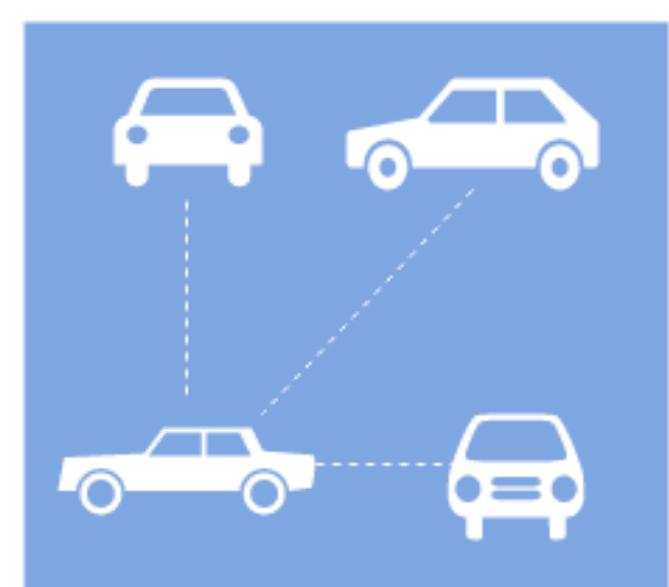


RxSpatial: Reactive Spatial Library for Real-Time Location Tracking and Processing



