

National Evaluation of a Mileage-based Road User Charge: First Year Field Test

Paul F Hanley - CoPI
Associate Professor
Urban & Regional Planning and Civil & Environmental Engineering

Jon G Kuhl - PI
Professor
Electrical-Computer Engineering

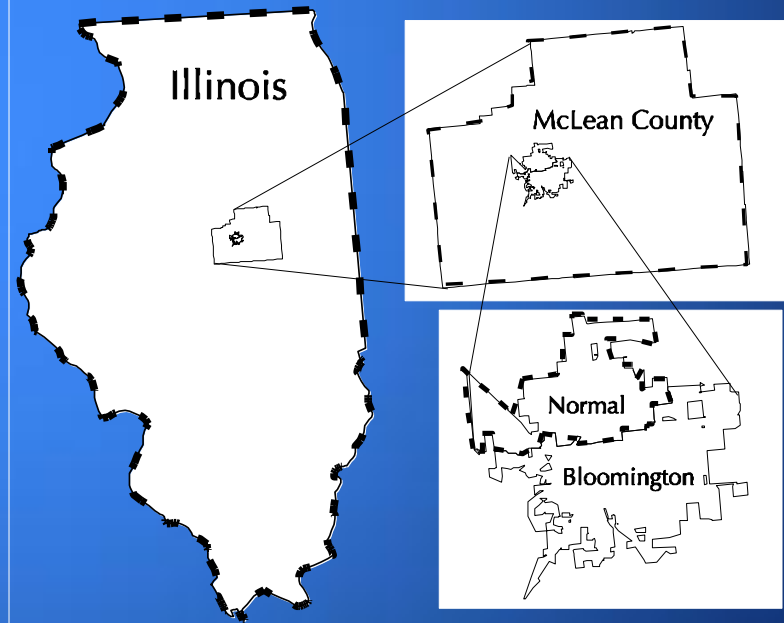


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Basic Approach

- Area-wide pricing based on miles traveled within jurisdictions



On-board Unit



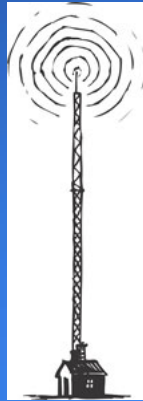
- SnapOn/NEXIQ eTechnician/xVDS architecture
- Model: Prism III

1. microprocessor with RAM, FLASH, and EE-PROM memory
2. 16-channel GPS receiver
3. vehicle communication interface to OBD-II, CAN/J1939, and J1587/J1708 vehicle buses
4. CDMA cellular data communication transceiver
5. RS-232 serial interface





