

DCA24LA097

OPERATIONAL FACTORS

Attachment 2

United Airlines Personnel Interview Transcripts

June 18, 2024

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UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of: *

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UNITED AIRLINES FLIGHT 1890 *

TURBULENCE ENCOUNTER ENROUTE TO * Accident No.: DCA24LA097

NEWARK, NEW JERSEY ON *

FEBRUARY 10, 2024 *

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INTERVIEW OF: JOHN JANOWIAK, Flight Operations
Navigation Databases Manager
United Airlines

Tuesday,
April 16, 2024

APPEARANCES:

SHAWN ETCHER, Operational Factors Investigator
National Transportation Safety Board

PAUL SUFFERN, Meteorologist Investigator
National Transportation Safety Board

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I N T E R V I E W

(9:04 a.m.)

MR. ETCHER: All right, good morning. It is April 16th at 9:04 in the morning. We're here with John, is it okay if call you John?

MR. JANOWIAK: Absolutely.

MR. ETCHER: Learning a little bit about the SkyPath system that they have here at United. My name is Shawn Etcher. I'm an operational factors investigator with the NTSB. All that means is I look forward of everything, forward of the cockpit door, and then how everything interacts with the pilots.

SkyPath being one of those things that pilots have as their tools, and you're the subject matter expert. So we wanted to learn all we could about it. So that's why you're here with us today. I'm also honored to have Paul with us, as well. He's a subject matter expert, but I'll let him introduce himself.

MR. SUFFERN: Sure. So we briefly met, John. I'm Paul Suffern, meteorology investigator with the NTSB. Have been here about 13 years. And before that I worked for the National Weather Service up in Alaska.

MR. ETCHER: It's just the two of us here interviewing you and talking with you today. I don't want to call it an interview. It always comes out as an interview, but it's not. We're just -- we're learning. You're teaching us.

MR. JANOWIAK: Okay.

1 MR. ETCHER: So you know, we're the only two that's going to
2 be talking with you at this point. So I appreciate you coming in
3 to educate me. As part of our process, we do record and
4 transcribe everything we do, when it comes to learning things,
5 talking with folks.

6 That recording will be sent off tonight to be transcribed.
7 And I won't do it, thank goodness, because that would take a long
8 time. But that transcript itself, when it comes back, it will end
9 up becoming part of our public docket in the future. The audio
10 recording will not, so you don't have to worry about hearing
11 yourself on the 10 o'clock news, or something.

12 MR. JANOWIAK: Okay.

13 MR. ETCHER: So are you okay with us recording and
14 transcribing?

15 MR. JANOWIAK: Yes.

16 MR. ETCHER: All right. Perfect. As part of our
17 regulations, you are entitled to a representative to be here with
18 you or via phone, or whatever. I see you came in here all by
19 yourself. Do you wish to have a representative?

20 MR. JANOWIAK: No, I think I'm okay by myself.

21 MR. ETCHER: If at any point you need to phone a friend or
22 talk to somebody, feel free.

23 MR. JANOWIAK: Okay.

24 MR. ETCHER: We'll hit pause. It's not a big deal.
25 Hopefully that doesn't occur, but if it does, you know you have

1 that luxury, if you will. Just a few rules. I sometimes ask
2 questions that really sound good in my head, they don't come out
3 of my mouth quite as articulate. So if you have questions or
4 don't understand the question even, ask for clarification. It's
5 all right.

6 Because if you give me a question -- or an answer, I
7 guarantee you if I don't understand it, I'm going to ask for
8 further clarification so I can understand it as well.

9 MR. JANOWIAK: Okay.

10 MR. ETCHER: If you need a break, please just say so. We'll
11 take one whether it's to phone a friend, whether it's to use the
12 restroom, or get a drink. Just say so. It's easy to hit the
13 recorder on pause. Come back and resume when we're back.

14 MR. JANOWIAK: Okay.

15 MR. ETCHER: Last question. Or last rule. If you don't know
16 an answer to something, I don't know works. So don't, don't be
17 afraid to use that.

18 MR. JANOWIAK: Mm-hm.

19 MR. ETCHER: If you have an opinion, great. Say it, just
20 make sure we know that it's your opinion.

21 MR. JANOWIAK: Okay.

22 MR. ETCHER: I love facts, but I love opinions too.

23 MR. JANOWIAK: Okay.

24 MR. ETCHER: Because sometimes that's more or just as
25 helpful.

1 MR. JANOWIAK: Mm-hm.

2 MR. ETCHER: So all right. Any questions before we move on?

3 MR. JANOWIAK: No, I don't believe so.

4 MR. ETCHER: Perfect. All right.

5 INTERVIEW OF JOHN JANOWIAK

6 BY MR. ETCHER:

7 Q. And just for the recording, could you please state your name
8 and spell your last name?

9 A. My name is John Janowiak. Last name J-A-N-O-W-I-A-K.

10 Q. Perfect. And what is your job title?

11 A. My job title is flight operations, navigation databases
12 manager.

13 Q. For --

14 A. For United Airlines.

15 Q. Okay.

16 A. Sorry.

17 Q. Perfect. Now that's a long title --

18 A. Yes.

19 Q. -- to me, so can you explain to me what that title -- what
20 does that title do? What do you do with that?

21 A. So the flight management computers on the aircraft, they have
22 a navigation database that needs to be loaded into, into that
23 computer so that the flight management system can display the
24 available routes, procedures, such as the departures, arrivals,
25 approaches for the pilots from the, the airports that they are

1 leaving from and then arriving at.

