

**USER ACCEPTANCE OF
COMMERCIAL VEHICLE
OPERATIONS (CVO) SERVICES
DTFH61-94-R-00182**

***Task B
Critical Issues Relating To
Acceptance of CVO Services By
Interstate Truck and Bus Drivers***

***PRELIMINARY FINDINGS &
ANALYSIS***

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May 2, 1995**



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Introduction

Penn + Schoen Associates has been commissioned by the Federal Highway Administration to conduct a study entitled 'User Acceptance of Commercial Vehicle Operations (CVO) Services.' The purpose of this study is to identify and evaluate critical issues relating to user acceptance of CVO services by interstate truck and bus drivers and to identify the CVO information needs of other interested parties.

This study consists of two distinct tasks. Task A, which is based on document reviews and a series of 50 in-depth interviews, fulfilled four primary objectives: 1) identified those issues relating to CVO services that are of potential impact or concern to interstate truck and bus drivers 2) identified the information needs of other interested parties outside the U.S. Department of Transportation 3) identified areas/topics that may deserve higher-level analysis during task B 4) collect other information that will aid in the finalization of the workplan for Task B. The report of Task A findings has already been submitted to the Federal Highway Administration and is entitled "Identification of Concerns and Needs: Final Report of Findings From Document Reviews and In-Depth Industry Executive Interviews."

Task B, the subject of this report, will consist of 1600 interviews with interstate truck and motor coach drivers, distributed as follows:

- 1200 interviews with truck drivers
- 400 interviews with motorcoach drivers

Of the 1200 interviews with truck drivers, 1125 were conducted with truck drivers intercepted at seventeen truck stops across the United States. These survey sites were randomly selected using a stratified systematic sampling methodology based on commercial truck diesel fuel consumption by state for 1992. The additional 75 interviews will be conducted via telephone with truck drivers who had participated in CVO operational tests.

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A total of 400 in-person interviews were conducted with motorcoach drivers at seven sites across the United States. Two hundred interviews were conducted with motorcoach drivers intercepted at line-run bus terminals and two hundred interviews were conducted with motorcoach drivers intercepted at popular tourist attractions.

The following six CVO Services were tested among the respondents:

- *Commercial Fleet Management*
- *Commercial Vehicle Electronic Clearance*
- *Commercial Vehicle Administrative Processes*
- *Automated Roadside **Safety** Inspection*
- *Hazardous Material Incident Response Service*
- *On Board Safety Monitoring*

Each respondent was questioned about three of these technologies (those drivers who haul Hazardous Materials were introduced to four). All respondents received questions on Commercial Vehicle Electronic Clearance and Automated Roadside Safety Inspection, and the remaining technologies were rotated in. Only those drivers who haul Hazardous Materials received those questions on Hazardous Material Incident Response Service.

Each technological service was measured across a range of attributes including:

- √ *useful for me*
- √ *improves safety on the road*
- √ *reduces traffic congestion [at the station -- where applicable]*
- √ *makes my work easier*
- √ *reduces paperwork*
- √ *would give me an advantage over other drivers*
- √ *invasion of my privacy by company*
- √ *invasion of my privacy by government*
- √ *makes it easier to comply with existing regulations*
- √ *makes me more independent*
- √ *relies too much on computers/loss of human judgment*
- √ *easy to use/won't require too much training*
- √ *will work/I would rely on it*

The margin of error for the entire sample of 1600 interviews is +/-2.5% at the 95% confidence level. The margin of error for the sample of 1200 truck drivers is +/-2.8% and for the sample of 400 motorcoach drivers is +/-4.9%.

All interviews were conducted from February 23, 1995 to April 21, 1995.

Note to the reader: Throughout the report, there are many references to "government" without distinction of which level of government is being referred to. This is because respondents did not differentiate between the levels of government and often referred to it as one entity.

Definition of Terms Used in this Report

Charter Drivers: Motorcoach drivers who usually drive charter routes

Commercial Vehicle Drivers: Refers to the entire sample of respondents, including both truck and bus drivers

Company Drivers : Truck drivers who identified themselves as working for a company

Independents/Independent Owner Operators: Those drivers who identified themselves as independent owner/operators

Line Run Drivers: Motorcoach drivers who usually drive line-run routes

Haz Mat Drivers -- Truck drivers who haul loads of hazardous materials, dangerous explosives, or petroleum. Drivers who answered questions on hazardous material incident response service.

Motor Coach Driver/Operator: Any respondent whose primary job is driving a motor coach.. Interchangeable with bus drivers.

Operational Test Drivers: Any driver who participated in a CVO operational test such as Advantage I-75, Help/Crescent, etc.

Truck Drivers: Any respondent whose primary job is driving a truck.

GENERAL REPORT

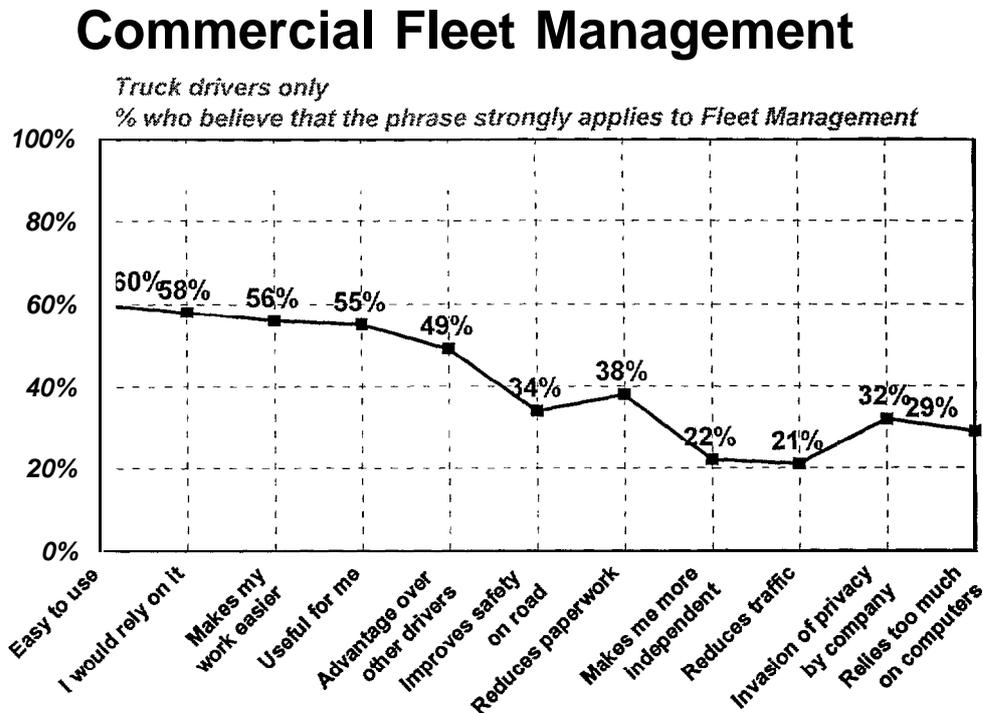
I. COMMERCIAL FLEET MANAGEMENT (CFM)

Overall, commercial vehicle drivers looked favorably towards commercial fleet management and the majority would look favorably to having it installed in their vehicles. Compared to the other five CVO Services tested, Commercial Fleet Management was very well received among respondents. It was seen as very useful, easy to use, making it easier to comply with existing regulations, and very reliable. This is particularly true among motorcoach operators, who found fleet management to be among the most useful of all the services tested. Relative to the other services, most drivers did not think that negative attributes, such as relied too much on computers or invasion of privacy by the company, were particularly applicable.

TRUCK DRIVERS' OPINIONS OF COMMERCIAL FLEET MANAGEMENT **PERCEIVED BENEFITS OF COMMERCIAL FLEET MANAGEMENT**

The majority of truck drivers were able to recognize some of the benefits that commercial fleet management would have for them personally. Across a range of attributes, more than half of the respondents "strongly agreed" that commercial fleet management would be easy to use, reliable, useful for them, and would make their work easier.

Chart I. 1- Attribute Ratings – Truck Drivers Only



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Certain segments of truck drivers were particularly favorable towards commercial fleet management. The following subgroups of drivers rated commercial fleet management highly across the range of attributes:

- ***Company drivers were better able to recognize the strengths of fleet management than independent owner operators***

Long haul drivers rate commercial fleet management higher than short haul drivers, especially with regard to thinking it is useful

- ***Drivers who are part of a large fleet are more favorable towards CFM than small or medium fleet drivers***
- ***Drivers with some new technologies already installed in their trucks were more favorable towards this service than those drivers without new technologies in their vehicles***

- **Drivers who are relatively new to the profession (<5 years) rate commercial fleet management higher across the positive attributes than those drivers who have been driving for more than five years**

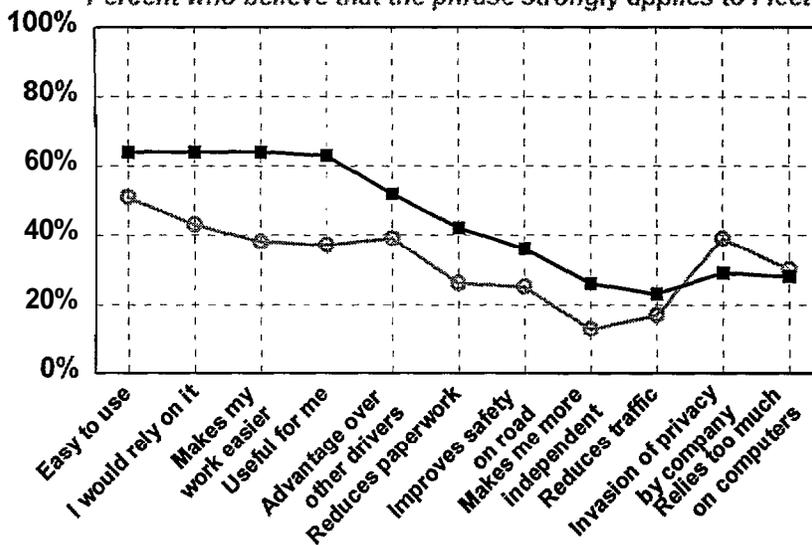
Overall, company drivers are more likely than independent owner operators to recognize the positive aspects of commercial fleet management. More than three-fifths of company drivers believe that fleet management would be easy to use (64%), reliable (64%), and would make their work easier (64%). Also, 63% of company drivers strongly agree that this service would be useful for them, compared to the 37% of independents who think so.

Chart 1.2--Attribute Ratings -- Company vs. Independent

Commercial Fleet Management

Truck Drivers only --

Percent who believe that the phrase strongly applies to Fleet Management

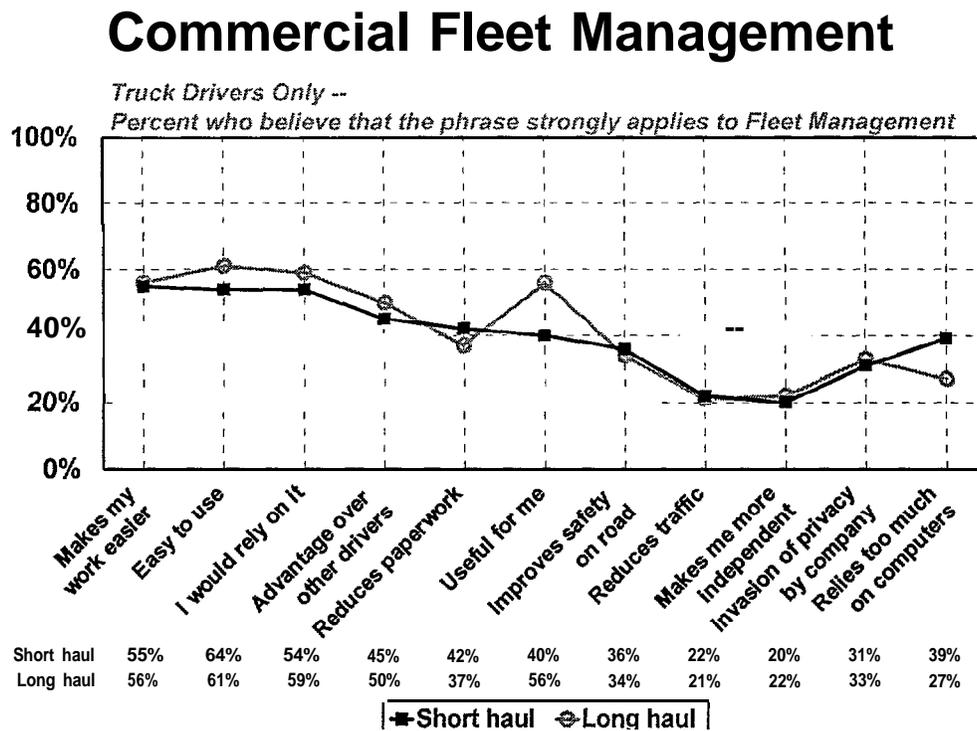


Company drivers	64%	64%	64%	63%	62%	42%	36%	26%	23%	29%	26%
independents	51%	43%	36%	37%	39%	26%	25%	13%	17%	39%	30%

■ Company drivers ○ Independents

Long-haul drivers (56%) are much more likely than short haul drivers (40%) to find commercial fleet management useful for them. In addition, long haul drivers are somewhat more likely than short haul drivers to think that commercial fleet management is easy to use, gives them an advantage over other drivers, and is reliable.

Chart 1.3 --Attribute Ratings -- Short haul vs. Long haul



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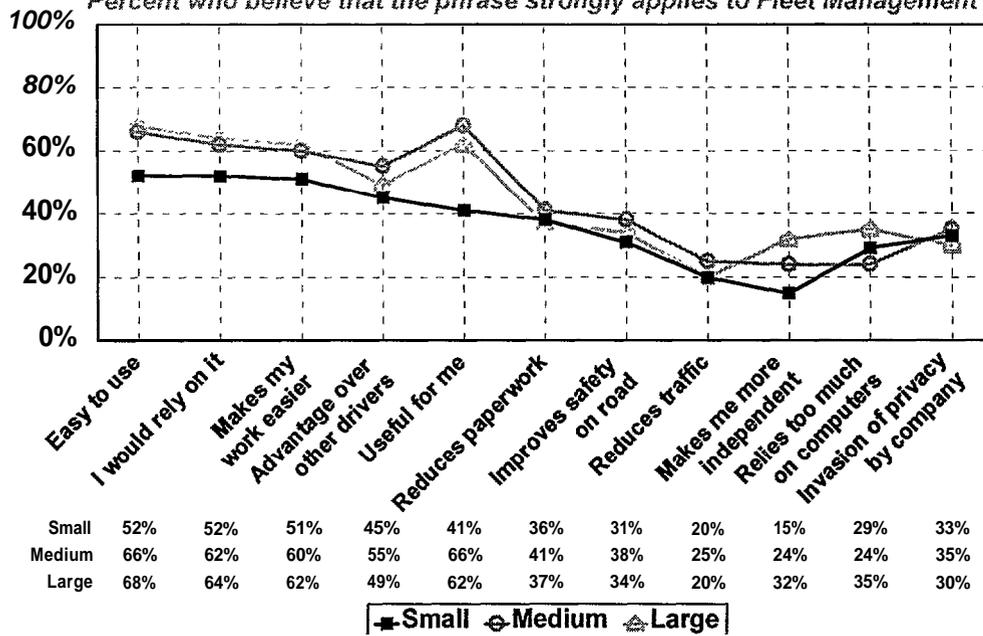
Drivers have differing opinions of commercial fleet management depending on the size of their fleet. Drivers who consider themselves part of a large fleet or medium fleet are more favorable towards commercial fleet management across the range of attributes than small fleet drivers. This variation between subgroups is especially significant on “useful for me” -- small

fleet drivers (41%) are much less likely than large (62%) and medium fleet (68%) drivers to think that CFM is useful for them.

Chart 1.4 -- Attribute Ratings -- Small fleet vs. Medium fleet vs. Large fleet

Commercial Fleet Management

Truck Drivers Only -- By size of fleet
 Percent who believe that the phrase strongly applies to Fleet Management



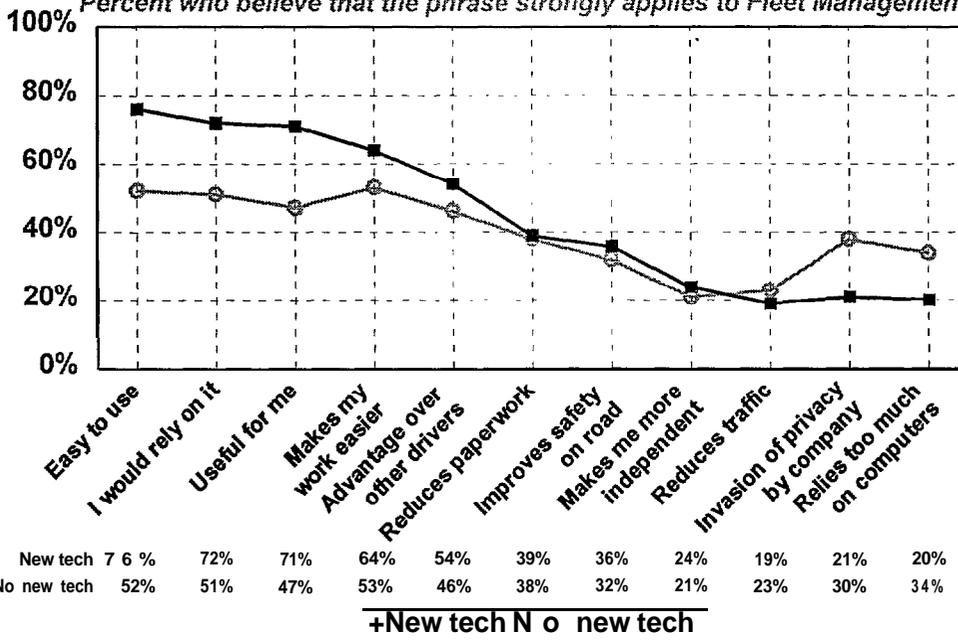
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Across the range of attributes, truck drivers who have already had new technologies installed in their trucks are more favorable towards commercial fleet management than those drivers who do not have new technologies in their vehicles. Drivers already familiar with technologies in their vehicles are more likely to think that fleet management would be easy to use, would work (is reliable), would be useful for them, and would make their work easier.

Chart I. 5 -- Attribute Ratings -- Drivers with technology vs. Drivers without technology

Commercial Fleet Management

Truck Drivers Only --By whether trucks are equipped with new technologies
 Percent who believe that the phrase strongly applies to Fleet Management

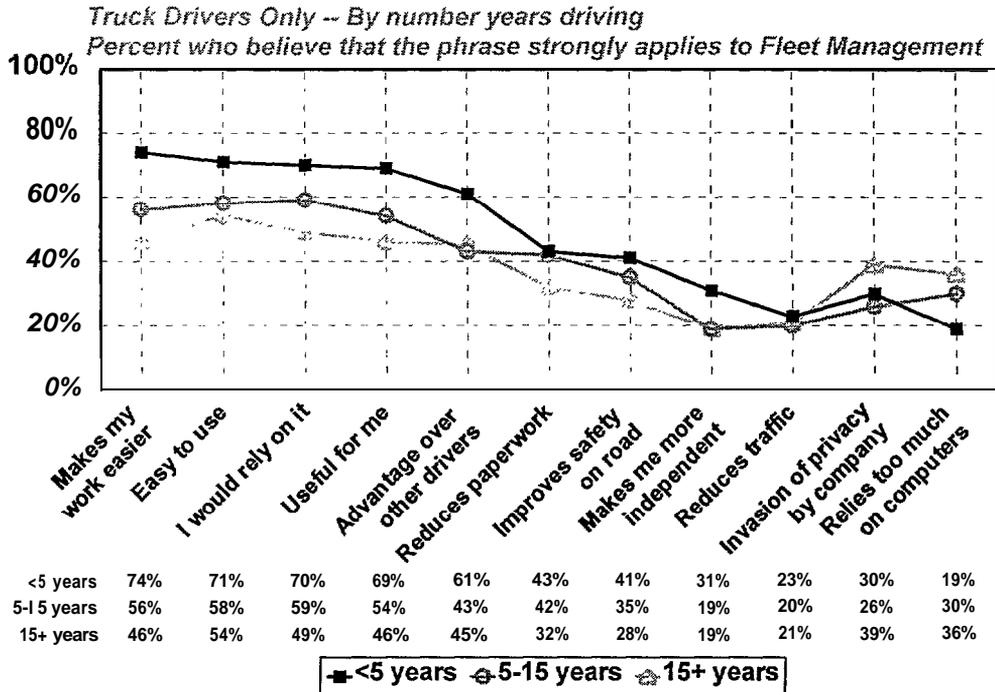


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Truck drivers' perceptions of commercial fleet management also varied by the number of years the respondent has been a truck driver. Those drivers who have been driving for a shorter amount of time (less than 5 years) seem better able to recognize the positive aspects of fleet management than drivers who have been driving for longer periods of time. In fact, three out of four drivers (74%) who have been driving for less than five years strongly agree that commercial fleet management would make their work easier compared to the 46% of those who have been driving for more than fifteen years. This segment of respondents also strongly believes this service would be easy to use, reliable, useful for them, and would provide them with an advantage over other drivers.

Chart 1.6 --Attribute Ratings -- By number of years driving

Commercial Fleet Management



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PERCEIVED WEAKNESSES OF COMMERCIAL FLEET MANAGEMENT

Truck drivers overall are aware of certain weaknesses of commercial fleet management. As Chart 1.1 (see above) illustrates, truck drivers perceive the following weaknesses of this service:

- **One in three respondents (32%) think that commercial fleet management is an invasion of their privacy by their company**
- **Twenty nine percent of truck drivers think that commercial fleet management relies too heavily on computers**
- **Commercial fleet management is not rated particularly high for its ability to reduce traffic (21%) or to increase drivers' independence (22%)**

The following segments of truck drivers are more likely to recognize the potential weaknesses of commercial fleet management.

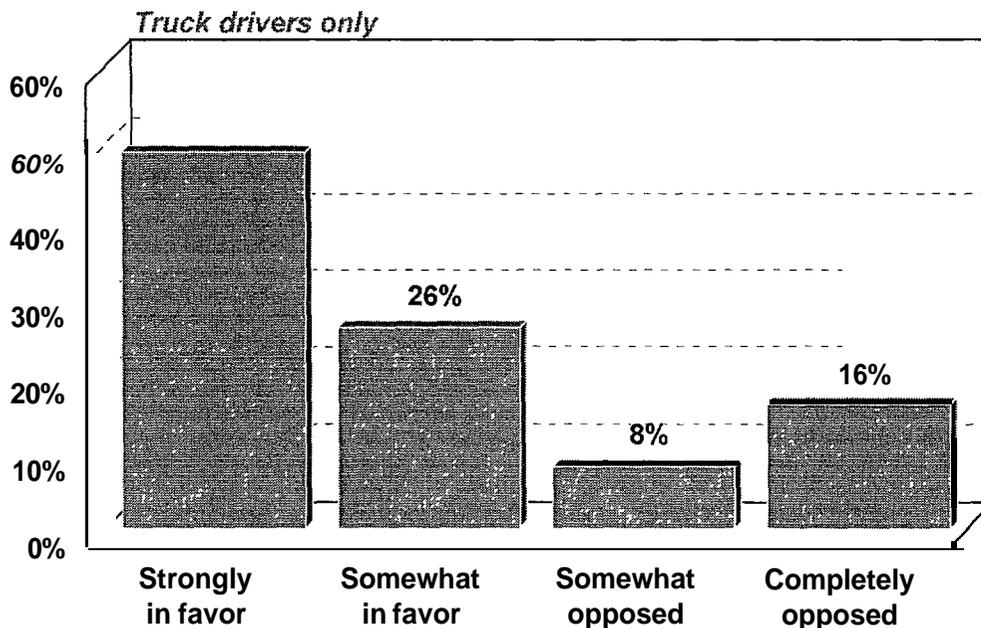
- ***As indicated in Chart 1.2, independents rate commercial fleet significantly lower than company drivers across the range of positive attributes. Also independent owner operators (39%) are more likely than company drivers (29%) to think that CFM is an invasion of drivers' privacy by their company***
- ***Short haul drivers (39%) are more likely than long haul drivers (27%) to think that commercial fleet management relies too heavily on computers (see Chart 1.3 above)***
- ***Drivers without technologies in their vehicles (34%) are more likely than drivers with technologies (20%) to think that commercial fleet management relies too heavily on computers. These drivers without technology (38%) are also more likely than drivers with technology (21%) to think that this service would be an invasion of privacy by the company. In addition, drivers with no technology rated CFM lower across the range of positive attributes. (see Chart 1.5 above)***
- ***Drivers who have been driving for more than fifteen years are more likely to recognize the weaknesses of commercial fleet management. Drivers for fifteen are more years (36%) are a/most twice as likely as newer drivers (19%) to think that commercial fleet management is too reliant on computers. In addition, drivers for more than fifteen years are more likely to think that CFM is an invasion of drivers' privacy by the company. (see Chart 1.6 above)***

ATTITUDES TOWARDS COMMERCIAL FLEET MANAGEMENT

Three-quarters (75%) of truck drivers look favorably towards Commercial Fleet Management and would be in favor of having it installed in their vehicles. Approximately half of truck drivers (49%) were “strongly in favor” of installation, while an additional quarter of truck drivers were “somewhat in favor.” However, 24% of respondents were opposed to installation.

Chart 1.7--Truck drivers only – Favorability towards installation

Considering All That You Know About Commercial Fleet Management, Would You Be In Favor Of Having It Installed In Your Truck?



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Favorability towards using commercial fleet management varied among subgroups of truck drivers. Company drivers (60%), who are better able to recognize the strengths of commercial fleet management across the positive attributes, are more than twice as likely as independent owner operators (25%) to strongly favor installation of fleet management in their vehicles. Independents

(42%), on the other hand, are more than twice as likely as company drivers (19%) to oppose installation of this service.

Table 1.1-- Favorability and Opposition To Installation of Commercial Fleet Management

Considering all that you know about Commercial Fleet Management, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	49	75	16	24
Company	60	88	14	19
Independent	25	58	25	42

Small fleet drivers (24%), who are more likely to recognize the weaknesses of commercial fleet management, are more than twice as likely as large (9%) and medium (12%) fleet drivers to “completely oppose” installation of commercial fleet management. Large fleet drivers (34%), on the other hand, are more likely to strongly favor installation of commercial fleet management than small fleet drivers (34%).

Table 1.2 -- Favorability and Opposition To Installation of Commercial Fleet Management

Considering all that you know about Commercial Fleet Management, would you be in favor of having it installed in your truck?

Industry Segment	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Trucks overall	49	75	16	24
Small fleet	34	67	24	33
Medium fleet	56	81	12	19
Large fleet	66	83	9	17

Overall, drivers with technology already installed in their vehicles represent the segment of truck drivers most favorable towards installation of commercial fleet management in their vehicles -- 72% strongly favor installation while 87% are strongly + somewhat in favor. Those drivers currently without technologies in their vehicles are less likely to strongly favor installation (38%).

Table I.3 -- Favorability and Opposition To Installation of Commercial Fleet Management

Considering all that you know about Commercial Fleet Management, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck	49	75	16	24
Technology in truck	72	87	8	13
No technology in truck	38	70	20	30

Drivers who have been driving for less than five years are better able to recognize the benefits of commercial fleet management and are more inclined to favor installation. Of those drivers who have been driving for less than five years, 68% strong favor installation compared to the 36% of drivers who have been driving for more than fifteen years. Conversely, those drivers who have been driving for more than fifteen years (23%) are almost four times more likely than those drivers who have been driving for less than five year (6%) to completely oppose installation.

Table I.4 -- Favorability and Opposition To Installation of Commercial Fleet Management

Considering all that you know about Commercial Fleet Management, would you be in favor of having it installed in your truck?

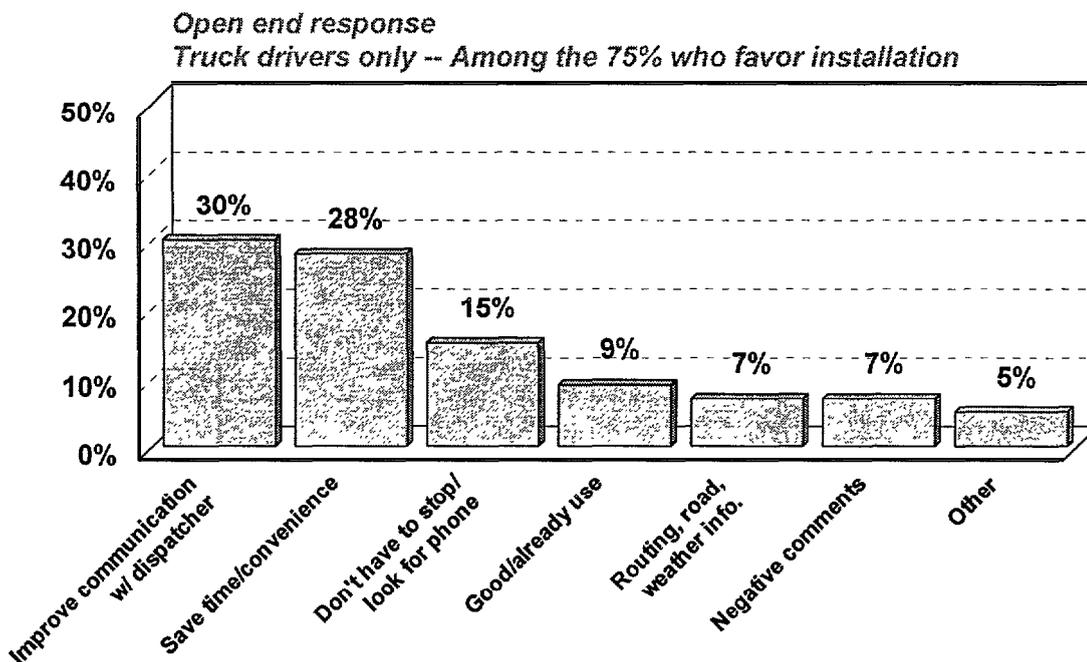
Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck	49	75	16	24
<5 years driving	68	87	6	13
5-15 years driving	51	77	15	22
15+ years driving	36	67	23	33

REASONS DRIVERS ARE IN FAVOR OF USING FLEET MANAGEMENT

When drivers were asked in their own words why they favor installation of Commercial Fleet Management, respondents recognized that the CVO Service would be beneficial to them by improving communications with the dispatcher (30%) saving time (28%) and by eliminating the need to pull over and use the phone (15%). Nine percent of respondents favored the technological service because they already used it. Seven percent of respondents favored the technological service because of routing, road, and weather information. Seven percent of respondents gave negative comments. Five percent of respondents gave other reasons.

