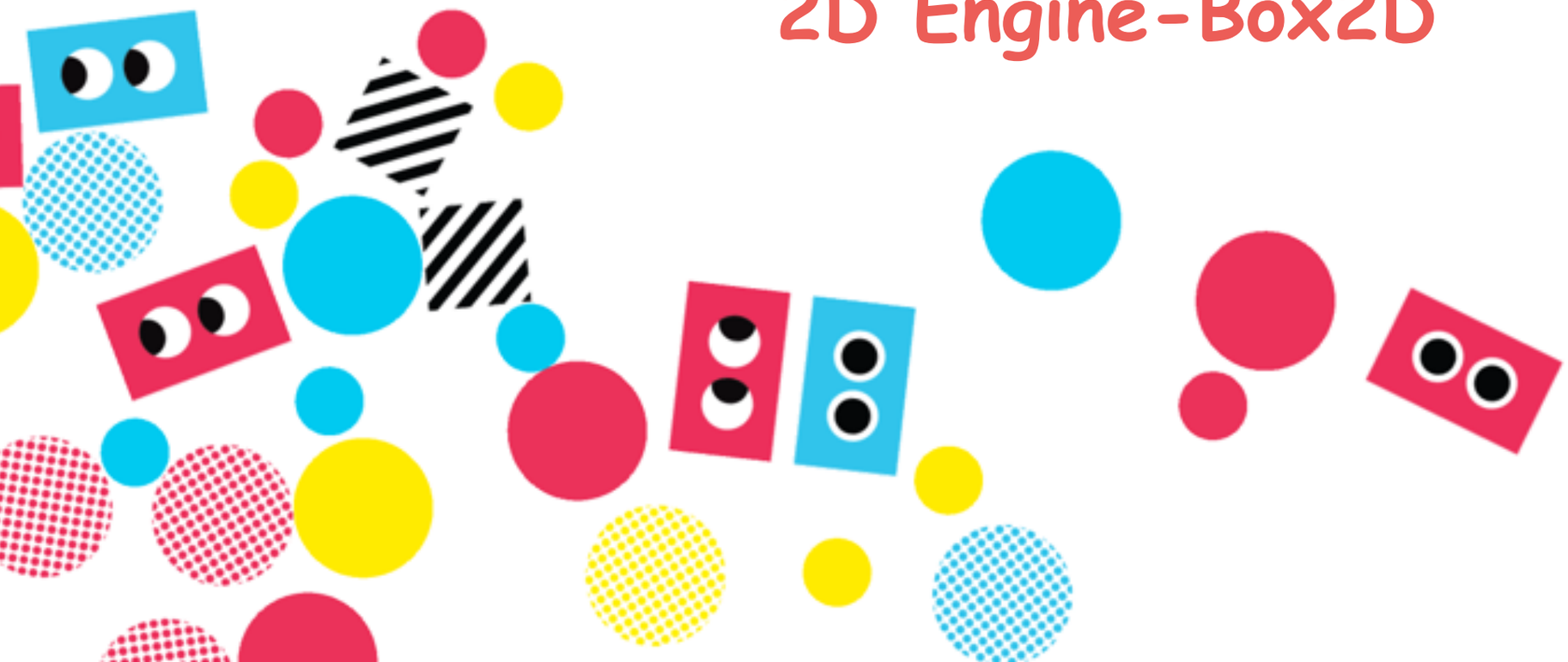
{WorkShop}

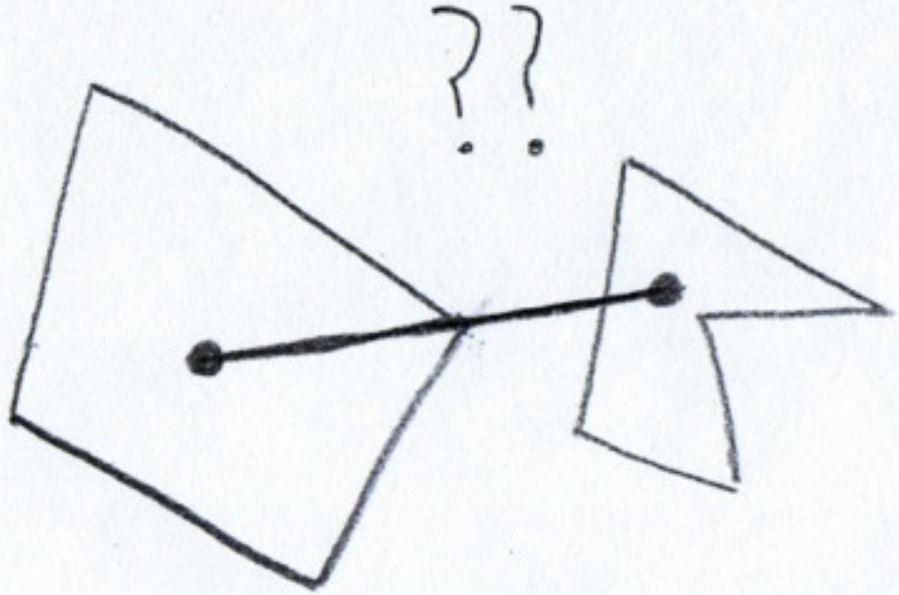
openFrameworks Workshop

2D Engine-Box2D

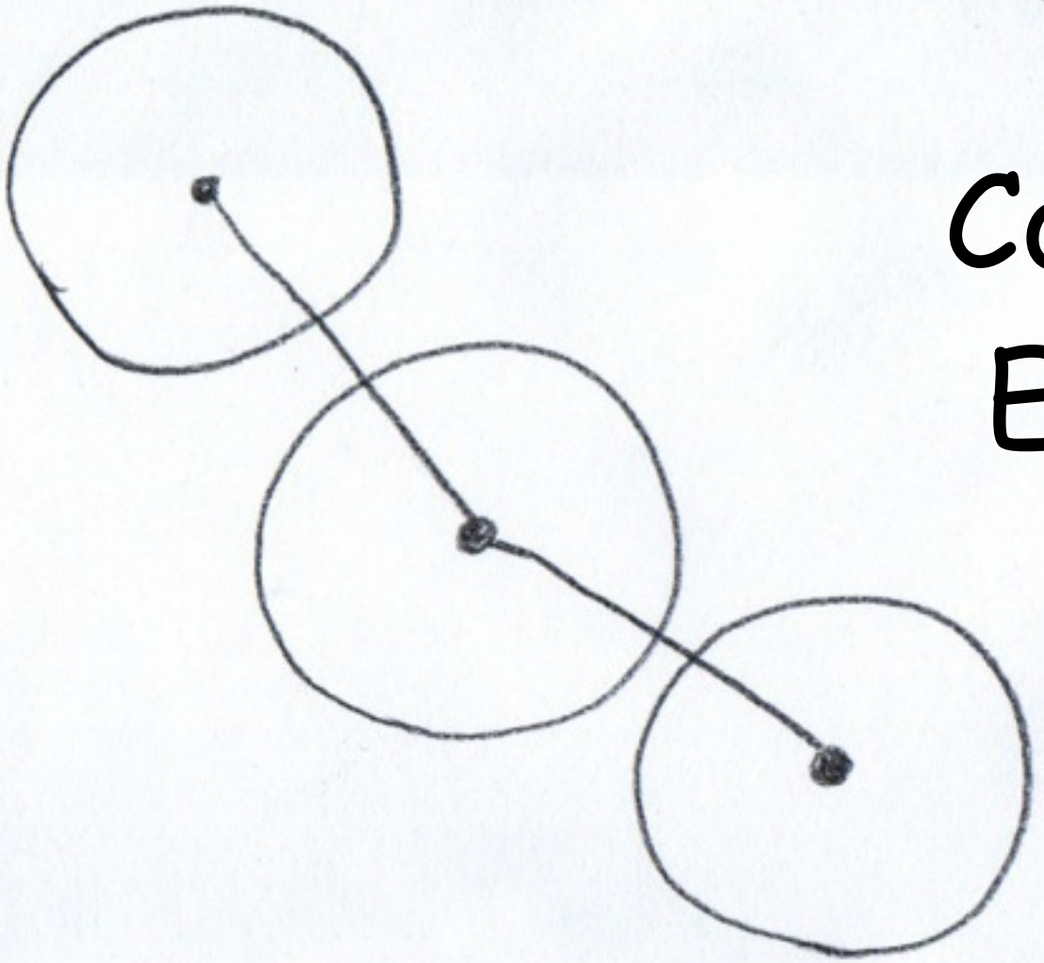


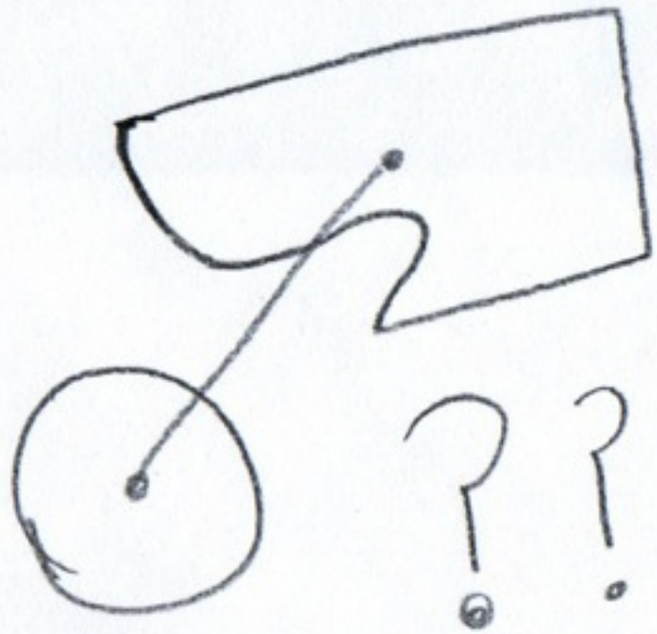
By: Peng Cheng