2 And so the pilots can put their entire route into the flight
3 management computer, and it -- I need to maintain the specific
4 coverage that each of our fleets require to operate the schedules
5 that they, that they have. So I work with Boeing and Jeppesen
6 companies that those -- Jeppesen is our navigation data supplier.
7 So they provide us with the navigation data.

8 I work with them to kind of work out the contracts that we
9 have with them to supply us the nav data. They in turn supply the
10 nav data to what are called type two LOA FMS manufacturers. So
11 they have -- those manufacturers have the authorization to pack
12 the nav data into the onboard equipment.

13 So the flight management computer. And then I work with
14 those, those type two LOA holders, in our case Honeywell and GE,
15 to specifically request additions, deletions, modifications to the
16 to the navigation data, that goes onto our aircraft.

17 Q. Okay. Sounds like quite a large job. You have one or two
18 airplanes out there as well.

19 A. We've ,got we've got a couple.

20 Q. Yeah. Yeah, that's what I've heard.

21 A. Mm-hm.

22 Q. All right. Perfect. So part of the nav database that you
23 load up, do you also -- are you also in charge of the turbulence
24 apps like SkyPath and things like that as well?

25 A. So I am -- I also support our EFB program. Which is the

1 iPads that we issue to all of the pilots, which those contain the
2 pilots navigational charts. It gives them also applications that
3 give them access to aviation weather, their quality of life
4 applications, like scheduling, their trip pairing information,
5 gives them the ability to communicate within work groups.

6 And then it also gives them access to an application that we
7 use called SkyPath, that gives them access to observed turbulence
8 recordings, amongst all of the SkyPath customers.

9 Q. So it's not just United.

10 A. Not just United data. It is all -- it's crowdsourced data
11 amongst all customers that are using the SkyPath application, or
12 some sort of integration into another application that provides
13 SkyPath servers with data.

14 Q. Okay. So since we're talking about SkyPath, let's just go
15 ahead and start digging in to SkyPath itself. Kind of --

16 A. Mm-hm.

17 Q. To me, it's new technology.

18 A. Mm-hm.

19 Q. Help educate me. How does it work? What, you know, in a
20 nutshell, in detail, whatever's easiest for you, but kind of help
21 me understand how SkyPath works.

22 A. Mm-hm.

23 Q. How you guys integrate it into your fleet.

24 A. Yep. So in the, in the EFB, the, the iPads that we provide
25 to the pilots. And I'm sorry, I don't know if I explained this.

1 EFB is electronic flight bag. So the -- in the EFB, there's an
2 accelerometer just like in your phones that can recognize
3 orientation of the device, movement of the device, kind of as well
4 as shaking of the device.

5 And so what the SkyPath application does is the SkyPath
6 company recognized that iPads or tablets of some sort have been --
7 being added into the, into the flight deck for many carriers and
8 they learned that, okay, now you have a -- at least one, if not
9 two accelerometers in the flight deck of thousands of aircraft
10 flying all across the globe.

11 And so they created this application to try and capture the
12 accelerometer readings from those devices and aggregate them,
13 interpret them, and display that information, because they
14 realized that the shaking of a device could be interpreting -- or
15 could be recording turbulence on the aircraft.

16 So the application uses a proprietary algorithm to monitor
17 the accelerometer readings from the iPad. It then takes that,
18 shares it, uses an internet connection to share it to the servers
19 owned by the SkyPath team. It uses, again, another algorithm on
20 those servers to clean up any of the, or filter out any of the
21 noise that it suspects which is not turbulence, which can happen
22 from a device just being picked up and moved. A device being
23 tapped on for navigating through screens, typing on the keyboard.

24 And then kind of, it filters all of that out. And then
25 applies the additional attributes to that information based on

1 what device provided the recording. So it -- then it can attach
2 to it what was the, what was the flight number, what was the
3 location, what was the time, what was the aircraft type.

4 So then it can normalize that data for other aircraft of that
5 type, or that size, or provide relevant information to aircraft of
6 other sizes. So then after it normalizes all that data, it then
7 makes that information available and kind of it collects multiple
8 readings from multiple aircraft and groups it together to kind of
9 find what's, what's true turbulence and what's not. Or what,
10 what, what do they assume to be true turbulence or not based on
11 their, based on their experience and observation.

12 And then from there, the application itself then will display
13 on its moving map different colored hexagons across the map,
14 indicating severity levels of, of turbulence all the way down from
15 clear, up to severe. And it will display those using a gray, a
16 gray color for indicating clear, up to yellow to be moderate or
17 light moderate, to orange being moderate to moderate severe. And
18 then red being a severe indication.

19 And the application has the ability to interact with any of
20 those, any of those hexagons, to be able to display a little bit
21 more information about the recording that was that was captured,
22 so you can see what aircraft type provided that reading, at what
23 time it was provided, at what altitude that reading was provided.

24 Q. Okay. So maybe I'm dense.

25 A. No.

1 Q. I shouldn't say maybe. I know I'm dense. So let's -- we'll
2 start with that. But how does it know like if, if an EFB was an
3 Airbus 319 --

4 A. Mm-hm.

5 Q. -- and it reported moderate.

6 A. Mm-hm.

7 Q. But 77 right behind them, you know, it may not feel like
8 moderate. How does it -- do you guys see any differences within
9 your fleet? Like, oh, that, that reported moderate, but the heavy
10 coming right behind it didn't report anything. Do you see any
11 differences or is that a problem?

