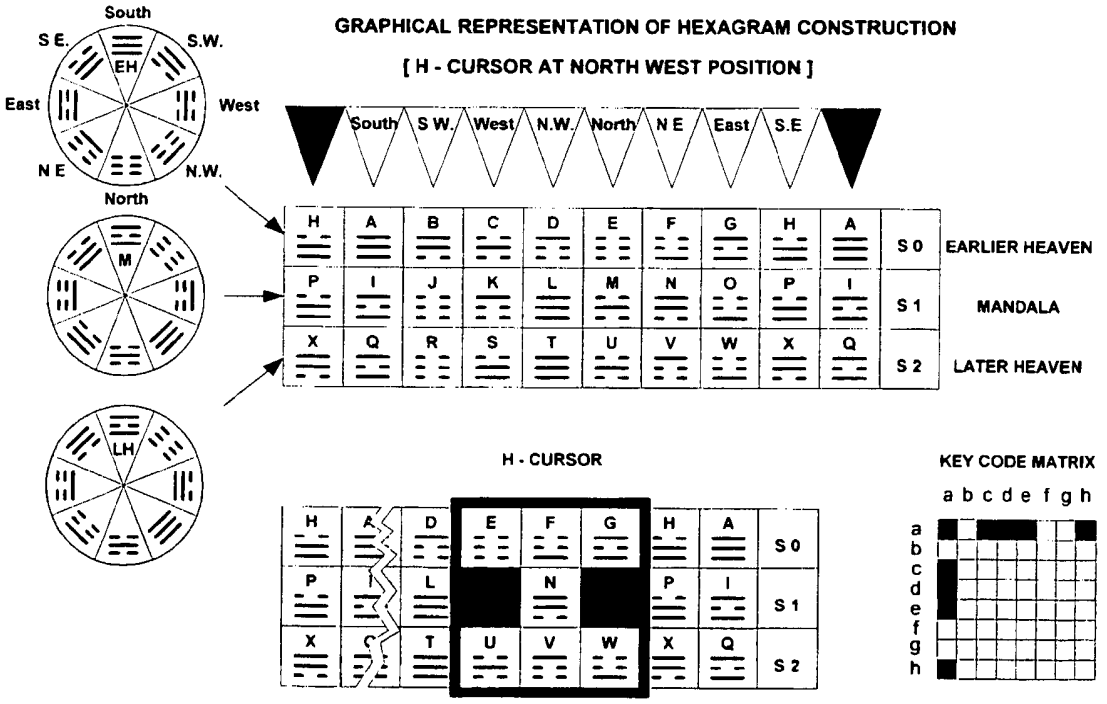
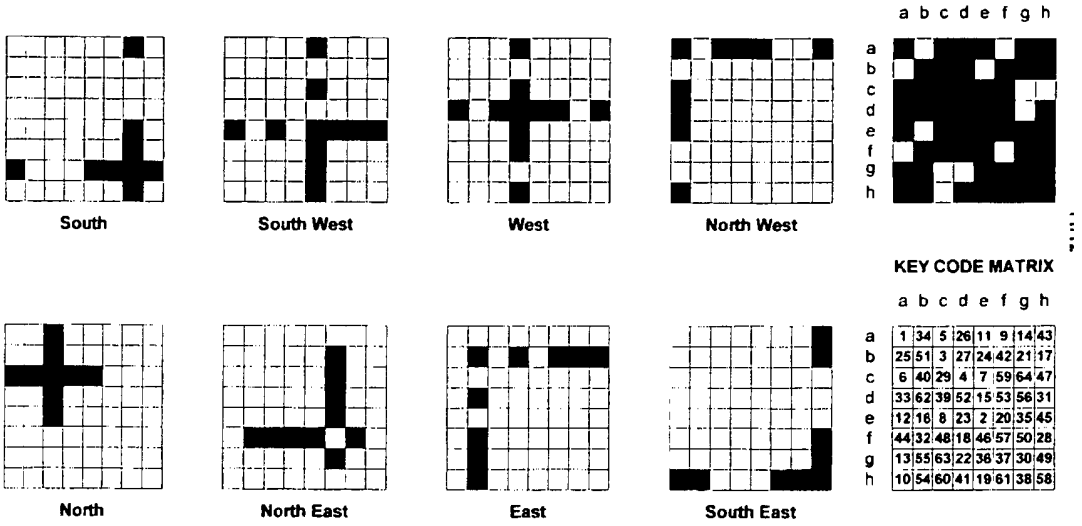


Figure 10



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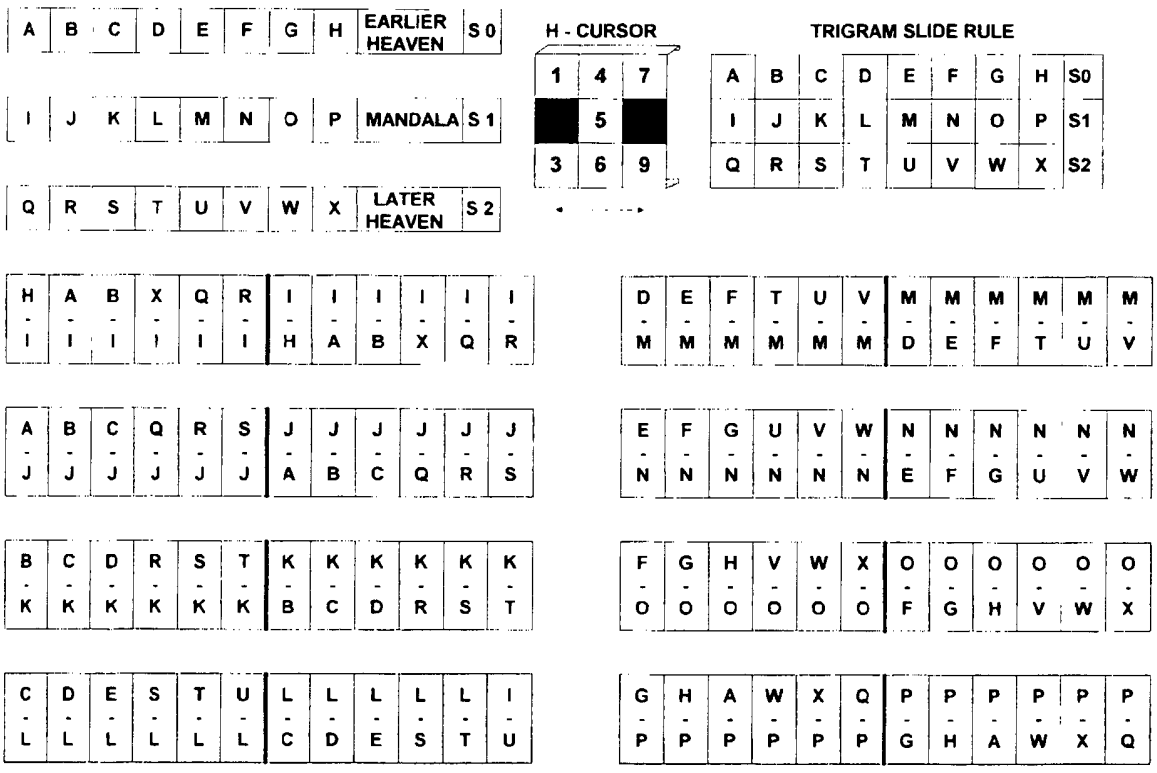


