

psbao

Typesetting Bao Diagrams with PSTricks

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Introduction

THIS PACKAGE provides functionality to typeset Bao diagrams in L^AT_EX 2_ε. It has been created using the Go package written by Victor Bos (September 4, 2008) as basis and it is built on top of the PSTricks package.

To all the people who have never played bao I suggest to visit <http://www.swahili.it/bao>.

Download and installation

THE psbao package can be found at CTAN (mirrors) in the directory `graphics/pstricks/contrib/psbao/`.

It is also available from <http://www.vessella.it/ghala/>.

To install the package, download the files `psbao.sty` and `psbaomanual.tex` and put them in a directory where L^AT_EX can find them. After that, test the installation by running L^AT_EX on `psbaomanual.tex`.

Note that psbao uses pstricks to draw graphics. Therefore, the same things that apply to viewing and printing documents with pstricks graphics also apply to documents with psbao graphics. In particular, it is usually better to use a PostScript viewer (e.g., `gv` or `gsview`) instead of a DVI viewer (like `xdvi` or `yap`).

Bao boards

THE interface of psbao is based on the notation used in <http://www.swahili.it/bao/>. That is, the rows of the 4 × 8 board are indexed by 1, 2, ..., 8 and the columns are indexed by *b*, *a*, *A*, *B*.

First of all it must be set the initial position of a Bao game. For the standard initial setting is used the command `\initbao`, but the board is showed by the environmnet `\begin{showbaoboard} ... \end{showbaoboard}` (Figure 1):

Code:

```
\initbao
\begin{figure}
\begin{center}
\begin{showbaoboard}
\end{showbaoboard}
\caption{...}
\label{fig:...}
\end{center}
\end{figure}
```

Prints:

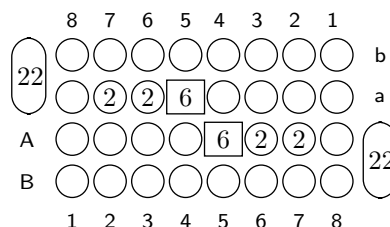


Figure 1: Setting up the standard initial situation: default size 0.6cm

For the initial setting of the beginner's variant *Bao la kujifunza* is used the command `\initjbao` (Figure 2):

To put seeds into the stores is used the same command: `\seka`. In this case instead of index of the row can be used the letters *s* or *S* for the south store.

Code:

```

\weka{1}{b}{2} % 3,0
\weka{2}{a}{2} % 2,1
\weka{3}{A}{2} % 1,2
\weka{4}{B}{2} % 0,3
\weka{5}{A}{1}
\weka{9}{A}{3}
\begin{showbaoboard}
\end{showbaoboard}

```

Prints:

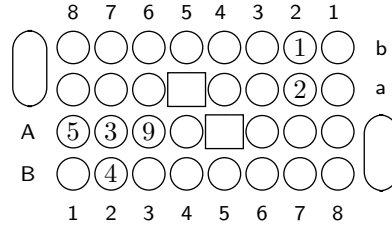


Figure 4: Example of weka

Code:

```

\initbao[0,%
    0,0,0,0,0,0,1,0,%
    0,0,0,0,0,0,1,0,%
    5,3,0,0,0,0,0,0,%
    0,3,9,0,0,0,0,0,%
    0]
\begin{figure}
\begin{center}
\begin{showbaoboard}
\end{showbaoboard}
\end{center}
\end{figure}

```

Prints:

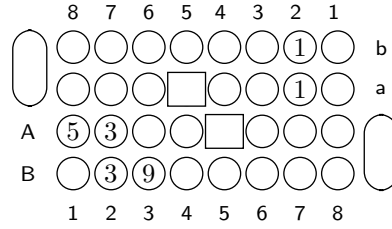


Figure 5: Writing the number of seeds of all holes

and the letters n or N . For example, `\weka{2}{s}{4}` puts two seeds into the store of South. The third parameter must be any number.

Code:

```

\begin{showbaoboard}
\weka{10}{n}{2}
\weka{1}{b}{2}
\weka{2}{a}{2}
\weka{3}{A}{2}
\weka{4}{B}{2}
\weka{5}{A}{1}
\weka{9}{A}{3}
\weka{9}{s}{3}
\end{showbaoboard}

```

Prints:

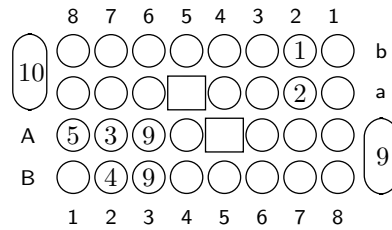


Figure 6: Setting up a situation with stores

The command: `\weka` keeps the previous situation, so if it is necessary to

set a completely new situation it must be used the command `\initbao`.

Markers

A HOLE on the board can be marked with the command `\markpos`. This command takes three parameters: the marker, the column, and the row. Available markers and the commands to generate them are listed in Table 1.

Note that to mark a non-empty hole the command `\weka` have to be used together with marker command, `\markpos`.

Note, also, that the special holes (as *kichwa* or *kimbi*) can be used the marks `\markdd` or `\markss`, indifferently (but consistently!). Those commands must be inside the environment `\begin{showboard} dots \end{showboard}`.

Diagram	Mark	Description	Command
<p>Diagram for <code>\marksx</code>: An 8x8 grid with columns 1-8 and rows a-b. Seed 10 is at (b,1) and seed 9 is at (b,8). A2 is at (a,6) and A3 is at (a,5).</p>	<code>\marksx</code>	a2<	<code>\markpos{\marksx}{a}{2}</code>
<p>Diagram for <code>\markdx</code>: An 8x8 grid with columns 1-8 and rows a-b. Seed 10 is at (b,1) and seed 9 is at (b,8). A3 is at (a,3) and A4 is at (a,4).</p>	<code>\markdx</code>	A3>	<code>\markpos{\markdx}{A}{3}</code>
<p>Diagram for <code>\markss</code>: An 8x8 grid with columns 1-8 and rows a-b. Seed 10 is at (b,1) and seed 9 is at (b,8). A2 is at (a,6) and A3 is at (a,5). A special hole is at (a,4).</p>	<code>\markss</code>	Special hole	<code>\markpos{\markss}{a}{2}</code>
<p>Diagram for <code>\markdd</code>: An 8x8 grid with columns 1-8 and rows a-b. Seed 10 is at (b,1) and seed 9 is at (b,8). A2 is at (a,6) and A3 is at (a,5). A special hole is at (a,1).</p>	<code>\markdd</code>	Special hole	<code>\markpos{\markdd}{A}{1}</code>
<p>Diagram for <code>\markma</code>: An 8x8 grid with columns 1-8 and rows a-b. Seed 10 is at (b,1) and seed 9 is at (b,8). A2 is at (a,6) and A3 is at (a,5). A special hole is at (a,4).</p>	<code>\markma</code>	Any nr of seeds	<code>\markpos{\markma}{A}{5}</code>

Table 1: Markers on holes