12 A. So we definitely do see differences, and we get pilots
13 reporting differences. The reports that we've received is that
14 generally the application tends to report on the more, more
15 extreme side, so it tends to report more turbulence than what is
16 actually experienced.

17 But for the most part I would say overall it is, it is fairly
18 accurate. But on the, the reports that we do receive where it's,
19 it is inaccurate, we don't really receive reports of this didn't
20 have anything, or this didn't -- this was reported light when it
21 was not, was not light. That -- it's generally the opposite
22 reporting.

23 Q. So it will, it will report it worse than it is.

24 A. Than it is.

25 Q. Okay.

1 A. If, if it is, if it is reporting inaccurately. But I would
2 say generally overall, we get the reports from pilots is, is
3 positive from the, from the application.

4 Q. And when you're going through it, you talked about how the --
5 it'll report anything from clear all the way up to severe.

6 A. Mm-hm.

7 Q. And by clear, do you mean smooth, or you mean like --

8 A. Smooth, I'm sorry. Yes.

9 Q. -- clear of turbulence?

10 A. Smooth, smooth.

11 Q. Okay.

12 A. So not clear of turbulence.

13 Q. Okay. I just wanted to make sure I understood that.

14 A. Yes.

15 Q. Now I know you said it, it takes a Wi-Fi connection --

16 A. Mm-hm.

17 Q. -- to work. So I'm going to assume, which is usually a bad
18 thing, but there's probably places in the world, or even in the
19 U.S. that it doesn't work so well, or do you guys have those
20 blank, blank spots?

21 A. Not so much specific places that are consistently not
22 working, but we do have aircraft in our fleet where it does not
23 work. And for example, our 787 fleet does not have reliable Wi-Fi
24 connectivity in the flight deck, because of the design of the
25 aircraft and the, the -- how the flight deck is kind of, it's a

1 bit of a Faraday cage, so it, it, it doesn't pass through Wi-Fi
2 signals very well. And we don't have wire connections -- wired
3 internet connections in the flight deck.

4 So things like Wi-Fi and GPS for the EFB device do not work
5 very well in the, in the 787, which is why we have -- we disabled
6 the ownship (ph.), or the, the geolocation of your, your specific
7 location on the, on the device, we've disabled that on the 787
8 fleet to mitigate any kind of erroneous GPS indication on the, on
9 the device.

10 Q. So because the 787 is kind of a Faraday cate --

11 A. Mm-hm.

12 Q. -- if you will, do they not have access? That's the wrong
13 word because they have access. I get it. But do they know it --
14 can they not use that?

15 A. They can, they can use the application, they just can't
16 provide recordings themselves. So the -- they can use it for, for
17 turbulence kind of flight planning, but they can't use it to
18 provide any readings of their own.

19 Q. Okay.

20 A. So the, the pilots can, can use it in the, in the flight
21 deck, but once they, once they get into the, the flight deck,
22 they, they generally won't have Wi-Fi connection, so their, their
23 turbulence information will be however, however old it was since
24 they started the flight.

25 So the, the -- if the pilots of that flight are not able to

1 access Wi-Fi, and they're two hours into the flight, their
2 turbulence data from SkyPath is two hours old.

3 Q. Okay. Now I'm going to assume again that the pilots of that
4 fleet, for instance, know that that's --

5 A. Yes.

6 Q. -- a factor, they don't -- I'm going to assume that there's
7 some procedure that they don't rely on that if they're doing a --
8 an eight hour transatlantic or something.

9 A. Correct. Yes.

10 Q. All right. So with that, and you know, it's giving you all
11 sorts of great data, it sounds like.

12 A. Mm-hm.

13 Q. Does it have the ability to put that data -- I know it puts
14 it out in the SkyPath world, but not everybody has SkyPath yet.
15 So does it put it out into a PIREP or does it, does it transmit
16 that information as well into the nav so places that don't have
17 SkyPath? Do you know?

18 A. It, it does have the ability to -- for the user to report
19 PIREP's. And I believe, I believe it was either 2023 or late
20 2022, when they rolled out the ability to record official PIREP's.
21 The, the PIREP's before were just kind of internal to the SkyPath
22 system of you could, you could do a manual reporting of turbulence
23 or some, some other thing like wind shear or something.

24 But in, I think it was 2022 might be 2023, that they rolled
25 out the ability to report official PIREP's that, that get sent to

1 the FAA.

2 Q. Okay. And do you know, have the crews been trained on the
3 ability to do that? Or do you know?

4 A. The -- so we don't have any, any official training on the
5 application, but the, the user guides and release notes are
6 provided to the pilots in pilot bulletins for every new release.
7 So that, that information is communicated out to them on how to,
8 how to find the instructions on how to do that.

9 The, the notification of the feature is communicated out to
10 them, along with the explanation of how to find it in the, in the
11 user guide and the release notes.

12 Q. Okay. And just so United itself doesn't train the pilots on
13 the use of the SkyPath. It's kind of a self -- you guys assume --

14 A. The --

15 Q. -- pilots are going to learn it on their own.

16 A. -- from my understanding, the -- in basic indoc, they train
17 the pilots on, on the EFB as well as the, the applications that,
18 that are used for operational use. But then future releases of --
19 future version releases of the application do not have official in
20 classroom training. It is, it is communicated via pilot
21 bulletins.

22 Q. Okay. All right. Perfect. So for just a moment --

23 A. Mm-hm.

24 Q. -- let's assume you and I are flying -- are pilots, and we're
25 flying, and then pick any aircraft you wish besides the 787.