Vehicle w/ OBU



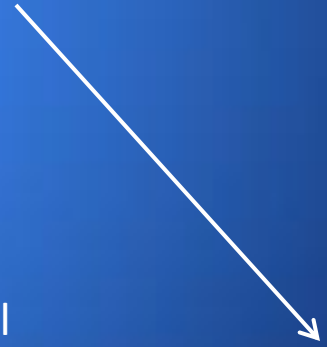
Cellular Data
Network



Billing & Dispersal
Center



Participants



Participants

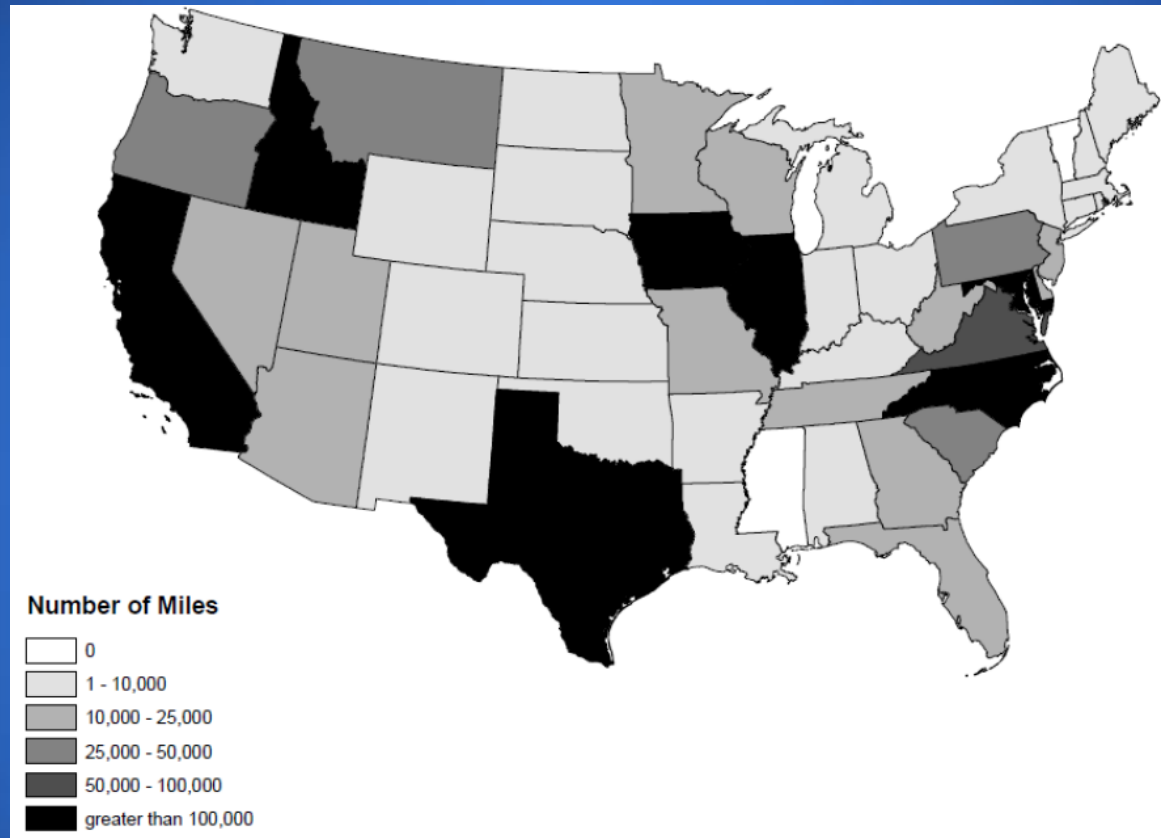
- First Year- Six Locations



Participants

- Over 28,000 eligible candidates
 - ≥ 18 yrs, insured, own vehicle, vehicle 2000 or newer, not moving, and employable in US
- Enrolled 1,207
 - Completed 1,152
 - Match demographic profile of each site
 - Age, Gender, Education