Figure 12

CURSOR	1	2	3	4	5	6	7	8	9	10	11	12
FORMULA	a	b	a	c	a	d	a	e	a	f	a	g
	b	a	c	a	d	a	e	a	f	a	g	a

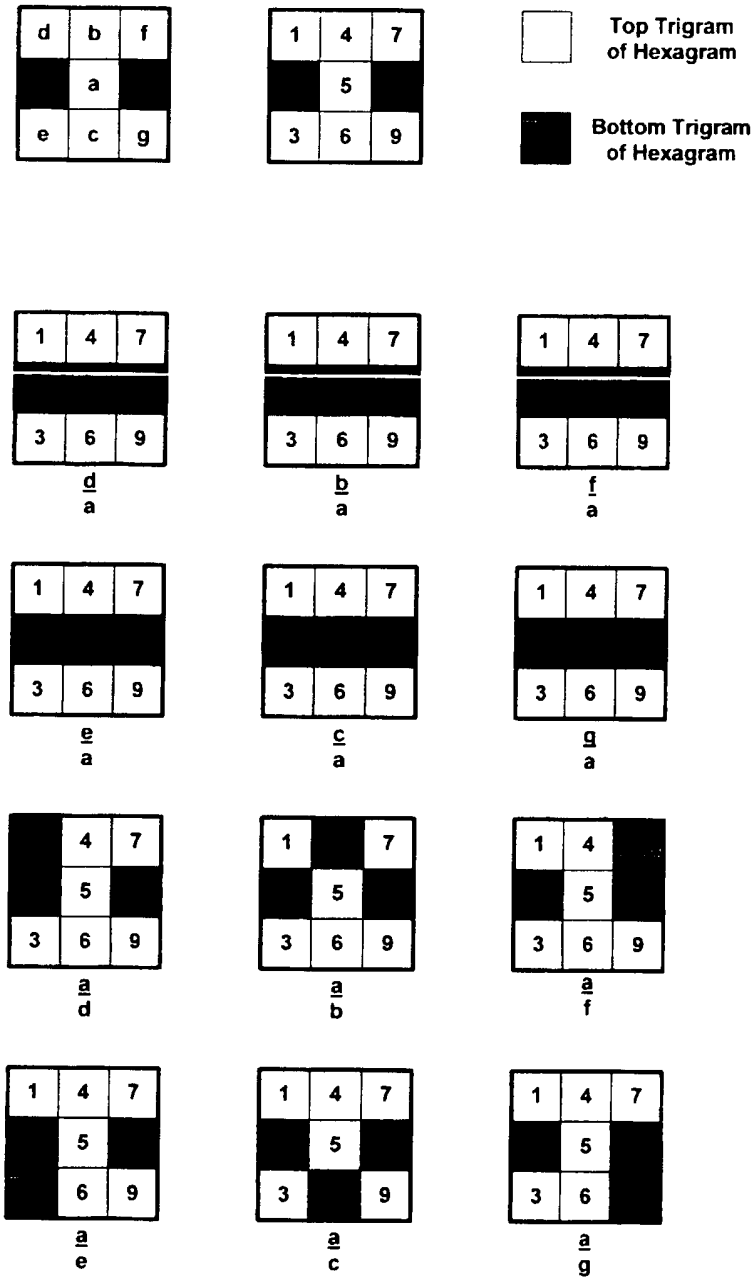


Figure 13

TRIGRAMS UPPER ▶ LOWER ▼	Ch'ien	Chen	K'an	Ken	K'un	Sun	Li	Tui
Ch'ien	1	34	5	26	11	9	14	43
Chen	25	51	3	27	24	42	21	17
K'an	6	40	29	4	7	59	64	47
Ken	33	62	39	52	15	53	56	31
K'un	12	16	8	23	2	20	35	45
Sun	44	32	48	18	46	57	50	28
Li	13	55	63	22	36	37	30	49
Tui	10	54	60	41	19	61	38	58

Figure 14

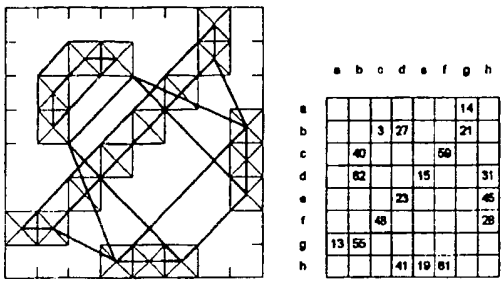


Figure 15

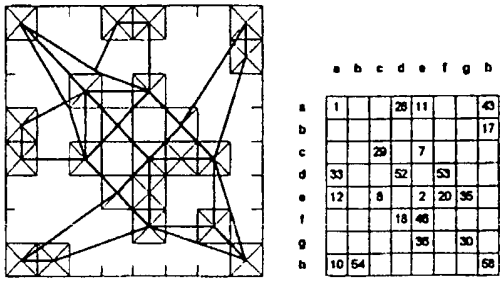


Figure 16

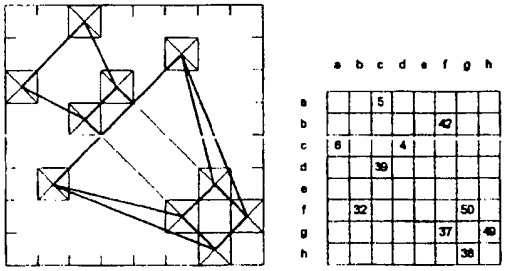


Figure 17

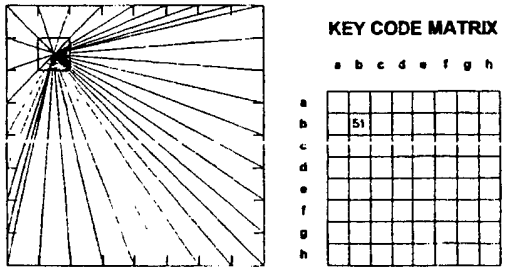
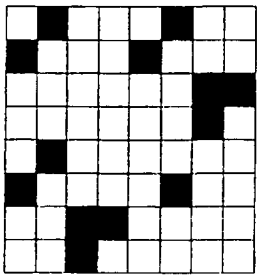


