

“WE HAVE SOME PLANES”

TUESDAY, SEPTEMBER 11, 2001, dawned temperate and nearly cloudless in the eastern United States. Millions of men and women readied themselves for work. Some made their way to the Twin Towers, the signature structures of the World Trade Center complex in New York City. Others went to Arlington, Virginia, to the Pentagon. Across the Potomac River, the United States Congress was back in session. At the other end of Pennsylvania Avenue, people began to line up for a White House tour. In Sarasota, Florida, President George W. Bush went for an early morning run.

For those heading to an airport, weather conditions could not have been better for a safe and pleasant journey. Among the travelers were Mohamed Atta and Abdul Aziz al Omari, who arrived at the airport in Portland, Maine.

1.1 INSIDE THE FOUR FLIGHTS

Boarding the Flights

Boston: American 11 and United 175. Atta and Omari boarded a 6:00 A.M. flight from Portland to Boston’s Logan International Airport.¹

When he checked in for his flight to Boston, Atta was selected by a computerized prescreening system known as CAPPs (Computer Assisted Passenger Prescreening System), created to identify passengers who should be subject to special security measures. Under security rules in place at the time, the only consequence of Atta’s selection by CAPPs was that his checked bags were held off the plane until it was confirmed that he had boarded the aircraft. This did not hinder Atta’s plans.²

Atta and Omari arrived in Boston at 6:45. Seven minutes later, Atta apparently took a call from Marwan al Shehhi, a longtime colleague who was at another terminal at Logan Airport. They spoke for three minutes.³ It would be their final conversation.

Between 6:45 and 7:40, Atta and Omari, along with Satam al Suqami, Wail al Shehri, and Waleed al Shehri, checked in and boarded American Airlines Flight 11, bound for Los Angeles. The flight was scheduled to depart at 7:45.⁴

In another Logan terminal, Shehhi, joined by Fayez Banihammad, Mohand al Shehri, Ahmed al Ghamdi, and Hamza al Ghamdi, checked in for United Airlines Flight 175, also bound for Los Angeles. A couple of Shehhi's colleagues were obviously unused to travel; according to the United ticket agent, they had trouble understanding the standard security questions, and she had to go over them slowly until they gave the routine, reassuring answers.⁵ Their flight was scheduled to depart at 8:00.

The security checkpoints through which passengers, including Atta and his colleagues, gained access to the American 11 gate were operated by Globe Security under a contract with American Airlines. In a different terminal, the single checkpoint through which passengers for United 175 passed was controlled by United Airlines, which had contracted with Huntleigh USA to perform the screening.⁶

In passing through these checkpoints, each of the hijackers would have been screened by a walk-through metal detector calibrated to detect items with at least the metal content of a .22-caliber handgun. Anyone who might have set off that detector would have been screened with a hand wand—a procedure requiring the screener to identify the metal item or items that caused the alarm. In addition, an X-ray machine would have screened the hijackers' carry-on belongings. The screening was in place to identify and confiscate weapons and other items prohibited from being carried onto a commercial flight.⁷ None of the checkpoint supervisors recalled the hijackers or reported anything suspicious regarding their screening.⁸

While Atta had been selected by CAPPS in Portland, three members of his hijacking team—Suqami, Wail al Shehri, and Waleed al Shehri—were selected in Boston. Their selection affected only the handling of their checked bags, not their screening at the checkpoint. All five men cleared the checkpoint and made their way to the gate for American 11. Atta, Omari, and Suqami took their seats in business class (seats 8D, 8G, and 10B, respectively). The Shehri brothers had adjacent seats in row 2 (Wail in 2A, Waleed in 2B), in the first-class cabin. They boarded American 11 between 7:31 and 7:40. The aircraft pushed back from the gate at 7:40.⁹

Shehhi and his team, none of whom had been selected by CAPPS, boarded United 175 between 7:23 and 7:28 (Banihammad in 2A, Shehri in 2B, Shehhi in 6C, Hamza al Ghamdi in 9C, and Ahmed al Ghamdi in 9D). Their aircraft pushed back from the gate just before 8:00.¹⁰

Washington Dulles: American 77. Hundreds of miles southwest of Boston, at Dulles International Airport in the Virginia suburbs of Washington, D.C., five more men were preparing to take their early morning flight. At 7:15, a pair

of them, Khalid al Mihdhar and Majed Moqed, checked in at the American Airlines ticket counter for Flight 77, bound for Los Angeles. Within the next 20 minutes, they would be followed by Hani Hanjour and two brothers, Nawaf al Hazmi and Salem al Hazmi.¹¹

