

**AVIATION SAFETY: THE ROLE AND
RESPONSIBILITY OF COMMERCIAL
AIR CARRIERS AND EMPLOYEES**

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION OPERATIONS,
SAFETY, AND SECURITY

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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JUNE 17, 2009
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ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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**AVIATION SAFETY: THE ROLE AND
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WEDNESDAY, JUNE 17, 2009

U.S. SENATE,
SUBCOMMITTEE ON AVIATION OPERATIONS, SAFETY, AND
SECURITY,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:05 a.m. in room SR-253, Russell Senate Office Building, Hon. Byron L. Dorgan, Chairman of the Subcommittee, presiding.

**OPENING STATEMENT OF HON. BYRON L. DORGAN,
U.S. SENATOR FROM NORTH DAKOTA**

Senator DORGAN. We'll call the hearing to order.

This is a hearing of the subcommittee of the Senate Commerce Committee, the Subcommittee on Aviation.

I want to thank all of you for joining us today to talk about the importance of the issue of aviation safety. This is the second hearing that we have held this month to discuss the subject of aviation safety, with a particular focus on the safety of regional carriers.

In this hearing, we will receive testimony from representatives of the Nation's network carriers and regional carriers from the Air Transport Association and from the Regional Airline Association, respectively. We'll also hear from the Air Line Pilots Association and from Mr. Scott Maurer, representing the Families of Continental Flight 3407, which crashed on February 12 of this year in New York.

I do want to say, as well, as we start this hearing, that I had intended and wished to have representatives of the carriers themselves at a hearing. And so, we did not accomplish that today. I'm not minimizing at all the representatives of the two—the ATA and the RAA, but I will wish to extend invitations and have representatives of the airlines themselves in here within the next month or so. It is important, I think, that they would accept an invitation to come, and so, I will extend those invitations again.

In this country, I think it is safe to say that we have a remarkably safe system of air travel. It's not my intention, with hearings about aviation safety, to alarm anyone about taking a flight on a regional carrier or a network carrier. We operate aircrafts all across this country every day, and provide critical air service to many people who would not otherwise have that kind of transpor-

tation service or that kind of option. But, we do have a responsibility, it seems to me, to ask questions and to get answers to the questions of, Do we have one level of safety, do we have one standard of safety that now exists, or have we drifted some?

If the traveling public ever has doubts about the consistency of safety in our airspace system or with airline travel, the airline industry inevitably will suffer. So, we have to move together to make certain that people have no reason to question the oversight or the application of aviation safety across the country.

I've said before that I've read extensively about the most recent crash that occurred in our country, the crash by Colgan Air in Buffalo, New York. Frankly, a number of things happened on that flight that caused me great, great concern. There were a number of mistakes that occurred, a number of things that, to me, were revelations that were quite stunning and led me to question, Is this—was it an aberration, was it something that happened only in the cockpit of this one plane, or is there something else at work? Is there a set of standards that is applied one way in one set of carriers and another way in another set of carriers? I don't know the answer to that, but I think it is important that we ask those questions.

The plane that crashed in New York was a Bombardier Dash 8 Q400 operated by a captain and a copilot who had commuted—both commuted long distances to get to work, and were found to have had reasonably little rest before the flight. The copilot raised issues, in the transcript that I read of the conversation in the cockpit, of her inexperience with icing conditions. They, clearly that evening, were flying in significant icing. The captain had failed a number of flight tests during his career, which the carrier themselves were unaware of and did not have information about.

We're going to hear from those that are investigating this. The NTSB, I know, is doing substantial investigations. But, the larger question for me, here, is, What about the airlines and the FAA's ability to prevent a double standard or two different standards of experience in the cockpit? What about the enforcement of rules with respect to familiarity with certain kinds of conditions, familiarity with equipment? We are supposed to have, dating back to the mid-1990s, "one level of safety," for both regional and major carriers. And I want to hear, from our witnesses today, whether you think that is actually the case, whether the system has kept up with changes, or whether there have been changes that have occurred that have drifted us away from one standard?

I'm particularly concerned, from some of the things I've learned in the last hearing—for example, that a carrier does not easily have full access to the records of pilots they are considering hiring. I'm talking about all of the records. They have access to the records of everything that has occurred with respect to an airplane. An airplane that comes off the line and is put in service, everything that happens to that particular airplane is a matter of record that anyone can access. And that is not the case with respect to the record of the pilot or the people in the cockpit.

I think that there is some reason to be encouraged by what the new administrator, Randy Babbitt, has done. He called for a meeting, Monday of this week, which reflects a concern that he wants

to understand these things quickly and take whatever action is necessary. It is also the case that he indicated that, after—2 years after the NTSB suggested a rulemaking on access to records for pilots, that Mr. Babbitt indicated to me that the next time he came to a hearing and I asked the question, “Have you begun a rulemaking?” he indicated that he expected the answer to be affirmative rather than negative.

So, I think we’re making some progress, here. But, this is very, very important, and it’s something that we have to ask questions about. They are tough questions, but necessary and important questions.

I want to thank the witnesses for being with us.

Senator DeMint is the Ranking Member of our Subcommittee, and I know Senator DeMint wishes to make a comment and then, I think, also introduce Mr. Maurer, more formally, who is a member of your state.

**STATEMENT OF HON. JIM DEMINT,
U.S. SENATOR FROM SOUTH CAROLINA**

Senator DEMINT. Thank you, Mr. Chairman. And I thank you again for conducting these hearings.

And I would just add my comments to yours. I agree with everything you said about the concerns about this flight. A lot of us get on regional flights ourselves, every week, going back and forth to our home states, and we assume a lot when we get on a plane. And I know all Americans do. And we do need to make sure there is a standard of safety for every American.

I’m looking forward to working with the Chairman on language that would reveal all the pilot records, just as we have them for an airplane. And some things seem to make common sense right now.

But, I do have the pleasure of introducing Mr. Scott Maurer this morning. Mr. Maurer is the father of a 30-year-old woman who was on Flight 3407 crash, Lorin Maurer. Mr. Maurer was born and raised in Reading, Pennsylvania, where he and his wife raised their daughter, Lorin. He currently lives in South Carolina.

I appreciate him taking the time to come to Washington. I think this is his third trip here, and I know this is very difficult for him to continue to recount this tragedy in public, as well as private.

Mr. Maurer comes before this Committee this morning as a representative of over 150 people and the families of the Flight 3407 group. They’ve come together as a result of the terrible tragedy, with the goal of making changes in the airline industry and the FAA, hoping to keep an accident like 3407 from happening again, and saving many other families the sadness that they are continuing to endure. Mr. Maurer is also joined this morning by his wife, Terry, and Lorin’s boyfriend, Kevin Kuwik.

I am deeply impressed with the work of the Maurers and Mr. Kuwik and all the families of the victims of Flight 3407. As a father of four and a grandfather of two, I can’t begin to imagine the pain that comes from so tragically losing a loved one. It speaks very highly of all the families here today that you’re working to take what must be such a deep sorrow and focusing it on improving airline safety and helping other Americans.

I'm looking forward to hearing your testimony, Mr. Maurer, and the recommendations, this morning. And both the Chairman and I—and I know I speak for everyone on the Committee—thank you for the sacrifice that you're making to try to improve the system for others.

Senator DORGAN. Senator DeMint, thank you very much.

I would—let me ask others if they would limit opening comments to 2 minutes, and then we'll have 7-minute rounds for questions when we've heard from the witnesses.

Senator Lautenberg?

**STATEMENT OF HON. FRANK R. LAUTENBERG,
U.S. SENATOR FROM NEW JERSEY**

Senator LAUTENBERG. Yes, Mr. Chairman, very quickly, thank you for calling this hearing, because, though our flight safety record is so outstanding, when we look at the total of aviation and its services, the situation with the Colgan flight is one that is—shook our bodies, our minds.

The plane took off from Newark-Liberty International in February. It cost the lives of 50 people. Flight 3407 taught us that we need to improve pilot training, address flight-crew hours of service, and implement consistent safety standards for both regional and large air carriers. And just last year, we saw disturbing reports about safety inspection failures, where the FAA let planes filled with passengers take off with cracked hulls. And these failures forced the cancellation of thousands of flights by airlines who may not have taken safety as seriously as they should have.

And so, we're anxious to learn whatever we can about the failure of good precautions, with Flight 3407, and we extend our sympathies, also, to Mr. Maurer, and that we would like to be able to make the promise, when we're finished with these hearings, Mr. Chairman, that we will have done whatever we can to make this excellent safety record that exists with American aviation even better. And we look with interest at what our witnesses—

Senator DORGAN. Senator Lautenberg—

Senator LAUTENBERG.—have to say.

Senator DORGAN.—thank you very much.

Senator LAUTENBERG. Thank you.

Senator DORGAN. Senator Johanns?

**STATEMENT OF HON. MIKE JOHANNNS,
U.S. SENATOR FROM NEBRASKA**

Senator JOHANNNS. Mr. Chairman, thank you. My comments will be very, very brief.

But, let me tell you what I'm thinking about and hoping to accomplish through this process. I think the burden is on the airlines to prove to the American people that, when we get on, for the price of our ticket, whatever that is, that we're going to have a well-experienced crew, who will treat us politely and decently, an airplane that is safe as can possibly be. And I think, really, the burden is there.

When I think about this flight in—and I feel so badly for these families, but this hearing is bigger than that one flight—I think about questions like, Is the plane safe? What's the inspection back-

ground of this airplane? What would the service records show me if I were to take a look at them? I ask myself, Has the crew got the training, the talent, the background, the discipline, have they gotten a good night's sleep, so they can handle all situations?

I had a pilot at—a dear friend of mine; he flew small planes—who said to me, “You know, flying is hours and hours of boredom followed by moments of sheer terror.” And, you know, that always stuck with me.

I ask myself, Does the crew know when they are entering a situation that is beyond their capability, or their airplane's capability? Are they trained well enough, and do they have the talent and experience and background, to see this situation and say, “I'm not going to expose my passengers to that risk. I don't care what somebody above me is trying to say?”

And those are the things that I hope to accomplish in this hearing. So, my hope is, we can focus on some of those questions, and others.

And I'll wrap up by just saying, Mr. Chairman, thanks for calling this—such an important topic. And—just glad to be here today.

Thanks.

Senator DORGAN. Thank you very much.

Senator Begich?

**STATEMENT OF HON. MARK BEGICH,
U.S. SENATOR FROM ALASKA**

Senator BEGICH. Thank you very much, Mr. Chairman. I will be very, very brief. I'll look forward to the questions and answers.

But, I'll be looking at this from two perspectives. One is United States Senator, but also someone who lost a family member, my father, in a plane crash. So, I look at it from two different perspectives. And I will be anxious to ask several questions. And I don't want you to take them, any of them, personally. I think this is an important issue, as just described by several Senators here, of—in regards to safety for our air flights, because people do walk onto the planes assuming they are safe transportation modes, and it's going to be important that we make sure they continue to improve on the record you have today.

But, again, I'm going to be coming from two perspectives, and I hope you recognize that.

Thank you very much.

Senator DORGAN. Senator Thune?

**STATEMENT OF HON. JOHN THUNE,
U.S. SENATOR FROM SOUTH DAKOTA**

Senator THUNE. Mr. Chairman, I, too, want to thank you for calling the hearing.

And I want to thank our panelists for being here, especially you, Mr. Maurer. Again, our condolences to you and your family and all the families. A very tragic, tragic incident, and I applaud you for committing yourself to making sure this doesn't happen to any other families. Thank you for your efforts and for the courageous work that you're doing.

Coming from a state like mine, we have a heavy reliance on regional airlines. They play an important role in transporting pas-

sengers from smaller communities who otherwise would not have scheduled air service. And, while I don't, you know, think, again, that we can—no one's arguing that we shouldn't take our overall aviation safety record for granted, I also believe there's room for improvement. And we want to ensure that the FAA and the airlines are doing everything they can to improve the overall safety record, when it comes, not only to regional airlines, but to all airlines.

And I particularly want to home in on something that we discussed at the Subcommittee hearing last week, Mr. Chairman, and that is the need to incorporate more information regarding the background of pilots. I think it just makes sense that we work to ensure that the FAA incorporates a more accurate picture of a perspective—prospective pilot's flight history when an airline is looking to make a hiring decision. And voluntarily requesting this information just isn't good enough. I think there is more that Congress can require, when it comes to updating the Pilot Records Improvement Act, and I hope that we can work on that in this Committee to make some of those changes, because, I think, clearly that came into play in this very tragic incident.

But, again, thank you for holding the hearing, and I want to thank our panelists, and I'll look forward to hearing from you.

Thanks.

Senator DORGAN. Senator Thune, thank you very much.

As several of my colleagues have mentioned, we look at these issues through the lens of tragedy, regrettably. But, in many cases, I—and I expect Mr. Maurer is here in the hope that what we learn will save other lives and improve airline safety. And I—all of us would, I think, embrace that goal.

So, with that in mind, we have four witnesses, and I want to call on Mr. Jim May first today. Mr. Jim May is President and Chief Executive Officer of the Air Transport Association of America.

Mr. May, you and I have discussed all of the issues that have been discussed this morning. I—the same is the case with Mr. Cohen; we've had these discussions.

Let me call on you—let me say, to all four of you, that your entire statements will be made a part of the permanent record, and we would ask that you summarize your remarks.

**STATEMENT OF JAMES C. MAY, PRESIDENT AND CEO,
AIR TRANSPORT ASSOCIATION OF AMERICA, INC.**

Mr. MAY. Thank you, Mr.—

Senator DORGAN. And would you pull that very close and turn that on.

Thank you.

Mr. MAY. Thank you, Mr. Chairman, and good morning.

Let me also share my condolences with Mr. Maurer and the other representatives of the families that lost loved ones aboard the Colgan Air flight. It is a terrible, terrible tragedy.

In the airline industry, safety is our highest priority. We try very hard to assure that we never compromise safety because of economic conditions. We work closely with all members of the aviation community, including regional airlines, to achieve extraordinary records—no fatalities for mainline carriers in the past number of

years. And it really is in that spirit that I appear before you today, with an understanding that no accident is acceptable. We have a responsibility to understand, through rigorous and searching inquiry, the causes of the Buffalo accident, and then to take whatever single or multiple corrective measures are needed.

In light of that responsibility, we're very fortunate that there are three expert government forums in which scrutiny is happening today, right now. This is as it should be. The public needs to be confident in the responses to aviation safety issues.

The National Transportation Safety Board's ongoing investigation is going to produce a far more complete picture than we have today. In this, as in previous accidents, the Board is the authoritative source for making that determination and recommending corrective action.

In addition, the Department of Transportation's Inspector General recently began an assessment of the Federal Aviation Administration's oversight of certification, pilot qualification, training, and other issues. That is in response, Mr. Chairman, to your very direct inquiry.

When this review was announced, we immediately offered our resources and full cooperation to the inspector general. His evaluation and constructive suggestions that we know will result from it will augment the NTSB's effort.

Finally, the FAA's Call to Action, held on Monday of this week, is a broad-based initiative to look at safety issues, including those raised at this morning's hearing. We attended—multiple representatives of ATA attended Monday's meeting and were impressed by the participants' focus on concrete issues and their understanding of the need for very prompt solutions. We look forward to being engaged with the FAA and other interested stakeholders in this vital work.

Now, I don't believe that any topic should be off the table in the Call to Action. We need to have a full and frank discussion about safety and the factors that contribute to it. If there are disparities between mainline and regional safety programs they should be closed, and closed quickly.

Let me suggest six or seven steps that need to be pursued right now, today.

First, I think we need to apply FOQA, Flight Operational Quality Assurance programs used by major carriers, to regional airlines. FOQA works. The collection and analysis of data recorded during flight improves safety.

Second, apply ASAP, Aviation Safety Action Programs, which encourage voluntary reporting of safety issues and events that come to the attention of employees, to those regional airlines that don't currently have such a program.

Third, identify advanced-training best practices of mainline carriers to be used by regional carriers. It's an AQP program, in the jargon.

Fourth, we need a centralized database of pilot records, to give airlines easy access to complete information about applicants from the time they begin their flying career.

Fifth, let's see if the FAA needs to increase compliance with the "sterile cockpit" rule, and what measures it should use to do that.

Sixth, let's examine flight-crew preparedness when pilots report to work. This means looking at crew-member commuting. If this means examining flight and duty-time issues, I think that's perfectly appropriate—but, tie it to the commuting side of the equation—as long as any examination is based on science, not anecdotes.

Each of these initiatives can and should be achieved in short order. We're looking forward to working with this Committee, the FAA, the IG, and the NTSB in as cooperative a fashion as possible.

Thank you, Mr. Chairman. I'll be pleased to answer any questions.

[The prepared statement of Mr. May follows:]

PREPARED STATEMENT OF JAMES C. MAY, PRESIDENT AND CEO,
AIR TRANSPORT ASSOCIATION OF AMERICA, INC.

The crash of the Colgan Air aircraft near Buffalo on February 12, 2009, was a tragedy that has produced heartache for the relatives and friends of the victims of that accident. Words are faint consolation for their grief.

Two basic considerations need to guide us in the aftermath of that tragedy.

The first consideration is that in the aviation community, no accident is acceptable. We need to understand through rigorous and searching inquiry the cause of the Buffalo accident. Completion of the ongoing National Transportation Safety Board investigation will produce a far more complete picture than we have today of what so tragically unfolded that evening. Moreover, the Department of Transportation Inspector General recently began an examination of Federal Aviation Administration (FAA) oversight of certification, pilot qualification, training and other issues that will augment the NTSB effort. The "call to action" initiative that the Secretary of Transportation announced last week will enhance these two efforts. The call to action meeting that the FAA held this Monday enabled stakeholders to review pilot training, cockpit discipline and other issues associated with flight safety. We enthusiastically support this initiative. ATA and its members actively participated in last year's FAA runway safety "call to action." We look to the same type of involvement with this latest "call to action."

The second consideration is that it is the certificate holder—the air carrier that has received the authority from the FAA to serve the public—that is ultimately responsible and accountable for the safety of its operations and for complying with the requirements that the FAA imposes on air carriers.

It goes without saying but I will say it: We do not compromise safety for economic reasons. ATA members and their employees have achieved an extraordinary safety record because of their single-minded focus on safety. This has occurred, I would emphasize, during the most turbulent era in our industry's history. It is in the spirit of the pursuit of safety that I appear before you today.

Understandably, much has been written about the Buffalo accident. Speculation, however, is not the foundation for a meaningful response to any aviation accident. We need to get it right. That is why we all rely on the NTSB in these situations. After its investigation is concluded, the Board will prepare and issue a detailed narrative report that analyzes the investigative record, identifies the probable cause of the accident and makes specific recommendations for fixing the causes of the accident.

That kind of rigor is indispensable in developing a fact-based, informed and effective response to the accident. It is the kind of diligence that characterizes other safety-related efforts in our industry. We approach safety issues collaboratively with commitment and know-how within the bounds of the Federal Aviation Regulations (FARs).

In the airline industry, safety is the highest priority. That is a shared commitment and we work closely with other members of the aviation community to achieve it. Together with the FAA, manufacturers, labor unions and other interested parties, we have achieved an extraordinary safety record. That impressive accomplishment, however, does not mean that we can rest on our laurels. We continuously pursue safety. Improving safety is work that is never done; we always seek to improve.

Commercial aviation has built this record through a disciplined and analytical approach to improving safety performance. That scrutiny includes benefiting from experience and from a forward-looking search to identify emerging issues. The Commercial Aviation Safety Team (CAST), for example, brings together stakeholders to

improve safety performance by applying data-driven analyses to spot issues before accidents occur and to establish safety priorities. Increasing reliance on two industry-led safety programs, the Aviation Safety Action Program (ASAP), which encourages voluntary reporting of safety issues and events that come to the attention of employees of certain certificate holders, and the Flight Operational Quality Assurance (FOQA) program, which involves the collection and analysis of data recorded during flight to improve safety, have also added immeasurably to our knowledge. This empirical approach, coupled with the expertise and commitment of our front-line employees, provides the underpinning for industrywide safety efforts.

Participation in these programs underscores that ATA members' efforts go well beyond compliance with governmental regulatory directives. This willingness to exceed minimum requirements is often overlooked. It is tightly woven into the safety culture of airlines, whether they are mainline or regional.

No accident or incident is acceptable. We seek to learn from each event. Consequently, ATA has formed a Senior Advisory Task Force to address the matters raised during the recent NTSB hearing about the Buffalo accident. The task force is comprised of airline presidents, chief operating officers and their peers. It will ensure that our support of the FAA, airlines, unions and others is responsive, targeted and thorough.

ATA member airlines highly value their relationships with regional airlines and the customer benefits those arrangements provide. Customers, communities and the marketing and operating carriers benefit immensely.

The bedrock principle in civil aviation is that the entity to which the FAA has issued a certificate is solely responsible for its activities. Whether that entity is an air carrier, an airman or a dispatcher, that responsibility cannot be delegated or assumed by others. That principle avoids any confusion about ultimate responsibility, an absolutely essential consideration in promoting safety. It is a principle that dates back to 1938, when Congress created the Civil Aviation Authority, the predecessor of the FAA.

As separate regulated entities, regionals are independent of mainline airlines. As I noted previously, they hold operating authority that the FAA has granted them. The FAA certifies regionals under Federal Aviation Regulation Part 121. This means that the certificate holder—the regional airline—maintains the responsibility for, and direct control of, its operations and safety programs. The FAA has the mandate to assure compliance with Part 121 and other FAR requirements.

We should also remember that in the mid-1990s, in evaluating the need for improvements in the regulatory structure under which commuter airlines—the former term for regional airlines—operated, the FAA responded with the support of ATA and its members by requiring them to adhere to FAR Part 121, the same regulation under which mainline airlines operate. As a result, the rule that became effective on December 20, 1995 imposed a “one-level-of-safety” standard that continues to this day. It required aircraft with 10 or more passenger seats and all turbojets operated in scheduled passenger service to operate under and comply with FAR Part 121 operational requirements. These included dispatch requirements and the use of certificated dispatchers, new flight/duty time rules, manuals and procedures for flight and ground personnel, cabin safety and flight attendant requirements for 20- to 30-seat airplanes, and new training rules.

Moreover, the Department of Transportation, for more than a decade, has required in 14 CFR Part 257 that codeshare arrangements be disclosed to customers before they purchase a ticket. This “operated by” language underscores the importance that the government has recognized in maintaining the distinction between the mainline airline and the regional airline.

FAA implementation of uniform mainline and commuter regulatory requirements has raised questions about mainline and regional operating environments. The most significant of those concerns and our responses follow.

“Two-tiered safety environment.” As noted previously, since 1995 the FAA has imposed one level of safety on the air carrier industry—whether with respect to training, flight deck crew competency, etc. If the NTSB or FAA determines that regional airline performance within that unitary regulatory structure requires additional attention, it should reformulate its compliance efforts as necessary.

Flight/duty time regulations. An issue that has arisen in the Buffalo accident is the role of flight-deck personnel commuting. That, it should be clear, is not a flight/duty time issue. Commuting is within the exclusive control of the pilot or copilot. It is expected, and the law assumes, that they will report fit to work. It is the responsibility of the crew member to inform the carrier if he/she is unable to fly because of fatigue, whether because of commuting or for any other reason. That is why Part 121 airlines staff reserve crew members.

Flight deck crew compensation. With but one exception, pilots at all larger regional airlines are represented by unions and they work in a seniority-based system. Compensation is a function of collective bargaining. Neither legislation nor regulation can effectively peg what is the right compensation in such a system of negotiated wages, benefits and working conditions.

Sterile cockpit rule. The FAA imposed the sterile cockpit rule in 1981. Its longstanding prohibition against “nonessential conversations within the cockpit” is well-known. To the extent that compliance with the rule is a concern at *any* Part 121 carrier, it is a matter for the FAA to pursue.

Centralized pilot record database. A centralized database of pilot records would make it easier to evaluate the backgrounds of applicants for flight deck positions. We urge the FAA to determine if such a database can be efficiently implemented. To be successful, however, it must be complete. Results of all pertinent actions relating to the pilot’s competency must be recorded and accessible to an airline evaluating an applicant.

Conclusion

We will work diligently with other stakeholders in evaluating and responding to the results of the NTSB investigation of the Buffalo accident and the Inspector General’s assessment of the FAA regulatory oversight program. This week’s FAA “call to action” meeting was part of a vital initiative that we believe will contribute appreciably to this effort. It is in that informed context that any further action to improve safety should be examined.

Senator DORGAN. Mr. May, thank you very much.

