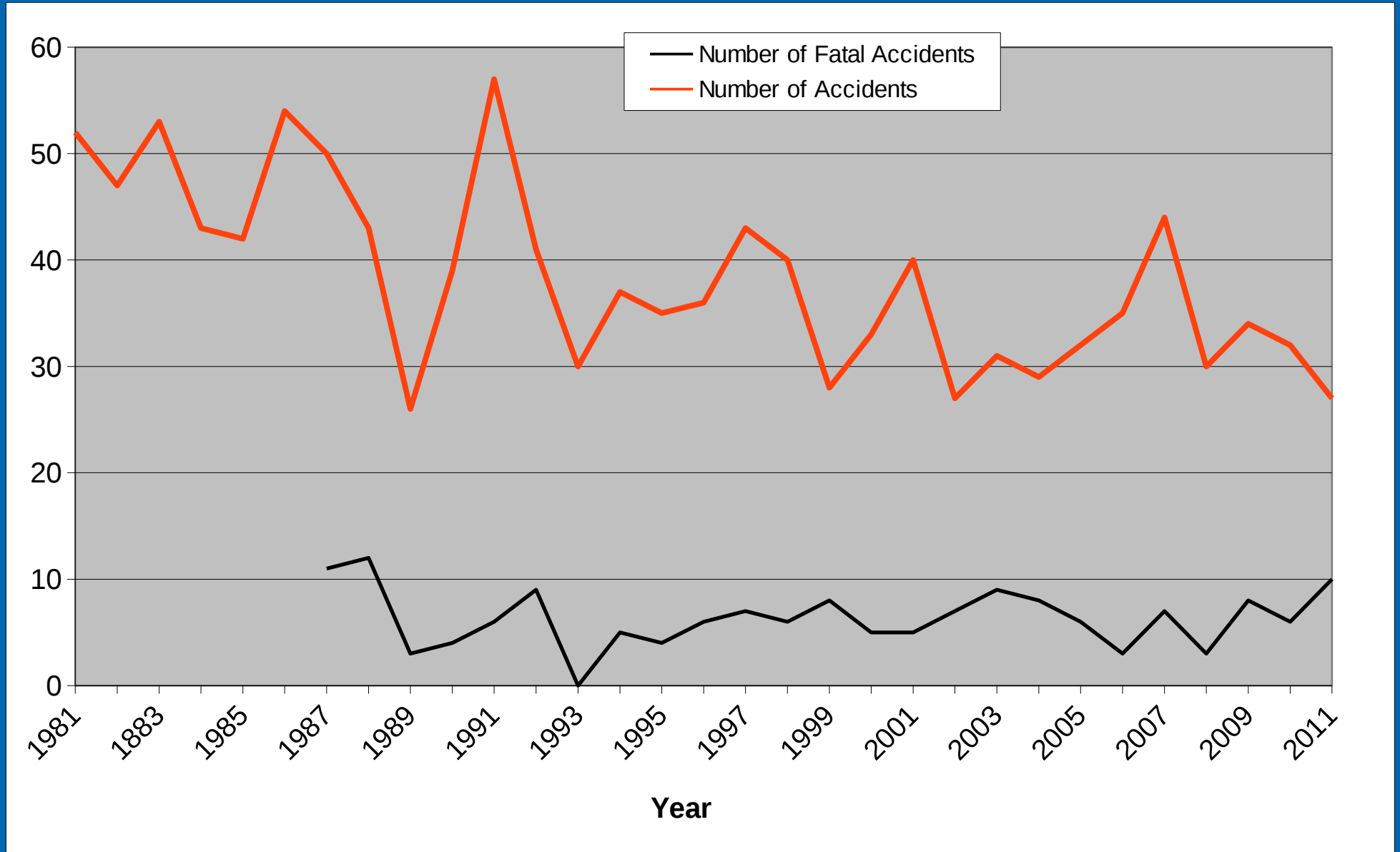


# SSA/SSA Special Safety Seminar

## Why Smart People do Dumb Things

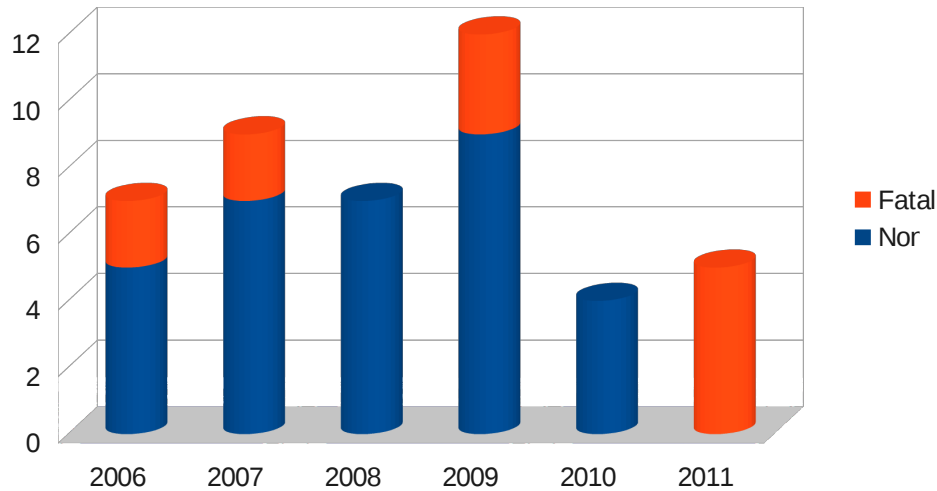
SSA Reno Convention 2012  
Special Safety Seminal  
Richard Carlson  
SSF Chairman

# Number of Soaring Accidents

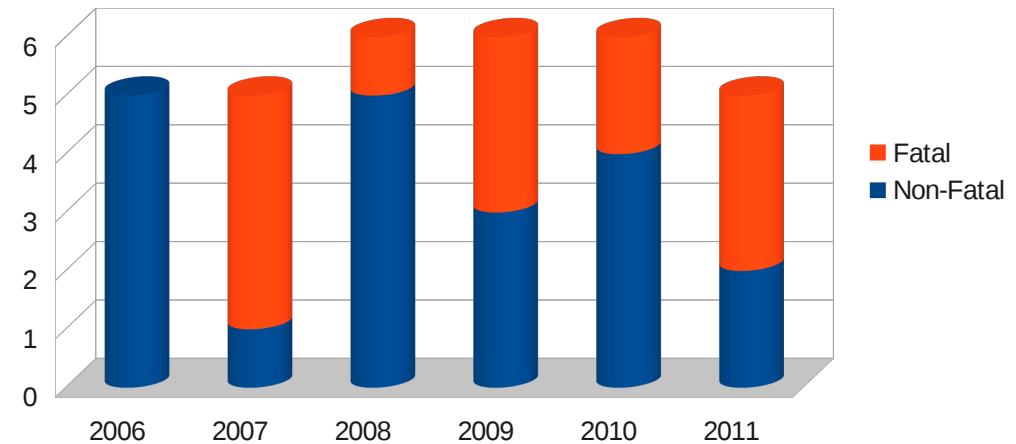


# Soaring Accidents by Phase of Flight

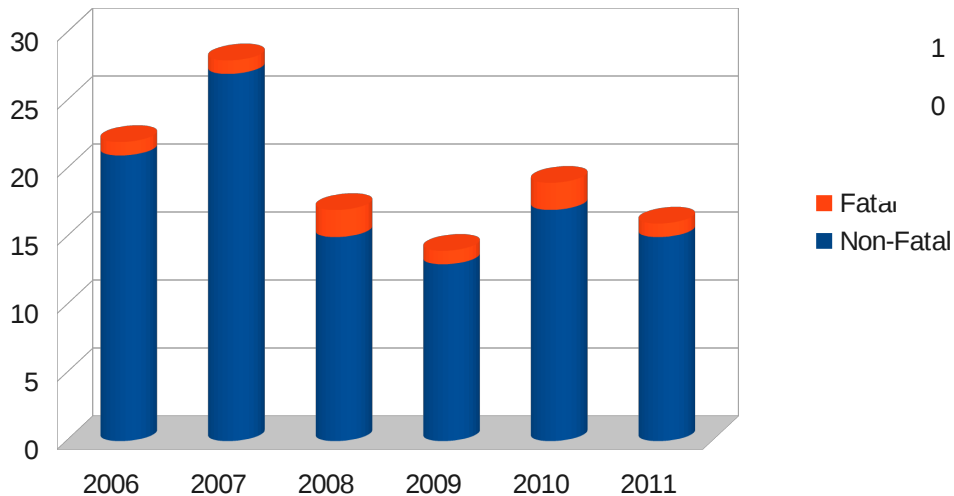
Fatal and Non-Fatal PT3 Accidents



Free Flight Fatal and Non-Fatal Accidents



Fatal and Non-Fatal Landing Accidents



# Accidents and Incidents

- Data on the previous graphs comes from the NTSB database
- Not all accidents and the majority of incidents do not get reported to the NTSB
- Insurance claims spiked in July with nearly 1 claim per day during that month

