Docket No. SA-533

Exhibit No. 2-O

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

Interview Summaries of Flight Safety International Personnel

(26 Pages)

ATTACHMENT
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Interview: Walter E. "Buddy" Dietz, Flight Safety International Director of Training
Interview date: August 19, 2009
Time: 1000 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – FAA; Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Dietz stated the following:

He was a military pilot for 27 years and an instructor pilot for 25 of those years. He was a Warrant Officer W-5. He flew helicopters and fixed with aircraft. He had been with Flight Safety (FSI) for about 13.5 years. At the time of the accident and the interview, he was the Director of Training. His responsibilities included running the operations of the center for the five programs. Each program had a program manager who ran the program and reported to him. He supervised about 29 people. He said his workload level was fine and he had good program managers and instructors who did a good job. He flew the King Air 90, King Air 200, Beech Baron, BE-90, and BE-200. He was not typed in the ATR. Prior to becoming Director of Safety at FSI, he was an instructor and program manager. He started on the EMB-120.

Mr. Dietz met the accident crew when they came to FSI for 2 days/16 hours of CRM training during their initial training. He did not do recurrent training with them.

He taught CRM in the Army in the early 1990s. He began training CRM at FSI for the FedEx program in 2004 when contracts were signed for the FedEx feeder operators.

CRM training at FSI was not aircraft specific. He taught CRM for various airlines including Empire Airlines.

He said there were variations of CRM programs for each airline. The FedEx feeder group made changes that were approved by FedEx of what they were looking to be covered. It was based on case studies, issues covered in the original FSI program and things they wanted modified. The case studies in each program varied and FedEx identified specific case studies to look at in their CRM program. He said almost all of the case studies in the CRM program dealt with abnormals but none dealt with icing situations.

The FedEx program was covered in 2 days/16 hours, which was similar to other initial training CRM courses.

Asked if crew pairings were discussed in the CRM program, such as pairing of a high time captain with a low captain first officer, Mr. Dietz said some of the issues they talked about focused on that. He told crews not to assume that it was a bad crew pairing that led to the outcome. When the crew was paired, it may have looked like a good crew pairing at the beginning. He focused on gender and race pairing issues as an organizational culture issue.

The CRM program is provided before the ATR initial ground school and continues throughout the training program.

All crews go through initial CRM training. FSI pointed out to them that everyone flying for the company had sat through the class and had the same materials.

Mr. Dietz did not have any general impressions of the accident crew to mention. He considered them to be typical students. He recalled that Capt. Holberton had been with Empire Airlines for awhile. He did not have anything to say about F/O Cornell. Asked if she was boisterous, he said no and that he remembered the boisterous ones.

Mr. Dietz did not have a background in human performance, human factors or psychology beyond regular college classes.

The CRM program materials were developed in house by the Ops and Standards Department.

Asked if he saw any weaknesses in the FedEx CRM program, he said no. There was nothing that stood out in a positive light from FedEx's program that was above other airlines' CRM programs. Asked what he would change about training if he had the opportunity, he said it was a lot of material to cover in two days and he would like three days if he could get it.

As a part of the CRM training, trainees participated in a team building exercise. As individuals, trainees would complete a 15 question multiple-choice test. Then they would break into teams of 2-3 members who would go through the same questions and come up with team answers. He said 98% of the time, the team scores higher than the individual.

Regarding discussions of crew pairings during CRM training, Mr. Dietz said communication was the stepping stone and crews had to be able to communicate. They could not sit and say nothing. He told them if it became an issue, they had other pilots they could talk to and their chief pilot. If in flight, he told them to speak up and let the issue be known. He said it varied as to whether new students could grasp the concept of speaking up.

CRM training did not incorporate any role-playing scenarios where a first officer could practice speaking up to a captain. Other skills trained as a part of CRM included situation awareness (SA), cues to recognize SA, how to build a team video, assertiveness, and inquiry and advocacy.

Mr. Dietz said that no changes had been made to CRM training since the accident.

Mr. Dietz stated that Flight Safety originally employed only one individual to teach CRM however, as the demand for the program increased, Flight Safety increased the number of instructors.

Mr. Dietz did not train CRM in the simulator but he said it was a part of the Empire-training program.

He said FSI instructors learned CRM as a part of their training, they observed other instructors, and practiced instructing before being considered qualified to instruct. If they had not attended the CRM course, they would then sit in on one of the courses that were in session.

Mr. Dietz did not teach any other courses besides CRM. He did not discuss icing in the CRM training.

Mr. Dietz was asked about the Blue card/gray card. He said they had posters on CRM with 11-12 items dealing with SA, communication, and various items. Those items were also on the cards. Trainees who attend the course were given those cards that they can keep. Asked what else was on the cards, he said setting targets was on there and if a crew set a target and had not met the target, they needed to address it.

Regarding fatigue, the CRM program discussed the Guantanamo bay accident, and 60 Minutes video clip on pilot fatigue by Bradley, and a 60 Minutes video clip on drunk driving versus fatigued driving.

The CRM program also focused on workload. Specifically, videos were presented of various scenarios developed by FSI after which they are discussed, such as what did they see, what they did not see. He said trainees tend to blame the captain and he pointed out to them that the first officer did not speak up like he should have. They also talked about what could have been done in that situation. Next they show another clip in which the crew used the appropriate CRM skills.

