



# Runway RISKS

Reducing Incursions, Excursions, and Confusion

March 2008

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Issue 2

## Did you know...

**1** >> According to the FAA, of the 341 pilot deviations reported between August 2007 and mid January 2008, 57 involved U.S. air carriers.

**2** >> ILS hold lines are not set off from runway hold lines when they are within 50 feet of each other



Photo from the Tenerife crash

### Case Study #1

## Providence, Rhode Island, December 1999

On an evening in December 1999, the single controller in the PVD tower was extremely busy. In the span of approximately 23 minutes, beginning at 8:22 p.m., the controller handled nine aircraft on ground and tower frequencies and coordinated with two other ATC facilities. In total, the controller had 88 separate communications in 23 minutes, about one every 15 seconds. Making situational awareness even more difficult for the controller, the tower was shrouded in fog. RVR readings ranged between 1,200 and 1,400 feet, and the controller did not have benefit of surface movement radar.

On this night, a variety of mistakes were made which resulted in a runway incursion, but did not culminate in tragedy, due to one crew's excellent situational awareness and pilot-in-command decisiveness. Let's pick up the story with transmissions by the crews of a Boeing 737, a B-757, and the controller (LC). The transcript has been redacted for brevity, but is available in its entirety at this link: [PVD Transcript](#).

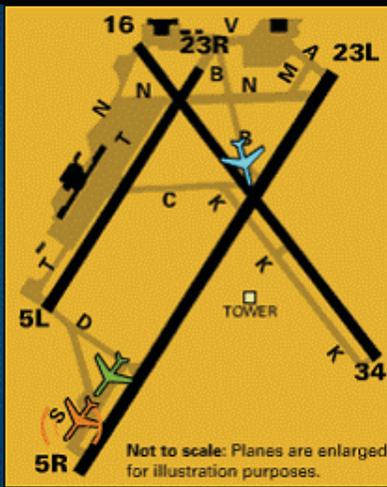
8:24:31	B-737	Ground, uh, B-737 to push off of gate four.
8:24:35	LC	B-737, Providence ground, roger. Hold the push please. Company aircraft passing behind.
8:25:32	LC	B-737 push back approved.
8:25:35	B-737	Cleared to push B-737, thanks.
8:27:11	B-757	Hello, tower. B-757 about four and a half outside of, ah, RENCH.
8:27:22	LC	B-757 Providence tower, good evening. Wind calm, runway 5R, cleared to land. The runway 5R RVR 1,200. Rollout 1,400.
8:27:31	B-757	Ok, we're cleared to land 5R, uh, B-757.
8:28:30	B-737	Uh, ground B-737 ready to taxi.

continued on page 2



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Visit [www.alpa.org](http://www.alpa.org)  
to learn more about runway safety  
and ALPA initiatives to continuously  
improve aviation safety.



PVD layout, circa 1999

## Did you know...

3 >> Runway incursions are classified in 3 ways:

- » **Operational Errors**—an error made by an air traffic controller that results in less than the minimum separation between two or more aircraft, between an aircraft and obstacles, or an aircraft landing or departing on a runway closed to aircraft.
- » **Pilot Deviations**—an action made by a pilot that results in a violation of an FAR such as not following an ATC instruction to not cross an active runway.
- » **Vehicle Pedestrian Deviations**—includes pedestrians, vehicles or other objects entering or moving on the runway movement area without authorization from ATC.

