

# Draxel ALPHA RELEASE



# DESIRABLE TARGET

∴ MORE UNIT TYPES

TRAINING TIME AND INTERFACE DON'T ALLOW IT

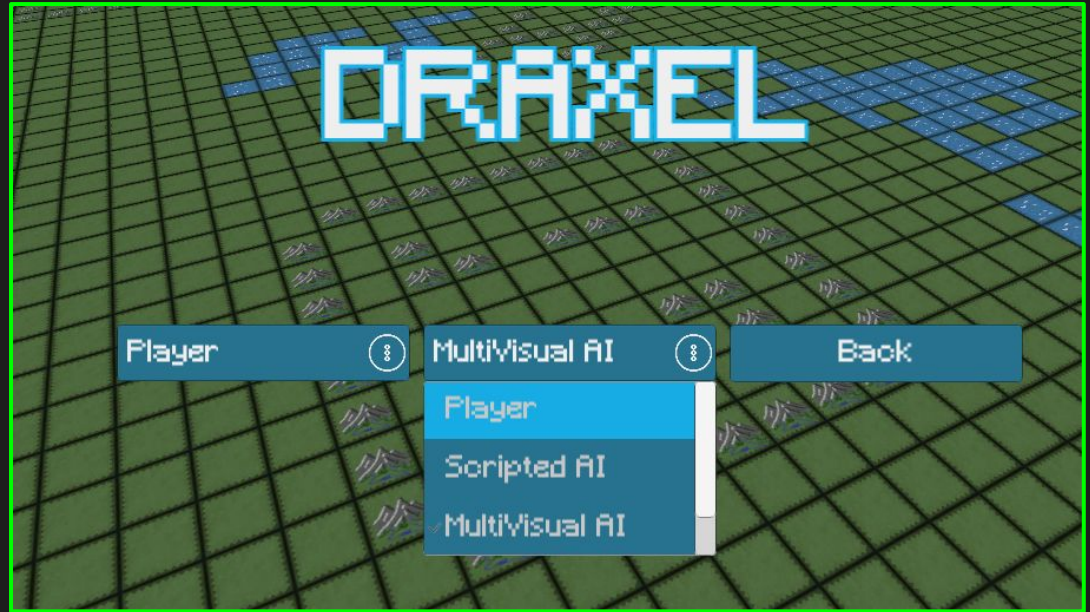
∴ DIFFERENT AI TYPES

IMPLEMENTED BUT ONLY ONE NEURAL NETWORK AI

∴ ANIMATIONS & EFFECTS

EFFECTS MOVED TO HIGH TARGET

# OTHER PROGRESS



∴ Refined menus / UI

∴ Refined user input

∴ Bug fixes for highlighting and map generation

# AI

## RANDOM

∴ IMPLEMENTED FULLY, USED AS SANITY CHECK

## HEURISTIC

∴ CANCELLED

## SCRIPTED

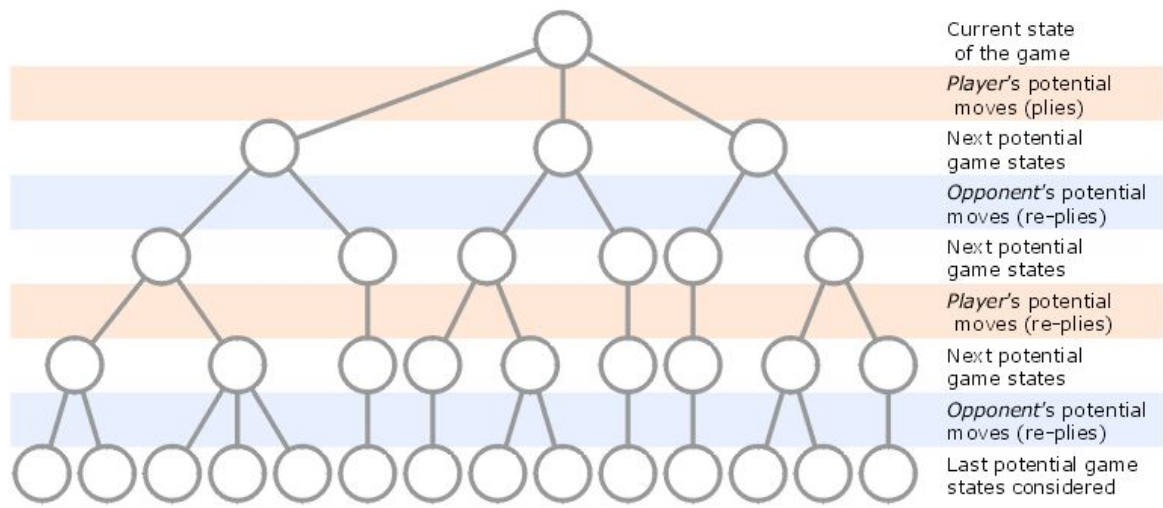
∴ INITIALLY INTENDED TO BE HEURISTIC


## NEURAL NETWORK (VISUAL REPRESENTATION)

∴ IMPLEMENTED - WINRATE > 90% AGAINST RANDOM