Figure18



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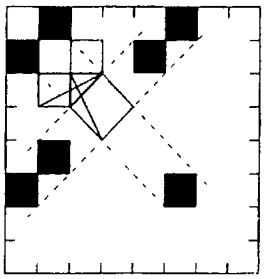


Figure 20

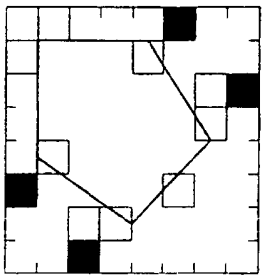
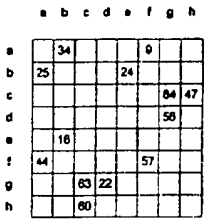


Figure 21



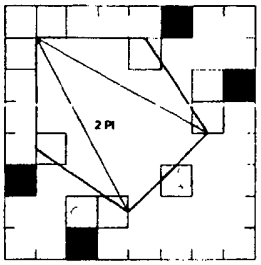


Figure 22

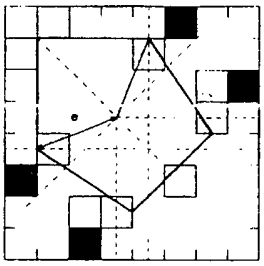


Figure 23

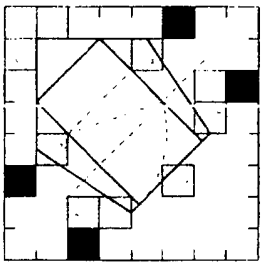


Figure 24

KEY CODE MATRIX

	a	b	c	d	e	f	g	h
a	1	34	5	28	11	9	14	43
b	25	51	3	27	24	42	21	17
c	6	40	29	4	7	56	64	47
d	33	62	39	52	15	53	58	31
e	12	16	8	23	2	20	35	45
f	44	32	48	18	46	57	50	28
g	13	55	63	22	38	37	30	49
h	10	54	60	41	19	61	36	58

SYMBOLIC DATA SYSTEM

This invention relates to an ancient cryptographic language which is symbolic and numeric in origin It incorporates patterns of trigrams which are related to the I Ching, the Chinese book of changes The patterns consist of circular sequential arrangements of trigram symbols They are found on a variety of archeological artifacts For research purposes, many of them have been categorized and individually identified, either by name or by a unique identification code or a numeric, binary or bar code.

For the purpose of this document, these trigram symbolic patterns are referred to herein as trigram data discs. They store data in a symbolic manner, similar to our modern day diskettes which store data in a magnetic manner In the past decade, there has been only archeological and artistic interest in them No one, as far as the writer of this document is concerned, has realized that they contain data in an unusual manner. **The symbolic information contained within these patterns has never been decoded or deciphered, because the means, methodology and/or the technology required to do so, has not been available.**

The I Ching is a book used exclusively for divination purposes Its text includes two trigram patterns known as the Earlier Heaven and Later Heaven arrangements and an illustration of a matrix board known as **the key for identifying hexagrams**. The text also contains, amongst other things, sixty-four hexagram oracle readings which may be addressed by utilizing one of the known methods to construct a hexagram symbol and thereby obtain a specific reading There are a number of different oracle methods which may be employed for divination purposes. For example, a hexagram may be constructed line by line by using the yarrow stalk or the coin method or alternatively, by the selection of two trigram symbols placed one above the other **In each case, the hexagram is created in a random manner which is unrepeatable.**

The trigrams mentioned above are three lined linear symbols, whilst hexagrams are six lined linear symbols, as shown within this document There are eight different trigram symbols, which by mathematical permutation can form sixty-four hexagram symbols **Each hexagram is identified either by name or numerically or by a unique binary code. The identification is incorporated within the text of this ancient book.**

The object of this invention is to provide the means to create groups of hexagrams in a logical, scientific and repeatable manner. These groups are used to extract coded scientific and mathematical data from a number of different trigram data discs and respective trigram symbolic patterns, which can be displayed on a visual display unit.

This invention consists of

- Trigram data discs
- A central processing unit **(C.P.U.)**
- A visual display unit **(V.D.U.)**
- Analytical Tables

Trigram Data Discs:
Symbolic data is extracted from trigram patterns and is transferred onto a number of new trigram data discs The new disc format has a recognizable, regular and uniform shape, with the eight trigram symbols singularly arranged in a logical sequential order, either along the periphery face or along the edge (rim) at each cardinal compass point position. Each new disc is uniquely identified and is individually assigned as a **reference** data or **programmable** data disc and its placement on the **C.P.U.** is determined accordingly The data is then transformed into a linear format, which is subsequently transcribed onto individual fascia data plates for the **C.P.U.** to decode.

There are more than **40320 trigram patterns**. The symbolic data contained within these patterns can be directly transformed into individual data fascia plates for classification and decoding purposes. Each trigram pattern can be represented as a single **reference** or a **programmable** fascia plate of symbolic data which can be manually or automatically inter-changed within the **C.P.U.** mentioned herein.

The Central Processing Unit (C.P.U.):
The **C.P.U** consists of a symbolic linear slide rule Its purpose is to select from **three** trigram symbolic patterns a combination of trigram symbols, which can be placed one above the other, to form a specific series of hexagrams from the symbolic data that has been encoded within the trigram patterns or the respective trigram data discs

It has two inter-changeable outer data fascia plates which contain the **reference** data and one inter-changeable sliding data fascia plate that contains the **programmable** data. Each individual fascia plate is inter-changeable so that it can be easily removed and replaced by other different fascia plates.

Each individual data fascia plate can be mounted onto any one of the **C. P. U.** base units. The fascia plate comprises a linear representation of the symbolic data which has been extracted from a specific trigram pattern or trigram data disc It has two data sections, a small section for identification and a larger section for the placement of symbolic data.