Youying Shi Abdeltawab Hendawi Hossam Fattah Mohamed Ali

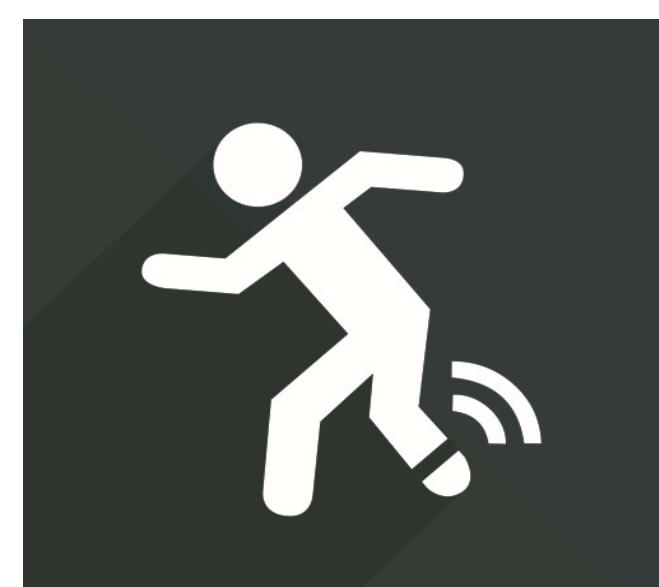
Motivation



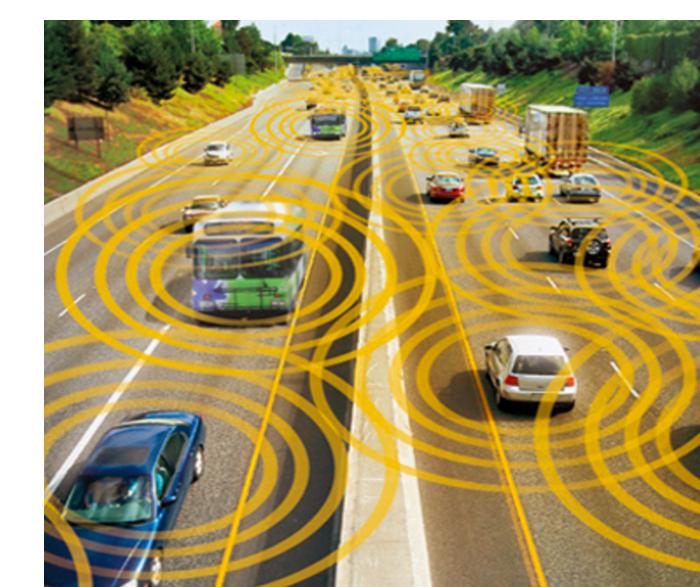