# SSA/SSF Letter – Aug

Dear Friends of our soaring community.

WHAT'S WRONG WITH SOARING? Nothing?

Is the fact that we had more fatalities - 9 - last year than the entire US Naval Aviation community had, and that we've already had 7 fatalities this year through the middle of August just an anomaly? Is the fact that July 2011 had more accidents than any month in our accident history just an anomaly? Is the fact that we've already had more contest accidents this year than any full year of contests we can remember just an anomaly?

# Convention Safety Stand-Down

- Follow-on action to the response from the August letter
- Bring SSA leadership and members together to discuss a path forward
- Leadership representatives
  - SSA – Al Tyler and Gerry Molidor
  - SSF – Rich Carlson and Bernald Smith
  - Contest Committee – Ken Sorenson and Hank Nixon
  - Membership – everyone in this room

# Risk Management

- Flight involves Risk!
- Pilots can, and must, be taught how to Managing that Risk
- All Aviation communities face this problem
  - Airlines and Air Carriers – CRM in the 80's
  - Military – CRM in the 80's
  - General Aviation – little progress
  - Soaring – some progress



## Chapter 17 Aeronautical Decision-Making

**Introduction**

Aeronautical decision-making (ADM) is decision-making in a unique environment—aviation. It is a systematic approach to the mental process used by pilots to consistently determine the best course of action in response to a given set of circumstances. It is what a pilot intends to do based on the latest information he or she has.

**Margin of Safety**

**Time**

**Climb**

**Approach & Landing**

**Pilot Capabilities**

**Risk Management**

## Risk Management Handbook

FAA-H-8083-2

U.S. Department of Transportation  
Federal Aviation Administration

## Aviation Instructor's Handbook

FAA-H-8083-9A

Teaching Tips from Veteran Flight Instructors

Use a camera to observe student training with slow motion. The instructor is worth \$1.00 per hour. The student is worth \$1.00 per hour. A high standard of performance is required. Because it's legal, don't do it. Develop a safety-culture environment. Assign organized, specific, appropriate homework after each flight. Use all available tools to supplement teaching and assessment: security issues, radiation, or other. Know the background, capabilities, and limitations of all training events as they relate to the training. Thoroughly and carefully document all training events as they relate to the training. Use the FAA's Aviation Instructor's Handbook (AIBH) to establish a minimum standard for all training events. Use the AIBH to establish a minimum standard for all training events. Use the AIBH to establish a minimum standard for all training events.

**ADM Process**

**Identify the Problem**

**Generate Options**

**Choose the Best Option**

**Implement the Decision**

**Evaluate the Outcome**



# Risk Management

- Potential responses to risk include:
  - Ignore potential risks
  - Eliminate potential risks
  - Mitigate potential risks
- Risk Mitigation framework (PAVE model)
  - Pilot
  - Aircraft
  - EnVironment
  - External pressures