1 A. Mm-hm.

2 Q. What do we have to do to get our SkyPath up and ready for a
3 flight? Is there anything? Is it -- do I just dock my EFB? Kind
4 of walk me through what a pilot -- what you would have to do to
5 get your SkyPath ready.

6 A. Yeah. So what I did here was -- and actually here, let me
7 start again so you can see. There we go. There's that. Okay.
8 So this is what the screen would look like when, when we open it
9 up. It's just the, just the moving map showing all of the, all
10 the active flights going on connected to the SkyPath servers,
11 providing data.

12 And all the pilot has to do is simply tap into the, the new
13 flight text box in the top left corner. It already prepopulates
14 it. It knows that it's a United Airlines user because I, I logged
15 in using our single sign on feature, which allows the pilots to
16 log in with their, their United credentials. They don't have to
17 remember 50 different passwords.

18 And so they, they log in using the single sign on, and then
19 all they have to do is put in their flight number, which the one I
20 had selected before was 2195. And I say load. It -- there are
21 two 2195, UAL 2195 flights happening. One's going on right now.
22 Then there's another one coming up shortly after, so it, it
23 wonders which one you're, you're looking to load.

24 I'm going to load the one that's actively going on, that
25 lands in -- nope, actually, it might have just landed three

1 minutes ago, but I will load that one. And so then it
2 automatically, it pulls the flight plan from SWIM. It displays it
3 on the moving map here. Comes up with a, a kind of a ride
4 indication card at the front that tells you whether you're going
5 to have a calm flight, jumpy ride, or occasional rough ride.

6 This one looks like it had a choppy ride. Just kind of a, a
7 general overview of what to expect. And they can use that into
8 their -- in their briefings. You can close that out and then it
9 has the, the filed flight plan from start to finish. And all of
10 the, all of the fixes and, and airways along the way on the moving
11 map.

12 And then at this bottom third here they have the, the
13 vertical view where they can see any expected turbulence along
14 their, their climb and descent, as well as their cruise. So they,
15 they can review this. See what, what turbulence they should be
16 expecting along their ride. Incorporate that into their preflight
17 briefing. And, and make sure that the, the entire crew is, is
18 aware for whatever game plan that they're going to operate on, on
19 the day.

20 Q. Okay. So it, so it takes the data that's already out there
21 in SkyPath world --

22 A. Mm-hm.

23 Q. And looks at your flight because you preloaded the flight
24 plan.

25 A. Mm-hm.

1 Q. And then it plots, will it say oh, it's like our GPS in our
2 car will say, oh, you're going from point A to point B, but we
3 suggest this little alternate route because it's less traffic or
4 whatever. Does that do that too?

5 A. It does, it does not provide route optimization. It, it will
6 during your, during your flight, it will provide -- the native app
7 will provide notifications of upcoming turbulence within ten
8 minutes.

9 So it will say expected turbulence in ten minutes and the,
10 the application will show you a notification. If the application
11 is in the background, it will show you a banner notification at
12 the top of your screen, which you can tap on and it will open up
13 the, the application.

14 There, there is also an audio alert as well for upcoming
15 turbulence notifications. And, and the, the native application
16 will, will do that. We also have the SkyPath turbulence
17 information integrated into another application that the pilots
18 use, which is called Flight Deck Pro, where the pilots use that to
19 -- this is the application that the pilots use to get their
20 approach charts, get their operational info in route, as well as
21 get airport information from departure and arrival locations, as
22 well as alternates.

23 So this is, this is the application that pilots are in the
24 majority of their flight, which is why we opted to go with SkyPath
25 integration into this application, because it, it makes it a

1 little more seamless, less, less maps that the pilots have to look
2 at. And just kind of one situational awareness tool that the
3 pilots can use.

4 The -- so if we turn on this weather layer. Let me download
5 that. You'll be able to see the same, the same information that
6 was displayed on the, on the SkyPath app. Now -- why is it not
7 turning -- why is it not coming up? There we go. There we go.
8 So here you can see the same SkyPath turbulence hexagons across
9 the moving map there.

10 And if I were to put in the same flight number, that was
11 Miami to Chicago. You'd see the same, the same routing through
12 the same SkyPath turbulence information there. And the turbulence
13 information displayed can be modified based on altitude and time.
14 So you can, you can filter the data. You can see all the way back
15 until four hours of historical turbulence recordings, and as, as
16 well as the past 30 minutes.

17 So that, that can be modified with this slider here to kind
18 of only see the most relevant data, recorded turbulence data four
19 hours back. Probably doesn't, it's my opinion, probably doesn't
20 give you the most useful information, but the default is, is two
21 hours, and that is the same in the native application as well.
22 Default is, is a two hour timeframe.

23 But can be -- and actually, I'm sorry, the native application
24 can go all the way back to six hours. But like I said, default is
25 two hours, and you can filter it down to as, as recent as 30

1 minutes.

2 Q. Okay.

3 A. The native application also lets you, I'll put down the
4 vertical mode, the native application lets you change the, the
5 filtering of displayed turbulence information based on altitude.
6 So you can -- what it will do, it will default to, to the altitude
7 of your device. So whatever the GPS altitude of your device is,
8 it'll lock into, I believe I think, 2,000 feet above and below of
9 that.

10 But you can use this slider to pick your specific altitude
11 that you want. If you want to just see -- if you know you're, if
12 you're on the ground and you're doing preflight briefing, and you
13 know you're cruising at 35,000 feet, then you can go to 35,000
14 feet and use that to filter out just the turbulence data for that
15 altitude.