Chart I. 8 -- Open end -- Favorability towards installation

Why Do You Say That You Would Favor Having Commercial Fleet Management Installed In Your Vehicle?



In the drivers' own words, they would be in favor of installation of Commercial Fleet Management for some of the following reasons:

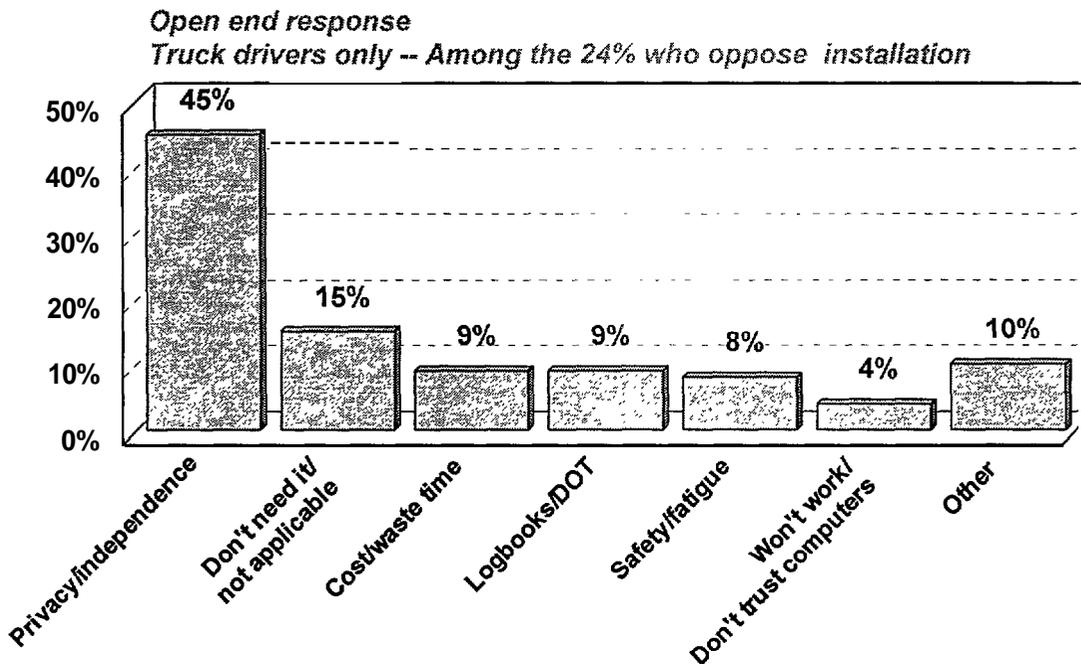
- *"Does cut down on phone time for routing; can punch in destination; cuts down on pulling in and having to stop. Gives drivers more time to sleep and drive"*
- *"Helps save time and convenience; help with delivery changes. A good communication device. **Have** something solid as proof to what was **said** about a certain situation"*
- *"My biggest fear is breaking down **and** not being able to communicate with anyone -- this would help. I used one previous/y and it was great. You can get directions and routing"*
- *"I already have a system similar to it called Qualcomm and I like it"*

REASONS DRIVERS ARE OPPOSED TO FLEET MANAGEMENT

The 24% of truck drivers who are opposed to having commercial fleet management installed in their vehicle were asked to explain why. As the following chart indicates, almost half of these truck drivers (45%) were opposed to this service because they thought it would be an invasion of their privacy or would decrease their independence.

Chart I. 9 -- Open end -- Opposition to installation

Why Do You Say That You Are Opposed To Having Commercial Fleet Management Installed In Your Vehicle?



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Some of the drivers responded that they were opposed to commercial fleet management for the following reasons:

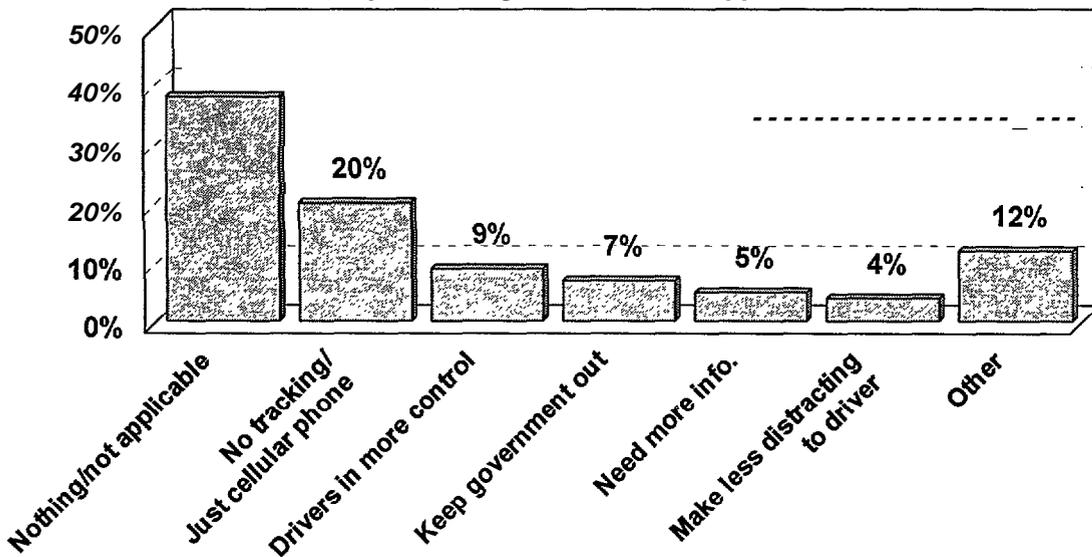
- *"A driver is the only one who knows how capable he is to drive. The computer shouldn't tell the driver what to do since the driver is there and is the only one who knows the conditions. A man 2000 miles away doesn't know what is going on. Anything that distracts the driver is unsafe. It is not good to have the driver pull over in order to read the computer screen and then send a message back."*
- *"Costs would outweigh the benefits. I already have weather channels. I need to stop occasionally."*
- *"I don't think dispatchers need to know where I am at all times."*
- *"They are a hazard -- divert attention from the road. "*
- *"Satellites can trace where you are and I am not always where my log book says I am, I would be in favor of cellular phones for emergencies."*

These 24% of drivers who are opposed to installation of automated roadside safety inspection service were then asked if anything about the service could be changed to make them more favorable towards it. More than one in three respondents (38%) said that nothing could be changed to increase favorability. One in five respondents (20%) would be more favorable to the service if it did not consist of a tracking device and instead was more like a cellular phone. In addition drivers wanted to be sure drivers would be in control (9%) and the government would not interfere (7%).

Chart I. 10 -- Open end

What About Commercial Fleet Management Could Be Changed To Make You More Favorable Towards This Technology?

Open end response
Truck drivers only -- Among the 24% who oppose installation



Drivers' offered the following verbatim responses as to what about the technology could be changed to make drivers more favorable:

- *"Don't like the idea that dispatcher can call you anytime (even when you are on break) -- too much computerized"*
- *"if the government did not have access to the contents"*
- *"Only problem is that the company knows where you are at all times"*

ATTITUDES AND OPINIONS OF MOTORCOACH OPERATORS

PERCEIVED BENEFITS OF COMMERCIAL FLEET MANAGEMENT

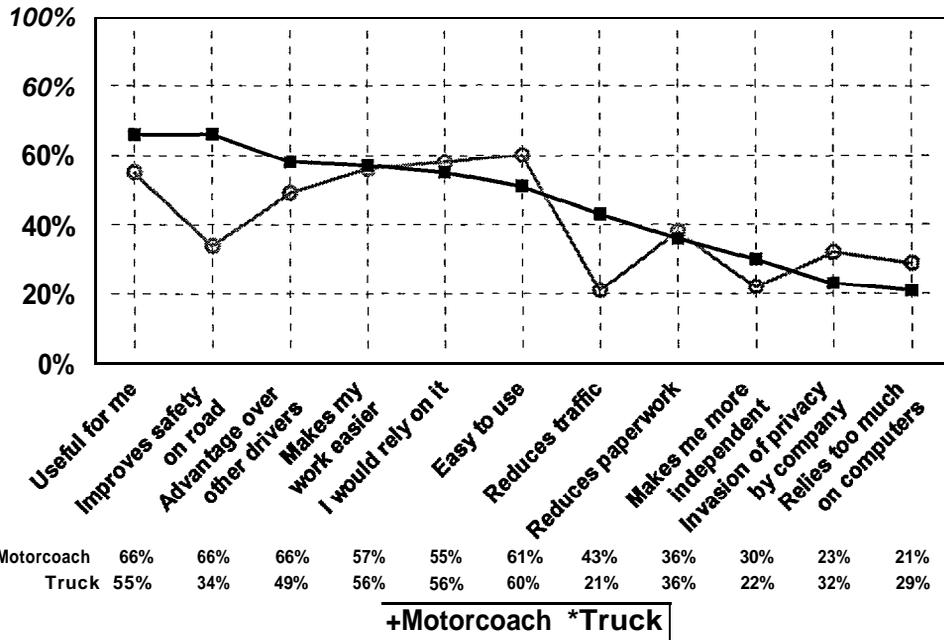
Motorcoach drivers perceive commercial fleet management somewhat differently than truck drivers. Motorcoach operators are much more likely than truck drivers to think that commercial fleet management improves safety on the road, reduces traffic, is useful for the driver, and gives them an advantage over other drivers.

As the following chart indicates, two-thirds (66%) of motorcoach drivers felt that commercial fleet management would be useful for them and would improve safety on the road. In addition, more than half of the respondents thought that this service would give them an advantage over other drivers (58%), make their work easier (57%), it would work and be reliable (55%), and would be easy to use (51%).

Chart 1.11 -- Attribute Ratings -- Truck drivers vs. Motorcoach drivers

Commercial Fleet Management

% who believe that the phrase strongly applies to Fleet Management



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PERCEIVED WEAKNESSES OF FLEET MANAGEMENT

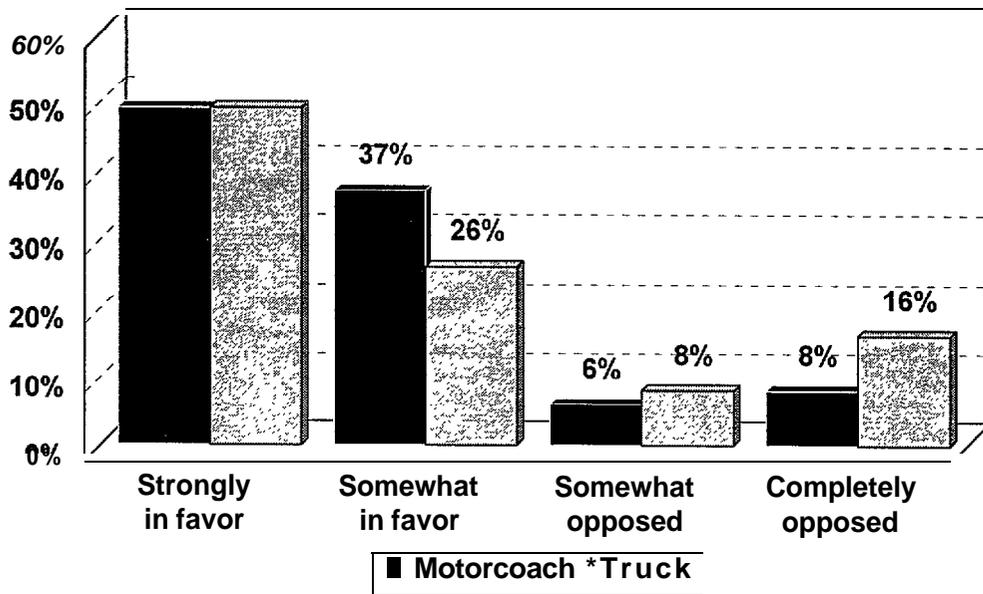
Motorcoach operators are less likely than truck drivers to perceive weaknesses in commercial fleet management. However, 23% of respondents perceive commercial fleet management as an invasion of their privacy by the company and 21% see it as too reliant on computers (21 %) In addition, this technological service is rated relatively low for its ability to increase the independence of the drivers (30%).

ATTITUDES ABOUT COMMERCIAL FLEET MANAGEMENT

More than eight in ten (87%) motorcoach operators favored installation of commercial fleet management in their vehicle compared to the 75% of truck drivers who favored installation. In addition, only 14% of motorcoach drivers were opposed to installation compared to the 24% of truck drivers who were opposed.

Chart 1.12 -- Motorcoach drivers only -- Favorability towards installation

Considering All That You Know About Commercial Fleet Management, Would You Be In Favor Of Having It Installed In Your [Truck/Bus]?

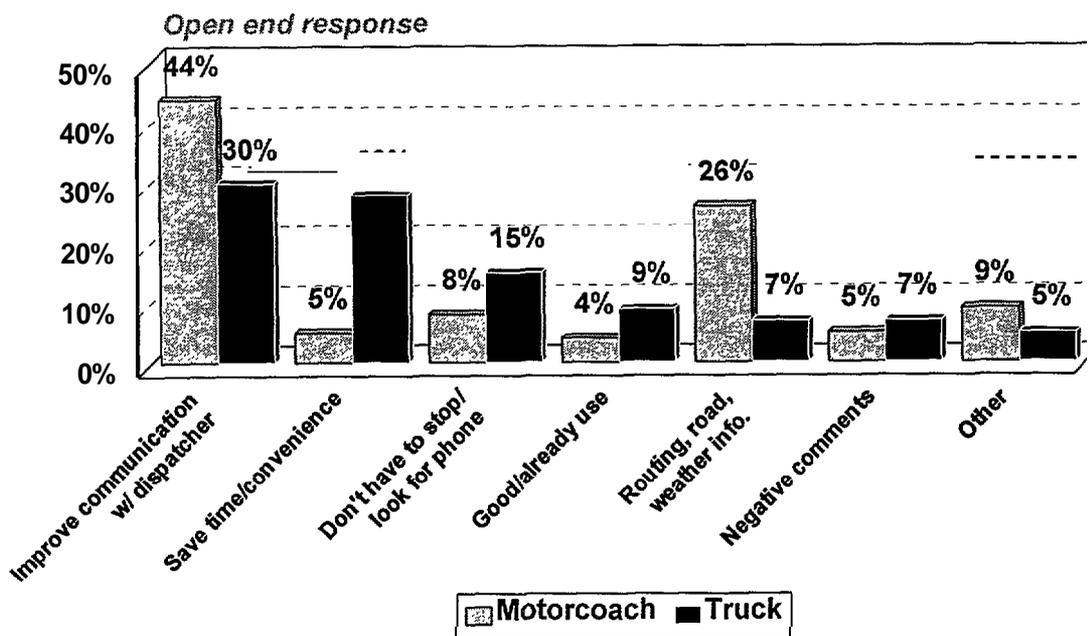


REASONS MOTORCOACH OPERATORS ARE OPPOSED TO CFM

The 86% of drivers who were in favor of having commercial fleet management installed in their vehicle were asked to explain why. The largest percentage of respondents, 44%, said that they were in favor of the improved communications with their dispatcher. One-quarter (26%) of motorcoach drivers were in favor of the routing, road, and weather information.

Chart I. 13 -- Open end -- Favorability towards installation of CFM

Why Do You Say That You Would Favor Having Commercial Fleet Management Installed In Your Vehicle?



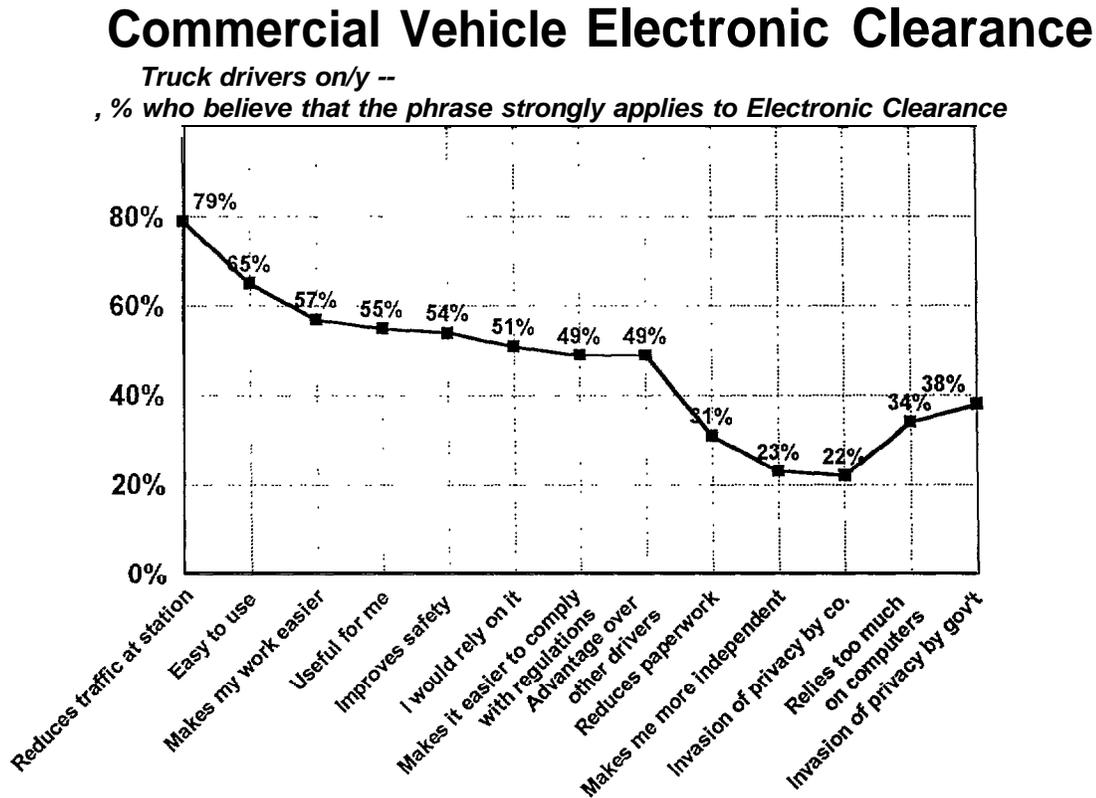
II. COMMERCIAL VEHICLE ELECTRONIC CLEARANCE (CVEC)

Both motorcoach and truck drivers were able to recognize the benefits of commercial vehicle electronic clearance, especially its ability to reduce traffic at stations. However, there a/so seemed to be a fear among respondents that commercial vehicle electronic clearance would lead to an invasion of their privacy by the government and that it relied too heavily on computers.

TRUCK DRIVERS' OPINIONS OF ELECTRONIC CLEARANCE ***PERCEIVED BENEFITS OF ELECTRONIC CLEARANCE***

Truck drivers were very favorable towards commercial vehicle electronic clearance and especially realized its potential for reducing traffic at weigh stations. Approximately 4 out of 5 respondents (79%) "strongly agreed" that CVEC would reduce traffic. In addition, more than half the drivers were able to recognize the direct benefits electronic clearance could have for them and their daily work routine: 57% agreed that it would make their work easier, 55% said that it would be useful for them, and 54% said it would improve safety on the road.

Chart 11.1 -- Attribute Ratings -- Truck drivers only



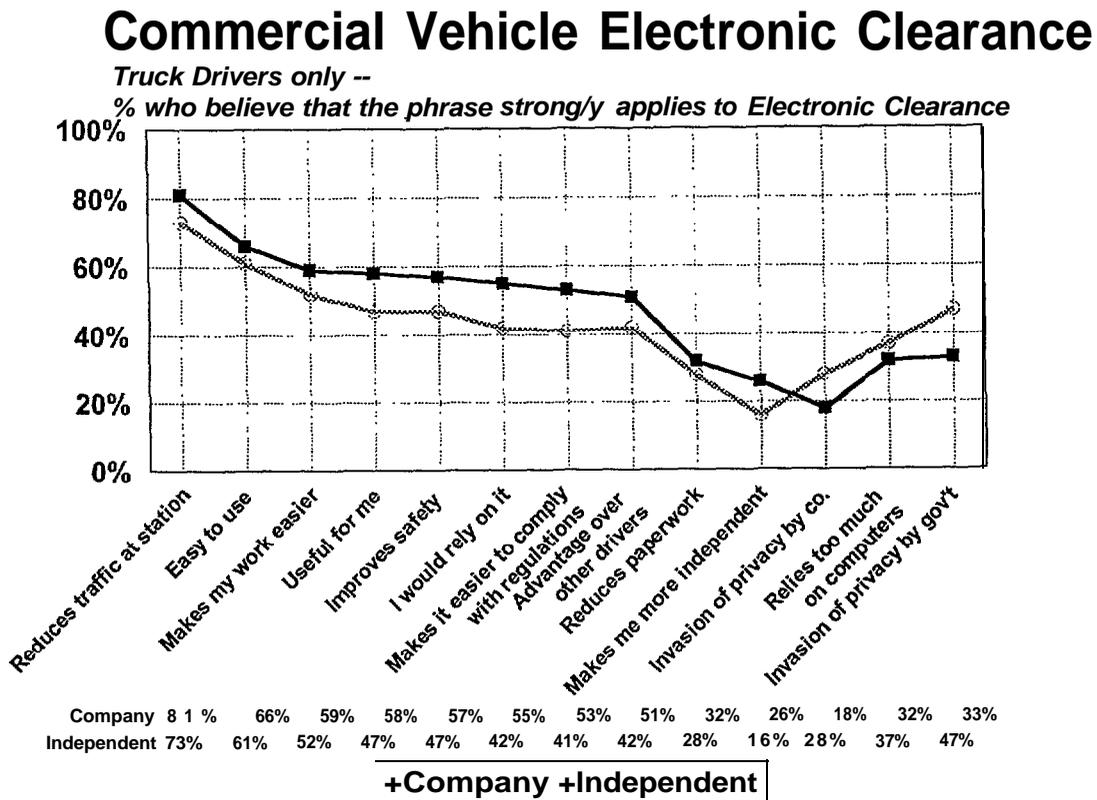
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Certain segments of truck drivers were more likely than others to recognize the strengths of commercial vehicle electronic clearance system. Specifically, the following subgroups of respondents are more likely to recognize the strengths of CVEC:

- **Company drivers**
- **Haz Mat drivers**
- **Drivers who are part of a large fleet**
- **Drivers who are relative/y new to the profession (<5 years)**

Commercial vehicle electronic clearance was perceived more favorably by company drivers than independent owner operators across the range of attributes. Company drivers were more likely to think that commercial vehicle electronic clearance would improve their work life (useful, reliable, easy) and conditions on the road or at the station (traffic, safety).

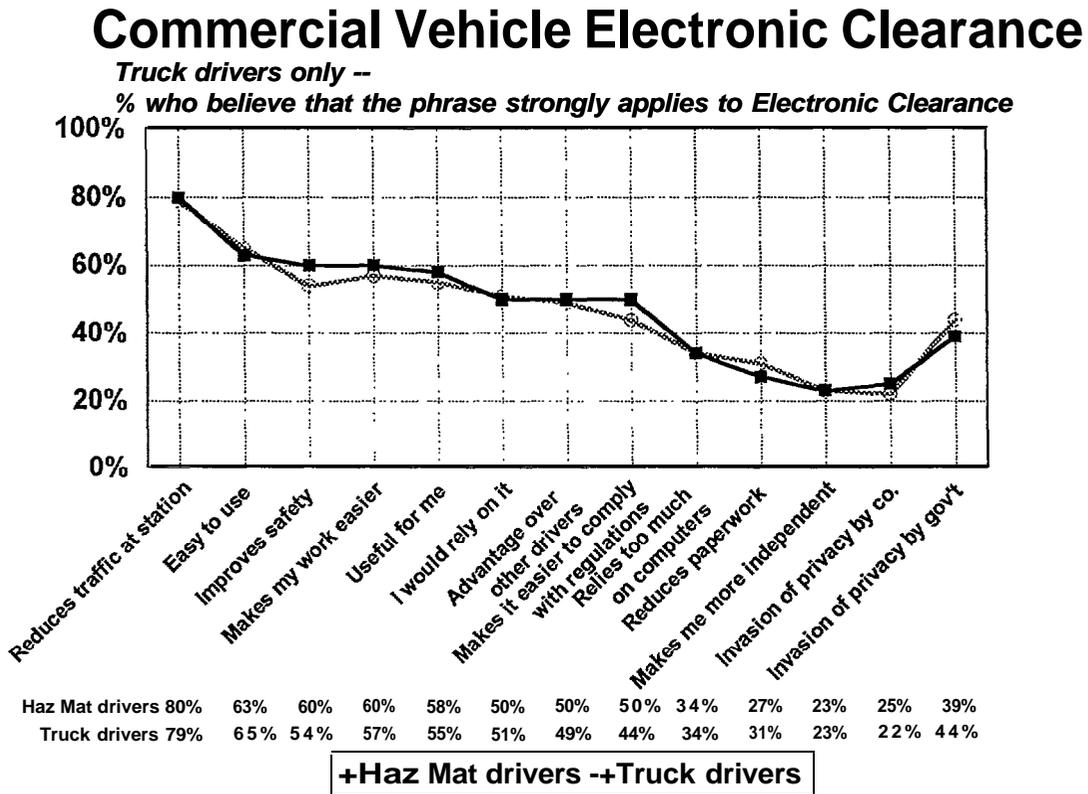
Chart II. 2--Attribute Ratings -- Company drivers vs. Independent Owner Operators



Drivers who haul hazardous material commodities perceive commercial vehicle electronic clearance somewhat differently than truck drivers overall. Hazardous material drivers were somewhat more likely to recognize the following potential benefits of commercial vehicle electronic clearance:

- Improves safety on the road
- Makes it easier to comply with government regulations

Chart II. 3 -Attribute Ratings – Haz Mat Drivers



Although full truckload and less than truckload drivers are both equally likely to think that commercial vehicle electronic clearance would reduce traffic at the station and would be easy to use, their attitudes and perceptions differed on the usefulness of the service.

As the following chart indicates, full truckload drivers are more likely than LTL drivers to think that the following attributes "strongly apply" to commercial vehicle electronic clearance.

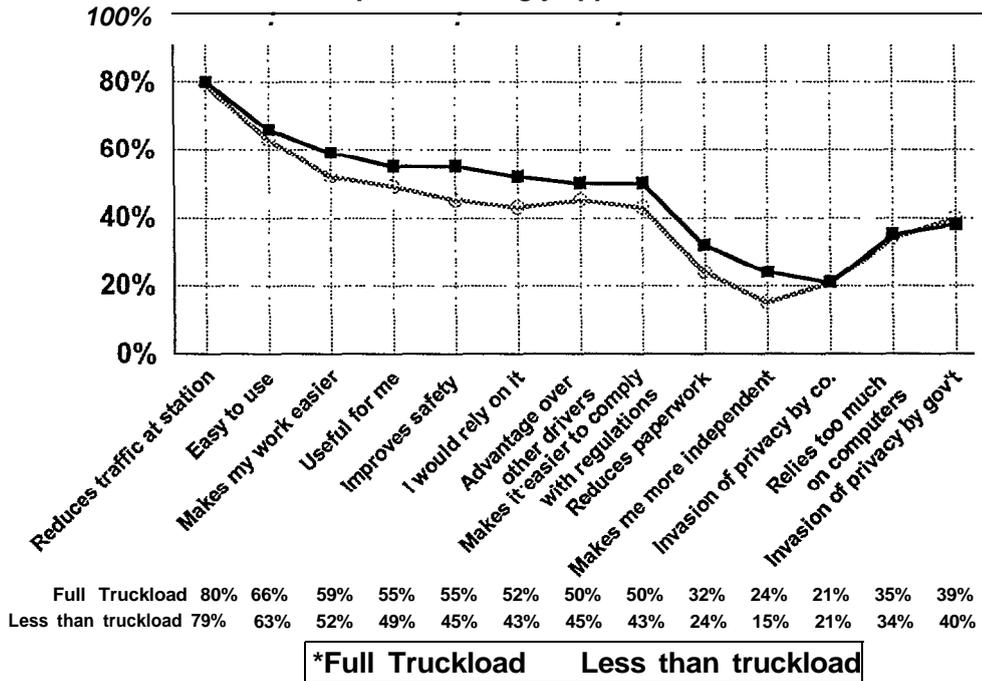
- *Improves safety (Full truckload 55% vs. LTL 45%)*
- *Makes drivers' work easier (59% vs. 52%)*
- *Useful for me (55% vs. 49%)*
- *Makes it easier to comply with government regulations (50% vs. 43%)*
- *Will work/Drivers can rely on it (52% vs. 43%)*
- *Makes drivers more independent (24% vs. 75%)*

Chart II. 4 -Attribute Ratings -- Full truckload vs. Less than truckload

Commercial Vehicle Electronic Clearance

Truck drivers only --

% who believe that the phrase strongly applies to Electronic Clearance



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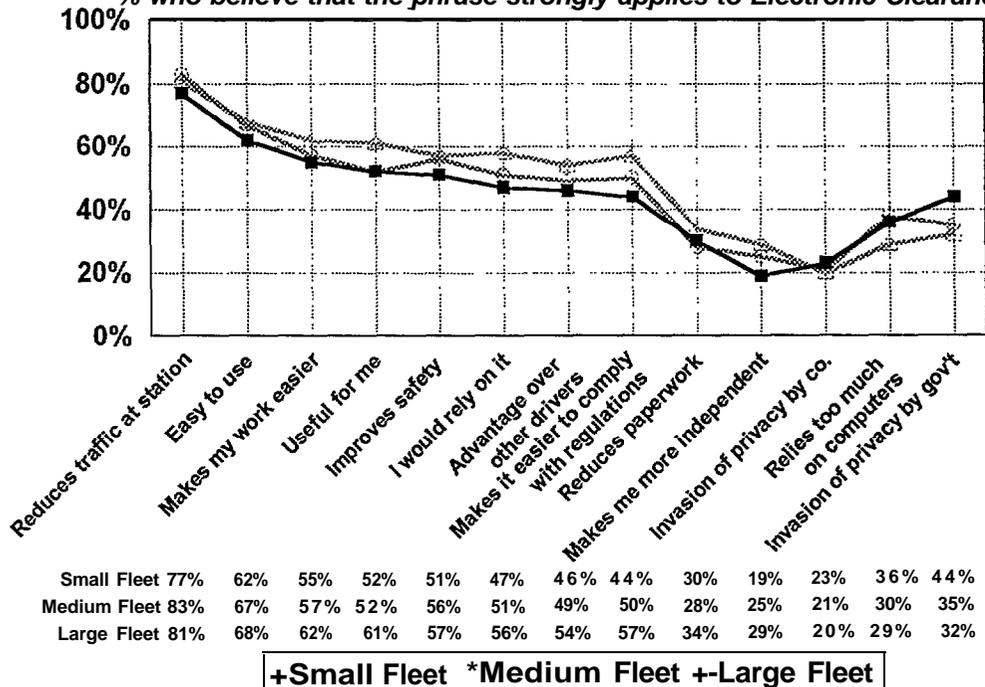
Across the range of attributes, large fleet drivers are better able to recognize the strengths of commercial vehicle electronic clearance than medium and small fleet drivers. Large fleet drivers are substantially more likely than small and medium fleet drivers to believe that CVEC is useful for the driver, will work and can be relied on, makes it easier to comply with existing regulations, and makes drivers more independent.

