Impasse
The beginning of a simple engine

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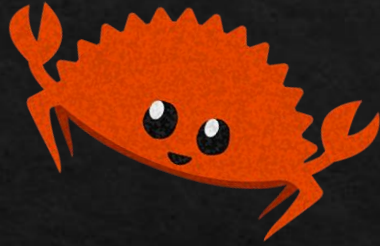
Structure

- Game design

- AI design

- Latest improvements

Game Design

- Language of choice: ... Rust?

- Why?
  - Fast (Like really fast)
  - No memory leaks
  - No run-time surprises
  - Efficient and small (200kb exe, 4Mb while running)

Game Design

- Modular

  - AlphaBetaEngine(*Game*) should work the same regardless of the game

  - So… Impasse implements a *Game* interface

- No overhead

  - Test engine with Tic-Tac-Toe

- NewGameState = OldGameState + Move (Like event-sourcing)

AI Design

‡ Nega-$\alpha\beta$ max

 † Simple

 † Change in Evaluation-function

 † Optimize

AI design

- ❖ Transposition table
- ❖ Iterative Deepening
- ❖ (Threads…)

Latest improvements

◈ Reliable timing

◈ Compiled optimizations for speed and size

◈ Console Arguments

Possible improvements

- Collision rules

- Multi threaded

- Move ordering scheme