

# **BEYOND OIL: TRANSFORMING TRANSPORTATION**

## **Urban Partnerships, Traffic Management and Tolling**

September 4th, 2008

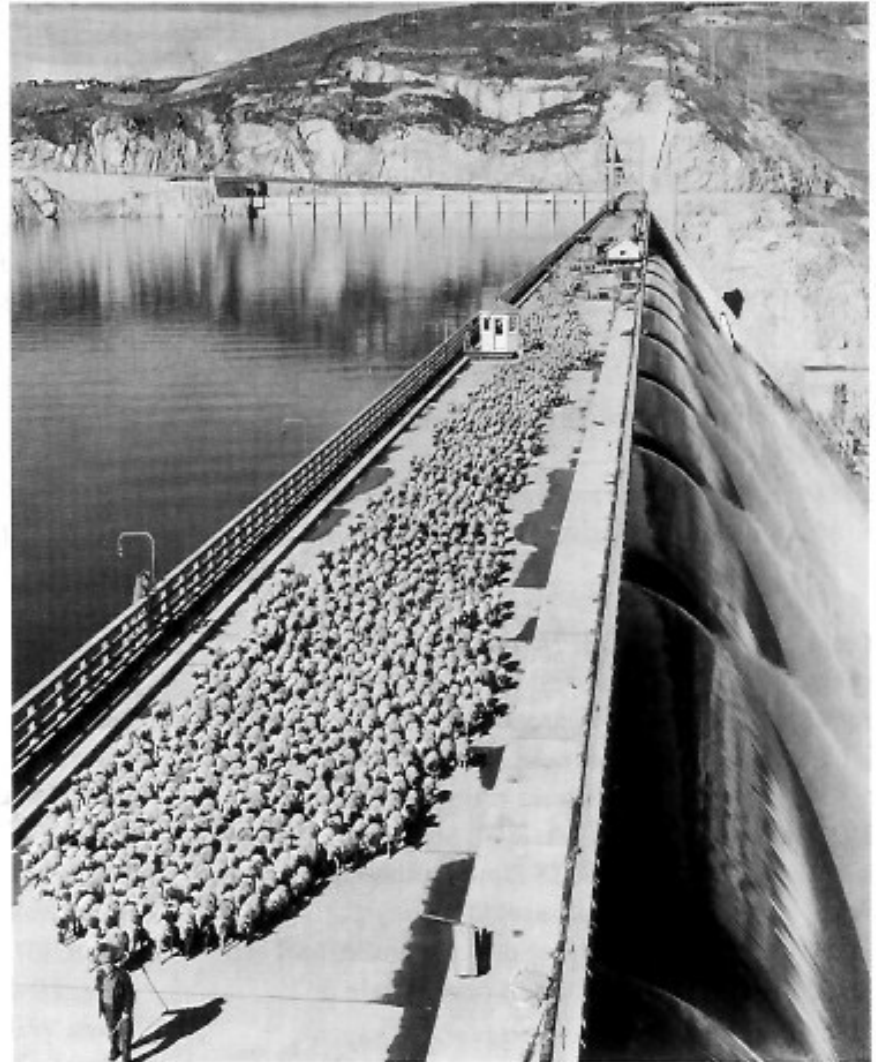
Jerry Hautamaki  
HNTB Corporation

