What are we doing here?

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April 27, 2015

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Project

Conway's game of life...

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Conway's game of life... ON STEROIDS!!!

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- Traits evolved with focus from user
- Victory condition: 80% biomass on the island

Organism traits

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These traits are evolved on the client and used in the CA rules on the server.

Server

- Representation
- Movement
- Sensing
- Competition

Representation

- List of players

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- Array for valid map positions
  - *Borrowing some ideas from fractal landscapes...*
- Array for pheromone values
  - *Commandeering some ideas from ACO...*
- Array for critter positions
  - *Stealing a concept from CA...*
  - For speed's sake, we also keep a list of positions with each player.

Movement

- Pick Square
  - Odds based on Herd/Solitary v. species pheromones, as well as Prey/Predator v. other pheromones

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  - Update various positions
- Update Pheromones
  - Shift value right 1, OR with 128

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  - Higher Predatory rating wins this one; if they're matched, we pick at random.

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- Determine sensitivity
  - Perform a "luck check" against the predator's senses to determine whether an encounter happens.
- Determine wariness
  - Another luck check, to see whether the prey reacts first.

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  - Determined by winner of second luck check

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  - We assume the prey are REALLY good at counter-attacks.

Client

- Evolution
- GUI

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- Variable population

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- Fitness function defined by player via "Focus Points"

GUI (Tkinter FTW!)

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- Very basic GUI construction
- Allows for creation of images

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