Asked how CRM training is evaluated, Mr. Dietz said it started with introductions and trainees stated whether they had ever attended CRM training before. Some had received no CRM training before and others had attended training at an airline. He said they could find out later it may have been lacking at the end. He would put up the course objective before they even started. The last part of the class was to put the objective back up and ask if they met that objective.

Asked if CRM was provided during recurrent, he said it was part of the normal syllabus, but he was not sure about Empire's syllabus specifically.

Trainees could provide feedback about the training via critiques.

Personnel out of the Ops and Standards office taught the Flight Safety CRM program. They also taught mariners, medical teams, and others. Personnel travelled around and did either a two day CRM training or a one day recurrent.

When asked if CRM was just a part of the program, Mr. Dietz replied that all of the instructors used CRM throughout all of the courses.

Mr. Dietz and one other instructor taught CRM training at FSI.

Mr. Dietz did not have anything to add to the interview.

The interview ended about 1035.

Interview: Dallas Gibson, Flight Safety International Instructor
Interview date: August 19, 2009
Time: 1115 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Gibson stated the following:

He was a simulator instructor and a subject matter expert for the development of courseware for the program. He taught both simulator and ground school training. He was an instructor at the time of the accident and the interview. He also did checks and was a TCE (training center evaluator).

He went to a community college for 2 years and got a degree in aviation. He was a flight instructor and had about 1000 hours of flight instruction time at the primary and commercial levels. His first airline job was with an air taxi service out of Florence, South Carolina, and flew to Charlotte, North Carolina. He next flew for Air Virginia. He was a captain on Shorts and the Metro Liner. He flew about a year for Mohawk Airlines flying Metro Liners. Next, he was hired by US Air before getting furloughed. In 1995, he began working for Flight Safety Academy and two years later transferred to Flight Safety (FSI) in Houston, Texas. He started at FSI on the EMB-120, and then went to the ATR in 1999. He had trained the ATR since 1999. He was typed on the ATR but had never flown it on the line. The simulators at FSI were primarily Level C but they also got some Level D.

Asked if he taught the accident crew, he said he taught Capt. Holberton in ground school more than once but he could not recall which course or when it was. He said he recognized him by face but nothing stood out about him. He did not remember having F/O Cornell in ground school but he ran the simulator for her 709 ride.

Systems were taught as a part of ground school and flaps were covered as a part of the flight control systems. Ground school also covered system anomalies. He talked about normal and then abnormal situations. Involving the flaps, he covered flap jam, flap unlock, flap uncoupled, no flaps, and flap control circuit breakers. He said they went through each entry in the QRH, through slides that discuss the annunciations that could occur, and also discuss scenarios and how to recognize them, for example if a crew moved the flap handle and the airplane started rolling, that was usually a flap jam or flap uncoupled.

He said he discussed the different cues that crews could use to recognize a flap asymmetry. He said it was a roll anomaly if the airplane tried to roll with flap movement. In the ATR 72, a crew would get an aural alert and a light. In the older ATR 42, it would be annunciated by a roll. There was nothing that would appear on the ADU for a flap asymmetry in the older 42. If the

autopilot was connected, the airplane would start to roll in the simulator. As it would start to roll, the pilot would have to take the controls. He said the pilot would probably not be looking at the ADU at that moment because it was a control issue.

When a flap unlock was trained, he said crews would have to go around and land with zero/no flaps. Flap malfunctions were done with all students because it was required to get a type rating in the ATR. The PTS said they had to perform a zero or reduced flap landing and FSI did a zero flap landing. Mr. Gibson stated that the landing portion was the same regardless of the problem, It was basically a change in the airspeed to accommodate not have full flaps for landing. He said they could give trainees a flaps unlock on final approach that required a missed approach or on takeoff. He said regardless of when it was given, the procedures were the same. He said the QRH said to go around if a crew identified it as a flap problem. A crew had to recognize that the flaps did not move. It would require that they rebug the airspeeds for the flap setting that they had.

Mr. Gibson did not recall any students attempting to land with a flap abnormality. He said he drilled it into their heads in ground school to go around if that happened.

Regarding F/O Cornell's 709 ride, he said she met the requirements but he did not notice anything about her performance standing out.

Regarding SLD and icing being discussed in training, he said there was some discussion of that because we use the manufacturer's flight crew operations manual (FCOM). In part 1 of icing section, there were discussions of freezing drizzle or rain. He said a pilot could not depend on ice protectors so they had to be aware of their surroundings. There were two long paragraphs about icing and detectors in the FCOM that also discussed types of icing that can be encountered and whether the detector would catch it. He said if a pilot was in an icing scenario and got indications of ice, they needed to do something. They carry that to the severe icing checklist in the QRH in training.

Asked if Mr. Gibson was familiar with SLD, he said he knew it did not immediately freeze on impact but could freeze further back behind the equipment.

He said by the time he started teaching the ATR, the changes following the Roselawn accident were pretty set in the ATR procedures and had already been addressed in the training. He watched the Edward's video provided by ATR and the video was at one time shown to students. He had not been in ground school for several months prior to the interview so he was not sure if it was still being shown, but it was a few months ago.

Mr. Gibson was familiar with the ATR "Be Prepared for Icing" document. He said he referenced students to the ATR website sometimes but FSI did not reproduce that document and hand it out. He did not recall it ever being handed out at FSI. He was not aware of FSI using the ATR materials as a part of their audio-video presentations.

Mr. Gibson said they did not specifically discuss weather such as size of droplets or freezing rain except how it related to the ice protection systems.