A unique sliding template, called an - H - cursor is placed above, over and across all three data fascia plates It is so designed that it can move freely sideways along the slide rule from one end to the other.

The cursor has a unique face plate which acts as a cursor-mask. The design of the mask enables a new mathematical permutation methodology to be utilized for the selection of trigrams. It is based on seven lower case alphabetical letters i.e., a to g inclusive, where each letter represents a single trigram data cell selected from one of the three trigram patterns or data discs.

Its use and purpose, which is graphically illustrated herein, shows that data extracted from one trigram data cell placed above the data extracted from another trigram data cell, will create a series of **twelve** hexagram symbols. Repeating this procedure for each cardinal compass point position will enable **ninety-six** hexagrams to be created. All the hexagrams created in this manner are numerically identified from their respective trigram components by utilizing the matrix grid **the key for identifying the hexagrams,** which is illustrated herein

Comparison of the I Ching and the Invented Symbolic System:
The divinatory symbolic system of the I Ching utilizes sixty-four hexagrams. These are singularly and individually created by the practitioner, using an oracle method to obtain a divinatory reading The particular oracle text is found by utilizing **the key for identifying hexagrams**, where each hexagram formed is identified either by name or by it unique identification number or by the respective trigram components from which it was created

The invented symbolic system differs from existing I Ching symbolic system, as the combinatory nature of the cursor's selection of data cells, together with a selection of differing **reference** and **programmable** data fascia plates, has been designed and developed to create a specific series of **ninety-six hexagrams.**

Each hexagram formed in this manner represents a **single computer pixel**. This hexagram pixel is identified by either its unique identification number or by its respective binary/denary code or its alpha-numeric code or by the **V.D.U.** address location or by the respective trigram components from which it was formed.

To create a pictographic image on the V.D.U. specific and anomalous groups of hexagrams are used.

The **specific** hexagram groups are created by mathematically summating the **ninety-six** hexagrams into selected groups Each group is based on the number of times an individual hexagram has been selected by the **C.P.U.**

The **anomalous** hexagram group comprises hexagrams that have been **omitted** from the selection process These are determined and identified, by comparing the total number of different hexagrams created by the **C.P.U** with the number of hexagrams mentioned in the I Ching,

Each **specific** and **anomalous** hexagram represents a computer pixel and each individual pixel's address and its actual position on the **V.D.U.** can be located by utilizing **the key for identifying hexagrams.**

This key identifies the screen position for each pixel by use of an alpha-numeric or a unique binary / denary code and as such, individual groups formed from either the **specific** and/or **anomalous hexagrams** can be displayed on the **V.D.U.** to form a unique pictographic image

The Visual Display Unit (V.D.U.):
The **V.D.U** is formed from **the key to identifying hexagrams** The resolution of the **V.D.U.** is incorporated within an eight by eight square matrix that comprises **sixty-four** square hexagram cells. Each cell address is identified, either by its assigned hexagram number or from its respective upper and lower trigram components, or by an alphabetic and/or numeric code, using lower case alphabet letters

The eight columns and rows that form the **V.D.U.** are identified by trigram symbols or by an alpha-numeric code. The sequential vertical and horizontal arrangements of these trigram symbols are identical in all respects, i e the sequential arrangement is such that the top horizontal sequence of trigrams commences at the top left hand side and finishes at the top right hand side of the matrix, whilst the vertical sequence of trigrams, commences at the top left hand side and finishes at the bottom left hand side of the matrix.

Each group of **specific** hexagram pixels created by the **C.P.U.**, and/or the **anomalous** group of **omitted** hexagrams, can be individually displayed on the **V.D.U** in a number of different ways, which will create differing pictographic images.

Each hexagram cell of the **V.D.U.** can be completely high-lighted to form a square image or alternatively, the central point or other points within the hexagram cell may be addressed by utilizing a unique **V.D.U.** location address

Analytical Tables:
The use of the cursor effectively creates a bridge that forms a link between each series of trigram data cells in a scientific and mathematical manner as it interacts simultaneously with all three respective trigram patterns or data discs

The analytical table shown herein has been specifically created. The table demonstrates and shows by example that the **C.P.U.** can be used to created **specific** groups of hexagrams It can also be used to indicate the **anomalous** hexagrams which were omitted from the selection process of the **C.P.U.**

Universal Analytical Tables may be created later by utilizing the mathematical permutation methodology developed for this invention. These may obviate the need of the C.P.U. described herein.

Origin of Reference and Programmable Data:
The **reference** data used within the analytical tables shown herein was extracted from the I Ching. The data is contained within the Earlier Heaven and Later Heaven trigram arrangements The symbolic **programmable** data was extracted from a Tibetan sacred treasury Mandala.

Details of these trigram patterns can be obtained from the internet (refer to the ichingmaster co.uk)

It should be noted that **reference** and **programmable** discs of symbolic data can be selected and extracted from over **40320 different trigram patterns or data discs by utilizing combinatory mathematics.**

It is not necessary to obtain every possible trigram pattern or data disc or similar archeological artifact to recreate the complete ancient library of pictographic images. All that is required is for practitioner(s) to realize that they are dealing with a combinatory series of trigram patterns or data discs.

Manufacture:
Preferably the **C.P.U** slide rule is made from metal or plastic material, but it may instead be made from card, wood (or other suitable material) or from a combination of materials.

A preferred embodiment of the invention will now be described with reference to the accompanying drawing in which

FIGURE 1 shows the eight trigram symbols arranged in a linear format

FIGURE 2 shows trigram symbols on the face of a trigram data disc

FIGURE 3 shows trigram symbols on the edge (rim) of a trigram data disc

FIGURE 4 shows the linear format of three trigram patterns or data discs

FIGURE 5 shows the plan, side and end view of the **C.P.U.** static base unit and two inter-changeable reference data fascia plates

FIGURE 6 shows the plan, side and end view of the **C.P.U** sliding base unit and an inter-changeable programmable data facia plate.

FIGURE 7 shows the plan, side and end view of an additional **C.P.U.** sliding base unit with different inter-changeable data fascia plate

FIGURE 8 shows the plan, side and end view of the **C.P.U.** base units (fitted with the reference and programmable fascia plates) aligned with their respective cardinal compass point positions, with the - H - cursor in the South West position

FIGURES 9 and **10** show by graphical illustration and example, the type of pictographic images created by an **anomalous** group of hexagrams which were **omitted** from the selection process of the **C.P.U.**

FIGURE 11 shows by graphical illustration and example, a pattern of pictographic images, created by summating all the **anomalous** groups of hexagrams together.