Why do you want to use Box2D?



Collision Events



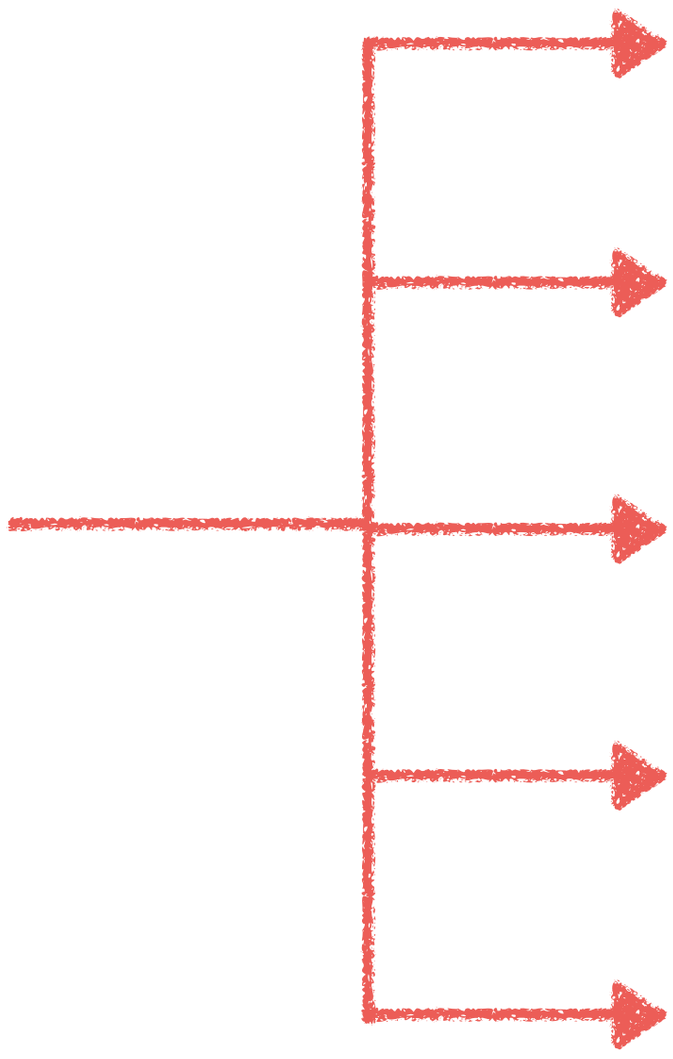


SCORE
TNT
TNT
TNT

What makes up Box2d world?

Box2d

world



1. World
2. Shape
3. Body
4. fixture
5. joint

World

- Gravity
- createGround
- createBounds
- registerGrabbing
- find fixtures in a given region

The world is like this ship

Body

You can think of a body as the properties of an object that you cannot see (draw) or touch (collide with).