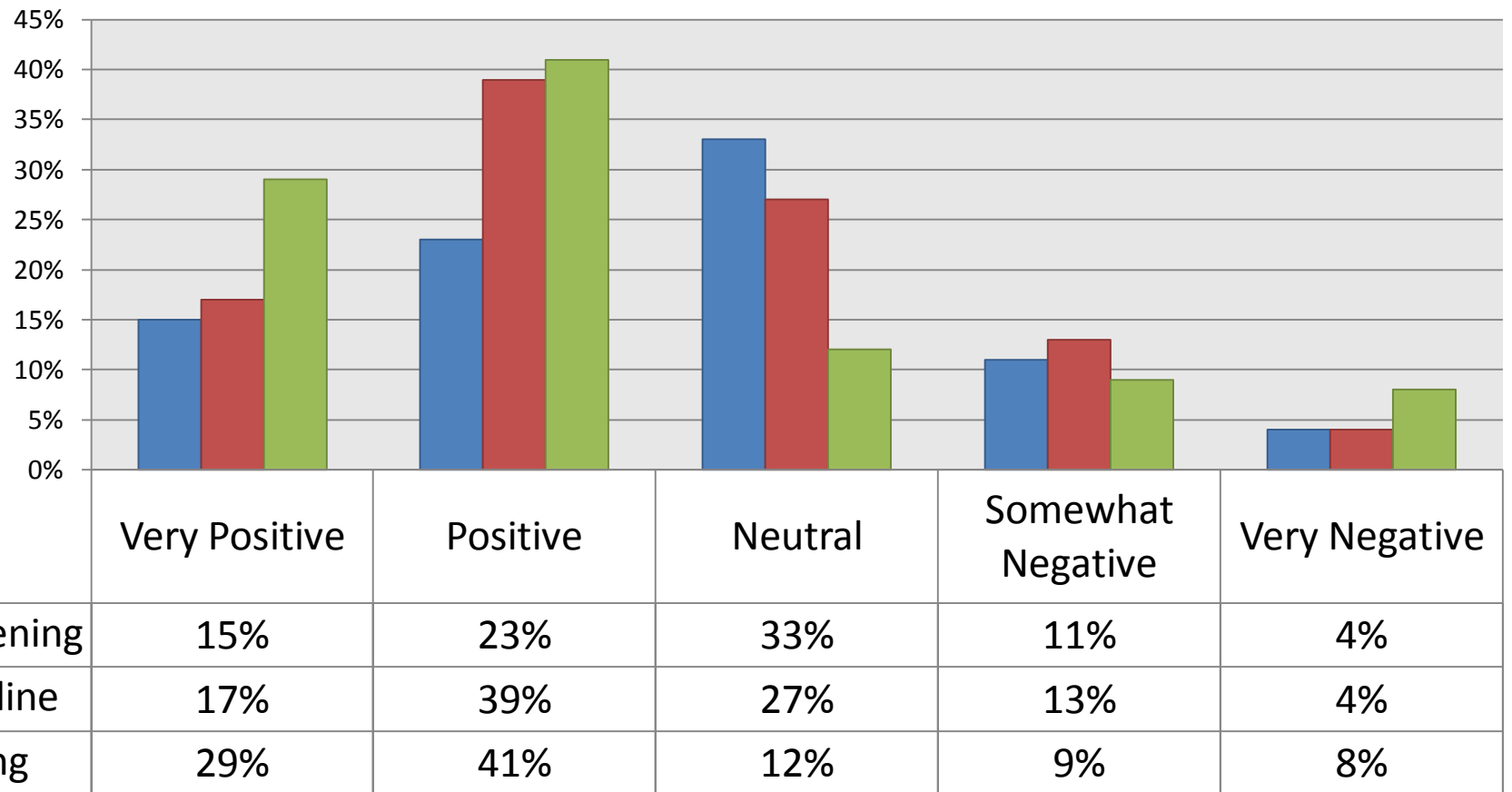
Miles Driven



- 9,961,616 VMT
- over an eight month period
- mean of 8,294 miles per vehicle

OPINIONS ABOUT VMT FEE SYSTEM

How do you feel about the idea of replacing the gas tax with a mileage-based road user fee?



Dynamic Opinions

- Those who switched from a more favorable to expressing a very negative attitude were more likely to
- be between 25 and 44 years of age*
- have less than a HS education or some college**
- be unemployed**
- have self identified as being conservative or extremely conservative**

* $p \leq 0.10$

** $p \leq 0.05$

Dynamic Opinions

- Those who switched from a less favorable position to expressing very positive opinions were more likely to
- be 45 years or older**
- have a bachelor's or graduate degree**
- and in households with income of 75,000 or higher *

* $p \leq 0.10$

** $p \leq 0.05$

OPINION ABOUT PRIVACY AND AUDIT ABILITY

Level of detail on invoice

- Maximum personal privacy
 - Only total charge and total mileage
 - Minimum audit-ability

Monthly Road-User Charge Statement



Davenport, IA

Vehicle Make: TOYOTA
Vehicle Model: COROLLA
Vehicle Year: 2002

Previous Balance: \$12.43
Payments Received: \$12.43
Current Charges: \$16.86
Total Amount: \$16.86

Invoice Date: 4/16/2009
Invoice No: 6410
Invoice Start Date: 3/01/09

Level of detail on invoice

- Maximum audit-ability
 - Charge and mileage by day

Vehicle Make:	HONDA	Previous Balance:	\$28.10	Invoice Date:	4/16/2009
Vehicle Model:	CR-V 2WD	Payments Received:	\$28.10	Invoice No:	6670
Vehicle Year:	2005	Current Charges:	\$32.91	Invoice Start Date:	3/01/09
		Total Amount:	\$32.91		