Chart II. 5 --Attribute Ratings – Small fleet vs. Medium fleet vs. Large fleet

Commercial Vehicle Electronic Clearance

Truck drivers only --

% who believe that the phrase strongly applies to Electronic Clearance



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The number of years the respondent has been a truck driver impacts driver acceptance of commercial vehicle electronic clearance. Drivers who have been driving for less than five years are somewhat more receptive to electronic clearance than those drivers who have been driving for longer periods of time. Drivers who have been driving for less than five years are more likely to think that the following attributes “strongly apply” to CVEC:

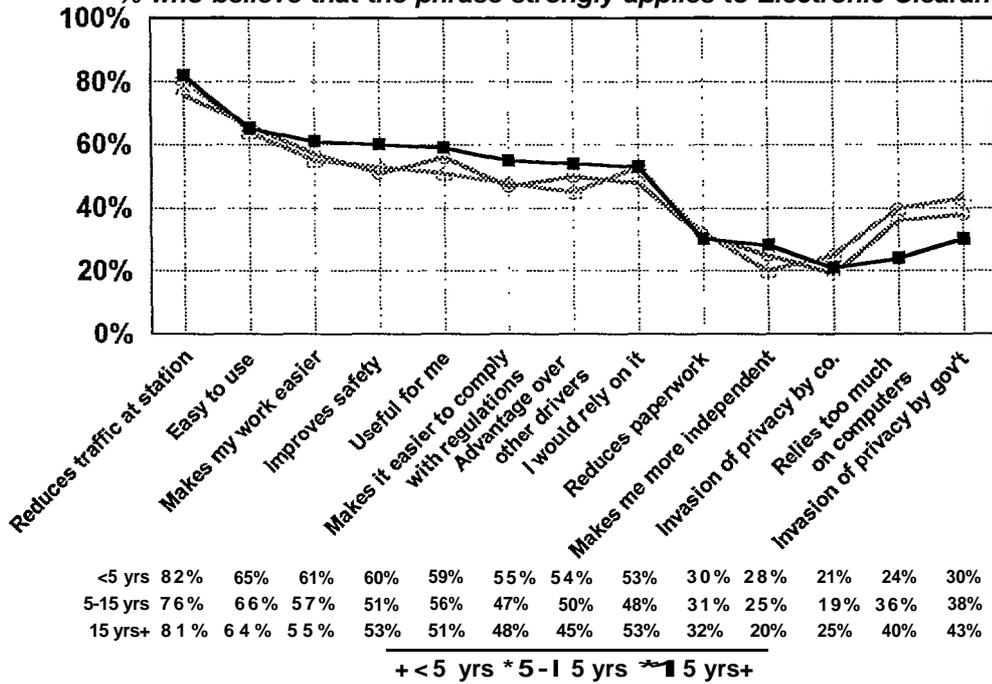
- *Useful for the driver*
- *improves safety on the road*
- **Makes my work easier**
- *Gives them an advantage over other drivers*
- *Makes it easier to comply with existing regulations*

Chart il. 6 – Attribute Ratings – By number of years driving

Commercial Vehicle Electronic Clearance

Truck Drivers only -- By number of years driving

% who believe that the phrase strongly applies to Electronic Clearance



Penn + Schoen Associates, Inc. T99-11

PERCEIVED WEAKNESSES OF CVEC

Respondents perceived the following weaknesses for commercial vehicle electronic clearance system. As indicated in charts II.1 to II.6 above, respondents gave CVEC weak ratings in the following areas:

- **Thirty eight percent of respondents thought that CVEC would be an invasion of privacy by the government**
- **More than one in three respondents thought that commercial vehicle electronic clearance relied too heavily on computers (34%)**

- **Twenty two percent of respondents thought that CVEC was an invasion of their privacy by companies**
- **Less than one in four respondents (23%) thought that this technological service would increase driver's independence**

Different segments of truck drivers are more likely to recognize the relative weaknesses of commercial vehicle electronic clearance. The following segments of truck drivers are the most likely to perceive the relative weaknesses of commercial vehicle electronic clearance system:

Independent owner operators are much more likely than company drivers to associate certain weaknesses with commercial vehicle electronic clearance (See chart 11.2 above)

- *Independent owner operators (28%) **are** much more likely than company drivers (78%) to think commercial vehicle electronic clearance system is **an** invasion of privacy by the companies*
- *Almost half (47%) of independent owner operators think **that** commercial vehicle electronic clearance is **an** invasion of **privacy** by the government compared to only a third (33%) of company drivers*
- *Independents (37%) are somewhat more likely than company drivers to think that CVEC relies too **heavily** on computers*

Drivers who consider themselves part of a small fleet are less favorable towards CVEC than medium or large fleet drivers.

- *Small fleet drivers (44%) are more likely than medium (35%) or large (32%) fleet drivers to think that commercial vehicle electronic clearance is an invasion of their privacy by the government*
- *Thirty six percent of small fleet drivers **are** likely to think **that** CVEC relies too heavily on computers compared to 29% of large fleet drivers*

Drivers who have been driving for more than fifteen years are more likely than those who are relatively new to the profession to distrust commercial vehicle electronic clearance

- *Drivers who **have** been driving for more than fifteen years (43%) are significantly more likely to strongly agree **that** CVEC is **an** invasion of privacy by the government than drivers who have been driving for less than five **years***
- *Two-fifths (40%) of drivers who have been driving for more than fifteen **years** think that CVEC relies too much on computers compared to the 24% of drivers who **have** been **for** less than five **years***

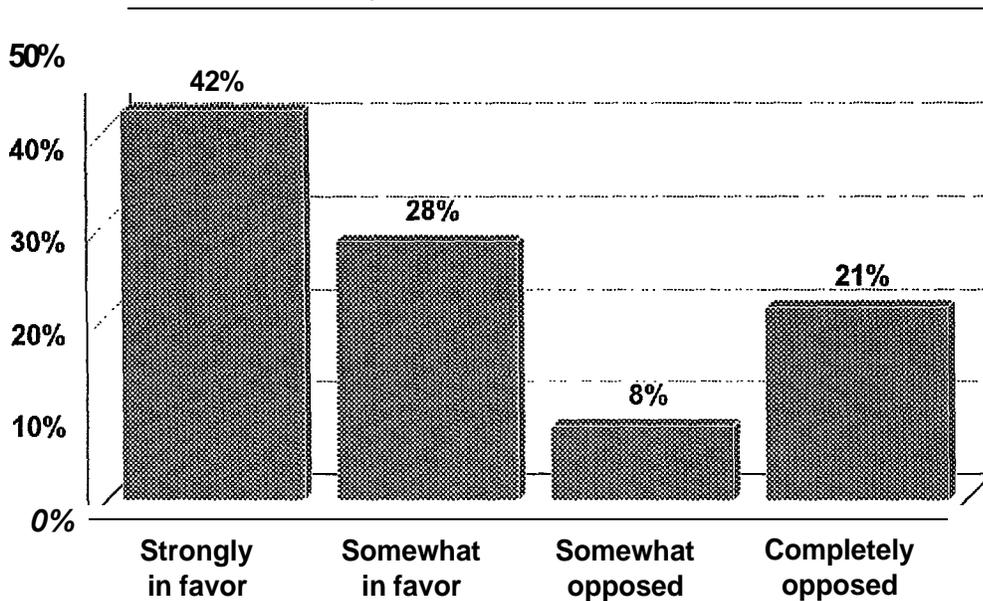
ATTITUDES TOWARDS CVEC

Seven out of every ten truck drivers are in favor of having commercial vehicle electronic clearance system installed in their trucks, and of that, 42% claim to be strongly in favor. However, more than one in five respondents (21%) are completely opposed to installation, and a total of 29% of truck drivers are completely or somewhat opposed.

Chart 11.7 - Truck drivers only -- Favorability towards installation

Considering All That You Know About The Electronic Clearance System, Would You Be In Favor Of Having It Installed In Your [Bus/Truck]

Truck drivers only



Penn + Schoen Associates, Inc. T112

Company drivers have a greater desire to use commercial vehicle electronic clearance than independent operators. As the following chart indicates, company drivers (48%) are much more likely than independents (29%) to strongly be in favor of having CVEC installed in their vehicle. Conversely,

independents (29%) are more than one and a half times as likely as company drivers (17%) to completely oppose installation.

Table II.1 – Favorability and Opposition To Installation of Electronic Clearance

Considering all that you know about Commercial Vehicle Electronic Clearance System, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	42	70	21	29
Company	48	74	17	24
Independents	29	61	29	39

Drivers who haul hazardous materials (49%) are more likely to strongly favor installation of commercial vehicle electronic clearance than truck drivers overall (42%).

Table II. 2- Favorability and Opposition To Installation of Electronic Clearance

Considering all that you know about Commercial Vehicle Electronic Clearance System, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	42	70	21	29
Haz Mat Drivers	49	73	20	27

Full truckload drivers (43%) are more likely to strongly be in favor of installation of CVEC than less than truckload drivers (37%). Both segments, however, are relatively equal in their opposition to the service.

Table II. 3-- Favorability and Opposition To Installation of CVEC

Considering all that you know about Commercial Vehicle Electronic Clearance, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	42	70	21	29
Full truckload	43	70	21	29
Less than truckload	37	68	23	31

Large fleet drivers (50%) -- who are better able to recognize the benefits of commercial vehicle electronic clearance -- are more likely to strongly be in favor of commercial vehicle electronic clearance than small (37%) or medium fleet (42%) drivers. Small fleet drivers, on the other hand, are more likely than large and medium fleet drivers to be completely opposed to the technology.

Table II. 4- Favorability and Opposition To Installation of CVEC

Considering all that you know about Commercial Vehicle Electronic Clearance, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	42	70	21	29
Small fleet	37	66	25	34
Medium fleet	42	71	21	28
Large fleet	50	75	16	24

As the below table indicates, three fourths of drivers who have been driving for five years or less are in favor of having CVEC installed in their vehicles compared to the 65% of drivers who have been driving for more than 15 years. In comparison, drivers who have been driving for more than fifteen years are more likely to completely oppose (33%) installation than those drivers who have been driving for less than five (24%).

Table II. 5-- Favorability and Opposition To Installation of CVEC

Considering all that you know about Commercial Vehicle Electronic Clearance, would you be in favor of having it installed in your truck?

	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck	42	70	21	29
<5 years driving	46	75	18	24
5-15 years driving	43	71	18	29
15+ years driving	39	65	26	33

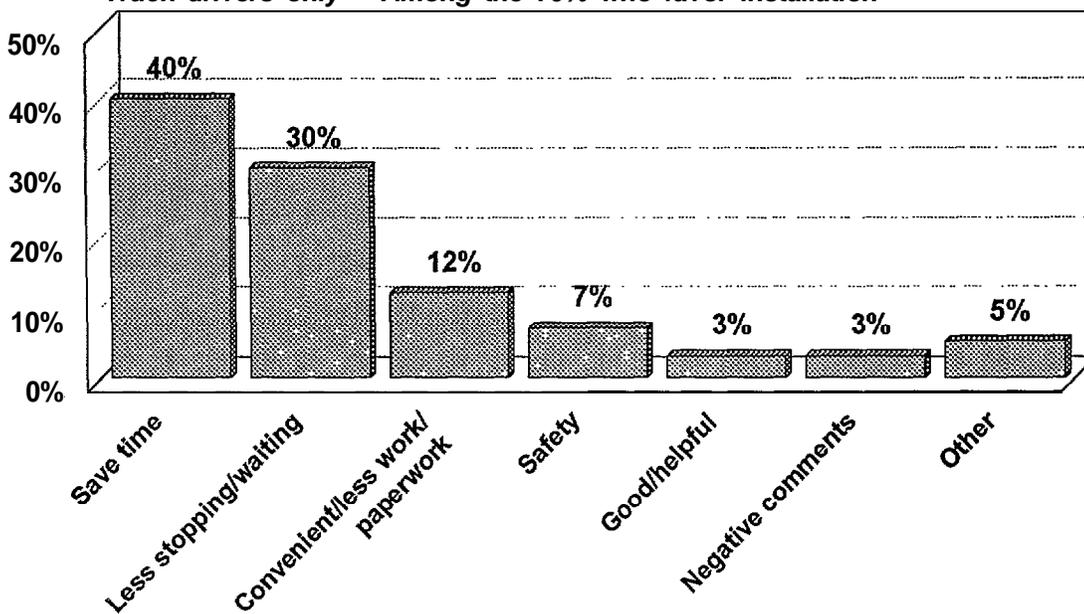
REASONS DRIVERS ARE IN FAVOR OF USING ELECTRONIC CLEARANCE

When drivers were asked in their own words why they favor CVEC, 40% responded that it would save them time and 30% favor the service because it would relieve stopping at waiting at the weigh stations.

Chart II. 8 -Open end – Favorability towards installation

Why Do You Say That You Would Favor Having Commercial Vehicle Electronic Clearance Installed In Your Vehicle?

Open end response
Truck drivers only -- Among the 70% who favor installation



Below are some verbatim answers as to why these drivers are in favor of having commercial vehicle electronic clearance installed in their vehicle:

- *“Already seen it in use and like it very much”*
- *“Anything that will **save** me time and stopping will **make** me more independent and do the job more efficiently”*
- *“As far as **scales are** concerned, sometimes you are backed up to the highway, so it would save **a** lot of time.”*
- *“Be a time saver for the driver **and** the company. It would be a big safety help since it wouldn't cause **traffic jams** on the highway. Anytime you stop and **start** a big truck it **costs you** time **and** money -- so this would help reduce costs. ”*

REASONS DRIVERS ARE OPPOSED TO ELECTRONIC CLEARANCE

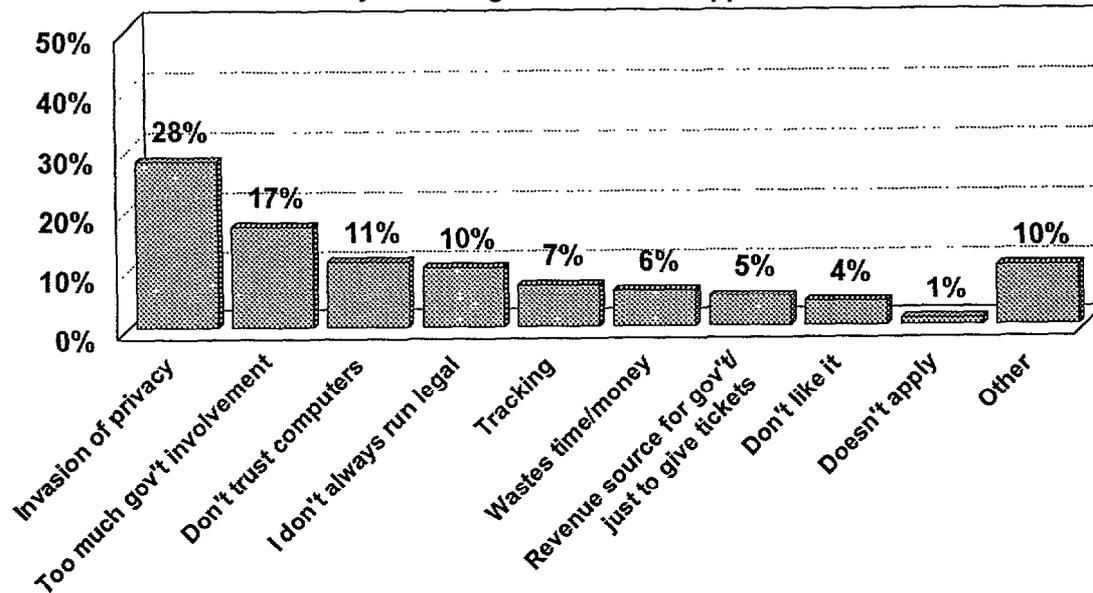
The 29% of drivers who are opposed to having commercial vehicle electronic clearance installed in their vehicles were asked why they felt that way. As the following chart indicates, these drivers were particularly concerned that CVEC this technological service would be an invasion of their privacy (28%) and would lead to too much government involvement (14%).

Chart II. 9 -Open end -- Opposition to installation

Why Do You Say That You Are Opposed To Having Commercial Vehicle Electronic Clearance Installed In Your Vehicle?

Open end response

Truck drivers only -- Among the 29% who oppose installation



Penn + Schoen Associates, Inc. T114

The following statements represent some of the verbatim responses of drivers when asked why they were opposed to having this system installed in their vehicles:

- *"I feel like if would be another way the government is taking away my responsibility to operate that mofor vehicle. Just anofher away of a computer taking over my life. independence to me has nothing to do with the government."*
- *"Because they would know everything you are doing, and you can't a/ways run legal. "*
- *"Certain times you want don't want to be weighed, and with this they get you everytime. "*
- *"Don't feel fhaf the government needs to be inside my vehicle -- it's like my home. "*

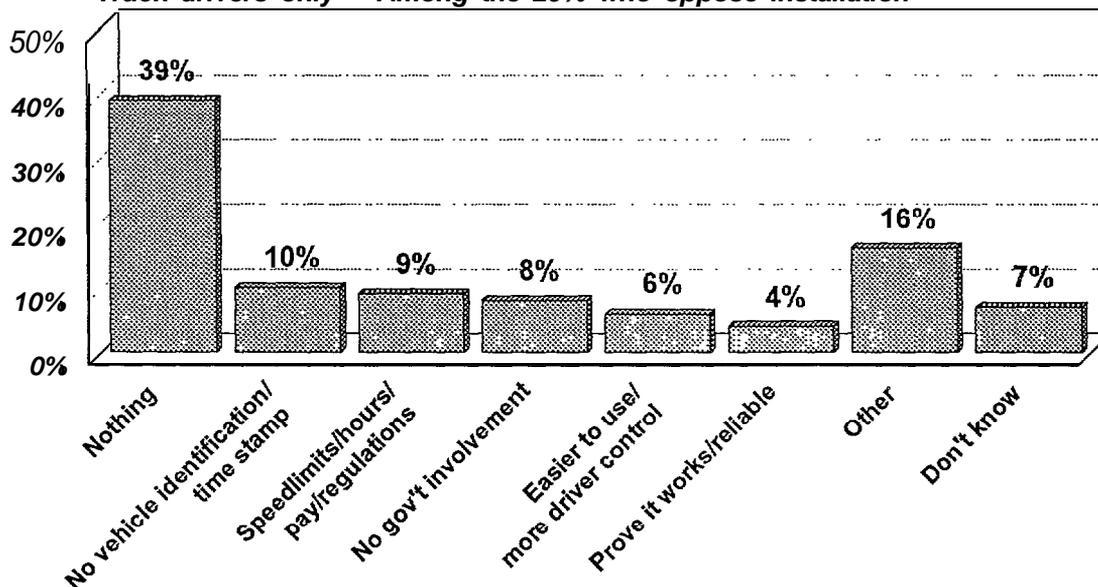
- "Computers have a tendency to go hay wire at times -- should not rely totally on computers. "
- "I don't like to depend on anything that's computerized. You can see it at fuel desks -- you have to wait up to an hour sometimes because the computer went down. "

These drivers, who are opposed to installation of commercial vehicle electronic clearance were then asked if anything about the system could be changed to make them more favorable towards it. Thirty eight percent of the respondents said that nothing could be changed to increase favorability. Other respondents wanted to do away with vehicle identification (9%) and government involvement (7%). Additionally, some respondents wanted to feel confident that the system would work (5%) and would be easy to use (5%).

Chart II. 10 – Open end

What About Commercial Vehicle Electronic Clearance Could Be Changed To Make You More Favorable Towards This Technology?

*Open end response
Truck drivers only -- Among the 29% who oppose installation*



Respondents who opposed CVEC gave the following verbatim responses to describe what about the technology could be changed to make them more favorable towards it:

- *"If they would not use it for giving tickets"*
- *"Don't register the time we cross scales"*
- *"Just to keep it voluntary"*
- *"Take the government out of it"*
- *"Remove the vehicle identification part so that we couldn't be tracked"*
- *"If it was used properly and not against you"*
- *"Make all scales alike so that you know what to do"*

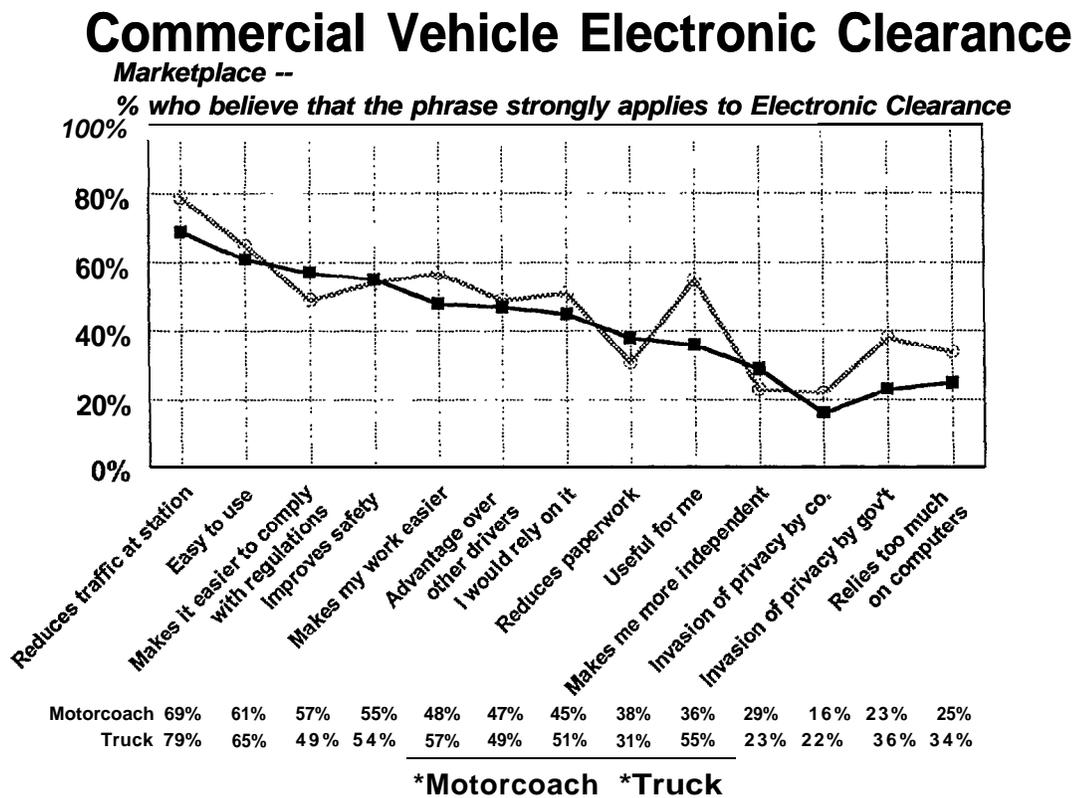
ATTITUDES AND OPINIONS OF MOTORCOACH OPERATORS

PERCEIVED BENEFITS OF ELECTRONIC CLEARANCE

Motorcoach operators viewed commercial vehicle electronic clearance differently than truck drivers. Motorcoach operators were less inclined than truck drivers to say that commercial fleet management helps reduce traffic at the station or that it would make their work easier. In addition, only a relatively small number of respondents who thought that electronic clearance would be useful for them: more than half of truck drivers (55%) felt that "useful for me" strongly applied to electronic clearance as opposed to the 36% of motor coach carriers who felt that this attribute strongly applied.

On the other hand, motorcoach operators (57%) were more likely than truck drivers (49%) to believe that commercial vehicle electronic clearance would make it easier to comply with existing regulations. Motorcoach operators (38%) were also more likely than truck drivers (31%) to believe that CVEC would help reduce paperwork.

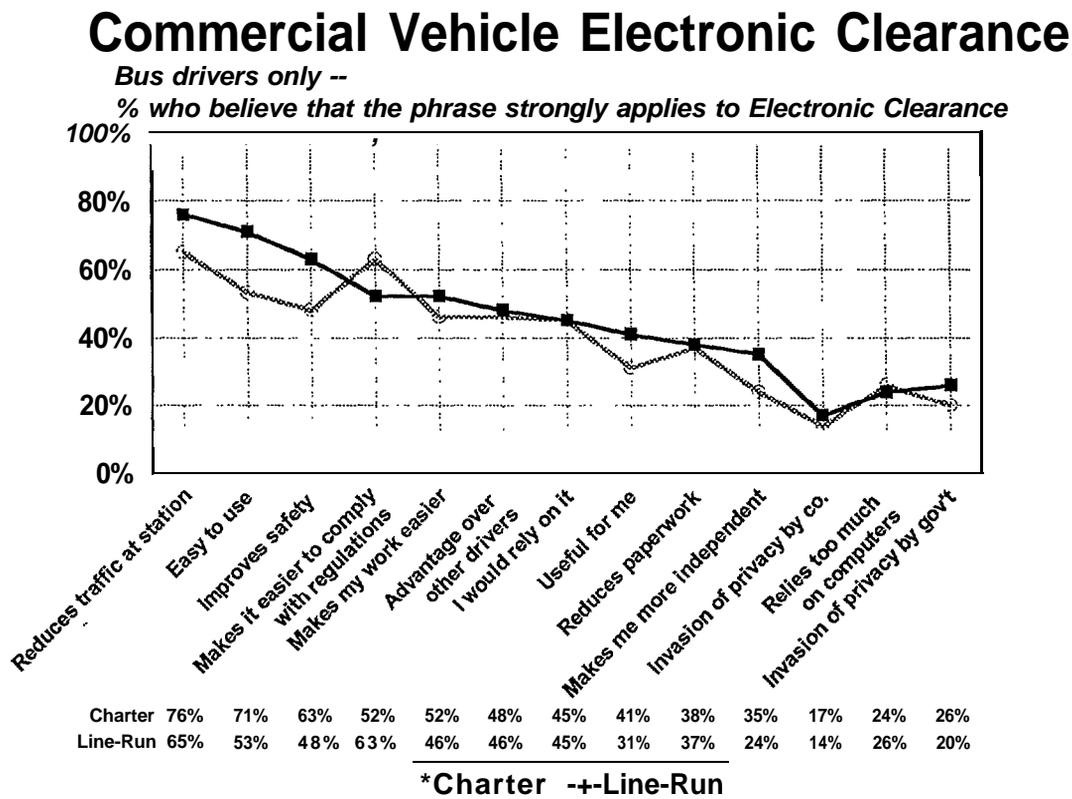
Chart II. 11 – Attribute Ratings – Motorcoach drivers vs. Truck drivers



As the following chart indicates, charter and line-run motorcoach operators differed in their perceptions of commercial vehicle electronic clearance. Charter drivers are most likely to rate electronic clearance highly on its ability to reduce traffic at the station (76%), its ease of use(71%), and its ability to improve safety (63%).

Line-run drivers also are most strongly inclined to believe that commercial vehicle electronic clearance will reduce traffic at the station (65%). However, unlike charter drivers, they are much more likely to say that this service makes it easier to comply with existing regulations (63%).

Chart II. 12 -Attribute Ratings -- Charter vs. Line Run



PERCEIVED WEAKNESSES OF ELECTRONIC CLEARANCE

Approximately one-quarter of motorcoach drivers thought that commercial vehicle electronic clearance had inherent weaknesses: 23% thought that this service was an invasion of privacy by the government, 25% thought that it relied too heavily on computers, and 16% thought it was an invasion of privacy by the companies.

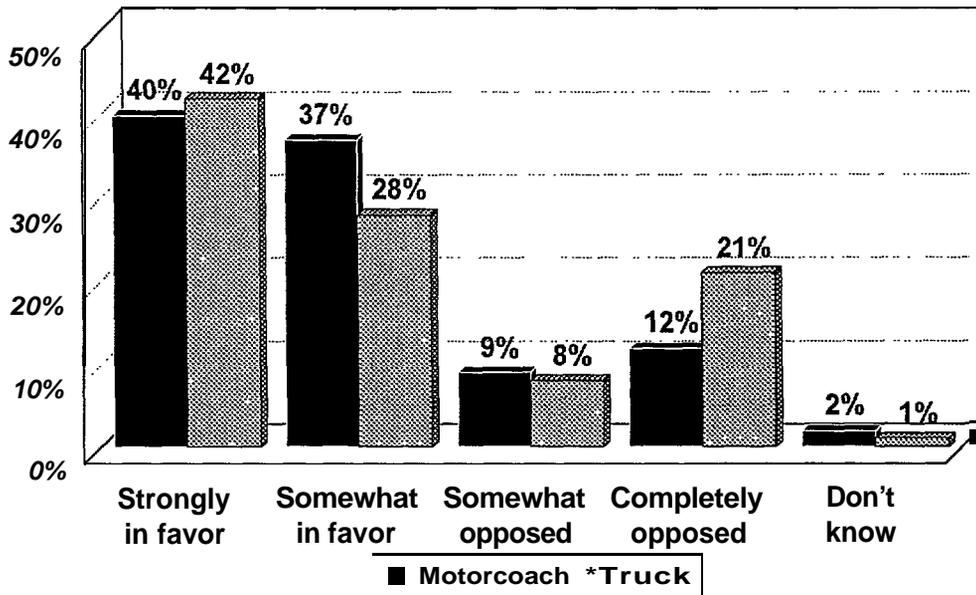
Charter drivers are somewhat more likely than line-run operators to think that commercial vehicle electronic clearance is an invasion of privacy by the government: 26% of charter drivers think that this service is an invasion of privacy by the government compared to 20% of line-run drivers. In addition, seventeen percent of charter drivers and 14% of line-run operators thought that commercial vehicle electronic clearance was an invasion of privacy by the company. Twenty-four percent of charter drivers and 26% of line-run drivers thought that CVEC relies too heavily on computers.

