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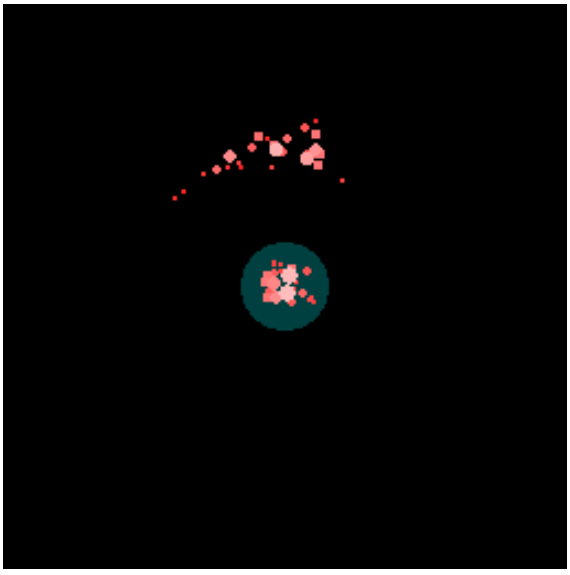
Flotilla – Abstract

"Flotilla" is a test in the programming of network protocols. It consists of a single server and client program, which can communicate in the typical client-server arrangement. Up to 8 clients can connect to a single server, but this is an arbitrary restriction.

The server maintains a game space where each connect client is represented as a circle in a 2D world. The server can process the connection and disconnection of the clients, as well as movement commands from each client that change the position of the circles.

Unlike most games, the client is never made aware of the game space in regular terms (what circles exist and where they are). Instead, the server will send information about random points in the game space that have "something" in them. A point will be reported to the client if that point is in contact with one of the circles. The client then takes this collection of points and renders them, creating a fuller image that, if enough points are sent, would be visually representative of the circles that exist.



One stationary circle and one moving circle, as seen from the client. The true dimensions of the stationary circle are shown for reference.

The intention of this spotty visual representation of a game world is to design a mini-map system that feels restricted in the same way real life radar systems are, being imprecise and based on sporadic detections. Such a system could add a more realistic element of stealth to multiplayer games, whose maps tend to be all-or-nothing knowledge based on distance instead of the intricacies of entity size, shape, or position.