Hani Hanjour, Khalid al Mihdhar, and Majed Moqed were flagged by CAPPs. The Hazmi brothers were also selected for extra scrutiny by the airline’s customer service representative at the check-in counter. He did so because one of the brothers did not have photo identification nor could he understand English, and because the agent found both of the passengers to be suspicious. The only consequence of their selection was that their checked bags were held off the plane until it was confirmed that they had boarded the aircraft.¹²

All five hijackers passed through the Main Terminal’s west security screening checkpoint; United Airlines, which was the responsible air carrier, had contracted out the work to Argenbright Security.¹³ The checkpoint featured closed-circuit television that recorded all passengers, including the hijackers, as they were screened. At 7:18, Mihdhar and Moqed entered the security checkpoint.

Mihdhar and Moqed placed their carry-on bags on the belt of the X-ray machine and proceeded through the first metal detector. Both set off the alarm, and they were directed to a second metal detector. Mihdhar did not trigger the alarm and was permitted through the checkpoint. After Moqed set it off, a screener wanded him. He passed this inspection.¹⁴

About 20 minutes later, at 7:35, another passenger for Flight 77, Hani Hanjour, placed two carry-on bags on the X-ray belt in the Main Terminal’s west checkpoint, and proceeded, without alarm, through the metal detector. A short time later, Nawaf and Salem al Hazmi entered the same checkpoint. Salem al Hazmi cleared the metal detector and was permitted through; Nawaf al Hazmi set off the alarms for both the first and second metal detectors and was then hand-wanded before being passed. In addition, his over-the-shoulder carry-on bag was swiped by an explosive trace detector and then passed. The video footage indicates that he was carrying an unidentified item in his back pocket, clipped to its rim.¹⁵

When the local civil aviation security office of the Federal Aviation Administration (FAA) later investigated these security screening operations, the screeners recalled nothing out of the ordinary. They could not recall that any of the passengers they screened were CAPPs selectees. We asked a screening expert to review the videotape of the hand-wanding, and he found the quality of the screener’s work to have been “marginal at best.” The screener should have “resolved” what set off the alarm; and in the case of both Moqed and Hazmi, it was clear that he did not.¹⁶

At 7:50, Majed Moqed and Khalid al Mihdhar boarded the flight and were seated in 12A and 12B in coach. Hani Hanjour, assigned to seat 1B (first class),

soon followed. The Hazmi brothers, sitting in 5E and 5F, joined Hanjour in the first-class cabin.¹⁷

Newark: United 93. Between 7:03 and 7:39, Saeed al Ghamdi, Ahmed al Nami, Ahmad al Haznawi, and Ziad Jarrah checked in at the United Airlines ticket counter for Flight 93, going to Los Angeles. Two checked bags; two did not. Haznawi was selected by CAPPS. His checked bag was screened for explosives and then loaded on the plane.¹⁸

The four men passed through the security checkpoint, owned by United Airlines and operated under contract by Argenbright Security. Like the checkpoints in Boston, it lacked closed-circuit television surveillance so there is no documentary evidence to indicate when the hijackers passed through the checkpoint, what alarms may have been triggered, or what security procedures were administered. The FAA interviewed the screeners later; none recalled anything unusual or suspicious.¹⁹

The four men boarded the plane between 7:39 and 7:48. All four had seats in the first-class cabin; their plane had no business-class section. Jarrah was in seat 1B, closest to the cockpit; Nami was in 3C, Ghamdi in 3D, and Haznawi in 6B.²⁰

The 19 men were aboard four transcontinental flights.²¹ They were planning to hijack these planes and turn them into large guided missiles, loaded with up to 11,400 gallons of jet fuel. By 8:00 A.M. on the morning of Tuesday, September 11, 2001, they had defeated all the security layers that America's civil aviation security system then had in place to prevent a hijacking.

