

Kunstmatige Intelligentie — Jungle

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Introduction

Dou Shou Qi [1] (meaning: “Game of Fighting Animals”) is a Chinese board game. In the Western world it is often called *Jungle*, The Jungle Game, Jungle Chess, or Animal Chess.

Dou Shou Qi is a two player *abstract strategy game* [2] and it contains some elements from *Chess* [3] and *Stratego* [4] as well as some other chess-like Chinese games (e.g., *Banqi* [5]). Its origins are not entirely clear, but it seems that it evolved rather recently (around the 1900s) in China.

The Board

Dou Shou Qi is played on a rectangular board consisting of 9×7 squares, see Figure 1. The columns are called *files* and are labelled *a–g* from left to right. The rows or *ranks* are numbered 1–9 from bottom to top (the board is viewed from the position of the white player).

```
. . ^ # ^ . .
. . . ^ . . .
. . . . . . .
. ~ ~ . ~ ~ .
. ~ ~ . ~ ~ .
. ~ ~ . ~ ~ .
. . . . . . .
. . . ^ . . .
. . ^ # ^ . .
```

Figure 1: The empty board.

There are several different kinds of squares. The *dens* (#) are located in the center of the first and the last rank (*d1* and *d9*). Each den is surrounded by *traps* (^).

There are also two rectangular (3×2 squares) bodies of *water* (~) sometimes called rivers. The remaining squares are ordinary land squares.

The Pieces

Each player has eight different pieces representing different animals. Each animal has a certain *strength*, according to which they can *capture* other (opponent's) pieces. Only pieces with the same or a higher strength may capture an opponent's piece. The only exception to this rule regards the weakest (rat) and the strongest (elephant) pieces. Just like the spy in Stratego, the weakest piece may capture the strongest. The strength of the pieces, from weak to strong, is:

1. R, r — Rat (sometimes called mouse);
2. C, c — Cat;
3. W, w — Wolf (sometimes called fox);
4. D, d — Dog;
5. P, p — Panther (sometimes called leopard);
6. T, t — Tiger;
7. L, l — Lion;
8. E, e — Elephant.

The initial placement of the pieces is fixed, see Figure 2. The capital letters are used to denote the white pieces.

```

l . ^ # ^ . t
. d . ^ . c .
r . p . w . e
. ~ ~ . ~ ~ .
. ~ ~ . ~ ~ .
. ~ ~ . ~ ~ .
E . W . P . R
. C . ^ . D .
T . ^ # ^ . L

```

Figure 2: The initial configuration.

Movement

Players alternate moves with white moving first. Each move one piece must be moved. Each piece can move one square either horizontally or vertically, see Figure 3. In principle a piece may not move into the water, and it is also forbidden to enter its own den (*d1* for white, and *d9* for black).

The rat is the only piece that can swim, and is therefore able to enter the water, see Figure 4. It may also capture in the water (the opponent's rat), however, it may not capture the elephant from the water.

Lions and tigers are able to leap over water (either horizontally or vertically), see Figure 5. They cannot jump over the water when a rat (own or opponent's) is on any of the intervening water squares.

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P * R
* D *
^ * L

```

Figure 3: The white dog (D) can move to all of the locations marked with *.

```

~ *
* R
~ *

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Figure 4: The white rat (R) can move to all of the locations marked with *.

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. ~ ~ *
* ~ ~ L
. . . *

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Figure 5: The white lion (L) can move to all of the locations marked with *.

Traps

When a piece is in an opponent's trap (*c9*, *d8*, *e9* for white and *c1*, *d2*, *e1* for black), its strength is effectively reduced to zero. Meaning that any of the opponent's pieces may capture it regardless its strength. A piece in one of its own traps is unaffected.

Objective

The objective of the game is to either place one of your pieces in the opponent's den or to eliminate all of the opponent's pieces. As in Chess, threefold repetition is declared a draw as is a stalemate position.

References

- [1] Jungle (board game), [http://en.wikipedia.org/wiki/Jungle_\(board_game\)](http://en.wikipedia.org/wiki/Jungle_(board_game)), retrieved March 23, 2015.
- [2] Abstract Strategy Game, http://en.wikipedia.org/wiki/Abstract_strategy_game, retrieved March 23, 2015.
- [3] Chess, <http://en.wikipedia.org/wiki/Chess>, retrieved March 23, 2015.
- [4] Stratego, <http://en.wikipedia.org/wiki/Stratego>, retrieved March 23, 2015.
- [5] Banqi, <http://en.wikipedia.org/wiki/Banqi>, retrieved March 23, 2015.