2015 SAFETY PROGRAM

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Scenario Based Training

You are going to be hearing a lot about Scenario Based Training (SBT) in the coming months. The Safety Standdown at the SSA Convention in Greenville will center around introducing this topic to the community.

So, what exactly is SBT?

It is a system to help the pilot consider all factors of the flight as it progresses, and develop reasonable and prudent mitigation strategies for threats as they occur during the flight.

It is important to remember that SBT is a training system. Highly structured scripts of real world experiences are used to develop threat mitigation in our operational environment. The system concept should be integrated throughout the applicants' training. New and different experiences are important to the development of "staying ahead of the aircraft" to analyze the contingencies as the flight moves on. Most importantly, the scenarios must be real world, highly plausible, and applicable to the applicants' flight environment.

Or to put it another way, SBT is good ol' hangar flying put into a package for specific training purposes and objectives.

You did not realize or conceptualize that this was going on when you related your flying adventures to your peers. They were actually learning from your experiences. You described a situation, told what you did, and told what the outcome was. Someone usually would then comment on the soundness of any part of your story, or maybe offer an alternate to what you did. They were actually proposing different solutions for the situation you were in.

The airlines and the military realized that their pilots had excellent basic airwork skills, but lacked critical risk mitigation skills. They began to develop training syllabi to meet these objectives. The airlines use a Line Orient Flight Training (LOFT) approach to training. You will get to run the Flap/Slat Inoperative checklist as part of a flight from Denver to Salt Lake City. You will have to incorporate weather, terrain, fuel, and any "x" factors that may be present. No longer do you do a *flap malfunction/simulator reset,* followed by an *electrical failure/simulator reset,* etc.

The Navy took a much more Single Pilot Resource Management approach to the problem. The Naval Aviation Training and Operational Procedures Standardization (NATOPS or Navy's Attempt to Operate Planes Safely) was developed to provide a procedural framework for each type of specific aircraft. Naval Aviators are constantly being evaluated on Headwork, Basic Airmanship, and Procedures during all phases of training. From the start of Primary Flight Training, malfunctions and abnormalities were inserted into all areas of training and flown to completion of the maneuver.

The airlines and military learned that the scenarios had to be real world and plausible. Multiple compound emergen-

cies with adverse weather actually provided negative training. They were able to prove that even the best prepared pilot and crew could easily be overwhelmed and pushed to failure.

They also understood that constantly resetting the simulator to insert a different system malfunction disrupted the crew's flow and habit patterns. You do not get to reset the aircraft in an actual abnormal situation, so why do it in the simulator? For this type of training, it is actually better to sit at a table with the instructor and review the procedures.

SBT helps you develop the ability to deal with a situation that you may not have encountered before. It helps you realize there are multiple correct solutions to the problem. It helps you recognize which solutions are best left on the shelf.

A very wise soaring sage once rhetorically asked, "Why do smart pilots do dumb things?"

The answer lies in a lack of training, and specifically SBT.

If you look back at most of the accidents, the basic airwork skills were not really at fault. You could usually identify a failure to recognize a deteriorating situation, or a poor decision as the true cause of the accident. These pilots got into a scenario they had either never seen before, or thought about before. They were now in uncharted territory and were making the best decision they could on-the-fly in a high pressure environment. They were not dumb – they were unprepared mentally for the situation they allowed themselves to get into.

SBT allows you to "what if" an unlimited number of scenarios on the ground. It allows you to brief, practice, and de-brief scenarios in the aircraft in a training environment. An example of this would be being below pattern altitude on the non-normal side of the airport. What would you do if you had never encountered this scenario before? With SBT, you can brief the scenario on the ground, get in the glider and go fly it, and de-brief it on the ground. Your CFIG can help you brief the flight with a heavy emphasis on thorough contingency planning. The CFIG can then steer you into a situation where you have multiple choices, and then let you fly it to completion. The CFIG should absolutely ensure the aircraft and occupants are not operating outside of acceptable margins of safety.

SBT helps you develop the "Rolodex" mitigation strategies to call upon when the need arises. Experience is not only having actually been in a situation before, but having thought through the possibilities. It allows you to build decision points into a flight. That is: If I see this, I'm doing that. And it allows you to tailor the allowable level of risk to the flight, the task, and the pilot involved.

It is important to realize that your Headwork Skills are perishable just like your Monkey Skills. If you do not exercise both sets of skills, they deteriorate and become unusable when you need them most.

Next month, we will explain how to incorporate SBT into your basic and advanced glider training.