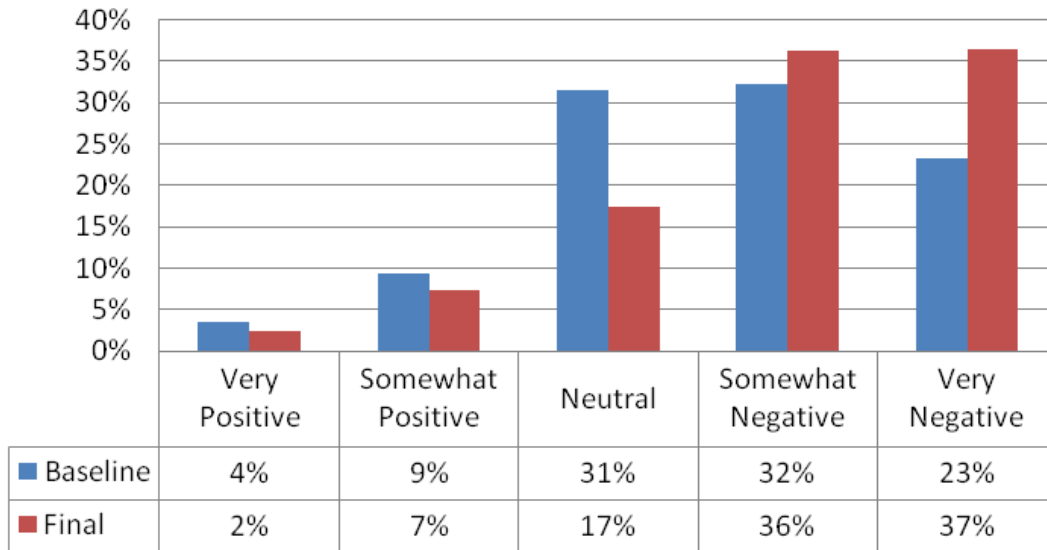
Road-User Charge Summary

	Vehicle Class Per Mile Rate	Total Miles Traveled	Total Amount
Arizona	\$0.0092	646.8	\$5.94
California	\$0.0172	17.2	\$0.30
Idaho	\$0.0122	557	\$6.79
Utah	\$0.0119	425	\$5.06
State Sub-Total (see below)			\$18.09
Federal Sub-Total	\$0.0090	1646	\$14.82
Total Road-User Charges		1646	\$32.91

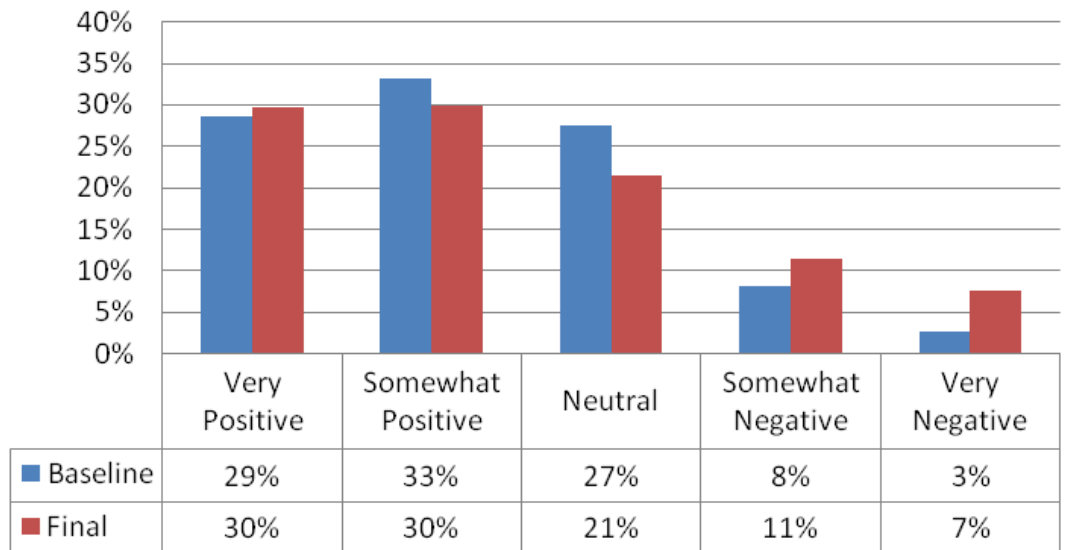
Road-User Charge Detail

Date	State	Miles Traveled	Total Amount
03/02/2009	Arizona	4.3	\$0.04
03/03/2009	Arizona	34.7	\$0.32
03/03/2009	California	17.2	\$0.30
03/04/2009	Arizona	215.7	\$1.98
03/05/2009	Arizona	9.1	\$0.08
03/06/2009	Arizona	15.2	\$0.14
03/09/2009	Arizona	367.8	\$3.38