The Hijacking of American 11

American Airlines Flight 11 provided nonstop service from Boston to Los Angeles. On September 11, Captain John Ogonowski and First Officer Thomas McGuinness piloted the Boeing 767. It carried its full capacity of nine flight attendants. Eighty-one passengers boarded the flight with them (including the five terrorists).²²

The plane took off at 7:59. Just before 8:14, it had climbed to 26,000 feet, not quite its initial assigned cruising altitude of 29,000 feet. All communications and flight profile data were normal. About this time the "Fasten Seatbelt" sign would usually have been turned off and the flight attendants would have begun preparing for cabin service.²³

At that same time, American 11 had its last routine communication with the ground when it acknowledged navigational instructions from the FAA's air traffic control (ATC) center in Boston. Sixteen seconds after that transmission, ATC instructed the aircraft's pilots to climb to 35,000 feet. That message and all subsequent attempts to contact the flight were not acknowledged. From this and other evidence, we believe the hijacking began at 8:14 or shortly thereafter.²⁴

Reports from two flight attendants in the coach cabin, Betty Ong and Madeline “Amy” Sweeney, tell us most of what we know about how the hijacking happened. As it began, some of the hijackers—most likely Wail al Shehri and Waleed al Shehri, who were seated in row 2 in first class—stabbed the two unarmed flight attendants who would have been preparing for cabin service.²⁵

We do not know exactly how the hijackers gained access to the cockpit; FAA rules required that the doors remain closed and locked during flight. Ong speculated that they had “jammed their way” in. Perhaps the terrorists stabbed the flight attendants to get a cockpit key, to force one of them to open the cockpit door, or to lure the captain or first officer out of the cockpit. Or the flight attendants may just have been in their way.²⁶

At the same time or shortly thereafter, Atta—the only terrorist on board trained to fly a jet—would have moved to the cockpit from his business-class seat, possibly accompanied by Omari. As this was happening, passenger Daniel Lewin, who was seated in the row just behind Atta and Omari, was stabbed by one of the hijackers—probably Satam al Suqami, who was seated directly behind Lewin. Lewin had served four years as an officer in the Israeli military. He may have made an attempt to stop the hijackers in front of him, not realizing that another was sitting behind him.²⁷

The hijackers quickly gained control and sprayed Mace, pepper spray, or some other irritant in the first-class cabin, in order to force the passengers and flight attendants toward the rear of the plane. They claimed they had a bomb.²⁸

About five minutes after the hijacking began, Betty Ong contacted the American Airlines Southeastern Reservations Office in Cary, North Carolina, via an AT&T airphone to report an emergency aboard the flight. This was the first of several occasions on 9/11 when flight attendants took action outside the scope of their training, which emphasized that in a hijacking, they were to communicate with the cockpit crew. The emergency call lasted approximately 25 minutes, as Ong calmly and professionally relayed information about events taking place aboard the airplane to authorities on the ground.²⁹

At 8:19, Ong reported: “The cockpit is not answering, somebody’s stabbed in business class—and I think there’s Mace—that we can’t breathe—I don’t know, I think we’re getting hijacked.” She then told of the stabbings of the two flight attendants.³⁰

At 8:21, one of the American employees receiving Ong’s call in North Carolina, Nydia Gonzalez, alerted the American Airlines operations center in Fort Worth, Texas, reaching Craig Marquis, the manager on duty. Marquis soon realized this was an emergency and instructed the airline’s dispatcher responsible for the flight to contact the cockpit. At 8:23, the dispatcher tried unsuccessfully to contact the aircraft. Six minutes later, the air traffic control specialist in American’s operations center contacted the FAA’s Boston Air Traffic Control Center about the flight. The center was already aware of the problem.³¹

Boston Center knew of a problem on the flight in part because just before 8:25 the hijackers had attempted to communicate with the passengers. The microphone was keyed, and immediately one of the hijackers said, “Nobody move. Everything will be okay. If you try to make any moves, you’ll endanger yourself and the airplane. Just stay quiet.” Air traffic controllers heard the transmission; Ong did not. The hijackers probably did not know how to operate the cockpit radio communication system correctly, and thus inadvertently broadcast their message over the air traffic control channel instead of the cabin public-address channel. Also at 8:25, and again at 8:29, Amy Sweeney got through to the American Flight Services Office in Boston but was cut off after she reported someone was hurt aboard the flight. Three minutes later, Sweeney was reconnected to the office and began relaying updates to the manager, Michael Woodward.³²

At 8:26, Ong reported that the plane was “flying erratically.” A minute later, Flight 11 turned south. American also began getting identifications of the hijackers, as Ong and then Sweeney passed on some of the seat numbers of those who had gained unauthorized access to the cockpit.³³

