

## Outline

- **Cell::Intersect**

*Input: Position, Direction*

*Return: Intersected surface, distance to surface*

- Loop over surfaces and find shortest distance to intersection and surface

- **Cell::Move to boundary**

*Input: Surface*

*Output: New Cell*

- Look up Hood for input surface
  - Check of particle is inside each cell
  - If inside
    - stop looping
    - return cell
- Loop through City
  - Check of particle is inside each cell
  - If inside
    - stop looping
    - Add newCell to Hood
    - Add current cell to newCell's Hood
    - return newCell