

**MEMORANDUM FOR THE RECORD**

Event: Interviews of United Airlines and American Airlines personnel in key roles on September 11, 2001

Type: Site visit

Date: November 17-21, 2003

Special Access Issues: None

Team: 7 and 8

Prepared by: Miles Kara

Participants (non-Commission): representatives of American Airlines and United Airlines

Participants (Commission): Miles Kara, John Raidt, Sam Brinkley, Bill Johnstone, and Lisa Sullivan

Location(s): UAL Headquarters in Chicago, IL and AAL Headquarters in Dallas Fort Worth, TX

**Background**

During period November 17-21, 2003, Miles Kara, Team 8 traveled with Team 7 to visit American Airlines (18-19 Nov) and United Airlines (20-21 Nov) to receive briefings, tour airframes (B757 and B767), and interview selected individuals. See Team 7 interview and trip reports for specific details on interviews and briefings. The purpose of this MFR is to list certain details from Mr. Kara's perspective.

**Specific Items of Interest**

***Transponders***

An Air Traffic Control supervisor at New York Center opined that the transponder on United 175 was a newer model peculiar to the United-operated B767 fleet that could not be turned off. That was the supervisor's possible explanation of why the transponder on United 175 changed code as opposed to being turned off. A senior pilot from both United and American Airlines, familiar with cockpit details, each separately demonstrated how transponders were manipulated in the cockpit and conclusively demonstrated that the transponder in United 175 could have easily been turned off. It was also made clear that it was a simple procedure to change the code on a transponder and that the code change would likely start with the left-most digit.

The transponders on United B757 and B767 airframes are identical. The transponders on American B757 and B767 are also identical and differ from the United version in a single detail. There are four knobs on the American version that change the transponder code.

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There are only two on the United Version. In both versions the knobs are stacked in groups of two. Therefore, there are two stacks of two knobs each on the American version and one stack of two knobs on the United version. In all cases the upper knob is smaller than and easily distinguished from the lower knob.

9/11 Closed by Statute

The senior United pilot also explained that there is a compelling reason for transponders to be turned off. Sheer congestion on the ground at large airports dictates that transponders be off. He explained that it was one of the last items accomplished prior to takeoff to set the transponder code.

*Vision of the New York Skyline*

Both senior pilots stated that it was unlikely that the terrorist pilot on United 175 saw American Air 11 fly into the north tower, but it was near certain that he would have immediately seen the fire/plume. Both made their observations while Mr. Kara and the pilot were in the cockpit of a B767. Both were provided the same geometrics—UA175 was abeam starboard AA11 at a distance of 40nm and from an altitude of 31K feet.

The window structure in the B767 cockpit allows vision over the left shoulder to the pilot's eight o'clock position. The United pilot stated that the New York City skyline would have been visible and although the terrorist pilot may not have picked up AA11 flying into the north tower he would have immediately picked up the aftermath, knowing what he was looking for. The pilot also said that binoculars would have been useless. Based on both his military and civilian flying career he stated that without stabilization the binoculars would have hindered not helped the pilot's distance vision. He also stated that binoculars are not carried on the Boeing 757/767 fleet.

*Flyability*

The cockpits of the B757 and B767 are virtually interchangeable in their essential elements. Both are "easy" to fly and both respond to slight touches and corrections. Entering changes to the auto pilot is something that terrorist pilots probably would not have been trained or able to do. Even the United senior pilot, who instructs on how to do that, said that he always has to pause before he makes such corrections to make sure to remembered how to enter the change. Any autopilot changes made by the terrorist pilots to assist them in navigating to predetermined coordinates would simply have been to enter a specific location such as Newark or Reagan National. [Here the Team 7 concern was the there was a record that the hijackers had purchased GPS devices and the speculation was that they did that so they could determine the latitude and longitude of their intended targets.]

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**ACARS**

Because of scheduling complexities, Mr. Kara took the ACARS briefing on behalf of the rest of the traveling Commission Staff. For the record, Commission Staff had previous access to responsive ACARS traffic concerning UA93 prior to the visit but did not see the UA175 responsive ACARS traffic until the briefing.

David Knerr, Manager, Flight Data Automation, provided the briefing. Knerr stated that he accomplished an "ACARS audit" on 9-11 on both UA175 and UA93 "by noon." He verbally certified that he presented to Mr. Kara in compiled form all of the ACARS information relevant to both flights that day.

He also certified during a review of critical time frames that there was no ACARS technical or textual information that either captured or depicted the several flight deviations, both controller-directed and pilot-initiated, that occurred during the flight of each United flight. He also certified that there was no ACARS record that the flight crew of United 175 communicated its prior knowledge of the unusual cockpit communications it heard on takeoff from Logan Airport or that it was both deviated away from American flight 11 and controller-directed to gain a visual location of that aircraft.

