Exercise 10: Latency

Goals

You can build an application that simulates latency. You have experienced how different levels of latency feel for a user.

1 Basic Test Application

Build a simple pyglet application that allows you to test different latency values. The application should display a circle with a random size and position. When a user clicks this circle, it disappears (successful click). Then, a new circle appears at a random position.

2 Adding Click Latency

Add constant latency to your system by delaying all click events. This can be done as follows: Whenever a click event is registered, start a detached thread that waits for a certain amount of time and then passes the click event through.

3 Advanced Test Application

Extend your test application so that every other target moves with a random velocity into a random direction.

4 Adding Movement Latency

Extend your latency simulation by also adding delay to mouse movement. This could be done by hiding the mouse cursor and using a custom widget (e.g. a circle) to indicate the mouse position. Adding latency to movement is very similar to adding latency to clicks: delay all events by a certain amount.

5 Varying Latency

Further extend your application by using a random latency value (within a certain range) for each new event.