### Case Study #1—Providence, RI

continued from page 1

8:28:34	LC	B-737, Providence ground, good evening. Taxi to runway 5R via taxiways Tango, Delta, and Sierra, report entering taxiway Delta.
8:30:21	LC	B-737, thank you, report holding short of runway 5R.
8:31:15	LC	B-757, turn left taxiway November or Alpha. Report clear of 5R, please remain this frequency.
8:31:22	B-757	Ok, uh, will remain with you, will report clear, B-757.
8:31:28	LC	B-757, what's your position?
8:32:34	B-757	And, uh, we're clear of the, uh, runway on, uh, November by Bravo, B-757
8:32:40	LC	B-757, thank you. Taxi to the ramp via taxiways November and Tango, report crossing runway 16.
8:33:07	B-737	Ground, B-737 is holding short behind FedEx.
8:34:46	B-757	B-757 is on November by the runways here. We don't see the, uh, are we cleared to cross straight ahead on November?
8:34:54	LC	B-757, affirmative, cross runway 16, join taxiway November Tango on the other side.
8:35:42	B-757	And, uh, B-757, we're approaching Kilo here, uh, um – somebody just took off.
8:35:55	LC	B-757, you shouldn't be anywhere near Kilo. Hold your position, please. Just stop.
8:36:10	B-757	Tower, this is B-757. We are currently on a runway. I'm looking out to the right with a Kilo, uh, we need to go on to the Kilo taxiway.
8:36:25	LC	B-757, you were supposed to taxi November and Tango. I need to know what runway you're on. I can't see anything from the tower.
8:36:33	B-757	Uh, ma'am, we are on 23R intersection of 16 and we did not connect on November. We are, we are by Kilo to our right and we just overshot Kilo. We did not see it.
8:37:02	LC	B-737, runway 5R, fly runway heading, cleared for takeoff.
8:37:10	B-757	Ma'am, I'm trying to advise you; we're on an active runway, B-757.
8:37:13	LC	23R is not an active runway; it's a taxiway when we're IFR or in the dark.
8:37:19	B-737	(unintelligible) he is, but we're staying clear of all runways until we figure this out.
8:37:44	B-757	Ma'am, this is B-757, we're on 23R. We're looking at Kilo straight ahead, if we can go straight, we can get on Kilo and get off the runway.
8:37:53	LC	B-757, standby. Please don't talk – I have other things I need to do.
8:37:59	LC	B-737, runway 5R, fly runway heading, cleared for takeoff.
8:38:04	B-737	Uh, tower, B-737. Till we figure out what's going on down there, we're just going to stay clear of all runways.

8:38:09	LC	B-737, roger, hold short of runway 5R. He's not anywhere near the runway, but you can hold short.
8:44:10	LC	B-737, the B-757 is almost to the ramp. Are you ready for departure?
8:44:14	B-737	B-737, we'll take a clearance onto the runway to hold, but until, we'd like to have the B-757 at the gate please.
8:45:04	B-757	Alright, uh, B-757 is, uh, clear of 16 and are coming into the gate.
8:45:20	LC	B-737, runway 23L, fly runway heading, cleared for takeoff.
8:45:24	B-737	Runway heading, cleared to go, B-737
8:45:27	LC	I'm sorry, it's runway 5R, cleared for takeoff, B-737.

## A view from the jumpseat

# It Happened to Me!



**M**ost pilots feel that they are the best at what they do and sometimes find themselves saying things like “that would never happen to me!” I was guilty of that until March 2001. I found myself on the jumpseat of a Boeing 767-400, which had landed over the top of a 737 in position on the landing runway. For obvious reasons, this could have been a major catastrophe.

I had flown a long day and really didn't pay much attention to the goings on inside the cockpit that night. I know these guys and their training, no need for me to be in the loop. In this case, I was dead wrong. We were attempting an approach to the runway

in heavy rain at night. Prior to our arrival, a Boeing 737 was put into position prior to our checking on to the tower frequency. I was sitting there just along for the ride, and we landed over the top of the aircraft and rolled into the gate none the wiser. The controller had made an error and forgot about the aircraft in position, and due to the weather, we never saw the aircraft in position due to a displaced threshold and the minimum lighting used on the aircraft in position.