16 So you're not getting bombarded with 40,000 feet of, of
17 turbulence information.

18 Q. Okay.

19 A. And so then back in, in the jet FD Pro application, that
20 integration also allows you to select a specific altitude window
21 that you want to see turbulence information for. Just like in
22 the, the native app.

23 The integration into Flight Tech Pro was tested back in fall
24 of last year, and then released out to our pilots I believe at the
25 very end of the year, beginning of January 2024 this year. And

1 that was communicated via pilot bulletin. I know that one because
2 I, I wrote that one. And there was -- we explained the steps on
3 how to, how to get the weather layer to show up, as well as how it
4 would -- or communicating that it would also -- it not only would
5 display turbulence information to you within the app, but if you
6 only had the, the jet FD Pro app open, and you didn't have the
7 SkyPath app open, it would still record your turbulence
8 information from your device and share that with the crowdsourced
9 data.

10 So they didn't, they didn't have to have the other flight --
11 or the other app open if they didn't want to. However, it was
12 recommended that they, that they do keep that that other app --
13 application open because some of the features that are not
14 available yet in the, in the weather layer integration are things
15 like they can't do the PIREP's, they can't do -- they don't have
16 the, the vertical display.

17 It also does not provide the notifications, the turbulence
18 notifications, the upcoming turbulence notifications. So the, the
19 native app, they don't have to have that on the forward display,
20 it doesn't have to be in the foreground, it can be in the
21 background to still provide those notifications.

22 So they can still have this map open in the foreground and
23 using that primarily, and they would still get the notifications
24 from the, from the native app as long as it's open in the
25 background.

1 Q. Okay. Since you've integrated this with the Flight Deck Pro,
2 have you had any concerns, issues brought up? Or was it all
3 kudos, like wow, this is awesome, from the end user, the pilots?

4 A. There was an issue with, with performance of the device that
5 was quickly fixed by, by the SkyPath team, it was he was taking --
6 using up a lot of the available memory on the device when it, when
7 it was running, and would, would use up a bit of the, the battery.

8 So but that was, that was fixed pretty quickly on a, on a
9 back end fix from them. The, the other issue was initially, when
10 we rolled it out and we were testing it, there were issues with
11 the normalizing of data for, for aircraft type in FD Pro, so FD
12 Pro does allow the user to select what aircraft they are in, and
13 the pilots were providing reports stating that they -- an
14 increased level of report stating that the turbulence reported to
15 them or displayed to them didn't seem to coincide with what they
16 were observing.

17 And that was reported back to SkyPath and SkyPath worked with
18 Jeppesen, the, the developer, developer of this application, to
19 correct that, that normalizing issue.

20 Q. Okay.

21 A. Other than that, no, no other major, major issues. One of
22 the great benefits that we've seen from it is the, the
23 availability of data. So back when the SkyPath app was originally
24 rolled out and provided to pilots back in 2019, there was a -- an
25 issue with, with data, or, I'm sorry, with battery usage because

1 of the, the application.

2 And at that time, our flight decks did not have -- were not
3 fully equipped with permanent, permanent power in the, in the
4 flight deck, so pilots can have the ability to always just plug in
5 a cord from their, from their iPad and plug it into the socket in
6 the, in the side of the, the flight deck. So they couldn't, they
7 couldn't charge while in flight.

8 So the available battery was, was like gold to them, so they,
9 they didn't want anything on the device that was going to
10 unnecessarily drain their battery. So there was -- that did
11 impact the adoption rate of, of the application across our, our
12 pilots to begin with.

13 When we had, when we had our, our last device refresh back in
14 2022, when we were rolling out the current version of the iPad
15 that the pilots are using right now, we actually did hear out in
16 the field, a lot of pilots say, like as we were, as we were
17 setting them up with their new device and going through and having
18 them log into all the applications, we did hear pilots saying when
19 we get to the SkyPath app, they'd say, oh, I don't use that. It,
20 it kills the battery.

21 And we had a kind of a coordinated campaign during that
22 refresh because we, we met with every single pilot across the, the
23 system to give them a new iPad and, and we quickly learned that we
24 were hearing that, that feedback. And so we kind of worked
25 together as a team to kind of start a campaign to remind pilots

1 that that has all been fixed. They don't need to worry about that
2 anymore.

3 And now that we have permanent power availability in their
4 flight deck, they don't need to worry about battery drainage
5 anymore. So that was -- we saw an uptick in usage of the
6 application after that as well. Now once we've integrated it into
7 Flight Deck Pro, every pilot uses Flight Deck Pro, they don't have
8 the choice. They have -- they need their, their navigational
9 charts.

10 So when they're using that now, every, every pilot uses this.
11 So every pilot is recording and, and at least providing turbulence
12 readings to, to the pool, the crowdsource pool of information. So
13 even if a pilot doesn't have this weather layer turned on, they're
14 at least providing useful readings to others that are using it.

15 Q. Okay. Great. I appreciate that. Now, it's great, it looks
16 like for the pilots in flight, but there's always the people on
17 the ground like dispatch.

18 A. Mm-hm.

19 Q. And you know, so if you and I were flying and we needed to
20 get a hold of dispatch because we're seeing turbulence ahead,
21 according to our SkyPath app --

22 A. Mm-hm.

23 Q. -- how can I talk with dispatch on the same sheet of music?
24 Because if I'm looking at SkyPath, are they looking at it? How
25 does it work for them? Kind of if you could walk me through that

1 a little bit.