# Introductory Remarks

- Congestion
- Funding



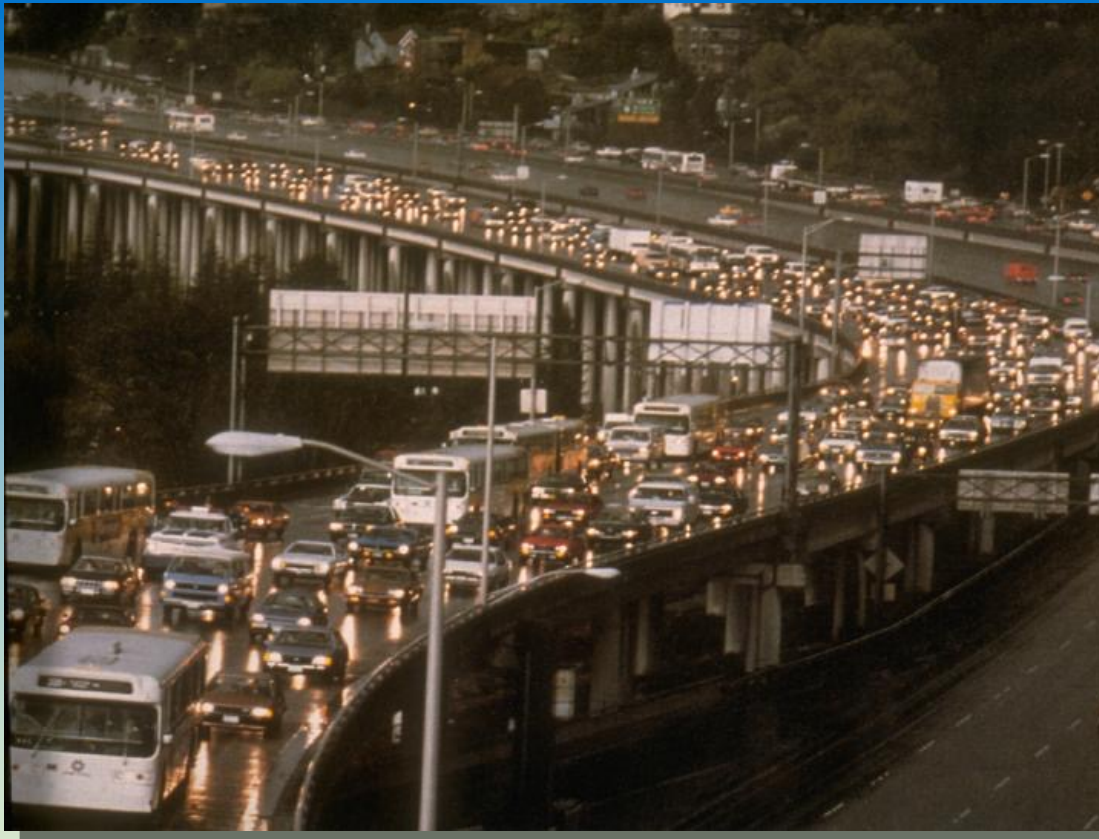
# Congestion



## Baaaacked-up Traffic

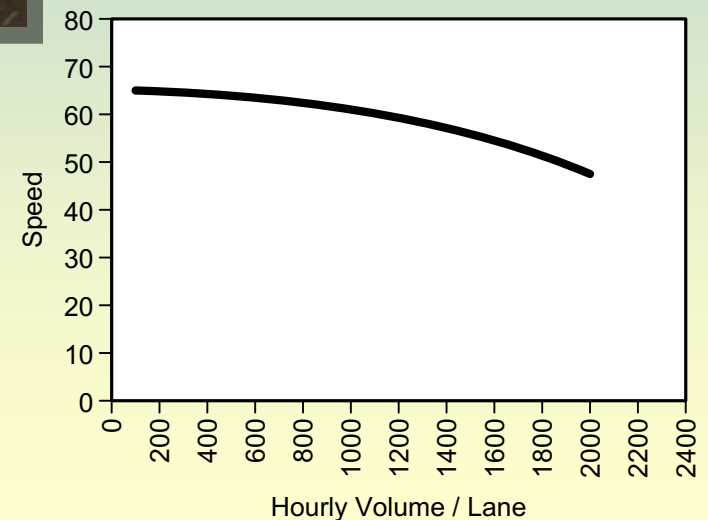
Hoofing it over the Grand Coulee Dam

