






Creating Cybersecurity Problems Through Regulation

GENIVI Fall Virtual All Member Meeting

October 5 - 7, 2021

About NMFTA



- NMFTA is an industry non-profit representing more than 450 companies operating in interstate, intrastate, and foreign commerce in both US and Canada
- Our LTL motor carrier members operate close to 200,000 trucks, generating over \$100 billion in freight revenue
-  National Motor Freight Classification (NMFC)
-  Standard Carrier Alpha Code (SCAC)
-  Standard Point Location Code (SPLC)
- Other activities to the benefit of the transportation industry

Our program



CTSRP Program



“Bringing stakeholders in freight transportation together to collaborate and improve their security posture through the development of best practices, tools, techniques, threat intelligence, education, and research in support of this mission.”



About Urban Jonson



Urban Jonson

- Chief Technology Officer
National Motor Freight Traffic Association, Inc.
- Principle Investigator / Manager
Commercial Transportation Security and Research Program (CTSRP)
- Transportation SME InfraGard

Past Positions

- Chief Technology Officer, Solution Technology International
- Chief Technology Officer, Technium
- Senior Consultant, Blackwell Consulting Services
- Director of IT, Marine and Aviation Management Services

Education

- University of Chicago, BA Economics



Laws and Regulations

- Really good and noble ideas
 - Protect the environment
 - Protect consumers
 - Public safety
- Laws and regulations are often
 - Complex
 - Negotiated Compromises
- Laws and regulations often result in unintended consequences especially as it pertains to cybersecurity



Intentions vs Consequences

- On Board Diagnostics (OBD) II – US EPA
 - Cellular connectivity combined with direct OBD-II access while the vehicle is in motion creates remote CAN bus access
- Electronic Logging Devices (ELD) – US DOT FMCSA
 - ELD mandate requires direct write connectivity to CAN bus as well as internet connectivity creating an unintentional internet to CAN bus bridge
- Right to Repair– Commonwealth of Massachusetts
 - Complex safety critical systems such as lane departure assist, crash avoidance, and adaptive cruise control introduce significant complications to the implementation of the right to repair for the average consumer
 - Autonomous vehicles are most likely only available as fleets



Future concerns

- CARB Heavy-Duty Remote On-board Diagnostic Devices (ROBD)
 - Everything included in OBD-II plus a few new things.. including diagnostics
 - “Once an internet connection is available, the ROBD system shall submit the encrypted data files to the CARB electronic reporting system approved by the Executive Officer. The internet connection can be satellite, cellular network, Wi-Fi, hot spot, etc.”
 - Cybersecurity requirements and best practices consciously omitted

https://ww2.arb.ca.gov/sites/default/files/classic/msprog/hdim/meetings/20201217_draft_hdim_reg_concepts.pdf

https://ww2.arb.ca.gov/sites/default/files/classic/msprog/hdim/meetings/20210803_hdim_reg_order_appx_b.pdf



Future Concerns

- Privacy Laws and Regulations
 - General Data Protection Regulation (GDPR) – EU
 - California Privacy Rights Act of 2020 (CPRA)
 - Virginia Consumer Data Protection Act (2021)
 - Colorado Privacy Act (2021)
- All in favor of privacy BUT all “rights” come with implied cybersecurity problems
 - Right to delete
 - Right to access
 - Data portability



Lessons Learned

- Interfacing with and coaching regulators is often not successful
- Planning and preparation is paramount
- Designing and implementing robust, agile cybersecurity programs and systems
 - Example: Cryptographic agility and resilience (TLS 1.0 broke the internet)
- Staying informed about upcoming regulations and laws and analyze how they can be applied to your products before they become effective

Thank You



Urban Jonson

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