2 A. Yeah, absolutely. So the dispatchers have access to the same
3 information. Let me pull this up. Through the desktop app, and
4 actually as of -- I don't work in the Network Operations Center,
5 so I don't know exactly the, the timetable on this, but all the,
6 all the dispatchers do now also have EFB's themselves.

7 So they have, they have the ability to be looking at the
8 same, the exact same map and display. But the, the desktop
9 application or the web-based application is a little bit more
10 designed for ground based support with, with SkyPath, so this
11 gives them the ability to create a, a desk of all of the aircraft.

12 So I've added flight 2195 to my desk, and I can add as many
13 aircraft as I want, and they will all show up here. And I can see
14 their, their expected turbulence along their route. This flight
15 obviously landed, so it doesn't, it doesn't show where the
16 aircraft is at the moment, but it would show an indicator where
17 the, where the aircraft is along the route of flight.

18 I can grab another flight to display that. That's flying --
19 a flight that is in the air right now. It's like, which one is
20 that? That guy. This is UAL 1633. Sorry, sorry. I searched for
21 the flight number in the search bar in the top left. It filters
22 it down and shows me that that flight is an available one to
23 select.

24 And I can click this button here which will add it to my
25 desk. Now I've added that, and I can select that one to highlight

1 the -- their flight path. Kind of get a better visual of where
2 they are on the map at the moment. And I can expand this drawer
3 here to see this is where they're at in their route of flight.
4 Looks like they are, they are smooth sailing, at least according
5 to what's available within the SkyPath application.

6 So as you can see these, these light gray areas, those are
7 areas of, of smooth air, and then these darker areas here those
8 are areas of no available information. So there hasn't been a
9 flight recording with SkyPath over that, over that path across the
10 ground and at that altitude in the past, I believe, two hours.
11 Because that's what our filter is set at.

12 Q. So they can actually -- and I understand dispatchers are
13 preparing varying amount of flights.

14 A. Mm-hm.

15 Q. They could have unlimited amount of flights down the left
16 side of their desk and monitor them all. And I don't mean that
17 and you know, they're sitting there staring at them.

18 A. Mm-hm.

19 Q. But they can actually pull up each one of them quickly,
20 immediately.

21 A. They, they would -- I mean, as quickly as, as I could
22 navigate through these tiles that are on the left side here, but
23 they also do receive the same ten minute out notifications for
24 each of the flights that are in their -- on their desk.

25 Q. So if they have five flights and four of them are getting all

1 these notifications, they're getting the same notification.

2 A. They will get the same notifications and the -- on their
3 screen here.

4 Q. And it's just a -- is it a visual or is it an actual like --

5 A. That --

6 Q. -- they use an audible, right?

7 A. That I don't know if they, if they've integrated an audible
8 notification on the on the desktop app. That I'm not positive on.

9 Q. Okay. Now I know it sounds like it's, I don't want to say
10 new to dispatch, but, but the EFB's new obviously.

11 A. Mm-hm.

12 Q. Can they do the same thing on the EFB's, have multiple
13 flights? Or is that just limited to one --

14 A. That that's just limited to one. That's why I said the, the
15 web-based application is better designed for ground support.

16 Q. Mm-hm.

17 A. Because the, the EFB application is really just to -- you can
18 observe all of the data, like all of the recorded tiles and
19 everything, but to be able to observe multiple flights, that's
20 really just reserved for the web-based application. You can, you
21 can track one flight on the EFB at a time, or you could -- you can
22 see, you can see all of the other flights on here. It shows the
23 aircraft symbols across the map, and you can tap on any one of
24 them to see information about that aircraft. But to actually
25 track it and get notifications for, for multiple flights, that's

1 where you need the, the ground based application.

2 Q. And since dispatch has access to all of that, has there been
3 any good feedback from it? Like is it user, user friendly for
4 them? Is it something, oh, it's just one more thing I have to
5 look at. Or have you heard?

6 A. So from what I've heard from Nathan Holderman (phonetic), who
7 is our head meteorologist for the Network Operations Center. He
8 is our NOC counterpart working on the SkyPath integration and, and
9 partnership with us.

10 What he has shared with us is that this edition of the, of
11 the dispatcher desk functionality was a great improvement. They,
12 they did not have that prior to 2022, but we worked with them, our
13 development team worked with SkyPath and got that, that
14 integration rolled out.

15 Q. Okay. All right. Perfect.

16 A. And I'm sorry, the other thing I wanted to add was that I'm,
17 I'm not positive if this has been rolled out yet, but we also,
18 we're working on a -- an API to allow the dispatchers to log into
19 this application and it automatically know what flights are on
20 their desk so they don't even have to search for them. It already
21 -- it just populates them based on what their, their desk number
22 is.

23 Q. Okay.

24 A. I know that that was, that was an initiative that was -- that
25 Nathan was -- and our digital technology team was working on with

1 SkyPath. I'm not sure if that was that was ruled out yet or not.

2 Q. Okay. All right, great. I know we've been talking for about
3 15 minutes. You got to be tired of looking at me.

4 MR. ETCHER: So I'm going to pass it over to Paul.

5 MR. JANOWIAK: Okay.

6 MR. ETCHER: Because he probably has really good questions.
7 But do you need a break? Do you want to get a drink? Use the
8 restroom, anything like that before I pass it off to Paul?