# HEURISTIK

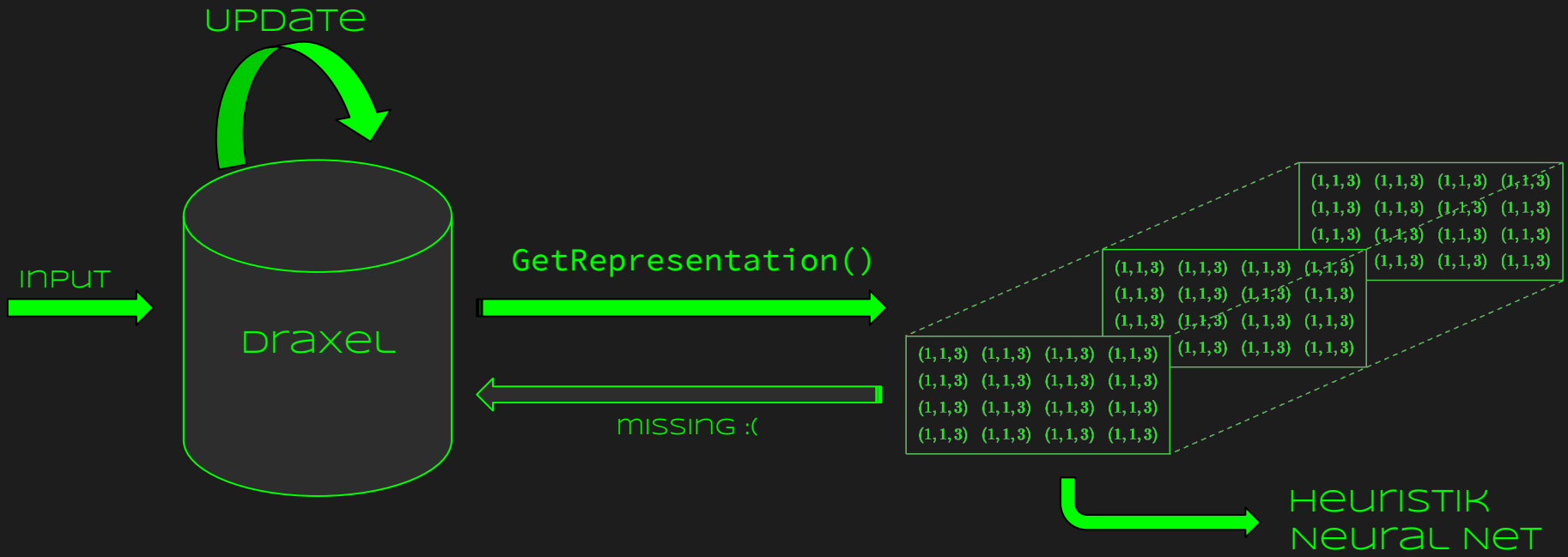
Minimax with alpha-beta pruning on a two-person game tree of 4 plies



	Visiting		Candidate
	Visited		Discarded
	Evaluating		Approved

$$\begin{aligned}
 f(p) = & 200(K-K') \\
 & + 9(Q-Q') \\
 & + 5(R-R') \\
 & + 3(B-B' + N-N') \\
 & + 1(P-P') \\
 & - 0.5(D-D' + S-S') \\
 & + 0.1(M-M') + \dots
 \end{aligned}$$

KQRBNP = number of king, queen, rook, bishop, knight, pawn  
 D,S,I = doubled, block, in check  
 M = Mobility (the number of squares a piece can move to)





ART

PLA

VAL S TS

MOBILITY

INFANTRY

"ARTILLERY"

GENERAL



DEMO TIME!