

Integrating Named Data Networking with Transportation Simulation



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- Critical transportation applications
 - Event-driven, Broadcast or Geocast (ROI)
 - Leading to trajectory changes
 - V2V and V2I communications
- NDN advantages
 - Better support for mobile, ad-hoc networks
 - Vehicular NDN: WiFi broadcast, node as router/relay (consumer and producer)
 - Geographic information in naming convention
- VSIMRTI
 - Integrated network simulations with transportation simulations
 - Applications that support changing vehicles' behavior upon receiving event data

VSimRTI (V2X Simulation Runtime Infrastructure)

Add Nodes
Move Nodes
Send Message

Receive
Message

Change
Route

Update
Position

NS3 (Network Simulator)

VSimRTI patch

NS3 Server

(Mobility, Scheduler, Map manager,
Wi-Fi installer, ...)

Node Manager

Application

SimpleSendingApp

NDNSendingApp

NS3 Core

Mobility

Wi-Fi

NDN Stack
Helper

ndnSIM

Applications

Protocol
Stack

Forwarding
Daemon

SUMO
(Traffic
Simulator)