FIGURE 12 shows by graphical illustration, the combinational mathematical permutation used for the creation of **ninety-six specific** hexagrams.

FIGURE 13 explains by graphical illustration and example, the new mathematical permutation methodology that is incorporated within the formula developed specifically for the unique - H - cursor design.

FIGURE 14 shows by graphical illustration, the key for identifying hexagrams utilized as a **V.D.U.**

FIGURES 15 to 18 inclusive, show examples of the pictographic images created by the **specific** groups of hexagrams, as determined from the list of hexagrams tabulated in **Table 1** herein.

The pictographic image illustrated in **Figure 15** was obtained by using the **1 off** Hexagram Nos extracted from **Table 1.**

The pictographic image illustrated in **Figure 16** was obtained by using the **2 off** Hexagram Nos. extracted from **Table 1.**

The pictographic image illustrated in **Figure 17** was obtained by using the **3 off** Hexagram Nos extracted from **Table 1.**

The pictographic image illustrated in **Figure 18** was obtained by using the **4 off** Hexagram Nos extracted from **Table 1.**

FIGURES 19 to 24 inclusive, show examples of the pictographic patterns created by the **anomalous** group of hexagrams which were extracted from **Table 1.** These individual patterns contain graphical data of a mathematical and scientific nature, which includes the irrational mathematical constant values for Pi, epsilon and the golden section ratio.

As shown in **Figure 1**, there are eight trigrams symbols which can be identified by name A combination of the eight trigram symbols placed one above the other, will create sixty-four hexagram symbols.

Figure 2 shows trigrams symbols and their respective cardinal compass point positions, sequentially arranged on the face of a new trigram data disc.

Figure 3 shows the trigram symbols and their respective cardinal compass point positions, sequentially arranged on the edge or rim of a new trigram data disc

Figure 4 shows an example of trigram symbols, which have been extracted from three trigram patterns or data discs, arranged with their respective cardinal compass point positions in a sequential linear format.

As shown in **Figures 5, 6, 7** and **8,** the C P U has a typical slide rule design It comprises two longitudinal blocks **2** placed onto and rigidly attached to a base plate **1** with a third sliding longitudinal block **6** which can move freely sideways from one end to the other, placed between them

Thin fascia plates of symbolic data **3, 4, 7 (and 9 including other fascia plates not mentioned, illustrated or shown herein)** are attached to the upper surface face of the static and sliding base blocks in such a manner that they can be easily removed and replaced.

Data cells containing trigram symbols, their respective cardinal compass point positions and the identification code of the trigram pattern or trigram data disc (from which the data was extracted) and any other similar data, is printed or embossed onto the upper surface face of each fascia plate

The two outer data fascia plates **3** and **4** of the **C.P.U.** contain the **reference** symbolic data, whilst the inner sliding data fascia plate **7 (and 9 including other fascia plates not mentioned, illustrated or shown herein)**, contain the **programmable** symbolic data

Each data fascia plate contains a linear representation of the symbolic data which has been extracted from a specific trigram pattern or data disc It consists of two data sections, a small section for identification and a larger section for the placement of symbolic data

The small right hand section contains the sequence identification of the data disc (from which the data was obtained) This identification may consist of a name, a numeric or binary number or a bar code

The larger left hand section is sub-divided and split into ten equally spaced and uniformly sized cells, which are identified by their respective cardinal compass point positions

The cells at each end of the larger section are **overlap cells** which enables data to be readily read off at each end of the sequential series of eight cardinal compass point positions

The symbolic data in the form of eight individual trigram symbols is placed into its respective data cell in a sequential and logical order, to reflect the symbol's position on the respective trigram pattern or data disc, as shown

The data cells (excluding the overlap cells) are assigned to the South, sequentially followed by South West, West, North West, North, North East, East and South East respectively

It should be noted, that the two reference data fascia plates of symbolic data may also be inter-changed by replacing either one or both data fascia plates by using different data fascia plates to those that are shown within this document. They can even be replaced by utilizing the programmable data fascia plates as reference data fascia plates and vice versa.

This inter-changeability of both the programmable and reference data fascia plates of symbolic data associated with the C.P.U. changes this unique C.P.U. into a cryptographic coding and decoding device, which may be used to create a vast number of hexagram pixels and a library of pictographic images.

Figure 8 shows the unique cursor 5 placed above and across all three fascia data plates **3**, **4** and 7 of symbolic data. (**The cursor can also be placed in a similar manner above other fascia data plates not mentioned, illustrated or shown herein**) It is retained on the slide rule and can move freely sideways from one end of the slide rule to the other end. It is used to select at each cardinal compass point position a specific arrangement of trigram data cells from all three fascia data plates.

The face of the cursor is marked with a matrix-mask, so that each individual square cell can be accurately aligned with a set number of **reference** and **programmable** trigram data cells. This matrix-mask of individual square cells segregates its face into **nine** separate cell segments, **seven** of which are transparent, whilst **two** are opaque or blacked out. (**For descriptive purposes only, each cursor segment is uniquely identified and represented in a numerical manner from 1 to 9).**

The cursor matrix-mask effectively creates the cursor formula. Its design effectively permits the user to only select a pre-determined number of trigrams for each cardinal compass point position, in a repeatable, mathematical and scientific manner. This pre-selection of the trigram data cells has been determined by utilizing a new mathematical permutation methodology, which has been specifically developed for use with this C.P.U.

Figure 9 shows a pictographic image created by the **anomalous** group of hexagrams omitted from the selection process of the **C.P.U. with cursor at the South position.**

Figure 10 shows a pictographic image created by the **anomalous** group of hexagrams omitted from the selection process of the **C.P.U. with cursor at the North West position.**

Figure 11 shows a **pictographic pattern** created by graphically summarizing the **anomalous** groups of hexagrams which were omitted from the selection process of the **C.P.U. for all eight positions of the cursor.**

Figure 12 shows the combinational mathematical permutation of hexagrams created by utilizing three trigram data fascia plates and the **C.P.U** symbolic slide rule. **(For descriptive purposes only, each trigram data cell of the C.P.U. has been uniquely identified and represented by an upper case alphabetical letter).**

Figure 13 shows in a graphical manner the **cursor face matrix-mask** of individual square cells, which effectively create the cursor formula by segregating its face into **nine** separate cell segments. **Seven** are **transparent** which **PERMITS** the respective data fascia plate cells on the **C.P.U.** to be selected. Whilst the **two opaque** or **blacked out** segments **STOP and PREVENT** the user from selecting the respective data fascia plate cells which are positioned immediately below the **opaque** or **blacked out** segments.