And next, we’ll hear from Mr. Cohen.

Mr. Cohen, you may proceed.

STATEMENT OF ROGER COHEN, PRESIDENT, REGIONAL AIRLINE ASSOCIATION

Mr. COHEN. Thank you. Chairman Dorgan, Senator DeMint, and members of the Subcommittee, I’m Roger Cohen, and I’m President of the Regional Airline Association.

I want to express our deepest sympathies for the lives of the passengers and crew of Flight 3407 that were lost, and for the families affected by the crash. We deeply share in their grief.

And I also want to express, today, not only for our member airlines, but for our 60,000 highly trained professionals, our total unwavering commitment to safety.

As we work toward ensuring this post—as we work toward this—let’s make sure this post-accident process does not have to be repeated. We will take whatever steps are necessary so that our flight crews and our aircraft are as safe as humanly possible.

The safety of our Nation’s skies is a shared responsibility. At Monday’s FAA summit, five of our regional airline CEOs and other senior leaders in—five of our CEOs joined with Federal agencies, major airlines, and union representatives to candidly explore all of the issues making headlines over these past few months. Regional airlines have but one objective, and that’s to prevent any future accidents.

And as we do that, as this Committee has noted, it’s important to keep our perspective and to reassure the American public that flying is extremely safe. In fact, until this recent tragedy, commercial airlines had gone the longest period in aviation history without a fatal accident.

Working collectively, rolling up our sleeves with all parties—government, labor, manufacturers—airlines have steadily improved our safety record over the course of many decades of safety initiatives, investigations, and reviews of accidents and incidents, large

and small. Nevertheless, we can and must do better. Our industry's number-one goal has been, and always will be, zero accidents and zero fatalities.

Mr. Chairman, at your request, our member airlines provided the Committee very detailed information about their operations, their training, their hiring, and their employees. Today, we will try to better define the airline—the regional airline industry to clear up some of the misconceptions. More importantly, we will talk about the steps that regional airlines have already taken and the actions we plan to take to further focus our total commitment to safety and accident prevention.

Our airplanes typically carry up to 100 passengers. More than 50 percent of all of the scheduled airline passenger flights in the United States are on regional airlines. And, most notably, three out of every four commercial airports in this country are served exclusively by regional airlines.

Our airlines, as you've indicated, largely operate in seamless partnership with the major airlines. Regional airlines provide the crew and the aircraft, while major airlines set the flight schedules, the fares, and the customer-service policies.

Regional airlines and our major airline partners operate as a single, integrated system. One ticket, one trip, one safety standard. All passenger airlines are subject to the exact same FAA safety standards and requirements. It has been this way for more than a decade.

Our goal is to prevent accidents, and that's why we are earnestly and eagerly supporting the FAA's Call to Action, and why the Regional Airline Association has embarked on our own Strategic Safety Initiative to underscore our safety culture and to help prevent accidents.

This Strategic Safety Initiative has four elements:

First, we'll be bringing together our safety professionals to review all of the procedures and address any issue that can even be perceived as a contributing factor to an accident.

Second, we will conduct a thorough review of fatigue, looking at all the human factors in the scientific field to minimize the risks associated with fatigue.

Third, we will implement a Fatigue Awareness Management Program so that our airlines keep this issue top-of-the-mind for both our flight crews and, just as importantly, airline management.

Fourth, we will reach out in partnership, with you in Congress, across the government, and to our fellow stakeholders in labor and throughout the aviation industry, to explore the full range of issues which could help us improve safety and prevent future accidents. And among those are, number one, establish a single integrated FAA database of pilot records. Second, explore random fatigue testing. Third, examine the practice of commuting. Fourth, extend the period for background checks from 5 to 10 years. And fifth, seek to analyze the information from cockpit voice recorders in settings other than accident investigations. And mine all this tremendous data of check rides to look for trends to help prevent future accidents.

Mr. Chairman, the Regional Airline Association thanks you for the opportunity to testify today and for opening the dialogue on

these critical issues. We look forward to keeping you informed. And I welcome any questions you might have.

[The prepared statement of Mr. Cohen follows:]

PREPARED STATEMENT OF ROGER COHEN, PRESIDENT,
REGIONAL AIRLINE ASSOCIATION

Good morning Mr. Chairman, Senator Hutchison, and Members of the Committee. My name is Roger Cohen. I am the President of the Regional Airline Association. Our 31 member airlines carry more than 90 percent of the passengers traveling on regional aircraft.

The circumstances that prompted the Committee to convene today's hearing are tragic. We share the Committee's concern for the lives of the passengers and crews that have been lost and the grief suffered by their families and loved ones.

The challenge now facing this Committee, Federal aviation safety agencies, and the aviation industry is to review all of the issues and take whatever steps are necessary to prevent accidents in the future.

We appreciate the open lines of communication this Committee has kept with our industry, including the opportunity to meet with Aviation Subcommittee Chairman Dorgan to share our thoughts in advance of this hearing as well as the opportunity to include our members in a survey of commercial airline safety programs and industry best practices. We hope you find this continuing dialogue to be as valuable as we do.

Federal safety statistics clearly show that flying is the safest mode of travel. A person is far more likely to have a fatal accident traveling in a car, train, or bus than traveling by air. According to the National Safety Council, the fatality rate for cars is 7,700 percent higher than for commercial aircraft and the fatality rate for trains and buses is 300 percent higher. This remarkable safety record is the result of decades of dedicated work from aviation safety professionals, both in the government and in the industry.

Nevertheless, the pursuit of improved aviation safety is a shared and continuous effort, to which regional airlines are committed, along with everyone else in the commercial airline industry. The industry's overarching goal has been and always will be zero accidents and zero fatalities. We are committed to working with Congress, the FAA, the NTSB, and aviation safety experts in academia to ensure that we can meet this goal.

Mr. Chairman, for the purposes of aiding this Committee with its inquiry, our testimony will focus on two broad areas.

First, we will take a few moments to reacquaint the Committee with the regional airline industry. Anyone who has done background research on the industry prior to this hearing would have found a large number of inaccuracies portrayed in the media, and such misconceptions will not help the Committee carry out its responsibilities.

Second, we will talk about the steps regional airlines have already taken and the actions they plan to take to even further intensify their focus on aviation safety. The regional airlines are launching a new initiative to advance industry safety standards. We also believe that Congress can provide additional safety tools for the industry.

Regional Airlines

Regional airlines operate regional jets or turboprop aircraft ranging in size from about 10 to 100 seats and provide scheduled passenger service on short- and medium-haul routes that connect more than 600 smaller towns and mid-size cities to each other as well as to the Nation's major hub airports. This network offers passengers seamless service to almost every community in the country and many around the globe, serving 160 million passengers last year.

Shorter flights to less heavily populated areas on smaller aircraft should not be equated with fewer flights or limited reach. Over the last 20 years, the industry has worked to match aircraft size to the market, leading to vast improvements in service to many communities that would otherwise not have air service. Today, more than 50 percent of all scheduled flights are operated by regional airlines and three out of every four commercial airports in the United States are served exclusively by regional airlines.

Regional airlines operate in full partnership with major airlines. Indeed, major airlines either contract with regional airlines to provide service on selected routes or have an ownership stake in regional airlines.

In this relationship, a regional airline is responsible for providing the crew and maintaining the aircraft. The major airline, for which the regional carrier is providing service, determines flight schedules and fares and sets customer service standards.

From the passenger's perspective, the brand of the major airlines is in full view throughout the travel experience. In most cases, the passenger buys the ticket from the major airline, typically checks in at the major airline's counter, may find the in-flight magazine of the major airline, and may even sip a beverage placed on the cocktail napkin of the major airline.

Regional airlines and their major airline partners operate as a single, integrated system. The notion of two separate systems is a misconception.

That misconception extends to safety standards and it needs to be corrected if Congress is to have an accurate grasp of the situation. The fact is that all carriers are subject to the same strict FAA safety standards and requirements and receive the exact same level of safety oversight, notwithstanding so many erroneous press accounts.

Pilot Qualifications. Regional airline pilots are subject to the same training requirements that apply to pilots working for major carriers. The rules are the same for all airlines.

Pilots must complete rigorous classroom and simulator training and regularly pass extensive flight checks given by FAA-approved examiners throughout their careers. Each and every check tests a pilot's knowledge and ability to perform both routine and emergency procedures. Each and every question, procedure and maneuver must be executed fully to FAA standards. Unlike many professional tests, the checks that airline pilots must complete are unforgiving. What this means is that airline pilots must complete every aspect of their flight check successfully, in effect scoring a grade of 100 percent, or they cannot fly for the airline. If any aspect of the flight check is not passed, the pilot must receive remedial training and successfully complete a recheck before being allowed to fly again.

The FAA also requires pilots to be separately trained and qualified on every type of airplane that they will be operating.

Regional airlines comply with these strict safety standards and regularly operate under internal standards above and beyond FAA requirements. For example, the average experience of the RAA member airline flight crews is 3,075 total flight hours for first officers and 8,500 for captains, which far exceed the FAA minimum requirements of 500 and 1,500 hours, respectively.

Pilot Background Checks. All airlines conduct in-depth background and safety checks on pilots before they are hired. Two separate sources are consulted.

The FAA maintains a database of pilot information established by the Pilot Records Improvement Act of 1996 or PRIA. This database includes information about a pilot's certificates, ratings, medical status and any rule violations for the previous 5 years. In addition, this law requires airlines to contact the pilot's previous airline employer to obtain information about his or her training performance, drug and alcohol tests, and employment status. FAA maintains a separate database, not subject to the PRIA law, which includes a pilot's history of FAA check ride disapprovals. Certainly, integrating a real-time database containing all pilot records would improve access to this vital information.

Pilot Fatigue. Rested, alert, and focused pilots are essential for aviation safety. All parties—the FAA, airlines, and pilots—have a role to play in ensuring that pilots are well rested.

The FAA has rules in place to avoid fatigue. These rules apply to all pilots and all airlines.

- Pilots cannot fly more than 100 hours per month. In practice, pilots typically fly less than that—80 to 82 hours during a month.
- Pilots can fly no more than 8 hours per day.
- Pilots are required to get at least 9 hours of time off between trips.

All airlines construct their pilot schedules in strict adherence to Federal rest rules. In addition, many airlines have agreements with their pilot unions, further limiting the length of their scheduled working days. Computers are used to track pilots' flight and duty time to ensure that they are working within the FAA rest rule limits. Pilots are also required to maintain their own log books and are directed to alert airline management if they are approaching a limit. These systems alert airline management if a pilot is approaching FAA limits.

Additionally, airlines provide training to pilots so that they can accurately recognize the signs of fatigue. It is the professional responsibility of every pilot, if he or she does not feel sufficiently well rested, to say so and not fly. Airlines have non-

punitive policies in place that allow pilots to drop the trip if the pilot feels incapable of flying alertly. Backup flight crews are in place specifically for this purpose.

Pilots must maintain this professional responsibility and ethical obligation to passengers and their fellow crewmembers to conduct themselves in a manner that ensures they are well rested. In fact, the great majority of regional airline pilots are consummate professionals that embrace their responsibilities without hesitation and without compromise. While there are strict FAA rules and regulations in place to ensure pilots have enough time off between duty periods, it is the pilot's responsibility to ensure they get enough rest during their time off and to notify the airline promptly in any case where the pilot did not get sufficient rest.

Among the other issues of interest to this Committee, which I would like to review, is pilot compensation.

Pilot Pay. The entire airline industry—regional, majors, and low-cost airlines—has a highly unionized workforce that is paid a fair and reasonable wage. Pay levels, the option to commute, and virtually all other work rules are negotiated through the collective bargaining process.

The average salary for a regional pilot with the rank of Captain at an RAA member airline is \$76,000 a year. This salary is comparable to other professions that utilize similar skills. For example, according to the Bureau of Labor Statistics, the average salary in the architecture and engineering fields is \$71,430 per year. In the computer industry or in mathematical sciences the average annual salary is \$74,500.

A First Officer has less seniority and responsibility than a Captain. The average salary for a First Officer, working at an RAA member airline, is \$32,000 a year. Again, this salary is in line with comparable professions. The average salary for a paramedic is \$31,980; medical assistants average \$29,060 per year.

Pilots earn a fair and reasonable wage and also receive valuable benefits such as free airline travel, paid leave, and comprehensive benefits. Also, pilots, while on duty, receive collectively-bargained *per diem* expenses.

Commuting. Some pilots choose to commute and live away from their crew base, which is the airport from which they will begin and end every flight assignment. In fact, commuting is a common and long-standing practice among crewmembers at all airlines, regional and major.

Whether to commute and what constitutes an acceptable commute is a choice made by each individual crewmember. In fact, the ability to live where they want to and to fly to where they work is a valuable perk that attracts pilots to the profession. It is important to note that, while many pilots commute, many others do not. Commuting is not necessitated by economics. In fact regional airlines have crew bases in dozens of attractive and affordable communities across the country.

On the other hand, those who choose long commutes have a professional responsibility to arrive at work properly rested. As I mentioned earlier, the airlines have non-punitive policies in place to relieve a pilot who is not rested or feels fatigued.

Moving Forward: Strategic Safety Initiative

RAA is a strong supporter of and full participant in the FAA's call to action. At the request of the Administrator, senior officials from the regional airlines, including five RAA member CEOs, attended the FAA's Call to Action meeting on Monday, June 15. The consensus reached at Monday's meeting is that safety is a shared responsibility. In fact, many specific safety objectives discussed at Monday's meeting were already included as part of the Strategic Safety Initiative (discussed in detail below) launched by RAA member airlines last week.

We will continue to support and participate in this valuable dialogue as FAA conducts similar safety summits across the Nation this summer, at which we will address our shared safety goals with our partners within labor and government and with our mainline partners.

Indeed, the purpose of the Regional Airline Association's Strategic Safety Initiative is to study and recommend actions responsive to challenges facing the airline industry. The initiative has four elements:

1. Review Safety Procedures

The Regional Airline Association will form a task force comprised of safety directors and operations directors from the regional airlines to review safety procedures, giving particular attention to any issue or procedure cited by the NTSB as a contributing factor to any accident.

2. Study Impact of Fatigue

RAA will commission a study to look at the impact of fatigue and other human factors on pilot performance. The study will be conducted by an inde-

pendent and expert organization, in all likelihood a university with a respected aviation program.

The study will be framed by a Strategic Safety Advisory Board comprised of industry experts drawn from the ranks of academia, industry, and safety regulators.

3. *Fatigue Awareness Management Program*

The Regional Airline Association will create a fatigue awareness management program for use by its member airlines.

4. *Recommendations to Congress*

We are committed to working with Congress on this initiative and believe that Congress can provide the aviation industry with additional safety tools, including:

a. *Single Data base of Pilot Records*

Requiring the FAA to maintain a single, integrated database of pilot records would provide airlines with critical, real-time information about pilot qualifications and performance, thereby improving the process of recruiting, hiring, and training new pilots.

b. *Random Fatigue Tests*

Airlines are already required to conduct random drug and alcohol tests on pilots. RAA recommends exploring with FAA and all industry stakeholders the concept of random fatigue tests on pilots to help ensure that pilots are indeed rested before flying.

c. *Commuting*

We believe it would be prudent for Congress, working with all stakeholders, to examine commuting in depth, including the possibility of limiting commuting time prior to beginning a work assignment.

d. *Extend Background Check Time Frame*

Under current law, an airline conducting a background check on a pilot can only review the last 5 years of the pilot's safety records, qualifications, and training. Extending the review period to 10 years will help airlines identify safety risks.

e. *Explore Use of Cockpit Voice Recordings for Accident Prevention*

Currently, cockpit voice recordings can be reviewed only as an accident investigation tool, and RAA clearly understands the sensitive privacy issues involved and the years-long debate about access to the CVRs. Yet, as we saw in the flight 3407 accident, pilots have violated the rule requiring sterile cockpit below 10,000 feet. In our collaborative safety effort, stakeholder groups must look at all potential tools to improve flight safety, including reaching out to our employee groups to explore random, non-punitive ways in which this essential information can be used to prevent accidents. Similar to ASAP and other diagnostic preventative safety programs, an initiative permitting random audits could provide valuable information.

f. *Improved Tracking and Analysis of Check Rides*

Current discussion suggests confusion relating to check rides—the image of pilots who have failed check rides continuing to fly aircraft. Every airline pilot is required to pass frequent check-rides during their airline service, and pilots cannot fly until they have successfully completed their required check rides. We believe FAA and the airlines may be able to increase the level of safety through a more detailed analysis of this testing over the entirety of a pilot's career. By working with regulators and the employee groups, the industry may develop a better methodology for assessing pilot performance and instituting remedial training programs that will ensure a higher level of safety.

We will be moving expeditiously to implement this initiative and have already begun compiling a list of aviation experts as candidates for our Strategic Safety Advisory Board. We will keep the Committee informed of these activities.

Mr. Chairman, the Regional Airline Association appreciates the opportunity to testify before the Committee this morning and I welcome any questions you might have.

Senator DORGAN. Mr. Cohen, thank you very much for your testimony.

Next, we will hear from Captain John Prater, the President of the Air Line Pilots Association.

Mr. Prater—
 Captain PRATER. Thank you—
 Senator DORGAN.—you may proceed.

**STATEMENT OF CAPTAIN JOHN PRATER, PRESIDENT,
 AIR LINE PILOTS ASSOCIATION, INTERNATIONAL**

Captain PRATER. Thank you, Chairman Dorgan.

We commend this Committee for calling this hearing to take a closer look at some of the critical issues affecting airline pilots and our charges. Many of these issues—pilot screening and hiring standards, training and mentoring—were at the top of the agenda at the FAA's Call to Action Summit in which we participated, on Monday. While this meeting was a critical first step toward developing solutions to these problems, we encourage the FAA to take a more structured approach in working with the airlines and labor to establish an agreed-to implementation plan for all parties to adopt.

In recent years, we have to look more at the system. The major airlines have come to rely heavily on codeshare arrangements with the so-called regional airlines to connect large, mid-sized, and small cities in the U.S., in Canada, in Mexico, to their international hubs. This has resulted in the exponential growth of the regional sector of the industry. Still, the major carriers exert a great deal—almost total pressure on the regional airlines to provide their service at the lowest possible price. They control ticket pricing and schedules, and they regularly move flying between their regional partners. This exacerbates breaking the chain of pilot experience. Couple that with 160 or more bankruptcies in the airline industry, and airline pilots leaving the industry because there has been no way to protect and retain that experience in the cockpit, we start over again and again.

Some of the major airlines, even today, are outsourcing their flying to the regionals and laying off their own pilots, losing those decades of experience to the profession. These experienced pilots cannot afford to work for one of these so-called "regional carriers" as a newly hired first officer. As a result, many of the smaller regional carriers hire pilots near the FAA minimum standards and do not employ adequate screening processes during hiring that identify that ideal candidate.

As was brought out during the NTSB's recent hearing on the tragic accident in Buffalo, many pilots who fly for the regional airlines are not getting adequate training or enough rest. Airlines are requiring pilots to work longer days, and more of them each month. Fleet and frequent base changes are forcing pilots to decide between commuting or possibly taking another pay cut to train on new equipment.

The consequences? The quality of airline pilot careers has been greatly diminished, and the severe erosion of benefits and quality of life are motivating experienced aviators to move to other professions.

Current training practices do not take into account the drastic change in pilot applicants' experience. Instead, they assume that pilots are far more experienced than they may actually be. ALPA

believes there must be a new focus on standardization and even on fundamental flying skills.

To meet this challenge, airlines and other training providers must develop methodologies to train for that lack of experience and to train for judgment. Current training practices may also need to be adjusted to account for the source and the experience level of that new pilot entering into initial training with his or her airline.

ALPA also believes there should be more stringent academic requirements to obtain both commercial and airline transport pilot ratings in preparation to starting a career as an airline pilot. The FAA should develop and implement a structured and rigorous ground school and testing procedures for pilots who want to qualify to fly for Part 121 airlines.

ALPA also recommends that airlines provide specific command and leadership training courses for new captains, to instill in them the necessary skills and traits to be a real leader on the flight deck. Airlines should also implement mentoring programs for both captains and first officers as they first enter operations in their new crew positions to help them apply the knowledge and skills to line operations from their more experienced peers.

Flight experience and pilot capabilities cannot be measured by mere flight hours. We must remember that each and every pilot out there today has met the FAA standards, has met and trained and exceeded the standards of their airline, who's responsible for certifying them.

Turning to another area of concern, for two decades you have heard me and my predecessors speak about the pilot—problem of pilot fatigue. It's time. We need to address those rules, and we need to change them.

Other means to enhance safety and improve airline operations, we agree with Mr. May, data collection and analysis programs, such—in FOQA and ASAP—we need to share that information across the industry and then modify our practices to make sure that the best practices are being used by the entire family of airlines. In order to allow those programs to grow and make these reports more readily obtainable, additional legislative protections will be needed to limit the use of ASAP and FOQA data in civil liability cases and to ensure that the information is used to increase safety.

The best safety device on any airplane is a well-trained, well-rested, highly motivated pilot. A strong safety culture must be instilled and consistently reinforced from the highest levels within an airline and among its codeshare regional partners.

Thank you for the opportunity to address you, and I'll be ready to take any questions.

[The prepared statement of Captain Prater follows:]

PREPARED STATEMENT OF CAPTAIN JOHN PRATER, PRESIDENT,
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL

Good morning. I am John Prater, President of the Air Line Pilots Association, International (ALPA). ALPA is the world's largest pilot union, representing nearly 54,000 pilots who fly for 36 airlines in the U.S. and Canada. ALPA was founded in 1931 and our motto since its beginning is "Schedule with Safety." For more than 77 years, ALPA has had a tremendous impact on improving aviation safety. ALPA is a founding member of the International Federation of Air Line Pilots Associations (IFALPA) and the U.S. and Canada representative to the Federation which joins the

pilots of over 100 nations together in safety and security harmonization efforts. Today, ALPA continues to be the world's leading aviation safety advocate, protecting the safety and security interests of our passengers, fellow crewmembers, and cargo around the world. ALPA has lived up to its mandate to the extent that many in the industry, including a former FAA administrator, have referred to us as the "conscience of the airline industry."

We applaud the Committee for holding this hearing and appreciate this opportunity to testify about "Aviation Safety: The Role and Responsibilities of Commercial Air Carriers and Employees." We would like to begin our testimony by discussing crewmember fatigue.

Crewmember Fatigue

Fatigue may adversely affect every flight crew member every time they fly. Due to airline economic conditions which require pilots to work longer days and more of them than ever before, fatigue has reached alarming levels within the industry. The FAA's flight and duty time regulations are woefully inadequate to address today's situation and have not significantly changed in over 60 years, since well before jet transports came into use in the late 1950s. The current U.S. flight and duty time rules are a patchwork of regulations that are intended to address disparate domestic, international flag, and supplemental operations. There have been a number of attempts to revise the regulations over the past 25 years, but those attempts have met with generally abysmal results because of the contentious disagreement by the stakeholders as to which changes were appropriate or needed.

One fact about pilot fatigue that is not widely known is that airline pilots frequently spend much more time at work each day than the number of hours recorded actually flying an airplane. This is especially true in the regional industry although the work schedules at the so-called "legacy carriers" are by no means free of these same concerns. Currently, airline pilots are routinely assigned duty days of up to 15 hours. During a typical 14- to 15-hour duty day, a pilot can expect to be assigned fewer than 8 hours of flying but up to 8 individual take offs and landings, in various types of weather and across multiple time zones. The time not flying may be spent performing duties such as checking weather, dealing with routing, dispatch and flight paperwork, overseeing aircraft loading and unloading, dealing with mechanical issues, waiting on the ground between flights, and similar activities. Thus, although a pilot may have only flown 7 or fewer flight hours by the end of a duty day, he or she could easily have been on duty 14 or 15 hours. This work pattern may be repeated over a period of several days. The weight of the scientific evidence accumulated over the last 20 or so years has firmly established that the vast majority of humans simply cannot be expected to reliably and safely perform operational tasks beyond 12 to 14 hours on duty. It cannot be overstated that pilots are making their most critical decisions on landings at the very end of their duty day which, due to unplanned circumstances, can easily be 20 hours or more since their last rest period. It is worth noting in this context that most fatal accidents occur during the landing phase of flight.

