

Planning, Policy
&
Programming

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Project Title:
Validation of Freight Volume
Modeling on Major Highway Links

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Validation of Freight Volume Modeling on Major Highway Links

Develop a method for generating freight (truck) volumes

WHAT IS THE NEED?

One of the most challenging problems in urban transportation planning is the lack of fine grain data on freight movements.

WHAT ARE WE DOING?

The research seeks to develop a method for generating freight (truck) volume and origin-destination estimations at the traffic analysis zone level from streamed data so that estimations can be constantly updated.

The experiments focus on state highways in the vicinity of the ports of Los Angeles and Long Beach, so it's relevant to both ship to truck freight distribution (Livability and Economy) as well as maintenance of pavement that is heavily travelled by trucks (System Performance). The methods include developing Closed-Circuit Television (CCTV) camera video analytics, freight simulation tool and freight volume estimation algorithms.

The approach for this research is comprised of five tasks below:

Task 1: Freight sensing dataset

Task 2: CCTV modeling and validation

Task 3: Freight modeling

Task 4: Freight simulation tool and validation

Task 5: Final report, modeling tool packages and demonstrations



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knowledge that improves
California's transportation system

WHAT IS OUR GOAL?

The research seeks to develop a new method for generating freight (truck) volume and origin-destination estimations at the traffic analysis zone level from streamed data so that estimations can be constantly updated. As a result, this method could provide fine grain data on freight movements for urban transportation planning and freight planning. In addition, this research would develop simulation tools and dashboards to allow to test freight volume estimation under varying scenarios.

WHAT IS THE BENEFIT?

The method developed by this research could enhance Caltrans freight modeling effort. In addition, it has the potential of providing fine grain data on freight movements for transportation planning and freight planning. Also, the simulation tool developed by this research should be accessible to Caltrans and provide support for envisioned planning use cases.

WHAT IS THE PROGRESS TO DATE?

This is a new task order. The task was not executed yet.