Figure 14 shows a graphical arrangement of the Visual Display Unit **(V.D.U.). It is designed that the numerical numbers that are used to identify each square within the matrix are not normally displayed, as they represent the hidden addresses of the hexagram pixels.**

Individual pictographic images are formed by high-lighting each set of individual hexagram pixel addresses. The images can be created manually, by either graphically drawing lines between each individual pixel point or automatically, by using mechanical, or electrical, or electronic, or biological, or chemical methods that link the pixels together to form a solid shape.

Additional and different pictographic images can also be created from the same set group of high-lighted pixels, by simply inter-changing the respective upper and lower sequential arrangement of trigrams that form the hexagram cells of the V.D.U. In this manner, a library of different pictographic images may be created from a small number of trigram patterns or data discs

Figure 15 to 18 inclusive, show the pictographic images created from each group of **specific** hexagrams formulated from the details shown in **Table 1,** as an example of the **C.P.U.** operation. Each image has been individually superimposed onto the **V.D.U** and the addressed hexagram pixels link together as shown to form a pictographic pattern.

Figure 19 to 24 inclusive, show the pictographic images created by the **anomalous** group of hexagrams which were **omitted by the C.P.U. selection process.** The individual hexagram pixel squares in this particular example, have been completely high-lighted to give the pattern shown herein

C.P.U. Modes of Operation
This slide rule arrangement creates two **C.P.U.** modes of operation, one static and the other rotational, which can be utilized to create a large number of different hexagram pictographic images

C.P.U. Static Mode:
With the **C.P.U.** arranged in a static mode the two **reference** data fascia plates **1** together with the single **programmable** data fascia plate **7 (and 9 including other fascia plates not mentioned, illustrated or shown herein)** are aligned with each other at the same cardinal compass point positions.

C.P.U Rotational Mode:
With the **C.P.U.** arranged in a rotational mode, the **programmable** data fascia plate **7 (and 9 including other fascia plates not mentioned, illustrated or shown herein)** can be moved sideways, so that its inherent trigram data symbols and its respective cardinal compass point positions may be realigned with different **reference** trigram data symbols and different cardinal compass point positions This effectively creates and simulates a rotation of the **programmable** data disc, which results in the creation of additional hexagrams.

For Automatic Mode Use:
The sideways movement of the **cursor** and **programmable** sliding section of the **C.P.U.** slide rule can be motorized

The inner face of the **cursor** and **each fascia plate of symbolic data** can be modified, equipped and fitted with a variety of different transmitter and respective receiver type devices, which represent or recognize each individual trigram symbol by utilizing either a mechanical, or an electrical, or an electronic, or a biological / chemical sensor and its respective sensor reaction device

These sensors and sensor reaction devices can be so designed that they give a specific and unique output signal for each individual hexagram created, which in turn may be applied to a computer system containing a comparator which will effectively read off the hexagrams created and automatically plot them onto an electronic or other similar visual display unit

Example:
The hexagrams in the analytical tables shown below have been created by utilizing the three trigram patterns or data disks known as the Earlier Heaven, Later Heaven and Mandala trigram cyclic arrangements The **reference** data was selected from the Earlier Heaven and Later Heaven trigram patterns and the **programmable** data was selected from the Mandala trigram pattern, as mentioned herein

This example demonstrates that analytical tables can replicate a situation where the data fascia plates of the C.P.U are arranged in the **STATIC MODE** (where all trigram data cells are aligned with their respective cardinal compass point positions) with the cursor aligned at the respective cardinal compass position shown below

At each cardinal compass point position, the trigram symbols in the respective data cells 'a to g' as shown in **Figure 13** have been read off and placed one above the other, as indicated in the permutation formula, which effectively creates the hexagrams stated The hexagrams have been numerically identified by utilizing the **key for identifying hexagrams** from their component trigrams, as mentioned previously

WITH CURSOR AT CARDINAL COMPASS POSITION - SOUTH

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Li	Ch'ien	Li	Li	Li	Tui	Li	Sun	Li	Sun	Li	K'un
	Ch'ien	Li	Li	Li	Tui	Li	Sun	Li	Sun	Li	K'un	Li
Hex. Nos	14	13	30	30	38	49	50	37	50	37	35	36

WITH CURSOR AT CARDINAL COMPASS POSITION - SOUTH WEST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	K'un	Sun	K'un	K'un	K'un	Ch'ien	K'un	Li	K'un	K'an	K'un	Tui
	Sun	K'un	K'un	K'un	Ch'ien	K'un	Li	K'un	K'an	K'un	Tui	K'un
Hex. Nos.	46	20	2	2	11	12	36	35	7	8	19	45

WITH CURSOR AT CARDINAL COMPASS POSITION - WEST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Ken	K'an	Ken	Tui	Ken	Sun	Ken	K'un	Ken	Ken	Ken	Ch'ien
	K'an	Ken	Tui	Ken	Sun	Ken	K'un	Ken	Ken	Ken	Ch'ien	Ken
Hex. Nos.	4	39	41	31	18	53	23	15	52	52	26	33

WITH CURSOR AT CARDINAL COMPASS POSITION - NORTH WEST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Ch'ien	Ken	Ch'ien	Ch'ien	Ch ien	K'an	Ch'ien	Tui	Ch'ien	K'un	Ch'ien	K'an
	Ken	Ch'ien	Ch'ien	Ch'ien	K'an	Ch'ien	Tui	Ch'ien	K'un	Ch'ien	K'an	Ch'ien
Hex. Nos.	33	26	1	1	6	5	10	43	12	11	6	5

WITH CURSOR AT CARDINAL COMPASS POSITION - NORTH

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	K'an	K'un	K'an	K'an	K'an	Ken	K'an	Ch'ien	K'an	Chen	K'an	Ken
	K'un	K'an	K'an	K'an	Ken	K'an	Ch'ien	K'an	Chen	K'an	Ken	K'an
Hex. Nos.	8	7	29	29	39	4	5	6	3	40	39	4

WITH CURSOR AT CARDINAL COMPASS POSITION - NORTH EAST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Sun	Chen	Sun	Ken	Sun	K'un	Sun	K'an	Sun	Li	Sun	Chen
	Chen	Sun	Ken	Sun	K'un	Sun	K'an	Sun	Li	Sun	Chen	Sun
Hex. Nos.	42	32	53	18	20	46	59	48	37	50	42	32