He did not recall if there was a specific weather module. He said there were certain subjects they were required to teach. When he taught, he had to refer back to the training manual to see what needed to be taught. He did not recall if other airlines had a weather module.

Mr. Gibson said he would be concerned if he encountered freezing rain or drizzle. He said icing was always of concern. He did not know any aircraft that was certified to fly in severe icing. If it was moderate to severe icing, it would be a judgment call. He would be concerned.

He was not familiar with the water droplet diameter associated with it.

He did not believe in the ATR documents that it stated a size limit of the droplets. He was not aware of FSI producing any manuals that had a prohibition in there as a part of the training.

He did not recall if F/O Cornell was given a flap problem during her 709 ride. All he remembered was that the check airman wanted to see maneuvers and they did part of checkride with simulated icing conditions. He did not recall the specific maneuvers.

He did not use the ATR module on "Be Prepared for Icing" in his courses. He did not know if it was used in any other customers' courses. He said certain subjects are taught by the customers' own instructors.

Mr. Gibson was not aware of any guidance from the FAA about how to teach flight in icing conditions. He said they follow the QRH, which states crews need to leave and avoid. They cover it to the extent it was addressed in the QRH.

He said during icing training, trainees may be given a failure of the icing equipment. They had a syllabus that they followed.

Asked about changes in ATR procedures and how icing was taught in the last 10 years, Mr. Gibson said he came into the training after all changes were implemented. The procedures had not changed since he had been in the program.

Flap malfunctions, teach crews how to trouble shoot, what would you lead them to do: there is no trouble shooting in the ATR. There is no QRH entry that says go troubleshoot.
How much time do you spend on recurrent ground instruction on procedures and techniques of pilot handbook: go through it during training as that particular category comes up.
How are changes made: goes to ops and standards office then she goes to program manager that change is coming and I find out through him. I sign that I have been notified.

Mr. Gibson said it was not recommended to reset a circuit breaker in flight. Specifically, if it was a flap jam, the QRH did not talk about circuit breakers.

Mr. Gibson said CRM was woven through all of the training – it was a two pilot airplane. There were briefing cards that they used. When they briefed the simulator session, during the simulator session and during the debrief, it was highlighted.

Trainees were evaluated on CRM in the simulator. He said if something was missed it was highlighted in the debrief. If he felt strongly enough about it, he would point it out in real time.

Mr. Gibson was not aware of any changes to icing training after the accident.

Asked if they trained flap asymmetries in the simulator, he said in the ATR 42 QRH, it was under the same title.

Mr. Gibson said they used the same simulator model during initial training. If the airline requested differences training during recurrent, FSI would use a different model simulator. FSI simulators primarily used were the 42-300 and 72-200. They also had a 42-500 but it was only used if the airline wanted differences training.

He said there was no written statement that stated the specific flap malfunction to be simulated during a checkride, the syllabus only said to simulate a flap malfunction. The checking section of the airline's program dictated that they had to do these types of maneuvers. It was not broken down further.

Mr. Gibson said any failure taught was going to be a task-sharing scenario. The scenarios required that whoever was the pilot flying would remain as pilot flying and the other crew member would handle the QRH, switch position changes, and other tasks.

When training consisted of two first officers, Mr. Gibson said that once off of the ground, it did not matter whether there was a captain or a first officer in the left seat. He said that scenarios were broken down by the pilot flying and pilot not flying. He said other than a captain who would have the final decision making, for handling situations in the simulator it was pilot flying and pilot not flying. They trained that whoever was the pilot flying was allowed and encouraged to make those decision as to the progress of the light.

FSI trained using Empire's SOPs.

Asked if there were many differences between Empire's training and FSI's training, he said there were some differences but he did not know whether the differences would be defined as 'many'.

Regarding FSI instructors being standardized with Empire's SOPs, Mr. Gibson stated that Empire sent down one of their training personnel to train FSI instructors. FSI instructors were all observed giving training in ground school, simulators and in check rides.

Mr. Gibson described a stabilized approach as on speed and in the proper configuration. He said he would have to look at Empire's manuals regarding at what altitude an approach must be stabilized by, but he said most airlines used 1000 feet.

Mr. Gibson stated that the flap indicator would have to be used to determine what speeds to fly, for example, if the flaps were between 15 and 30, the pilots would fly the flaps 15 speeds.

While FSI tried to train pilots to look out the window to verify the flap conditions, in the simulator a pilot would not be able to see the flap conditions, but it could get them in the habit of looking.

LOFT was the last session of training prior to the flight check during initial training.

Asked if pilots were trained to recognize a failure as the pilot not flying, Mr. Gibson said if it were a single pilot, they would receive a session or half a session where they would be the pilot not flying.

He said the Roselawn scenario was not specifically discussed in training, but it always came up in the icing recognition and avoidance section.

He was required to give a flap malfunction for a type rating check ride and one was also required for first officers.

Asked if crews were required to put down the flaps and verify then with the indicator, he said yes. Asked about how long he would expect it to take for a crew to identify an anomaly, pull the QRH and run through it, Mr. Gibson said he had not thought about it like that but thought it should take less than 10 minutes.

When a crew encountered a stick shaker in cruise, the procedure was to apply maximum power and flaps 15. If on approach, the procedure was maximum power, flaps 15, and go around. He said any anomaly in terms of stick shaker, the procedure was max power.

