Countermeasures for Distraction: Electronic Devices on the Flight Deck

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Overview

• Proven Safety Concern
• Contributing Factors
• Current FAA Rule
• How can the operator proactively work to prevent this problem?
  – Policy
  – Culture
  – Software Controls
• Future FAA Rule
Proven Safety Concern

• **Attentional Tunneling**: becoming absorbed in a task to the exclusion of other visual and aural inputs, and is also a factor in the breakdown of task management. ¹

• The "party" situation, *when a person at a loud crowded party usually listens to one conversation and can easily ignore all others, is a commonplace example of attentional tunneling*. ¹

• In some ways, attentional tunneling helps people handle a situation with a high number of visual and aural inputs. However, it can also block important visual and aural information. *Because flight crew members must attend to many safety-related tasks during aircraft operations and must manage those tasks effectively, attentional tunneling can introduce risks*. ²

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Proven Safety Concern

Texting While Driving Causes:

• 1,600,000 accidents per year\(^1\)
• Causes nearly 25% of all car accidents \(^1\)
• About 6 times more likely to cause an accident than driving intoxicated \(^2\)
• The same as driving after drinking 4 beers \(^2\)

Proven Safety Concern

• 2009: Airline overflies destination by >100 miles
  – Pilots say they were using personal laptops

• 2010: Airliner aborts landing with gear up
  – Pilot says he was distracted by incoming texts

• 2011: Helicopter crashes from fuel starvation
  – NTSB: Text messages distracted pilot
Contributing Factors

• Pilot Workload
  • Old days navigating was a full time job
  • GPS / FMS
• Automation
  • FD / Autopilot
  • VNAV / Auto Throttles
• Datalink
Contributing Factors

• Generational Factors
  – Younger pilots are more apt to multi-task
  – More tech oriented

Jeff A. Kohlman, Aviation Management Consulting Group
2013 Aviation Business & Legislative Conference
April 2013
Contributing Factors

• Mission
  – Longer Range Aircraft
Contributing Factors

- Availability
  - Cell phones / EFB’s / Internet in the cockpit
Current FAA Rules

• “Sterile Cockpit” Rule 135.100 (published in 1981)
  – No certificate holder shall require, nor may any flight crewmember perform, any duties during a critical phase of flight except those duties required for the safe operation of the aircraft...
  – No flight crewmember may engage in, nor may any pilot in command permit, any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties...
  – Critical phases of flight includes all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.
    • Note: Taxi is defined as "movement of an airplane under its own power on the surface of an airport".
How can the operator proactively work to prevent this from becoming a problem?

- Policy
- Culture
- Software Controls
Policy

• When developing policy keep in mind:
  – Methods for identifying the need
  – Be practical
  – Avoid being too specific or not specific enough
  – Vet the policy
  – Determine the appropriate place to publish
  – Make crewmembers aware
  – Hold crewmembers accountable
Policy

• Extension of the “Sterile Cockpit” rule
  – 1000 feet prior to level off
  – Preflight
  – Engine Start
  – Ban items from the cockpit

• Internet in the cockpit
  – Use only for flight related activity

• Checklist
  – Cell Phones / Sterile Cockpit
Culture

What is Culture?

The ultimate test of an organization’s success is behaviors—i.e., what people *do*

Robert L Carraway, Darden School of Business
2013 Air Charter Safety Symposium
February 2013
Culture

• Lead by example
  – Bad habits trickle down from the top
• Policy must be enforced
• Positive reinforcement
Software Controls

Mobile Device Management
Software Controls

- Apple Mobile Device Management
  - Configurable settings
- Current manual requirements
- Document sharing
- How L.J. Aviation uses MDM for our iPad EFB’s
- Inherent problems
Software Controls

- **Apple MDM Pertinent Configurable Settings:**
  - **Accounts**
    - Email
    - Wi-Fi
  - **Device functionality**
    - Installing apps
    - Siri
    - Camera
    - FaceTime
    - In-App Purchase
    - Multiplayer gaming
    - Adding Game Center friends
  - **Applications**
    - YouTube
    - iTunes Store
    - Safari

Software Controls

• Current Manual Requirements:
  – Restrict user from installing all but selected apps
    • Can blacklist Apps
  – Remotely remove non-managed apps
  – Modify Apple ID information
  – Restrict users from deleting apps
Software Controls

• Document Sharing
  – Security
  – Currency
  – Auditability
Software Controls

• How L.J. Aviation uses MDM
  • We manually enroll all devices
    • Install required apps
    • Load company email address
    • Download documents
  • Each pilot is issued an iPad
  • Training / Manual
  • Audit
Software Controls

• Inherent problems
  • At the mercy of the manufacturer
  • At the mercy of the App company
  • Ever evolving

Something, somewhere went terribly wrong
Future FAA Rules

- NPRM 14 CFR Part 121
- SUMMARY: The proposed rule would prohibit flight crew from using a personal wireless communications device or laptop computer for personal use while at their duty station on the flight deck while the aircraft is being operated. This rule is intended to ensure that certain non-essential activities do not contribute to the challenge of task management on the flight deck or a loss of situational awareness due to attention to non-essential tasks.

In Summary

• There is a proven safety concern associated with electronic devices in the cockpit.