Collaborative Vehicle Cluster



Geofencing

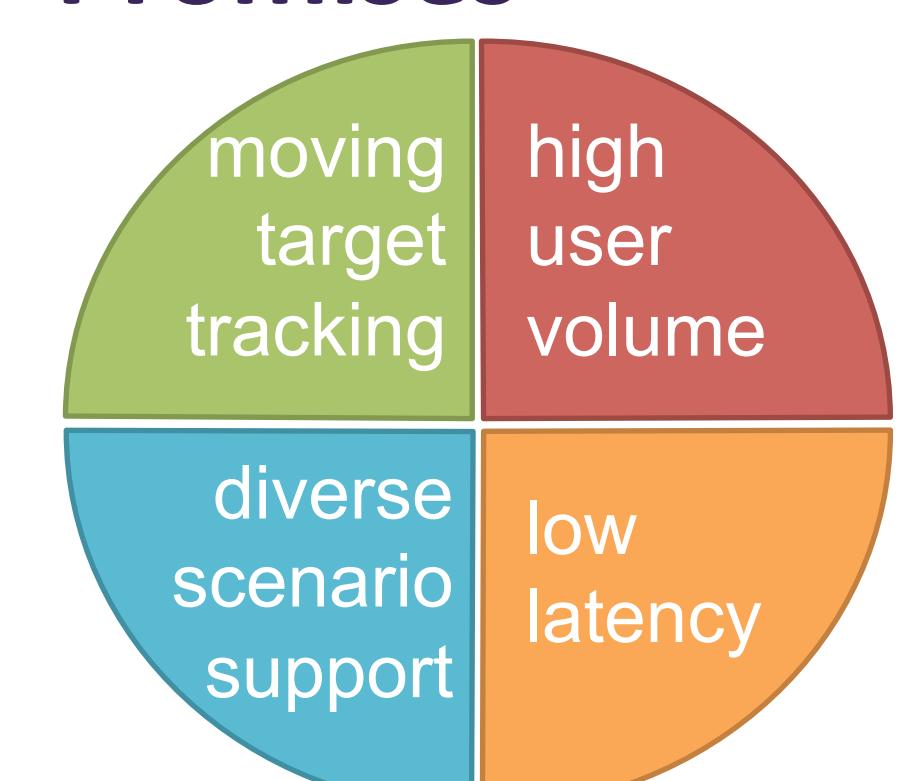


Offender Activity Tracking

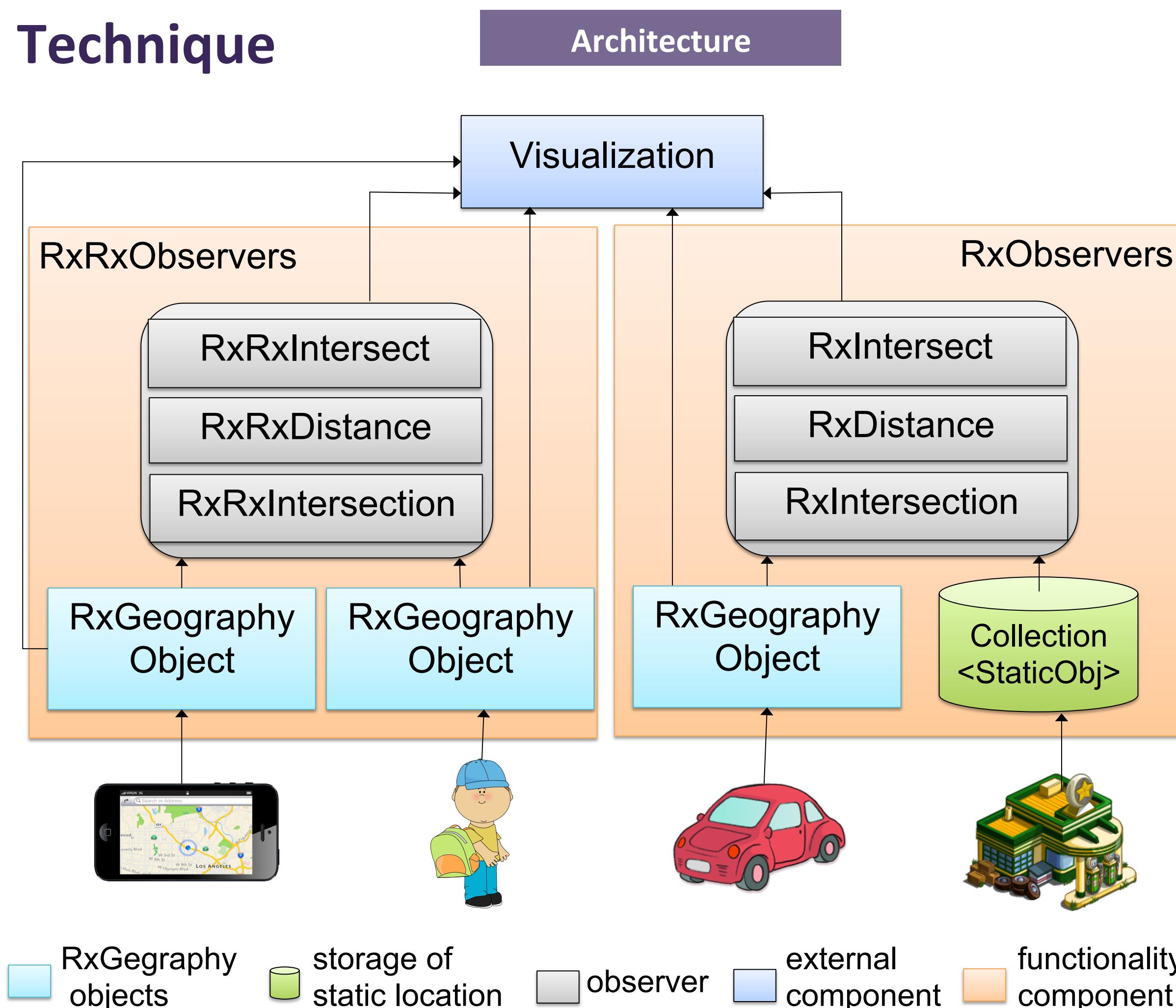