The airlines are required to give pilots only an 8-hour break after any duty day, regardless of its length. Unfortunately, this 8-hour minimum break does not provide an adequate opportunity for recuperative sleep because the break is not an opportunity for 8 hours of sleep, but rather a period of time away from the aircraft. During the 8-hour break, it is not unusual for a pilot to be left with a *maximum* 4 or 5 hours of sleep opportunity. This occurs because the FAA has defined all time away from the airplane ("release to report") on a trip as "rest." Incredible as it may seem, the time a pilot spends waiting for a hotel shuttle and going through airport security screening is defined as "rest" under the current FAA regulatory scheme. A pilot must also attend to all of his or her other non-work-related daily physical and nutritional needs and requirements during this 8-hour break away from the aircraft. It is not at all unusual for a pilot to elect to forego a meal so as not to further reduce their sleep opportunity. This situation is highly objectionable-sleep experts agree that most adults require 7 to 8 hours of sleep each night to meet their physiological needs and restore their alertness. Pilots need a longer, and genuine, daily rest period than is allowed under current regulations.

Another serious deficiency in current regulations is the failure to acknowledge circadian rhythms. Every human has an internal circadian cycle that determines sleep and wakefulness. Typical "circadian low" cycles (*i.e.*, a period of reduced wakefulness and energy) will occur from approximately 3 to 5 a.m. and again from 3 to 5 p.m. Performance and alertness may be decreased during the nocturnal window, which is from approximately 2 a.m. until 6 a.m., depending on individual variability. Flight and duty regulations need to acknowledge this cycle.

Because the FAA's present fatigue regulations are antiquated and outmoded, they have frequently been augmented by contractual work rules negotiated between pilots and their employers in the decades from 1960 to the mid 80s. Through the restructuring of pilot contracts in corporate bankruptcies (note: over 160 U.S. airlines have gone through bankruptcy since 1980) and the complete absence of negotiated work rule improvements at many carriers, there has been non-uniform treatment of flight duty and rest limitations at the various airlines, leaving only the antiquated Federal Aviation Regulations to govern maximum duty days and minimum rest periods for thousands of airline pilots. Further exacerbating the problem is the fact that pilot wage rates and pensions were slashed by more than 30 percent in corporate bankruptcies forcing pilots to accept even more flights or face their own financial crisis. Fatigue provisions are rarely found within any pilot contract, especially within a regional airline agreement. Of the regional contracts that do have such provisions, only one of which we are aware allows a pilot to recoup his or her lost pay. All contracts of which we are aware contain real threats of disciplinary action if the company determines that a pilot's claim of fatigue was fraudulent.

In recent times, there has been severe pressure on individual airlines to slash pilot staffing and reduce rest periods to minimum levels due to a belief that such actions would result in "productivity" increases necessary for economic survival. The demands for more monthly and yearly flight hours flown by fewer pilots has led to endemic fatigue levels, and with fewer pilots staffed on reserve or standby duty for weather disruptions, pilots are forced to fly more flights to the upper limits of the FARs or watch as scheduled flights are canceled for lack of available rested crews. The fatigue cushion once provided by negotiated work rules has been virtually eliminated largely due to a single-minded focus by airline managements on minimizing the labor costs associated with flight operations. This elimination of the fatigue protections once provided by negotiated work rules that were developed over decades of experience at most established air carriers means that today, for more and more pilots, the bare minimum protections afforded by the FAA flight and rest regulations have become a daily way of life.

The current cumulative effects of reduced rest resulting from working to minimum FAA limits, combined with the effect of personal financial stress and uncertainty brought about by nearly 8 years of severe economic downturns in the industry, have taken a severe toll upon pilots. Many pilots feel that they are just hanging on to a barely tolerable job instead of pursuing a once-promising career. Today's airline pilot is typically working substantially more hours for less money and spending more hours away from home than his or her predecessors. In addition, regularly required training events are crammed on top of the monthly flight schedule often paying less than 3 hours of pay for 8 hours of training with none of that time counting toward the FAR flight time limits. The repeated attempts by airline managements in recent years to return U.S. airlines to an era of profitability by cutting labor costs continues to be paid for by the daily sacrifices and toil of airline pilots and other workers.

ALPA joins the National Transportation Safety Board (NTSB), which since 1990 has identified reducing accidents and incidents caused by human fatigue as one of its "Most Wanted Transportation Safety Improvements" in the United States, in calling for revisions to the current FAA regulations based on fatigue research, circadian rhythms, and sleep and rest requirements. The current FAA rules glaringly fail to adequately address any of these issues and reform is decades overdue. Other U.S. Federal agencies have moved toward scientifically-based worker fatigue regulations; the FAA is simply lagging behind other agencies when it comes to the need to modernize its fatigue rules.

When addressing possible revisions to the current FAA flight duty and rest regulations applicable to pilots, airlines and their pilots are immediately at cross-purposes. Managements are looking for more availability and "productivity" from flight crews. For flight crews, safety advocates and scientists, the question is often not whether to change the current rules, but rather *how much* to reduce the current maximum flight and duty limitations to enhance safety, raise human performance to acceptable levels, and reduce risk. Hence, the past approach of creating proposed regulations on notions of operational necessity without the assistance of scientists and technical advisors, or reference to the technical literature, has failed. Needed are rules which are grounded in the results of scientifically based fatigue studies and safety reports.

The International Civil Aviation Organization (ICAO) has enacted standards that will become effective in November 2009 which will require participating states to adopt rules limiting airline pilot duty periods that are based on science. The United States' airline pilot fatigue rules currently do not meet this new international standard and the FAA will be under pressure to comply. In Europe, new regulations gov-

erning airline pilot flight time limitations were enacted in 2008. While implementation of these new regulations in individual European Union member states is an ongoing process, the design and implementation of scientifically-based airline pilot fatigue rules has been underway in Europe for some time. For example, the United Kingdom has for years had science-based airline pilot flight and duty time regulations. The U.K.'s rules, embodied in Civil Aviation Authority document CAP 371, account for human circadian rhythms and adjust maximum pilot duty periods based on time of day, number of flight legs, time zones crossed, acclimatization to local time and other factors. Under these scientifically-based rules, if a pilot who is normally awake during the day and asleep at night reports for duty during the middle of the night, he or she is simply not permitted to work as long as if he or she reported during normal daylight hours. The current FAA rules incorporate none of these modern, scientifically-justified fatigue protections.

Pilots performing commercial flying duties must have regulatory safeguards which provide them with an opportunity to get an adequate night of sleep before each duty day of flying. In some cases, pilots may lack access to adequate rest facilities to obtain needed recuperative sleep in order to prepare to safely operate the next flight or series of flights. Unfortunately, the combination of duty periods and personal or industry economic circumstances may in some cases operate to deny a pilot a realistic opportunity to obtain facilities for needed rest. Ensuring that a meaningful opportunity for rest is provided combined with a scientifically determined maximum length duty day, including provisions for the type of flying accomplished—whether it be traditional short haul, multiple sector flying or flights across multiple time zones—is essential to ensure that the U.S. air transportation system continues its envied record of safety. We believe it is possible to implement needed regulatory changes that will adequately address safety needs and the issues related to pilot fatigue without negatively impacting the ability of the Nation's airlines to serve the needs of the public.

To that end, we were pleased the Commerce Committee included a provision in S. 1300 to arrange for a study by the National Academy of Sciences on pilot fatigue which will examine recommendations made by the NTSB and the National Aeronautics and Space Administration (NASA) on this subject, and provide recommendations concerning the FAA's flight and duty regulations. ALPA stands ready to work with regulators and the industry to develop science-based rules that will adequately address the problem of fatigue.

Fatigue Risk Management Systems

A fatigue risk management system (FRMS) is a science-based, data-driven process used to continuously monitor and manage fatigue risks. An FRMS is intended to be implemented within an airline's safety management system (SMS) to allow operational efficiency for unique and specific operations when needed while also mitigating fatigue-inducing factors. An FRMS offers an effective, alternative means of evaluating and managing risk when compared to a purely prescriptive scheme but it is intended to be built upon—and create synergy with—defined, prescriptive flight and duty time regulations. I would invite the Committee to review ALPA's white paper on FRMS, published in June 2008, for additional information on this subject.

Revised regulations must provide guidance based on science that accounts for start and stop times related to crew circadian rhythms, the number of takeoffs and landings related to crew duty days, and any time zones that must be crossed. Science-based regulations, coupled with an FRMS, can allow some flexibility in unusual flight operational situations.

Since fatigue is such a critical factor in daily airline operations, ALPA published *The Airline Pilots' Guide to Fighting Fatigue* in October 2008. This booklet may be carried by crews and provides guidance to understanding and dealing with fatigue. Understanding and mitigating fatigue is extremely important and assists crews in flying in as rested a state as possible, given the inadequate regulations governing the tempo of operations. We are presently updating this document to give pilots guidance on "responsible commuting."

Airline Training Programs

Most airlines, which include many of the major or "legacy" carriers and the larger, "mature," regional airlines, do an outstanding job of hiring and training pilots. They normally require significant flight experience including substantial amounts of multi-engine and turbojet time. However, some smaller regional airlines which may have very thin profit margins due to the economics of the contract between them and their major airline, have traditionally not offered compensation packages which enable them to hire experienced pilots. As a result, they must often employ pilots with little experience and bare minimum qualifications who are willing to take these

low-paying positions in exchange for an opportunity to build experience so that they can move to a career airline.

Some airline training programs, including those at mature regional airlines, are extensive and exceed the regulatory minimums. When pilot experience at the new-hire level dropped severely below 1,000 hours, or less than a year's worth of total flight experience, these airlines wisely extended their training process and doubled the initial operating experience (IOE) program requirement for these pilots. However, this cannot be said for all airlines.

Economic pressures push some airlines to train to the minimum requirements set by regulations. These minimums were established decades ago and were based on pilots coming into the airlines with much more experience than many pilots have today. Experience allows pilots to broaden their approach to problem solving and decisionmaking above the technical proficiency needed to fly the aircraft. It allows for the recognition of outside patterns and trends that develop during the course of routine flights and permits crewmembers to accomplish tasks specific to their cockpit position as well as be aware of the tasks being performed by other crewmembers. Experienced pilots tend to identify more pertinent clues and generate more alternatives in problem solving and decisionmaking than inexperienced pilots.

ALPA believes the licensing and training methodologies used successfully in the past may not work where airline pilots entering airline operations do not have the background or experience that previous generations of incoming airline pilots possessed. In meeting this challenge, the airlines and other training providers must develop methodologies to "train experience" that in the past was acquired in the traditional maturation and progression to becoming an airline pilot. This training should include extensive and detailed academic courses of learning taught in classrooms by well-qualified instructors.

Screening

Few, if any, airlines tailor their training programs based on their new hires' past flying experience. The airline industry has seen significant changes—some of which involve pilot demographics—that have not been reflected in our training practices. For example, there are considerably fewer former military pilots in the airline ranks than in years past. The military services extensively screen their candidates, who are generally required to have a four-year college degree, before being accepted into pilot training. Once accepted, military training provides intense and rigorous classroom academic instruction as well as in-depth flight instruction that takes over 1 year. Additionally, pilots today coming from non-military backgrounds often do not have the challenging experience of their predecessors on which to build—*e.g.* flying corporate, night freight, or flight instructing—before being hired at entry-level, or regional air carriers. These demographic changes require a new focus on standardization and professionalism training and even some fundamental flying skills. The previous training programs based on the assumption of more experienced pilot candidates will not be sufficient; "one-size-fits-all" training is ill suited to the task.

The financial commitment of training and the historical time commitment to build experience to qualify to be hired by an airline through the civilian route and the considerable time and sacrifices needed to serve in the military acted as a screening process to eliminate those only marginally interested in becoming an airline pilot. However, with new pilots being hired with as little as 200 hours total flight time (much of which could have been in a simulator) and fewer military pilots seeking airline jobs, this *de facto* screening process that helped ensure only the highest performing people make it to the airlines is no longer effective. Today, many regional airlines do nothing to discourage their experienced pilots from quitting so as to hire lower-paid replacements.

Flight experience and pilot capabilities cannot be measured by mere flight hours. Airlines used to have an extensive screening process that included psychological tests, academic knowledge tests, simulator flying skill evaluations and medical conditioning exams. As the number of pilot applicants declines and airlines become more desperate to fill the positions, these screening processes have been reduced and some elements completely eliminated.

Airlines need to reestablish thorough screening processes, or their equivalent, to ensure that the applicants they hire will be able to maintain an equivalent or better level of safety, professionalism and performance than their predecessors. Flight schools need to implement extensive screening processes for students pursuing a professional pilot career. Regulators need to provide the oversight to ensure that these screening tools are implemented effectively by the airlines and flight training organizations, as well as modify pilot qualification regulations to include much more rigorous education and testing requirements in order to provide a screening process that begins prior to initial pilot certification and continues at the airlines.

Command and Leadership Training

The FAA does not currently require command training for pilots who upgrade to captain. The agency does require that an applicant for an airline transport pilot certificate have knowledge of aeronautical decisionmaking and judgment, as well as crew resource management, to include crew communication and coordination. We do not consider these requirements to rise to the level of command training. The difference between the two approaches is a focus on knowing what to do versus knowing how to do it. Training in decisionmaking, for example, might emphasize all the things that a pilot must investigate in order to make a sound decision, but might not provide strategies for how to stick to that good decision in the face of pressure from outside entities to compromise.

The role of captain includes far more than the ability to fly the aircraft from the left seat and perform the checklists. Some airlines have courses for teaching prospective captains how to lead a crew, exercise command authority, take charge of a situation, and so forth, all of which are critical safety skills that must be learned. They are not simply inherent to being the one “in charge.” Specific training should include emphasis on setting the tone for compliance by adhering to standardized procedures. Other topics that should be trained include reinforcing the skills, aptitude, and character necessary to lead fellow crewmembers (informally or otherwise) in compliance with procedures.

Need for Stronger Academic Emphasis

The Joint Aviation Authority (JAA), now the European Aviation Safety Agency (EASA), and FAA pilot licensing requirements are both ICAO-compliant. The single biggest difference between EASA and FAA is knowledge requirements. The FAA theoretical knowledge is simply not as demanding as EASA, which has 14 written exams versus one by the FAA, which is a multiple-choice exam. The EASA exams require the student to be tested for 30–40 hours. By stark contrast, the FAA publishes its exam questions with answers provided so a student can purchase them, study the questions, and pass its single exam. Examination questions are not available for EASA exams in such a manner.

The least demanding Federal Aviation Regulations which govern commercial pilot license requirements (*i.e.*, § 61.125 and § 61.155) specify the aeronautical knowledge requirements for commercial and airline transport pilot ratings. These rules were written decades ago, when there was no expectation that they would be used as minimum standards to train pilots to take jobs as airline first officers. The requirements emphasize weather and navigation, including interaction with air traffic control. There is some mention of aircraft aerodynamics and human factors, including aeronautical decisionmaking and judgment as well as crew resource management. The regulations allow self-study and many such training courses emphasize passing the test rather than learning the material. We do not feel these requirements are adequate to prepare a professional airline pilot. The ground instruction of these subjects needs to be strengthened with required formal classroom academic instruction and more extensive testing and examination.

The EASA-approved training course for a commercial airline pilot tends to be rather structured and rigorous. FAA should develop and implement a corollary ground school and testing process in FAR Part 121 for all pilots who seek commercial airline careers. Testing akin to the quality of the Certified Public Accountant (CPA) exams or bar exam for attorneys would benefit aviation by serving as a screening tool to ensure that, in the future, only the most knowledgeable and dedicated pilots join the ranks of airline pilots.

Airline Relationships

The past several years have been very turbulent ones for the major, legacy airlines which have experienced numerous bankruptcies and changing operations. Rather than using their own pilots on the mainline seniority list to fly the 50- to 90-seat jet aircraft or modern 76-seat turboprop aircraft into mid-size and smaller cities in the U.S., Canada and Mexico, they have established economic relationships with regional airlines to provide this service and feed the major carriers through their hub cities. The major carriers exert a great deal of economic, and other pressures on the regional airlines to provide their service at the lowest possible price. The major carrier controls all aspects of ticket pricing and schedules and regularly moves flying between their regional partners, which forces major changes of pilot domiciles among the regional carriers. An operational and safety relationship providing surveillance and oversight of regional airline operations must be required and maintained by those major carriers who either own or contractually use regional airlines. Even with these relationships, there is no guarantee that “One Level of Safety” will be provided by the dependent carriers. Safety comes not just from

oversight from an outside airline or organization but is an intrinsic value built into an airline from the highest levels of internal management. Given operational criteria and guidance, this value must be recognized and nurtured to realize true safety in operations. ALPA's endeavors to establish One Level of Safety and contract standards have been rebuffed by the managements of some mainline and regional carriers.

Before the practice of codesharing with regional partners began, ALL flying was done by the pilots of an airline on one, single pilot seniority list. This practice ensured that several years of airline operations experience for newly hired airline pilots—even those with military or thousands of hours of previous civilian flight time—was earned before assuming the command responsibilities of an airline captain. The pilots of the name brand airline were trained and met the same high standards, whether they flew 70-seat DC-9's or 400-seat B-747's, or they were not promoted to be an airline captain. The pilots that once flew for such regional airlines (which were in the 70s and 80s referred to as "national carriers") as Ozark, Southern, North Central, Hughes AirWest, AirCal, Allegheny, Piedmont, PSA, and Frontier, held career jobs at those carriers. They flew 40-50 seat propeller-powered aircraft and 70- to 100-seat jet aircraft. They had good jobs with pensions, work rules, and wages that made them career destinations. Those pilots were not just trying to gain experience to get a job with a major airline. Their pilot seniority list operated to guarantee stability and years of cockpit experience before assuming command. The merger mania of the 80s saw those carriers swept into the major or legacy airlines.

Then, as competitive cost concerns increased with the post-deregulated upstart carriers, the legacy airlines began to outsource the flying to as many as a dozen new "regional" partners flying 30- to 50-seat props and 50- to 90-seat jets. The name brand airline then began the practice of having their "partners" bid against each other to maintain these "fee for departure" outsourcing contracts. As the legacy airlines replaced more and more mainline flying by this outsourcing scheme to regional operators, they furloughed hundreds of highly experienced pilots, and refused to allow these experienced pilots to fly for the contractor carrier, effectively replacing them with lower paid and lower experienced pilots.

With this overriding concern on lowering costs by the legacy carrier, the stable and experienced regional partners were whipsawed against each other and forced to continually lower their costs to today's substandard levels or be replaced by another newly created contractor. This system of replacing one regional with another has created unprecedented, rapid growth at a few low-cost regionals where newly hired pilots are upgraded to Captain with less than 1 year of air line flying experience. A copilot seeking to upgrade to captain with the minimum of 1,500 total hours has not been through several years of thunderstorms and winter storms despite the fact that they meet the FAA minimums. He or she has not flown with hundreds of other Captains nor been through several years of annual training and checking events. Before this unconscionable focus on outsourcing mania began, most airline pilots would have 10 or more years of airline experience as a co-pilot before qualifying for command.

The legacy airlines grant these outsourcing contracts to the regional carriers for short periods from 2 to 7 years so that higher costs and their experienced pilots can once again be replaced by new airlines with new pilots. Today, even though the "regional" carriers are flying up to 40 percent of the U.S. airline domestic system, few of the regional airline pilot jobs created by the outsourcing schemes are worthy of an experienced aviator career. The duties and responsibility of a captain and a co-pilot flying 30 to 100 passengers for a regional partner airline is just as important to their passengers as a Captain flying a B-777 or Airbus 330 for a legacy carrier. In a further example of this safety compromising business practice, the legacy airline, will oftentimes during growth periods refuse to hire the experienced "regional" pilot from one of their fully owned or contract partners to become a co-pilot on a 100-120 seat mainline airplane. However, that same pilot may be a captain flying a complex jet aircraft with 70 passengers on 5 or 6 flights per day in the service of the codeshare, mainline airline which sold the ticket to the passengers. This cycle of outsourcing with very little oversight by the ticket-selling carrier has created a very unstable environment which has broken the One Level of Safety mandate.

The NTSB has performed several safety studies of the regional, air taxi, and air carrier industry. As a result of those studies, the Board called upon major airlines and their code-sharing partners to establish a program of operational oversight that would include periodic safety audits of flight operations, training programs, and maintenance and inspection as well as emphasize the exchange of information and resources that will enhance the safety of flight operations. The Board believes that there may be large differences between code-sharing partners in terms of the knowl-

edge, expertise, and other resources for assuring safe operations. They noted that this is particularly true when a code-sharing carrier uses the brand identity name and paint scheme of the larger carrier. Passengers have no choice but to fly on the code-share carriers even though they purchased their ticket from the major carrier and deserve the same level of operational oversight, control and service, which the code-share partner may not be able to deliver.

The regional airlines, in their own cost-saving measures, have gone to extraordinary lengths to provide their product at the lowest possible price. As an example, Trans States Holdings, which operates Trans States Airlines, established a second subsidiary airline, GoJet Airlines, which operates United Express flights from United Airlines hubs at Chicago O'Hare, Denver, and Washington Dulles airports flying Bombardier CRJ700 Regional Jets. A passenger buying a ticket on United Airlines may very well, unwittingly, end up on a GoJet flight. As a new airline, GoJet can abrogate prior relationships their parent airline may have with service providers to provide cheap airline seats for their codeshare partner.

Another example of this type of cost pressure can be seen at Midwest Airlines which has outsourced over 75 percent of its flying to regional partners. They have laid off 75 percent of their experienced pilots and replaced them by contracting with Republic and Skywest Airlines. Midwest Airlines refuses to train their long-time pilots in the new smaller jet aircraft. This has the effect of the Midwest pilots with over 15 years of airline experience being replaced by pilots with less than 3 years experience in a blatant disregard for the value of its own employees. Economics of outsourcing to cheaper contractors has clearly trumped the safety value of maintaining experience in the cockpit.

Pilots flying for airlines like GoJet, Gulfstream, Colgan and others are at the bottom of the economic scale with starting salaries below \$20,000 per year. In many cases, pilots have accumulated extraordinary costs just to earn the basic FAA licenses of commercial, instrument and multi-engine ratings. A 4-year flight education at a college or university can cost from \$120,000 to \$180,000, or more. It is difficult to repay these expenses and maintain any sort of reasonable lifestyle on the starting pay of a regional pilot. So these jobs frequently end up as a stepping stone to a major carrier, an opportunity to build valuable flight time before moving on to a more lucrative job with a major carrier. In fact, some airlines publicly call themselves "stepping stones" without reservation, as could be heard in a recent NTSB public hearing. This type of relationship effectively represents a disincentive to provide more than the bare minimum training or to provide any motivation for experienced employees to remain. Typical wage differences between major and regional carriers can be as much as \$70,000 for a Captain and \$50,000 for a first officer at 5 years of service. The differentials increase dramatically the longer the pilot is employed.

When an economic downturn comes, operations contract, major airlines park their airplanes, and employees are furloughed. These furloughed employees will generally not take the jobs in the regional industry; they have other skills to market. It is a telling factor that as pilots were called back from furloughs following the 9/11 downturn, a majority chose not to return even to the major airlines; they found other jobs, many times in an entirely different industry, or returned to full-time military service. In today's economic and outsourcing business practices, pilots with decades of experience are laid off from the legacy airlines and cannot afford to work for one of the regional partner airlines as a newly hired first officer. Their experience is not given any value for employment at the legacy carrier's codeshare partners and they are faced with starting over as a first officer for less than \$20,000 per year.

In today's airline industry, the legacy major airlines have farmed out the flying to the lowest regional bidder while rejecting any attempts to retain their experienced pilots within their extended airline systems.

Retirement benefits have also been reduced within the regional industry. Managements have refused to grant sufficient improvements for retirement benefits due to, among other reasons, the (assumed) belief that the pilot will not be there long anyway. However, as we have seen, the overall longevity of pilots staying at the regional level has increased as the economic outlook has changed. Major carriers have reduced their overall capacity steadily in recent years, and at the same time reduced their pilot headcount. When combined with the increase in retirement age to 65, the regional pilot may have little choice but to maintain employment at a carrier that offers lower wages, with lower health and retirement benefits and far less in quality of life.

Commuting Pilots

Aviation is a turbulent industry; numerous cost and operational pressures occur daily. Airlines frequently make adjustments to their fleets' size and geographical distribution. Crew bases open, close, or change, sometimes with little or no notice to employees stationed there. An airline that services a city or town with a Bombardier CRJ700 jet today may serve it with an ATR-42 turboprop tomorrow and next week, service may cease entirely. As these operational decisions are made, crew bases move, change, or close. A CRJ base may become an ATR-42 base and the CRJ base may move to a different part of the country. When companies make such changes, the pilots involved may have several alternatives. They can move to the new base where CRJs are being flown, they can remain where they live and commute to the new base, or, if permitted by their employer, they can be trained in the new airplane now being flown out of their old base, which may require a large pay cut. Any of these can be very disruptive for the pilots and in turn, their families.