May 11, 1943



# Congestion

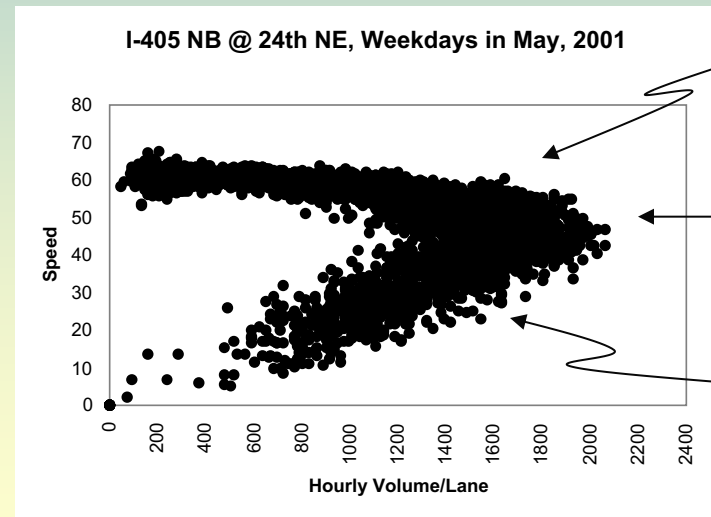
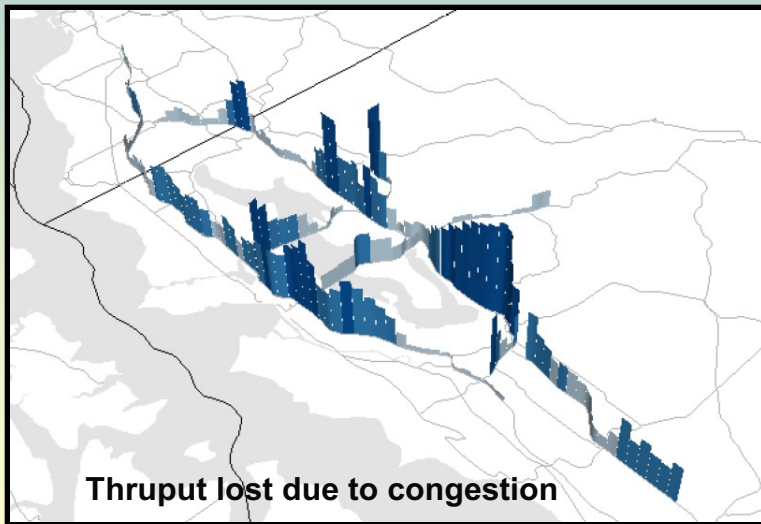
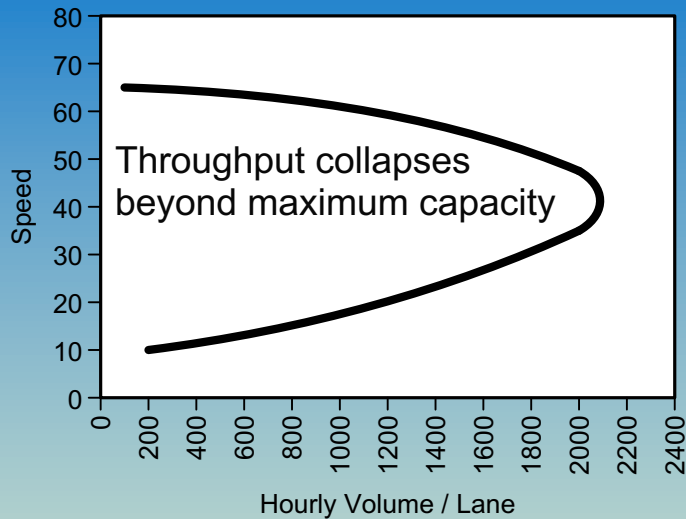
- Too many cars  
Not enough road