• If we as operators are proactive, we can use countermeasures to eliminate this concern.
Air Charter Summit: Corporate Policies For Electronics

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Gammon & Grange, P.C.
June 19, 2013
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- Intellectual property, trademark, copyright law
- Internet and social media law
- Nonprofit law
Respondeat superior

The legal theory of *respondeat superior* ("vicarious responsibility") means that an employer may be held legally accountable for negligent employee actions if the employee was *acting within the scope of his or her employment.*
Liability for employee use of electronics
TEXTING PILOT IN FATAL MISSOURI CRASH MADE RISKY DECISION TO FLY WITH INADEQUATE FUEL

Four people were killed when a LifeNet Eurocopter AS350 B2 helicopter ran out of fuel near Mosby, Mo. in August 2011. NTSB Photo

The air medical pilot involved in a fatal crash near Mosby, Mo. in 2011 was likely distracted by personal text messages when he took off without checking his fuel, then knowingly continued to fly with inadequate fuel, the United States National Transportation Safety Board (NTSB) determined on Tuesday.
Employee use of electronics

Examples of liability

- A driver and the corporation that owned the vehicle were liable for $21.6 million because the driver may have been talking with her husband on a cell phone at the time of a fatal crash.

- An off-duty police officer was texting shortly before a fatal crash. Because he was driving a police vehicle, the police department was held liable for $4 million.

- A federal judge awarded $18 million in a case involving a crash that killed three people and injured 15. The driver of the tractor-trailer was checking his phone for text messages when his truck ran into 10 vehicles that had stopped in backed-up traffic on a freeway.
Employee use of electronics

Employers should set policies that exceed existing rules, regulations, and laws.

- Regulations and laws often prescribe only minimum standards, not best-in-class safety.
- Best to get ahead of the curve.
Employee use of electronics

In addition to having a good policy, employers need to:

- Educate employees
- Monitor compliance
- Enforce the policy
- Address violations
Employee use of electronics

- It is crucial to enforce your company policies. Having a good policy but not enforcing it can be the basis for liability just as much as not having a policy at all.
Liability for employee use of social media
Employee use of social media

Don’t let your employees post anything in social media that you wouldn’t want to see on the front page of the New York Times (or to go viral!).

The New York Times
Employee use of social media

Tweets from Congressional Staffers Describe On-Job Drinking in Office of Congressman Larsen
www.nwdailymarker.com
Employee use of social media

Don’t let your employees post anything in social media that you wouldn’t want to hear on the witness stand.

- Posts on social networks are generally discoverable in litigation.
Employee use of social media

If you’re not allowed to do it in the “real world,” you’re probably not allowed to do it in a virtual world.

- Real world laws do apply to the virtual world (including social media).
Employee use of social media

Actions taken by an company’s employees can be held against the company.

- This can sometimes be true even if the employee’s posts are ostensibly done in his/her “personal” life
- The line between personal and professional life is becoming increasingly blurred in the social media world.
Employee use of social media

Some legal issues to be concerned about regarding employee social media use:

- Intellectual property
- Defamation
- Harassment
- Confidential information
- Many others
Intellectual Property (IP)

Trademarks:
- company name
- logo
- slogan
- product or service names
Intellectual Property (IP)

Copyright - protects content:

- publications (reports, brochures, etc.)
- websites
- videos
- music
- photos
Intellectual Property (IP)

Need to be careful of:

1. Your company infringing on others’ IP
2. Others infringing on your company’s IP
Defamation

Facebook posts by Pizza Kitchen owner lead to $2M suit
Marketing firm claims Pizza Kitchen remarks hurt its reputation

Issuance of a false statement about another person, which causes that person to suffer harm.

- Employers may face liability when employees use social media to disseminate rumors, gossip, and offensive false statements about co-workers.
Hostile work environment/Harassment

Social media expands an employer's potential liability outside its physical location and work hours.

- For example, a supervisor who "friends" a coworker on Facebook could lead to inappropriate remarks or actions outside of the workplace and work hours.
Discrimination

Employers may face liability when employees use social media to make discriminatory statements, racial slurs, or sexual innuendos directed at co-workers.
Disclosure of Confidential Information

Employers can be held liable for improper disclosure confidential or other protected information in social media.
Ownership & control of social media accounts

Do not let employees set up social media accounts using their own personal contact information!
Ownership & control of social media accounts

Who controls your company’s social media accounts?

Without proper agreements or policies, ownership of social media accounts and website domain names created by employees could be unclear when he or she leaves the company.
Ownership & control of social media accounts

Management, *not lower-level employees or contractors* should have control over:

- setting up the accounts,
- using the company name in the account name,
- maintaining the passwords,
- giving access only to those who need it as part of their job duties, and
- directing the content.
Advertising

The Federal Trade Commission Act’s prohibition on “unfair or deceptive acts or practices,” which broadly covers advertising claims, apply equally to social media.

Required disclosures must be clear and conspicuous, even with the space limitations of social media entries.
Social media policy

Employers should have social media policy to govern use of social media by employees. Should include:

- Prohibit infringing uses of third party copyrighted works (e.g., videos, music, text) and trademarks (names and logos).
- Prohibit unauthorized dissemination of employer’s own copyrighted works and trademarks.
- Prohibit obscene, defamatory, harassing and/or abusive language.
- Prohibit disclosure of sensitive, proprietary, confidential, or financial information about the employer.
Social media policy

The employer should communicate (in employee contracts and/or policies):

- The employer owns the accounts and the content, and that contributing content is part of the employee’s job duties
- Employees may not set up personal accounts using company names and trademarks
Social media policy

- What is considered "acceptable use" (i.e., business use only, limited personal use, or unlimited personal use).
- Personal posts, blogs, etc. that relate to the field of the employer’s activities should be distinguished from the employer.
Right to "concerted activity"

The National Labor Relations Act

• Protects an employees’ right to engage in "concerted activity” (with or without a union):
  - when two or more employees take action for their mutual aid regarding terms and conditions of employment.

• Covers many activities, including:
  - discussions about pay,
  - work conditions, or
  - safety concerns.

• Extends to certain work-related conversations conducted on social media.
Social media policy

Every company’s social media policy will be different, should be tailored depending on:

- Company size
- Employee culture
- Degree of social media use
- Branding & marketing strategy