A pilot may want to stay on the CRJ, for example, but cannot or does not want to move to the new base. Any number of factors can influence that decision, including children in school, relationships with friends, or housing costs. For instance, the cost of living in Des Moines, Iowa is considerably less than the cost of living near JFK in New York. Thus, the pilot is more likely to maintain his home in Des Moines and commute to work, reducing his days off, his free time and his overall lifestyle. That decision to stay on the CRJ will necessitate commuting to the new base. The pilot may share or lease an apartment, plan to stay with friends, or use a hotel for accommodations in the new base. Generally, economic factors determine the course of action, but the basic problem of a relocated crew base is out of the pilot's control; it is forced by the industry and pilots cope as best they can. Most regional carriers, while they offer some expenses toward the moving of displaced crewmembers, offer little if anything to voluntary moves. The difference between voluntary and displaced movement is often a blurred line between having a job and losing a job. However in today's circumstances, even the limited monetary help a regional carrier may provide does not cover the costs of moving a family many times over a pilot's career.

Commuting has a number of complicating factors, which include:

- employer's sick leave and attendance-reliability policies
- very few seats are available for pilots forced to commute on today's full airplanes,
- airline policies which prohibit positive-space transportation,
- inadequate or non-existent relocation provisions, and
- commuting policies which require pilots to depart home base with several backup flights.

This difficult reality adds to the creation of stress and further increases pilot fatigue factors. ALPA encourages airline managements to work with their pilots to establish new or improved commuting policies and scheduling practices that take into account these lifestyle issues.

Safety Data and Reporting Programs

What should be done to make improvements now while we are implementing the previously discussed changes in training and qualifications? There are programs available to the aviation industry today, such as Flight Operations Quality Assurance (FOQA) and Aviation Safety Action Program (ASAP), that can provide important and needed oversight information, not only internally within air carriers, but also for the overall air transportation system. The safety data provided by these programs are making differences in safety and efficiency of air carrier operations. Approximately 90 percent of the data provided through ASAP is sole-source data. This is safety data that will not and cannot be gathered by other means and it can be critical and essential to improve the safety performance of our industry.

Safety Management Systems (SMS) are mandated by ICAO standards. SMS programs are being developed for use by U.S. aviation entities. Safety reporting and safety data are intrinsic in SMS programs and ASAP and FOQA should be an integral part of any SMS.

In order to make the data more readily obtained and available for safety improvements only, protections need to be put in place that will limit the data use in civil liability cases. Restraints also need to be strengthened for the use of the data for safety purposes only. The data has an important safety benefit and it must not be compromised. Unless there are improved protections that will limit the use of the data to solely safety purposes, the flow of reports will cease. These programs are

a critical safety benefit for the industry that need to be nurtured, protected, and promoted at all levels of the air carrier industry.

Promoting Professionalism in the Industry

The best safety device on any airplane is a well trained, well rested, highly motivated pilot. A safety culture at an airline must be instilled and consistently reinforced from the highest levels within the organization. An organizational safety culture will encourage the highest levels of performance among professional pilots.

This high level emphasis must go hand-in-hand with appropriate training. Standard operating procedures must be just that; they should be the operating norm for all flight crewmembers and deviations should not be allowed except for extraordinary circumstances. Pilots-in-command should be encouraged to mentor their first officers and instill in them the desire to maintain the highest standards of operational safety.

ALPA offers professional standards programs and structure which reinforce professional conduct in the cockpit. Similarly, airlines need to provide special command training courses for new captains to instill in them the necessary traits to be a real leader on the flight deck. In addition to basic required skills such as aeronautical decisionmaking and crew resource management, new captains should receive training to reinforce the skills, aptitudes, and character necessary to properly lead a crew, exercise command authority, and maintain the highest levels of safety in the face of internal or external pressures that may tend to lower operational safety margins.

In the case of the Colgan Air accident, the pilot group was new to ALPA, and unfortunately the professional standards structure was just being established.

Mentoring Programs

In addition to promoting professional conduct among crewmembers, at least one airline whose pilots ALPA represents has a detailed, structured, pilot-mentoring program. This program provides a wide variety of resources and benefits to new-hire crewmembers as they become acquainted with their airline and becoming an airline pilot. The program pairs experienced line pilots with new hire pilots in an effort to answer many of the frequently asked questions, such as bidding, jump seat travel, vacation, etc., from new hires. Pilot mentors also assist new hires as they transition from the training environment to flying the line, and throughout their first, probationary year. There is also another aspect of the program that assigns a senior captain or check airman to newly upgraded captains once they are online and out on their own. This greatly assists new captains as they become accustomed to requirements for command.

Call to Action

On Monday, June 15, 2009, the FAA held a meeting, a "Call to Action", for industry and FAA to identify a few key initiatives that can be incorporated voluntarily by operators. The subjects discussed included many of the very issues we are discussing here; crew education, professional standards and flight discipline, training standards, and mentoring. This was an important first step toward recognizing and acknowledging problems and developing and implementing solutions. We stand ready and look forward to future meetings so we can truly and thoroughly address airline safety issues and make real progress toward realizing One Level of Safety.

Conclusions and Recommendations

In conclusion, ALPA believes that it is essential, and long overdue, that the flight and duty time rules for commercial aviation operations be revised based on readily available science. Issues that must be addressed include providing crewmembers a minimum rest period that will allow an opportunity for 8 hours of sleep, and there should be provisions for operations on the back side of a pilot's circadian rhythms. Additionally, a pilot's duty day length should be based on when the day begins and how many flight segments are scheduled.

In regard to training, we feel there should be more stringent academic requirements in FAR Part 121 to obtain both commercial and airline transport pilot ratings. Airlines should provide specific command training courses for new captains to instill in them the necessary skills and traits to be a real leader on the flight deck. Airlines should also implement mentoring programs for both captains and first officers as they first enter operations in their crew position to help them become comfortable and reinforce the knowledge and skills learned in training and apply them to line operations.

Airline training needs to account for the source of their pilots and assume the minimum experience level. There should be structured, in-depth oversight of code-share partners by the major carriers to include periodic safety audits of flight oper-

ations, training programs, and maintenance and inspection. The best practices in use by major carriers need to be mentored into their smaller codeshare partners.

Safety data provided through important data sharing programs such as FOQA and ASAP needs to be vigorously protected from inappropriate use and preserved for the sole purpose of improving safety and operational efficiency. Further, these programs need to be promoted at all levels of the industry.

Finally, airline managements and their pilots should work closely together to promote policies and practices that instill a strong safety culture throughout the organization; reinforce the importance of professionalism in all aspects of operations; and recognize the value of well trained, well rested, and highly motivated employees.

Thank you, again, for the opportunity to testify today. I would be pleased to address any questions that you may have.

Senator DORGAN. Thank you very much, Captain Prater.

And finally, we will hear from Mr. Maurer, Mr. Scott Maurer, who is a representative of the Families of Continental Flight 3407.

Mr. Maurer, I know that your daughter, Lorin, was a passenger on that flight, and I know that it is likely difficult for you to speak publicly about these issues, but, on behalf of the families, I believe that all of you wanted an opportunity to do that, and I am pleased to give you that opportunity. And our thoughts and sympathies are with you and the families.

**STATEMENT OF SCOTT MAURER, FATHER OF LORIN MAURER,
REPRESENTATIVE OF THE FAMILIES OF CONTINENTAL
FLIGHT 3407**

Mr. MAURER. Thank you. And bear with me.

On behalf of the Families of Continental Flight 3407, we would like to thank you, Chairman Dorgan and Ranking Member Senator DeMint and all of the other subcommittee members of aviation, for the opportunity to speak to you today.

My name is Scott Maurer, and, you've heard, my daughter, Lorin Maurer, was a passenger on Continental Flight 3407.

Tomorrow night, at 10:17, it will be 18 weeks since our lives were changed forever. The minutes, hours, days, and weeks that have passed since this tragedy have been an unbelievable nightmare for all of us. It's a pain that you will never know, and certainly one we hope no one else will face.

We believe very strongly the crash did not have to happen, and was preventable. As such, we are here today, and will be here tomorrow and beyond, to ask for your help and push for change so that other families can be spared this pain.

When my 30-year-old daughter, Lorin Maurer, an athletics fundraiser at Princeton University and future athletic director, purchased her ticket from Continental Airlines, she assumed the pilots would fly—who would fly that plane were competently trained. She thought they had significant experience and knowledge of the plane and all of the flight control features. As she took her seat in 3A for an exciting Valentine weekend to join her boyfriend, Kevin Kuwik, in Buffalo, I am sure she believed that the pilots at the controls had been trained to handle cold-weather flight conditions, stalls, and other emergency situations that all pilots are expected to be prepared to confront. There are many other examples I could share from the victims' perspective, but time limits will not allow, today.

The critical message I do want to relay to you here today is that when the American public buys a ticket from an airline, they assume and expect that safety is in their—that their safety is in good hands. Sadly, we find that that is not always the case, and we are here today imploring you for assistance and action.

So, how can you help?

Number one, let's put the best pilots in the cockpit and set them up for success. Now, this sounds very simple, but, in reality, it takes money to do this, and the airline industry has not stepped up to the plate. Pilot hiring procedures, training, fatigue management, and compensation have all been discussed throughout these hearings. The media attention focused on the failures of Colgan Air and its flight crew have resulted in a hastily called emergency summit meeting, earlier this week, bringing together representatives of the FAA and the airline industry to discuss these very same issues. Unfortunately, meetings of this magnitude have been done before, resulting in little change, as the costs have always been too high for implementation. The breakdown—to break down the bureaucratic logjam, the families of the victims are now forced to ask Congress to intervene and do the right thing for public safety.

Number two, better aviation oversight by the Federal Government. Americans believe that the role of the FAA is that of a gatekeeper, an agency that is technically trained and expertly qualified to watch over the airline industry for the safety of the American public. We have certainly identified leaks in this dike. While we are optimistic that the newly appointed administrator hears our pleas for action, we fear that the obstacles thrown up by the airline industry and pilot unions will be very hard to overcome. Again, we are asking for Congressional intervention, as history of these organizations voluntarily taking action to improve safety has been woefully inadequate.

Number three, NTSB recommendations. Why are we willing to accept an 85-percent implementation rate of NTSB recommendations by the FAA, when 100-percent would save lives? Would I even be sitting here talking to you today, had previous recommendations for training and cold-weather flight management been acted on? These recommendations must be taken seriously and acted on jointly by the FAA and the NTSB. We must learn from accidents so we can prevent future occurrence.

My wife, Terry, my son, Christopher, and Lorin's boyfriend, Kevin, miss Lorin every minute of every day. I will not have the opportunity to walk my daughter down the aisle and give her away in marriage. She will not experience the joy of a growing child within and raising a loving family, as we did. Our traditional Christmas Eve visit to New York City for some last-minute shopping and taking in Mass at Saint Patrick's Cathedral will be—will probably come to an end this year; it'll just be too painful to make that trip without Lorin.

Many of my fellow crash-victim families sitting behind me also have similar stories and similar losses.

So, now it's up to you to make a difference. Everyone in this room today, and those who were here last Wednesday, expressed that they have come before you to make the necessary changes in

safety. Winter is coming. If we do not implement critical safety changes before then, and another accident occurs, we can only blame ourselves for the losses of those families. I do not wish to shoulder that burden, and hope and believe that you agree with me.

Mr. Chairman, Ranking Member Senator DeMint, and all of the other Aviation Subcommittee members, thank you for your time. And I'm open, also, to answering questions.

[The prepared statement of Mr. Maurer follows:]

PREPARED STATEMENT OF SCOTT MAURER, FATHER OF LORIN MAURER,
REPRESENTATIVE OF THE FAMILIES OF CONTINENTAL FLIGHT 3407

On behalf of the Families of Flight 3407, we would like to thank Chairman Dorgan, Minority Leader Senator DeMint, and all other members of the Senate Subcommittee on Aviation for the opportunity to speak to you today. My name is Scott Maurer. My daughter, Lorin Maurer, was on board Continental Flight 3407.

Tomorrow night at 10:17 p.m. will be 18 weeks since our lives were changed forever. The minutes, hours, days, and weeks that have past since this tragedy have been an unbelievable nightmare for all of us. It is a pain that you will never know, and one that we hope no one else must face. We believe very strongly that the crash did not have to happen and was preventable. As such, we are here today, and we will be here tomorrow and beyond, to ask for help and to push for change so that other families can be spared this pain.

When my 30-year-old daughter, Lorin Maurer, an Athletics Fundraiser at Princeton University and future Athletic Director, purchased her plane ticket from Continental Airlines, she assumed that the pilots who would fly the plane were competently trained. She thought they had significant experience and knowledge of the plane and all of the flight control features. As she took her seat in 3A for an exciting Valentine weekend trip to join her boyfriend, Kevin Kuwik, in Buffalo, NY and attend the wedding of his brother, I am sure she believed that the pilots at the controls has been trained to handle cold weather flight conditions, stalls, and other emergency situations all pilots must be prepared to confront.

When 45-year-old Darren Tolsma, father of two beautiful young children and a highly specialized defense systems engineer, took the opportunity to board an earlier flight than originally planned to return home sooner to be with his wonderful family, he believed that all airlines use thorough pilot hiring practices to ensure competent and qualified employees. This would include a review of previous employment experience and demonstrated proficiencies to insure the skill levels necessary to transport civilian passengers on commercial aircraft safely.

When 33-year-old Coleman Mellett and 64-year-old Gerry Niewood, two very gifted musicians for the Chuck Mangione jazz band, climbed aboard Continental 3407 to join fellow band members in Buffalo to perform a concert for a very excited western New York community, they thought that the FAA had conducted due diligence in its oversight of airlines, pilot training and operations to ensure the safety of all air travelers. They believed, as most Americans do, that there are enough checks and balances in place between government officials and the airline industry to ensure proper management of aviation safety. These wonderfully talented individuals were completely unaware of codeshare ticketing and the regional airline alliances with major airlines, and they were certainly unaware that such arrangements result in trickle down airline management that directly has an adverse effect on safety standards and procedures.

As 57-year-old Beverly Eckert, an advocate for the victims of the September 11, 2001 terror attacks after she lost her husband Sean in the South Tower of the World Trade Center, made plans to journey to Buffalo to celebrate his birthday anniversary with family and friends, she was unaware that many pilots commute great distances to start their work day. The commute can be from Seattle, Washington to Newark, New Jersey, as was the case for the First Officer on Continental Connection Flight 3407, and can occur on the same day the pilot is scheduled to fly. This commute time is not part of the work schedule time established by the FAA to manage the dangerous condition of flight crew fatigue.

When Doug Wielinski, father of four lovely daughters, intended to end his day enjoying his hobby with sports memorabilia and collectibles in the dining room area of his home on Long Street, he knew little of the low wages regional airline pilots are paid to begin an aviation career. Such low wages might deter talented and

skilled pilots from pursuing an aviation career or cause those who do accept the entry level wage to moonlight with a second job to make ends meet, which might also contribute to pilot fatigue.

How Can You Help???

1. *“Put the Best Pilots in the Cockpit and Set Them Up for Success”*—We need to ensure that only the best pilots are placed in the cockpits of planes carrying passengers over American skies. Airline hiring practices must be reviewed and upgraded to bring more experienced pilots with demonstrated skills to the regional airlines. It is imperative that flight crews’ full piloting histories are disclosed and/or readily accessible to airlines considering applicants for hire. PRIA provides some of this history, but other means of disclosure must be developed to allow the airlines to know who they are hiring. For example, requiring an authorization to obtain a pilot’s complete airman file is one way to ensure that the prospective airline is fully aware of the pilot’s history.

At the NTSB public hearings, some of the testimony and comments from the witnesses and board members gave us a glimpse into the reality that the major airlines have substantially better training protocols, methods, and procedures than their regional partners. Additional simulator time and the most advanced training programs all cost money, and consequently are seen with much more frequency in the training departments of the major carriers. These major carriers also benefit from all the years of experience and knowledge that have accrued in their training departments due to their longevity. And their greater resources allow them to take full advantage of the most modern safety data analysis programs like FOQA (Flight Operation Quality Assurance program) and LOSA (Line Observation Safety Audits) where their regional partners can not. We simply ask is it too much for these major airlines to work closely with their respective codeshare partners to ensure that they provide their pilots with the best safety tools possible in terms of training and other industry best practices.

Federal regulations regarding management of fatigue need to be updated to reflect the most recent scientific research information on this issue. Time to commute to duty work stations, flying during day time versus at night, and crossing multiple time zones all should be considered in updating this regulation of work time limits and rest.

Compensation wages should be reviewed and upgraded to promote the attraction and retention of highly skilled pilots without concern for dual employment to make ends meet.

2. *“Better Aviation Oversight by the Federal Government”*—Americans believe that the role of the FAA is that of a gatekeeper, staffed by people who are technically trained and expertly qualified to watch over the airline industry for the safety of the American public. We have studied numerous accidents over the past fifteen years in which the NTSB has provided safety recommendations to the FAA designed to prevent the same accidents from reoccurring. Many of these recommendations are still classified by the NTSB as having an unacceptable response to this day. Because the rulemaking process is so cumbersome, the FAA often attempts a workaround solution known as a Safety Alert (SAFO). Unfortunately, these SAFO’s are offered to the airline industry to adopt or administer voluntarily. During testimony by Colgan’s FAA Principal Operations Inspector at the NTSB hearing, we learned that because SAFO’s are voluntary, they are not monitored for implementation and, in practice, they are routinely not adopted. Voluntary safety recommendations made to cash-strapped airlines cannot protect the flying public. It is imperative that the mechanism for translating NTSB safety recommendations into mandated practice be streamlined to eliminate what is often years of delay between recognition of a safety concern and action to correct it.

From the transcript of the cockpit voice recorder, we learned of the ongoing and extended conversation between both pilots below the 10,000 feet altitude sterile cockpit requirement. The current self-reporting process used to monitor and address this FAA requirement clearly has gaping holes that invite abuse. An audit process must be implemented. Despite all of the commentary regarding pilot professionalism, we must recognize that these individuals are human and susceptible to human fault. Without implementing a true check system with accountability, it is improbable that this safety requirement will ever be met as intended. Indeed, violations of sterile cockpit are seen all too often in fatal crashes.

We are encouraged by the appointment of a new FAA administrator, Randy Babbitt. Some of the family members were fortunate enough to meet Mr. Babbitt prior to his confirmation, and we are hopeful that he will offer a NEW beginning in leadership for the FAA. We hope he employs the “One Level of Safety” attitude he used as president of the Air Line Pilots Association. Even the best-run companies are bet-

ter served by audits and double checks on how they conduct business. The above examples only reconfirm to the families the need for the FAA to become more “hands on” in its oversight of the airline industry.

3. *NTSB recommendations*—Earlier we mentioned that several NTSB recommendations were made with unacceptable responses returned by the FAA. To the families, it appears as though the NTSB and FAA are not working jointly together in the best interest of aviation safety. We ask that Congress intercede to get these agencies functioning like the team they were intended to be. Airline safety now and tomorrow is depending on it. We know you can learn from mistakes. Under the process as we understand it, the NTSB conducts an unbiased investigation to identify recommended solutions/actions to the FAA for development and implementation. On paper this process looks very good and should work but through the years we have seen very little progress.

In regards to the safety recommendations derived from the Flight 3407 investigation, the families and public wish to see immediate action. We expect 100 percent resolution between recommendations made by the NTSB and timely implementation by the FAA. We have repeatedly heard the proud commentary of “85 percent implementation of all NTSB recommendations to date.” We believe if both agencies work together they can find solutions that will yield 100 percent implementation and make airline safety much improved.

Summary

In summary, the Families of Continental Connection Flight 3407 would again like to thank the members of the Aviation Subcommittee for this opportunity to express our concerns and desires. Following previous accidents of a similar nature, the airline industry and the FAA have had ample time to do the right thing in terms of addressing threats to aviation safety, but still, our loved ones perished in a preventable crash. Now we must ask Congress to intervene in the interest of public aviation safety. As you make aviation policy decisions moving forward, please consider our requests and do NOT react to the influence of economics, lobbyists, personal interest groups, the airline industry, the airline pilots unions, or others with personal agendas. The families do NOT have such financial or influential resources as those listed above, putting us at a significant disadvantage.

So we ask that these policy decisions be made by each of you individually as though your wife, husband, son, daughter, mother, father, brother, sister, other family member or loved one are boarding a plane. Please “DO” make changes that will prevent a tragedy like Continental Connection Flight 3407 from happening again. This tragedy was and is preventable. You can make a difference . . . please do.

Chairman Dorgan and Minority Leader, Senator DeMint, I will entertain any questions the Committee might have at this time for the families.

In Memory—Continental Flight 3407

Mary Julia Abraham	Georges Abu Karam
Clarence A. “Larry” Beutel III	David Borner
Ronald and Linda Davidson	Alison Des Forges
Beverly Eckert	John J. Fiore
Ronald Gonzalez	Brad S. Green
Zhaofang Guo	Steven L. Johnson
Kevin W. Johnston	Ruth Harel Katz
Ellyce Kausner	Nicole Korczykowski and Johnathan Perry
Jerome Krasuski	Brian Kuklewicz
Beth Ann Kushner	Sean Lang
Madeline Linn Loftus	Lorin Maurer
Don McDonald	Coleman Mellett
Dawn Monachino	Donald, Dawn, and Shawn Mossop
Jennifer Neill (and Baby Neill)	Gerard Niewood
Mary “Belle” Pettys	Donna Prisco
Matilda Quintero	Ferris Reid
Capt. Marvin D. Renslow	Julie Ries
John G. Roberts III	Kristin Safran
Rebecca Lynne Shaw	Dipinder Sidhu
Jean Srnecz	Darren Tolsma
Susan Wehle	Ernest West
Douglas C. Wielinski	Shibin Yao
Clay Yarber	Joseph J. Zuffoletto

The Gaping Hole . . .

. . . left in our lives by the needless loss of 51 loved ones on the night of February 12, 2009.

They came from all over the country and world . . .

8 countries—USA, Canada, Jamaica, Israel, Lebanon, India, China, and Liberia
9 states—NY, NJ, CT, PA, OH, CA, WA, FL, TX

They valued education . . .

2 were undergrads, 1 was in Law School, 2 were pursuing an MBA
There were 5 Ivy League degrees among them

They made the world a better place . . .

There was a 9/11 activist and a human rights activist
6 veterans of our armed forces, 7 combat tours, and 2 purple hearts
4 defense contractors dedicated to protecting our soldiers lives

They were talented . . .

2 members of the Chuck Mangione Jazz band
2 former collegiate athletes

They were faith-filled . . .

A cantor at a Jewish temple and an elder in a Jehovah's Witness congregation

Most of all, they loved their families . . .

21 left behind spouses, and 3 were engaged
There were 2 married couples and one young boyfriend/girlfriend couple
1 passenger was 6 months pregnant
20 children under the age of 18 lost a parent
14 children lost a grandparent
11 daughters lost their fathers and will never have their Dad walk them down the aisle
8 fathers lost their daughters and will never be able to give their hand away in marriage
17 mothers had to say goodbye to their sons

. . . *And we loved them.*

"FAMILIES OF CONTINENTAL FLIGHT 3407"

Senator DORGAN. Mr. Maurer, thank you very much.

I indicated, in the last hearing, that I have some discomfort about a good many things, here. Reading the transcript of the cockpit recording demonstrated to me a number of errors occurred, a number of deficiencies occurred, in the management of that flight. I also said that that young copilot and pilot perished in that accident, as well, and they're not here to speak, they're not here to speak for themselves, and they have families who miss them terribly. And so, I'm discomfited by that. And yet, we have no choice but to proceed aggressively to find out, What are the standards, here? And are these accidents—was this an accident that could have been prevented? How do we prevent future accidents in circumstances like this?

Let me ask a few questions, if I might. My understanding—I would say to Mr. May and Mr. Cohen, my understanding is that we're hiring pilots to put in a cockpit of commercial airlines with 30, 50, 80, 90 passengers behind the cockpit—we're hiring some of them for \$10 an hour. Is that correct?