Vehicle Tracking for Insurance

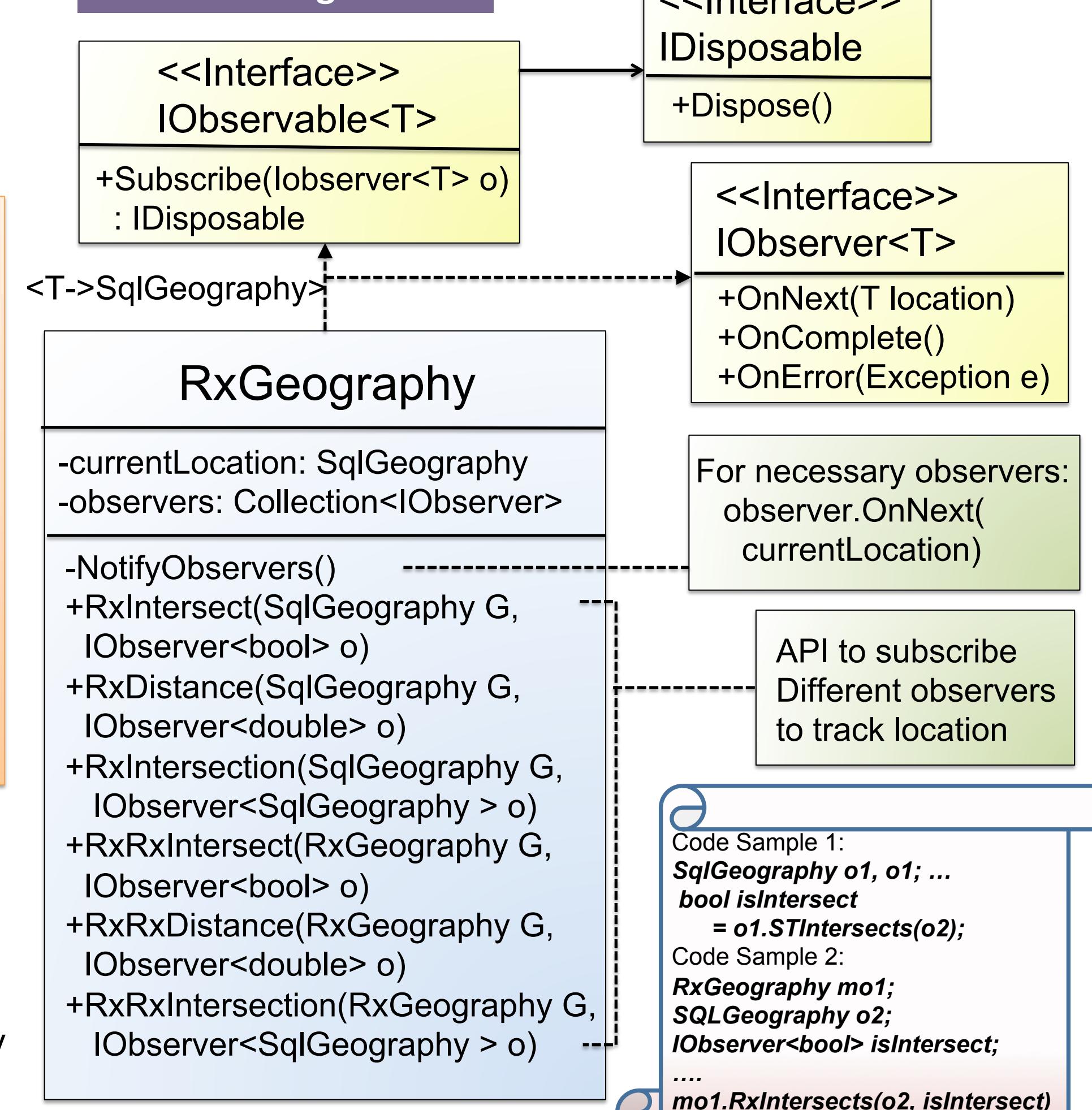
Promises



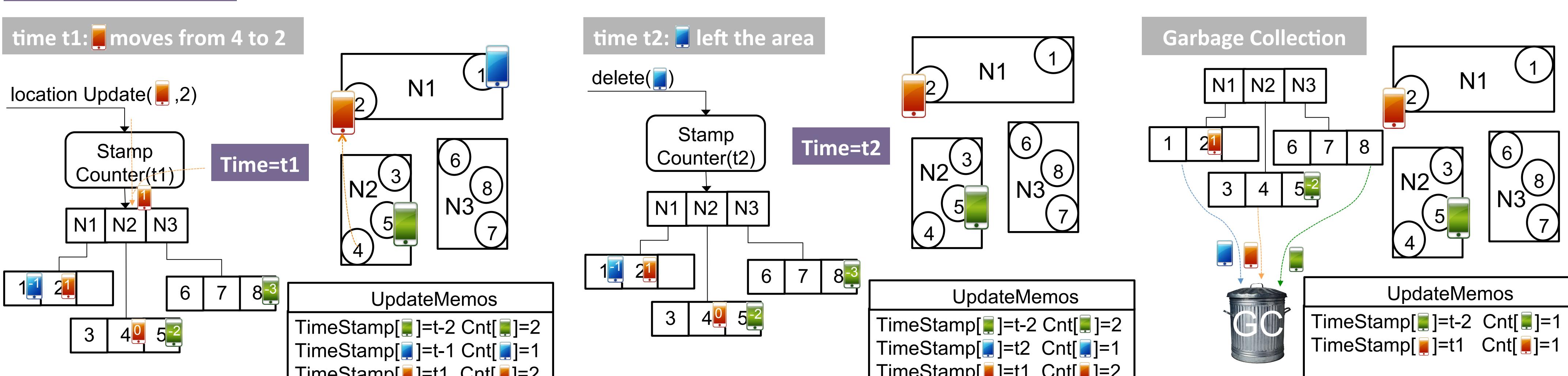
Technique



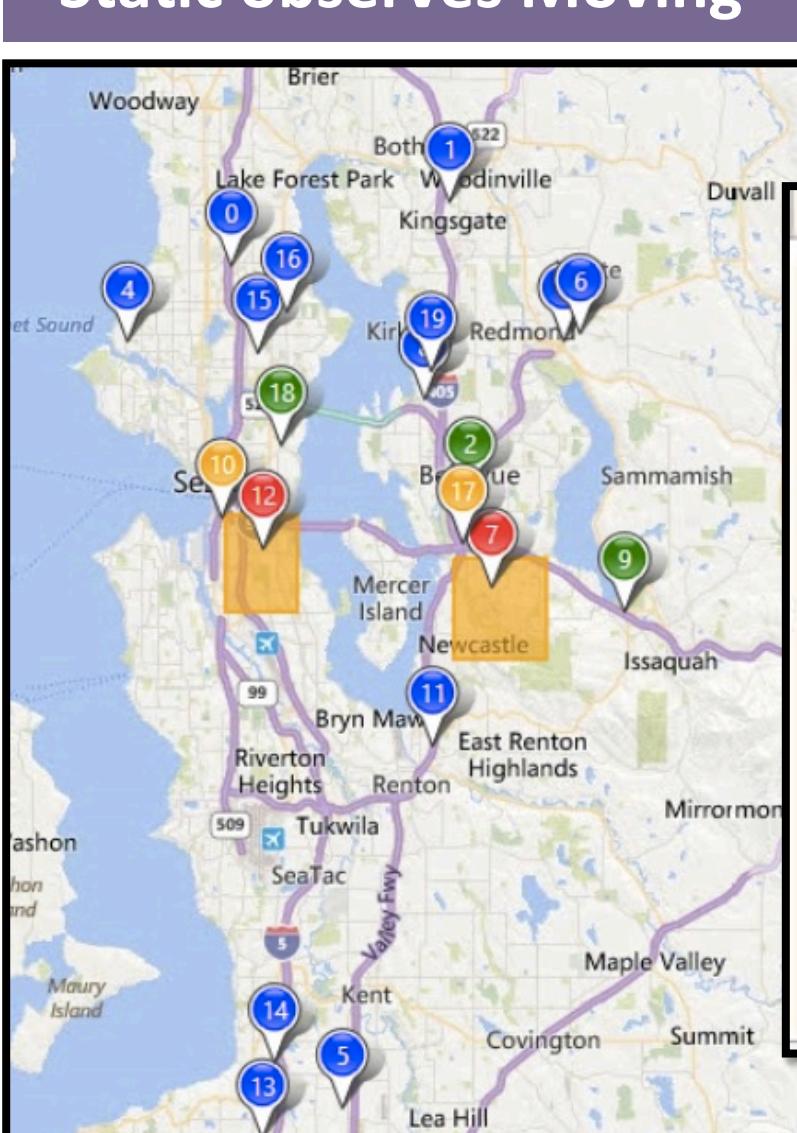