Maximum Privacy



Maximum Audit ability



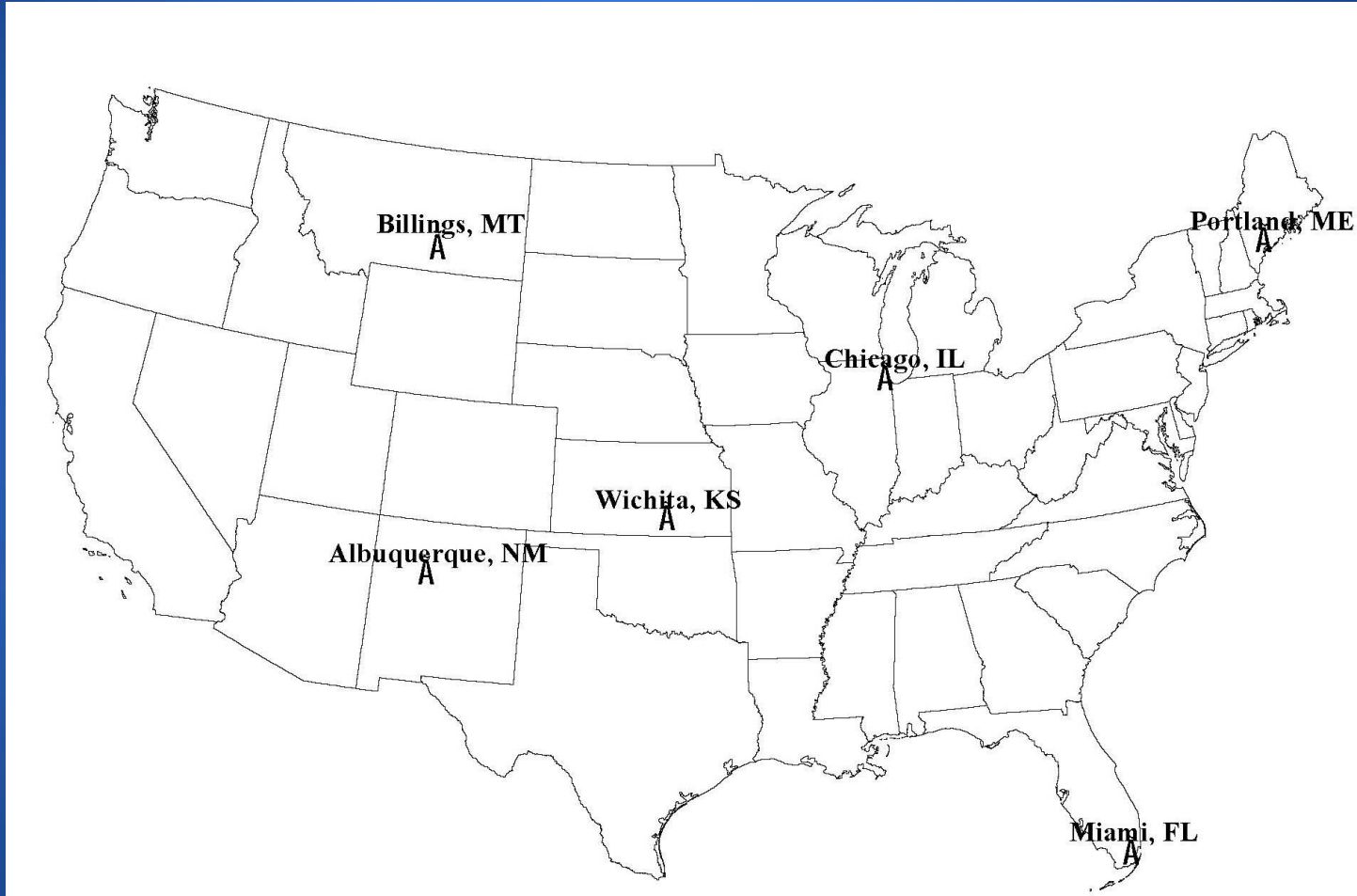
Building an Attitudinal Profile

We hear a lot of talk these days about liberals and conservatives. Below is a scale which is commonly used to determine political views that people might hold or share. Where would you place yourself on this scale?	Study (%)	GSS (%)
Extremely liberal	1.3	3.4
Liberal	13.5	11.9
Slightly liberal	12.4	10.9
Moderate, middle of the road	32.1	36.6
Slightly conservative	14.2	13.2
Conservative	18.1	16.2
Extremely conservative	2.5	3.4
Don't Know	5.8	5.0

Tradeoff Between Privacy for Audit ability

- As the age increases participants were more likely to take an extreme position rather than staying neutral.
- A self-identified liberal or one not stating a political view was more likely to express somewhat positive or negative preference
- Slightly conservatives were more likely to somewhat disagree with the privacy tradeoff
- A conservative was more likely to strongly disagree with the tradeoff

Second Round



- 1,400 Participants

Contacts

- Road User Study
- Jon Kuhl – Principal investigator
kuhl@engineering.uiowa.edu
- Paul Hanley - Co Principal investigator
paul-hanley@uiowa.edu
- www.roaduserstudy.org
- 1-866-363-1975