ATTITUDES TOWARDS CVEC

Thus, as the following chart indicates, although only one in three motorcoach drivers "strongly agreed" that commercial vehicle electronic clearance was useful for them, more than three in four respondents favored installation of the service in their vehicle. In fact, motorcoach drivers were more favorable towards installation than truck drivers. As the following chart indicates, 70% of truck drivers would be in favor of having electronic clearance installed in their vehicles while 29% would be opposed to the idea. Comparatively, among motorcoach drivers, 77% would be in favor of installation while only 21% would be opposed

Chart II.13 Motorcoach drivers only – Favorability towards installation

Considering All That You Know About The Electronic Clearance System, Would You Be In Favor Of Having It Installed In Your [Bus/Truck]?



Penn + Schoen Associates, Inc. T112

As the following table indicates, line-run and charter motor coach drivers are about equally favorable towards the installation of commercial vehicle electronic clearance system: 79% of charter drivers favor installation compared to 77% of line-run operators.

Table 11.6- Favorability and Opposition To installation of CVEC

Considering all that you know about Commercial Vehicle Electronic Clearance, would you be in favor of having it installed in your truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Motorcoach	40	77	12	21
Charter Motorcoach	39	79	11	21
Line Run Motorcoach	41	77	11	20

REASONS MOTORCOACH OPERATORS ARE IN FAVOR OF USING CVEC

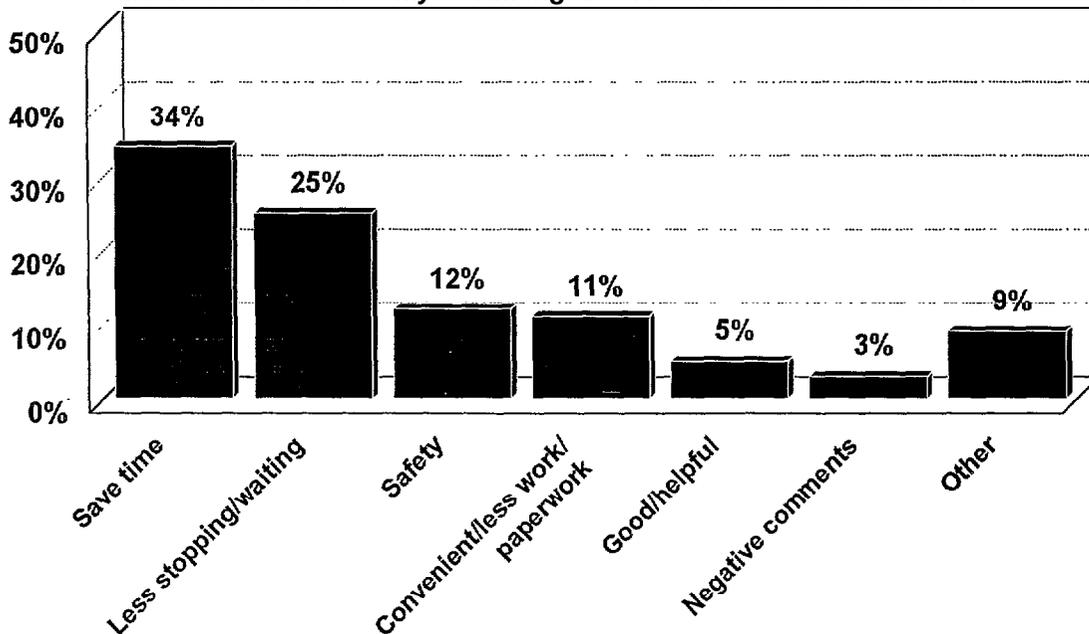
When motorcoach drivers were questioned as to why they are in favor of having commercial vehicle electronic clearance installed in their vehicles, 34% said because the service would save them time and 25% said because it would mean less stopping and waiting.

Chart II. 14 – Favorability towards installation

Why Do You Say That You Would Favor Having Commercial Fleet Management Installed In Your Vehicle?

Open end response

Motorcoach drivers only -- Among the 77% who favor installation

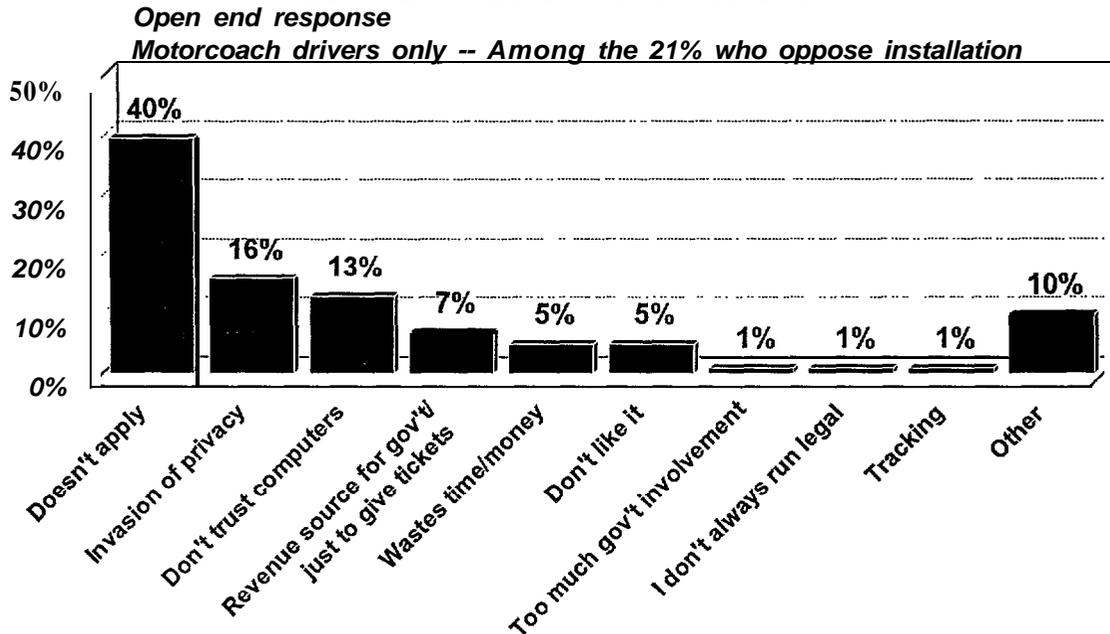


REASONS MOTORCOACH OPERATORS OPPOSE CVEC

Twenty one percent of motorcoach respondents oppose installation of commercial vehicle electronic clearance in their vehicles. As the following chart indicates, four-tenths of motorcoach drivers (40%) were opposed to commercial vehicle electronic clearance because they felt that it didn't apply to them, 16% felt that it would be an invasion of their privacy, and 13% don't trust computers.

Chart II. 15 – Open end -- Opposition to installation

Why Do You Say That You Are Opposed To Having Commercial Vehicle Electronic Clearance Installed In Your Vehicle?



III. COMMERCIAL VEHICLE ADMINISTRATIVE PROCESSES (CVAP)

Overall, commercial vehicle drivers were able to recognize the benefit commercial vehicle administrative processes could have on alleviating the burden of paperwork. For commercial vehicle administrative processes, motorcoach and truck drivers' attitudes and perceptions towards the service were somewhat disparate. Motorcoach drivers were much stronger proponents of this technological service than truck drivers.

Compared to the other five CVO services tested, commercial vehicle administrative processes service was more widely accepted by motorcoach drivers. Among truck drivers, however, appeal and attitudes were relatively low: among the six services tested, CVAP was ranked relatively low across the attributes, and it was the second least favorite technology in terms of drivers' favorability towards using it.

TRUCK DRIVERS' OPINIONS OF CVAP

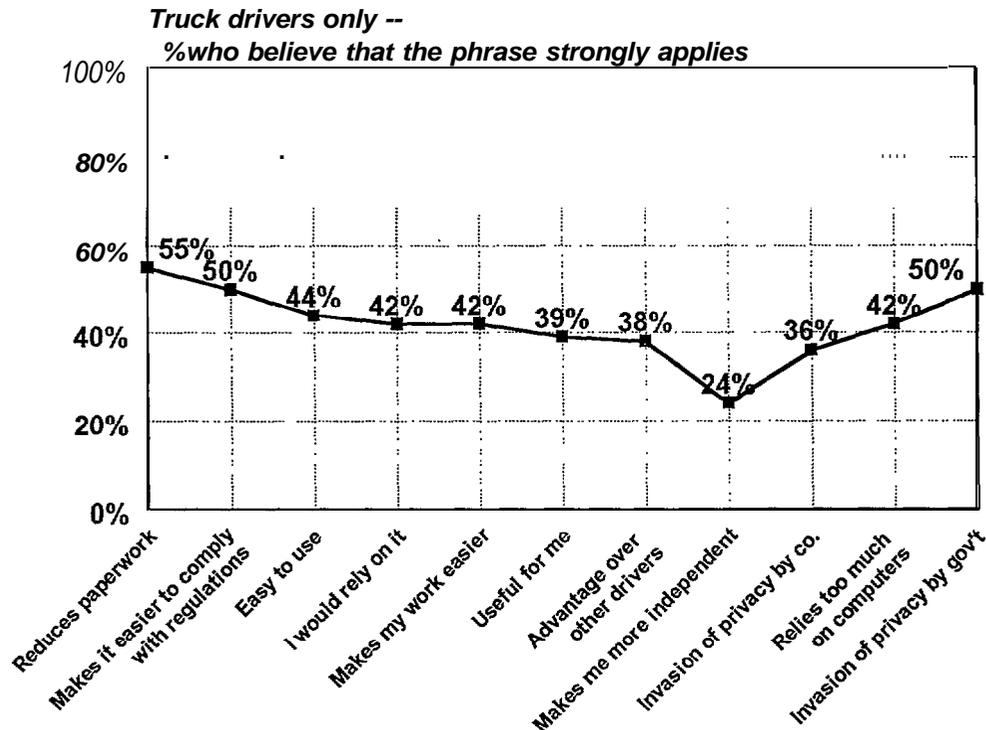
PERCEIVED BENEFITS OF CVAP

Across the range of positive attributes, truck drivers were not particularly favorable towards commercial vehicle administrative processes. However, some benefits of commercial vehicle administrative processes were recognized

Fifty five percent of truck drivers strongly agreed that commercial vehicle administrative processes would reduce paperwork. In addition, one in two respondents believed that commercial vehicle administrative processes would make it easier to comply with existing regulations.

Chart III. 1 --Attribute Ratings – Truck Drivers Only

Commercial Vehicle Administrative Process



Penn + Schoen Associates, Inc. T99-11

Compared to the other CVO services tested, for this particular service variation between subgroups seems to be less defined. Opinions and attitudes towards this technological service seem to be more universally distributed among truck drivers.

As the following chart indicates, company drivers and independent owner operators rate commercial vehicle administrative processes virtually the same across the range of positive attributes, including:

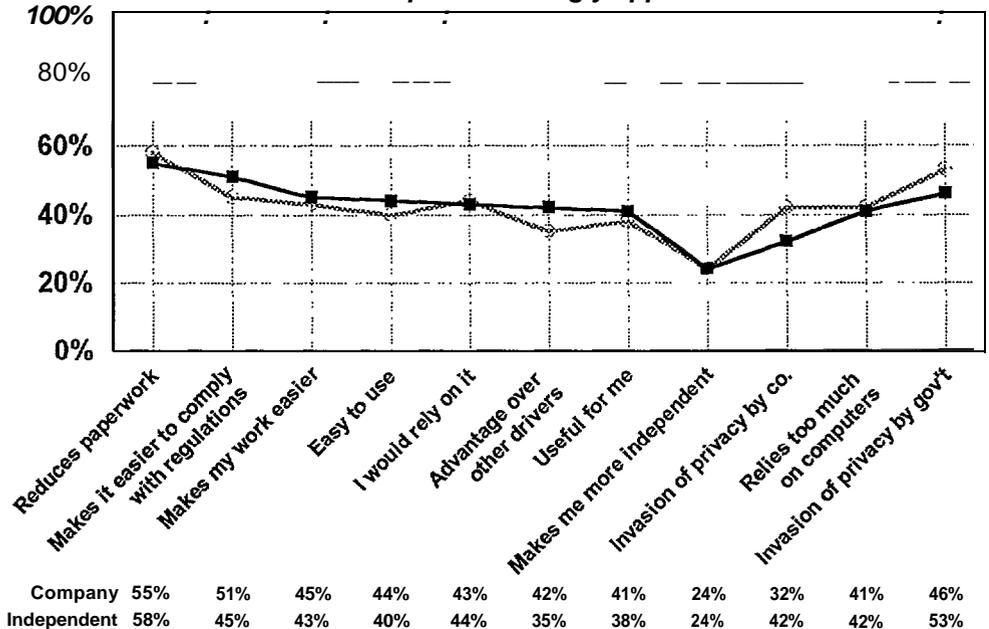
- *Useful for me*
- *Makes my work easier*
- *Reduces paperwork*
- *Makes me more independent*
- *Easy fo use*
- *I would rely on if*

Company drivers, however, are somewhat more likely than independents to think that CVAP will give them an advantage over other drivers and will make it easier to comply with existing regulations.

Chart III. 2 Attribute Ratings -- Company vs. Independent

Commercial Vehicle Administrative Process

Truck Drivers Only --
 % who believe that the phrase strongly applies



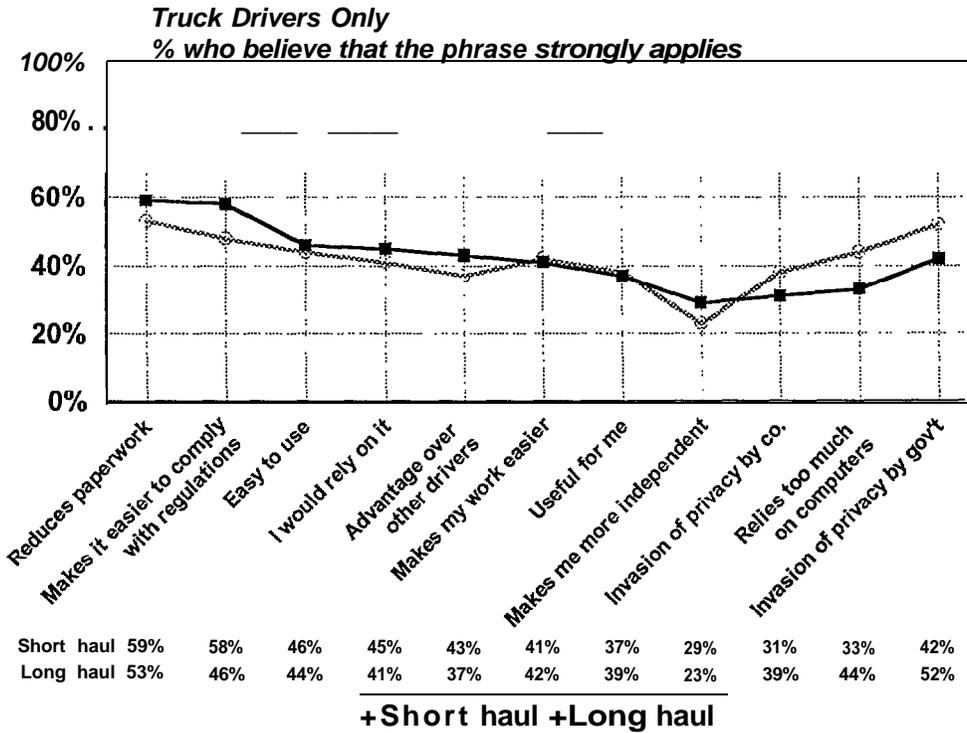
+Company & Independent

Penn + Schoen Associates, Inc. T116-

Short haul and long haul drivers had somewhat differing opinions on the benefits of commercial vehicle administrative processes. Across the range of attributes, short haul drivers are somewhat more favorable towards commercial vehicle administrative processes than long haul drivers. Short haul drivers are more likely than long haul drivers to think that this technological service makes it easier to comply with existing regulations, reduces paperwork, gives them a competitive advantage, and makes them more independent.

Chart III. 3-- Attribute Ratings -- Short haul vs. Long haul

Commercial Vehicle Administrative Process



Penn + Schoen Associates, Inc. T116-127

Truck drivers' perceptions of commercial vehicle administrative processes varied by the number of years the respondent has been a truck driver. Those drivers who have been driving for a shorter amount of time (less than 5 years) seem more receptive to this technological service than drivers who have been driving for longer periods of time.

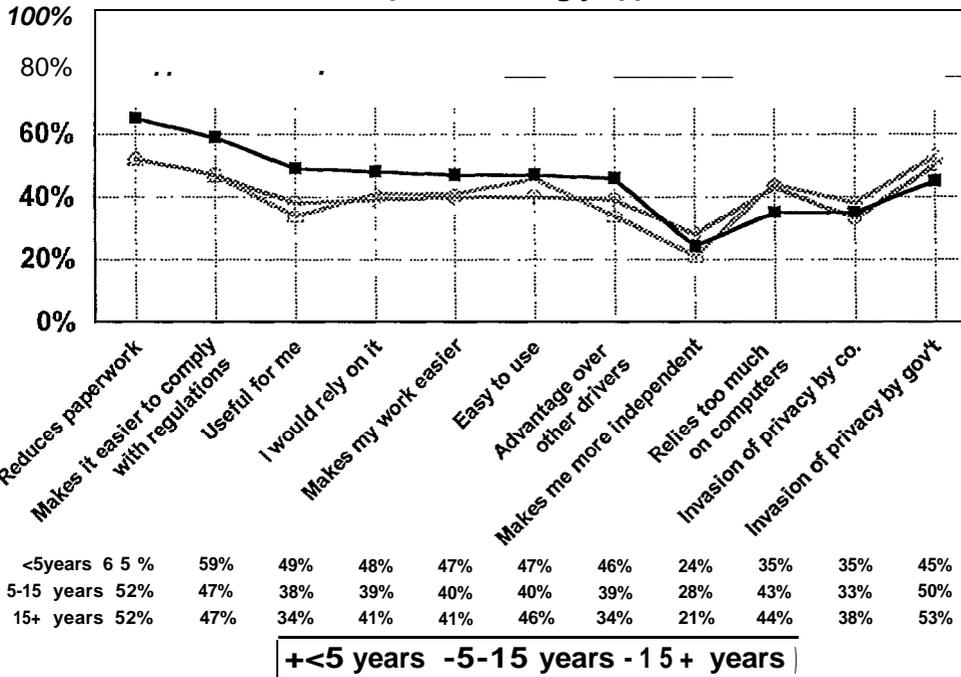
In fact, drivers relatively new to the profession (49%) are almost one and a half times as likely as older drivers (34%) to strongly agree that commercial vehicle administrative processes is useful for them. In addition, drivers who have been driving for less than five years are more likely to strongly agree that this service makes their work easier, reduces paperwork, gives them an

advantage over other drivers, and makes it easier to comply with existing regulations.

Chart III. 4 --Attribute Ratings --By number of years driving

Commercial Vehicle Administrative Process

*Truck Drivers Only -- By number of years driving
% who believe that the phrase strongly applies*



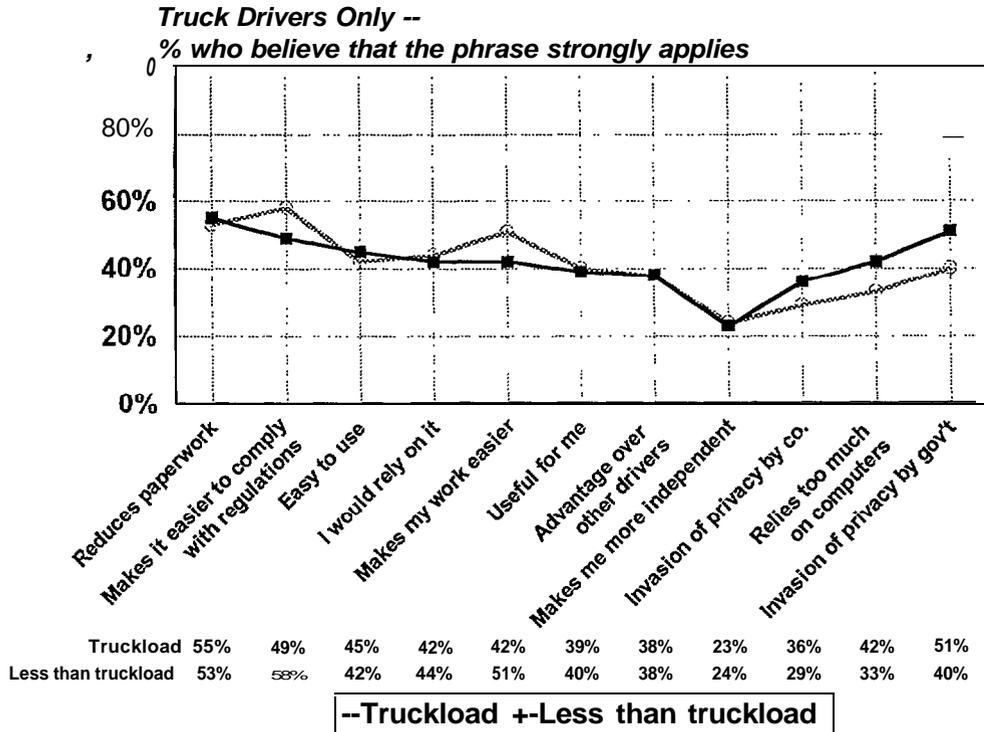
Penn + Schoen Associates, Inc. T116-125

Full truckload and LTL drivers are both equally able to recognize that commercial vehicle administrative processes reduces paperwork, is easy to use, and is reliable. Less than truckload drivers, however, are more likely than truckload drivers to recognize the benefits that CVAP could have for them, including:

- 58% of LTL drivers strongly agree that CVAP makes it easier to comply with existing regulations compared to (49%) of truckload users
- 51% of LTL drivers strongly agree that CVAP will make their work easier compared to 42% of full truckload drivers

Chart III. 5 -- Attribute Ratings -- Full truckload vs. Less than truckload

Commercial Vehicle Administrative Process



Penn + Schoen Associates, Inc. T116-127

PERCEIVED WEAKNESS OF CVAP

Overall, many respondents were able to perceive weaknesses with commercial vehicle administrative processes service. Chart III.1 above illustrates the following weaknesses of commercial1 vehicle administrative processes:

- *A potential obstacle to truck driver acceptance of commercial vehicle administrative processes is a fear that this technological service is an invasion of privacy by government. **In fact, one out of every two (50%) respondents "strongly agreed" that this service would be an invasion of their privacy by the government***
- *Forty two percent of respondents thought that commercial vehicle administrative processes relied too heavily on computers and that there was a loss of human judgment*

- More than one in three respondents (36%) thought that CVAP would potentially lead to an invasion of privacy by companies
- Although slightly more than half of the truck drivers did recognize that commercial administrative processes would reduce their amount of paperwork and make it easier to deal with existing regulations, less than half of the respondents felt that the remaining positive attributes "strongly applied" to commercial vehicle administrative processes. More than 60% of drivers did NOT strongly agree that CVAP would be useful for them.

The following segments of truck drivers are somewhat more likely to recognize the potential weaknesses of commercial vehicle administrative processes:

Independent owner operators are much more likely than company drivers to think that commercial vehicle administrative processes infringes on their privacy. (See chart III.2 above)

- More than half (53%) of independents think CVAP is an invasion of privacy by the government -- 46% of company drivers agree with that
- Forty two percent of independents think that CVAP is an invasion of the drivers' privacy by the company, while only 36% of independents think so

Long haul drivers are less favorable towards commercial vehicle administrative processes than short haul drivers

- Forty four percent of long haul drivers think that commercial vehicle administrative processes relies too much on computers compared to the 33% of short haul drivers who think so
- More than half of long haul drivers (52%) think that CVAP would be an invasion of privacy by the government. 42% of short haul drivers think this
- Long haul drivers (38%) are more likely than short haul drivers to think that CVAP is an invasion of privacy by the government (31%)
- Long haul drivers are even less likely than short haul drivers to think that C V A P increases a driver's independence

Respondents who have been driving more than fifteen years responded more negatively towards commercial vehicle administrative processes than those who have been driving for shorter periods of time.

- Drivers who have been driving for more than fifteen **years are** more likely than those drivers who have been driving for less than five years to think that CVAP is an invasion of privacy by the government (53% **and 45%** respectively)
- 15+ **year** drivers are more likely (44%) than <5 year drivers (35%) to think that CVAP relies too much on computers

Truckload drivers are more likely than less than truckload drivers to have negative perceptions of CVAP

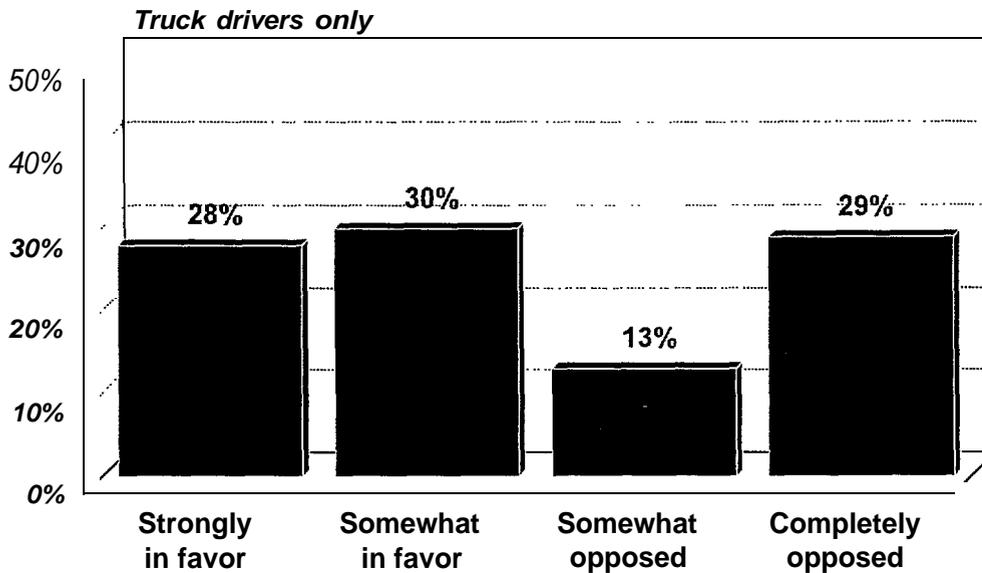
- More than half (51%) of full truckload drivers think that invasion of privacy by government strongly applies to CVAP. Comparatively 40% of the less than truckload drivers think this attribute applies.
- Truckload drivers are more likely to think that CVAP is too reliant on computers (42%) than less than truckload drivers (43%)
- More than one third of respondents (36%) think that this technological service would be an invasion of a driver's privacy by the company. Only 29% of LTL drivers think that

ATTITUDES TOWARDS CVAP

Drivers' mixed opinions of commercial vehicle administrative processes are reflected in the number of drivers who would actually use the service. As the following chart indicates, 58% of drivers would favor using commercial vehicle administrative processes while 43% would be opposed to it.

Chart III. 6 -- Favorability – Truck Drivers Only

Considering All that You Know About Commercial Vehicle Administrative Processes, Would You Be In Favor Of Using It?



Penn + Schoen Associates, Inc. T 127

Company drivers have a somewhat greater desire for commercial vehicle administrative processes than independents. As the following table indicates, 30% of company drivers are strongly in favor of using CVAP compared to the 25% of independents who are strongly in favor.

Table III. II – Favorability and Opposition To Use of CVAP

*Considering all that you know about Commercial Vehicle Administrative Processes,
would you be in favor of using it?*

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	28	58	29	42
Company	30	60	26	40
Independent	25	55	35	45

Short haul drivers' ability to better recognize the benefits of CVAP than long haul drivers is reflected in that short haul drivers are slightly more likely

than long haul drivers to strongly favor usage. However, overall desirability of the service is about equal between the two segments,

Table III. 2-- Favorability and Opposition To Use of CVAP

Considering all that you know about Commercial Vehicle Administrative Processes, would you be in favor of using it?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	28	58	29	42
Short haul	32	59	25	41
Long haul	26	57	29	42

Drivers who have been driving for less than five years have a greater desire (35%) for commercial vehicle administrative processes than drivers who have been driving for fifteen years or more (23%). Drivers who have been driving for longer periods of time are more likely to oppose using this service.

Table III. 3-- Favorability and Opposition To Use of CVAP

Considering all that you know about Commercial Vehicle Administrative Processes, would you be in favor of using it?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	28	58	29	42
<5 years driving	35	64	25	36
5-15 years driving	28	56	28	44
15+ years driving	23	55	32	45

Less than truckload drivers are more favorable towards commercial vehicle administrative processes than full truckload drivers : 64% of LTL drivers favor using CVAP compared to 58% of full truckload drivers.

Table III. 4-- Favorability and Opposition To Use of CVAP

Considering all that you know about Commercial Vehicle Administrative Processes, would you be in favor of using it?