Sweeney calmly reported on her line that the plane had been hijacked; a man in first class had his throat slashed; two flight attendants had been stabbed—one was seriously hurt and was on oxygen while the other’s wounds seemed minor; a doctor had been requested; the flight attendants were unable to contact the cockpit; and there was a bomb in the cockpit. Sweeney told Woodward that she and Ong were trying to relay as much information as they could to people on the ground.³⁴

At 8:38, Ong told Gonzalez that the plane was flying erratically again. Around this time Sweeney told Woodward that the hijackers were Middle Easterners, naming three of their seat numbers. One spoke very little English and one spoke excellent English. The hijackers had gained entry to the cockpit, and she did not know how. The aircraft was in a rapid descent.³⁵

At 8:41, Sweeney told Woodward that passengers in coach were under the impression that there was a routine medical emergency in first class. Other flight attendants were busy at duties such as getting medical supplies while Ong and Sweeney were reporting the events.³⁶

At 8:41, in American’s operations center, a colleague told Marquis that the air traffic controllers declared Flight 11 a hijacking and “think he’s [American 11] headed toward Kennedy [airport in New York City]. They’re moving everybody out of the way. They seem to have him on a primary radar. They seem to think that he is descending.”³⁷

At 8:44, Gonzalez reported losing phone contact with Ong. About this same time Sweeney reported to Woodward, “Something is wrong. We are in a rapid descent . . . we are all over the place.” Woodward asked Sweeney to look out the window to see if she could determine where they were. Sweeney responded: “We are flying low. We are flying very, very low. We are flying way

too low.” Seconds later she said, “Oh my God we are way too low.” The phone call ended.³⁸

At 8:46:40, American 11 crashed into the North Tower of the World Trade Center in New York City.³⁹ All on board, along with an unknown number of people in the tower, were killed instantly.

The Hijacking of United 175

United Airlines Flight 175 was scheduled to depart for Los Angeles at 8:00. Captain Victor Saracini and First Officer Michael Horrocks piloted the Boeing 767, which had seven flight attendants. Fifty-six passengers boarded the flight.⁴⁰

United 175 pushed back from its gate at 7:58 and departed Logan Airport at 8:14. By 8:33, it had reached its assigned cruising altitude of 31,000 feet. The flight attendants would have begun their cabin service.⁴¹

The flight had taken off just as American 11 was being hijacked, and at 8:42 the United 175 flight crew completed their report on a “suspicious transmission” overheard from another plane (which turned out to have been Flight 11) just after takeoff. This was United 175’s last communication with the ground.⁴²

The hijackers attacked sometime between 8:42 and 8:46. They used knives (as reported by two passengers and a flight attendant), Mace (reported by one passenger), and the threat of a bomb (reported by the same passenger). They stabbed members of the flight crew (reported by a flight attendant and one passenger). Both pilots had been killed (reported by one flight attendant). The eyewitness accounts came from calls made from the rear of the plane, from passengers originally seated further forward in the cabin, a sign that passengers and perhaps crew had been moved to the back of the aircraft. Given similarities to American 11 in hijacker seating and in eyewitness reports of tactics and weapons, as well as the contact between the presumed team leaders, Atta and Shehhi, we believe the tactics were similar on both flights.⁴³

The first operational evidence that something was abnormal on United 175 came at 8:47, when the aircraft changed beacon codes twice within a minute. At 8:51, the flight deviated from its assigned altitude, and a minute later New York air traffic controllers began repeatedly and unsuccessfully trying to contact it.⁴⁴

At 8:52, in Easton, Connecticut, a man named Lee Hanson received a phone call from his son Peter, a passenger on United 175. His son told him: “I think they’ve taken over the cockpit—An attendant has been stabbed—and someone else up front may have been killed. The plane is making strange moves. Call United Airlines—Tell them it’s Flight 175, Boston to LA.” Lee Hanson then called the Easton Police Department and relayed what he had heard.⁴⁵

Also at 8:52, a male flight attendant called a United office in San Francisco, reaching Marc Policastro. The flight attendant reported that the flight had been hijacked, both pilots had been killed, a flight attendant had been stabbed, and

the hijackers were probably flying the plane. The call lasted about two minutes, after which Policastro and a colleague tried unsuccessfully to contact the flight.⁴⁶