9 MR. JANOWIAK: I think I'm okay.

10 MR. ETCHER: All right. Go ahead, Paul.

11 MR. SUFFERN: Yeah. Thanks, Shawn. Thanks John. This has
12 been super informative. Just all the different information here,
13 so I just had a couple of follow-ups and maybe a little bit more,
14 more details and stuff.

15 BY MR. SUFFERN:

16 Q. You mentioned the timeframe of four hours and two hours is
17 like y'all's default there.

18 A. Mm-hm.

19 Q. How real time is it? So I'll just, as an example, say you
20 have a SkyPath user, it doesn't have to be United. It could be
21 somebody else. And you're say 15 minutes of trail, something like
22 that. How quickly will, if this one is 15 minutes ahead gets some
23 type of turbulence, how quickly will that show up on the SkyPath
24 map to be able to (indiscernible)?

25 A. Yeah. So I, I'm not positive on the exact time it takes for,

1 for a recording to go from the device to their servers, back to
2 being displayed for everyone. But my, my belief is that you
3 would, you would get that information before reaching that, that
4 next aircraft's location.

5 So you would have that. That would be available within 15
6 minutes. One thing I, I do know is that the -- when a device
7 records turbulence, it will display to the user a turbulence
8 recording immediately. And -- but other devices may not be
9 displayed that exact same reading.

10 It, it displays it immediately to the user to let them know
11 that the application is working and that it has successfully
12 recorded or has successfully captured a turbulence recording so
13 that they know that their device is working and that their, their
14 application is working.

15 But what it also has to do is there is a, there's an
16 algorithm on the device within the application itself, that, that
17 will filter out any noise like taps or, or user shaking or
18 something like that. But what, what will also happen is then that
19 recording gets sent down to the SkyPath servers.

20 It will also check to see if the other, the other iPad on
21 that flight recorded the same exact thing. Will match those two
22 together, and if it doesn't have a -- if it doesn't get the same
23 recording in both -- if both iPads are connected to the internet
24 are using -- have the SkyPath app open or the -- some sort of
25 weather layer integration from another app open, and they're both

1 providing turbulence readings to the SkyPath server.

2 And one app shows moderate turbulence and the other one shows
3 clear air or smooth air, sorry. That will most likely get thrown
4 out as noise. So the device that recorded turbulence will show
5 that to the -- to that user. Once it gets to the server, if it
6 gets thrown out as noise, then that, that indication of turbulence
7 that it recorded behind you will end up getting removed and will
8 never have been displayed to any other users.

9 So it does have that kind of data validation built into the
10 device itself, but also on their server end because there are
11 multiple devices providing information to their server location,
12 that it can use, it can use more info to get an even more accurate
13 depiction of the current turbulence environment.

14 So then that information is what's displayed back, but I, I
15 believe it is -- it would be available as long as it's an accurate
16 -- or it perceives it as an accurate turbulence recording, it
17 would display that within minutes.

18 Q. Okay. Just to step back to the integration thing, and just
19 help me understand, you know, pilot --

20 A. Mm-hm.

21 Q. -- in the cockpit there, as soon as I put my EFB down, I'm
22 sure you guys -- do you guys have little cradles or handles for
23 the --

24 A. Yes. They're -- so there are EFB mounts. Whether they are
25 what we call LTRM's, long term removable mounts, or suction cup

1 mounts that go into the window, all, all of our aircraft do have -
2 - they utilize the -- we -- I don't have it on my production
3 device, but the pilots use -- are provided a pivot case and there
4 are matching pivot mounts in all the aircraft.

5 And so they mount the device and as long as it is stable, I
6 think it's for either 30 seconds or a minute, there will be a
7 notification on here saying that your device is stable and is now
8 -- is calibrated and is recording turbulence.

9 Q. Okay. So will that come up as a notification for the pilots,
10 so they, they know?

11 A. So that, that comes up as a, as a notification in the, in the
12 native app, but it does not show up as a notification when using
13 the, the weather layer integration.

14 Q. Okay. And then just one more thing on the initial one, I'm
15 just trying to understand this process.

16 A. Yeah, yeah.

17 Q. So they, they put the EFB, it's loaded there for 30 seconds.
18 They don't, let's just say they don't have anything loaded on
19 that --

20 A. Mm-hm.

21 Q. -- on the EFB at the time. As soon as they pull up SkyPath,
22 or they pull up the charts with the weather layer, that will
23 automatically kick into SkyPath, starting to record data, and
24 things like that.

25 A. So I don't -- I'm not 100 percent positive on this, but I

1 don't believe that you actually have to select a flight number for
2 it to record turbulence. If it notices, if the application sees
3 that your device is at 35,000 feet and it's stable, and the app is
4 open in the foreground or the background, it will record
5 turbulence to that, I believe it is a ten mile diameter, hexagon,
6 1,000 feet, and 1,000 foot block of altitude space.

7 That's what each of these hexagons, the attributes are of the
8 of each of those different disks.

9 Q. Okay. This is great. So just walk me through -- I can
10 understand how the application can, if you're flying along at
11 cruise, 35,000 feet, you're going to be there for the next two
12 hours.

13 I can understand how the application works as far as giving
14 you a ten minute heads up.

15 A. Mm-hm.

16 Q. How does it know when you're in descent? Say you're
17 descending into, you know, Denver or something like that, and you
18 have this descent profile from 35,000 feet over the next 20
19 minutes down to 6,000 feet. How does -- is it taking your flight
20 profile and it's picking out the altitudes, you know, 2,000 feet
21 either side, or is it assuming you're still at 35? Or how does it
22 know to give you a ten minute notification in descent or even, you
23 know, on departure, I guess?

