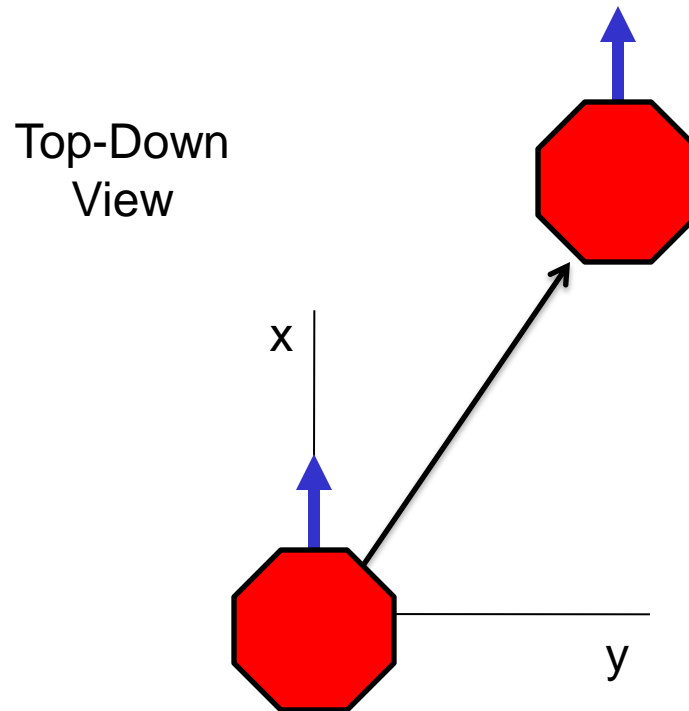# Move Tutorial

MOVE THE SATELLITE

A

B

- Objective: Move the satellite from its starting position to (0.5, 0.2, -0.3)

Top-Down
View

x

y

Inputs/Outputs

- loop provides:
  - **myState[12]**
  - **time**
- Position Control
  - **api.setPositionTarget**
  - **api.setVelocityTarget**
  - **api.setForces**

Plan

1. What is the simplest way to do this?

2. Do we need a sketch and math model?

- Use position control with api.setPositionTarget

- No model is needed since we can directly command position.
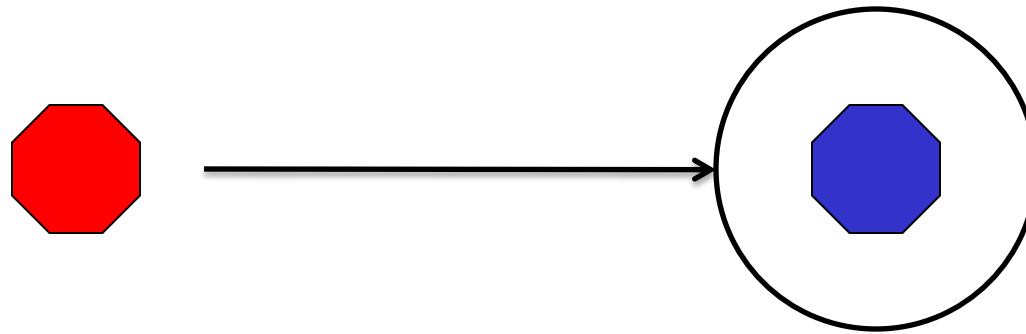
A   B

api.setPositionTarget

```cpp
//Make an array to hold our end position
float endPosition[3] = {0.5,0.2,-0.3};

//Make an array to hold our Target position
float posTarget[3];
int i;

//Set the target to the end position
for (i=0; i<3; i++)
{
        posTarget[i] = endPosition[i];
}
api.setPositionTarget(posTarget);
```

MOVE NEAR THE OTHER SATELLITE

- Move near to the other satellite (within 0.45 m) without colliding

- Move in a circle around the satellite