A number of links in the safety chain were broken, but maybe my extra set of eyes could have helped; maybe not. It definitely illustrates how even when you aren't

*continued on page 4*

## ***This runway incursion event provides a number of valuable lessons:***

- » Maintaining situational awareness and being alert to the potential for problems is paramount in periods of low visibility and/or darkness.
- » Since many control towers do not have surface movement radar, controllers are not always able to ensure the location of traffic on the ground, particularly in low visibility conditions.
- » Controllers can make errors. Listen to all radio transmissions to develop a mental picture of what is occurring in order to determine how your operations might be affected. Trust your instincts; if something doesn't feel right, don't ignore it.
- » Whenever possible, familiarize yourself with airport configuration and likely taxi routes prior to touchdown, particularly when runways must be crossed.
- » If you are unsure of your position while taxiing, relay that information to ATC immediately and assertively, particularly when you suspect you are on a runway.
- » Until moving map displays with own-ship position are installed in your flight deck, four eyes looking outside of the aircraft, coordinated with cross-checking the current airport diagram, are necessary for safe ground navigation.

## ***Did you know...***

**4**

- » ***“According to FAA statistics, during the last 3 months of 2007, there was an average of 2.5 runway incursions every day in the United States, providing the potential for catastrophe. The FAA categorizes this risk as ‘unacceptable;’ we agree, but I’m taking it a step further. This rate of occurrence is inexcusable.”***

**ALPA President  
John Prater**

*In his February 13, 2008 testimony before the Subcommittee  
On Aviation Committee On Transportation and Infrastructure,  
United States House of Representatives*

**ALPA** has developed a special website dedicated solely to runway safety. There you will find links to runway safety educational material and video recreations of several high-profile incidents. Material on this website is being added on a regular basis, so stop by for the latest information on runway safety. Previous issues of this newsletter can also be found there. The website address is [holdshort.alpa.org](http://holdshort.alpa.org).

## Our Goals

**W**hile our main goal of distributing this newsletter is to increase your education and awareness of runway safety hazards, ALPA is also committed to providing access to educational resources on our website. In addition, we strive to:

1. immediately provide you with awareness tools,
2. conduct this educational campaign to provide information to line pilots,
3. continue the pursuit of long-term system mitigations of runway collision hazard.

### **A view from the jumpseat—** *continued from page 3*

directly in control, it COULD happen to you. Even as a jumpseater, you are still a CREWMEMBER, and your adherence to safe practices do not end when your assigned trip is over. We all may not commute to our domicile, but we probably see many pilots on our jumpseat who do. Most pilots should welcome the extra set of eyes into the cockpit, and make it clear when the jumpseater is briefed that he/she is expected to point out something that might affect the safety of the flight. Make a point of opening up your departure or arrival

brief to the jumpseater so that he/she can take an active part in the process. The goal is not to overload a jumpseater with added tasks or responsibilities, but to include and welcome him/her as part of the crew. Most, if not all, would oblige without question. Just having that extra assistance in today's busy cockpit environment will always pay dividends. Your professional attention to safety is quietly observed and upheld by our customers and their families, as well as our very own. ✈

## DOT Says

# Serious Runway Incursions Still a Danger

**T**he Department of Transportation Office of the Inspector General (IG) said in a report released earlier this year that runway incursions remain a persistent, serious problem, despite the FAA's efforts to reduce their frequency. Though the focus of the IG's study was at Boston Logan, Los Angeles International, Philadelphia International, and Chicago O'Hare airports, where incursions have recently increased, the results of the study gave recommendations for system-wide improvements. The study said the FAA should engage in better information sharing to communicate root causes of deviations and communicate best practices that have worked to reduce incursions; focus more on controller human-factor issues and training; and improve accountability at the national level to ensure runway incursions remain



*That looks like a Land-Over.*

a top priority. According to the study, runway incursions have decreased from a high of 407 in fiscal year 2001 to a low of 323 in fiscal year 2003. Since then, the numbers have remained relatively flat. According to the IG's study, the FAA did not comment on how it would address the concerns noted in the report. ✈

**Thank you** for taking the time to read this edition of ALPA's runway safety newsletter. In future issues, you will read about other runway incursion accidents and incidents, where runway incursions occur, and some suggestions to help you avoid runway incursions.