Asked if there was any detriment to putting a first officer in the left seat during training, he said it depended on the individual and their experience level.

He said he trained according to Empire's training program and Empire had their own checklist.

Regarding critiquing of the training, he said there was a flow of communication between instructors and Empire.

Mr. Gibson did not anything to add to the interview.

The interview ended at 1220.

Interview: Hector Guerrero, Flight Safety International ATR Program Manager
Interview date: August 20, 2009
Time: 0920 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Guerrero stated the following:

He was the ATR Program Manager for almost 2 years. His sole responsibility was the ATR program. He was a corporate pilot prior to coming to Flight Safety (FSI) in 1999. He started in the Twin Commander program at FSI. He had an ATP license and a B.S. in Professional Aeronautics from Embry-Riddle Aeronautical University with minors in Aviation Safety and Statistics. He flew the Saber Liner, King Air, and Twin Commander. He had a type rating in the ATR but had not flown the ATR on the line.

As program manager, he did not do instruction on a regular basis. Depending on scheduling, he might teach a ground school or simulator session. He was qualified as a simulator instructor but was not a check airman. He received a proficiency check every year to remain current. He was not a TCE (training center evaluator).

He oversaw and supervised eight instructors. He was in charge of scheduling courses and instructor qualifications. He ensured instructors were qualified to instruct ground school and simulator sessions. He also set the instructor schedules to determine who would be teaching ground school or in the simulator and when. He kept track of when instructors needed recurrent training. His opinion of the instructors at FSI was that they were well trained and well qualified professional instructors.

There were simulator technicians but they did not report directly to him.

Mr. Guerrero would sit in on instructor hiring interviews if he was available. He may be asked to give feedback on the instructors interviewed.

He did not know Capt. Holberton or F/O Cornell.

Asked if he provided input in FSI's ATR course curriculum, he said they taught what was specified in the program. If they saw something that needed to be added, he would make a proposal to the director of training. They would analyze the situation and determine whether to add something.

He did not talk directly to ATR, FAA or EASA. He interacted with the training department at the airlines. He also oversaw courses throughout the week. He received the training materials and interacted on what was new and what they were going to teach. They did that on a regular basis.

If an airline makes a change to the training program, they received the materials and verified the changes. Then he would pass them along to the instructors and verify that all instructors had the current materials.

Mr. Guerrero said he oversaw about 10 different ATR programs and each had differences. He said the systems were the same. Each company outlined its own specific procedures. He did not notice any major differences and said they were all fairly similar.

When materials received from the airline, FSI would make changes to their materials as necessary. They had meetings every month and discussed the changes. However, if changes were received prior to the meeting, he would discuss with the instructors the changes and verify that the instructors had the new changes. The changes were made through email and instructors were responsible for knowing that their materials were current.

Instructors were required to talk to other instructors about the progress of students. The instructors would also talk to him.

Asked if they gave any feedback to the airlines about their training programs, he said they taught exactly what was in each program. They usually did not give opinions of any kind.

Regarding FSI's ATR training, they taught what was approved by the FAA.

He did not review ATR safety data to incorporate it into training.

He said no changes had been made to FSI's or airlines' training programs since the accident.

FSI had a subscription to receive materials from ATR. For example, if they saw an update to the QRH they would update their materials.

Instructors went thought ground school and a proficiency check every year. They would review all procedures that they needed to teach. They did not do a check ride but just a proficiency check. Instructors received the same proficiency check that a captain would receive on a check ride.

After ATR visited FSI in April 2009, FSI did not change their program to make the type rating closer to what the manufacturer provided.

On a monthly basis, we have meetings and we deal with standardization and procedures. We try to maintain those standards all of the time.

Asked if there was anything he would like to see improved in FSI's ATR program, he said what they had had been approved.

Mr. Guerrero was aware of the ATR document "Be prepared for icing" but said it was not used in their coursework.

Mr. Guerrero said they covered icing and weather during systems training, and discussed what the pilots must be aware of when dealing with adverse weather conditions. They taught pilots to avoid icing conditions, for example by changing altitude or not taking off.

Asked if FSI taught pilots how to check weather information, he said no, that each company had their own training and taught that before pilots came to FSI. Regarding FSI's training, he said as a part of the preflight planning they requested the forecast and they got an update on weather along the route.

Mr. Guerrero said instructors went through CRM training each year. They covered human factors, how to detect errors, how to prevent errors, the decision making process, how to react to stress, how to deal with stress, the basics of communication/sender-receiver feedback, and probably did some exercises on how working as a team leads to better results.

He was not familiar with the accident.

He had nothing else to add to the interview.

The interview ended at 0953.

Interview: Steve Jobe, Flight Safety International EMB-145 Program Manager
Interview date: August 19, 2009
Time: 1505 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Jobe stated the following:

He was the EMB-145 program manager at the time of the accident and had been since 2007. He had previously been associated with the ATR program. He was a simulator and ground school instructor. He was also a TCE and then became the ATR Program Manager in 2005. He was hired by FSI in 1994 as an ATR instructor. In 1997, he was cross-trained into the EMB program. He left FSI in 1998 and returned in 2001. He was dual qualified in both programs.

He used his GI benefits to pay for flight training. He worked as a flight instructor and then became a first officer for Simmons Airlines flying the YS-11. After that he was a first officer in the ATR 42 and then upgraded to the Shorts 360. He flew for Rosenbalm Aviation in 1988, which went bankrupt in 1991. He went back to flying in 1994. He had about 8000 total time. He was typed in the Shorts 360, ATR 42, ATR 72, and the EMB-145

He did not do any training with Capt. Holberton or F/O Cornell. He did do two recurrent checkrides with Capt. Holberton but he did not remember anything about him or the ride beyond his face.