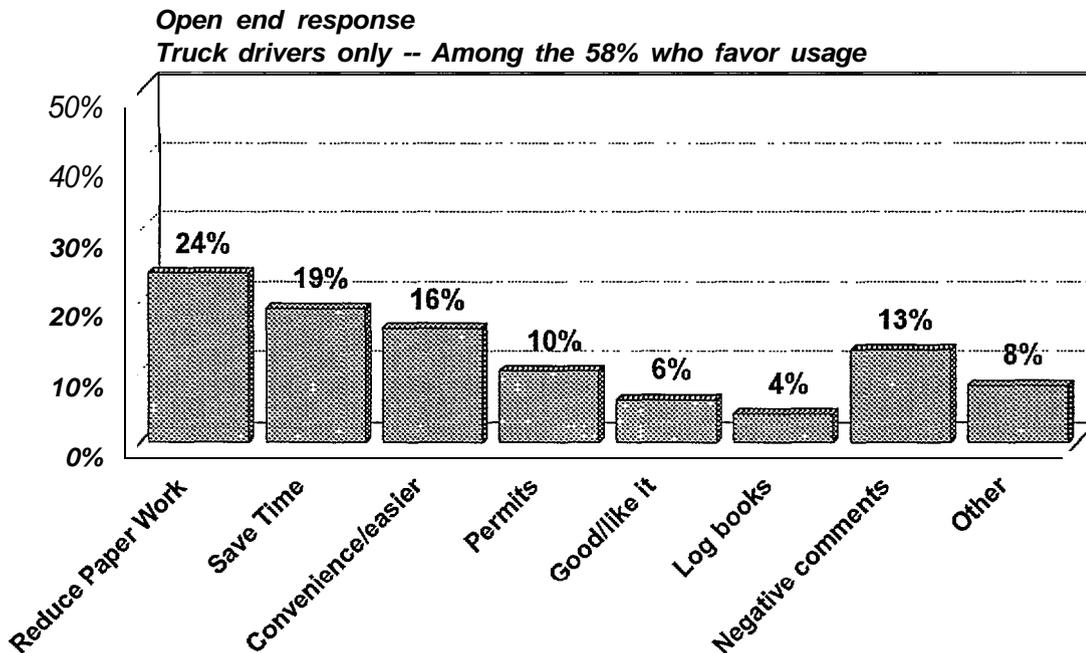
Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	28	58	29	42
Full truckload	28	58	28	42
Less than truckload	3	64	22	36

REASONS DRIVERS ARE IN FAVOR OF USING CVAP

The 58% of truck drivers who are in favor of using commercial vehicle administrative processes were asked to describe why they favor this technological service. One in four respondents felt that CVAP would reduce paperwork, 19% thought it would save time, 16% thought that it would make work more convenient and easier, and 10% felt that it would help with permits.

Chart III. 7 – Opposition To CVAP – Open End

Why Do You Say That You Would Be In Favor Of Using Commercial Vehicle Administrative Processes?



Penn + Schoen Associates, Inc. T128

In the drivers' own words, they would be in favor of installation of Commercial Vehicle Administrative Processes for some of the following reasons:

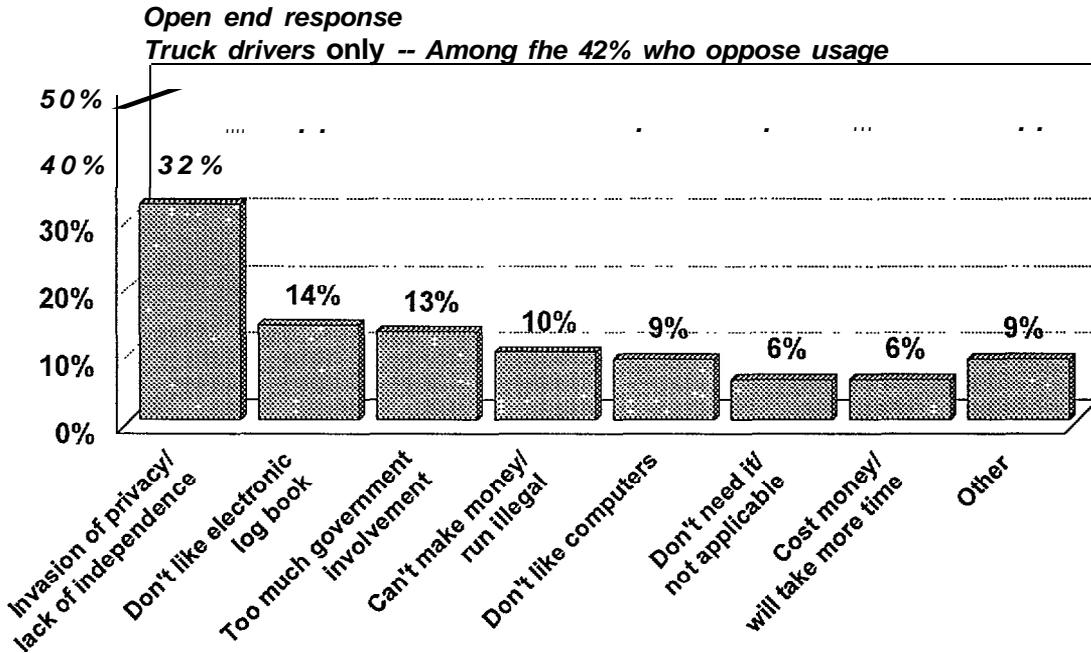
- *"I think it would speed things up"*
 - *"Anything that makes less work for the driver, saves time, and makes me more money. No need to chase down paperwork,"*
 - *"Can cut time on guess work with the log book. Fuel and miles would be kept automatically. Gut paperwork with permits and manifest. "*
 - *"Cut a lot of time. i am lazy and any technology that can help me is all right. "*
- "Gives me time to get rest instead of sitting in the cab doing paperwork.*
- *"It would take the whip out of the truck owner's hand, you can't fudge your logbook."*

REASONS DRIVERS ARE OPPOSED TO CVAP

The 42% of truck drivers who opposed commercial vehicle administrative processes were asked to describe why they were opposed to using this service. One-third (32%) of the respondents said that the reason they are opposed to CVAP is that they fear it invades their privacy and takes away their independence. In addition 14% of respondents do not like the electronic log book and 13% do not want the government involved in this service.

Chart III. 8 – Opposition To CVAP – Open End

Why Do You Say That You Are Opposed To Using Commercial Vehicle Administrative Processes?



Penn + Schoen Associates, Inc. T97

The verbatim responses indicate that many drivers are especially bothered by the electronic log book and government intervention because it will force them to drive legal. In the words of some drivers:

- "This would record all my data. . . the more loads I haul the more money I make. This would not let me **cheat** on my log book."
- "The amount of government control, and the access to information that **should be confidential -- makes it harder for independent drivers to complete**"
- "Can't cheat on how many hours I have driven, especially in 55 mph states."
- "I don't want them to be able to check my log or miles driven -- the 10 hour rule. They would be able to ticket us days after the fact."

However, other drivers' resistance to CVAP was driven by other concerns, including:

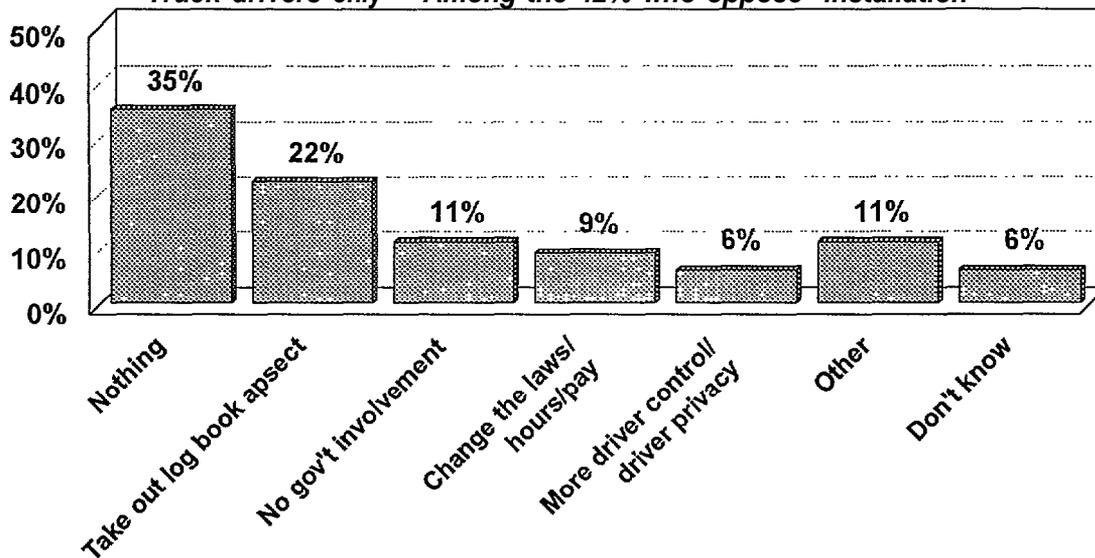
- *"Computer error can ruin a trip. I would rather rely on humans."*
- *"I don't have very much paperwork to do in the first place, and what I do have, my company **takes** care of for me. This could be used to keep track of where I am all the time."*
- *"Makes management's job too easy with the fuel and mileage auditing, if I had my own truck it would make things easier but I am a company driver."*

Drivers who are opposed to commercial vehicle administrative processes were then asked what about the technological service could be changed to make them more favorable towards it. The majority of drivers were either opposed to the technological service all together and thought that nothing could be changed to improve it (35%) or thought that the technology would be good without the electronic log book (22%).

Chart III. 9 – Opposition To CVAP -- Open End

What About Commercial Vehicle Administrative Process Could Be Changed To Make You More Favorable Towards This Technology?

Open end response
 Truck drivers only -- Among the 42% who oppose installation



Penn + Schoen Associates, Inc. T98

APPEAL OF COMPONENTS OF CVAP

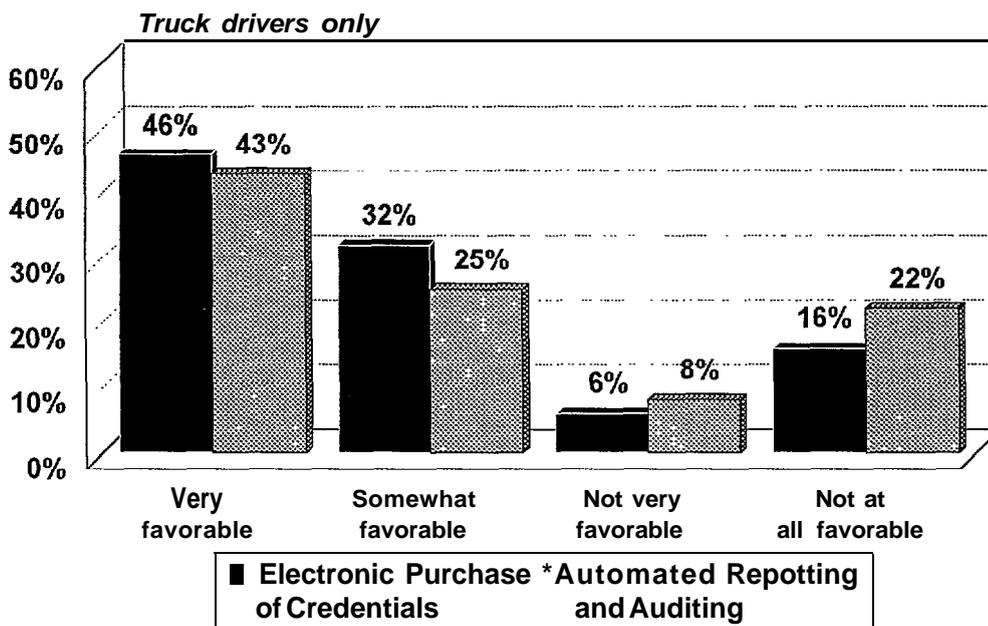
Truck drivers, overall, were probed to determine which specific components of the technological service they found appealing, and which they were opposed to. As the following chart indicates, more than half of the respondents are favorable towards both the electronic purchase of credentials component and the automated mileage and fuel reporting component of this technological service.

Although both components of CVAP were favored by at least three in five respondents, ***truck drivers are somewhat more favorable towards just the electronic purchase of credentials component of the technology than just the automated mileage and fuel reporting and auditing component***

Seventy eight percent of respondents were very or somewhat favorable towards the electronic purchase of credentials compared to the 68% of respondents who favored the automated mileage and fuel reporting and auditing component. Conversely, 30% of respondents were not favorable towards the reporting and auditing component while only 22% were not favorable towards the electronic purchase of credentials.

Chart III. 10 – Truck Drivers Only -- Favorability Towards Components

**Considering What You Have Heard About The Technology,
How Favorable Are You Towards Just The [Electronic
Purchase Of Credentials/Automated Mileage And Fuel
Repotting And Auditing] Component Of This Technology?**



ATTITUDES AND OPINIONS OF MOTORCOACH OPERATORS

PERCEIVED BENEFITS OF CVAP

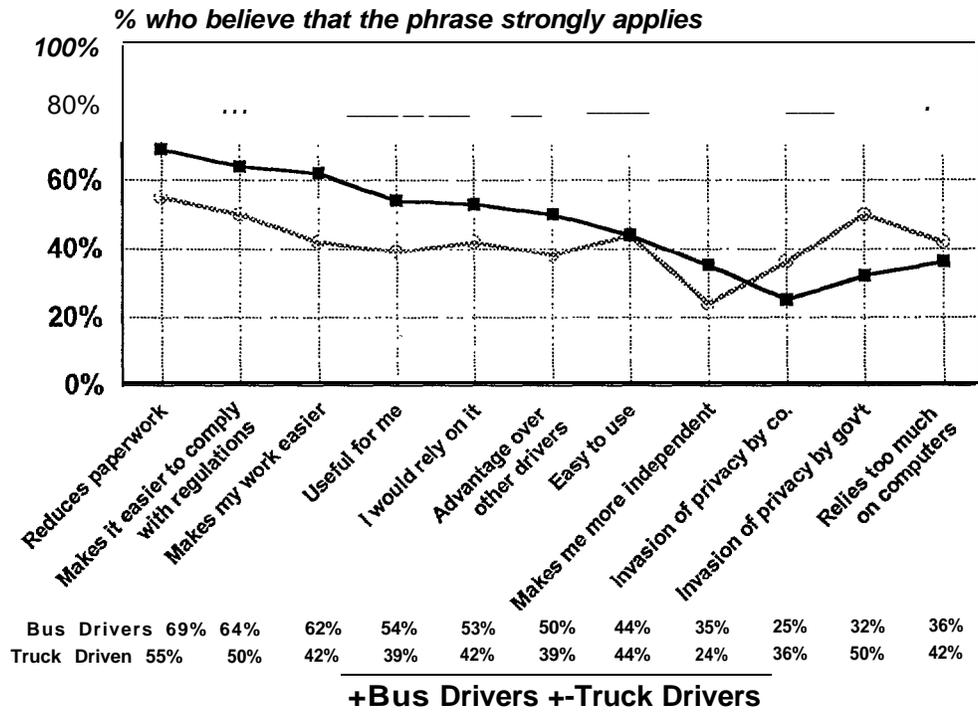
In contrast to truck drivers, motorcoach drivers were very favorable towards commercial vehicle administrative processes. Motorcoach drivers were able to recognize the benefits of CVAP with regard to reducing paperwork and making it easier to comply with regulations, as well as the positive impact it could have on easing a driver's daily work routine. In addition, motorcoach drivers did not particularly think that this service was intrusive.

Compared to the other CVO services tested among motorcoach drivers, commercial vehicle administrations is rated highest for its ability to reduce paperwork and make the drivers work easier and is ranked second of the five services tested in favorability towards using it.

The following chart shows the favorability of motorcoach drivers towards CVAP across the range of attributes.

Chart 111.11-Attribute Ratings – Truck drivers vs. Motorcoach drivers

Commercial Vehicle Administrative Process



Penn + Schoen Associates, Inc. T99-11

Motorcoach drivers recognize the benefits that CVAP will have in reducing paperwork (69%) making it easier to comply with existing regulations (64%), making work easier for the drivers (62%) and more than half (54%) think that this would be useful for them, reliable, and would give them an advantage of other drivers.

PERCEIVED WEAKNESSES OF CVAP

Between a quarter and a third of the respondents perceived weaknesses in commercial vehicle administrative processes: 25% of motorcoach operators

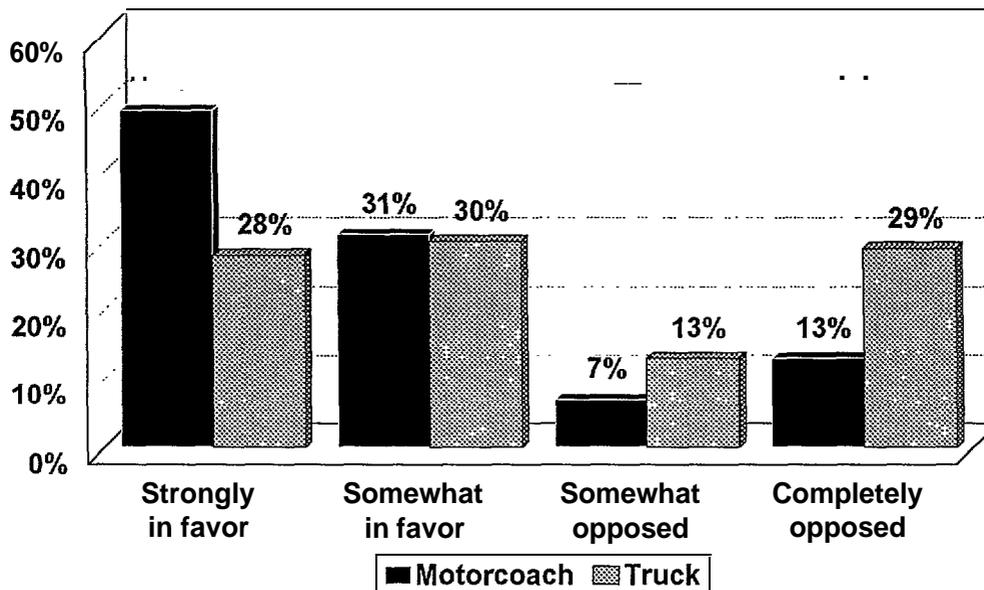
thought this service would be an invasion of privacy by companies, 32% thought it would be an invasion of privacy by the government, and 36% felt that this technological service would rely too much on computers instead of humans.

ATTITUDES TOWARDS CVAP

Almost one of every two motorcoach operators would strongly favor using CVAP -- this is double the number of truck drivers who would strongly favor it. A total of four out of every five respondents would strongly or somewhat be in favor of using CVAP. Only 20% of motorcoach drivers opposed using commercial vehicle administrative processes -- that is half the number of truck drivers who opposed it.

Chart III. 12-- Motorcoach drivers only -- Favorability towards usage

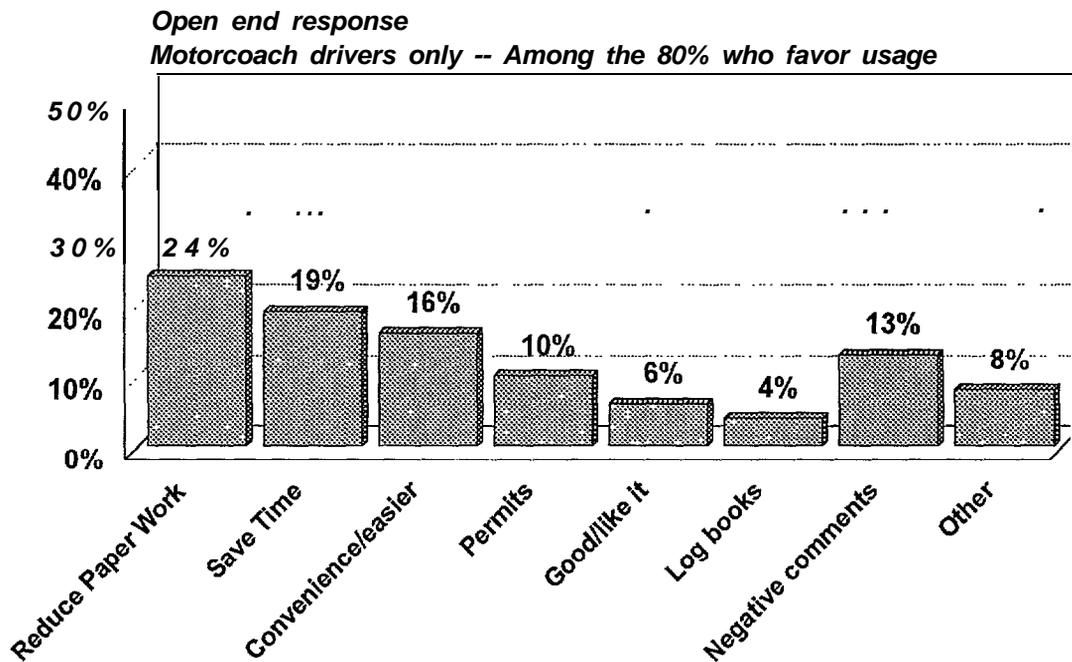
Considering All that You Know About Commercial Vehicle Administrative Processes, Would You Be In Favor Of Using It?



REASONS MOTORCOACH OPERATORS ARE IN FAVOR OF USING CVAP

The following chart indicates the reasons why motorcoach drivers so strongly favor commercial vehicle administrative processes.

Why Do You Say That You Would Be In Favor Of Using Commercial Vehicle Administrative Processes?



Penn + Schoen Associates, Inc. T128

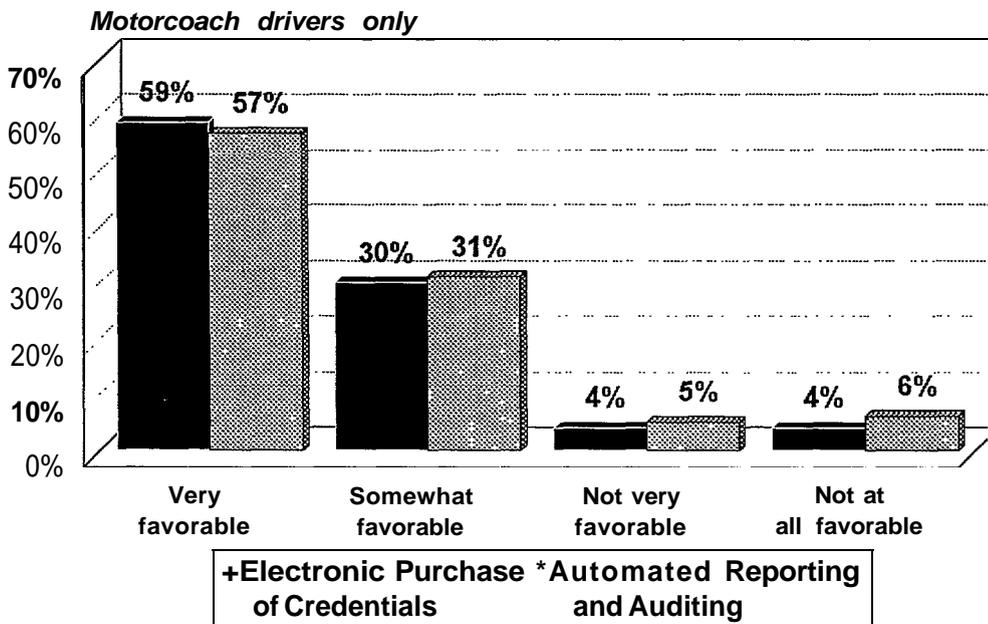
As the above chart indicates, motorcoach drivers were particularly attracted to commercial vehicle administrative processes because it would reduce paperwork (24%) save them time (19%) and would be convenient for them (16%).

APPEAL OF COMPONENTS OF CVAP

In contrast to truck drivers, *motorcoach drivers were equally in favor of both the electronic purchase of credentials (89%) and the automated fuel reporting (88%) components of the technological service.* As the following chart indicates, the majority of motorcoach operators were not opposed to either aspect of CVAP, and instead, nine out of ten respondents were favorable towards it.

Chart 111.13 -- Truck Drivers Only – Favorability Towards Components

Considering What You Have Heard About The Technology, How Favorable Are You Towards Just The [Electronic Purchase Of Credentials/Automated Mileage And Fuel Reporting And Auditing] Component Of This Technology?



IV. AUTOMATED ROADSIDE SAFETY INSPECTION SERVICE (ARSI)

Both truck and motorcoach drivers were able to recognize the positive impact that automated roadside safety inspection service would have on improving safety and reducing traffic at the station. The majority of respondents however, did not think that the technology would reduce paperwork or make them more independent.

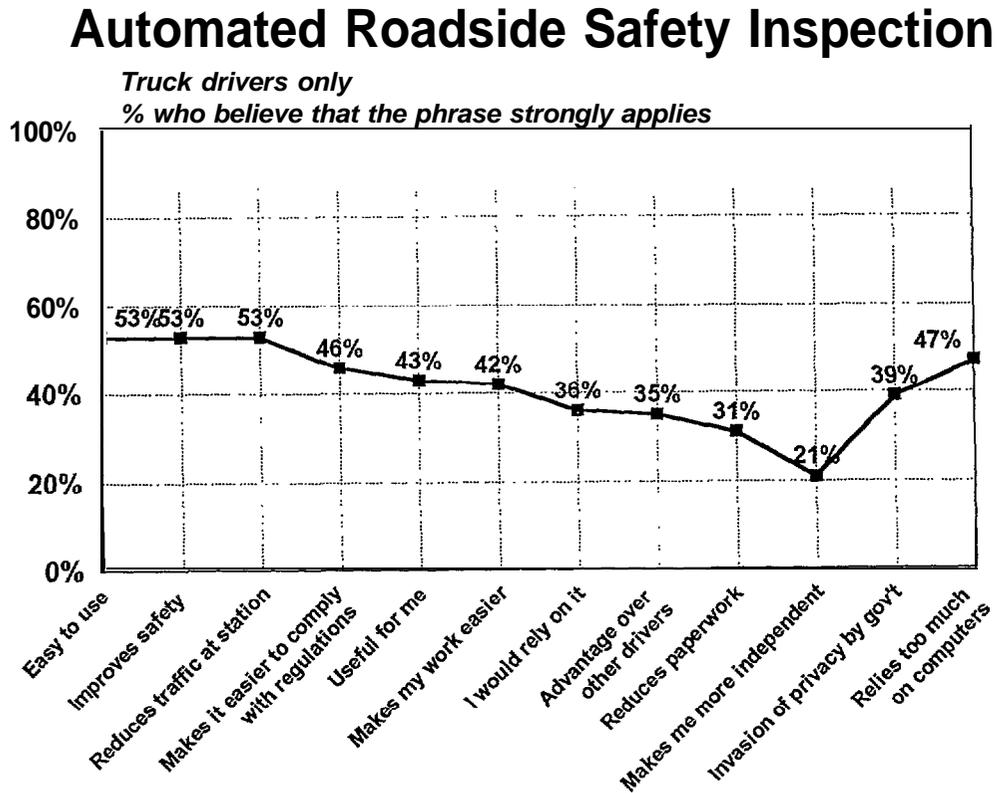
TRUCK DRIVERS' OPINIONS OF ARSI

PERCEIVED BENEFITS OF ARSI

Compared to the other five CVO services tested, truck drivers were not particularly favorable towards automated roadside safety inspection. Only about half of the respondents felt that the positive attributes strongly applied to ARSI.

Approximately one-half of truck drivers strongly agreed that automated roadside safety inspection would be easy to use (53%) would improve safety on the roads (53%), and reduce traffic at the station (53%). However, not many respondents perceived ARSI as having the ability to reduce paperwork (31%) or make drivers more independent (21%).

Chart IV. I- Attribute Ratings -- Truck drivers only



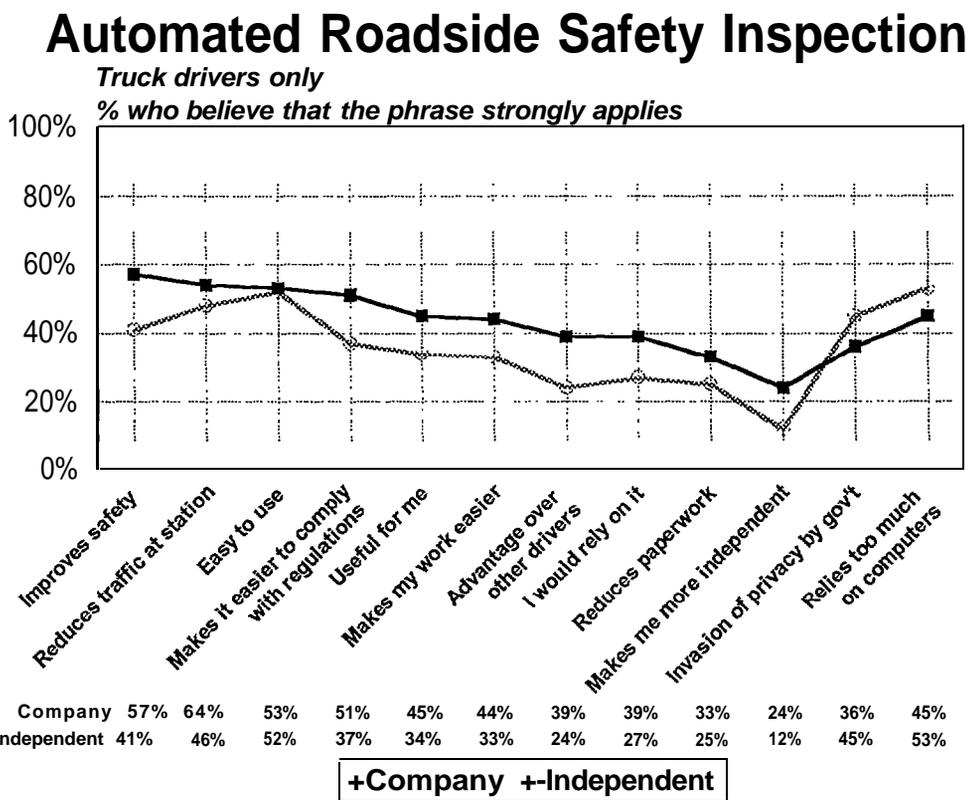
Penn + Schoen Associates, Inc. T133

Certain segments of truck drivers were more likely than others to recognize the strengths of automated roadside safety inspection service. Specifically, the following subgroups are more likely to recognize the strengths of automated roadside safety inspection service:

- **Company drivers are more favorable than independents**
- **Large fleet drivers are more favorable than small/medium fleet**
- **Full truckload drivers are more favorable than less than truckload drivers**

The greatest difference exists between company drivers and independent owner operators. As the following chart indicates, across the range of attributes company drivers are much more favorable towards automated roadside safety inspection service. However, both segments of drivers are equally likely to think that the service is easy to use.