Mr. COHEN. Mr. Chairman, the pay—the average pay of a regional airline captain is \$72,000 per year. The average pay of a first officer at a RAA-member airline is \$32,000 a year. That's very comparable to other professions that have lives at stake—medical assistants, paramedics—

Senator DORGAN. But, Mr. Cohen, I'm asking what your—is it the case that we're hiring pilots to put in the cockpit of commercial airplanes and paying them \$22–23,000 a year? That's \$10 an hour, roughly. Isn't that the case? And if that's the case, one wonders, What is the capability of pilots that are coming out of school with a good many hours, who meet the technical qualifications, get hired for \$10 an hour, and then live with their parents in Seattle and fly to Newark to a duty station, all night long. And at that salary, are they to going to hire a crash pad or maybe rent a hotel to get some sleep? Don't think so.

So, my question is—a very specific question—isn't there a significant issue, here, about experience and funding and salaries at the entry level on some of these airplanes, where we're getting—all of us are getting on? The name is the same. We think it's—you know, it's Northwest, it's Continental, it's Delta, the same name; it's just—it's a different carrier, with a completely different standard, it seems to me, of hiring new pilots that are entering that cockpit. Am I wrong about that?

Mr. COHEN. Mr. Chairman, I think I heard a couple of questions in there—let me just try to expand on a couple of things.

First of all, and most importantly, compensation and safety are not related. The NTSB has never, in all of its accident investigations, ever cited compensation or pay as a causal factor, even a contributing factor, to an aircraft accident. The pay is fair and competitive in a very difficult industry. I am a 35-year veteran of the airline industry, and I will tell you that it is as Captain Prater pointed out, a very difficult industry. For the first time opportunity that a person comes into, these people are proficient, they are well trained, they are well qualified or we would not put that person in charge of that airplane, in charge of that crew, the safety of that flight—we would not do it, if that person weren't well trained and prepared.

Senator DORGAN. Well, let me ask—do you have the chart with respect to commuting?

[The information referred to follows:]



Senator DORGAN. Let me ask a question of Captain Prater. The—this chart shows the commuting for Colgan Airlines, but I assume it's a chart that applies to most airlines, people flying all over the country to get to their duty station. That shows Newark, and it shows the pilots, where they're living in order to fly to Newark to get to a duty station. Does that make any sense to you, Captain Prater? I understand you might say, "Well, you know what, it has always been that way. People need to get there. They've got to be on their own, they've got to get adequate rest," and so on. But, this case had a copilot that flew all night long to get to her duty station. And so, does that make sense?

Captain PRATER. It makes sense. And I would agree with you that that is—represents the reality of our air transportation system and our pilots. However, I think we have to take a very close look, again, at the system that has created this. You can't open and close domiciles on a regular basis and transfer flying and lay off pilots at one airline and not give them some ability to either move to their new station or to get to work. Even if I am based in Houston and the company needs me out of Newark, they will deadhead me to Newark, they will get me to where I should start my flight. There is a huge responsibility that professional aviators take very near and dear. None of us get into a cockpit believing that we're going to fail that day. Every one of these aviators face the weather, the same weather and the same situation; engines fail, we have emergencies, and our pilots do it.

Senator DORGAN. But, with very different levels of skill and experience. Do you agree?

Captain PRATER. Yes, without a doubt.

Senator DORGAN. All right. Look, I have very limited time. I'm going to stay here and ask all my questions, at the end of this. I don't want to disabuse—or abuse, rather, the—my colleagues. But, the question of pilot records—Captain Prater, do you have a problem with—if we know everything about an airplane, that we—that a potential employer should know everything about a pilot's records?

Captain PRATER. I believe that the Record Act can be improved. I do think that history and performance is necessary and good, but don't look at that in a—as the entire story. We are constantly going through training, and must meet the standards every month, every week, every year. So, just like when you create an airplane, you test it to destruction; as pilots, we are trained to a point outside of what we can do. We must find our limit. You must push pilots, in their training, to be able to meet and succeed. But, many times that takes a lot of training, more than we're getting today.

Senator DORGAN. You seem to imply, in your testimony, that there were two standards with respect to commercial—excuse me, commercial aviation. One would be the trunk carriers or network carriers, and the other, the regional. Do you believe there are two standards in the cockpit?

Captain PRATER. I'll say it succinctly. We have one level of regulation. We do not have one level of safety.

Senator DORGAN. So, different levels of enforcement.

Captain PRATER. Yes.

Senator DORGAN. Mr. May, do you agree with that?

Mr. MAY. Mr. Chairman, I do agree, to this extent; FAR Part 121 is the single standard that the FAA has promulgated, to which we all must adhere. I don't think there is any question that mainline carriers exceed that FAR Part 121 base far more often than most.

Senator DORGAN. But, that which exists in law or rule is relevant, only to the extent you have a Federal agency that says, "You know what, we're going to force you to own up to"—

Mr. MAY. That is—

Senator DORGAN.—"the law and the rule, and we're going to enforce it, and enforce it aggressively."

Mr. MAY. That is correct.

Senator DORGAN. Do you believe that's the case now?

Mr. MAY. I think that we could have greater enforcement. And if the Committee and the FAA choose, you can even change some of the parameters. We've suggested, as I said in my testimony today, you ought to have FOQA programs, ASAP programs, required as part of the base. I think you can use AQP programs on training. I think there are a number of issues on pilot records that you can resolve. All of those things could be done to further improve the environment.

Senator DORGAN. One final point. Mr. Cohen and Mr. May, as I indicated when I started this hearing, I want to invite the folks that run the carriers, themselves, to come to that table. And we have made some invitations, and apparently have not had acceptance of those invitations. And we'll remake them, fully understanding that they will be accepted, and have another hearing with the airlines themselves.

Captain PRATER. Mr. Chairman, you have our commitment. Whoever you want, whenever you want, we will provide them here.

Senator DORGAN. Thank you very much.

Senator DeMint?

Senator DEMINT. Thank you, Mr. Chairman.

I think we need to get a little more specific. And, Mr. May, I appreciate you mentioning specifics about what we can do with training. But, what I'm not hearing here today are specific ideas about, what do we need to change to prevent something like this from happening again? There have got to be things that come to mind that we need to change. Obviously we have some situations of violating current rules—no sterile cockpit, in this particular crash—that the pilots themselves violated rules. We need to make sure that that doesn't happen again. But, what do we need to do? What do the carriers need to do? What do we need to do, from a regulatory perspective? And do we need legislation that the regulators can't carry out? So, what we're looking for here is what we can do.

And so, I would just like—Mr. May, starting with you, because you mentioned training—but, what we need are specifics, here, of things that can be done to improve safety, perhaps that this crash brings to light, that we're currently not doing or not requiring or not auditing. We have, so far, gotten a lot of assurances that safety is our main concern, but the reason we're here is that that broke down. So, I'm just looking for some ideas. We need to know if we need to push the regulators to do something different, we need to pass legislation, or do we need to insist on the carriers to do something that they're not doing?

Mr. May, I'll go with you and then go—

Mr. MAY. Senator DeMint, I think I made seven very specific recommendations in my oral testimony. I'll recap them for you today.

I think there needs to be a requirement that regional carriers implement FOQA programs and ASAP programs, both of which Captain Prater, I think, would agree are all fully in use at mainline levels, and would make a marked difference, if applied at the regional levels.

I think, number three, we need to put in a new training standard, if you will. There's a long, open NPRM on training at the FAA. I think probably it would be wise for the FAA to implement an ARC, an Aviation Rulemaking Committee, and take a hard look at AQP programs—Advanced Qualification Programs, if you will—that are—have been developed by mainline carriers, could be mentored and transported to regional carriers to improve safety, in terms of training.

Number four, I think you need to take—or, have the—direct the FAA to take a hard look at how they'd better enforce the sterile cockpit rule. We recognize that there are privacy issues involved, here, but I think there needs to be some kind of monitoring of cockpit tapes, on a frequent basis, that we can—

Senator DEMINT. Just random—

Mr. MAY.—adjust that.

Senator DEMINT.—auditing of—

Mr. MAY. Yes, at some point. And I suspect Captain Prater would acknowledge that, as long as we protect the privacy of the pilots, there's a way that can be done.

Next, I think you need to have a very specific program promulgated by the FAA on records so that when a carrier goes out to hire an individual pilot, they have access to all of that pilot's records in the same place and in the same format, so that they can have a complete look at what has gone on there.

And finally, I think you need to make sure that we have a very close look at the whole process that is used by the FAA to regulate 121, and how many of these issues need to be incorporated in it, or whether or not the standard is fine, it just needs to be an enforcement issue. So, those are some very specific—

Senator DEMINT. That's very—

Mr. MAY.—recommendations—

Senator DEMINT.—very helpful. I think we need to somehow get that in a—some joint letter to the FAA, to make sure that we're at least reviewing those recommendations.

The other witnesses, do you agree some things—

Mr. COHEN. Senator DeMint, I—

Senator DEMINT.—need to be added?

Mr. COHEN. Senator DeMint, members of the Committee—we would wholeheartedly support the points that Mr. May pointed out. I think the industry—again is, one industry, and in full concurrence on these type of issues.

Let me also point out two specific things, in addition. The integrated database of pilot records is something that Congress can direct the FAA to do, and to do it immediately, so that the access to this information is readily available about the people as we hire. As we have better information about everybody in the system, the safer it will be.

And as to the other issue, let me please underscore the use of CVRs. And, I think, as you all talked about in your remarks, it is a tragedy that we are here, and all of the issues that Congress, the FAA, are learning about had to be after the tragedy. And that is a shame, because if there is a tool out there that can be used to help prevent accidents, that is getting information about how to prevent accidents before they happen, and we are not even touching it, that is a real tragedy.

Senator DEMINT. Captain—

Captain PRATER. Sir, I'd like to respond. We're talking Band-Aids, here, and we need to look at the system. The thought that somehow we can monitor cockpit voice recorders and somehow improve the safety or the compliance of pilots, let us focus on the professionalism and the training of those airmen who do this day in and day out. We're missing something, here. We're missing that these airmen have been doing their job.

Now, let's not take this accident and try to say it was caused because pilots were talking in the cockpit. You have to communicate, you have to relay. I'm not going to talk about this one, obviously, because it's still under investigation and we're analyzing. Do we want to improve it? Yes. But, where do you learn to become a professional? You learn it from the men and women that you respect. You break the chain, and you keep moving around, flying, and where do you get that experience? All of a sudden, a new first officer is flying with somebody who's only been flying for 3 years. That wouldn't have happened if the airlines wouldn't keep pushing fly-

ing around the system. It took me 12 years to make captain. That used to be the norm. We went through 12 years or 8 years or 5 years of airline operations. Now it's much quicker.

Senator DEMINT. Let me just be clear. You object to random reviews of cockpit recordings just to verify that we're keeping sterile cockpits and following other rules? You object to that?

Captain PRATER. I don't object to it, as long as it's done in a system like an ASAP program, where it can be protected and we learn about safety. If you want to use it to monitor—you'll actually create a cockpit that may not be as safe. Let's not mistake that "sterile cockpit" means we're focused upon flying the airplane at critical points. That is standard. That's what goes on. I think we're assuming a little bit too much. If it's protected and used as safety data, then we should be able to find a way to make the system safer. And that is our shared goal.

Senator DEMINT. Because I know just about every service company I call on the telephone now, bank or whatever, is going to say, "This call may be audited for quality purposes." And you can't improve what you don't measure. And I think, to assume that a one-time training scheme is going to monitor potential problems over the lifetime of a pilot is like assuming the same thing for an airplane. So, I'm a little concerned that you consider that a Band-Aid. Do you consider getting the records—keeping records of pilots over their career—is that a Band-Aid?

Captain PRATER. Again, are we going to compare apples with apples? Which training school did they come out of? You don't want to create a system, where, "Hey, Joe, go to X, Y, Z Training School, because they don't flunk anybody. You won't have anything on your record." Or, do you want them to go to the hardest school out there, where they push you to your limits, push you to a failure, not of a check ride, but all these are maneuvers that we must be trained in over and over, whether they're emergencies or back-to-basic flying skills. So, you don't want to create a system that actually finds a way of getting around that. Don't create a loophole—

Senator DEMINT. I know I'm over time, but can we allow Mr. Maurer just to comment to the suggestions in the—

Mr. MAURER. I guess I'd just like to remind everybody, when you're sitting in the passenger section of the plane—again, you're unaware of who's up there on the other side of those doors. Is full disclosure too much of a thing to ask when your life is at hand?

Another comment. Chairman Dorgan had that chart up there. My commute to work is 7 miles. Members of the Senate, I know that you've—you come from pretty far away, but you have a residence here, you have someplace here. Perhaps the airline industry needs to consider providing for that kind of thing if we're going to allow pilots to commute these great distances.

I happen to travel probably every other week, and it's not uncommon for me to be sitting side by side with pilots who are commuting to their base location. They're tired. I get in conversations with them all the time. They're tired. Those hours don't count toward the critical restrictions. I mean, these are things that we've got to take into account. We learned, in our accident, of long hours that were taken just getting to work, and then you're going to climb on a plane and fly.

So, I just—let’s keep the human element in mind, let’s not be defensive.

Senator DORGAN. Senator Lautenberg?

Senator LAUTENBERG. Thanks.

I think there was a response to a question by Senator Dorgan that kind of missed the boat, about the relatively modest wage that—or, wages that are paid to people, such as the fellow who flew copilot in that flight, 3407, because it—you said it’s kind of a pay scale that might be applied in other professions and—but, I think the point was missed, because if someone is not making enough money to take care of themselves and their families, it will typically mean a second job, a second opportunity to earn some more money, is in the cards. As a consequence, there is more effort, there is more opportunity for fatigue to creep into the individual’s operation.

And so, I think that when we talk about a profession that, in the year, might pay \$20,000 a year, we’re talking about, that’s almost minimum wage for any kind of a job, whether it’s a janitor or otherwise, a bank teller. So, we have to look at these in realtime.

And, you know, I—at the previous hearing that we held on aviation safety, one of the questions that I raised was, How many times does an inability to pass a test be allowed at—before it’s three strikes, or whatever the number is, and you’re out? I mean, would you—would anyone here want to go into major surgery—heart, head, whatever—and have a physician there who flunked his tests five times before he—they squeezed him through the operation and put him—put life in his hands? I don’t—I think there’s a point in time when you have to say, “Hey, if you can’t master this in two or three times, then this is—then find something else to do.” People love to fly. I know a lot of pilots. I sat a lot in second seats in small—second seats in small airplanes. And flying is—it’s a glamorous job, it really is. I don’t know how it is as, commercial operation when you’re sitting in seats to fly back home or otherwise away from home, et cetera, but I think there’s a point in time, Mr.—Captain Prater, that—say, “Hey, this is not the kind of a”—the simulators have—replicate emergency situations?

Captain PRATER. Very much so. You can really do a good job of training for emergencies. It doesn’t replicate, though, the fact that, when you’re in an airplane, it’s much more three-dimensional, all the forces on you. So, sometimes you have to go to—back to that basic airmanship.

But, to your point, sir, at most of the airlines, that “three strikes and you’re out” is just about the way it works. That’s oversimplified, but we give an airman two chances, there’s a training review board, where the company, the industry—we may even send the pilot out for a physical, a psychological exam, a fitness for duty—is there something else going on why that individual—but, basically, by the third time of that failure, trying to master the same maneuver or the same airplane—and pilots’ jobs are at risk at that point.

Senator LAUTENBERG. The—so, this was an oddity, that had the captain of this flight failing five times over a period of years. The records didn’t go back far enough to dig out the information.

Captain PRATER. Again, I think we have to make sure that we are comparing apples with apples. If he had problems in his private pilot license or commercial pilot license, with basic airmanship skills, and had to be retrained there. But, we can't get away from the fact that he met—all of them met the FAA standards, and they met the standards that their employer had set, as required by the FARs.

Senator LAUTENBERG. The—is the testing—the training for a regional pilot the same as it is for pilots in the major airlines?

Captain PRATER. Yes, it is, Senator.

Senator LAUTENBERG. It is. Would the—do the regular airline companies—aviation companies pay as little as \$20,000 a year and put someone, even alongside a trained captain, in the cockpit?

Mr. MAY. Senator, as a practical matter, the pilots that are hired by the mainline have significantly more seniority, on average, and are paid at a higher level. Pay is a function of collective bargaining, and it's generally also conditioned on number of hours, number of hours in a particular type of aircraft, whether or not they've been a pilot in command, whether or not they're a first officer. So, there are a number of factors involved in pay, but it is effectively the exclusive jurisdiction of collective bargaining and seniority.

Senator LAUTENBERG. Before someone achieves the status of captain, is there a requirement in the regionals that they fly a particular number of hours—have flown a particular number of hours?

Mr. Cohen?

Captain PRATER. Basic FARs require 1,500 hours of total flight time, to be age 23 years old. That's the basics. That's not a lot of time. In many cases, pilots do exceed that before they check out as captain, but in rapidly expanding environments, it is of a concern. It's also of a concern of how much actual experience. Time isn't the only generator. If you flew a B-52 for 20-hour missions, it's not the same amount of training as making six take-offs and landings a day in an airline environment. So, time doesn't cure all here.

Mr. COHEN. Senator, excuse me, if I might.

Senator LAUTENBERG. Yes, go ahead.

Mr. COHEN. For the record, our average captain at a regional airline has 8,500 hours. That's pretty experienced. And our average first officer is well over 3,000 hours.

Senator LAUTENBERG. Maybe not dealing with averages, but rather with specifics might be called for, to say, "Well, the captain of an airplane that's got a less-skilled copilot has to be—have had more experience than the basic experience." And that might be a good rule to put into play, that if you're going to take someone who's new at this job—and, again, considering all of the factors, and they're complicated as could be—but, when you look at what is required of the passenger flow today in major airlines, that—or regionals—the passengers are examined so thoroughly to make sure that they can't bring down an airplane. And when we look at the skills and the training and the reaction ability of a pilot, well, that's much more casually done. And I think we can learn from that. Not to change the security process, but, rather, to say that the person who's up in the front of that airplane has to really be able to manage all situations.

Mr. Maurer, I know that it's painful for you to review this, but you're doing a noble job when you say, "Let my loss be a lesson for others," and I think we have to take that very much to heart. Thank you.

Thank you, Mr. Chairman.

Senator DORGAN. Thank you. Senator Johanns.

Senator JOHANNNS. Thank you, Mr. Chairman.

Mr. Cohen, how many regional airlines are in operation out there today? How many would that be?

Mr. COHEN. Mr. Chairman, Senator, as it has been talked about, the term "regional airline" is more of a term almost of art rather than of science. There are 31 RAA member airlines, and those 31 members carry 90-plus percent of the passengers in scheduled service.

Senator JOHANNNS. OK. How many of those would be profitable today? How many are actually making money?

Mr. COHEN. Mr. Chairman, Senator, many of them are privately held, so they do not report their finances publicly. And I just don't have that information available to me.

Senator JOHANNNS. Of those who are not privately owned, could you get that information for us?

Mr. COHEN. We would be glad to get it to you and provide it to the Committee, absolutely.

[The information referred to follows:]

REGIONAL AIRLINE ASSOCIATION
Washington, DC.

Hon. MIKE JOHANNNS,
Russell Senate Office Building,
Washington, DC.

Dear Senator Johanns:

On behalf of the Regional Airline Association member airlines, thank you again for the opportunity to appear before the Senate Aviation Subcommittee hearing on June 17, 2009. Our industry is committed to the constant improvement of safety in commercial aviation.

Following up on your request for information, please find attached a spreadsheet outlining the profitability of publicly traded RAA member airlines. The chart was compiled from public data available through the Morningstar rating service. It summarizes the financial performance of the six publicly traded, Part 121 passenger airline members of RAA. These include: ExpressJet Holdings; Gulfstream International Group; Great Lakes Aviation; Pinnacle Holdings; Republic Holdings and Skywest. (Publicly traded Mesa Air group is not currently an RAA member, so is not included here). Also included are website links providing additional information on each company. Please note that a number of RAA member airlines are wholly or partially owned subsidiaries of major airlines, including American Eagle, Comair, Compass, Horizon, Mesaba, Piedmont, and PSA.

Again, thank you for taking the initiative to increase airline safety. We would welcome a chance to further discuss this information and other issues with you directly and will contact your office to arrange a convenient time.

Respectfully,

ROGER COHEN,
President,
Regional Airline Association.

CC: Hon. Byron L. Dorgan

Regional Airline Association (RAA): Publicly Traded, Member Reported Net Income

Company Name	City	State	Stock Symbol	Net Income (Loss) FY2004 in Millions of USD	Net Income (Loss) FY2005 in Millions of USD	Net Income (Loss) FY2006 in Millions of USD	Net Income (Loss) FY2007 in Millions of USD	Net Income (Loss) FY2008 in Millions of USD	Net Income (Loss) FY2009 Q1 in Millions of USD
ExpressJet Holdings, Inc.	Houston	TX	NYSE:XJT	122.8	98.0	92.6	(70.3)	(88.2)	(10.6)
Gulfstream International Group Inc.	Ft. Lauderdale	FL	AMEX:GIA	N/A*	N/A*	1.2	(3.1)	(14.8)	0.7
Great Lakes Aviation, LTD	Cheyenne	WY	OTC BB: GLUX	5.6	1.2	15.7	19.2	1.9	0.09
Pinnacle Airlines Corp.	Memphis	TN	NasdaqGS:PNCL	40.7	25.7	77.8	34.6	(4.9)	18.8
Republic Airways Holding, Inc.	Indianapolis	IN	NasdaqGS:RJET	44.8	60.7	79.5	82.8	84.6	2.2
Skywest Inc.	St. George	UT	NasdaqGS:SKYW	82.0	112.3	145.8	159.2	112.9	9.4

* Gulfstream International Group Inc. was incorporated in December 2005. Information provided by Morningstar, Inc.

Senator JOHANNNS. OK. Let me understand your business model, because I think that bears on some issues, here.

As I understand it, the cost of the ticket that I would purchase is not determined by that regional, it's determined by the carrier they contract with. Is that correct?

Mr. COHEN. For the vast majority of business operations, yes.

Senator JOHANNNS. How are your revenues determined, then? How—is it based on that ticket cost?

Mr. COHEN. There are a variety of business arrangements, which are proprietary in nature, but it's my general understanding that it can be one of a couple of ways. Probably the predominant way is now what's called "fee for departure" or—that, basically, the regional airline is given a schedule and is paid, in some fashion, based on the number of flight hours, the number of trips, the performance of those trips, and so forth. There are regional airlines that are wholly owned subsidiaries of major airlines. That may be a different relationship. There are some independent flying regional airlines; that's a smaller group. There are some business models that actually have a little bit of a mix—where the ticket price may be split; but, that is a very small percentage.

Senator JOHANNNS. Is it impacted by the number of people on the plane? So, if you're flying 50, versus 5, your revenues are going to be better?

Mr. COHEN. Only in those instances where the regional carrier would be sharing in the risk of the revenue for the flight.

Senator JOHANNNS. OK. What's—

Mr. COHEN. But, again, these are proprietary. I've never seen one. That's just my general understanding.

Senator JOHANNNS. There are statistics as to how many of these regionals have gone bankrupt, because, of course, that's a public sort of event. How many would that be?

Mr. COHEN. I've been the president of the Regional Airline Association for a little over two and a half years, and, of our members, I believe two may have gone out of business in those two years, of our members.

Senator JOHANNNS. OK. On the pilots themselves—you know, I started out as a young lawyer, and, had you asked me, at age 23, "Are you ready to handle the most complex cases in a courtroom setting?" I would have said, "Absolutely. I've got my law degree, I've got my bar certificate. Let's go." I wasn't anywhere near ready.

Is the regional airline regarded as the training ground for pilots? Kind of, you go there, you pick up some hours, you do some flying back and forth to whatever you're—and you pick up those hours, and then eventually you, hopefully, get to a big carrier, and maybe eventually go transcontinental—I don't know what the next steps would be. Is that the case?

Captain PRATER. Unfortunately, that's what this system has produced. And it's not the safest model, sir.

Senator JOHANNNS. Yes. You see, Mr. Cohen, averages mean nothing to me. You know, when I walk on that airplane, and I stick my head in the cockpit and say, "Boy, I feel so good that the average salary here is" whatever you told me it was—I would never say that. I want to know that they are trained and ready and can handle thunderstorms and icing and keep me out of trouble. So, your

averages just don't land anywhere with me; they miss the mark completely.

What would be the minimum salary per year that a pilot would be hired to come onboard?

Mr. COHEN. Mr. Chairman, I don't have—Mr. Chairman, Senator Johanns, I don't have the minimum. Again, the average, which is—we—I believe we provided some information to the Committee. I can get you that of our member airlines. We can provide that to you.

Senator JOHANNNS. I want you to get that.

Your averages mean nothing.

