



The Honorable  
Christopher A. Hart  
Vice Chairman

# Outline

- NTSB Basics
- Two Future Safety Concerns
  - Automation
  - Personal Electronic Devices



# What the NTSB Does

- Independent agency, investigate transportation accidents, all modes
- Determine probable cause(s) and make recommendations to prevent recurrences
- Conduct special studies and investigations
- Assist victims and their families



# Independent

- 5 Members, nominated by the President, confirmed by the Senate
- Members are not investigators
- Safeguards for independence
- Conclusions from facts, not politics



# Purpose

- Single focus is *SAFETY*
- Primary product:  
Safety recommendations



# Safety Recommendations

- Safety recommendations are issued to any organization that has authority to fix the problem, including operators, regulators, labor unions, and state and local governments
- Recommendation acceptance rate:  
More than 82%



# Recent Automation Accidents

- Turkish Airlines: February 2009
- Metro: June 2009
- Air France: June 2009??



# Turkish Airlines Flight 1951

- Inoperative Left Side Altimeter
- Pilots Selected Right Side Autopilot



- ATC Directed Aircraft Too High
- Autopilot Commanded Throttles To Idle
- Go-Around Unsuccessful



# Metro, Washington DC

- Electronic Collision Prevention
- Parasitic Electronic Oscillation
- Stopped (Struck) Train Electronically Invisible



- Following (Striking) Train Was Accelerating
- Stopped Train was on Curve



# Air France Flight 447??

- Operating on Autopilot
- Night, In Clouds, Turbulence
- Airspeed Information Sensors Frozen



- Autopilot Inoperative Without Airspeed
- Pilots' Responses Inappropriate



# Recent P.E.D. Investigations

- Chatsworth: September 2008
- Minneapolis Overflight: October 2009
- Philadelphia Duck: July 2010



# Train Collision, Chatsworth

- Commuter Train Engineer Texting
- Previously Warned Against Texting



- Commuter Train Passed Red Signal
- Collided With Oncoming Freight Train
- NTSB Recommended In-Cab Camera



# Minneapolis Overflight

- ATC Lost Radio Contact With Airliner
- Airliner Still on Radar
- Overflew Destination
- Pilots Alerted by Flight Attendants
- Pilots on Laptops???



# “Duck” Overrun

- Duck Engine Overheated
- Duck Stopped, Anchored in Ship Channel



- Barge/Tug Operator on Cellphone
- Barge Empty, High in Water
- Barge/Tug Operator Not on Top Deck
- Radio Warnings Unanswered



# Conclusions

- Automation is *NOT* the “Silver Bullet”
- Professionalism Will *ALWAYS* Be Essential



Thank You

***Questions?***



National Transportation Safety Board