Knerr provided a cursory explanation of how ACARS works. All such communications are routed through a contracted service provided by AIRINC. That service is simply a transmission service consisted on some 300 ground stations throughout the United States. Dispatchers type in a free text message at their terminals and the AIRINC transmission service converts that message into a standardized air-ground format that is then sent to the plane. The message is received on a small terminal screen in the aircraft and can be printed out. There are two forms of acknowledgement; an automatic avionics acknowledgement that the message reached the plane and a crew acknowledgement that the crew has actually seen the message. Not all messages require the latter acknowledgement. Some messages from the plane are automatically triggered, specifically gate push back time and lift off time, and engine performance data is routinely down-linked so that dispatchers can recalculate fuel-load and related time-distance factors. AIRINC guarantees delivery of all ACARS messages at flight levels above 29,000 feet. Knerr stated that in the New York area it is likely that messages at all altitudes down to ground level are reliably delivered. ACARS messages are recorded and stored for 90 days, unless there is direction to hold them longer.

**United Flight 175 Messages of Interest**

**1158:00Z** Pushback (rounded to nearest 30 seconds)  
**1214:00Z** Lift off (nose wheel strut extension)  
**1231:49Z** A crew acknowledged message that indicates crew was in charge  
**1259:19Z** A dispatcher-initiated message that reached the plane but not crew-acknowledged from [redacted] stating "I heard of a reported incident."  
**1259:29** Additional dispatcher-initiated message  
**1259:30** Additional dispatcher-initiated message  
**1303:17** Rogers-initiated message not received by the aircraft

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**United Flight 93 Messages of Interest**

- 1201Z** Pushback
- 1242Z** Lift off (nose wheel strut extension)
- 1321:20Z** Crew-acknowledged message
- 1322:26Z** Personal interest message to crew
- 1324:24Z** Ballenger alerting message about cockpit intrusions
- 1326:10Z** Crew asked, Jason, to confirm the previous message (last crew acknowledgement)
- 1351:58Z** Last downlink from aircraft

***Aircraft Situation Display (ASD)***

Dispatchers and other persons who sit positions in the System Operations Centers (SOC) at both American and United Airlines have access to an aircraft situation display that can be tailored to meet specific needs. For example, any individual with access to the system can focus strictly on company planes, a specific plane, or all planes in the system. Military planes are not displayed. The ASD at each of the two SOCs is tailored to the needs of each airline and is a subset of the TSD (Time Sensitive Display) commonly used by FAA, in that the ASD is based on FAA radar feed.

The ASD is not time sensitive and refreshes each minute or more. Nevertheless its sensitivity allowed United to maintain continuity on UA93 and to have post-facto awareness that UA175 impacted the second tower. Its sensitivity and data input, however, was not sufficient to allow American to gain any situational awareness of AA77, but did allow some situational awareness of AA11.

Two distinct issues emerged that impacted the two airlines ability to gain situational awareness, separately or jointly, on 9-11. Each airline had a procedure in place to isolate an incident flight and take its management away from the SOC and move that management to a crisis center. [Note: This is different than procedures in FAA en route centers. Handling of incident aircraft is left with the controller and area of record and an attempt is made to move handling of other aircraft in his/her airspace to other controllers.]

First, United learned that it could not handle two such incidents simultaneously. The isolation of UA175 precluded initial isolation of UA93 until United could figure out, software and procedure-wise, how to do that. Essentially, United defaulted to the UA93 incident since it was ongoing.

Second, American had no situational awareness of AA77 and had formed the erroneous understanding that AA77 impacted the second WTC tower. [Note: This is different from the FAA awareness that AA77 crashed on the Ohio/Kentucky border.] According to United people interviewed they were not able in the immediate aftermath of the 2d WTC impact and the Pentagon impact to convey to American that it was UA175 that was the second impact into the WTC.

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United never lost situational awareness on UA93 and followed its final path in its crisis center. A document in a delivery made available to Commission Staff on Nov 21 indicates that United had radar continuity from the FAA portion of the Joint Surveillance System, supplemented by data from the ASAR-9 radar at Pittsburgh TRACON.

**Other Items**

*UA175.* SOC personnel at United that we talked to had no idea of the extent of interaction of the UA175 crew with the saga of AA11. We walked down a list of indicators—suspicious transmission heard on takeoff, course change to avoid AA11, sighting of AA11 at altitude and reporting same to ZNY controller. Until we mentioned them no one we talked to was aware of those occurrences.

*Weapons.* Team 7 will cover this in more detail, but for the record we heard no evidence of any weapons used except for knives (or stabbing) and the threat of a bomb. There was one inference that mace or other control measure was used. No one reported use of a gun.

*Plane configurations and hijacker seating.* The hijacker seating arrangement of 1-2-2, with pilot to the front on the B757s was clearly pre-meditated and different from the 2-1-2 seating arrangement aboard the B767s with the pilot in the middle. On the B757 there is only one cabin crew (one of four or five), the purser, sitting forward immediately aft the cockpit. On the B767, as many as three (of nine) sit forward immediately aft the cockpit.