

Alma Mater Studiorum - Università di Bologna



# BECCHI TEAM

Tablut Challenge 2021

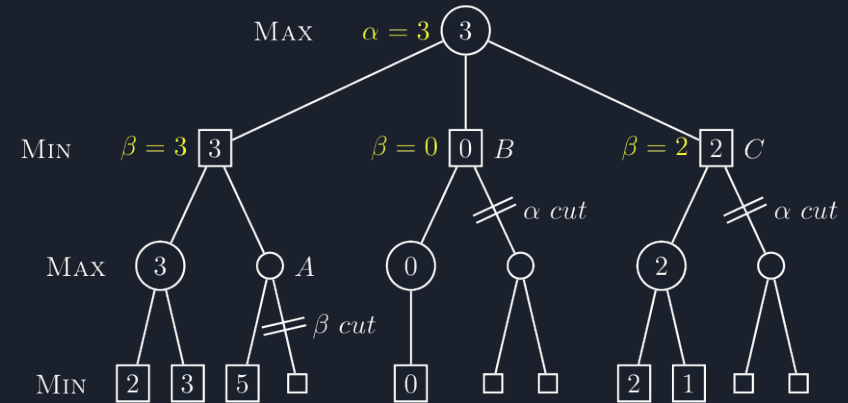
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# Strategy

## Search space expansion:

- Minmax with alpha-beta cuts  
to prune branches with no additional information
- Iterative deepening applied to Minmax  
to guarantee an answer within the timeout
- Transposition Table  
used to avoid the repetition of the evaluation of a game state already evaluated





# Heuristic

Heuristic split in 2 components for white and black player:

- White heuristic = white component - black component
- Black heuristic = black component - white component

Each component is evaluated as a weighted sum of features





- NumWayToWin
- KingDistanceFromEdges

- BlackAlive
- WhiteEaten
- BlackPawnsNearKing
- BlackBestPositions

- WhiteBestPositions
- WhiteAlive
- BlackEaten
- ProtectionKing

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☆		B		●		B		☆	2
☆	B		W	○			B	☆	3
●				○	W			●	4
●	●	○	○	+	○	○	●	●	5
●			W	○				●	6
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A	B	C	D	E	F	G	H	I	



# Main inspiration



# Main inspiration's main inspiration





Thanks for your  
attention!