He taught ATR ground school and simulator training. Ground school training included systems. When discussing flap systems, he taught normal and abnormals. He did not recall the abnormalities trained and said he would have to look at Empire's systems. He never taught ground school for Empire, and taught little ground school for other customers. He never taught ATR ground school after being rehired.

He said they did train flap abnormals in the simulator, including the required complete failure of flaps. He said he had also covered split flaps. He attempted a flap unlock but he almost never did that.

He did not remember the ATR checklists.

Asked what he would do if he experienced a flap problem at 1000' on approach, he said it would be based on the circumstances and he could not give an answer.

He was not current to teach or be a check airman in the EMB-145. He just managed the program.

He said they covered icing in the ATR training.

Mr. Jobe experienced a flap roll off event when flying the ATR. It was a winter day in Detroit and they were landing to the north on Runway 3. ATC kept them high and then would 'slam dunk' them in. He was in the clouds at 5000' and they were picking up moderate ice. He and the captain discussed the icing and decided they would wait to break out of the clouds before cycling the boots. After the broke out of the clouds, the pilot cycled the boots and at that moment the wing dropped to 30 degrees and the autopilot kicked off. As the pilot flying, he was able to correct it and land the airplane. He said the air was smooth when the roll was encountered. When they landed, he said the crew before them had experienced a more severe roll and lost control of the airplane. He thought the event occurred in winter 1991. He thought he might have mentioned the event in his classes. Asked what information he passed along to students regarding his incident, he said he would have advised them to take the SOPs established for that situation very seriously.

Mr. Jobe was familiar with the Roselawn accident.

Pilots were briefed on the accident by FSI.

He could not say what was trained and what materials were presented in Empire's training.

Mr. Jobe was not sure what SLD was. Asked if he was familiar with super cooled liquid droplets, he said that came out of the Edward's work after the Roselawn accident. He was not sure if that information was passed along to students.

During systems they would identify levels of icing and the actions to take. There was however, no briefing or class on icing or weather.

He said an indication of freezing rain or drizzle in a METAR would concern him. Asked why, he said because of the Roselawn accident. Mr. Jobe was the ATR program manager at FSI when Roselawn happened.

Asked if he recalled if the FAA passed information on to the facility, he said no.

Mr. Jobe said Empire was not one of the companies that adopted FSI's training program. For this reason, Empire was required to train the FSI instructors on their program. Empire would come and observe them and made sure they were training in accordance with their program.

He said the instructors did not give Empire any feedback on their training but they would try to keep open lines of communication. He did not think it was an instructor's place to say there was a problem with the training. They trained the FAA approved Empire training.

Mr. Jobe did not think he had ever implemented an icing system malfunction during a PC. He did not know if that was standard among other check airmen. He said if an emphasis item did arise, it may be brought up on a checkride.

Asked if icing was discussed during a prebrief or debrief, Mr. Jobe said they discussed how to identify severe icing and it would certainly be covered one way or another in an oral. He said it was only in the debrief if something was raised in the TCE's mind during the ride.

He said instructors went through FSI's 61.157 type rating in the aircraft. As a part of training there were logical subjects that had to be covered and those subjects were probably similar to that of an airline.

Asked if he was familiar with the training program provided by ATR, he said his instructor when he was trained in the ATR was an engineer from ATR.

Regarding the procedure to follow when the stick shaker activated, he said he would have to look at Empire's manual and he did not know Empire's procedures. He said the one thing a pilot would have to do was increase power.

He said a stabilized approach was when a pilot did not have to constantly adjust power, pitch, and heading. Regarding the minimum altitude for a stabilized approach, Mr. Jobe said that 121 had established what that altitude should be. He said an unstable approach would be an indication to him that his situation awareness was not all there and he would want to get out of that situation.

He had not heard anything official about the accident.

He did not give multiple failures during a PC.

Mr. Jobe did not have anything to add to the interview.

The interview ended at 1543.

Interview: Andrew "Andy" E. Mattei, Flight Safety International Instructor
Interview date: August 19, 2009
Time: 1345 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Mattei stated the following:

He was an instructor at Flight Safety International (FSI) with about 19,000 hours of flight time and 5 type ratings. He flew 23 years for Enron, flew for a corporate operator in Southern Illinois, and flew Hawkers for a 135 operator in Texas. He started in the Hawker program at FSI then went to the ATR program, and then returned to the Hawker program. He was involved in the ATR program from June 2007 to November of 2008. He was not a check airman on the Hawker or the ATR.

Mr. Mattei had taught ground school for several customers including DHL, Mountain Air Cargo, and several foreign countries. He was type rated in the ATR but had not flown it on the line.

He did Capt. Holberton's recurrent check ride in March 2008. Capt. Holberton would have received a flap malfunction. His impression was that Captain Holberton had looked forward to his training and had a good attitude. He also did "systems integration" with F/O Cornell, which included use of Empire's checklists and SOPs. He did not remember F/O Cornell. He said nothing stood out from either trainee.

He explained that systems integration included use of the QRH and abnormal and emergency procedures. It would also have included flap malfunctions. He would cover integration of systems and then from there teaching trainees which checklist to go to. He said checklists were arranged such that there were comments that explained to crews what was going on with this checklist. Trainees took what they learned in classroom to the cockpit.