Chart IV. 2 -- Attribute Ratings – Company drivers vs. Independent Owner Operators



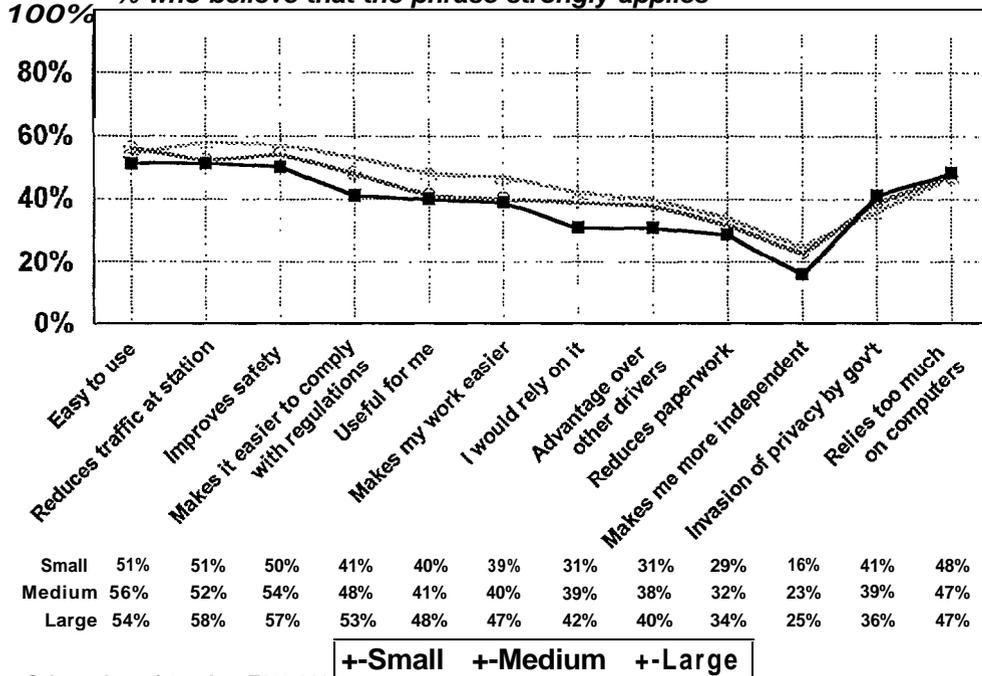
Penn + Schoen Associates, Inc. T133-144

As the following chart indicates, variations also existed between drivers depending on the size of their fleet. Large fleet drivers are much more favorable towards automated roadside safety inspection than small or medium fleet drivers. Across every attribute, large fleet drivers were better able to recognize the advantages of automated roadside safety inspection service.

Chart IV. 3 -Attribute Ratings – Small fleet vs. Medium fleet vs. Large fleet

Automated Roadside Safety Inspection

*Truck drivers only -- By fleet size
% who believe that the phrase strongly applies*

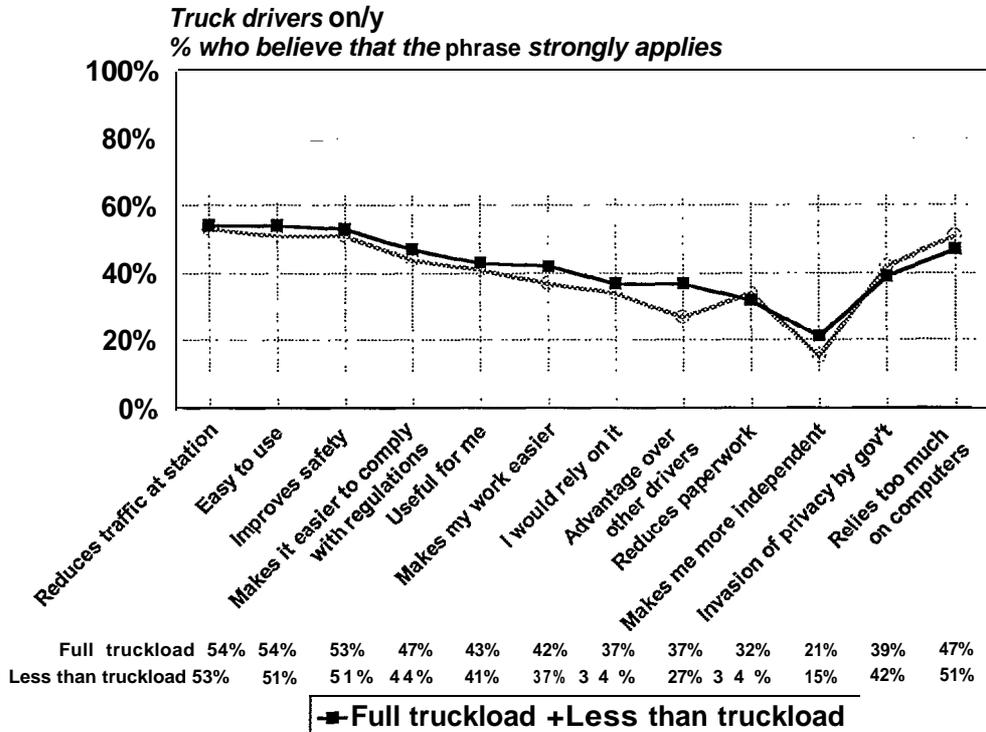


Penn + Schoen Associates, Inc. T133-144

In addition, full truckload drivers are somewhat more likely to recognize the strengths of automated roadside safety inspection service than less than truckload (LTL) drivers. Truckload drivers are more likely to believe that automated roadside safety inspection service will give them an advantage over other drivers (37% compared to the 27% of LTL drivers), makes them more independent (21% compared to the 15% of LTL drivers) and that it would make their work easier (42% compared to the 37% of LTL drivers).

Chart IV. 4 --Attribute Ratings -- Full truckload vs. Less than truckload

Automated Roadside Safety Inspection



Penn + Schoen Associates, Inc. T133-144

PERCEIVED WEAKNESSES OF ARSI

Certain weaknesses of automated roadside safety inspection service were perceived by respondents. As indicated in Chart IV.1 above, ARSI was perceived as relatively weak in the following areas:

- Respondents did not think that automated roadside safety inspection service would increase a driver's independence. Only one-fifth of drivers (21%) thought that this attribute was strongly applicable
- Thirty-nine percent of truck drivers thought that use of ARSI would lead to an invasion of driver's privacy by the government
- Almost half of the respondents (47%) felt that ARSI relied too much on computers (loss of human judgment)

The following segments of truck drivers, are most likely to perceive the relative weaknesses of automated roadside safety inspection service:

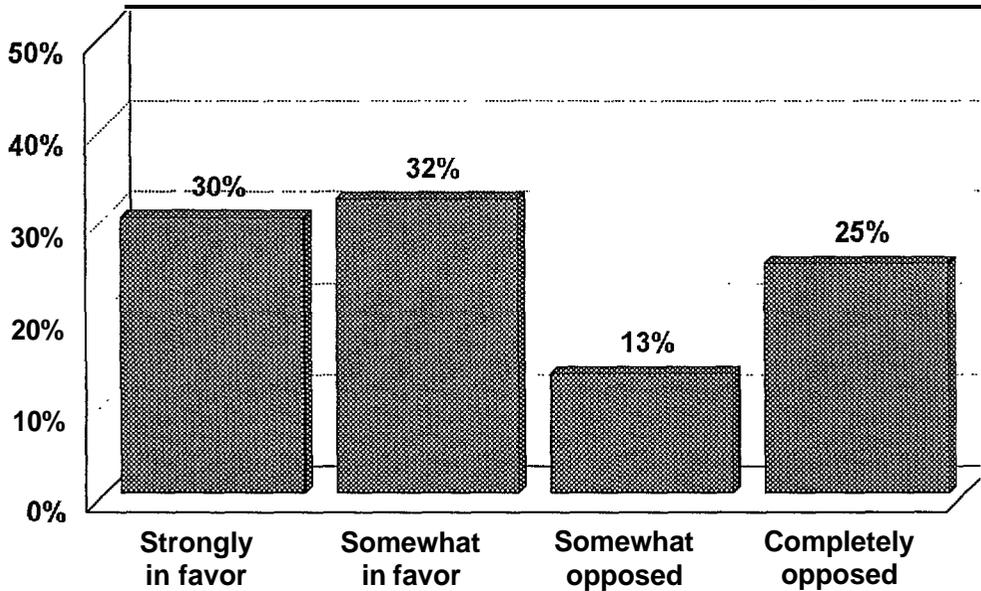
- ***Independent owner operators are more likely than company drivers to think that ARSI relies too heavily on computers (53%) and is an invasion of their privacy by the government (45%). Also, they are less favorable towards ARSI across the range of attributes and only 12% think that this service will increase their independence***
- ***Small fleet operators are less favorable towards ARSI than medium and large fleet drivers. They are more likely than large fleet operators to think that this service relies too heavily on computers. They also rate ARSI lower across the range of positive attributes***
- ***Less than truckload drivers are somewhat more likely than truckload drivers to think that ARSI is an invasion of their privacy by the government and relies too heavily on computers. In addition, only 15% were likely to think that this service would increase their independence***

ATTITUDES TOWARDS ARSI

As the chart below indicates, more than half of the respondents (62%) would be in favor of using automated roadside safety inspection service. However, of that majority, less than one in three (30%) would strongly favor using automated roadside safety inspection service. In addition, a total of 38% of truck drivers oppose using ARSI, and 25% of those respondents are completely opposed,

Chart IV. 5 – Favorability and opposition towards use of ARSI

Considering All That You Know About The Automated Roadside Safety Inspection Service, Would You Be In Favor Of Using It?



Penn + Schoen Associates, Inc. T145

Demand for automated roadside safety inspection service varies among subgroups. Company drivers (34%), who are better able to recognize the strengths of ARSI, are more likely than independent owner operators (23%) to strongly favor using automated roadside safety inspection. Independents (21%) are more likely to completely oppose the service than company drivers (34%).

Table IV. I- Favorability and Opposition To Use of ARSI

Considering all that you know about Automated Roadside Safety Inspection Service, would you be in favor of using it?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	30	62	25	38
Company	34	65	21	34
Independents	23	53	34	47

Large fleet drivers (68%) are more likely to favor using automated roadside safety inspection service than medium (60%) or small fleet drivers (60%). Small fleet drivers (30%) on the other hand, are more likely to completely oppose use of ARSI.

Table IV. 2-- Favorability and Opposition To Use of ARSI

Considering all that you know about Automated Roadside Safety Inspection Service, would you be in favor of using it?

Industry Segmentation	Strongly favor	Somewhat in favor	Opposed	Completely Opposed
Truck drivers overall	30	62	25	38
small fleet	27	60	30	41
Medium fleet	30	60	23	40
Large fleet	35	68	20	32

Drivers demand for automated roadside safety inspection also varied between full truckload drivers and less than truckload drivers. Thirty-one percent of less than truckload drivers are completely opposed to using automated roadside safety inspection service compared to the 24% of truckload drivers who are completely opposed.

Table IV. 3-- Favorability and Opposition To Use of ARSI

Considering all that you know about Automated Roadside Safety Inspection Service, would you be in favor of using it?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	30	62	25	38
Full Truckload	31	63	24	37
Less than truckload	34	60	31	40

REASONS DRIVERS ARE IN FAVOR OF USING ARSI

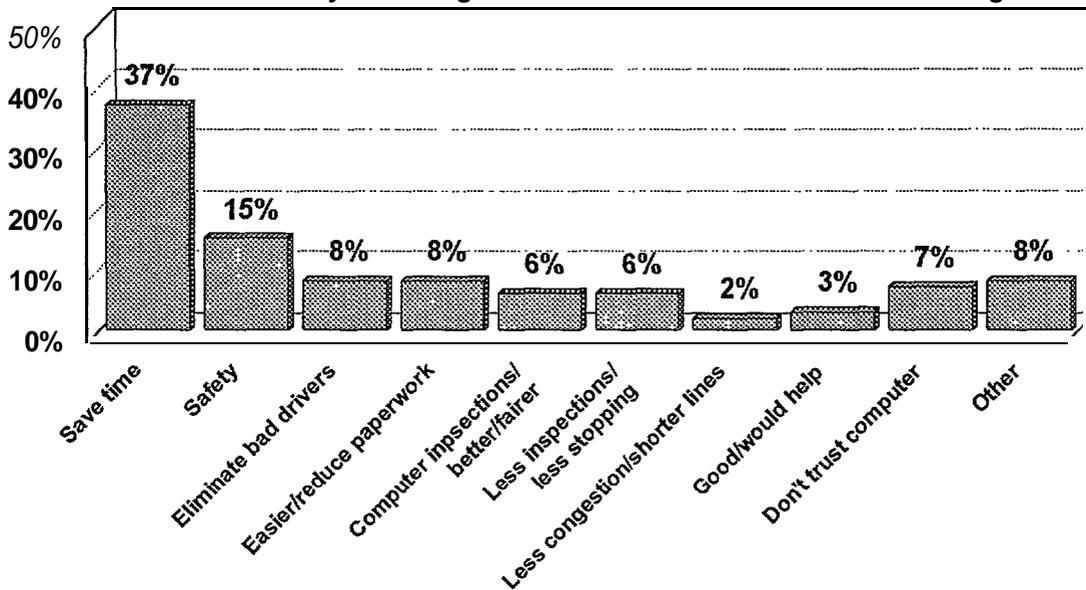
Drivers who are strongly or somewhat in favor of using automated roadside safety inspection service were asked to describe in their own words why they are in favor. As the following chart indicates, the most important reasons drivers favor ARSI is that it saves time (37%) and that it has safety benefits (15%).

Chart IV. 6 -- Open end -- Favorability towards ARSI

Why Do You Say That You Would Be In Favor Of Using Automated Roadside Safety Inspection Service?

Open end response

Truck drivers only -- Among the 62% who would be in favor of using it



Below are some verbatim responses drivers provided as to why they are in favor of installation:

- *"All wrecks would get off the road. They would know who the safe drivers are. Safety inspections would be faster and would let you know if something is wrong. Less harassment. "*
- *"Automated inspection would save time -- DOT gets pretty technical. Less paperwork. If truck driver is usually safe and hasn't had problems he won't be pulled over as much. "*
- *"Computers rely on facts -- the inspector might be having a bad day and might have an attitude -- computers don't have attitudes. Also, I have done the rolling brake test before and thought it wasn't a bad deal"*
- " *"Would get the high risk drivers off the road -- time saver -- more accurate inspections"*
- *"Something has to be done about safety for trucks and drivers. This would help clean up the bad drivers and trucks. "*

REASONS DRIVERS ARE OPPOSED TO ARSI

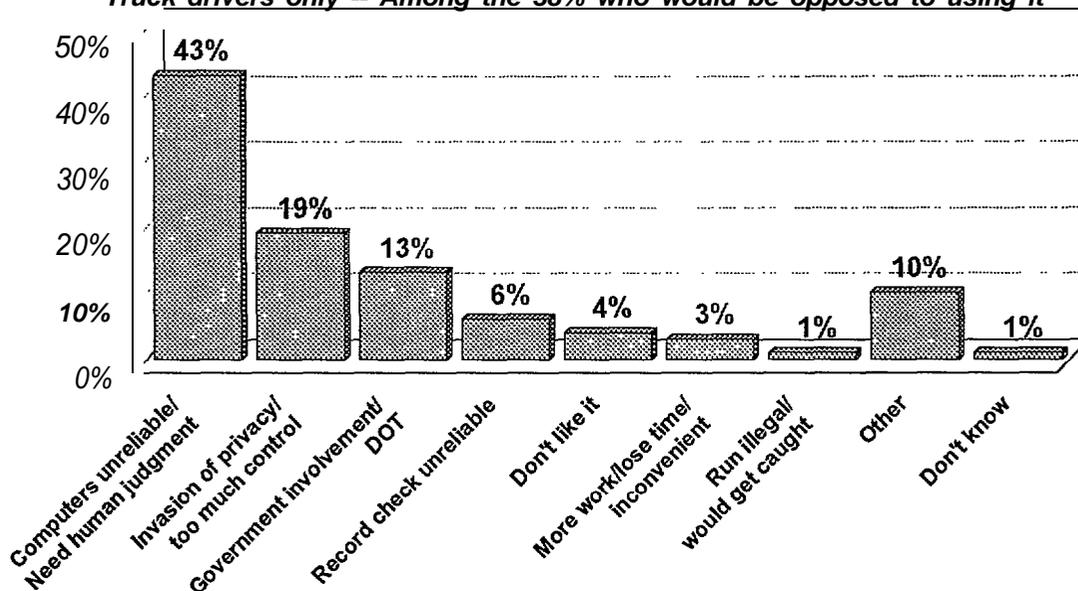
The 38% of truck drivers who said that they are opposed to using automated roadside safety inspection service were asked why. Most drivers were against using this technology because they felt that computers could not accurately inspect their truck (43%) because they felt it was an invasion of privacy (19%) or because they felt that there would be too much government involvement (13%).

Chart IV. 7- Open end -- Opposition to ARSI

Why Do You Say That You Are Opposed To Using Automated Roadside Safety Inspection Service?

Open end response

Truck drivers only -- Among the 38% who would be opposed to using it



Penn + Schoen Associates, Inc. T147

Drivers offered the following verbatim responses as to why they are opposed to having ARSI installed in their vehicles:

- "Another **way** for the government to make money. Everything is already checked by the company. Also its time consuming. The computer makes mistakes too. "
- "Because of computer error -- nothing compares to human judgment. I don't like it and I would rather **have** the human element involved. If worked for years, why fix it?"
- "I don't like that they look at the safety record of the driver. Just because I **have** tickets does not make me a bad driver. It singles people out."
- "Everytime the government is involved there **are** too **many** restrictions. Company should be responsible for safety inspections and not the federal government. "

- "If you suspect a vehicle, it should not be based on the safety history of the driver, it should be based on the driver. Just because someone has a good safety record doesn't mean that they **may** not miss something. That is why we have professionals out here to check – they just overstep their bounds sometimes. Electronics cannot accurately inspect a vehicle. 'I"

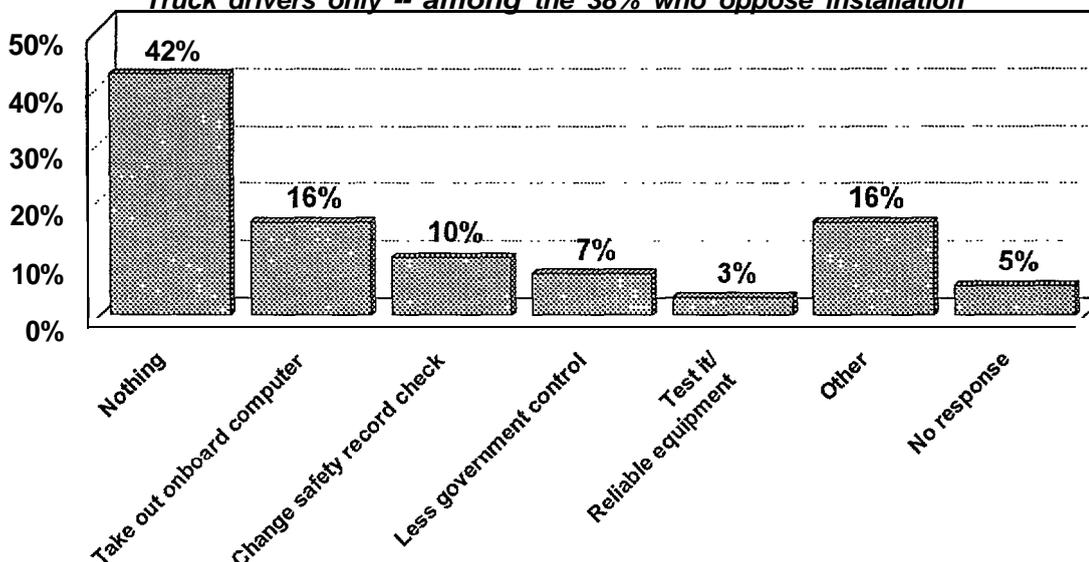
These drivers, who are opposed to installation of automated roadside safety inspection service were then asked if anything about the service could be changed to make them more favorable towards it. The following chart shows that 42% respondents said that nothing could be done and 16% said that they would like the service better if they took out the onboard computer.

Chart IV. 8 – Open end

What About Automated Roadside Safety Inspection Service Could Be Changed To Make You More Favorable Towards This Technology?

Open end response

Truck drivers only -- among the 38% who oppose installation



Following are some verbatim responses as to what could be changed about the technological service:

- *"Can't go on a driver's safety history. Tickets don't tell the whole story

Combination of computers and mans checking"*
- *"Eliminate the revenue generation by the government. Make conditions conducive fo the driver."*
- *"Not done on roadside. Do inspections at weigh stations or resf area and don't hook into my onboard computer."*

ATTITUDES AND OPINIONS OF MOTORCOACH OPERATORS

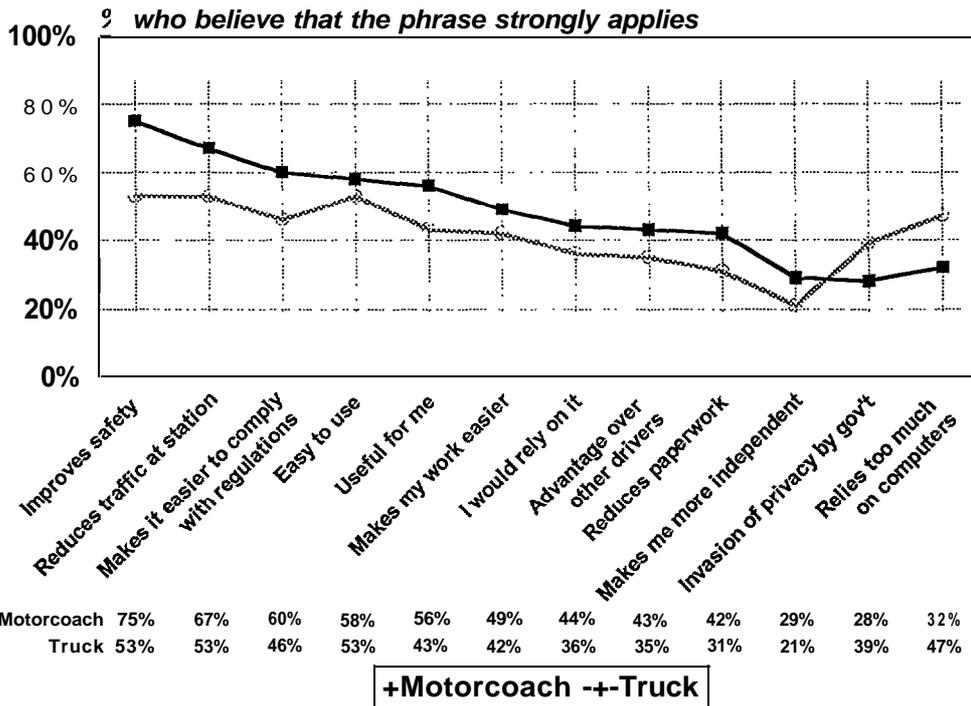
Overall, moforcoach drivers were more favorable fowards aufomafed roadside safety inspection service than truck drivers. Across the range of affribufes moforcoach drivers were beffer able to recognize the benefifs of ARSI and were less likely to associate weaknesses wifh the service.

PERCEIVED BENEFITS OF ARSI

Three-quarter (75%) of motorcoach operators felt that this technological service would help to improve safety on the road and two thirds (67%) felt that this service would help reduce traffic at the station. In addition, more than half (56%) strongly agreed that this technological service would be useful for them.

Chart IV. 9- Attribute Ratings – Motorcoach drivers vs. Truck drivers

Automated Roadside Safety Inspection



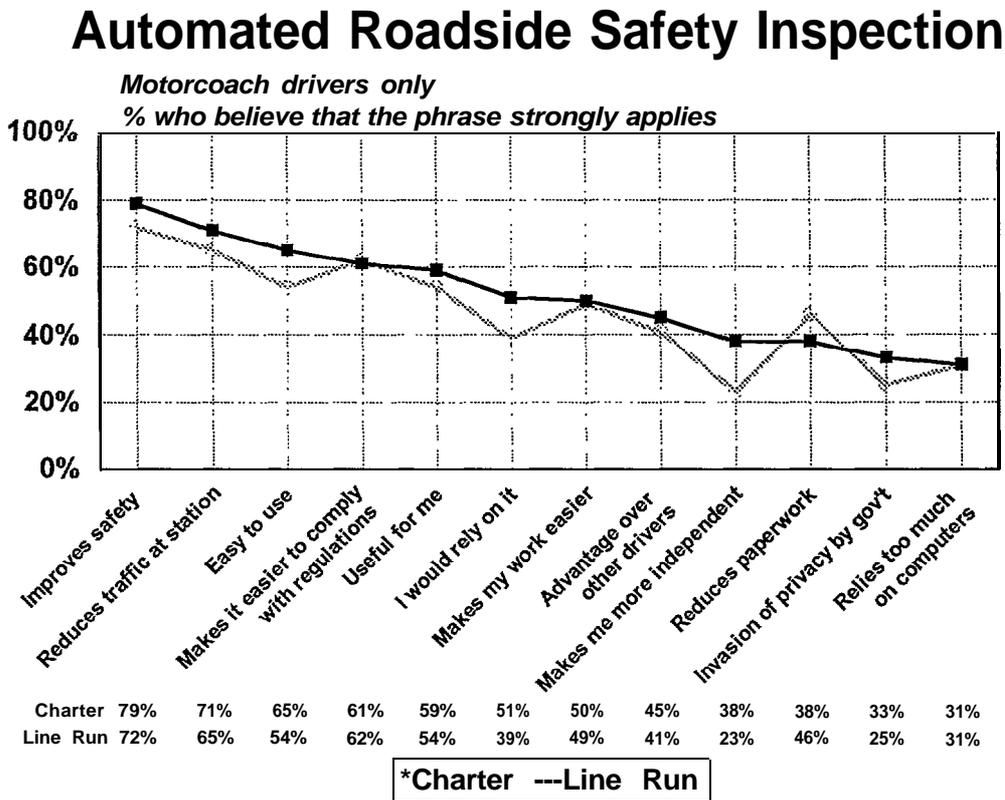
Penn + Schoen Associates, Inc. T133

Among motor-coach drivers, charter operators are better able to recognize the benefits of automated roadside safety inspection service than line run operators. The most substantial difference these two subgroups is whether ARSI makes drivers more independent: 38% of charter drivers thinks that the service makes you more independent compared to the 23% of line-run drivers. There are also substantial differences over whether the technological service is easy to use --- 65% of charter drivers think so compared to 54% of line-run operators -- and whether a driver thinks the technology would work and is

reliable -- half (51%) of charter drivers think so compared to 39% of line-run operators.

Although overall charter drivers are better able to recognize more benefits of ARSI, line-run drivers (46%) are more likely than charter operators to think that this service will help reduce the burden of paperwork.

Chart IV. IO- Attribute Ratings – Charter vs. Line-Run



PERCEIVED WEAKNESSES OF ARSI

Although the majority of motorcoach drivers are able to recognize benefits of the service, a substantial number do think that this technological service is an invasion of privacy by the government (28%) and that it relies too much on computers and that the human element is excluded (32%).

In addition, the majority of respondents did not rate the technological service particularly high for its ability to reduce paperwork (42%) or make drivers more independent (29%).

As the following table indicates, almost one in three (32%) motorcoach drivers felt that this technological service relied too heavily on computers and 28% felt that it was an invasion of privacy by the government.

Motorcoach drivers only --Attribute Ratings

Percent who believe the phrase strongly applies
All numbers represent percentages

	Motorcoach drivers	Charter	Line-run
Relies too much on computers	32	31	31
invasion of privacy by government	28	33	25

The above table also illustrates charter and line-run operators' perceptions of the relative weaknesses of automated roadside safety inspection service. In Chart IV.7 (see above) charter drivers rate automated roadside safety inspection service higher across the range of attributes than line-run drivers do. However, although charter drivers seem better able than line-run

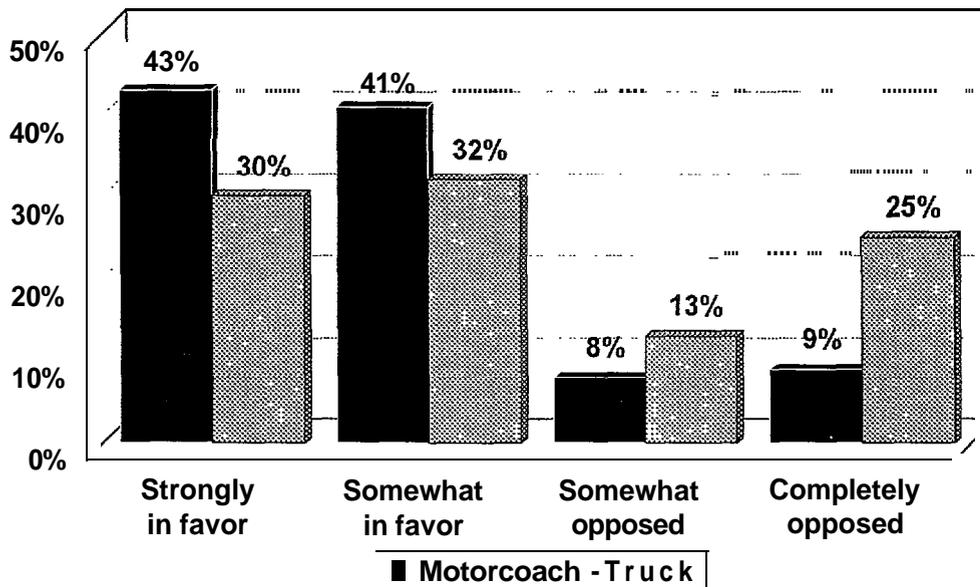
operators to recognize the strengths of this service, they are also more likely to think that ARSI is an invasion of their privacy by the government.