At 8:58, the flight took a heading toward New York City.⁴⁷

At 8:59, Flight 175 passenger Brian David Sweeney tried to call his wife, Julie. He left a message on their home answering machine that the plane had been hijacked. He then called his mother, Louise Sweeney, told her the flight had been hijacked, and added that the passengers were thinking about storming the cockpit to take control of the plane away from the hijackers.⁴⁸

At 9:00, Lee Hanson received a second call from his son Peter:

It's getting bad, Dad—A stewardess was stabbed—They seem to have knives and Mace—They said they have a bomb—It's getting very bad on the plane—Passengers are throwing up and getting sick—The plane is making jerky movements—I don't think the pilot is flying the plane—I think we are going down—I think they intend to go to Chicago or someplace and fly into a building—Don't worry, Dad—If it happens, it'll be very fast—My God, my God.⁴⁹

The call ended abruptly. Lee Hanson had heard a woman scream just before it cut off. He turned on a television, and in her home so did Louise Sweeney. Both then saw the second aircraft hit the World Trade Center.⁵⁰

At 9:03:11, United Airlines Flight 175 struck the South Tower of the World Trade Center.⁵¹ All on board, along with an unknown number of people in the tower, were killed instantly.

The Hijacking of American 77

American Airlines Flight 77 was scheduled to depart from Washington Dulles for Los Angeles at 8:10. The aircraft was a Boeing 757 piloted by Captain Charles F. Burlingame and First Officer David Charlebois. There were four flight attendants. On September 11, the flight carried 58 passengers.⁵²

American 77 pushed back from its gate at 8:09 and took off at 8:20. At 8:46, the flight reached its assigned cruising altitude of 35,000 feet. Cabin service would have begun. At 8:51, American 77 transmitted its last routine radio communication. The hijacking began between 8:51 and 8:54. As on American 11 and United 175, the hijackers used knives (reported by one passenger) and moved all the passengers (and possibly crew) to the rear of the aircraft (reported by one flight attendant and one passenger). Unlike the earlier flights, the Flight 77 hijackers were reported by a passenger to have box cutters. Finally, a passenger reported that an announcement had been made by the "pilot" that the plane had been hijacked. Neither of the firsthand accounts mentioned any stabings or the threat or use of either a bomb or Mace, though both witnesses began the flight in the first-class cabin.⁵³

At 8:54, the aircraft deviated from its assigned course, turning south. Two minutes later the transponder was turned off and even primary radar contact with the aircraft was lost. The Indianapolis Air Traffic Control Center repeatedly tried and failed to contact the aircraft. American Airlines dispatchers also tried, without success.⁵⁴

At 9:00, American Airlines Executive Vice President Gerard Arpey learned that communications had been lost with American 77. This was now the second American aircraft in trouble. He ordered all American Airlines flights in the Northeast that had not taken off to remain on the ground. Shortly before 9:10, suspecting that American 77 had been hijacked, American headquarters concluded that the second aircraft to hit the World Trade Center might have been Flight 77. After learning that United Airlines was missing a plane, American Airlines headquarters extended the ground stop nationwide.⁵⁵

At 9:12, Renee May called her mother, Nancy May, in Las Vegas. She said her flight was being hijacked by six individuals who had moved them to the rear of the plane. She asked her mother to alert American Airlines. Nancy May and her husband promptly did so.⁵⁶

At some point between 9:16 and 9:26, Barbara Olson called her husband, Ted Olson, the solicitor general of the United States. She reported that the flight had been hijacked, and the hijackers had knives and box cutters. She further indicated that the hijackers were not aware of her phone call, and that they had put all the passengers in the back of the plane. About a minute into the conversation, the call was cut off. Solicitor General Olson tried unsuccessfully to reach Attorney General John Ashcroft.⁵⁷

Shortly after the first call, Barbara Olson reached her husband again. She reported that the pilot had announced that the flight had been hijacked, and she asked her husband what she should tell the captain to do. Ted Olson asked for her location and she replied that the aircraft was then flying over houses. Another passenger told her they were traveling northeast. The Solicitor General then informed his wife of the two previous hijackings and crashes. She did not display signs of panic and did not indicate any awareness of an impending crash. At that point, the second call was cut off.⁵⁸

At 9:29, the autopilot on American 77 was disengaged; the aircraft was at 7,000 feet and approximately 38 miles west of the Pentagon.⁵⁹ At 9:32, controllers at the Dulles Terminal Radar Approach Control “observed a primary radar target tracking eastbound at a high rate of speed.” This was later determined to have been Flight 77.