WITH CURSOR AT CARDINAL COMPASS POSITION – EAST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Chen	Li	Chen	Chen	Chen	Chen	Chen	Ken	Chen	Tui	Chen	Sun
	Li	Chen	Chen	Chen	Chen	Chen	Ken	Chen	Tui	Chen	Sun	Chen
Hex. Nos.	55	21	51	51	51	51	62	27	54	17	32	42

WITH CURSOR AT CARDINAL COMPASS POSITION - SOUTH EAST

Permutation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Tui	Tui	Tui	Sun	Tui	Li	Tui	Chen	Tui	Ch'ien	Tui	Li
	Tui	Tui	Sun	Tui	Li	Tui	Chen	Tui	Ch'ien	Tui	Li	Tui
Hex. Nos.	58	58	28	61	49	38	17	54	43	10	49	38

The resultant hexagrams obtained in this manner were summarized as follows

a) For hexagrams with a lower trigram of Ch'ien we have

Upper trigrams of Ken, Ch'ien, K'an, Tui, K'un and Li with trigrams - Sun and Chen omitted i e Hexagram Nos 9 and 34

b) For hexagrams with a lower trigram of Chen we have.

Upper trigrams of Li, Chen, Ken, Tui, Sun and K'an with trigrams - Ch'ien and K'un omitted i e Hexagram Nos 25 and 24

c) For hexagrams with a lower trigram of K'an we have

Upper trigrams of K'un, Ken. Ch'ien, K'an, Chen and Sun with trigrams - Li and Tui omitted i e Hexagram Nos 64 and 47

d) For hexagrams with a lower trigram of Ken we have

Upper trigrams of Chen, K'an, Tui, Sun, K'un, Ken and Ch'ien with trigram - Li omitted i e Hexagram No 56

e) For hexagrams with a lower trigram of K'un we have

Upper trigrams of Li, Sun, K'un, Ch'ien, Ken, K'an and Tui with trigram - Chen omitted i e Hexagram No 16

f) For hexagrams with a lower trigram of Li we have

Upper trigrams of Tui, Ch'ien, Li, Sun, K'un and Chen with trigrams - K'an and Ken omitted i e Hexagram Nos. 63 and 22

g) For hexagrams with a lower trigram of Sun we have

Upper trigrams of Chen, Tui, Li K'un, Ken and K'an with trigrams - Sun and Ch'ien omitted i e Hexagram Nos 57 and 44

h) For hexagrams with a lower trigram of Tui we have

Upper trigrams of Tui Sun, Li, Ch'ien, Chen, K'un and Ken with trigram - K'an omitted i e Hexagram No 60

In order to extract as much information as possible from the **specific** hexagrams created by using the methodology stated herein, the hexagrams created were categorized and tabulated into four distinct groups as shown in **TABLE I** below

TABLE 1 - SUMMARY OF HEXAGRAMS CREATED FROM THREE CYCLIC SEQUENCES

HEX No	No Off	HEX No.	No.Off	HEX No	No.Off	HEX No.	No.Off	ONE Off HEX No.	TWO Off HEX No	THREE Off HEX No.	FOUR Off HEX. No
1	Two	17	Two	33	Two	49	Three	3	1	4	51
2	Two	18	Two	34	Zero	50	Three	13	2	5	
3	One	19	One	35	Two	51	Four	14	7	6	
4	Three	20	Two	36	Two	52	Two	15	8	32	
5	Three	21	One	37	Three	53	Two	19	10	37	
6	Three	22	Zero	38	Three	54	Two	21	11	38	
7	Two	23	One	39	Three	55	One	23	12	39	
8	Two	24	Zero	40	One	56	Zero	27	17	42	
9	Zero	25	Zero	41	One	57	Zero	28	18	49	
10	Two	26	Two	42	Three	58	Two	31	20	50	
11	Two	27	One	43	Two	59	One	40	26		
12	Two	28	One	44	Zero	60	Zero	41	29		
13	One	29	Two	45	One	61	One	45	30		
14	One	30	Two	46	Two	62	One	48	33		
15	One	31	One	47	Zero	63	Zero	55	35		
16	Zero	32	Three	48	One	64	Zero	59	36		
								61	43		
								62	46		
									52		
									53		
									54		
									58		

The above table of hexagrams formulated by the permutation of trigrams selected from the three cyclic sequences (using the above methodology for the formulation of hexagrams) shows that there were **thirteen anomalous hexagrams** i e Hexagrams Nos **9, 16, 22, 24, 25, 34, 44, 47, 56, 57, 60, 63 and 64,** which have been **omitted** from the above table

The graphical representation of pictographic images determined from each group of **specific** hexagrams (which have been superimposed onto the key code matrix visual display board) is as shown in **Figure 15** to **Figure 18** inclusive

Similarly, the graphical representation of pictographic images determined from the **thirteen anomalous hexagrams,** is shown in **Figure 19** to **Figure 24** inclusive

This example, shown within this document, conclusively proves that the invention mentioned herein accurately decodes the symbolic data encoded in a symbolic format on each trigram pattern or data disc.

Universal Analytical Tables and Computer Software Programs:
Universal analytical tables and computer software program can be written, based on the analytical tables and information mentioned herein, which will obviate the use of the manual or automatic **C.P.U** and associated symbolic data fascia plates stated herein However, it should be noted that the reference data used by the analytical tables is based on the Earlier Heaven and Later Heaven trigram arrangements and the use of any differing reference data will necessitate the creation of a new set of analytical tables and revised software programs.

Reservation of Copyright and Patent Development Rights:
The inventor reserves all copyright and patent development rights to the new mathematical methodology and **C.P.U** mentioned within this document

CLAIMS:

SYMBOLIC DATA SYSTEM

1. A symbolic data system which consists of data discs, a symbolic linear slide rule which acts as a central processing unit, a visual display unit and analytical tables forms a universal cryptographic coding and decoding device

2. A symbolic data system according to claim 1, in which symbolic data is placed either on the periphery face of a data disc or on the edge/rim of the disc in a sequential and logical manner

3. A symbolic data system according to claim 2, in which data from a number of data discs is transcribed onto individual identified inter-changeable reference and programmable data fascia plates which can be mounted and/or fitted onto or within a symbolic linear slide rule in such a manner so that they can be easily removed and replaced by other different data fascia plates of a similar nature.

