Improving Safety in Competitions
FLYTOP trainings

- **Club Training**
  - Leaders
    - 1.5 days
  - Club Training
    - 2 days
  - Refresher
    - 1 day

- **Flight Instructor Training**
  - Teaching Flight Safety
    - 2 days
  - Clinic for Flight Safety
    - 1 day

- **FLYTOP-Trainer Training**
  - Module 1
  - Module 2
  - Module 3
Central Idea

• Do not focus on teaching pilots!

• Teach the club (= system)!

• For details ask Barbara
• or me during the next days

B. Hofer, FAA Switzerland
What do we teach a club?

Flight Safety = Learning

traditional

arom accidents

REAKTIV

improves rules/ SOPs

modern

from errors

PROAKTIV

Training of the system = club
How Safe is Flying in Competitions?

Deaths per 1 Million Starts

- Glider flying: 14
- Alpine glider flying: 32
- Contest flying: 144

Acceptable risk level: 1 fatality per 1 Mio starts
Deadly Accidents in Switzerland

• Jan to August 2012: 5 glider pilots dead
• 2 of 5 during a competition

• So something should be done
How about You?

• Please raise Your hands

• Are You flying competitions?

• Are You a member of a flying club?
Main Message

Nowadays pilots, instructors, officials, buereaucrats, competition directors,… are usually uneducated and untrained in

• modern, procative flight safety methods!

• It is proven that the implementation of procative safety methods brings down the risk by at least a factor of 10!
Imagine

• You are a pilot at a competition
• This is the first briefing
• In the rules for the competition You have read:

  • Six percent for safety:
  • Each competitor shall be given up to 6% additional points to the daily score based on his participation in proactive safety actions.

• Details will be announced at first briefing.
Yellow cards

• By now you should have
• At least one Yellow card:

• Please sign each card with your Call Sign
• For example:
On each card

• Safety relevant observations, remarks, events

• What could make this competition safer?

• Example:
  • Every tow plane should be marked such that towed pilots could read their call signs

• One remark per one card!
Rules of the Game

• During the next three (flying-) days of the competition you are asked to fill out such safety observation cards
• The Safety Officer (me) will be the only person that reads these cards
• The Safety Officer (me) will evaluate, if the remark is a valid proactive safety observation
• If you hand in at least 6 valid cards you will get 6% additional competition points
Valid Remarks

• Remarks on the yellow cards are valid if they concern a
  specific, observable, safety relevant issue of the competition, which can be effectively influenced by a concrete measure of the competition’s organization

• Counter example: “Bad weather”

• Good example: “tell tow pilot of plane XXX to fly faster during tow”
Practical Experiments: 1)

- Competition in Fuessen, Bavaria/Germany
- 35 Gliders
- May 26th – Jun 2nd 2012
- During the
- First 3 days:
Practical Experiments: 2)

- Alpine Flying Camp Muenster/ upper Rhone valley
- 39 Gliders
- Jul 28th – Aug 4th 2012
- During the
  - First 3 days:
Measuring Safety

• From prior experiments we know:
  • On each flying day
  • every pilot can recognize
  • without big efforts detect
  • 3 safety relevant observations:

• Let this be define a proactive safety level of 100%
• For example in Fuessen: 35 pilots*3 days = 105 = 100%
Results

- Safety Level:
- Muenster vs Fuessen
- 4% vs 119%
- Remember 3 fatalities during 10 prior days!

- Median number of per pilot & day
- Muenster vs Fuessen
- 0 vs 3.4
What made the Difference?

1. “6% for safety rule” published in advance

2. Immediate Reward: 6% competition points in Fuessen

3. Education and Training in Proactive Safety in Fuessen
Training

- Prior to the Competition the
- Competition Director

- and in particular the Safety Officers

received intensive training in modern methods of flight safety
FLYTOP Training Program for Fuessen

- **Pilots:** 3 hours training in modern safety concepts
- **Syllabus:**
  - Proactive vs reactive methods
  - Error management
  - Systemic approaches
  - Training of the system
FLYTOP Training Program for Fuessen

• Competition Director and Safety Officers:
• 2 days intensive training program in
• Syllabus:
• Proactive methods
• Error management in systems
• Non Technical Skills (NOTECHS)
• Managing Clubs and
• other aviation systems
• See also:
Reactions of the Pilots

• 35/36 = 97% of the pilots wanted that FLYTOP-Competition should be continued in the next competition

• 65% of the pilots wanted the 6% for safety rule included in the competition rules.
Effects for the Competition

- Immediate response (actions) to many of the pilots' observations
- Examples: marking of the tow pilots, marking of a safety strip

- List of ToDos for preparing the next competition
- “relief” function for the competition managers
- 100 eyes see more than 2!
Summary

• 6% for safety rule should include
• proactive safety behaviour

• 6 safety cards on 3 flying days easy to fulfill
  i.e
• Participation in proactive safety is sort of a basic requirement like having his documents ready

• HOWEVER
In order that things work

- Education and training in modern proactive safety methods is required!

- In particular for
  - Competition Directors & Safety Officers
  - (ca 10 hrs = 1.5 days of training)

- also at least a basic training for all pilots
Our Sponsors

• BAZL ( = FAA Switzerland)
• Aeroclub Switzerland
• Insurance Company
• Made our coming to UVALDE possible
FLYTOP Team who made all this possible:

• Alfred Ultsch

• Regina Ultsch

• Barbara Hofer

• Jens Eisenreich

• Herbert Lehner
Questions, Remarks?

- 6% for safety behaviour of pilots

- FLYTOP can teach You and in particular the systems (competitions, clubs, flying camps,...) how to make glider flying safer

- However, this teaching takes substantial time: min. 2 days