At 9:34, Ronald Reagan Washington National Airport advised the Secret Service of an unknown aircraft heading in the direction of the White House. American 77 was then 5 miles west-southwest of the Pentagon and began a 330-degree turn. At the end of the turn, it was descending through 2,200 feet, pointed toward the Pentagon and downtown Washington. The hijacker pilot then advanced the throttles to maximum power and dove toward the Pentagon.⁶⁰

At 9:37:46, American Airlines Flight 77 crashed into the Pentagon, traveling at approximately 530 miles per hour.⁶¹ All on board, as well as many civilian and military personnel in the building, were killed.

The Battle for United 93

At 8:42, United Airlines Flight 93 took off from Newark (New Jersey) Liberty International Airport bound for San Francisco. The aircraft was piloted by Captain Jason Dahl and First Officer Leroy Homer, and there were five flight attendants. Thirty-seven passengers, including the hijackers, boarded the plane. Scheduled to depart the gate at 8:00, the Boeing 757's takeoff was delayed because of the airport's typically heavy morning traffic.⁶²

The hijackers had planned to take flights scheduled to depart at 7:45 (American 11), 8:00 (United 175 and United 93), and 8:10 (American 77). Three of the flights had actually taken off within 10 to 15 minutes of their planned departure times. United 93 would ordinarily have taken off about 15 minutes after pulling away from the gate. When it left the ground at 8:42, the flight was running more than 25 minutes late.⁶³

As United 93 left Newark, the flight's crew members were unaware of the hijacking of American 11. Around 9:00, the FAA, American, and United were facing the staggering realization of apparent multiple hijackings. At 9:03, they would see another aircraft strike the World Trade Center. Crisis managers at the FAA and the airlines did not yet act to warn other aircraft.⁶⁴ At the same time, Boston Center realized that a message transmitted just before 8:25 by the hijacker pilot of American 11 included the phrase, "We have some planes."⁶⁵

No one at the FAA or the airlines that day had ever dealt with multiple hijackings. Such a plot had not been carried out anywhere in the world in more than 30 years, and never in the United States. As news of the hijackings filtered through the FAA and the airlines, it does not seem to have occurred to their leadership that they needed to alert other aircraft in the air that they too might be at risk.⁶⁶

United 175 was hijacked between 8:42 and 8:46, and awareness of that hijacking began to spread after 8:51. American 77 was hijacked between 8:51 and 8:54. By 9:00, FAA and airline officials began to comprehend that attackers were going after multiple aircraft. American Airlines' nationwide ground stop between 9:05 and 9:10 was followed by a United Airlines ground stop. FAA controllers at Boston Center, which had tracked the first two hijackings, requested at 9:07 that Herndon Command Center "get messages to airborne aircraft to increase security for the cockpit." There is no evidence that Herndon took such action. Boston Center immediately began speculating about other aircraft that might be in danger, leading them to worry about a transcontinental flight—Delta 1989—that in fact was not hijacked. At 9:19, the FAA's New England regional office called Herndon and asked that Cleveland Center advise Delta 1989 to use extra cockpit security.⁶⁷

Several FAA air traffic control officials told us it was the air carriers’ responsibility to notify their planes of security problems. One senior FAA air traffic control manager said that it was simply not the FAA’s place to order the airlines what to tell their pilots.⁶⁸ We believe such statements do not reflect an adequate appreciation of the FAA’s responsibility for the safety and security of civil aviation.

The airlines bore responsibility, too. They were facing an escalating number of conflicting and, for the most part, erroneous reports about other flights, as well as a continuing lack of vital information from the FAA about the hijacked flights. We found no evidence, however, that American Airlines sent any cockpit warnings to its aircraft on 9/11. United’s first decisive action to notify its airborne aircraft to take defensive action did not come until 9:19, when a United flight dispatcher, Ed Ballinger, took the initiative to begin transmitting warnings to his 16 transcontinental flights: “Beware any cockpit intrusion—Two a/c [aircraft] hit World Trade Center.” One of the flights that received the warning was United 93. Because Ballinger was still responsible for his other flights as well as Flight 175, his warning message was not transmitted to Flight 93 until 9:23.⁶⁹

By all accounts, the first 46 minutes of Flight 93’s cross-country trip proceeded routinely. Radio communications from the plane were normal. Heading, speed, and altitude ran according to plan. At 9:24, Ballinger’s warning to United 93 was received in the cockpit. Within two minutes, at 9:26, the pilot, Jason Dahl, responded with a note of puzzlement: “Ed, confirm latest mssg plz—Jason.”⁷⁰