# Congestion

By managing system load,  
we can recover the lost capacity

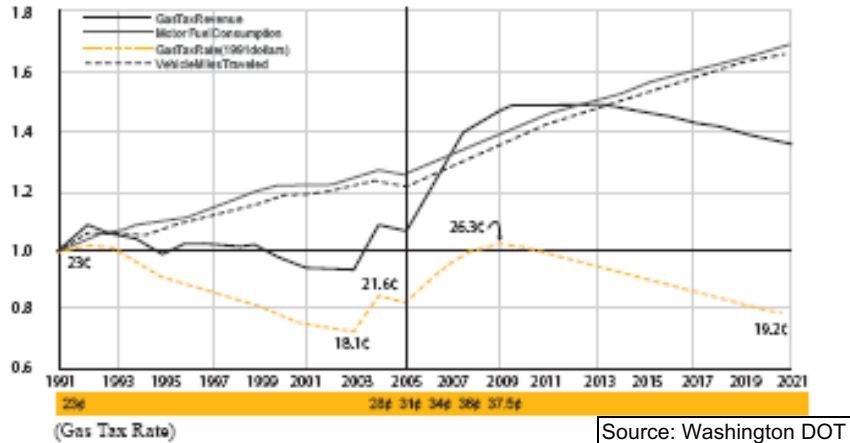


Slightly lower speed,  
higher throughput

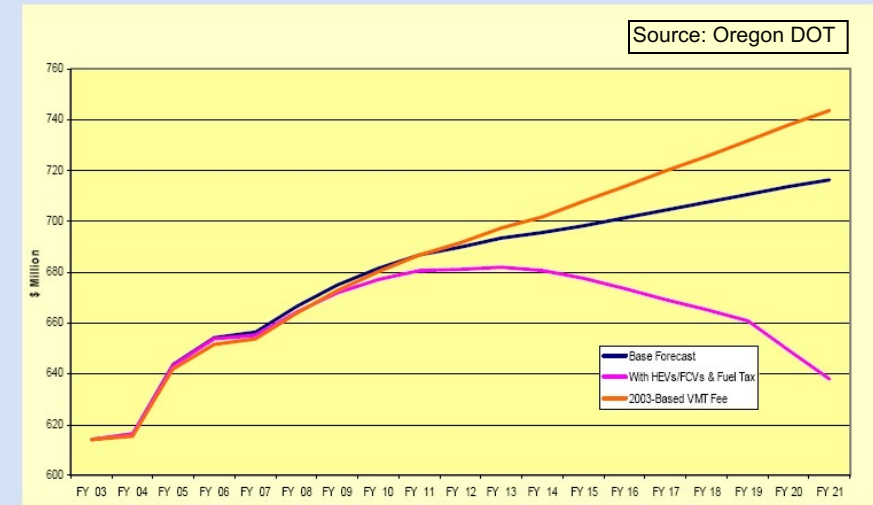
Max throughput is  
reached at  
roughly 50 mph

Much lower speed,  
lower throughput

## Growth Rates Compared: Vehicle Miles Traveled, Gas Tax and Gas Tax Rates



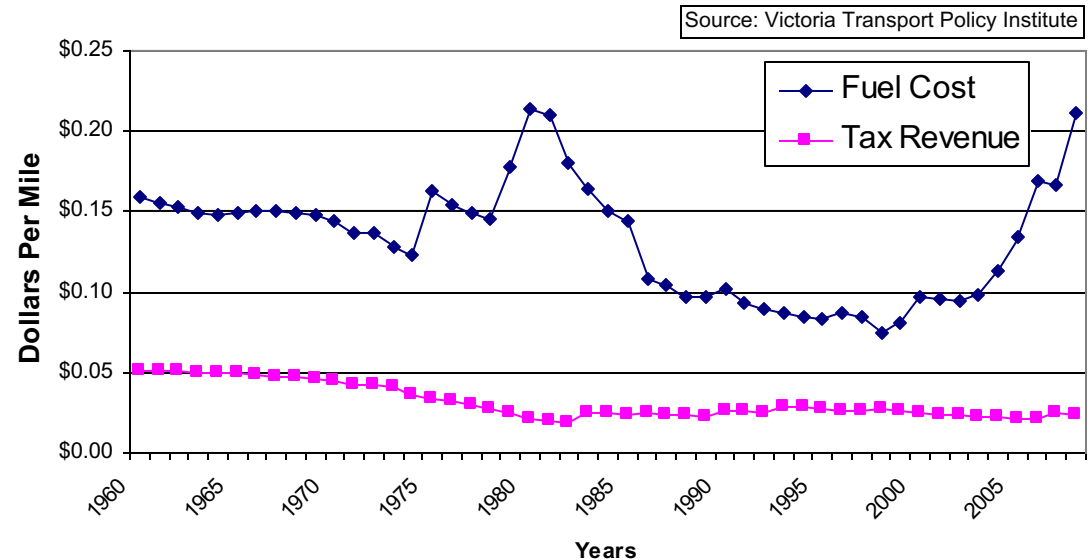
## Effect of New Technology Vehicles on Highway Fund Revenue



# Funding



## Fuel Cost vs. Tax Revenue Per Vehicle-Mile (2001 Dollars)



# Funding

## What does it cost to build?

- \$15M/Lane mile for urban Interstates  
= 30¢ / vehicle mile

Source: Patrick Decorla-Souza  
FHWA Value Pricing Program

- SR-520 Floating Bridge  
30 Lane lines, ~\$4.0B estimated  
= 50¢ / vehicle mile