Captain PRATER. That new—that new pilot, sir, would be making between \$16- and \$18,000 a year for a full-time job, and less if he or she is on reserve.

Senator JOHANNNS. And doing that kind of commuting.

Captain PRATER. Yes, sir.

Senator JOHANNNS. OK.

Now, I traveled extensively when I was in the Cabinet. I must admit, I got tired of it. But, one of the things that really, really hammered me was the constant time changes, the poor diet, the lack of exercise, because you can never have a schedule. When these folks are traveling from out at the West Coast over to the East Coast, and they've gone through all those time changes, how does that compute? If you see somebody that has spent the whole night, can they literally land in New Jersey and get on an airplane and start flying?

Maybe the pilot. Captain?

Captain PRATER. While it is possible, it's also true that—may have flown that flight across the country—5-hour flight in the middle of the night—and then be expected to sit around for a couple of hours, as many as 5 or 6 hours, and then fly the trip. So, I would put it in the terms of, Where is it more—is it any more restful sitting in coach seat trying to get to work for 2 hours, or driving to an airport for 2 hours? I think we have to look at that.

Obviously, the subject of commuting has some focus, especially on our first duty day. Is—that first duty day, are you sufficiently rested to do your next 16 hours of duty? That's what we have to look at, those extensive periods.

But, I think, in this case, what also is forgotten is, that copilot could have flown that trip instead of just ridden on it, and been legal to fly, that afternoon, and fly that trip. That's a fact.

Senator JOHANNNS. Let me—and I'm out of time, so I'm going to zero on this in a very focused way. But, let's say I grew up in Florida, and I get my training in Florida, and I'm used to thunderstorms, but I have no idea of what icing is about, never flown in it, maybe got a little bit of training on it, but no experience whatsoever. Could a regional hire me to fly a northern route?

Mr. COHEN. Mr. Chairman, no, that person would be trained extensively in the type of operations that he or she is going to be flying in.

Senator JOHANNNS. Now, Captain, how much—

Captain PRATER. I would disagree with that statement, from this point. That pilot has check-passed the minimums for all types of operations and all types of weather, and if his or her experience

has been specifically in one area or one region of the country, they could be thrown into the worst weather of the Northeast or the mountain flying, or whatever, without further training. And that's—we have to talk about specific training at different points.

When you move pilots around this system, we must continue that training cycle. And I think it's deficient in that area.

Senator JOHANNIS. OK. I'll just wrap up, Mr. Chairman, with this very, very quick thought.

I ask these questions—and I'll be very candid about it—because I worry that, because of economics, or whatever, we're trying to do this on the cheap. And we are hiring pilots at a very low wage. I don't know how you'd live on that salary. And you know what you're ending up with? People who are trying to build their hours to move out of the regional system. If that is the case, that's very worrisome.

Now, Mr. Cohen, you represent these fine folks. Prove to me I'm wrong. The burden is on the airlines to prove the safety of our travel.

Thank you, Mr. Chairman.

Senator DORGAN. Senator Begich?

Senator BEGICH. Thank you very much, Mr. Chairman.

And, Mr. Maurer, thank you very much for your testimony.

And, as I said in my opening, you know, I have experienced tragedy in my family and—in a plane crash with my father, but even to a more extreme, that the plane was never recovered. And it took a tragedy, back then, to change the rules of requiring locator beacons in planes, because of that incident. And it was the largest air recovery attempt in this country's history. And so, it seems, always, when we deal with air traffic safety, it's always a tragedy that moves us to the next stage.

So, I appreciate you being here. I'm very, very sympathetic, from personal reasons.

But, you know, as I was listening to the testimony, Mr. Cohen—and I feel like you're, like, on the hotseat, and I appreciate your being here—but, as I was listening to you, I asked my staff—because I know all associations have conferences and meetings and so forth—so, while you were testifying, I said, “Go get me a copy” of your last conference, which was held in mid-May. And it was a 4-day, 5-day conference. This is now 2, 3 months after the significant incident—as you described it, a very significant incident in the regional airlines' history. But, yet, when I looked through the conference agenda of four and a half days, I see very little mention of safety, except in the last—let me just finish—in the last couple of days.

Now, I'm assuming, through the discussion of the conference, you had conversations. I know, as a former mayor, when the Katrina disaster happened, we spent a whole conference on that, because of the importance of safety in our communities.

And so, as you talk about the ideas and suggestions, I want to—and I think Mr.—Senator Johannis said it very clearly—it's on you. And I can only look at what's been done and your comments today.

So, I want to take a couple of steps. And if you want to quickly comment on the convention, that's great. It's—and I'm not going to read the agenda, because you know what was there and the kind

of things you covered, but it just seems that that should have been forefront. And maybe it was, and your agenda that's on your website doesn't show that. And I just—it seems such an important issue.

Mr. COHEN. If I might.

Senator BEGICH. Yes.

Mr. COHEN. To that point, Senator, the reason why RAA was created, and every year for the last 34 years, has been to promote the safety within the industry. The safety directors of our member airlines meet for the entire length of that conference. That is a meeting at which everything is shared—among the airlines—with the FAA, with members of the NTSB that are there. And it is not a public meeting, so that they can share those experiences.

And so, you are exactly correct, that was not on the public website. They meet for 10 hours a day, and in a windowless room. And we would urge you when—the next time, when they meet here—they meet regularly—I would urge members of this Committee to come to—you are invited. We would love to have you there.

Senator BEGICH. Would you share the outcome of your last conference meetings from that with the Committee?

Mr. COHEN. We will do so.

Senator BEGICH. And if it needs to be confidential, or whatever the rules are, I'm happy to oblige.

Mr. COHEN. Yes.

[The information is maintained in Committee files.]

Senator BEGICH. Let me go to another issue, again Senator Johans asked, and that was regarding the pay rate. And I—I'm not going to debate you. I—it surprised me that you did not know the beginning salary, or a range. So, do you have—has the Association ever done a salary study? I'm just guessing they must have had some analysis over the many years you've been in existence. And if so, can you provide that to the Committee?

Mr. COHEN. Mr. Chairman, Senator, we will provide you the information of our member carriers, what is publicly available, and we'll get that to you.

Senator BEGICH. And I guess I would push you a little bit further. I mean, we have rules here; we can keep things proprietary information. So, I would like you to stretch further, if you can.

Mr. COHEN. Will do so.

Senator BEGICH. The issue on the pay. And I know you mentioned that the compensation is not necessarily a driving factor. I would disagree with you, just so it's clear on that fact, because as, again, a former mayor, managing over 500 police officers, 300 public safety people in the area of paramedics and fire, what I never wanted them to have was a second job. I wanted one job. And one job was doing the safety of the community. So, we paid them very well. The net result was, we had very limited or—limited problems, because of that, because they didn't have to worry about their family and taking care of them.

So, I want to disagree with you on that and ask you this simple question, and taking it—as the Chairman has talked about \$22–23,000. In Alaska, small planes, regionals—and we have some great regionals in Alaska, from the ones that operate currently

there—but, the pay seems to me an important factor in creating quality, so the quality of a pilot doesn't literally—and I'll use these words carefully—"fly" to the majors, to keep them for long-term careers. Do you honestly think—and I'm going off the Pilots Association, because they obviously know, because they get the paycheck—that \$22–23,000 is adequate for us to have people flying planes with—I don't care if it's one person or 20 people or 50 people?

Mr. COHEN. Two points to that, Senator, that the pay at virtually every one of our member airlines, all but one, is collectively bargained.

Senator BEGICH. That's not my question. I—again, as a former mayor, I deal with collective bargaining all the time. Is it the right kind of pay to have? And should we require minimums that are guaranteed pay levels for pilots in regional planes? This is a question I asked last week to folks.

Mr. COHEN. Senator, again, it's a very complex issue—we believe, fundamentally, that the quality of the people that we have flying is good. We would like to get even better. That's one of the reasons why we strongly support a number of the issues that have been discussed today, to get better training, to get better—there is an investment, here, too. It's interesting that this committee, which is, responsible for so much of the next generation of technology and spending billions of dollars, that we believe that there can be some money spent on the human capital in our aviation safety system, and we would strongly support that.

Senator BEGICH. And I'm running out of time, so let me ask, if I can, to both of you, I guess—to you, and also—oh, Mr. May, you could answer this, too, and also Mr. Prater, if you—Captain Prater, if you want to answer this very quickly. And it's a very simple question. And that is the whole issue of downtime and FAA's minimums that they currently have. And I know each one of you have mentioned the FAA minimum standard requirements for pilots. Do you think the minimums are too low? The minimum standards of FAA for pilots for downtime, as well as other training and other issues, do you think they're too low and need to be raised up?

And, Mr. May, can we start with you? Is that OK?

Mr. MAY. Certainly, Senator Begich, I assume you're talking about flight and duty time now?

Senator BEGICH. Yes.

Mr. MAY. I think they're probably appropriate, one.

Two, we made a commitment, at the FAA's Call to Action on Monday, to enter into a science-based study to determine whether or not they are currently appropriate or not. There has been a recent proceeding, on ultralong flying, that the FAA has done. It was science-based. Plenty of skilled people available to do that. I think we probably ought to incorporate—the Chairman has raised this issue of commuting—I think we ought to incorporate that into the process.

And so, we would strongly endorse a process being established by FAA to look at flight and duty time, current standards, how they might differ for regionals, for example, with lots of takeoffs and landings, versus long haul. All of that needs to be put on the table.

Senator BEGICH. Mr. Cohen? Mr. Prater? And my time is definitely up, so if you can be very quick on the response.

Mr. COHEN. Totally agree with what Mr. May said.

Senator BEGICH. OK. Mr. Prater?

Captain PRATER. And we believe there has been enough study. We're ready to move forward with it. We do believe there's enough science on the record. We're going to make our recommendations directly to the FAA and work with the associations to move that process forward.

Senator BEGICH. Can you share that with the Committee when you do that?

Mr. COHEN. Of course.

Senator BEGICH. Thank you very much.

Thank you, Mr. Chairman.

Senator DORGAN. Senator Klobuchar?

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Thank you very much, Mr. Chairman. Thank you for having this hearing.

The tragedy of the Colgan Air flight brought the safety of our airlines back into the public eye. I can tell you, for—Senator Begich has his own very personal story. For me, it was eerily reminiscent of the crash of Paul Wellstone's plane. He, as you know, was the Senator from Minnesota. While that was a private plane, the issues were ice, the issues were pilot training, and the issues were fatigue. So, when I hear all this from our hearing last week, of underpaid pilots, pilots that are tired, and pilots that aren't earning enough money, it reminds me very much of that.

In addition to that, here you have the factor of pilots living far away from their bases leading to long commutes and a lot of time spent waiting in the airports. I know there have been some questions about fatigue, but I had a question about the reimbursement for hotel rooms in the evenings. I mean, I know that some of the larger airlines pay for hotel costs so that the pilots can get sleep before shifts. Are regional carriers doing the same thing?

Mr. COHEN. Mr. Chairman, Senator Klobuchar, when pilots are on duty, the minute they check in, all their—their hotel costs on duty are paid for, 100 percent, by the company. They also receive a per diem expense to cover travel costs. It's the same, mainline and regional. There's no distinction between the way those policies are done between the major airlines and the regional airlines.

Senator KLOBUCHAR. Anyone else have something to add on that?

Captain PRATER. Well, I would say there is a fair amount of difference. But, I think where you're going is, is the pilot getting adequate rest, and a place to get that adequate rest, before he or she begins her first trip out of whatever domicile they've been assigned to? And the answer, quite simply, is, no, they're not provided by the airlines.

Senator KLOBUCHAR. Because that is—so, what they do is, they fly to start their first trip, from somewhere, and there may not be a way for them to get reimbursed for flight—for a hotel then, because it's not in between flights. Is that—

Captain PRATER. That's—
Senator KLOBUCHAR.—right?

Captain PRATER.—correct.

Senator KLOBUCHAR. And was that the case here, do we know, with the Colgan flight? Because I know she was spending the day in the airport—

Captain PRATER. I seriously doubt whether there is—in fact, it was—I can say, without a doubt, they were not given a place to get adequate rest, or provided for or compensated for a hotel room so that they could get adequate rest.

Senator KLOBUCHAR. OK. We heard, last week, that regional pilots are more likely to become tired and fatigued by flying, because they are flying more flights per day, rather than one long flight. And I'm sure that could happen with major carriers, too. And, in other words, they are doing more takeoffs and landings in one day, and they may be, actually, more prone to fatigue. Do you think that that's true? Anyone want to take that on?

Captain PRATER. Having spent more time fatigued than anybody else up here at the panel, I can say that there are a lot of different ways of lowering your readiness level, if you will. The fatigue of a 16-hour flight is different, but just as important as a pilot who's flying seven legs—seven different landings and takeoffs in the middle of the winter weather or summer weather. It is different, but to all adds to the same place, that a tired or fatigued pilot is not at the peak of his or her performance.

Senator KLOBUCHAR. And I—

Mr. COHEN. Senator—

Senator KLOBUCHAR. Go ahead, Mr. Cohen.

Mr. COHEN. The issue of fatigue is a very serious one and why it is right at the top of our Strategic Safety Initiative. There's a lot of new science out there on fatigue, and the possibility of exploring fatigue testing. Let's start gathering the data, let's start testing people for fatigue. We have the ability to do that now, but we don't, currently. And we would strongly urge it.

Senator KLOBUCHAR. Well, I think that we know. I mean, I've read enough sleep studies to know that if people have—don't have enough sleep, I don't—I mean, I'm not at all disputing that testing is good and finding more details about long flight, short flights, is good. But, the bottom line is, if they don't have enough sleep, because they're sitting there in an airport, and they haven't slept the night before, because they were flying from far away and they don't have enough money to pay for a hotel room, then I think you're going to have a problem. So, that's why I was glad that Administrator Babbitt, this past Monday, said he's going to propose a new rule on pilot rest requirements, which I think would be very helpful.

I wanted to talk briefly about the de-icing issues, because that was clearly an issue here. I think—what was it, that the first officer told the pilot, in this crash, "I've never seen icing conditions. I've never de-iced. I've never experienced any of that." And this was clearly a factor in the crash.

Are regional aircraft more susceptible to problems associated with icing than some of the larger aircraft? Is it because of where they're flying or at what levels they're flying? Any thoughts on that?

Captain PRATER. Certainly, some of the airplanes that fly in the lower levels, the, if you will, surface to 18–20,000 feet, are more likely to pick up—and spend a lot of time at that altitude—will pick up more icing. Certain turboprops are more susceptible to it, even though I believe that most of them are more than adequate to handle those conditions. But, you can't stay in it forever. And the fact that the first officer—you know, I—this will sound strange, but there has been such a focus on some sterile cockpit violations—I am relieved that we know that that first officer in that airplane said, “I've never seen icing like this before,” because we've all learned something that's just as apparent as whether it's the CVR—we have learned something. She felt she wasn't prepared.

Senator KLOBUCHAR. So, what you're saying is, you can have violations, things go wrong, but that she was—that she said this is such an indication that there are problems in training that you really don't need anything more than that.

Captain PRATER. That, plus sharing information between pilots, knowing what's going on. We talk regularly so that we know that you know what I'm thinking. You have to voice some of the things that are going on in your head so that your first officer or your captain knows what you're doing or what you're planning to do. That is not a violation of sterile cockpit. That actually leads us to knowing what's going on between the two, the dynamic.

Senator KLOBUCHAR. What do you think—maybe someone else can answer this—could be done to train our regional pilots efficiently on how to fly in icing conditions? Anyone want to take that?

Mr. Cohen?

Mr. COHEN. Senator, we are strongly supportive, the training programs at our airlines are very robust. We are working with the FAA, our mainline partners, our employees, to make them as robust as they possibly can be. All—more training is always good.

Senator KLOBUCHAR. OK.

Mr. Maurer?

Mr. MAURER. I guess what I would comment on is, we learned, in the NTSB hearings, that there is software available to take inexperienced pilots and put them with experienced pilots. So, a mentoring program of some sort, where you've got an experienced pilot who has flown in ice, who has seen it, who understands it, knows what to do—put an inexperienced pilot with them, and perhaps we might have a better outcome. I mean, that's a hands-on way of learning about these things. There's only so much that can be done in a simulator. Let's face it.

Senator KLOBUCHAR. I would think icing would be harder condition to simulate than—

Mr. MAURER. Right.

Senator KLOBUCHAR.—some of the—maybe I'm naive about it, but it seems like it would be.

Mr. MAURER. And, along that line, I just wanted to make one other comment. The regional airlines typically are flying less than 2-hour-type flights, et cetera—you mentioned it—more takeoffs, more landings. As I've interviewed and talked to pilots, I mean, this is the critical time of flight, taking off and landing. Where, then, should we have the best skill? And I'm not trying to talk anything away from the majors, but should we not have the best pilots,

the most skilled pilots, flying these short trips? Particularly if you're flying in these altitudes—

Senator KLOBUCHAR. That are more—

Mr. MAURER.—where—

Senator KLOBUCHAR.—difficult—

Mr. MAURER.—are more susceptible to ice—

Senator KLOBUCHAR. Interesting.

Mr. MAURER.—which—that's another issue that—you know, pilots don't like to fly in it, but they have to.

Senator KLOBUCHAR. Right.

OK, thank you very much.

Senator DORGAN. Senator McCaskill?

**STATEMENT OF HON. CLAIRE McCASKILL,
U.S. SENATOR FROM MISSOURI**

Senator McCASKILL. Thank you, Mr. Chairman.

I'd like to talk a little bit about maintenance. I have worked on this issue since I came to the Senate, on foreign repair stations. And I'm sure you all are aware that the IG has determined that regional carriers are depending on outsourcing maintenance, to a large extent. And my question to you, Mr. Cohen, is, How much of the outsourced maintenance—I believe the IG said that 50 percent of the regional airlines' maintenance is being outsourced—what percentage of that outsourced maintenance work is going to FAA-certified repair stations?

Mr. COHEN. I'm glad you asked that question, Senator, because it's a good opportunity to clarify some things in that IG report that I think the hearing in the other body didn't quite get straight.

First of all, 100 percent of all the maintenance is being done in an FAA-certified maintenance operation. Otherwise, it wouldn't be allowed to fly.

Number two, to augment the IG study regional airlines outsource less maintenance overseas than even the mainline carriers do. Virtually all of the maintenance by the regional airline members is done here in this country, either by themselves or at their own FAA-certified maintenance operation here in the United States, including our manufacturers, which have locations in the United States—in Miami, in Tennessee, and in West Virginia.

So, I hope—that may be a long way of answering your question, but I—

Senator McCASKILL. No.

Mr. COHEN. But—

Senator McCASKILL. No. But, I'm interested in what you said, though, because I'm sure you're aware that it is perfectly acceptable to the FAA for the repair work to be done in noncertified stations. You—I mean, you're aware of that, right? But, you're maintaining, today, that all of the maintenance work is being done—because we—this is one of the problems we have right now, is that a repair station does not have to be certified by the FAA in order for it to be utilized by either the commercial carriers or the regional carriers. Are you aware of that?

Mr. COHEN. Senator, again, it's my understanding, on the maintenance, that the heavy maintenance, here, that we're talking

about the C&D checks, are conducted by what I'm assuming are FAA-certified facilities.

Senator MCCASKILL. If you would check that, because I—

Mr. COHEN. I will—

Senator MCCASKILL.—think—I would be surprised if that were the fact.

Mr. COHEN. I will—

Senator MCCASKILL. I mean, we've done a fair amount of work on this issue, and there are a large number of—not just “kick the tires,” but serious and substantial maintenance and repair work that is being done by noncertified repair stations, both foreign and domestic. And so, I would certainly appreciate you following up on that, because one of the issues, of course, is, why do we have certified repair stations if people aren't required to use them? And that's, in fact, what the legislation that Senator Specter and I have introduced would require you to use, the certified repair stations. As I said to FAA a couple of different times in this room, I assume getting one certified is a good thing. Well, if it's a good thing, why aren't we requiring people to use them? And if it's not a good thing, why are we spending taxpayer money supporting them? It doesn't make sense to me, just using good, old-fashioned common sense, that we would go through a certification process and then not require it.

So, if you would get back to me, I would really appreciate it. Because the FAA does not have good data on this. They will admit they do not know how much of the maintenance is being done at certified versus noncertified repair stations.

Mr. COHEN. Senator, we'll get you all the information.

Senator MCCASKILL. Thank you very much.

And, Mr. May, same question to you, for the national carriers. Can you give me any kind of figure as to what percentage of the maintenance is being done in certified versus noncertified repair stations?

Mr. MAY. I do not have that number at hand, but I would be happy to provide it to you, Senator.

Senator MCCASKILL. That would be terrific. And while you're at it, Mr. Cohen has represented that none of this is being outsourced beyond the United States, in terms of the regional carriers. I am confident it is being outsourced beyond the United States for the large commercial carriers.

Mr. MAY. That is—

Senator MCCASKILL. And do you have—does your association have a number of what percentage of that maintenance is being outsourced?

Mr. MAY. I don't—I'm sure we have the answer to that. I don't happen to have it with me. I'd be happy to provide it for—

Senator MCCASKILL. If you have it, that would be terrific. It has been a very difficult amount—the information is difficult to come by from the FAA. They have not, I don't think, prioritized looking at this issue, and I don't think the American flying public realizes to what extent maintenance has been outsourced in an effort to cut costs. And what—one of the problems is that, in many of these places, there's not even alcohol and drug testing, and it seems weird to me that we have domestic certified repair stations, and,

because we don't have as many of them anymore because so many have been outsourced, there are FAA inspectors that hang out there, that are really looking over the shoulder.

And then you travel to Indonesia, and if there is ever an FAA inspector that shows up—by the way, the United States pays for that, the taxpayers pay the costs of the FAA inspector to go look at foreign repair stations, not the airlines. So, the taxpayers are actually underwriting this outsourcing. They aren't even doing drug and alcohol tests. And, as we have talked about in this hearing before, there are actually locations that have been on the State Department's Watch List for terrorist activity, where there have been repair stations that have been utilized.

So, if you would get back to us with whatever information your associations have on this information, I think it will be helpful as we move forward, trying to get these important reforms done in the area of maintenance and repair.

Thank you.

Thank you, Mr. Chairman.

Senator DORGAN. Senator McCaskill, thank you very much.

We will attempt to get all of that information. I'm well familiar with the issue of the inspections and the repair stations. I mean, we have—in fact, I've written about one of the carriers that flies an empty Airbus 320 to El Salvador for repair, and then flies an empty 320 back to the United States after having had it repaired in El Salvador, or inspected or maintained in—my guess is, that's probably another issue of dollars and cents.

And let me go back to just a moment ago, on icing. I just pulled the transcript again of this. This copilot said, "I've never seen icing conditions. I've never de-iced. I've never de-iced. I've never experienced any of that. I don't want to have to experience that and make those kind of calls. You know, I freaked out. I'd have seen this much ice and thought, 'Oh, my gosh, we're going to crash.'"

The actual transcript is of a copilot that appears to me to have had minimum training in icing conditions.

Now, the reason I mention this is because the training issue has been on the table, here. What kind of training does someone have in that cockpit to fly in the conditions into which that airplane is headed? If they're flying to Buffalo, New York, in the winter, one would expect you would encounter icing conditions of some sort.

I come from the State of North Dakota. I learned to fly, many, many years ago, and, you know, I've been on airplanes, small airplanes, with a lot of buildup on the wings, and watching it with flashlights. So, I—you know, I've flown in a lot of icing, with pilots and with others.

And so, I think it's an important question. How much training exists before someone is put in a cockpit for the specific kind of conditions they are likely to encounter?

I want to ask about this issue of the time in an airplane, because I think that's also important. In the Buffalo crash, we were told that that carrier had had training. They trained their pilots on the stick-shaker, but not the stick-pusher. And so, if that's the case, I guess the first question of mine is, If you're in a cockpit with a device called a "stick-pusher," which is going to be a device that is going to automatically move you toward some sort of safety func-

tion in a—in that flight, and have never had experience with it, or not been trained in it, is that a— isn't that a significant deficiency? And how could that happen?

Captain Prater, can you tell us?

Captain PRATER. I'd be glad to, Senator.

First of all, every airplane has different characteristic, different safety features, and pilots should be trained to the proficiency in each and every one of those.

I cannot testify toward the conditions on the training of this individual airman or crew, but I can say, more generally, is that there is a huge cost to training airmen, so it does come down to dollars and cents.