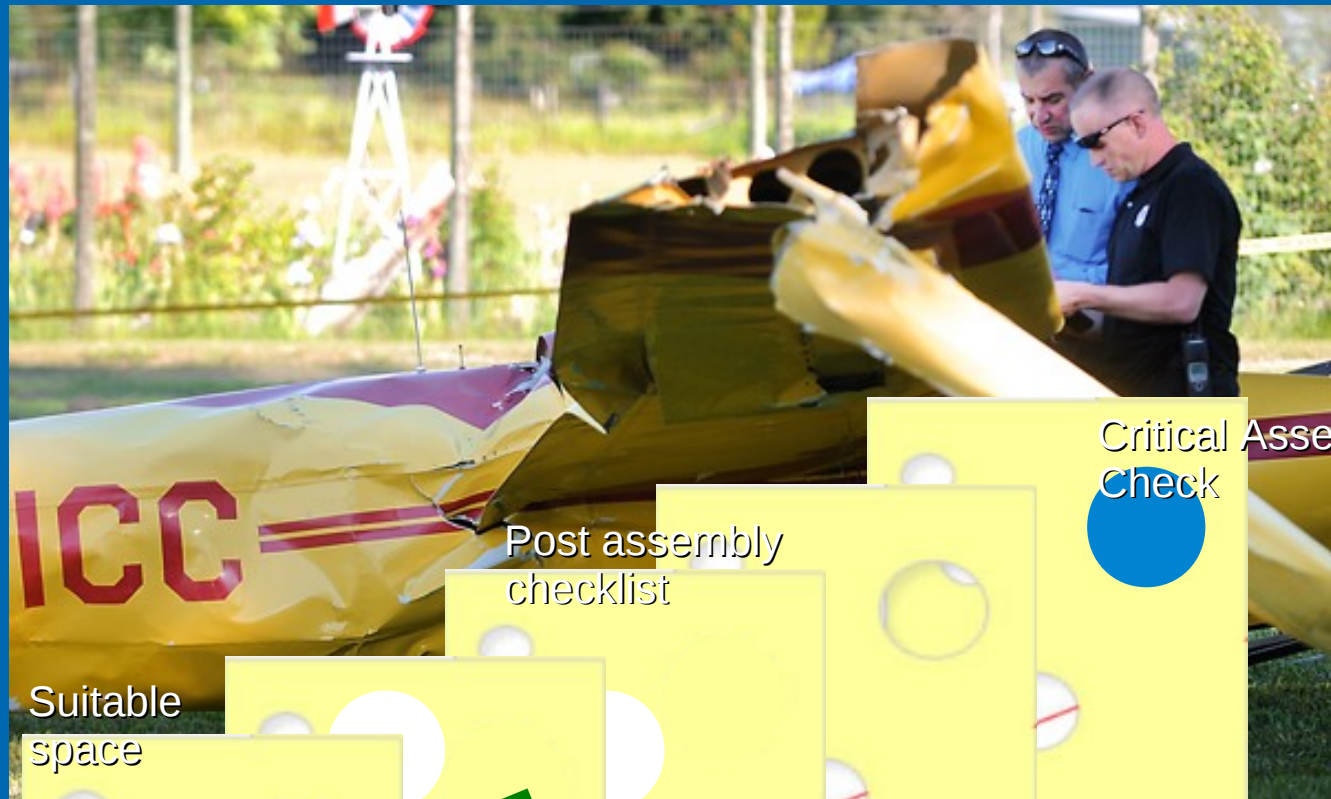
## American Cheese

- Evaluate accident causes and create new rules and regulations based on causal factors
- Pilot in Command makes decisions
- Regulate the use of Checklists

## Swiss Cheese

- Evaluate accident causes and create new barrier based on causal factors
- Multiple personnel involved
- Multiple barriers to detect mistakes

# Glider Assembly Process



Critical Assembly  
Check

Post assembly  
checklist

Suitable  
space

Positive Control  
Check

Knowledgeable  
assistant

Limit  
distractions

POH, or other  
written, instructions

# Underlying Principles

- Risk Management and Decision Making Skills are learned behavior
- No different than learning stick & rudder skills
  - Explicit training using available resources
    - Books, pamphlets, AC's, web sites
    - Flight instructor
  - Implicit training by example
    - what you do vs what you say
    - what do your peers do

# New Glider Scenario

- Ingrid, a private glider pilot with 120 hours arrived at the club about 10:00 with the glider she just bought. As she is pulling it out of the trailer she tells you about the long drive and trailer problems she had, getting in about 4:00 this morning. Today promises to be a good soaring day and she is anxious to get started, will you help her assemble?

# Dialog with You

- Begin tailoring a RM/ADM program for SSA members
- Representatives from the SSA general membership and contest pilots, will answer questions
- Bob Wander will moderate this session
- At the end Chartis, our insurance company, will make a donation to the SSF



Learn  
from your  
Mistakes

Didn't do  
our checks,  
did we?!



- PRE TAKE-OFF CHECKS ARE IMPORTANT
- CHECK THE CANOPY BY PUSHING UP ON THE FRAME

Learn  
from the  
Mistakes  
of others