# Solution

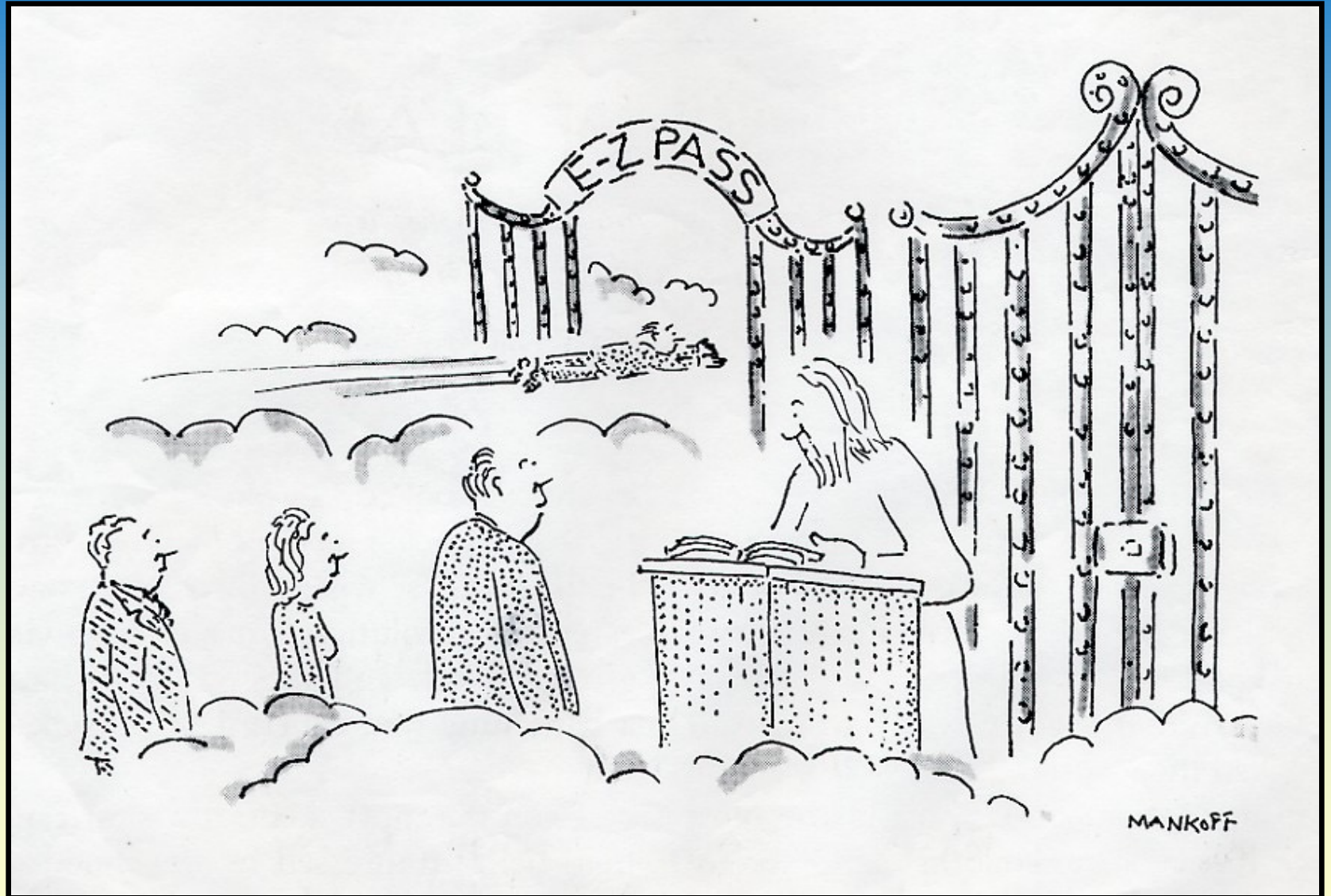
User Fee = Contribute / mile driven

Technology is available to fairly charge all vehicles for their roadway use





# Some Find Other Users



# BEYOND OIL: TRANSFORMING TRANSPORTATION

- **Review of June 26<sup>th</sup> Tolling Workshop**
  - *Glenn Pascall, Senior Fellow, West Coast Corridor Coalition*
- **Technology Solutions for Tolling & Traffic Management**
- **Implementation and Updates**