I have severe concerns that the regional industry, who looks at their pilots as, if you will, part-time help, training help, may not want to spend as much money making sure they're aware of each and every facet. Training has been shortened over my three decades as an airline pilot. I think we need to look at it very seriously and say, Have we reduced it to below what should be the standards?

Senator DORGAN. Mr. Cohen?

Mr. COHEN. Mr. Chairman, in defense of the training programs at our regional airlines—is the Committee—this committee was provided with very detailed information about the training programs, which are every bit as robust. One of the things we talked about at Monday's Call to Action was to look at all of these type of training issues that have been laid on the table, certainly today and over the last several weeks, and to look at it, whether it's environmental—you know, additional training in environment, additional training on whatever—and that, in all my years in the airline industry—and I've been in it since 1971—I have never seen, ever seen, a decision by any airline regarding safety that—you know, that would jeopardize safety because of cost. I just want to lay that on—

Senator DORGAN. Mr. Cohen, Senator Johanns was making the point, and a perfectly reasonable point, that if we're flying through very difficult economic conditions, if regional carriers are smaller companies having substantial difficulty, isn't it likely that you have substantially less experience in that airplane, you're paying lower salaries, and so on? And does that have an impact on the capability of that airplane to fly through difficult circumstances?

Look, the airline industry has created, for the most part in this country, two different systems. One is a hub-and-spoke system, and the other is flying between city pairs, with some localized carriers.

In the hub-and-spoke system, in the old days, Northwest Airlines, which served my State, would fly its jet carriers into that city, one of four cities in North Dakota, with 727s, had a pilot, a copilot, and a flight engineer. And I assume that the pilots that bid on those routes were probably pilots with less time in the company than somebody that bid on a San Francisco to Narita route. So, I understand that, you know, the longer routes and the bigger planes, and so on, are going to get the pilots with more experience. But, it just seems to me, the way this hub-and-spoke system has morphed is that the network carriers have decided, "You know what, we're going to move a lot of these spokes off onto a commuter

carrier, and that commuter carrier is going to be out there with smaller planes, in most cases. It's going to cost us less, although they're going to wear our name on the fuselage, but it's going to cost us a lot less, because, frankly, it can be a carrier that we have, perhaps 100 percent ownership of, or substantial ownership of, but not the same contracts we have." So, it will have pilots with less experience that they can hire for an entry level of \$18,000 a year.

I—it seems to me, just inevitably, that you do you have, then—again, without demeaning a pilot or a pilot's ability—you do have the potential of a separate standard of capability. I'm not talking about training to safety minimum standard, I'm just talking about separate standard of capability.

And so, the major question that we started with today is, the FAA said, in the mid-1990s, one standard. And passengers that get on an airplane, when they walk through that airplane door, should expect the same standard on the cockpit of a commuter carrier or a network carrier.

The—I think Mr. Prater says he believes that the enforcement of that standard is not as rigorous as passengers would expect or as we would expect.

Mr. May, what's your impression of that?

Mr. MAY. Mr. Chairman, we all adhere to FAR Part 121, which is the single standard that was established in 1995. I think the reality is that mainline carriers more regularly far exceed that standard in Part 121 than our regional partners do. We have, in—with virtually no exceptions—FOQA programs, ASAP programs, more robust training, et cetera. And, as part of the recommendations that we have made before you today, and in the House last week, and at the FAA, we would suggest that many of those programs be instituted at the regional level for our partners.

Senator DORGAN. But, let me ask you—I mean, the fact is, it is your name—that is, the name of your companies that you represent—on the fuselage of these airplanes.

Mr. MAY. That is correct.

Senator DORGAN. And, in many cases, you own the regional carrier, or own substantial portions of equity in the regional carrier. So, it would seem to me that it would be in the interest of the network carriers to require the things that you have recommended today prior to these recommendations.

Mr. MAY. I understand that thought, Senator. There was actually a proposal made by NTSB, back in about 1994, when this whole debate came to pass and when Part 121 was created and putting the regionals under Part 121, to have the mainline carriers be the enforcement of Part 121 for their regional partners. That was specifically rejected by the Congress and the FAA, because they wanted to have a single level of enforcement, as well as a single level of achievement. And I think that decision was the correct one at the time, and I think it remains correct, that the FAA needs to be the principal enforcer. We have openly said, here today, and will continue to say, if we need to change those standards and upgrade them, then that is something that we ought to look at doing. By the same token, I think the enforcement needs to rest with the FAA.

Senator DORGAN. Yes. Well, you know, I'd—was just in another committee earlier this morning and described a Federal agency that was willfully blind and cheerfully ignorant for about 10 years. And I'm—I don't ascribe that to the FAA, except to say that I've had a bellyful of enforcement requirements by certain agencies that have completely neglected the opportunity or the requirement to do so.

The FAA, as we said to Randy Babbitt, the new administrator, last week, we need new diligence here, a new level of interest in making certain that we have one standard, that passengers can rely on one standard when they board an airplane. And I think that's going to require some effort by the FAA, and may require some effort by this Committee.

Senator Rockefeller and Senator Hutchison, myself, Senator DeMint, and others, are going to be working on—I'll be putting together, along with my colleagues, the FAA Reauthorization Act. We're right in the middle of that process now, which will include modernization of the air traffic control system and many other things, all of which have to do with safety. And so, we're going to—I would say, to those that have raised the questions this morning about pilots' records and so on, my first expectation is that Administrator Babbitt is going to move quickly to address some of those issues, but we will introduce legislation to be certain that it is done the right way, as well.

So, Senator Begich, did you wish to make any other comments?

Senator BEGICH. No, just thank you for the opportunity.

Senator DORGAN. Yes, I—let me thank the witnesses for being here.

Again, we'll have one additional hearing, at some point, with the airline companies themselves. We appreciate, Mr. May and Mr. Cohen, your representation of them here at this hearing. And, Captain—

Well, there is one other question I've not asked. And I—I know there's a term of art called "crew rest," vis-à-vis fatigue, and we've talked a lot about fatigue today, and I think one of the Senators raised the issue of crew rest. But, I have been on plenty of airplanes, plenty of airplanes that fly in here late because of storms and so on, and we land at midnight at Washington National. And I know that there's a requirement for a certain number of hours of rest. But, I've sat with pilots and walked out of the plane with pilots who say, "Well, I've got to be back here at X hour. That meets the test of the number of hours I have for rest. But, by the time I get to the hotel, by the time I check in, by the time I get to bed, I'm going to have probably 4 hours of sleep tonight." That is a crew-rest issue. And that is a regulatory issue. And I don't want people to think that only—that fatigue is the only issue here. I think there are other issues with respect to crew rest that we want to talk about as we go forward.

Captain PRATER. Yes, sir. I mean, it leads to the fatigue of that next day. If you're not allowed adequate time to recuperate from the up to 16-hour duty day that you had the day before, and you're only away from the airplane for 8 hours, 8 and a half hours, it's not enough. We need to ensure that the pilots are getting at least

an adequate opportunity, behind the hotel door, to get 8 hours of rest.

Senator DORGAN. One thing is certain about this country, we are all pretty mobile, we rely on a transportation system that is modern and safe and reliable. And no insignificant part of that is the commercial airline industry. It's very important to our country, very important to all regions of our country. And we want it to be made as safe as is possible.

I think the tragic crash in Buffalo, New York, has activated a lot of interest in asking questions. Did we drift along, here, and allow the creation of a couple of different standards in training, and so on, on enforcement? We'll know more about the answer to that as more disclosures come from the NTSB and so on. And we're learning some from last week's hearing and this week's hearing. And for that, we're indebted to the people who are witnesses.

And, Mr. Maurer, we are especially indebted to you and the families who have decided to, in the name of those you loved, find a way to make a difference and make certain that others do not experience the same fate.

So, we appreciate all four of you being here.

This hearing is adjourned.

[Whereupon, at 12:05 p.m., the hearing was adjourned.]

A P P E N D I X

June 12, 2009, Newnan, GA

Senator BYRON L. DORGAN—Chairman
Senate Subcommittee on Aviation Operations, Safety, and Security,
Washington, DC.

Dear Senator Dorgan,

In a June 10, 2009 e-mail from your staffer Mr. Rich Swayze to me, it was requested that I forward to your office an affidavit concerning commercial aviation safety issues pertaining to your upcoming June 17th hearing.

I have enclosed this affidavit for perusal by your subcommittee members in hopes that it will be included in congressional records for your upcoming hearing, since I was previously advised that I would not be permitted to testify before your committee in open or closed session, nor would any other whistle blowing airline pilots from other airlines that I am presently in contact with through our 'Whistleblowing Airline Employees Association.'

As mentioned before, I am currently a federally unprotected whistle blower whose rights as such have been denied on multiple counts. I am merely asking my government to perform their duties in protecting my rights as such, given where I am in matters at present.

If this information, as well as previously submitted correspondence and information is excluded from congressional records associated with this hearing, it is respectfully requested that the reason(s) why be addressed to me by separate correspondence from your staff. A certified copy of this correspondence is forthcoming to your office via United Parcel Service.

Your thoughtful consideration is greatly appreciated.

Very respectfully submitted,

DAN HANLEY,
Former United Airlines B-777 Captain.

Encl: My affidavit dated June 12, 2009

Affidavit of Daniel W. Hanley for Inclusion as Part of Public Congressional Record for Hearing Conducted by Senate Aviation Operations, Safety, and Security Subcommittee Chairman Senator Byron Dorgan of June 17, 2009

I, Daniel W. Hanley, being first duly sworn, on oath, states as follows:

1. I am of legal age and competent. This affidavit is made on my personal knowledge of all matters set forth and referenced herein. If sworn and called as a witness in this case, I could, and I would, testify competently as to each fact set forth and incorporated herein by reference.

2. The alleged facts supported with evidence are true and correct to the best of my personal knowledge of the facts, evidence, information and belief.

3. On June 9, 2009 at 11 a.m., I was advised by Mr. Rich Swayze, a staff member on the Senate Aviation Operations, Safety, and Security Subcommittee, that I would not be permitted to testify in either open or closed session of said committee, hence this affidavit is being provided for inclusion as part of public congressional record for this hearing.

4. I am of information and belief that in October 2003, I was ushered through the United Airlines Employee Assistance Program (EAP) at United Airlines directly as a result of my submission of federally-mandated Aviation Safety Awareness Reports which, among other issues, addressed concerns regarding crew fatigue, reckless scheduling of aircrews, aircrew morale issues, and alleged stonewalling of communication processes within the company, that included the Federal Aviation Administration Principle Operation Inspector.

5. I currently possess documentation, mental health records, prior military flight and health records, and availability of credible witnesses in support of what I state herein. I allege that, in 35-years of flying civil, naval, and commercial jet aircraft, I have never failed a check ride, flight physical, or any psychological screening and have an untarnished record with no flight violations. I estimate to have flown over 20,000 flight hours in numerous civilian and naval aircraft including the P-3 Orion, as well as the B-737, B-727, A-320, B-757/767, and B-777 commercial jet aircraft at United Airlines.

6. My U.S. Navy service record is available on request, which demonstrates that I consistently ranked in the top 1 percent of my peer group throughout my 10 years as a Naval Officer and aviator, and was recommended for accelerated promotion on all but one or two officer evaluation reports in 10 years. In 1978, I was selected for the Operations Research Program at the Naval Postgraduate School at Monterey, California and was nominated for the Navy Weapon System Acquisition Management Program (WSAM), but declined these tempting assignments to pursue a career in commercial aviation.

7. Upon graduation from Primary Flight Training at NAS Saufley Field in Pensacola, Florida in 1973 while flying the T-34B, I was selected as 'Student of the Week' out of 228 graduating students. Upon graduation from Advanced Flight Training at NAS Corpus Christi, Texas flying the TS-2A Tracker, I was selected as 'Student of the Month'. Upon graduating from Replacement Air Group Training Squadron flying the P-3 Orion, I was ranked number one in my class. In my fleet squadron, I became the youngest and only Lt (jg) Plane Commander/Mission Commander well in advance of schedule and of that of my contemporaries. Additionally, I was the youngest and junior ranked instructor pilot in the squadron, as well as a NATOPS Safety Instructor and maintenance functional check pilot. Additionally, I served as a P-3 Subject Matter Expert in development of a training syllabus for fleet wide use for the P-3C Update II Project. In 1984, I received a Navy Achievement Medal serving as Operations Officer while attached to Patrol Squadron Sixty at NAS Glenview, Illinois.

8. I was on the Dean's List at Southern Illinois University and graduated in 1973 with a Bachelor of Science in Applied Mathematics. Upon expulsion as a United Airlines B-777 Captain, during the time-frame 2004-2006, I attended Georgia State University full-time while majoring in Psychology and World Religious Studies and maintained a near straight-A average. I am a few hours short of receipt of a Bachelor of Arts degree in Psychology, and have reenrolled for the fall 2009 semester for continuance of my education.

9. The Air Line Pilots Association motto is "Schedule with Safety". I allege, based on my own perceptions and personal experiences, as well as inputs received from many other aircrew members at United Airlines in 2003, that United Airlines Flight Operations management personnel engaged in a crew scheduling process during bankruptcy that may have endangered the lives of the traveling public, due to crew fatigue, poor morale, inadequate and unconcerned management leadership, massive problematic downgrade of pilots, and many other issues. These situations were precipitated by the alleged leveraged position of management in making outrageous concession demands of employees in an effort to receive an ATSB loan guarantee that was never granted, and which propelled United Airlines into Chapter 11 bankruptcy. It was these and other legal, financial, and political pressures that greatly diminished the ability of ALPA to adequately address safety issues and legally support those pilots who did via appropriate Federal communicative processes. This perception was gained by me from actual statements made at the time by both my JFK Chief Pilot, ALPA council chairman, and others.

10. I allege that commercial aviation safety must necessarily be maintained in a vacuum without external financial, legal, and political pressures and influences exerted on aircrew members wishing to report known safety deficiencies for fear of undue recriminations.

11. The first sentences of the Air Line Pilots Association Code of Ethics are thus stated:

AN AIRLINE PILOT will keep uppermost in his mind that the safety, comfort, and well-being of the passengers who entrust their lives to him are his first and greatest responsibility.

- He will never permit external pressures or personal desires to influence his judgment, nor will he knowingly do anything that could jeopardize flight safety.

- He will remember that an act of omission can be as hazardous as a deliberate act of commission, and he will not neglect any detail that contributes to the safety of flight, or perform any operation in a careless or reckless manner.
- Consistent with flight safety, he will at all times operate his aircraft in manner that will contribute to the comfort, peace of mind, and well-being of his passengers, instilling trust in him and the airline he represents.
- Once he has discharged his primary responsibility for the safety and comfort of his passengers, he will remember that they depend upon him to do all that is possible to deliver them to their destination at the scheduled time.
- If a disaster should strike, he will take whatever action he deems necessary to protect the lives of his crew and his passengers.

12. The Federal Aviation Administration website states:

Our Mission

Our continuing mission is to provide the safest, most efficient aerospace system in the world.

Our Vision

We continue to improve safety and efficiency of flight. We are responsive to our customers and are accountable to the taxpayer and the flying public.

Our Values

- Safety is our passion. We are the world leaders in aerospace safety.
- Quality is our trademark. We serve our stakeholders, our customers, and each other.
- Integrity is our character. We do the right thing, even when no one is looking.
- People are our strength. We treat people as we want to be treated.

13. I allege that beginning in 2002 until July 12, 2003 when I wrote my first formal letter of complaint to Captain Paul Whiteford, United ALPA MEC Chairman, I had countless face-to-face and phone conversations and e-mail exchanges with both United flight management and ALPA representatives regarding a whole host of safety concerns, many of which had been expressed to me by other aircrew members, but were not being adequately addressed by company management personnel. It must be emphasized that throughout this ordeal that ended in December 2003, I was attempting to be most cautious not to draw media attention or initiate litigation of any sort, as I feared that such actions might compromise the success of United's emergence from bankruptcy, since the company was allegedly teetering on the brink of Chapter 7 liquidation.

14. I further allege that my actions and conduct were commensurate with the stated Air Line Pilots Association motto and Code of Ethics, in consonance with the Federal Aviation Administration Mission statement, and was in keeping with the highest standards of United Airlines stated number one priority of safety. I genuinely believed that what I was doing was in keeping with every legal, moral, and ethical principle engrained in me as a pilot since I first took flight in a Cessna-150 in 1968 and carried throughout my entire Naval flying experiences, and through my career at United Airlines. I honestly believed that I would have the full support of ALPA and the FAA since I was sustaining the legal, moral, and ethical high ground in reporting this to United Airlines management and the FAA Principle Operation Inspector assigned to the airline.

15. On the ground while at the gate, aircraft security is coordinated by the captain and the ground security coordinator with the final decision made by the captain regarding continuance of a flight. Shortly after 9/11, United Airlines senior management authorized flight crew members, who felt they were at risk due to security concerns, to deplane with pay protection for that segment of their schedule. In 2003, due to a security breach on my flight at the gate in London, wherein the flight attendants perhaps averted a north Atlantic diversion due to advisement to me of a passenger condition, I happened to notice flight attendant supervisors who had boarded the plane that was being inspected without passengers onboard that were badgering my cabin crew for allegedly delaying the flight. I asked them to step aside so that I could explain just how helpful this crew was to me in my making the decision to have the aircraft inspected (most of the passengers told me that if this passenger remained on board, they weren't going to take the flight). I then asked them a hypothetical question regarding what their actions would be if both I and the ground security coordinator were agreeable to taking the flight but had flight attendants who still experienced consternation and wanted to deplane. They re-

sponded that they would give the flight attendant in question a direct order to take the flight and, if she refused, she would be terminated from employment at United Airlines. I asked them both if this was stated United Airlines upper-management policy, and they both agreed that it was. Believing that this might just be a local London base policy, I queried both the Newark and JFK in-flight offices and actually saw the intimidating policy in writing. A Newark-based in-flight supervisor wrote a stinging letter to my JFK Chief Pilot just because I asked to see this policy in writing, which I felt impinged on the CLR concepts that include effective cockpit-cabin communications.

16. To keep this matter in house, I filed a Captain's Report to address my concerns, as the flight attendants serve as the eyes and ears in the back of the cabin since the promised TV cameras were never installed. A week or so later, I received a call from an ALPA safety representative telling me that management and ALPA had reviewed my report, and although they agreed with what I stated, felt that ALPA was somewhat restricted due to the fact that United Airlines was in the midst of attempting to receive post-9/11 ATSB loan moneys. Paraphrasing, he remarked, "C'mon Dan, be a team player . . . we're in bankruptcy and need this loan. Why don't you just drop this issue? Management thinks that you're just being a big-mouthed whistleblower. How do you want me to dispose of this report?" I told him what he could do with the report, but only after querying him as to where ALPA was drawing the distinction between aviation safety and airline financial survival concerns. I emphasized to him that I wasn't willing to compromise my principles as a captain with regard to safety issues in spite of the financial condition of United Airlines and the unfavorable negotiating position that ALPA found itself in at present. Subsequent discussions with numerous chief pilots and ALPA officials indicated to me that the entire bankruptcy process was impinging on aviation safety issues, hence, after repeated stonewalls of all issues, I intended to write CEO Glenn Tilton a letter addressing this concern. The remaining tragic conclusion of my aviation career may be found in the previously submitted affidavit.

17. Since 2006, I have been contacted by numerous airline pilots from all carriers who have shared their similar stories with me. Additionally, other pilots who have not personally had such experiences, but are knowledgeable of the EAP process for removing 'dissident' pilots have provided much information and insight and are willing to provide sworn testimony.

18. In light of ASAP program cancellations last year at Delta, UsAir, and American, with the current pending litigation hanging over the head of United pilots, coupled with the exposure of whistleblower suppression at Colgan Air that could have possibly prevented that air disaster, other pilots and myself feel morally and ethically compelled to speak out. We already have and will continue to do so until this problem is rectified by the Department of Transportation and the Federal Aviation Administration.

19. I could have turned my back on aviation and walked away from all of these concerns 5 years ago, but my conscience would not allow it. I may have been retired from the left seat in 2003, but I will always be a captain in my heart and in my soul, just as I will always be a Naval Aviator. It does count just how many times an airline pilot walks down the jet way with regard to airline safety. Poor pay and working conditions do very much contribute to poor morale, which also adds stress and distraction into the safety equation, which hasn't been addressed by the Transportation subcommittee.

20. While concerns are being expressed regarding the impact of commuting on airline safety, please be advised that it has come to my attention that most first officers at the trunk carriers are working full-time outside the airline as their primary source of income. Many have told me that once they get their business established, that they are going to resign from their airline jobs, as the continued hassle is no longer worth it. Additionally, many line captains that I've talked to are working absolute minimum hours to keep the job since their pensions were stolen from them in bankruptcy. Apathy and poor morale in the airline industry amongst pilots is a cancer to safety more insidious than most of the issues addressed by the committee to date.

21. For airline CEOs who recently stated that pilot pay has no impact on the level of safety in flight operations, I would suggest that they try living on \$25,000 for a year without access to any other financial assets, and see what 'happy campers' and just how effective and focused they are at their jobs.

22. Further affiant sayeth naught.

DANIEL W. HANLEY

SWORN before me on

This day of June 2009

NOTARY PUBLIC

Other documents submitted by Mr. Hanley may be found at <http://airline-whistleblower.blogspot.com/>.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE McCASKILL TO
JAMES C. MAY

Question 1. How much of the maintenance work that your member companies outsource is performed at part 145 certificated repair stations, and how much is performed elsewhere?

Question 2. How much of your member companies' outsourced maintenance work is performed abroad? Of the work performed abroad, how much is done at part 145 certificated repair stations, and how much is done by entities other than part 145 repair stations?

Question 3. How do your member companies determine when to outsource maintenance and where to send that maintenance work once they have decided to outsource? Accounting for differences in the type of work outsourced, how much more does it cost to send work to a part 145 certificated repair station than to a non-certificated facility? How much less does it cost to send work to a part 145 certificated repair station located abroad? How much less to send the work to non-certificated facility abroad?

Question 4. How do your members verify the quality of work performed at non-certificated facilities?

Answer. Based upon data collected by the Department of Transportation's Research and Innovative Technology Administration (RITA) Bureau of Transportation Statistics (BTS), in 2008, thirty-eight percent of total aircraft maintenance expenditures by airline members of the Air Transport Association (ATA) went to third party maintenance providers.

That figure, alone, does not provide true insight to this complex subject. The level of contract maintenance utilized by individual airlines varies significantly based on factors such as the type—or types—of aircraft used, the geographic region of operations, business philosophies, labor agreement limitations, internal cost structures, and commercial relationships with airframe, engine and component manufacturers. Without exception, all airlines rely to some extent on contract maintenance providers. Airlines are by no means unique in this regard. For example: trains, buses and cruise ships are predominantly maintained by companies other than those who operate them; the U.S. Department of Defense contracts with private companies for the maintenance of its aircraft, in many cases with the same companies utilized by commercial airlines.

Although the majority of narrow-body aircraft maintenance work contracted for in the past few years has stayed within North America—maintenance performed outside North America is limited primarily to wide-body which routinely transit locations abroad—it is worth noting that the work must always be performed in accordance with the U.S. air carrier's maintenance program and the applicable portions of its required manual—*regardless of location*.

Under existing FAA regulations, all repair stations are treated as extensions of the air carrier's maintenance organization, air carriers cannot delegate the responsibility for the airworthiness of their aircraft and they are required to provide a level of oversight to ensure the standards are met.

While some view maintenance contracting as undermining safety, the data reflects otherwise. U.S. airlines have logged an exceptional safety record while steadily expanding their use of contract maintenance.

Question 5. Describe your members' programs to audit the policies and performance of the facilities to which they send their maintenance. How widely do these policies vary across your membership? Describe the most rigorous audit program. Describe the least rigorous.

Answer. We're not in a position to describe our members specific policies on auditing, we simply don't have that kind of detailed information. Additionally, we would not characterize any of our members as having "more" or "less" rigorous programs.

RESPONSE TO FOLLOW-UP WRITTEN QUESTIONS SUBMITTED BY
HON. CLAIRE MCCASKILL TO JAMES C. MAY

Question. We would like to get more clarity from the ATA about the following issues:

1. Neither of the witnesses addressed the second half of our first question; namely, how much work is done at part 145 certificated repair stations, and how much is done by entities other than part 145 repair stations?

2. We would like both witness to better address the audit questions (the fifth question). In particular, the following passages from the Inspector General's report on "Air Carriers' Outsourcing of Aircraft Maintenance" issued on September 30, 2008 outline concerns about airline audits on the policies/performances of the facilities to which they send their maintenance. We would like to get a more definitive answer on how the airlines are addressing these issues:

"While all the carriers we visited had audit programs, we found that these programs were not always effective. As a result, maintenance problems either went undetected or reoccurred.