Class Diagram



RUM-Tree



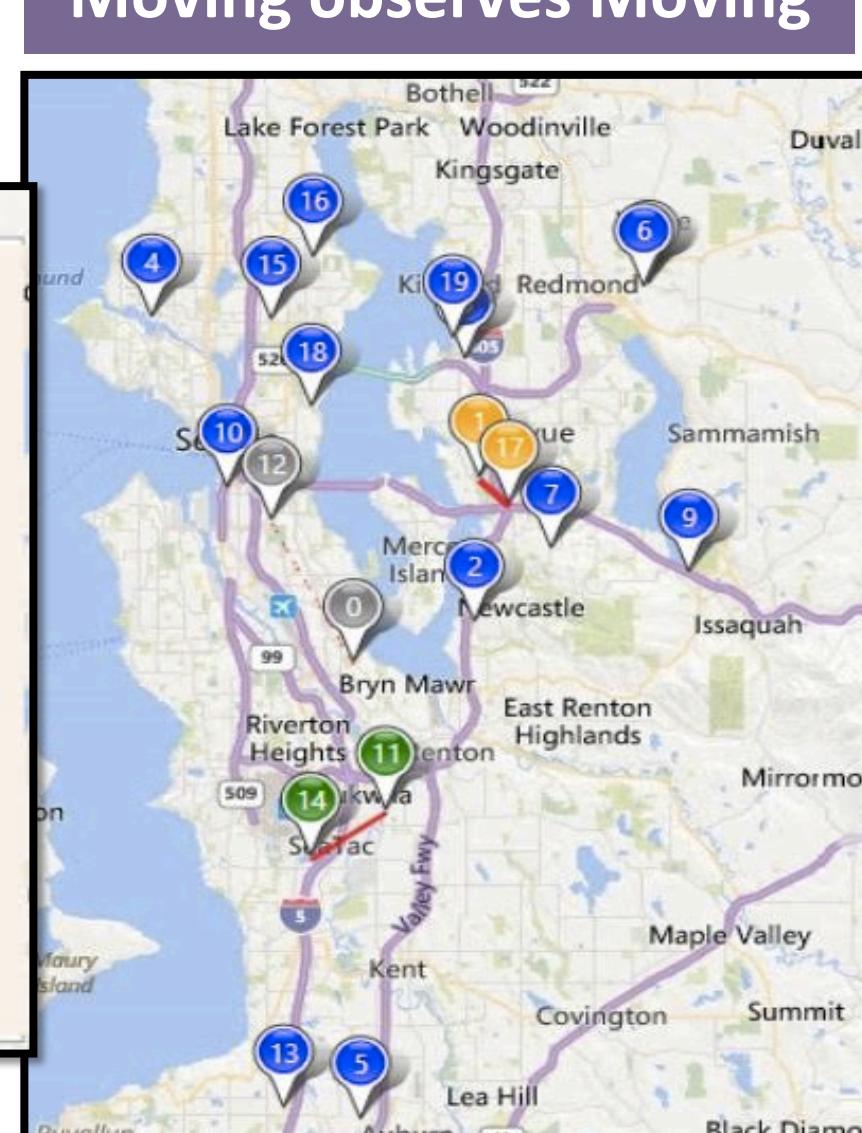
Static observes Moving



Criminal Activity Tracking
Intersect Status Tracking

