



Railroad Safety Advisory Committee



Preventing Railroad Employee Distractions Caused by Personal Electronic Devices

The 44th Railroad Safety Advisory Committee Meeting

May 20, 2011
Washington, DC



What is a Personal Electronic Device?

Electronic device means a ...

- device used to conduct oral, written, or visual communication
- place or receive a telephone call
- send or read an electronic mail message or text message
- look at pictures
- read a book or other written material
- play a game
- navigate the Internet

49CFR 220.5 Definitions



Personal Electronic Devices continued



- navigate the physical world
- play, view, or listen to a video
- play, view, or listen to a television broadcast
- play or listen to a radio broadcast other than a radio broadcast by a railroad
- play or listen to music
- execute a computational function
- perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the employee or another railroad operating employee from a safety-related task

[49CFR 220.5 Definitions](#)



Cell Phone Use

- 1971 ATT proposes service to FCC
- 2011 U.S. cell phone users: **223 Million**
 - US Population **311 Million**
 - Number of mobile Web users: **60.7 Million**
 - Percentage of mobile device owners that streamed audio: **8% (about 18 Million)**
 - Percentage of mobile device owners that viewed video via their mobile phone: **7% (about 16 Million)**

Nielsen Fact Sheet

<http://blog.nielsen.com/nielsenwire/press/nielsen-fact-sheet-2010.pdf>



The Nation's Youth

- 4% of students said they thought it was acceptable to use a cell phone in class.
- 41% said they had used cell phone to check messages in class.
- 50% said use of text messaging was acceptable in class
- 33% considered playing games appropriate in class

2005 MIT Cell Culture Forum <http://web.mit.edu/newsoffice/2005/cellphone-1130.html>



Cultural Effects on Highway Safety



- 6,000 people died in 2008 in automobile crashes involving a distracted driver
- > 500,000 were injured
- On any given day in 2008, more than 800,000 vehicles were driven by someone using a hand-held cell phone.

<http://www.distracted.gov/files/for-media/12.30.09.pdf>



The Railroad Culture



- Railroad Culture is a reflection of our national culture
- As cell phone use becomes more pervasive in the general population it also becomes more socially acceptable during other activities, *including work*



Selection of Railroad Accidents with Cell Phones Involved



Date	Location	Details
12/2000	Gillette, WY	1 Dead
4/2002	Clarendon, TX	2 Dead >\$8,000,000
4/2004	Gunter, TX	1 Dead, 1 injured >\$2,600,000
4/2006	San Antonio, TX	4 Injured >\$400,000
9/2008	Chatsworth, CA	25 Dead >\$7,000,000



How have we addressed the problem so far?



- September, 2010, FRA enacted 49 CFR Part 220 Subpart C, Electronic Devices
 - Directed at Operating employees
 - Not necessarily focused on personal devices
- Limited testing of new technological fixes



How have we addressed the problem so far?



- April 21, 2011 FRA hosted Electronic Device Distraction Summit
 - Attended by representatives of rail carriers, rail labor organizations, and industry associations
 - Representatives of NHTSA, UP, and TWU gave presentations
 - Purpose: to begin the discussion about how to make use of personal electronic devices by railroad employees on the job *socially unacceptable*
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Human Factors Perspective



- Michael L. Brown, Acting Associate Administrator, Research and Program Development, National Highway Traffic Safety Administration
 - The primary responsibility of the driver is to operate a motor vehicle safely. The task of driving requires full attention and focus.
 - Drivers should resist engaging in any activity that takes their eyes and attention off the road for more than a couple of seconds.
 - Even a second or two can make all the difference in a driver being able to avoid a crash.
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Human Factors Perspective

Distraction:

- Visual - Eyes off the road
 - Manual - Hands off the wheel
 - Cognitive - Mind off the driving task
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- Texting is one of the riskiest forms of distraction; it combines all 3 types-manual, visual and cognitive distraction.
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Union Pacific's Perspective

- R. M. Grimaila, VP & Chief Safety Officer
 - Focus on behavior before accident occurs
 - Behaviors change with Engagement
 - Positive Engagement starts with Trust
 - Several programs designed to increase engagement
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Union Pacific's Perspective

- Culture is repeated behavior
 - Culture change takes time
 - We can and must decide what we want our culture to be
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TWU Perspective

Gary Maslanka, International Vice President,
Director Railroad Division

- Labor/Management Team constructed processes to:
 - Develop HAZMAT Training Program
 - Create Skilled Peer Trainers
 - Deliver Peer to Peer Training
 - Measure Effectiveness of Training Program
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TWU Perspective

- As a result of this peer-to-peer program:
 - More than 90% of respondents cited changes they made at their locations toward better and safer Hazardous Materials transportation
 - Nearly 40% believed that as a result of receiving training themselves, they had been able to limit or prevent a Hazardous Materials incident
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Discussion Summary

- Overall Recommendations:
 - Develop a program using involvement from all stakeholders
 - Build Trust
 - Set and Explain Standards
 - Consider Programs Like Operation Life Saver, Operation Red Block, or peer-to-peer coaching programs as models
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Goal



- Devise a program to make personal electronic device use by railroad employees socially unacceptable.

Task Statement

- **Purpose:**

- To prescribe mitigation strategies, programs and processes for governing the use of personal electronic devices which could cause distractions to railroad employees engaged in safety critical activities.

- **Task Description:**

- Explore additional methods to achieve compliance through education, peer to peer intervention, counseling and other cooperative, non-regulatory methods.
 - Review previous and current programs that improve compliance with rules and improve safety performance such as Clear Signal for Action (CSA).
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Task Statement

- **Issues requiring specific report:**
 - What criteria should be used to determine the most effective programs/methods of dissemination and compliance?
 - What are the desired outcomes/objectives of these programs/methods?
 - Who will develop the program to achieve the outcomes/objectives?
 - Who will institute and control the program?
 - How will the compliance and program efficacy be evaluated and monitored?
 - How much will this program cost?
 - When will all safety critical railroad employees be educated/trained through this program?
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