When trainees experienced a flap problem, Mr. Mattei expected trainees to "fly the airplane," and then "get the numbers out." He told crews they "don't want to get in a hurry," and they may want to "do a 360 if you need time."

As a student, Mr. Mattei experienced a flap asymmetry and zero flaps in the simulator. Asymmetries would lock out at approximately "9-degrees". Asked what he would do if he had a flap problem, he said it depended on what the flap problem was. He would determine the problem by looking at the flap indicator. He stated that he would try to "call for the correct checklist." He said if there was a flap unlock, there would be a chime and then there would be emergency memory items that should be done. He said if it was an airborne situation on approach, the checklist was strictly to go around.

He thought it was the same checklist for flap abnormals.

There was no audible or visual warning for a flap asymmetry. He said it was more sensing control of the airplane. He could not recall anything on ADU. If the autopilot was engaged, the pilot would see it trying to counteract the asymmetry.

When a pilot called for gear down, flaps 15, as a pilot he would look at the flap gauge. He taught pilots to point at the gauge and look to see that they got what they asked for.

Mr. Mattei thought he did the simulator portion of Capt. Holberton's recurrent training. He did not recall what the flap malfunction given was but said they always got a flap malfunction during recurrent. He did not remember Capt. Holberton's CRM skills.

Asked if he recall talking about the flap system when F/O Cornell attended training, he said it was a normal part of training when they went through the checklists

FSI taught trainees to do a "flap check" during integration, to look out the window also as much as possible, though "you need to remember that you are in a simulator."

They used the Empire manuals during training.

They did not ask for feedback from the operator (Empire).

Icing systems and the ice evidence probe would have come up in to the two icing checklists – in the normal and abnormal procedures.

Mr. Mattei would discuss the activation of anti and deicing equipment. When the ice detector detected ice, the pilot would get the chime and light. To him, icing was a serious subject. When a pilot exited and was free of ice, the systems may be turned off so the stick shaker was back to normal conditions. All of this was brought up in initial courses and system integration.

He was not familiar with SLD.

He was familiar with the Roselawn accident but he did not know the exact circumstances that led up to the loss of control.

Any restrictions on flying in severe ice: to be avoided. If you encounter it there is a severe icing checklist that will help you define the severe icing parameters and will tell you what to do. First thing is to leave the environment.

As a corporate pilot, take any meteorology courses: read AFM, publications, periodicals, being out in it.

Asked if he would avoid freezing drizzle or freezing rain that was presented in a METAR, he said "you betcha". He would want to know if it was necessary to fly in it. He said a pilot would

have to pick up on the condition, what the ground conditions were, and what the taxiway condition were. He said it was "an as you see it type thing".

He said freezing drizzle was not necessarily outside of the icing envelope. He said it could be light or very light. He would try to inquire ahead and see if other planes had problems. He said, "You don't negotiate with freezing rain".

What do you look for in terms of Empire training vs. FSI training: when conducted training, I had their training manual with me. Go right down the line. We would brief before the session. This is what we are doing today. In debrief we would rehash what we did and ask if they had any questions. Then turn page and say this is what we are going to do tomorrow. We only use their manuals.

Mr. Mattei said he was never asked for any feedback on Empire's training. Asked if he had any feedback, he said no.

He did not train pilots to look at circuit breakers. He said flap problems were evident as to which type it was. He said with the flap unlock, they would be retracting. If it was a flap asymmetry, the flaps will lock in position. And if flaps 0, a pilot will know what he had so "don't mess with it".

He was not aware of any discussions since the accident regarding changes to training or procedures.

How do you teach a failure system during training, task sharing from crew: PF flies the airplane, can be either crewmember, whoever is flying at the time. PM will take care of the checklist. PF may work with ATC while other pilot is working the checklist. It is a shared task thing.

In the event that an approach became un-stabilized, Mr. Mattei stated that, a pilot should set "max power," reduce flaps to 15 degrees and then "fly the airplane." He said, "don't go below the shaker".

Mr. Mattei stated that, "the pilot flying, flies, the pilot monitoring does the checklist." He advised that he "found no problem," with two first officers in the simulator at the same time, and switching seats. The first officer was the pilot flying from the right seat and in the left seat was the pilot monitoring. He said regardless of seat they were in, the procedures were the same.

No Automatic Performance Monitoring (APM) system was installed in the simulators.

During the simulator training they allowed one hour for the briefing and a half hour for the debrief though the debrief would always go over as he would spend extra time with the students. He believed in all crewmembers getting the training they came to get and not to rush them out the door.

He stated that when on approach the airplane should be stabilized by 1,000 feet, or you should "go-around." Stabilized approach consisted of on glideslope, power constant, airspeed constant,

decent descent. He also stated that, if the stall shaker went off a pilot should also go around. He also said it depended on the airlines' SOPs.

He did not do more than icing abnormals, for example a flap malfunction, when flying in icing conditions.

Mr. Mattei had not heard anything about the accident.

Mr. Mattei did not have anything to add to the interview.

The interview concluded at 1428.

