A Global Truck Parking Problem That Today’s Technology Can’t Fix

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Speaker Qualifications

Int’l Parking and Mobility Institute
Board of Directors, Fmr Chair – Technology Committee, Fmr Chair – ITS & Parking Task Force

ITS Canada
Board of Directors, DEI Committee

ITE
Fmr Chair – Goods Movement Council

Transportation Research Board
Fmr Chair - Intermodal Frt Transp Committee, Chair – Frt Subcommittee (RTSMO)

ITS America
Fmr Chair - Intermodal Task Force, Fmr Chair – CVO Architecture & Standards Subcommittee
Agenda

- National Problem
- Traditional Smart Parking Solutions
  - Benefits and Drawbacks
- Hidden in Plain Sight
- Potential Solutions?
National Problem
National Problem

“Truck Parking is an Issue for Nearly Every Trucker. Of the nearly 11,700 truck drivers who took the survey .... 98% reported problems finding safe parking. Issues with truck parking were reported in every state and region...

Excerpted from Owner Operators Independent Drivers Association report
National Problem

Something to think about…

- NO SPACE TOO SMALL

“One of the points we’ve been impressing on lawmakers is that no amount of parking is too small, and that every new space is important…”

Bryce Mongeon, OOIDA.
Traditional Smart Parking Solns
Traditional Smart Parking Solns

Two primary methods of determining real-time truck parking availability

1. Counting trucks upon entry and exit of truck parking site
2. Sensor technologies at individual truck parking space locations
Traditional Smart Parking Solns

1. Counting trucks upon entry and exit of truck parking site (If 20 spaces exist and one truck enters – 19 spaces available...)}
Traditional Smart Parking Solns

2. Sensor technologies at individual truck parking space locations
Traditional Smart Parking Solns

In-ground sensors
Traditional Smart Parking Solns

In-ground sensors

Loop detectors

Piezoquartz sensor
Traditional Smart Parking Solns

Overhead/Side Sensors

Height Detection System

Traffic Counting Radar
Traditional Smart Parking Solns

Overhead/Side Sensors

Laser Technology

3-D Imaging
Traditional Smart Parking Solns

Overhead/Side Sensors
Traditional Smart Parking Solns
Overhead/Side Sensors
Traditional Smart Parking Solns

Overhead/Side Sensors

LPR Camera
Traditional Smart Parking Solns

Overhead/Side Sensors (not automated)
Traditional Smart Parking Solns

Some challenges realized…

- Cars that park in truck parking sensor spaces
- Cars that enter the truck parking entrance (and are counted) then back out of the truck parking entrance to try and get to the car parking area
- Sensors propagate errors in numbers and need to be updated .. But aren’t.
- Others?
Smart(er) Parking Relationships

- 87% of available truck parking in the USA is located at private truck stop operations (avg # of spaces per truck stop is 143)
Hidden In Plain Sight
Hidden In Plain Sight

- All of these Smart Parking systems for trucks required something that is key ... and, unfortunately, often missing. Can you guess what that is?

- Each of the systems required a definite and known truck parking space capacity! (i.e., 100 space capacity and 5 trucks entered the site and are parked...)

Image: Parking sign with text: SPACES OPEN 114 MILES 95
Hidden In Plain Sight

- A quick quiz…
Hidden In Plain Sight

- A quick quiz…
Hidden In Plain Sight

- A quick quiz…
Hidden In Plain Sight

- Real world truck parking challenges
Hidden In Plain Sight

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[Google Earth images of truck parking areas]
Hidden In Plain Sight

- Real world truck parking challenges
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Potential Solutions?

- Truck Parking Cams
- AI gaming applications
- Traffic Mgmt Center CCTV (Open, Nearly Full, Full)
- 3rd Party Monitoring
Potential Solutions?

- Truck Parking Cams
Potential Solutions?

- AI Gaming Application
Potential Solutions?
Potential Solutions?

- Traffic Mgmt Center CCTV (Open, Nearly Full, Full)
Potential Solutions?

- 3rd Party Monitoring
Potential Solutions?

- How would YOU do it?
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