Project Green Light

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Video Introduction

Goal

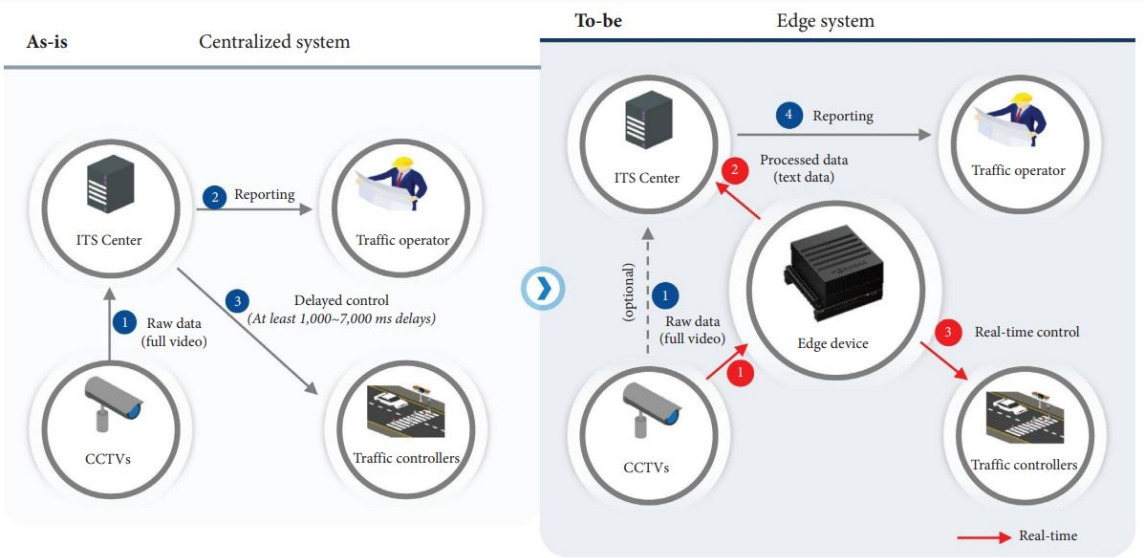
- Reduce emissions
- Reduce traffic
- Improve traffic light timings

Summary

About half of the emissions at intersections come from accelerating after stopping. Project Green Light works to optimize traffic light timing configurations through Google Maps driving trends and AI in 70 intersections in 12 cities.

Other Research

- Multiple groups testing AI traffic lights
- Centralized solutions vs “Edge AI”
- Reduced size, equal power

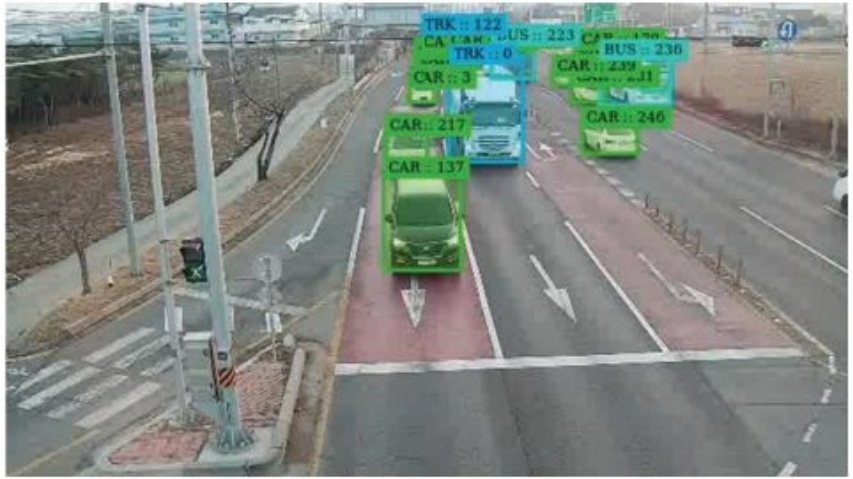


Singapore ITS Training

- How are these models trained and tested?
- What are the inputs and outputs?
- How is error calculated?