Interview: Johann L. Progner, Flight Safety International Simulator Instructor
Interview date: August 20, 2009
Time: 1025 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Progner stated the following:

He started out in 1969 as a pilot for the German Air Force. He trained with the Air Force in Wichita Falls, and trained in the Lockheed F-104 at Luke Air Force Base. He also flew DO-28 for the military. After 12 years with German AF he got a job with Lufthansa as an instructor for 5 years. He trained transport pilots for the German Air Force for 3 years. He also trained pilots on "Europeanization". He taught trainees to move up from a prop airplane to the 737 and also European airspace. He then became a copilot on the 737 before being called back part time to instruct. Two years later he became a copilot on the 747. He then became a captain on the 737 and also did simulator instruction. Five years later he went to FS-300 as a captain. He retired 3 years later and moved back to the United States. He was hired by FSI in 2000, was furloughed in 2002, started part time again in 2004, and became full time in 2007. He had about 15,000 hours total time. He was typed in the EMB and ATR on his US license. He was typed on the 737, 747, and A300 on his German license. At the time of the interview, Mr. Progner was a simulator instructor for the EMB and ATR. He was typed in the ATR but had not flown it on the line.

He did Capt. Holberton's recurrent training and checkride after the accident and, according to the records, some training about 2 years ago. Nothing stood out about the training. He said Capt. Holberton would have received training on emergency and abnormal situations. He did not remember if anything was trained on flight controls or secondary flight controls such as flaps. He said it was required to do a no flap landing and he usually did a flap unlock. He said a flap unlock was better to train on takeoff, and a no flap was better on landing.

He had trained a flap asymmetry before. He said when that occurred the pilot could feel the airplane rolling and he would have to figure out what it was. He said the pilot might get a trim display on the ADU. He said the autopilot would disengage.

Asked what he as an instructor expected pilots to do on approach, he said it depended on the situation. It depended on how the airplane reacted, if the airplane was in IMC, and how violent the reaction was. He said if he could not control it right away, he would prefer a go around. Get a/c under control and then see what checklist says. No flap, split flaps, flap unlock in QRH

Icing was usually covered on day two of recurrent. Procedure wise I stay with the freezing conditions.

He taught escape maneuvers in training. He had pilots takeoff in bad weather and fly to Atlanta.

He had not heard of SLD but knew what super cooled liquid droplets were. He would be concerned about freezing rain or drizzle because that was the best way to pick up ice. He said it was the worst-case scenario that a pilot could have.

He was barely familiar with the Roselawn accident.

He did not do LOFT with Empire.

As an instructor he had to attend recurrent training.

He did not fly outside of FSI.

He said most airlines trained that an approach must be stabilized by 1000' in IMC conditions and 500' in VMC conditions.

He said the cues of a stable approach were airspeed steady, power setting stable, glideslope stable, and not needing to correct heading. When stabilized, the airplane was "all trimmed, all set" and a pilot could fly "hands off". What he would expect a trainee to do if the approach was unstable depended on the situation and how destabilized the approach was. He said in a bad situation he would expect them to do a go around.

Mr. Progner also taught recurrent ground school. To prepare for training, FSI had a "bag" for each program that consisted of the applicable training materials. He said there was also a "cheat sheet" of the major differences of that program from other programs. If he were teaching initial training, he would go into the details of the training. He said they also had checking and training requirements for each operator. Instructors received two days of training by Empire Airlines on their training. They were also observed.

Asked if trainees were taught to go around during icing training, he said yes if a go around was necessary.

He used the Empire Pilot Handbook in training. Discuss effects of icing when discuss ice protection systems

If a change, we hear a rumor from the students. We get an email from hector that says we have a change and there is an attachment on the email. Go to communication folder and read the change and sign for it that I got the information. I can't teach it until it was in the book.

Ever have a crew not recognize a flap asymmetry: usually it comes on the approach with autopilot on. Many times autopilot disengages.

He said FSI tried to keep the same instructor with a trainee throughout training but sometimes they had to switch.

Asked if any changes had been made to the training since the accident, he said since the accident in Buffalo, there was more awareness and talk about it. It was emphasized more in ground school and simulator training.

He said they trained stick shaker activation when doing air work and approach to stalls. If a stick shaker happened during an approach, he would expect a pilot to do a go around.

Mr. Progner taught systems integration and introduced trainees to failure modes. He said they would go through the system description and failure modes. Asked if he would tell them the failure would lock out one side of the flaps and that the flap handle was inoperative, he said yes, and there was nothing they could do about it.

He said looking at circuit breakers was not trained because it was not in the procedure. He had never seen anyone look at the circuit breakers.

Capt. Holberton told Mr. Progner that he egressed after the accident but he did not say anything about the flying part.

Mr. Progner did Capt. Holberton's recurrent after the accident. There was no special emphasis on any items. Mr. Progner did not know Capt. Holberton was involved in accident until he told him. He did not recall which flap anomaly he gave him. He did not remember anything unusual or having to retrain any maneuvers.

If he could make any changes to training, it would be to make initial training longer. Regarding recurrent, he said it was ok the way it was.

He taught multiple training programs. He could not think of anything to improve in Empire's training. He said they were all pretty much the same but the details like call outs were different.

FSI did not train a dedicated weather module. He said they usually had ATP pilots who should have a basic understanding of the weather. He would reiterate how to escape weather.

He had nothing to add to the interview.

The interview ended at 1115.