The hijackers attacked at 9:28. While traveling 35,000 feet above eastern Ohio, United 93 suddenly dropped 700 feet. Eleven seconds into the descent, the FAA’s air traffic control center in Cleveland received the first of two radio transmissions from the aircraft. During the first broadcast, the captain or first officer could be heard declaring “Mayday” amid the sounds of a physical struggle in the cockpit. The second radio transmission, 35 seconds later, indicated that the fight was continuing. The captain or first officer could be heard shouting: “Hey get out of here—get out of here—get out of here.”⁷¹

On the morning of 9/11, there were only 37 passengers on United 93—33 in addition to the 4 hijackers. This was below the norm for Tuesday mornings during the summer of 2001. But there is no evidence that the hijackers manipulated passenger levels or purchased additional seats to facilitate their operation.⁷²

The terrorists who hijacked three other commercial flights on 9/11 operated in five-man teams. They initiated their cockpit takeover within 30 minutes of takeoff. On Flight 93, however, the takeover took place 46 minutes after takeoff and there were only four hijackers. The operative likely intended to round out the team for this flight, Mohamed al Kahtani, had been refused entry by a suspicious immigration inspector at Florida’s Orlando International Airport in August.⁷³

Because several passengers on United 93 described three hijackers on the plane, not four, some have wondered whether one of the hijackers had been able to use the cockpit jump seat from the outset of the flight. FAA rules allow use of this seat by documented and approved individuals, usually air carrier or FAA personnel. We have found no evidence indicating that one of the hijackers, or anyone else, sat there on this flight. All the hijackers had assigned seats in first class, and they seem to have used them. We believe it is more likely that Jarrah, the crucial pilot-trained member of their team, remained seated and inconspicuous until after the cockpit was seized; and once inside, he would not have been visible to the passengers.⁷⁴

At 9:32, a hijacker, probably Jarrah, made or attempted to make the following announcement to the passengers of Flight 93: "Ladies and Gentlemen: Here the captain, please sit down keep remaining sitting. We have a bomb on board. So, sit." The flight data recorder (also recovered) indicates that Jarrah then instructed the plane's autopilot to turn the aircraft around and head east.⁷⁵

The cockpit voice recorder data indicate that a woman, most likely a flight attendant, was being held captive in the cockpit. She struggled with one of the hijackers who killed or otherwise silenced her.⁷⁶

Shortly thereafter, the passengers and flight crew began a series of calls from GTE airphones and cellular phones. These calls between family, friends, and colleagues took place until the end of the flight and provided those on the ground with firsthand accounts. They enabled the passengers to gain critical information, including the news that two aircraft had slammed into the World Trade Center.⁷⁷

At 9:39, the FAA's Cleveland Air Route Traffic Control Center overheard a second announcement indicating that there was a bomb on board, that the plane was returning to the airport, and that they should remain seated.⁷⁸ While it apparently was not heard by the passengers, this announcement, like those on Flight 11 and Flight 77, was intended to deceive them. Jarrah, like Atta earlier, may have inadvertently broadcast the message because he did not know how to operate the radio and the intercom. To our knowledge none of them had ever flown an actual airliner before.

At least two callers from the flight reported that the hijackers knew that passengers were making calls but did not seem to care. It is quite possible Jarrah knew of the success of the assault on the World Trade Center. He could have learned of this from messages being sent by United Airlines to the cockpits of its transcontinental flights, including Flight 93, warning of cockpit intrusion and telling of the New York attacks. But even without them, he would certainly have understood that the attacks on the World Trade Center would already have unfolded, given Flight 93's tardy departure from Newark. If Jarrah did know that the passengers were making calls, it might not have occurred to him that they were certain to learn what had happened in New York, thereby defeating his attempts at deception.⁷⁹

At least ten passengers and two crew members shared vital information with family, friends, colleagues, or others on the ground. All understood the plane had been hijacked. They said the hijackers wielded knives and claimed to have a bomb. The hijackers were wearing red bandanas, and they forced the passengers to the back of the aircraft.⁸⁰

Callers reported that a passenger had been stabbed and that two people were lying on the floor of the cabin, injured or dead—possibly the captain and first officer. One caller reported that a flight attendant had been killed.⁸¹