ATTITUDES TOWARDS ARSI

Demand for automated roadside safety inspection service is greater among motorcoach drivers than among truck drivers. More than four in five (84%) motorcoach drivers would be in favor of using automated roadside safety inspection service compared to the 62% of truck drivers who would favor it. Similarly, truck drivers (38%) are more than twice as likely as motorcoach drivers to be opposed to using this CVO Service.

Chart IV. 1 I-- Favorability and opposition towards use of ARSI

Considering All That You Know About The Automated Roadside Safety Inspection Service, Would You Be In Favor Of Using It?



Although charter drivers are better able to recognize the benefits of ARSI than line-run drivers (see chart IV.7 above), the two subgroups are about equal in their demand for the service. Overall, 86% of charter drivers are in favor of using ARSI compared to the 83% of line-run drivers. Alternatively, 15% of charter drivers oppose using this service compared to the 17% of line-run drivers. However, charter drivers' ability to better perceive the benefits of ARSI is reflected in the higher number of charter drivers who are "strongly in favor" of using the service.

Table IV. 4- Favorability and Opposition To Use of ARSI

Considering all that you know about Automated Roadside Safety Inspection Service, would you be in favor of using it?

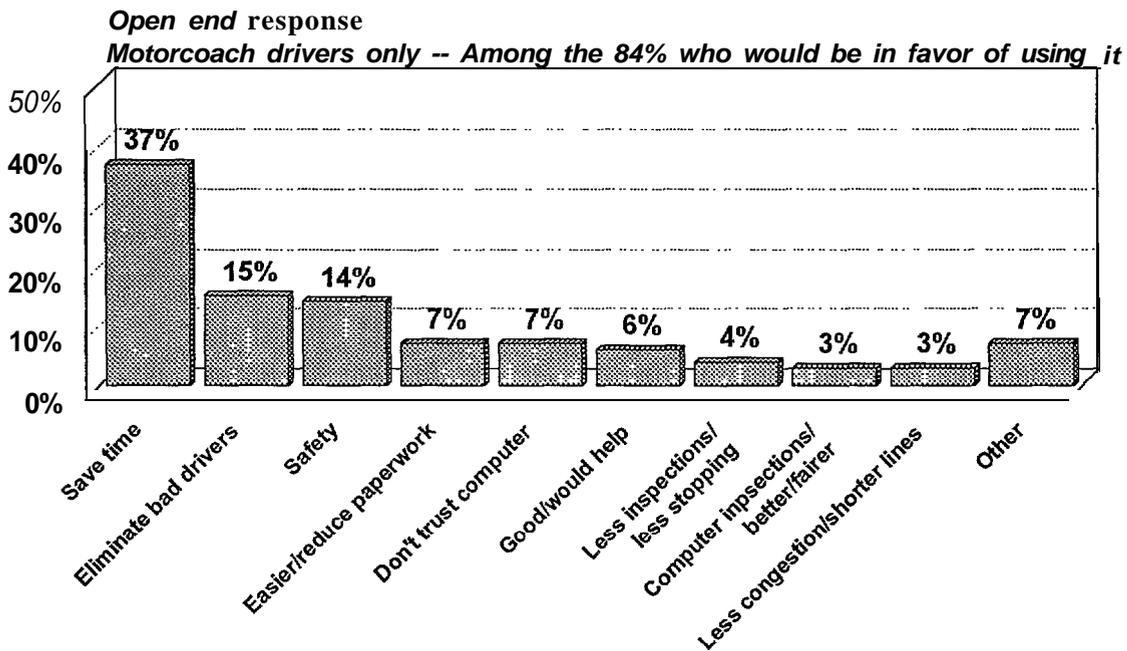
Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Motorcoach drivers overall	43	84	9	17
Charter	48	86	9	15
Line-run	39	83	8	17

REASONS MOTORCOACH OPERATORS ARE IN FAVOR OF USING ARSI

Motorcoach operators who are strongly or somewhat in favor of using automated roadside safety inspection service were asked to describe in their own words why they are in favor. As the following chart indicates, the most important reason among those drivers is that it saves time (37%).

Chart IV. 12 – Open end -- Favorability towards ARSI

Why Do You Say That You Would Be In Favor Of Using Automated Roadside Safety Inspection Service?



V. HAZARDOUS MATERIAL INCIDENT RESPONSE SERVICE (HMIR)

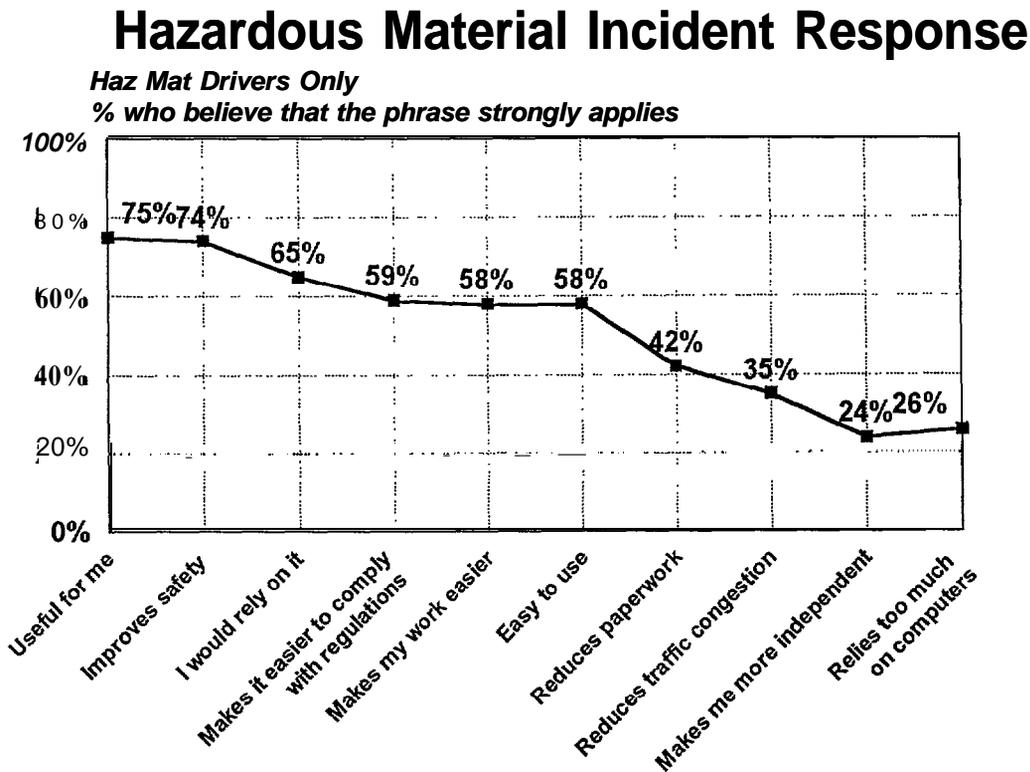
Note: those truck drivers who said that they haul hazardous materials were asked about hazardous material incident response service.

Truck drivers were extreme/y favorable towards hazardous material incident response service. Drivers were especially able to recognize the safety benefits of this technology and the usefulness it would have for the driver.

PERCEIVED BENEFITS OF HMIR

Hazardous material incident response service was perceived by the majority as having a wide range of advantages. Three in four respondents recognized that this technological service could be useful for them (75%) and would improve safety on the road. More than half of the respondents also strongly agreed that this technological service would work/they could rely on it (65%), it would make it easier to comply with existing regulations (58%), and that it would be easy to use.

Chart V. 1 – Drivers who haul hazardous materials -Attribute Ratings



Penn + Schoen Associates, Inc. T149

PERCEIVED WEAKNESSES OF HMIR

Respondents did see certain drawbacks in using hazardous materials incident response service. Approximately one in four respondents (26%) thought that this technological service relied too much on computers and excluded human judgment.

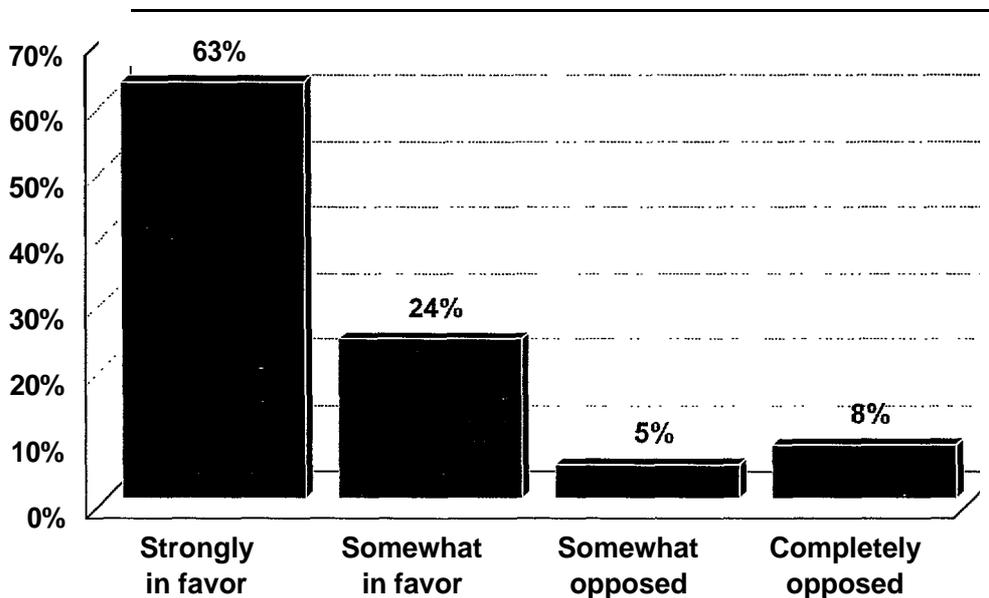
In addition, hazardous material incident response did receive relatively low ratings on some of the positive attributes. Less than a quarter of the respondents (24%) thought that this technological service would make drivers more independent, and only 35% thought that this technological service would reduce paperwork.

ATTITUDES TOWARDS HMIR

Drivers' favorability towards hazardous material incident response service is reflected in the high number of drivers who would be in favor of using this service. As the following chart indicates, 63% of drivers who haul hazardous materials are "strongly favor" of having hazardous material incident response installed in their vehicle and 87% overall are in favor of it. Only 14% of the respondents are opposed to this service.

Chart V. 2-- Drivers who haul hazardous materials -- Favorability and opposition

Considering All That You Know About Hazardous Material Incident Response, Would You Be In Favor Of Having It Installed In Your [Bus/Truck]?



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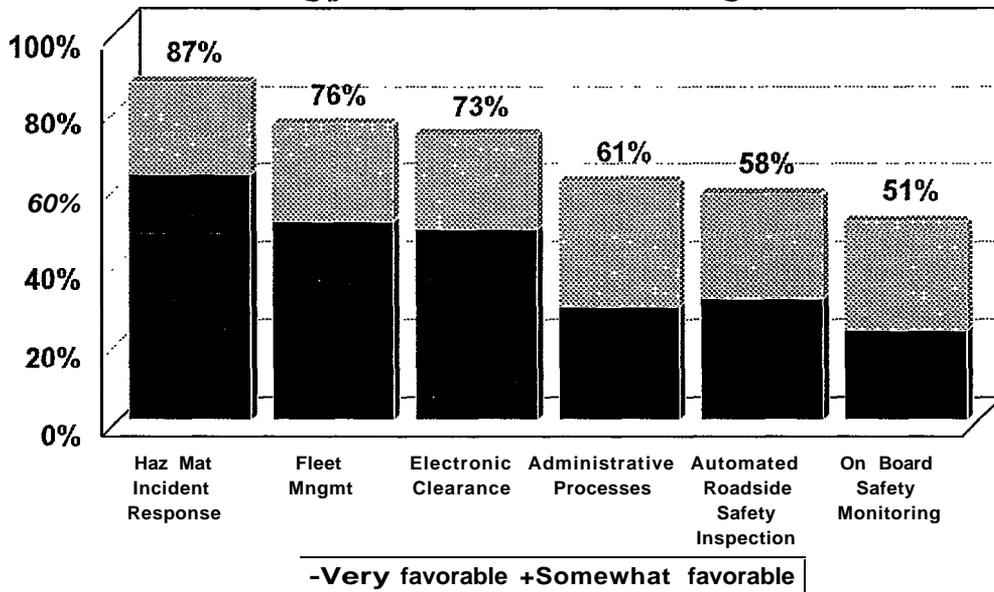
When hazardous material incident response service is compared to the other five CVO services tested, respondent's high demand for the service is

apparent. *Compared to the other five CVO services tested, respondents were most favorable towards hazardous material incident response service.*

Chart V. 3 -- Drivers who haul hazardous materials -- Favorability

Considering All That You Know About Would You Be In Favor Of Using It?

*Drivers who haul hazardous materials only --
 Percent strongly + somewhat in favor of having the service installed*

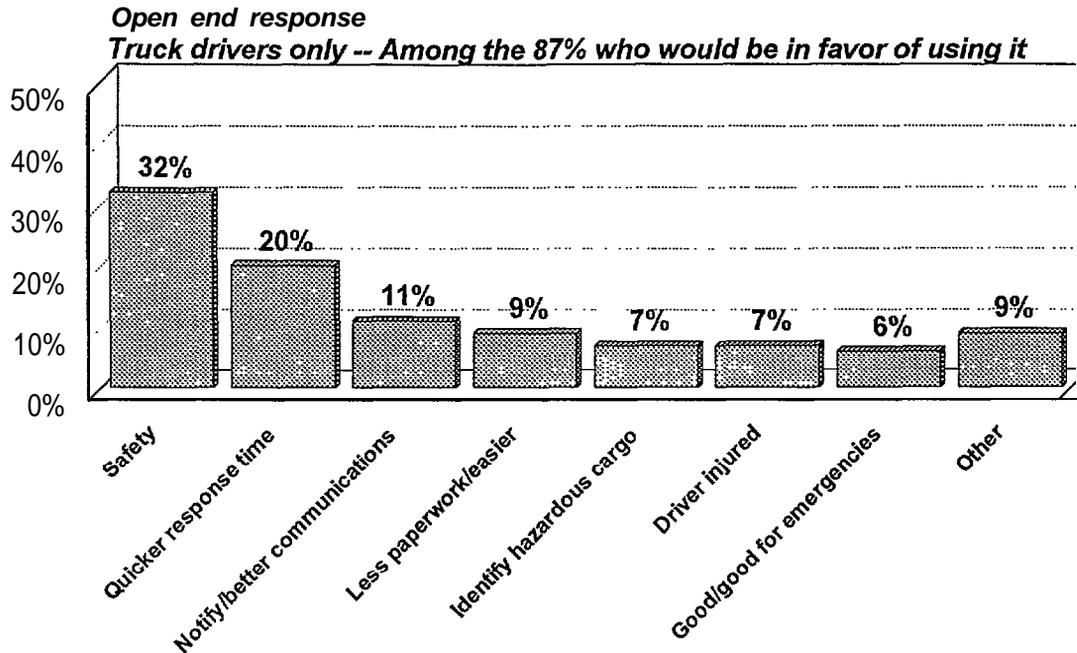


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REASONS DRIVERS ARE IN FAVOR OF USING HMIR

The 87% of drivers who are in favor of hazardous material incident response service were primarily in favor of this service because of its safety benefits.

Why Do You Say That You Would Be In Favor Of Using Hazardous Material Incident Response Service?



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The following are some verbatim responses that reflect drivers' the reasons drivers are so favorable towards this service:

- *"Anything that could increase safety is good. I am very favorable towards safe operation."*
- *"Hazardous materials should be safely carried on the road and identification of the materials is important"*
- *"A human would still know how to deal with an incident. But, if the driver were injured it would send the signal automatically. "*
- *"Too many of these accidents happen in the middle of nowhere. This would get help faster. Time is critical. "*
- *"Avoid traffic congestion in case of an accident -- would make clean up easier"*
- *"Safety purposes for the driver and the general public. Help the team appraise the situation before they get there"*

REASONS DRIVERS ARE OPPOSED TO HMIR

Of the respondents questioned, only 14% were opposed to the installation of hazardous material incident response service in their vehicle. The following is a verbatim list of some of the reasons drivers gave for opposing installation of this service:

- *"One more thing to confuse you and worry about while you are going down the road. Complicated"*
- *"It would be expensive if accident were only a fender bender"*
- *"If a truck is involved in a serious accident the sensors would not be working. I feel this is not feasible."*
- *"Too much government knowing what you are doing. They could track the truck"*

Drivers who oppose installation of hazardous material incident response service were also asked, what if anything about the technological service could be changed to make them more favorable towards it. The following are some verbatim responses offered by the drivers:

- *"Let the government pay for it instead of the driver or the carrier or the insurance company"*
- *"Include all the haz mat info in with your load info when calling to dispatchers. The telephone call is more reliable"*
- *"Install a code which indicates the nature of your incident to judge which unit is sent out"*
- *"Nothing. I don't see how it would work in case of a serious accident. Impossible"*

VI. ON BOARD SAFETY MONITORING SERVICE (OBSM)

Compared to the other CVO services tested, users were not particularly favorable towards on board safety monitoring. While a majority of respondents were able to recognize the potential safety benefits of this service, the idea that the technology was too invasive and too reliant on computers made some respondents unwilling to accept this service.

TRUCK DRIVERS' OPINIONS OF ON BOARD SAFETY MONITORING

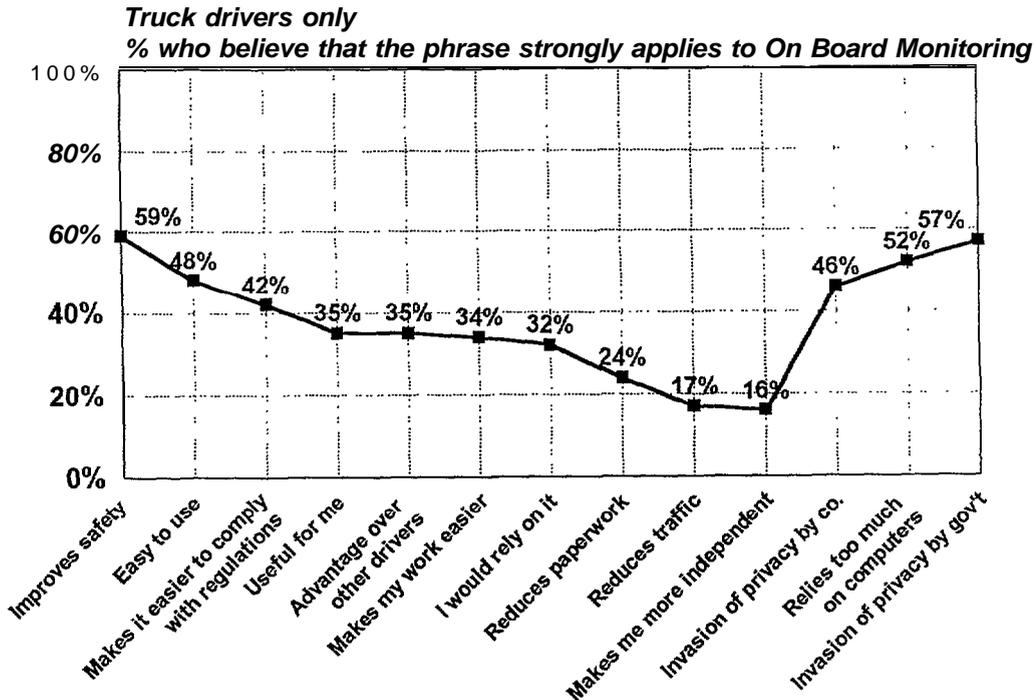
PERCEIVED BENEFITS

Among truck drivers, safety is the greatest perceived benefit of on board safety monitoring service. Almost three in five respondents (59%) thought that this service would improve safety on the roads. In fact, on board safety monitoring was rated higher than any other CVO service -- except for hazardous material incident response service -- for its ability to improve safety on the road.

As the following chart indicates, on board safety monitoring was also rated relatively highly for its ease of use (48%) and for making it easier to comply with existing regulations (42%). However, less than half of the respondents found these attributes strongly applicable.

Chart VI. 1 – Attribute Ratings -- Truck drivers only

On Board Safety Monitoring

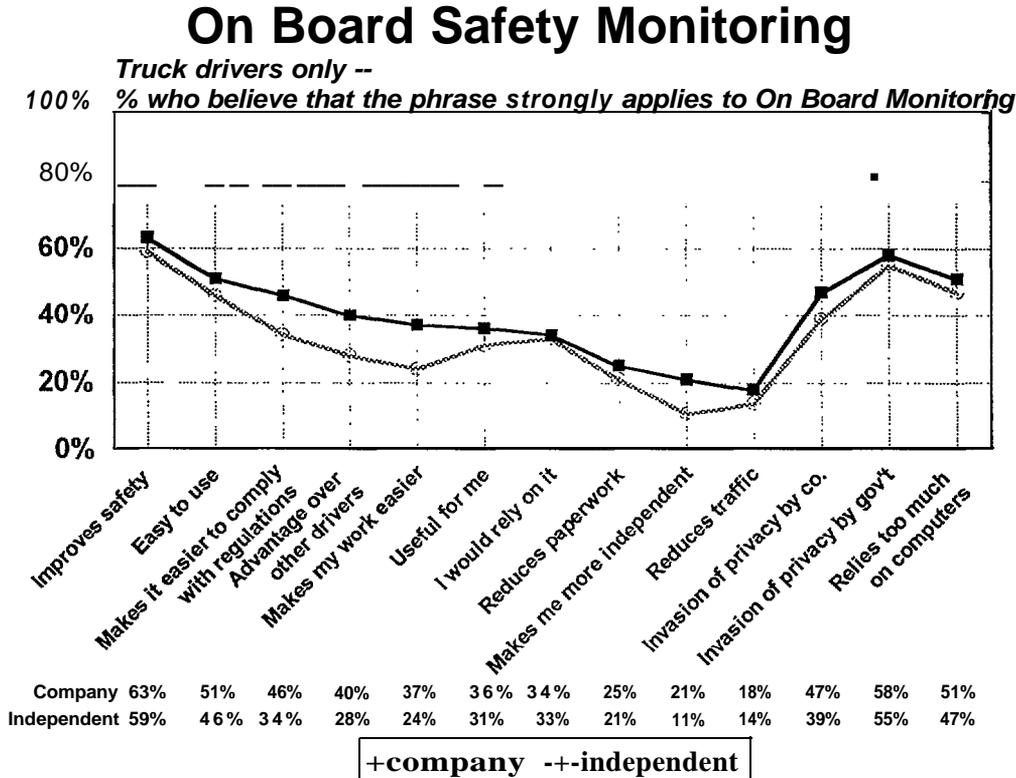


Penn + Schoen Associates, Inc. TI63

Across the range of positive attributes, company drivers are more favorable towards on board safety monitoring than independent owner operators. As the following chart indicates, company drivers are much more likely than independents to think that the following attributes strongly apply to on board safety monitoring:

- Makes it easier to comply with existing regulation
- Gives me an advantage over other drivers
- Makes my work easier
- Makes me more independent

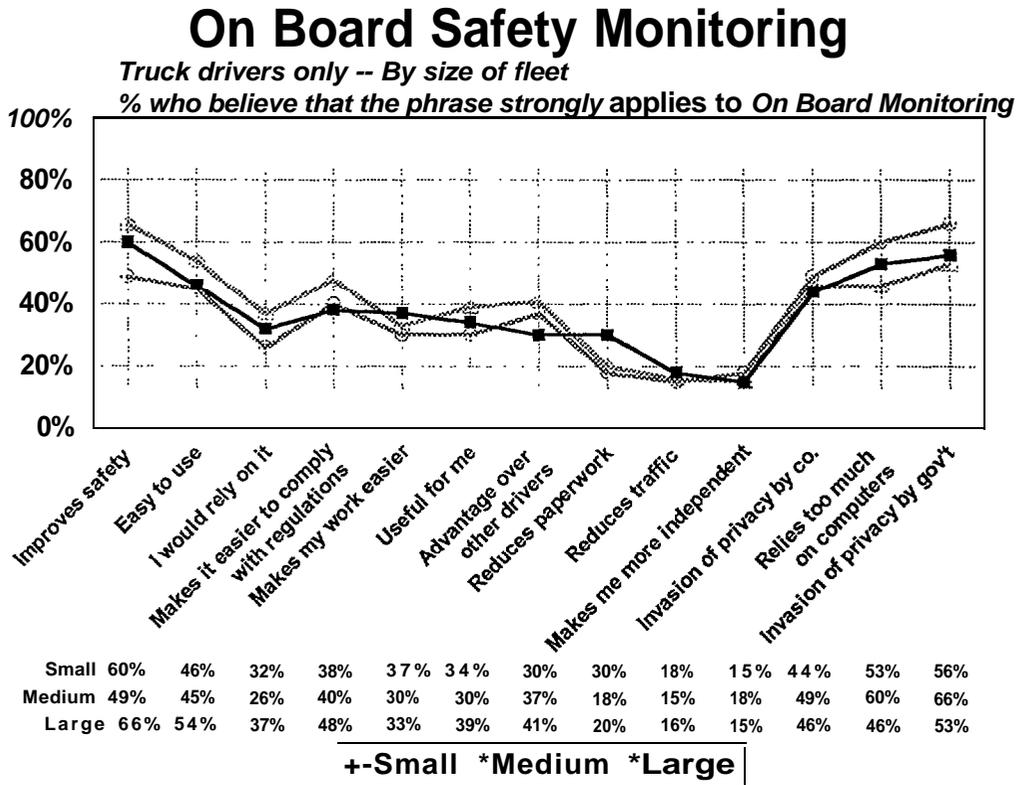
Chart V1.2- Attribute Ratings -- Company drivers vs. Independent Owner Operators



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Variations also existed between drivers depending on the size of their fleet. As the following chart indicates, drivers who are part of a large fleet are more likely than small and medium fleet drivers to think that OBSM would improve safety (66%), be easy to use (46%), would make it easier to comply with existing regulations, and would give them an advantage over other drivers. Small fleet drivers, on the other hand, are more likely than medium and large fleet drivers to recognize the benefit of OBSM in reducing paperwork.

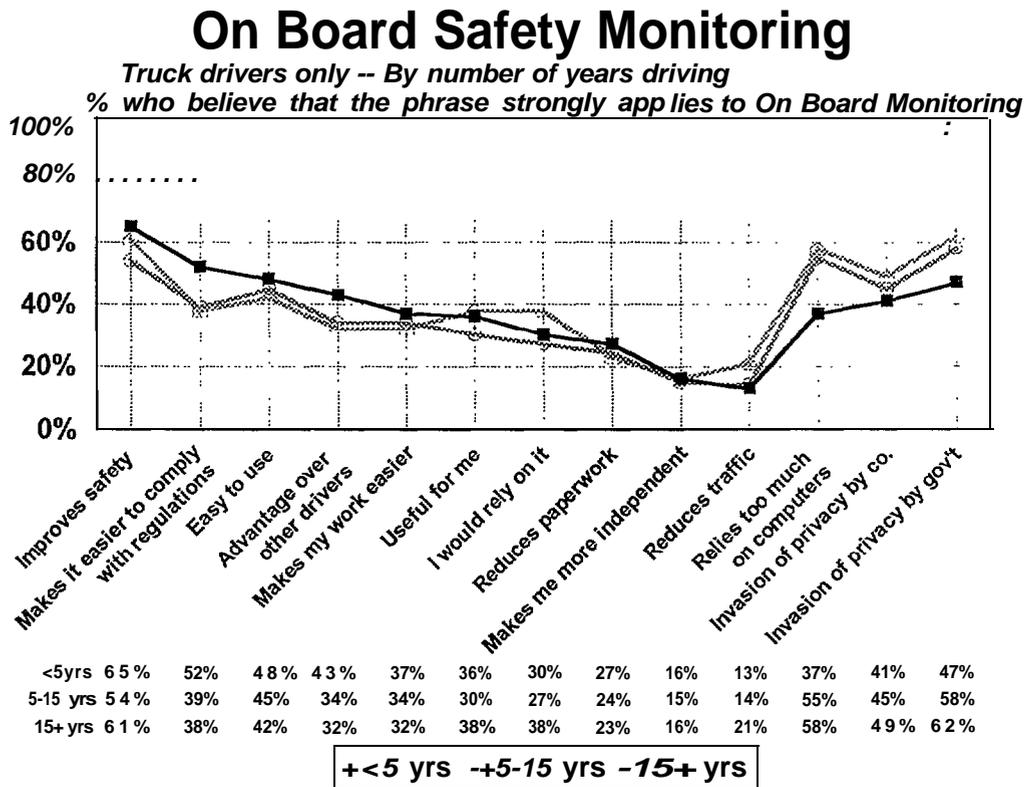
Chart VI. 3 Attribute Ratings -- Small fleet vs. Medium fleet vs. Large fleet



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Drivers who have been driving for five years or less are more likely than drivers who have been driving for longer periods of time to think that on board safety monitoring makes it easier to comply with existing regulations (52%) and gives an advantage of other drivers (48%). Drivers who have been driving for more than 15 years are more likely to think that this technological service would work/they would rely on it.