Example

Moving observes Moving

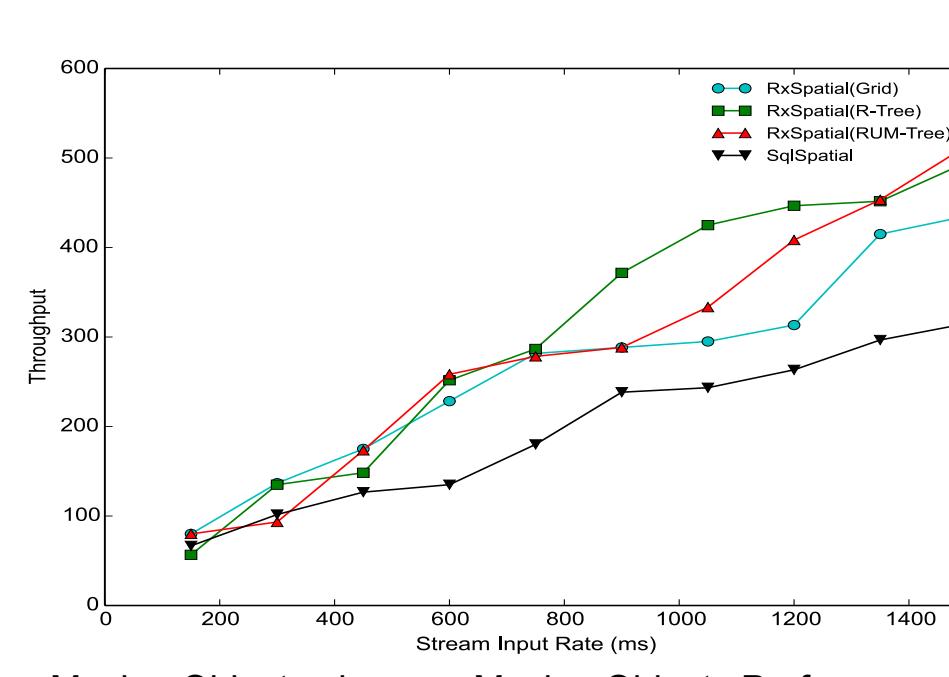


Control Panel

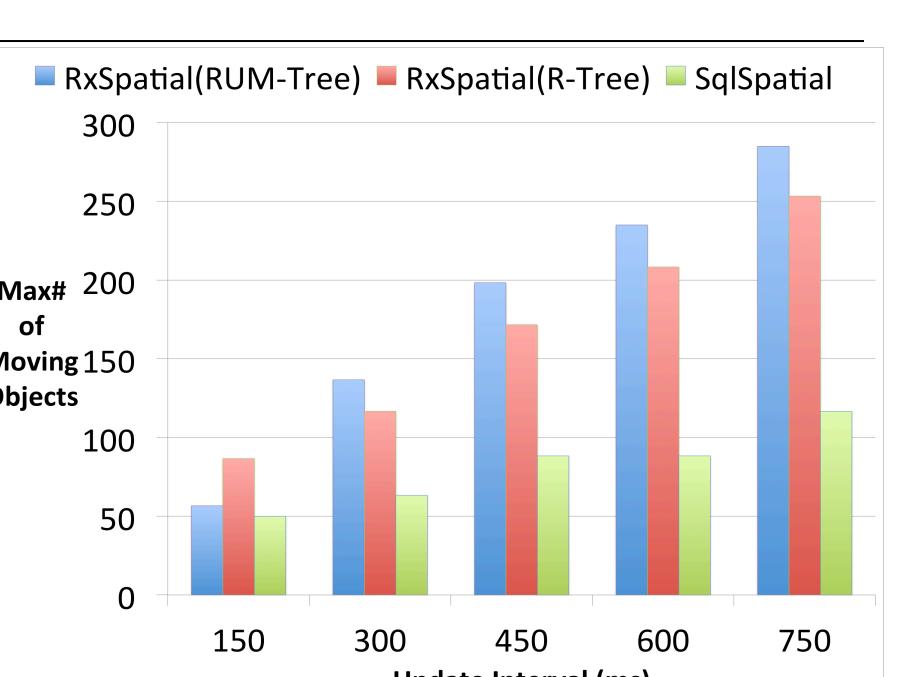
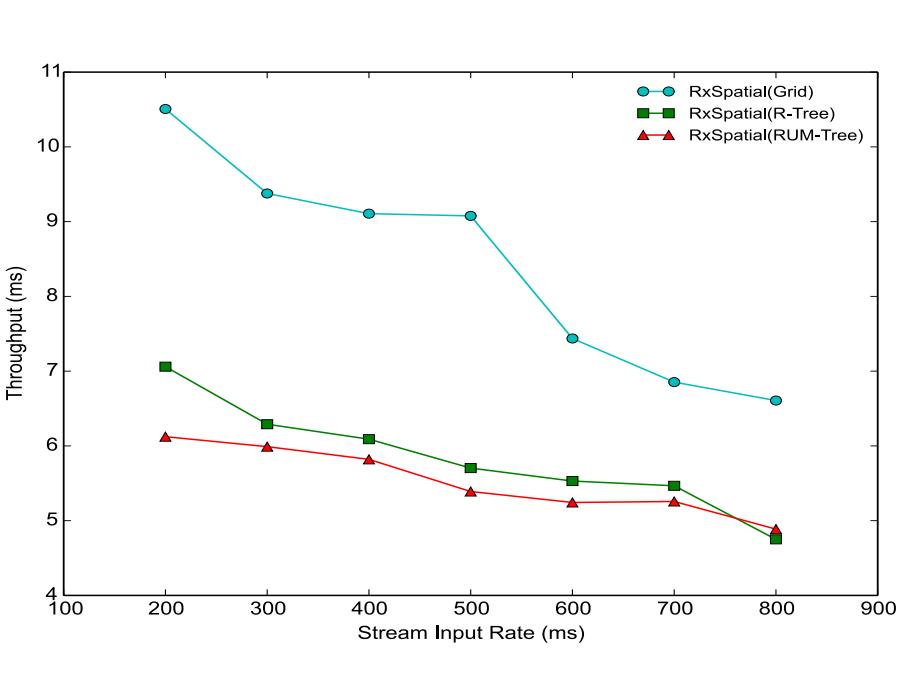