Interview: Steven Seats, Flight Safety International Instructor
Interview date: August 20, 2009
Time: 0805 CDT
Location: Hilton Hotel, Houston, Texas
Present were: Todd Gunther, Katherine Wilson, Leah Yeager – National Transportation Safety Board (NTSB); Sebastian Travadel – Bureau d'Enquetes et d'Analyses (BEA); Dominique Falque – ATR; John Koppenhaver – Federal Aviation Administration (FAA); Steve Martini – Empire Airlines
Represented by: Charles Smith – Smith & Moore

In the interview, Mr. Seats stated the following:

He was an instructor and examiner for the ATR. He was also a JAA examiner for the EMB-145. He started at Flight Safety International (FSI) in 1996, left and flew corporate, came back to FSI in 2001, was furloughed in 2002 and returned in 2004. He flew for the US Air Force for over 20 years as a certified flight instructor and a check airman, and retired about 18 years ago. He flew for World Airways flying DC-10s for less than a year prior to coming to FSI. While furloughed he flew in Europe. He had about 14,000 hours of flight time. He had 5 type ratings. He was typed in the ATR but had not flown it on the line. At the time of the interview, he was current to train in the ATR program.

Mr. Seats taught recurrent ground school but not initial.

He was told that he had instructed Capt. Holberton and F/O Cornell. He remembered them from the facility but did not recall their training or checking. He did a 121 441 check with Capt. Holberton and initial simulator training with F/O Cornell.

He said he taught flap anomalies according to whatever was in the company's QRH. He taught whatever time permitted and was allowed in their curriculum.

He was familiar with the ATR QRH but had not memorized it.

Asked what a pilot should do if they had a flap problem, he said it depended on the circumstances and problem. He said for sure they would do the QRH. If a pilot called gear down, landing checklist and the flaps did not extend, he said the pilot should complete the procedures in accordance with the company procedures and the QRH. He said there were more circumstances to consider but he would expect them to go missed approach and go through the procedures, and if able continue with a stable approach. He would expect trainees to show him good airmanship and good knowledge of procedures.

He was familiar with some Empire procedures but would have to check most of them

Mr. Seats attended recurrent training every 6 months in both airplanes. It involved simulator time. He received a flap abnormality in the ATR simulator as a part of recurrent.

Asked what cues a pilot would get for a flap asymmetry, he said there would be roll problems, and once a pilot picked up on it, it would depend on the severity of the asymmetry. He said if the autopilot was on, it would continue to hold the servo and the crew may not recognize it. He said there would be an autopilot message and also an aileron mistrim. The wheel could also be displaced. He said he was a firm believer that when that happened, disconnect the autopilot and see how the airplane felt rather than letting the autopilot mask the situation.

He had heard of SLD associated with icing and saw it in some videos. He assumed SCDD was also associated with what he knew about SLD. He knew it meant to avoid icing conditions. If icing SLD was forecast, he probably would not fly in it. If he got ice in abnormal places, he would assume he was in severe icing conditions and would need to exit. He said no part 25 aircraft was certified to fly in severe icing. He did not remember ever seeing SLD in a METAR.

He would be concerned if he saw freezing drizzle or freezing rain forecasted. He said freezing drizzle would make him think that he was going to get into severe icing. He told his students to avoid it.

He thought ATR had the "Be prepared for icing" document on its website but they did not use it in training. He said they were limited to an airline's manuals. He had never seen a hard copy of the document or given it to students. He could not say if any of the information was presented in FSI presentations.

He taught Empire's procedures. He said there were some differences between training programs but he could not intertwine other information into another training program. He followed their checklist.

Empire would observe the instructors and when changes came from the company, they would have to be trained on their changes.

He did not train troubleshooting techniques. Asked specifically about looking at circuit breakers, he said maybe to see if one was popped but not to use it as a switch.

During 441 checks, icing would be focused on normally in the oral. He would emphasize it and it was an emphasis item in the PTS, but said there was a lot to do in short amount of time.

Asked if he saw any notes in Capt. Holberton's or F/O Cornell's training records, he said there were no notes on Capt. Holberton's checkride. And for F/O Cornell, there would be just Ss or Us. He reviewed the notes in F/O Cornell's record but there was nothing outstanding. It was normal for a new hire.

Trainees could provide feedback about training through the FSI critique program.

Asked if there were any changes to training since the accident, he said he did not dwell on the accident. There had been more emphasis on icing but he could not say when the changes happened.

Mr. Seats said he was not required to have a JAA license but he had to be evaluated by a JAA/CAA evaluator. He had to attend recurrent every 3 years. Training was focused on checkrides. He was also trained in the EMB.

He went through recurrent training every 6 months for the FAA. He went through EMB and ATR recurrent. In the ATR, he had to go to ground school, simulator training and a PC check. He had to go to ground school two times per year. He also had to have a 121 114 observation. For the EMB, he had an FAR 135 check. He also did a Cat II check for the EMB.

Asked what was considered to be a stabilized approach, he said it would be what the company says. The minimum altitude for a stabilized approach would be based on company procedures and some companies used a different altitude for IMC and VMC conditions.

If the stick shaker activated on approach, the procedure was max power, flaps 15, and go around. He said a stick shaker was not normal on any approach and he would go missed and find out why he got the shaker.

He said they had tools and techniques to teach CRM during the prebrief, in the simulator and during the debrief.

Asked if he would introduce any abnormals when in icing training, he said he would not compound an emergency. He would maybe give a failure of something that could happen in the real world.

He was not familiar with the accident more than hearsay.

Asked if there was anything that he thought we needed to know to help us in our investigation, he said it was not his job.

He had nothing else to add to the interview.

The interview ended at 0843.