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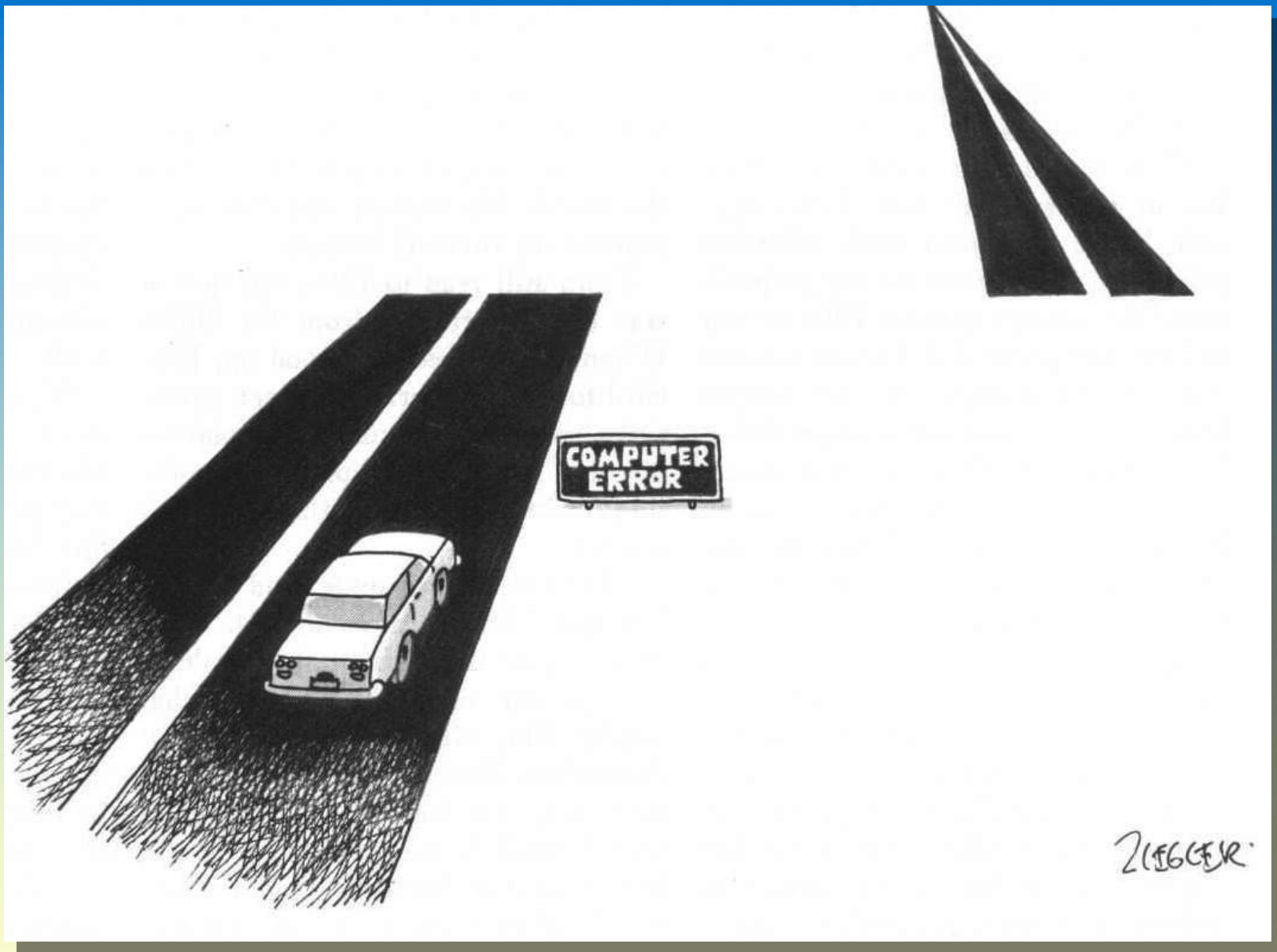
- Review of June 26<sup>th</sup> Tolling Workshop
- Technology Solutions for Tolling & Traffic Management
  - *Jack Opiolla, Booz & Company*
  - *Brian McNew, Kapsch Traffic Com*
  - *Arti Gupta, Ph.d., Siemens Energy & Automation*
  - *Preet Khalsa, Skymeter Corporation*
  - *Michael Wieck, Roadway Sensors, Iteris*
  - *Bryan Mistele, INRIX*
- Implementation and Updates



# Origin of Transponders







# BEYOND OIL: TRANSFORMING TRANSPORTATION

- Review of June 26<sup>th</sup> Tolling Workshop
- Technology Solutions for Tolling & Traffic Management
- **Implementation and Updates**
  - *Dave Kristick, E-470 (Denver) Public Highway Authority*
  - *Dick Ford, Washington State Transportation Commission*