For example, at one heavy airframe repair station, all three types of oversight failed—FAA, air carrier, and repair station. We found that two air carrier audits and two FAA inspections (CMO and FSDO) failed to detect significant weaknesses at this facility. These were not discovered until another major air carrier's pre-contract award audit found problems in the repair stations' maintenance practices, such as not properly overseeing subcontractor maintenance. The problems identified were so serious that repair station management stopped operations for over a month so it could take corrective actions."

"For example, on-site personnel for two carriers we reviewed only performed undocumented, on-the-spot inspections of work at repair stations. As a result, the air carriers could not use the data for trend analysis or ensure the repair station took corrective actions."

Answer. In essence, there are two separate oversight schemes, one regulatory and one independent, both effective in ensuring satisfaction of applicable FAA regulations. This comprehensive, multilayered approach to oversight ensures the highest levels of quality and safety—regardless of who does the work or where that work is performed.

Initial levels of protection are contained in the Federal Aviation Administration (FAA) regulations which provide a basic framework to ensure competence among those certificated to perform aircraft maintenance (ref. 14 CFR parts 121, 145 and 65). Prior to granting this certification, the FAA confirms that an entity or individual has fulfilled specific regulatory requirements.

Related to that approval process, the FAA issues Operations Specifications (OpSpecs) which adapt the general terms of applicable regulations into the specific requirements for an individual certificate holder (OpSpecs are as legally binding as the regulations). Air carrier OpSpecs contain a specific section to address aircraft maintenance, and repair station OpSpecs delineate the ratings and limitations for the maintenance that can be performed.

Second, once certificated, air carriers and repair stations are inspected and monitored by the FAA for verification of their continued conformity with the rules.

Third, certificated air carriers acquire the non-delegable responsibility for the airworthiness of the aircraft in their fleet (see 14 CFR § 121.363). Aircraft maintenance is the primary ingredient of airworthiness, and FAA regulations contain detailed maintenance program and manual requirements (See 14 CFR §§ 121.365; 121.367; 121.369) which validate the related air carrier processes and procedures. When work is sent to a repair station, it must follow the maintenance program of the air carrier with whom it has contracted (See 14 CFR § 145.205).

Fourth, air carriers conduct preliminary investigations of potential repair station vendors which typically include verification of repair station capabilities (OpSpecs) and a thorough review of FAA mandated Repair Station Manuals, Quality Manuals and Training Manuals. If that examination is satisfactory, it is normally followed by an on-site visit to verify compliance with applicable regulations, industry standard audit programs and adherence to the repair station's own manuals. Some areas of investigation include:

- Validation FM certificates held by persons directly in charge of maintenance and/or those who perform maintenance
- Inspection of training records of Inspectors, Technicians and Supervisors
- Examination of procedures for technical data, documentation and maintenance record control

- Examination of procedures for work processing, disposal of scrap parts, tool calibration and handling material with a limited shelf life
- Review of repair station internal inspection and quality programs
- Review of previous inspection program results and corrective actions

If the repair station is selected to perform maintenance for the air carrier, similar on-site audits would be conducted on a regular basis.

Finally, a fifth layer of oversight is provided by on-site air carrier representatives. These individuals monitor the day to day operations and coordinate the activities of the repair station related to the air carrier's equipment. Final inspections, and ultimately air carrier approval for service are also normally accomplished by these on-site airline personnel.

[Note: Senator McCaskill does not feel the answers to any of the above questions were sufficient.]

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARK BEGICH TO
JAMES C. MAY

Question. Mr. May, please share any recommendations the Air Transport Association may have regarding flight duty time and rest time with the committee.

Answer. Fatigue is a risk to airline safety that is taken seriously and must be managed effectively. The Colgan Air accident, although still under investigation by the NTSB, has prompted renewed focus on the issue of fatigue and the associated flight/duty time regulations. The FAA recently convened an Aviation Rulemaking Committee (ARC) to recommend changes to the current regulations and ATA members are actively engaged in that effort. We remain convinced that any changes to the flight/duty time regulations must be based on scientific data and reflect operational realities.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CLAIRE MCCASKILL TO
ROGER COHEN (SUBMITTED JULY 22, 2009)

Question 1. How much of the maintenance work that your member companies outsource is performed at Part 145 certificated repair stations, and how much is performed elsewhere?

Answer. As noted in our attached June 26 letter to Senator McCaskill also provided to the Committee, we can assert that virtually all of the substantial airline maintenance work on RAA member aircraft is conducted at FAA certificated repair stations. (See Attachment A.)

Question 2. How much of your member companies' outsourced maintenance work is performed abroad? Of the work performed abroad, how much is done at Part 145 certificated repair stations, and how much is done by entities other than Part 145 repair stations?

Answer. The attached chart from our June 26 letter to Sen. McCaskill indicates the percentage of maintenance conducted by region. (See Attachment B.)

Question 3. How do your member companies determine when to outsource maintenance and where to send that maintenance work once they have decided to outsource? Accounting for differences in the type of work outsourced, how much more does it cost to send work to a Part 145 certificated repair station than to a non-certificated facility? How much less does it cost to send work to a Part 145 certificated repair station located abroad? How much less to send the work to non-certificated facility abroad?

Answer. The decision to contract for maintenance is largely dependent on the size of an airline's fleet. For example, in deciding to contract for heavy maintenance checks (C & D checks) is the fleet sufficient in size to retain a dedicated group of mechanics that specialize primarily in structural inspections and that there is sufficient work to keep them employed through the year. The same principal applies to specialists for landing gears, engines, electronics, etc. If an airline's fleet is not large enough to support the inventory of parts and components to keep a specialized group of mechanics continually employed throughout the year, an airline may choose a specialized contract maintenance provider to accomplish the work. As stated, virtually all heavy maintenance work (landing gear work, engine work, electronics work) for all our members is accomplished by FAA approved repair stations located in the U.S. and Canada. Non-certificated work is very limited, such as when an aircraft requires service or repair at a remote outstation where the individual airline would not have technical staff available. In such case, the work must be done

by an FAA approved mechanic under the direction of the airline's maintenance control staff.

We have no information comparing the cost of an FAA approved repair station in Canada compared to one in the U.S.

Question 4. How do your members verify the quality of work performed at non-certificated facilities?

Answer. Non-certificated work is very limited to those instances when an aircraft may require service or repair at an outstation at which the airline would not have technical staff available. In such an example, the work done would be by an individual FAA approved mechanic under the direction of the airline's maintenance control staff. The work is accomplished in accordance with the individual airline operator's maintenance manuals located at all airports served by our members.

Question 5. Describe your members' programs to audit the policies and performance of the facilities to which they send their maintenance. How widely do these policies vary across your membership? Describe the most rigorous audit program. Describe the least rigorous.

Answer. Audit capability and oversight practices for contract substantial maintenance work is described within each airline's FAA-approved Operations Specification D91. This includes an on-site inspection audit of the contract facility, as well as audits of the organizational structure, competency and training of personnel, manuals, facility and ability to transfer and receive data to support the carrier's continuing analysis and surveillance program, reliability program and other programs required by the carrier's manual. Every contract for substantial maintenance is approved by that carrier's FAA principal maintenance inspector via approving the OpsSpec. Also, many of RAA member airlines participate in CASE—the coordinating agency for supplier evaluation in which airlines share on-site audit results among participating operators. Since every operator is required to have an FAA approved D91 if they are to contract for substantial maintenance, the process is standardized among all the operators, so there are “no least rigorous” programs.

RESPONSE TO FOLLOW-UP WRITTEN QUESTIONS SUBMITTED BY
HON. CLAIRE MCCASKILL TO ROGER COHEN

Question. We would like to get more clarity from the RAA about the following issues:

1. Neither of the witnesses addressed the second half of our first question; namely, how much work is done at Part 145 certificated repair stations, and how much is done by entities other than Part 145 repair stations?

2. We would like both witness to better address the audit questions (the fifth question). In particular, the following passages from the Inspector General's report on “Air Carriers' Outsourcing of Aircraft Maintenance” issued on September 30, 2008 outline concerns about airline audits on the policies/performances of the facilities to which they send their maintenance. We would like to get a more definitive answer on how the airlines are addressing these issues:

While all the carriers we visited had audit programs, we found that these programs were not always effective. As a result, maintenance problems either went undetected or reoccurred.

For example, at one heavy airframe repair station, all three types of oversight failed—FAA, air carrier, and repair station. We found that two air carrier audits and two FAA inspections (CMO and FSDO) failed to detect significant weaknesses at this facility. These were not discovered until another major air carrier's pre-contract award audit found problems in the repair stations' maintenance practices, such as not properly overseeing subcontractor maintenance. The problems identified were so serious that repair station management stopped operations for over a month so it could take corrective actions.” . . .

“For example, on-site personnel for two carriers we reviewed only performed undocumented, on-the-spot inspections of work at repair stations. As a result, the air carriers could not use the data for trend analysis or ensure the repair station took corrective actions.”

Answer (dated August 5, 2009). This is the first time we have been asked this specific question or even notified about it, and as you know we replied directly to Sen McCaskill some 6 weeks ago and were not advised of any additional information needed.

We will provide further information but will not be able to meet the deadline of day after tomorrow. Please call me with any questions. Thank you.

Answer (dated August 5, 2009). In response to your request yesterday August 5, I am resending the following:

Our transmission and your “thank you” acknowledgment of our response to your request from July 22.

A pdf copy of the letter faxed to Clark Porter in Sen. McCaskill’s office on June 26. (See Attachment A.)

I have highlighted in yellow the answers regarding maintenance previously provided the Committee in our July 22 transmission. I have added in red additional comments further to the questions provided us yesterday. We have no record of receiving these questions prior to yesterday, and to our knowledge, Sen. McCaskill has not contacted RAA seeking additional information or clarification as we offered in our June 26 letter. (See Attachment A.)

As to the questions regarding findings from the DOT IG report citing unnamed air carriers, RAA cannot respond since the specific carriers are not named.

Thank you and please acknowledge receipt of this message for our records.

RESPONSE TO FOLLOW-UP WRITTEN QUESTION SUBMITTED BY
HON. CLAIRE MCCASKILL TO ROGER COHEN DATED AUGUST 7, 2009

Question. We received the fax in June, and recognize that we did not acknowledge it at the time. However, we believe the questions we asked were legitimate and that they addressed an important issue, namely: does the current regulatory framework ensure the safety of aircraft maintenance. It is unclear to us whether this is information that you would prefer not to provide, cannot provide, or did not have enough time to provide. If the latter is the case, we can petition the committee to hold the record open.

Our specific criticism is this; throughout your statements you fail to distinguish between certificated and non-certificated repair stations. You state your maintenance is “conducted by or under the direct supervision of certificated FAA repair stations.” Additionally, the chart you submitted to us makes no distinction between certificated and non-certificated repair stations. We would like to determine the breakdown of maintenance performed at the certificated repair stations themselves and how much is performed by Part 65 mechanics who are not employed by a certificated repair station or other subcontractors. Part 65 mechanics are not required to have the same quality control systems, etc. as Part 145 or Part 121 certificated stations. Subcontracting oversight requirements for Part 121 repair stations differ substantially from those imposed on Part 145 repair stations. If, indeed, all maintenance is performed at Part 145 repair stations or at Part 121 repair stations, rather than by subcontractors, please state so clearly.

Also, we mentioned the IG report because it indicates that at least some airlines are not doing a good job of adhering to the FAA requirements to which you referred. Conceivably, airlines would have different policies within the Operation Specification framework. We were asking you to account for disparities between airlines.

Please let us know whether you could provide us with more clarity on these issues if given more time. Thank you.

Answer (dated August 11, 2009). First and most importantly, RAA has never and would never question the legitimacy of any question, particularly one dealing with the airline industry’s highest priority of safety. So in response to your question “does the current regulatory framework ensure the safety of aircraft maintenance”, our answer is yes.

Further, please be assured that there is no information that “we would prefer not to provide”. RAA has provided and will continue to provide you and the Committee—to the best of our ability—the information you request. To that end, the attached (in highlights) responds to the questions posed in your August 7 e-mail (below).

Thank you, and please call me if you need anything additional.

Question. Please respond to our concern that you “fail to distinguish between certificated and non-certificated repair stations.”

Answer. All substantial maintenance (as defined by FAA and listed in an air carrier’s Operations Specification D091) by RAA members that is contracted to an outside vendor, is accomplished by an FAA certificated repair station located either in the U.S. or in Canada.

Question. What do you mean when you state your maintenance is “conducted by or under the direct supervision of certificated FAA repair stations.”

Answer. The maintenance is accomplished by the employees of the certificated repair station. However it is not uncommon that small (but important) tasks may be

contracted out by the repair station. Welding, for example may be accomplished by a third party vendor but the work would be “under the direct supervision” of the repair station.

Question. We would like to know how much of maintenance is performed at the certificated repair stations themselves and how much is performed by Part 65 mechanics who are not employed by a certificated repair station or other subcontractors.

Answer. RAA does not possess information regarding the amount of maintenance that is performed by Part 65 mechanics who are not employed by a certificated repair station. However, since the overwhelming majority of the work that is contracted out by our members is accomplished by Bombardier repair facilities in Bridgeport, WV and Phoenix, AZ, and by the Embraer repair facility in Nashville, TN, we believe this “third party” maintenance is less than 5 percent of the total work accomplished. The Committee may wish to contact these providers independently to gain further information.

Question. Is any maintenance accomplished at Part 121 repair stations, rather than a Part 145 repair station?

Answer. The “Part 121 repair station” to which you are referring to, is one in which a Part 121 operator will supervise and sign off the work of a non-certificated repair station under the air carrier’s Part 121 certificate. It is a legal option for an air carrier to do so, but as we stated in our earlier correspondence, none of our members reported to RAA that they do this. It is our understanding that all substantial maintenance accomplished by our members that is not done by their own employees is contracted out only to FM approved Part 145 repair facilities.

Question. What about different policies within the Operation Specification framework?

Answer. With some limited exceptions, we understand our members list their substantial maintenance providers in OpsSpec D091.

[Note: Senator McCaskill does not feel the answers to any of the above questions were sufficient.]

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
ROGER COHEN

Question 1. Mr. Cohen, please provide documentation on the average starting salary for pilots and first officers of RAA airlines.

Answer. As we indicated in our attached June 26 letter to Senator Begich also provided to the Committee, RAA does not have information regarding starting salaries for regional airline pilots. In our letter, we referred to the website www.airlinepilotcentral.com which has compensation information for all airlines, regional, mainline and cargo.

Question 2. Mr. Cohen, as you committed to during the hearing, please provide documentation on the outcome of the most recent Safety Directors meeting at RAA’s annual conference.

Answer. In the attached June 26 letter, we also provided information from our recent safety director meetings. (See Attachment C.)

Question 3. Mr. Cohen, during the hearing you invited members of the Committee to attend the next Safety Directors meeting. As soon as it is available, please provide the Committee with the details of upcoming Safety Directors meetings.

Answer. The agenda has not been finalized for the next RAA safety directors’ meeting which we will provide the Committee once finalized. As noted in our June 26 letter, we have extended an invitation to Senator Begich and we extend the same invitation to all committee members and staff.

Question 4. Mr. Cohen, as you committed to during the hearing, please provide any RAA salary studies and carrier salary information (starting salary, average salary, and high salary) for the Committee.

Answer. As RAA testified on June 17, information provided us from responding member airlines showed an average annual salary of more than \$73,000 for Captains and more than \$32,000 for First Officers. (This does not include benefits, including per diem expenses). As noted in our attached June 26 letter, complete comparative information on all airline pilot salaries is publicly available at www.airlinepilotcentral.com.

ATTACHMENT A

REGIONAL AIRLINE ASSOCIATION
 Washington, DC, June 26, 2009

Senator CLAIRE MCCASKILL,
 Washington, DC.

Senator BYRON DORGAN,
 Washington, DC.

Dear Sen. McCaskill:

On behalf of the Regional Airline Association (RAA) member airlines, including St. Louis-based Trans States and GoJet, thank you for the opportunity to appear before the Senate Aviation Subcommittee on June 17, 2009.

We can confidently assert that virtually all of our substantial aircraft maintenance is conducted by or under the direct supervision of certificated FAA repair stations in the U.S. or approved maintenance organizations in Canada (which are approved by the FAA under a reciprocal agreement with Transport Canada).

If you'll indulge me a personal perspective, I have great memories about what many once considered the finest aircraft maintenance facility in the world—TWA's overhaul base in Kansas City. I began my airline career based in St. Louis, but spent several days each week at that facility. The work performed there was exemplary. More importantly, the thousands of highly skilled professionals who worked there, many my close friends, were the best in the business. I am just as confident in the reliability and safety of the maintenance conducted on RAA's member airline aircraft today.

Thank you again for your consideration, and please let us know if we can provide anything additional. We will be contacting your office to schedule a time where we can discuss these and any other issues in greater depth.

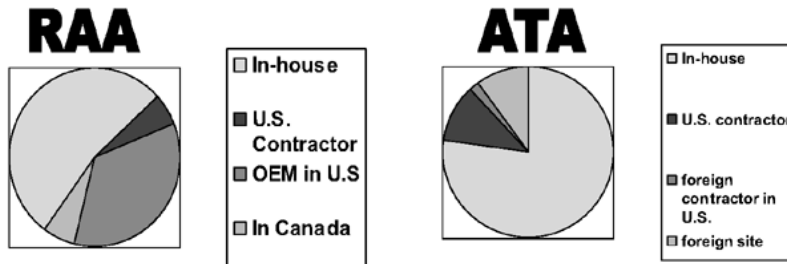
Respectfully,

ROGER COHEN,
President.

CC: Faye Malarkey Black, VP Legislative Affairs, Regional Airline Association

ATTACHMENT B

Heavy Maintenance Checks (HMC) for RAA and ATA Members



- RAA data updated for 2009. ATA data submitted to the DOT IG in 2004
- Most of RAA contract HMC is done by OEM's Bombardier and Embraer repair facilities located **within** the U.S.
- All HMC for RAA members outside the U.S. is accomplished in Canada



Operational Impact of a Safety Culture

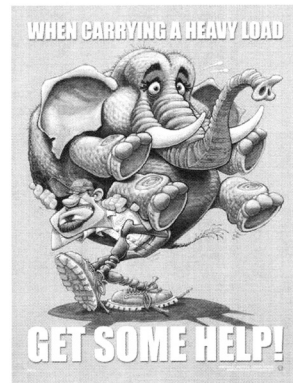
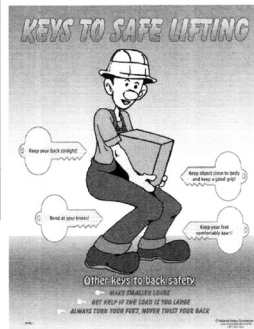
RAA 2009



Safety



The condition of being safe from undergoing or causing hurt, injury, or loss



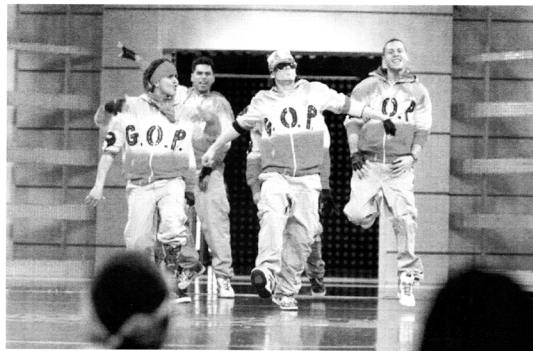
Culture



The behaviors and beliefs characteristic of a particular social, ethnic, or age group

The sum total of ways of living built up by a group of human beings and transmitted from one generation to another.

The set of shared attitudes, values, goals, and practices that characterizes an institution or organization



Safety Culture



Safety culture is commonly viewed as an enduring characteristic of an organization that is reflected in its consistent way of dealing with critical safety issues (Zhang et al., 2002)

There are generally five global components or indicators of safety culture:

1. Organizational Commitment,
2. Management Involvement,
3. Employee Empowerment,
4. Reward Systems, and
5. Reporting Systems (Wiegmann et al., 2002).

"Doing the right thing, even when no one is watching."



The Lesson of Heinrich's Triangle

ACCIDENT		
- 30 INCIDENTS OCCURRED		
DEA	IRS	IRMS EAs
- 300 HAZARDOUS CONDITIONS DOCUMENTED		
UCRs	Procedure Non-Compliance	Identified Operational Risks
Inadequate Maintenance	Non Standard Use of MFD Equipment	Inadequate Coordination
- 1000 "UNSAFE ACTS" UNREPORTED		
Unreported Incidents	Unreported Procedures	Procedures not Followed
Inadequate Reporting	Unrealistic Schedules	Incorrect rework/Backlog
Rubber Stamped Equipment Certifications	Inadequate Qualification/Training	Inadequate Position/Role Assignments
Missed Performance Checks	Reported Poor Performance	Distractions
Unaware of Aircraft Route		

Identify and Help Mitigate Safety Risks

Continue Improving Our Safety Culture to Ensure an Even Safer Tomorrow

Safety Culture – The Pinnacle Perspective



- Leadership Commitment
- Active Risk Management
- Reporting Culture
- Informed Culture
- Just Culture



5

Operational Impact



- Leadership Commitment
 - Front line empowerment and accountability
- Active risk Management
 - Hundreds of Risk Management decisions made every day
 - How have you trained your people manage Risk?



6

Operational Impact – Reporting Culture



- **ASAP Data Told Us**
 - Flights landing with incorrect flap settings
 - Flights landing with TRs not armed
 - Flights landing without landing clearance
- **FOQA Told Us**
 - All of these happened after an Unstable Approach
- **What we Did**
 - Changed our procedures to complete the Before Landing Checklist earlier in the descent
- **What Happened**
 - 90% reduction in Unstable Approaches
- **Operational Impact**
 - Reduced Go-arounds
 - Reduced Block Hours and Fuel Burn



P I N N A C L E
A I R L I N E S , I N C .

7

Operational Impact – Reporting Culture



- **ASAP Data Told Us**
 - Largest number of Inflight Emergencies declared because of Gear
 - Largest among those were Gear Disagree messages
- **FOQA Told Us**
 - Gear being extended at max airspeed to help slow down
- **What we Did**
 - Internally reduced the Max Gear Extension speed
- **What Happened**
 - 100% reduction in non-mechanical Gear Disagrees
- **Operational Impact**
 - Reduced maintenance write-ups = reduced maintenance costs
 - Fewer aircraft OTS
 - Fewer flight cancellations



P I N N A C L E
A I R L I N E S , I N C .

8

Operational Impact – Reporting Culture



- ASAP Data Told Us
 - Large number of Windshear Alerts on Take-off
 - Warnings becoming disregarded – “Noise”
- FOQA Told Us
 - Airspeed increases of 10-30 kts over bugged speed
 - Pilots increased pitch rapidly decreasing airspeed
 - GPWS sensed decrease in performance and warned accordingly
- What we Did
 - Changed training on Take-off rotation
- What Happened
 - Elimination of large number of Windshear Alerts
- Operational Impact
 - Reduced maintenance write-ups = reduced maintenance costs
 - Fewer aircraft OTS
 - Fewer flight cancellations

P I N N A C L E
A I R L I N E S , I N C .

9

Operational Impact of a Safety Culture



Safety Culture = Good Business


P I N N A C L E
A I R L I N E S , I N C .

10

Situational Awareness



11

Operational Impact of a Safety Culture



12

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARK BEGICH TO
CAPTAIN JOHN PRATER

Question 1. Capt. Prater, as you committed to in the hearing, please share ALPA's recommendations to the FAA regarding flight duty and rest time with the Committee.

Answer. ALPA's position on Flight Time regulations is that the regulations must be science based and insure a safe level of alertness, as required by ICAO. This would insure that flight crewmembers are allowed an adequate sleep opportunity, which would require maximum duty and minimum rest breaks, that there are safeguards to prevent cumulative fatigue, and that circadian rhythms are addressed. These issues should be addressed in a proscriptive rule. However the proscriptive rule needs to also provide the basis to move to the ultimate solution which would be a Fatigue Risk Management System.

Question 2. Captain Prater, does ALPA have any statistics on the average commute of its membership from home to duty station?

Answer. ALPA does not have data on the average time pilots spend commuting from their homes. Where a pilot lives is a personal lifestyle choice. We do support that pilots report to work fit for duty and they are required to certify that they are fit for duty when they sign the flight release for each flight.