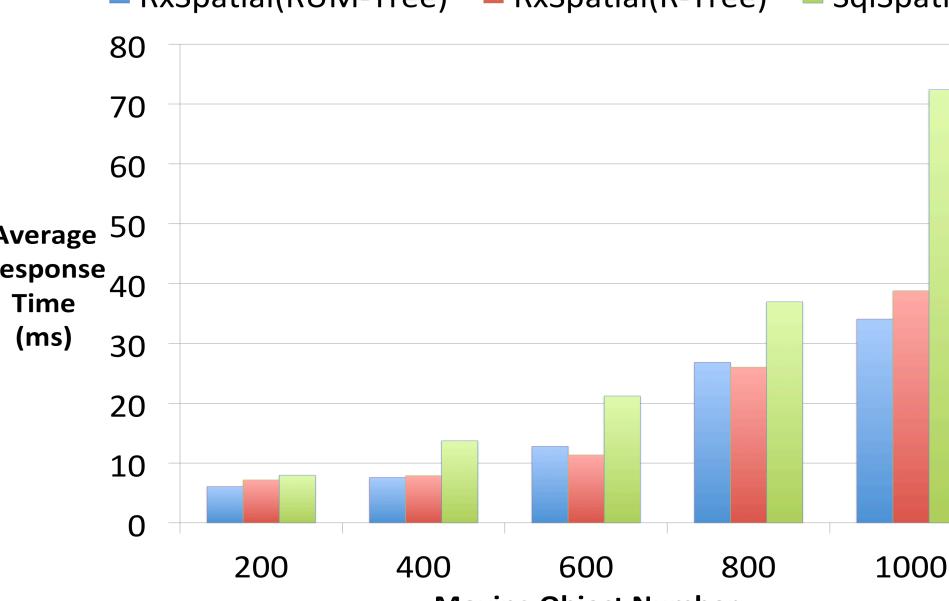
Collaborative Vehicle Proximity Tracking

Performance Evaluation

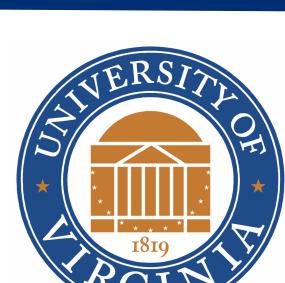
Static Object observing Moving object Performance



Moving Objects observer Moving Objects Performance



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