

Electronic Toll Collection Systems

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- Background
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- “Photo-Toll” technology
- General Considerations
- Conclusions



Background

Technology Advancements

- ETC systems are now technologically feasible and cost efficient
- ETC systems reduce delays and other negative aspects of traditional toll collection

Increased incidence of tolling

- Decline in “traditional” transportation revenue and growth in PPTA agreements results in imposition of tolls on additional facilities



Major Issues

Transportation network improvements

- Dramatically improved convenience and efficiency
- Data collected by ETC systems can support important operations management and research activities

Privacy

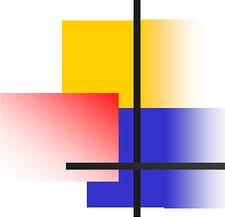
- ETC systems create significant databases, (e.g. travel patterns)

Security

- ETC systems rely on personal information that is subject to accidental or malicious release

Consent and Disclosure

- User consent and thorough disclosure of information policies is essential to safeguard the public and ensure confidence in ETC systems



Transponder Technology

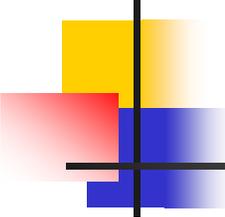
Majority of deployed ETC systems are based on “RFID” transponder technology

Advantages

- Technology has proven success in real-world application
- Transponder ETC systems are subscription-based and require consent and disclosure
- Ability to limit information disclosure within and among facilities and third parties

Disadvantage

- May not support “HOT” lanes and other non-traditional toll structures

The logo graphic consists of a vertical black line intersecting a horizontal black line. To the left of the intersection, there are three overlapping squares: a yellow one at the top, a red one in the middle, and a blue one at the bottom. The text 'EZ Pass' is positioned to the right of the vertical line, with 'EZ' in a smaller font size than 'Pass'.

EZ Pass

EZ Pass is most significant transponder system

- Numerous benefits to Virginians and other states

Consortium includes several positive information protection provisions

- Commercial use prohibitions
- Notification of routine and accidental disclosures
- Reciprocity provisions

Membership changes state role in toll policy

- Reduced autonomy for technology decisions
- State role remains critical – state policy and law determines many information practices



“Photo-toll” Technology

Photo-Toll is similar to existing “photo-red” technology

- Video or photograph of vehicle or license plate used to monitor transactions

Photo-Toll has multiple potential applications

- Enforcement
- Primary Collection



Photo-toll – Enforcement

Enforcement is primary role of currently deployed photo-toll systems

- System activated only to capture toll-violating vehicles
- Registration information cross-checked with DMV for toll collection

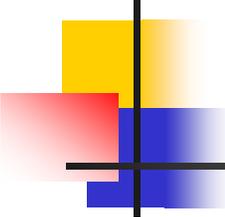


Photo-toll – Primary Collection

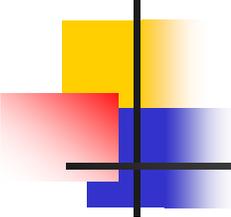
Recent legislation (SB 815, 2005) authorizes use of photo-toll as primary collection system

Significant information exchange required for viable implementation – “bulk” transfer of DMV Motor Vehicle Registration database

- Potential abrogation of consent principle
- Increased risk of accidental, improper or malicious use of personal information

Unresolved issues

- Out-of-state vehicle registrations
- Identification of responsible driver



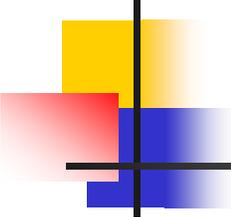
General Considerations

Federal law does not control all privacy provisions

- US Code allows release of personal information for any use authorized under state law related to “operation of a motor vehicle or public safety”

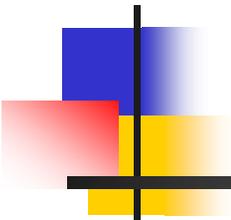
New technologies can enhance privacy and security protections

- Improved encryption technologies
- Pre-paid toll cards



Conclusions

- Prevalence of ETC systems will continue to increase
- EZ Pass membership will continue to drive Virginia's technology and procurement decisions
- State maintains important role in determining what information is collected and how it is used
- Complete public disclosure, oversight and audit of information use practices critical for system success and public acceptance



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