One of the callers from United 93 also reported that he thought the hijackers might possess a gun. But none of the other callers reported the presence of a firearm. One recipient of a call from the aircraft recounted specifically asking her caller whether the hijackers had guns. The passenger replied that he did not see one. No evidence of firearms or of their identifiable remains was found at the aircraft’s crash site, and the cockpit voice recorder gives no indication of a gun being fired or mentioned at any time. We believe that if the hijackers had possessed a gun, they would have used it in the flight’s last minutes as the passengers fought back.⁸²

Passengers on three flights reported the hijackers’ claim of having a bomb. The FBI told us they found no trace of explosives at the crash sites. One of the passengers who mentioned a bomb expressed his belief that it was not real. Lacking any evidence that the hijackers attempted to smuggle such illegal items past the security screening checkpoints, we believe the bombs were probably fake.⁸³

During at least five of the passengers’ phone calls, information was shared about the attacks that had occurred earlier that morning at the World Trade Center. Five calls described the intent of passengers and surviving crew members to revolt against the hijackers. According to one call, they voted on whether to rush the terrorists in an attempt to retake the plane. They decided, and acted.⁸⁴

At 9:57, the passenger assault began. Several passengers had terminated phone calls with loved ones in order to join the revolt. One of the callers ended her message as follows: “Everyone’s running up to first class. I’ve got to go. Bye.”⁸⁵

The cockpit voice recorder captured the sounds of the passenger assault muffled by the intervening cockpit door. Some family members who listened to the recording report that they can hear the voice of a loved one among the din. We cannot identify whose voices can be heard. But the assault was sustained.⁸⁶

In response, Jarrah immediately began to roll the airplane to the left and right, attempting to knock the passengers off balance. At 9:58:57, Jarrah told another hijacker in the cockpit to block the door. Jarrah continued to roll the airplane sharply left and right, but the assault continued. At 9:59:52, Jarrah changed tactics and pitched the nose of the airplane up and down to disrupt

the assault. The recorder captured the sounds of loud thumps, crashes, shouts, and breaking glasses and plates. At 10:00:03, Jarrah stabilized the airplane.⁸⁷

Five seconds later, Jarrah asked, “Is that it? Shall we finish it off?” A hijacker responded, “No. Not yet. When they all come, we finish it off.” The sounds of fighting continued outside the cockpit. Again, Jarrah pitched the nose of the aircraft up and down. At 10:00:26, a passenger in the background said, “In the cockpit. If we don’t we’ll die!” Sixteen seconds later, a passenger yelled, “Roll it!” Jarrah stopped the violent maneuvers at about 10:01:00 and said, “Allah is the greatest! Allah is the greatest!” He then asked another hijacker in the cockpit, “Is that it? I mean, shall we put it down?” to which the other replied, “Yes, put it in it, and pull it down.”⁸⁸

The passengers continued their assault and at 10:02:23, a hijacker said, “Pull it down! Pull it down!” The hijackers remained at the controls but must have judged that the passengers were only seconds from overcoming them. The airplane headed down; the control wheel was turned hard to the right. The airplane rolled onto its back, and one of the hijackers began shouting “Allah is the greatest. Allah is the greatest.” With the sounds of the passenger counter-attack continuing, the aircraft plowed into an empty field in Shanksville, Pennsylvania, at 580 miles per hour, about 20 minutes’ flying time from Washington, D.C.⁸⁹

Jarrah’s objective was to crash his airliner into symbols of the American Republic, the Capitol or the White House. He was defeated by the alerted, unarmed passengers of United 93.

1.2 IMPROVISING A HOMELAND DEFENSE

The FAA and NORAD

On 9/11, the defense of U.S. airspace depended on close interaction between two federal agencies: the FAA and the North American Aerospace Defense Command (NORAD). The most recent hijacking that involved U.S. air traffic controllers, FAA management, and military coordination had occurred in 1993.⁹⁰ In order to understand how the two agencies interacted eight years later, we will review their missions, command and control structures, and working relationship on the morning of 9/11.

FAA Mission and Structure. As of September 11, 2001, the FAA was mandated by law to regulate the safety and security of civil aviation. From an air traffic controller’s perspective, that meant maintaining a safe distance between airborne aircraft.⁹¹

Many controllers work at the FAA’s 22 Air Route Traffic *Control Centers*. They are grouped under regional offices and coordinate closely with the national Air Traffic Control System *Command Center*, located in Herndon,