

Multi-UAV Simulation Presentation

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Improvement from previous simulation

- ▶ A 2-D model has been developed, this is based on the assumption that the height is constant for all UAVs
- ▶ All UAVs keep monitoring all fires upto a time the 'false alarm' is detected
- ▶ This false alarm is selected randomly and the UAVs adjust their course accordingly
- ▶ Also self collisions among UAVs have been neglected
- ▶ Obstacle avoiding has been implented in some cases as fires have been set randomly, thus setting a random obstacle in most cases causes overlap

Continued..

- ▶ The path-planning algorithm discussed last time has been modified a little
- ▶ The priority of the fires/cells are based on the "age" /time it has been unattended for
- ▶ This makes sure no fire is neglected for a long time
- ▶ Also the parameter of distance in the original algorithm has been replaced by moving to the next unattended fire
- ▶ This does not create a problem when path of 2 UAVs cross

Simulation

- The UAVs return to their base station after fire monitoring

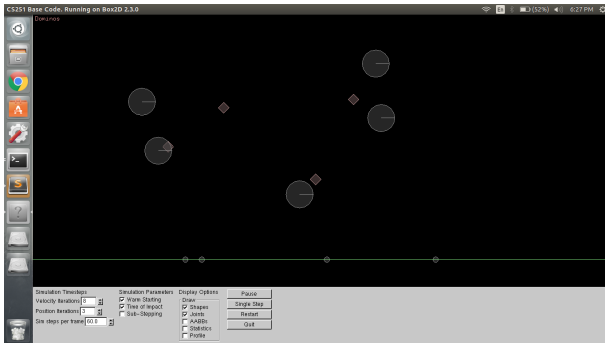


Figure : Monitoring

Simulation

- ▶ Path planning is adjusted once false fire is detected

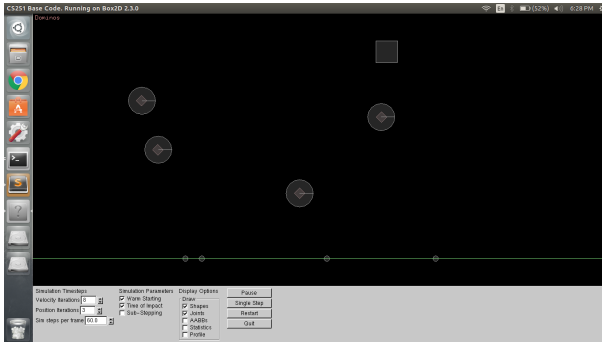


Figure : New Arrangement