

What is known as a “block” in *mattris* is simply a list of coordinates in relation to the anchor. In the figure shown, the block is a “T” block, with coordinates

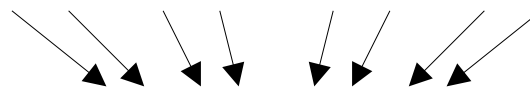
$(0, 1)$, $(1, 1)$, $(2, 1)$, and $(1, 2)$.

Now, recall that a binary number of length N (such that N is a positive integer greater than zero) may represent values from 0 to 2^N-1 . To represent values from 0 to 3, we therefore only require 2 bits of information (as $2^2-1 = 3$). So, our coordinates from above may be written in binary as so:

$(00, 01)$, $(01, 01)$, $(10, 01)$, and $(01, 10)$.

Finally, we may combine these into a single binary integer:

$(00, 01)$, $(01, 01)$, $(10, 01)$, $(01, 10)$



0001 0101 1001 0110

These individual values are accessible using bit-wise operations, namely shifting ($>>$ or $<<$), ‘and’ ($\&$) and ‘or’ (\mid). As long as values are properly kept track of, this implementation is quite simple.