TikZ-Bagua Package

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1 Introduction

The TikZ-Bagua package mainly using TikZ, by xparse, xstring, bitset and xintexpr, defines the Grand Terminus [1] \taiji and \xtaiji for newer method, \liangyi for the Two Elementary Forms, \sixiang for the Four Emblematic Symbols, \bagua for the Eight Trigrams and \Bagua for Sixty-four Hexagrams, in *The I Ching*, without require special fonts.

2 Usage methods

The last argument of all defined macros is optional scale, and default 1.

2.1 The Grand Terminus (the Taiji)

Thanks to netizens, the default is same as in ancient books without the Fish Eyes, show its by macro with star. For reason that there are some formed by semi-circles, so add \xtaiji for it, with (or without) star.

```
\taiji [<scale>], \taiji* [<scale>].
\xtaiji [<scale>], \xtaiji* [<scale>].
The four above macros show ② ② ② ②.
```

2.2 The Two Elementary Forms (the *Liangyi*)

\liangyi {\scale>].

We can obtain — and -- by \liangyi{\scale>} getting 1 and 0, respectively.

2.3 The Four Emblematic Symbols (the Sixiang)

\sixiang {\sixiang* {\sixiang* {\sixiang* {\sixiang* [\scale>].

The Four Emblematic Symbols obtained from \sixiang{<bin>} by getting the binary number of 3,2,1,0, and \sixiang*{<dec>} for decimal.

2.4 The Eight Trigrams (the Bagua with three lines)

 $\bagua {<bin>} [<scale>], \bagua* {<dec>} [<scale>].$

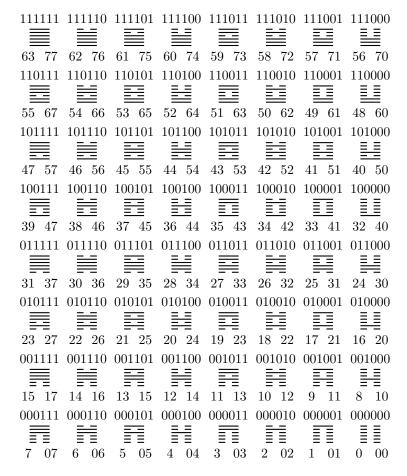
The Eight Trigrams obtained from $<table-cell> \$ by getting the binary number of $7, 6, \ldots, 0$, and $\$ for decimal.

2.5 The Sixty-four Hexagrams (the *Bagua* with six lines)

\Bagua [<2,8>]{\sin,oct>} [\scale>], \Bagua* {\dec>} [\scale>].

The Sixty-four Hexagrams obtained from $\Bagua{\coloredge}$ by getting the binary number of $63, 62, \ldots, 0$, $\Bagua[8]{\coct>}$ for octal number $77, 76, \ldots, 0$, and $\bagua*{\cocto}$ for decimal.

We list all the Sixty-four Hexagrams here, in which the above number is binary, the below is decimal and octal.



3 Versions

v1.01 2022.08.04

Revise \taiji to show the Grand Terminus in ancient books, add \xtaiji for later, fix some bugs.

v1.0 2021.10.17

Release TikZ-Bugua v1.0.

References

[1] James Legge (Trans.). The I Ching, Second Edition. Dover Publications, Inc.