Chart VI. 4 Attribute Ratings --Number of years driving



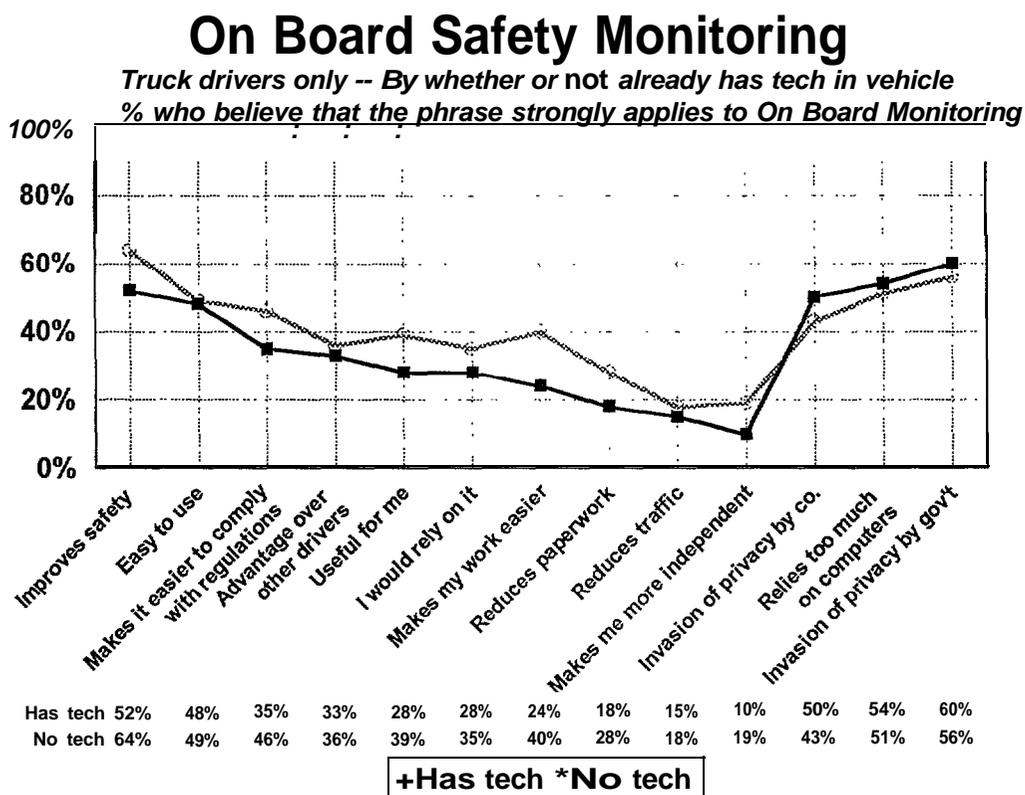
Penn + Schoen Associates, Inc. T163

Drivers who do not currently have any new technologies in their vehicle are more favorable towards on board safety monitoring service than those drivers who have already had experiences with new technologies in their vehicles. Drivers without new technologies in their vehicles are more likely than drivers with technologies to think that the following attributes strongly apply to OBSM:

- Improves safety
- Makes it easier to comply with existing regulations
- Useful for me
- Will work/I would rely on it

- Makes my work easier
- Reduces paperwork
- Makes me more independent

Chart Vi.5 --Attribute Ratings -- Drivers w/tech. vs. Drivers without technology



PERCEIVED WEAKNESSES OF ON BOARD SAFETY MONITORING

The majority of respondents perceived certain weaknesses in on board safety monitoring service. As indicated below in Table VI.1, the following are obstacles to user acceptance of OBSM:

- ***More than half of the respondents (57%) feared that on board safety monitoring service would be an invasion of their privacy by the government***
- ***More than half of the respondents (52%) felt that on board safety monitoring service relied too heavily on computers and too little on human judgment***
- ***Forty-six percent of the respondents perceived on board safety monitoring service as an invasion of drivers' privacy by their company***
- ***Only a small number of respondents -- less than one in four -- thought that on board safety monitoring service would reduce paperwork (24%), reduce traffic congestion (17%), or make drivers more independent (10%)***

Table VI. I-- Truck drivers only -Attribute Ratings

*Percent who believe the phrase strongly applies
All numbers represent percentage*

	Truck	Comp	Indep	Short haul	Long haul	Small fleet	Med fleet	Large fleet	<5 yrs	5-15 yrs	15+ yrs	Tech	No tech
Invasion of privacy by company	46	47	39	37	46	44	49	46	41	45	49	50	43
Invasion of privacy by government	57	58	55	48	59	56	66	53	47	58	62	60	56
Relies too much on computers	52	51	47	48	53	56	66	53	47	58	62	60	56

The following segments of truck drivers, are most likely to perceive the relative weaknesses of on board safety monitoring service:

- ***Company drivers (47%) are more likely than independent owner operators (39%) to perceive on board safety monitoring service as an invasion of their privacy by their company***
- ***Long haul drivers are more likely than short haul drivers to see on board safety monitoring service as an invasion of their privacy by their company (46% to 37% respectively) and are more like/y to see this service as an invasion of their privacy by the government (59% to 48% respective/y)***
- ***Medium fleet drivers are more likely than small or large fleet drivers to see OBSM as an invasion of their privacy by the company, as an invasion of their privacy by the government and as too reliant on computers***
- ***Drivers who have been driving for longer periods of time (5 years or more) are more likely than drivers who have been driving for less than five years to think that OBSM is an invasion of their privacy by the government and as too reliant on computers***

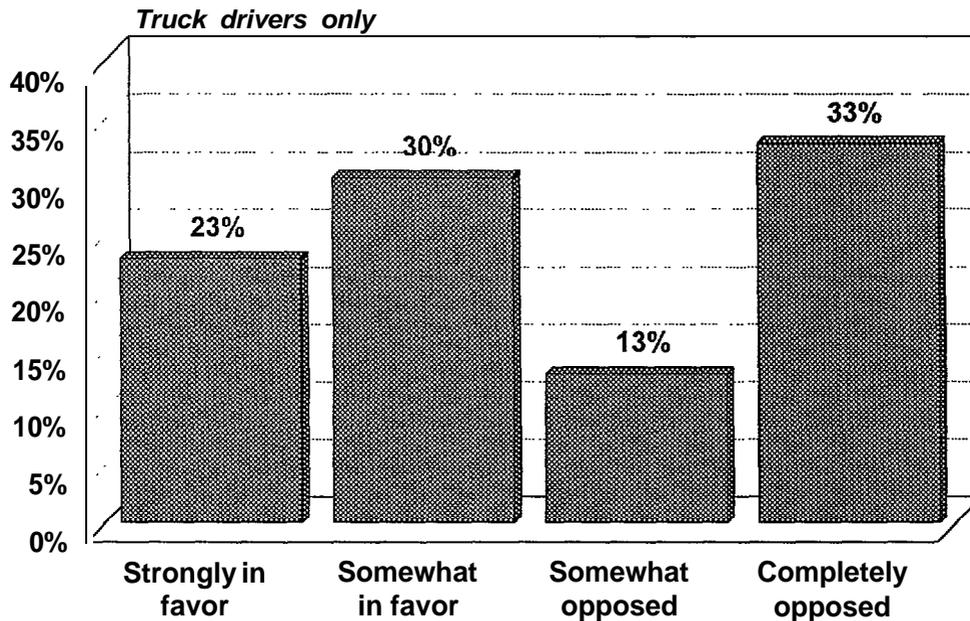
ATTITUDES TOWARDS ON BOARD SAFETY MONITORING

Respondents are almost equally divided as to whether or not they would want to have on board safety monitoring service installed in their vehicle. As the chart below indicates, slightly more than half of the respondents (53%) would be in favor of having on board safety monitoring service installed in their vehicle. Less than one in four respondents (23%) would strongly be in favor of installation.

Almost as many respondents who favor installation of on board safety monitoring are opposed to it. A total of 46% of truck drivers would be opposed to having OBSM installed in their vehicle. In addition, there are more drivers completely opposed (33%) to on board safety monitoring than drivers strongly in favor (23%) of it.

Chart VI. 6-- Favorability and opposition towards use of On Board Safety Monitoring

Considering All That You Know About The On Board Safety Monitoring Service, Would You Be In Favor Of Having It Installed In Your [Truck/Bus]?



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Desire to use onboard safety monitoring service varied among subgroups. Company drivers (27%) were more likely to strongly favor installation of this service than independent owner operators (20%). However, the independent owner operators and company drivers were just as likely to completely oppose installation of this service.

Table VI. 2- Favorability and Opposition To Use of On Board Safety Monitoring

Considering all that you know about On Board Safety Monitoring Service, would you be in favor of having it installed in your Truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	23	53	33	46
Company	27	57	32	44
Independents	20	62	32	48

Drivers who do not already have new technologies in their trucks (56%) were more likely than those drivers equipped with new technologies (49%) to favor installation of OBSM. Conversely, those drivers who were already familiar with technologies were more likely to be opposed to installation of the service than those drivers who do not currently have technologies installed in their vehicles.

Table VI. 3- Favorability and Opposition To Use of On Board Safety Monitoring

Considering all that you know about On Board Safety Monitoring Service, would you be in favor of having it installed in your Truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	23	53	33	46
Drivers with technology already in truck	21	49	38	52
Drivers with NO technology	24	56	31	44

Drivers who are relatively new to the profession -- have been driving less than five years -- are more favorable towards on board safety monitoring service than those who have been driving for longer periods of time. Drivers who have been driving for fifteen years or more (50%) are one and a half times as likely as newer drivers (less than 5 years -- 35%) to completely oppose installation of OBSM.

Table VI. 4- Favorability and Opposition To Use of On Board Safety Monitoring

Considering all that you know about On Board Safety Monitoring Service, would you be in favor of having it installed in your Truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	23	53	33	46
Driving <5 years	24	65	24	35
5-15 years	18	50	31	49
15 years +	26	50	39	50

Short haul drivers (63%) are more favorable towards installation of on board safety monitoring than long haul drivers (52%) are. Long haul drivers, who were more likely to perceive OBSM as an invasion of their privacy and too reliant on computers, were more likely to completely oppose (35%) installation of the service than short haul drivers (23%)

Chart VI. 7- Favorability and Opposition To Use of On Board Safety Monitoring

Considering all that you know about On Board Safety Monitoring Service, would you be in favor of having it installed in your Truck?

Industry Segmentation	Strongly in favor	Strongly + Somewhat in favor	Completely Opposed	Somewhat + Completely Opposed
Truck drivers overall	23	53	33	46
Short haul	23	63	23	37
Long haul	24	52	35	48

REASONS ARE IN FAVOR OF USING ON BOARD SAFETY MONITORING

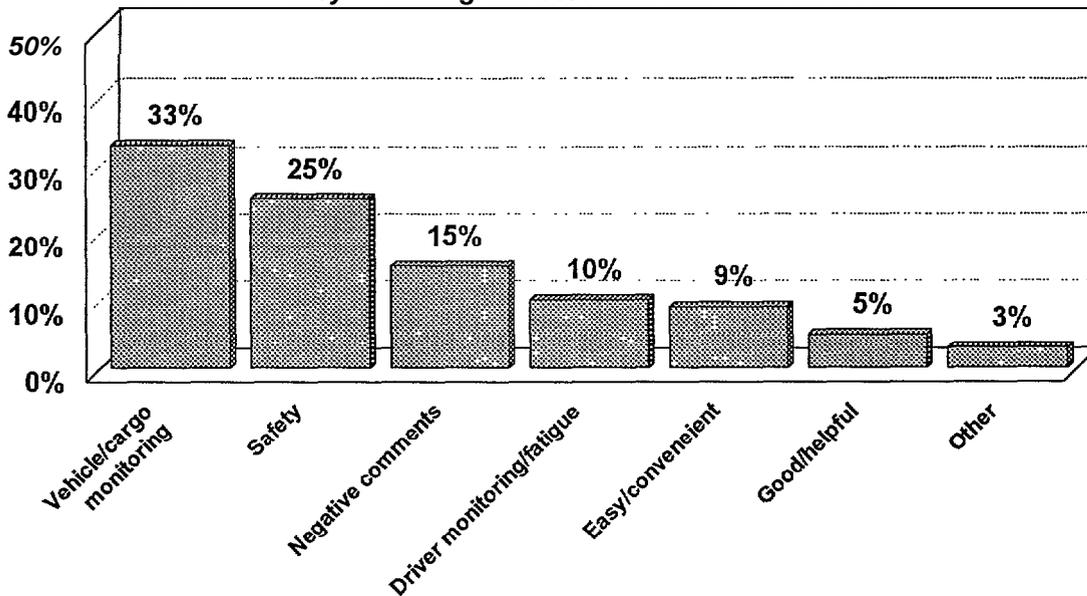
The fifty three percent of drivers who were in favor of installation of on board safety monitoring service were asked in their own words why they were favorable. Favorability towards installation of on board safety monitoring seems to be based on driver perceptions that the system will monitor the cargo and the vehicle (33%) and that it will improve safety (25%).

Chart VI. 8 – Open end -- Favorable towards OBSM

Why Do You Say That You Would Be In Favor Of Having On Board Safety Monitoring Installed?

Open end response

Truck drivers on/y -- Among the 53% who would be in favor



Penn + Schoen Associates, Inc. 1128

The following is a list of verbatim responses as to why drivers are favorable towards OBSM:

- *"Anything that will help improve the industry and increase safety is what we are looking for"*
- *"Can be an asset in order to keep bad drivers off the road. It pulls off tired drivers. But it also relies on a computers and computers are only as good as the person who programs it. "*
- *"This is the kind of technology that we need for safety purposes and to make you more efficient.*
- *"I recently had an accident. If I had this it would have told me about the tire problems I have"*

- "Eliminates a lot of people falling asleep. Monitoring cargo is very helpful -- could let you know of problems. Infringes on privacy somewhat, but something has to be done to stop all the accidents"

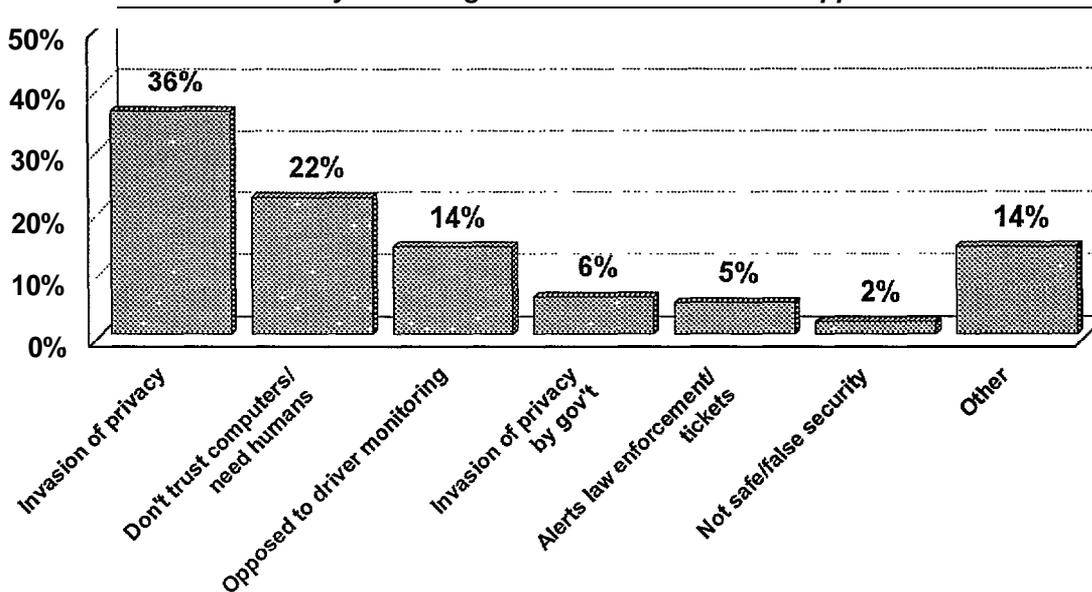
REASONS DRIVERS ARE OPPOSED TO ON BOARD SAFETY MONITORING

The 46% of truck drivers who said they are opposed to using on board safety monitoring service were most bothered by the fact that they considered this an invasion of their privacy (36%), they don't trust computers (22%) and that drivers would be monitored within their vehicles (14%).

Chart VI. 9 -- Open end -- Opposition to OBSM

Why Do You Say That You Would Be Opposed To Having On Board Safety Monitoring Installed?

Open end response
Truck drivers only -- Among the 46% who would be opposed



Drivers offered the following verbatim responses as to why they are opposed to having on board safety monitoring service installed in their vehicles:

- *"Because I know what I am doing, I don't need a computer to tell me when I am tired"*
- *"Don't like the idea of being told when I can or cannot drive by anyone -- especially the government. I know when I **am** too tired to drive -- I know my own limitations"*
- *"Relies too much on technology and not enough responsibility on the driver"*
- *"Since it alerts enforcement personnel it could get you stopped for something very minor. If you've got one tire that's a little bit low, you could get stopped for nothing. It doesn't **allow** the driver any judgment as to the seriousness of the problem"*
- *"I don't like a machine telling me what to do. It's great for dispatch and stuff but something telling me when I **go** to shut down **and go to** sleep -- that's wild, no way. Calling the police is entirely out of the question. Ain't no way. They can send a signal to the company -- I'll go for that -- but no way to the police. Out of the question. On alertness and fatigue -- what if I am up all **day** unloading and I got a hot load and have to be somewhere by the next morning or whatever. This thing's going to shut me down and I won't be **able** to make the delivery and I will be out of a job. It's gonna cost money. Company would have to **pay** more money because there is a lot of down time."*

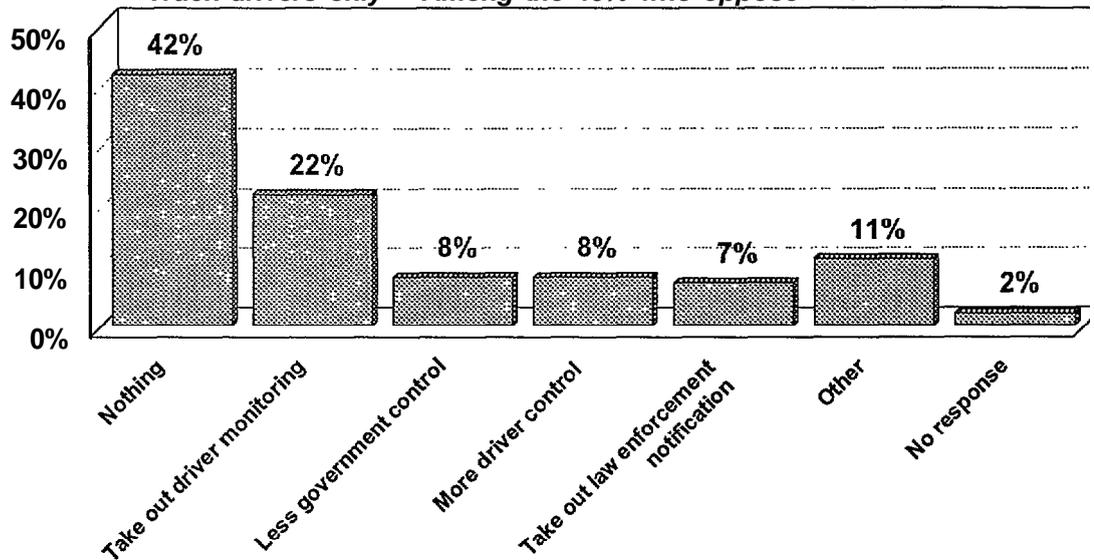
Drivers who are opposed to installation of on board safety monitoring were then asked if anything about the technological service could be changed to make them more favorable towards it. The following chart indicates that drivers would be more favorable towards the technology if the monitoring was not focused on the driver, if the government were not involved and if the information did not go to enforcement personnel.

Chart VI. 10 -- Open end

What About On Board Safety Monitoring Could Be Changed To Make You More Favorable Towards This Technology?

Open end response

Truck drivers only -- Among the 46% who oppose installation



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The following verbatim responses give some indication of what, if anything, about the technological service could be changed:

- "Can get rid of driver monitor and this calling the cops is ridiculous. The warning signals are 0. K. I like that idea but the rest of it -- / don't think so. If it triggers and only lets me know, that would be better."
- "Company should be the only people who have access to the information. "
- "I completely agree with monitoring the truck and load safety. I want to know if something is wrong -- but don't monitor the driver. "
- "Have an override switch and no tattle tale. No memory in computer"
- "Put in more human factors insfead of relying totally on computers. "

ROLE OF ENFORCEMENT PERSONNEL

Truck drivers were asked if they would be more favorable towards on board safety monitoring service if enforcement personnel were not involved in the process. As the following table illustrates, more than two-thirds of truck drivers (69%) would be more willing to accept this technology if enforcement personnel were not involved. Independent owner operators (75%) were more likely than company drivers (66%) to accept this technology if the information did not go to enforcement personnel. Similarly short haul drivers (75%) were more willing than long haul drivers (67%) to accept this service if the information did not go to enforcement officials.

Table VI. 5 – Truck drivers only

Would you be more willing to accept this technology if you knew that the information gathered from the monitoring service would not go to enforcement personnel?

	Truck drivers	Company	Independent	Short haul	Long haul
Yes	69%	66%	75%	75%	67%
No	29%	31%	24%	23%	30%
Don't know	2%	3%	1%	2%	3%

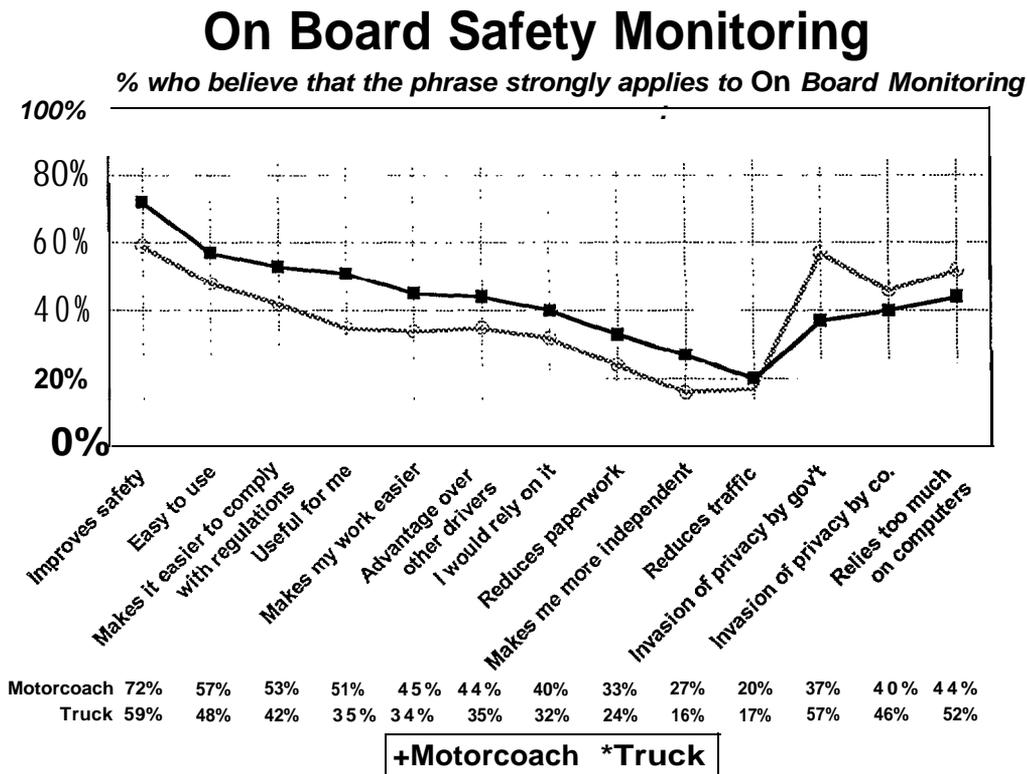
ATTITUDES AND OPINIONS OF MOTORCOACH OPERATORS

Overall, motorcoach drivers were more favorable towards on board safety monitoring service than truck drivers. Across the range of attributes motorcoach drivers were better able to recognize the benefits of this service than truck drivers and were less inclined to think that the negative attributes were strongly applicable.

PERCEIVED BENEFITS OF ON BOARD SAFETY MONITORING SERVICE

Almost three-quarters (72%) of motorcoach operators were able to recognize the safety benefits of this service. More than half of motorcoach drivers thought that on board safety monitoring service would be easy to use (57%), makes it easier to comply with existing regulations (53%). In addition, 51% of motorcoach drivers strongly agreed that this service would be useful for them.

Chart VI. 1 -- Attribute Ratings -- Motorcoach drivers vs. Truck drivers



PERCEIVED WEAKNESSES OF ON BOARD SAFETY MONITORING

As the above chart indicates (Chart VI.8), more than two in five motorcoach operators thought that on board safety monitoring service relied too heavily on computers. In addition, 40% of motorcoach drivers believed this technology was an invasion of their privacy by their company, and 37% thought that it was an invasion of their privacy by the government.

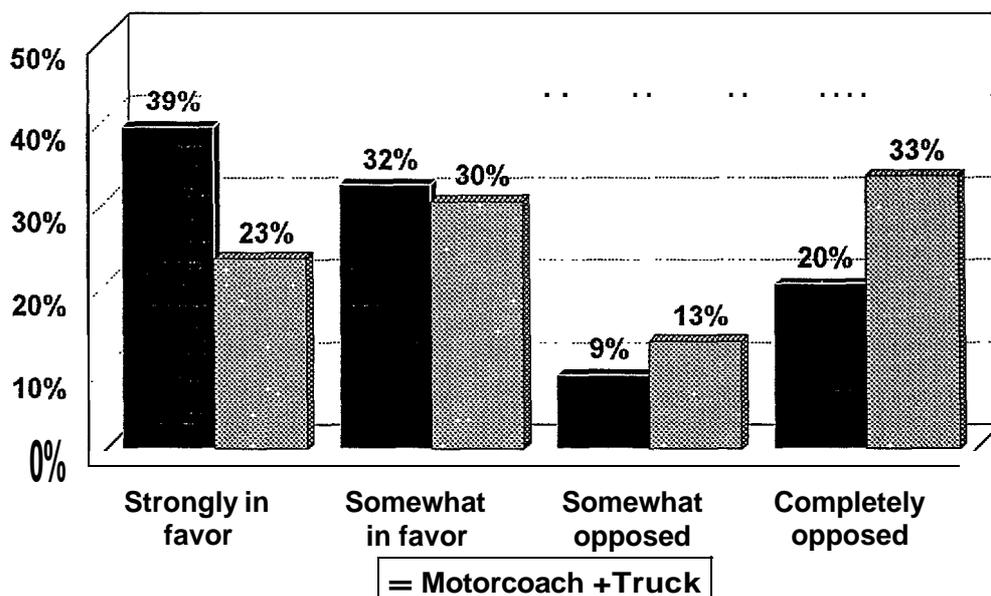
In addition the technological service was rated poorly by respondents on its ability to reduce traffic (20%) and on its ability to increase the independence of the driver (27%).

ATTITUDES TOWARDS ON BOARD SAFETY MONITORING SERVICE

Motorcoach drivers are more likely to want installation of the on board safety monitoring system than truck drivers. Seventy one percent of respondents are in favor of having this service installed in their vehicles compared to the 53% of truck drivers who were favorable. Twenty nine percent of motorcoach drivers were opposed to installation of this service.

Chart VI. 12-- Favorability and opposition towards use of On Board Safety Monitoring

Considering All That You Know About The On Board Safety Monitoring Service, Would You Be In Favor Of Having It Installed In Your [Truck/Bus]?



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REASONS MOTORCOACH OPERATORS ARE IN FAVOR OF USING OBSM

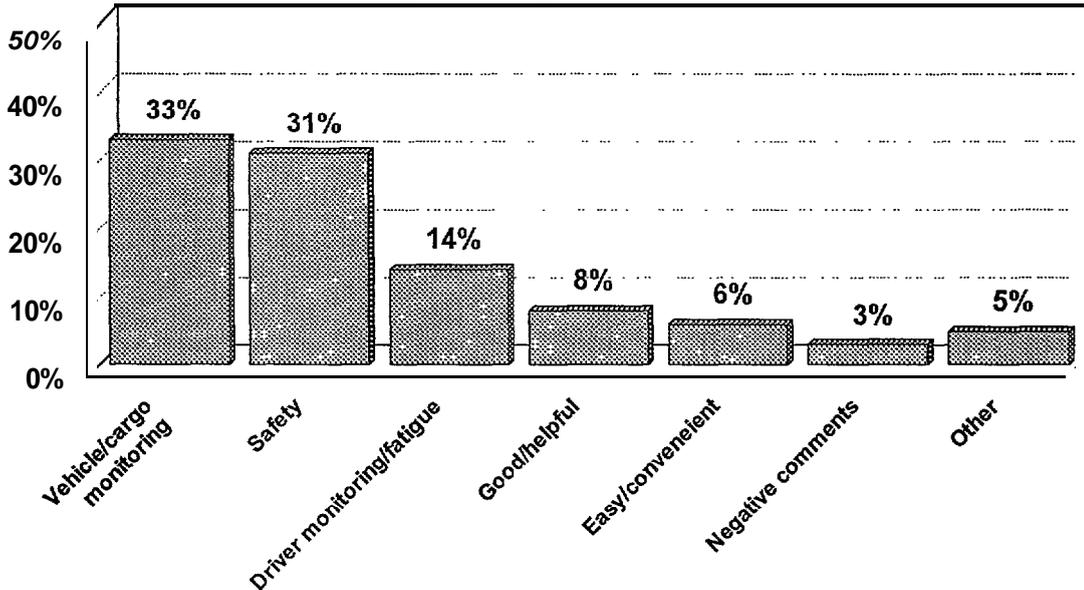
The 71% of motorcoach operators who are strongly or somewhat in favor of using on board safety monitoring service were asked to describe in their own words why they are in favor. As the following chart indicates, drivers are most favorable towards the service's ability to monitor the vehicle or cargo (33%) and the impact it will have on safety (31%).

Chart Vi. 13 – Open end – Favorable To OBSM

Why Do You Say That You Would Be In Favor Of Having On Board Safety Monitoring Installed?

Open end response

Motorcoach drivers only -- Among the 71% who would be in favor



Penn + Schoen Associates, Inc. T128

ROLE OF ENFORCEMENT PERSONNEL

When asked whether they would be more willing to accept this technological service if the information did not go to enforcement personnel, 56% of motorcoach drivers said yes and 41% said no. This is relatively less than the number of truck drivers (69%) who said that they would be more willing to accept this service if the information did not go to enforcement personnel.

Table VI. 6-- Motorcoach operators only

Would you be more willing to accept this technology if you knew that information gathered from the monitoring service would not go to enforcement personnel?

	YES	NO	DON'T KNOW
MOTORCOACH OPERATORS	58%	41%	1%