4. A symbolic data system according to claim 3, in which the inter-changeability of the data fascia plates enables the symbolic linear slide rule to be used as a cryptographic coding and decoding device, which can be utilized to create computer pixels and/or a library of pictographic images and/or mathematical permutations and/or other different and diverse symbols and characters.

5. A symbolic data system according to claim 4, in which data fascia plates can be designed to permit the coding and decoding of other different and diverse data which may consist of characters or symbols or signs associated with different languages, alphabetical letters, numeric numbers, chemical and/or biological and/or nuclear configurations and/or formulas

6. A symbolic data system according to claim 3, 4 and 5 , in which data extracted from an individual data disc or other objects or documents is placed onto and/or within reference and programmable data fascia plates

7. A symbolic data system according to claim 6, in which each individual data fascia plate is divided into separate sections and/or data cells

8. A symbolic data system according to claim 7, in which sections and/or the data cells of individual data fascia plates are individually identified, equally and uniformly sized and are spaced out along the respective data fascia plate

9. A symbolic data system according to claim 8, in which data cells and the data placed within the data cells of the respective data fascia plate is formed, as an integral part or printed or embossed or cut or drilled on and/or into the plate which is fabricated and/or manufactured from a variety of many different materials.

10. A symbolic data system according to claim 9, in which the data contained within the data cells is mathematically manipulated and/or selected by utilizing a number of different masked matrix cursors.

11. A symbolic data system according to claim 10, in which the masked matrix cursors are retained and fitted above and across data fascia plates in such a manner so that the cursors can move sideways and can be aligned with a specific number and/or set of data cells at a number of pre-determined identified positions.

12. A symbolic data system according to claim 11, in which each individual cursor-mask incorporates a matrix formed by a number of individual square data cells which segregate the face of the cursor into separate and uniformly spaced cell-segments, which are of the same uniform size as the data cells associated with the respective data fascia plates.

13. A symbolic data system according to claim 12, in which the cell-segments of the cursor-mask are either transparent and/or opaque or blacked out which permit the user to only select a specific number and/or a pre-determined set of data cells containing data in a repeatable, mathematical and scientific manner

14. A symbolic data system according to claim 13, in which the design of the cursor-mask incorporates and/or utilizes mathematical permutation methodologies which are developed specifically for the pre-selection of the data placed in the data cells of the respective data fascia plates

15. A symbolic data system according to claim 14, in which symbolic data created by the linear slide rule is tabulated into **specific** groups of data to form groups of computer pixels.

16. A symbolic data system according to claim 15, in which **specific** groups of data created by the linear slide rule or data that has been omitted from the selection process (called **anomalous** groups of data) form groups and/or sets of computer pixels which are displayed on a visual display unit.

17. A symbolic data system according to claim 1, in which the visual display unit is used to display any data which is processed by the symbolic linear slide rule.

18. A symbolic data system according to claim 17, in which the x and y co-ordinates of the screen associated with the visual display unit are changed to create different images from the same set number of computer pixels

19. A symbolic data system according to claim 1, in which the sliding mode (representing a rotational mode of a respective data disc or the sideways movement of a programmable data fascia plate) will increase the amount of data extracted from the respective data fascia plate.

20. A symbolic data system according to claims 4 and 5, in which the cryptographic symbols and/or numeric language encoded within circular trigram patterns or trigram data discs (which relate to the I Ching, the Chinese book of changes) are deciphered.

21. A symbolic data system according to claim 1, in which the symbolic data system is automated for universal use.

22. A symbolic data system according to claim 21, in which automatic and sensory devices are fitted to the linear slide rule.

23. A symbolic data system according to claim 22, in which the components forming the linear slide rule are fitted with mechanical, electrical or pneumatic and other electronic devices together with transmittable and receiving sensory devices and/or other sensitive components which automatically (a) interchange the fascia data plates and (b) move the respective programmable data fascia plates to any pre-determined position and (c) move the cursor(s) so that they accurately align with the respective data cells of the respective data fascia plates selected for processing and (d) change the cell configuration(s) of the cursor mask(s) which changes and/or alters the mathematical permutation methodology of the data selection process and (e) create a series of pixel output(s) from the processed data which are high-lighted and/or displayed as patterns and/or images on the visual display unit

24. A symbolic data system according to claim 23, in which the data on the data fascia plates forms an integral part of the data fascia plate and/or is embedded into or onto the surface of the data fascia plate by utilizing lasers, electrical, electronic, magnetic, bio/chemical devices and/or other nano technological methods which enables the respective data within the data cells to be identified, measured and mathematically manipulated and/or compared with other reference data to create an output of processed data in the form of computer pixels which are displayed onto the visual display unit

25. A symbolic data system in accordance with claim1, in which data is incorporated and mathematically manipulated by the use of various analytical tables which utilize the mathematical methodology embedded into the cursor-mask(s) and associated data fascia plates to obviate the use of the manual and/or the automatic symbolic linear slide rule

26. A symbolic data system in accordance with claim 25, in which universal analytical tables are incorporated within computer software which simulates data of a different and diverse nature which is synthesized into and/or onto visualized data discs for processing by a computerized symbolic data system which creates an output of computer pixel groups which are displayed on a computer monitor or a network of computer monitors(s) linked to analytical comparators and processors used for coding and deciphering purposes

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Application No:	GB0700335.3	**Examiner:**	Rhiannon Jenkins
Claims searched:	All	**Date of search:**	22 April 2008

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1 at least	J. Compton, "The I Ching Project - The I Ching Key: The Secret Computer of the Ancient Gods", published Nov 2006, Compton-Kowanz Publications
X	1 at least	US 3598414 A (SEAY ET AL) - See figures and columns 5 to 9
X	1 at least	GB 348069 A (SUNDERLAND ET AL) - See figures and page 1
X	1 at least	DE 20004044 U (LICHTENAUER) - See figures and English language abstract
X	1 at least	GB 2429576 A (CRAYMER) - See figures and pages 1 to 3
X	1 at least	SU 489069 A (SHALIMOV) - See figures and English language abstract
X	1 at least	GB 07731/09 (CHARLES) - See figures and page 1

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art
Y	Document indicating lack of inventive step if combined with one or more other documents of same category	P	Document published on or after the declared priority date but before the filing date of this invention
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than the filing date of this application

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[X] :

G5X

Worldwide search of patent documents classified in the following areas of the IPC

G06G; G09C

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC, INTERNET

International Classification:

Subclass	Subgroup	Valid From
G09C	0001/04	01/01/2006
G06G	0001/06	01/01/2006