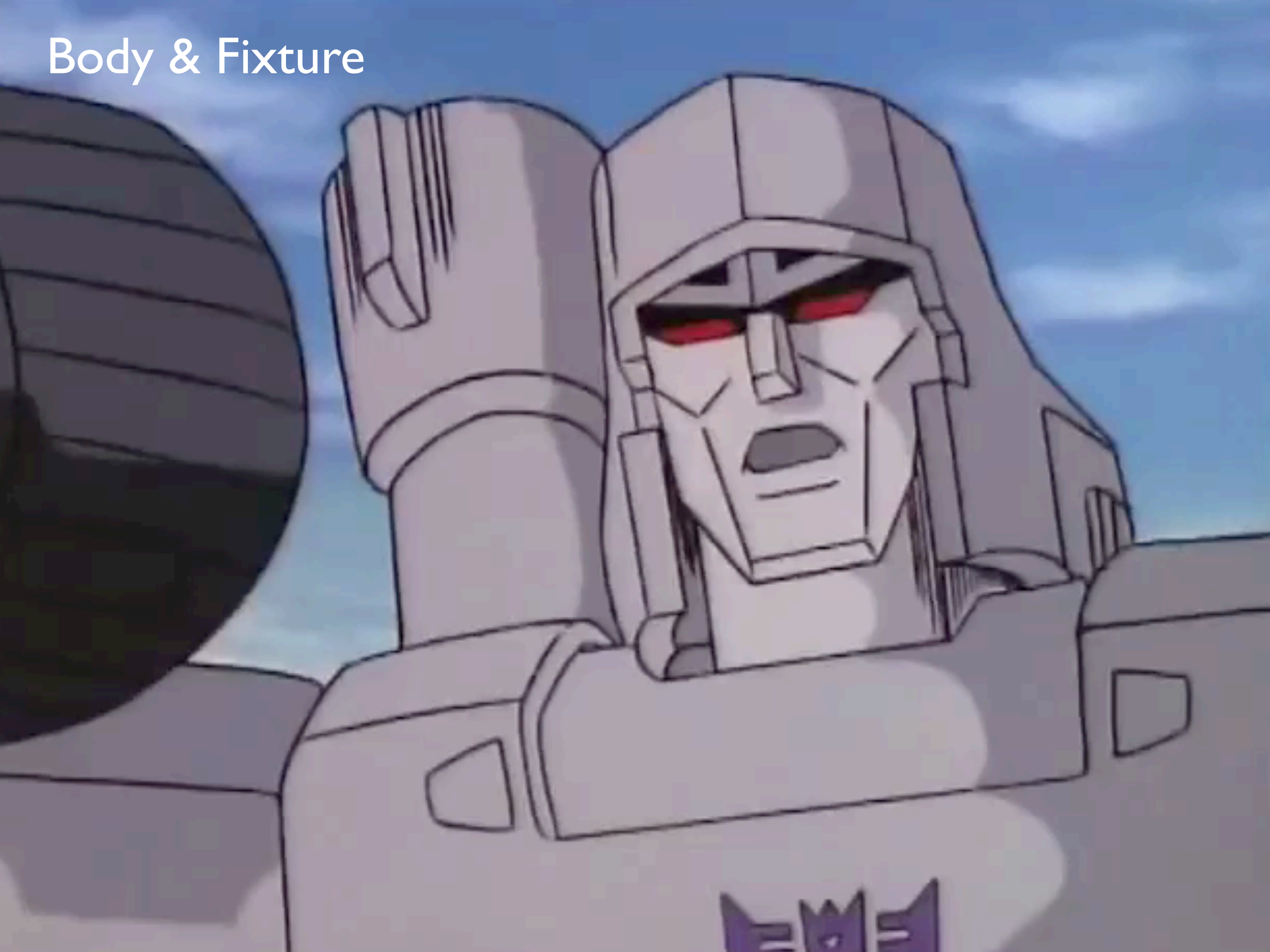
- mass
- velocity
- location
- angle
- rotational inertia

Fixture

Fixtures are used to describe the size, shape, and material properties of an object in the physics scene.

- size,
- restitution,
- friction,
- density

Body & Fixture



Today's goals

1. Initialize Box2d world
2. Generate different Box2D circles, rectangle, triangles and etc.
3. Use Box2d edge to make land
4. Understand Box2d Native code(optional)
5. Create a simple game

Reference

- Box2d C++ Tutorial:
  http://www.iforce2d.net/b2dtut/
- The Natural of Code by Daniel Shiffman
  http://natureofcode.com/book/chapter-5-physics-libraries/#chapter05_section5