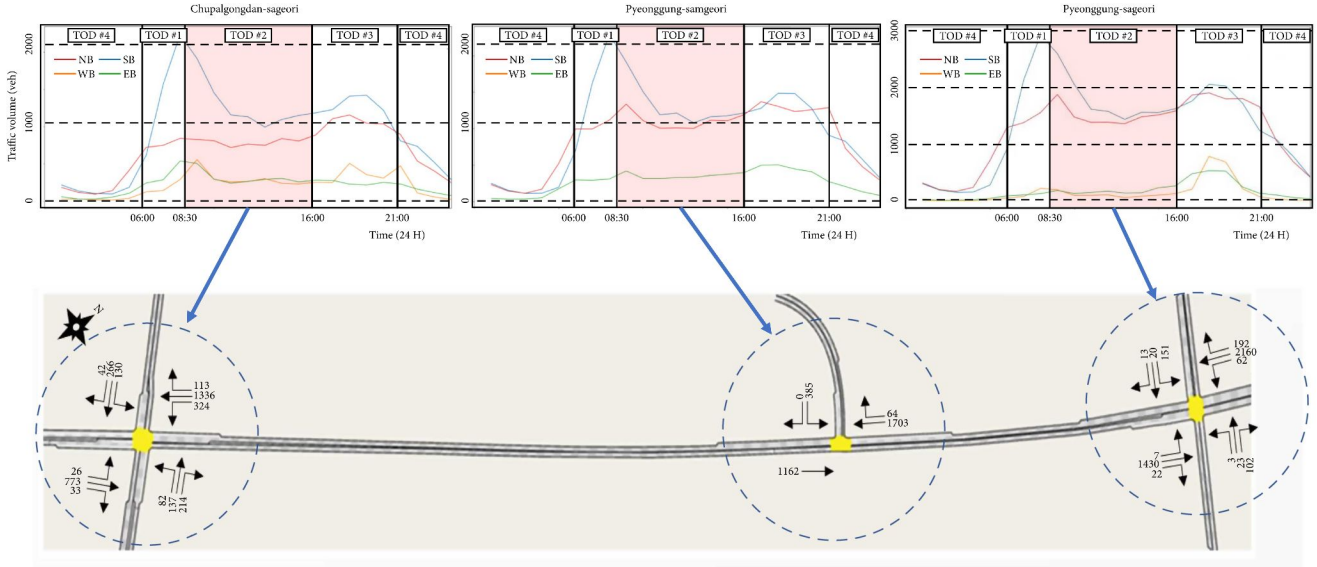
Video Input

- CCTV cameras at each intersection
- AI tracks regions of interest (RoI), and individual cars
- Flow rates are calculated



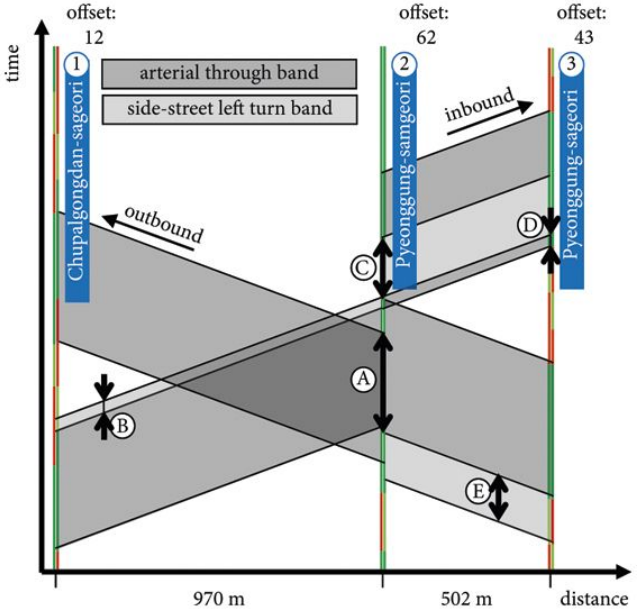
Output and Training

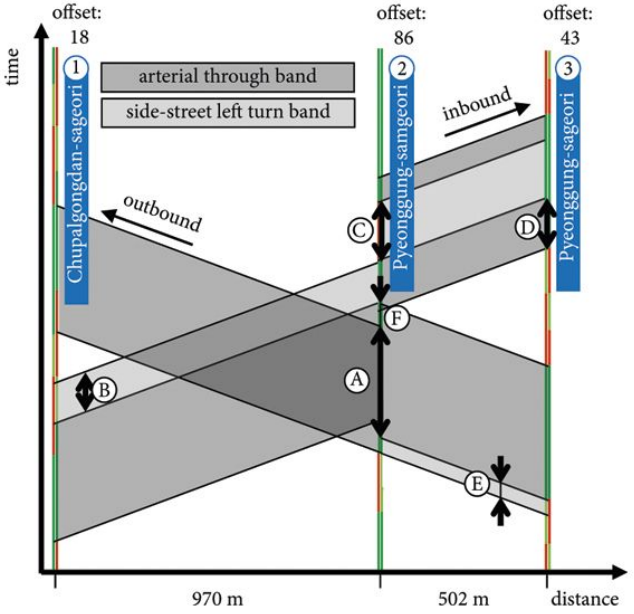
- Video data measures flow rate
- Simulated intersection trains on real time data
- Flow rate used to measure success



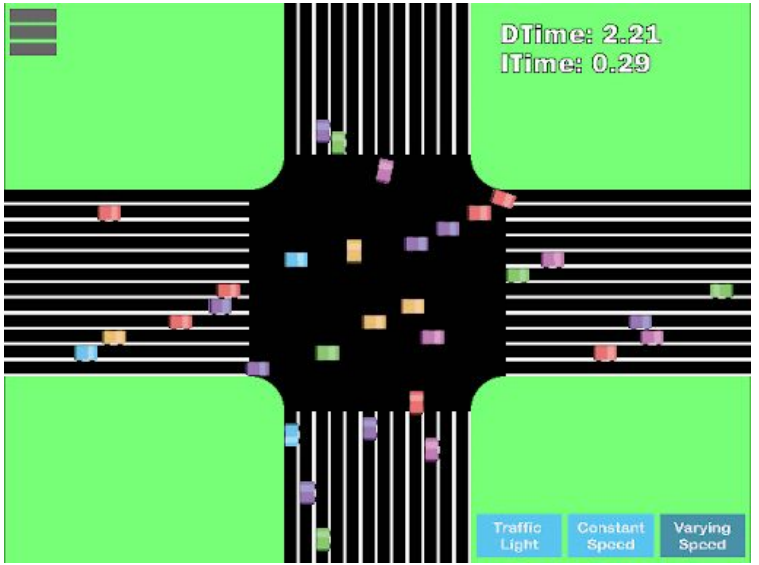
Communication Between Lights

- Arterial traffic signal optimization
- TOD (left) vs. LT2 (right)





The Future of Intersections



Questions?