24 A. So I would have to remind myself on this, I'd have to brush
25 up through the user guide, but I believe that notifications are

1 disabled in climb and descent because they, they wanted to remove
2 additional distractions during those phases of flight. And so I'm
3 not 100 percent positive on that, but I believe that they are
4 disabled during the climb and descent phases.

5 Q. Okay.

6 A. And they recognize that based on the, the flight plan that's
7 been entered into the -- or that it's been pulled from the, the
8 flight number.

9 Q. Okay. You mentioned several times when John was asking the
10 questions about how you all have rolled out the EFB's and each
11 pilot got a new one. And hey, the SkyPath app is, is working
12 better now.

13 A. Mm-hm.

14 Q. Is there an expectation from United for the, for the pilots
15 to be using that information in some form for their flight, or is
16 it kind of supplementary to all of the other tools that they have?

17 A. So I mean we, we provide the pilots with a lot of different
18 weather tools and, and a lot of tools in their tool, their tool
19 belt, so we don't mandate that they use absolutely all of them for
20 each and every flight, but we, with the, the standards and the,
21 the rigorous standards that we have for the pilots that we do
22 hire, we assume that the -- we, we tell them about here are all
23 the tools that you have, and we trust that they will be using
24 everything at their disposal to make sure that their flight is as
25 safe as possible.

1 Q. You mentioned earlier about having the indoc training and,
2 and things there as well. Would you be the person to ask about
3 how SkyPath is rolled out to dispatchers and meteorologists, you
4 know, and how they're trained or made aware? Or would that be
5 kind of a Nathan question?

6 A. That would probably be more of a Nathan question.

7 Q. Okay.

8 A. Yeah, he has a -- he's got the better understanding of their
9 day-to-day operations and what their workflow looks like. We --
10 and my, my team primarily provides the pilots with, with the tools
11 that are out there. So the, the things that are out in the market
12 that, that we can get the approval from finance to, to go and, and
13 purchase and then we work closely with our standards department
14 and our training department to determine how, how it is trained to
15 the pilots and what is what is etched in as, as standard operating
16 procedure or is required, or what is just an extra tool that's
17 available.

18 Q. Okay. Is there a mechanism that United has as a user of
19 SkyPath to provide feedback to SkyPath? Hey, we'd like to see
20 this, or we'd like to see that, or things like that. How, how
21 does that process work?

22 A. So there is a, a support email address that is available from
23 the SkyPath team that's monitored 24 hours a day, 365 days a year.
24 And we also have monthly, monthly meetings with our account
25 manager and the, the product owner of SkyPath.

1 And I believe every few years they have a customer action
2 board where they invite the users and, and potential users of
3 SkyPath to get together to talk about new features, provide
4 feedback and kind of give us a direct line to them to kind of tell
5 them, hey, this is what we, this is what we like. This is what we
6 don't like. In kind of a collective effort.

7 Q. Okay. And then last question for now, you mentioned the, the
8 787 and having that Farraday cage. Are there any other aircraft
9 where maybe not similar issues, but have issues with using the
10 SkyPath app and how it works?

11 A. Not specifically the SkyPath app. We have had reports of GPS
12 issues with the, with the EFB or the pilot iPad in instances. And
13 we, we believe it is related to when the, the window heat is in
14 use. We believe that the, the electrical current from that may
15 maybe -- it may interfere with the, the GPS sometimes.

16 And also based on how the device itself is oriented, if the,
17 if the GPS antenna is pointed down when the, when the windshield
18 heat is on, that could result in more interference than if the, if
19 the GPS antenna is pointed directly at a, at a satellite and, and
20 there's no, no windshield heat on.

21 But we don't have any studies or any kind of official data
22 that points to -- to point to, to that. It's just those are the,
23 those are what we believe the anecdotal situations have kind of
24 followed.

25 Q. Okay. This has been super, John. Thank you so much.

1 MR. SUFFERN: That's all I got for right now.

2 MR. ETCHER: All right, thanks. And yeah, John, you've been
3 fantastic. My brain is trying to absorb it all. Sadly, it's the
4 size of a pea, so there's only so much it can absorb. But I
5 appreciate it. It's been great. I just have a very few
6 questions.

7 MR. JANOWIAK: Yep.

8 MR. ETCHER: But do you need a break before we start round
9 two?

10 MR. JANOWIAK: I think I'm okay.

11 MR. ETCHER: Okay.

12 MR. JANOWIAK: Yeah.

13 MR. ETCHER: Round two is always quicker.

14 MR. JANOWIAK: Okay.

15 MR. ETCHER: I have yet to have it go longer than round one.
16 And like I said, I have just such a few questions --

17 MR. JANOWIAK: Yep.

18 MR. ETCHER: -- because you've been full of information and
19 thank you for letting us record, because there's no way I'd retain
20 all this without it. So I appreciate that.

21 BY MR. ETCHER:

22 Q. I know you talked about in the, in the cockpit, the, the
23 iPads. I'm don't want to say they talk to each other --

24 A. Mm-hm.

25 Q. -- but SkyPath compares them to make sure there's good data.

1 A. Mm-hm.

2 Q. But what if one of the pilots like to have, I don't have
3 enough battery. I'm powering this thing off, or I just don't want
4 it on right now. So now you only have one.

5 A. Mm-hm.

6 Q. And let's say that one drops or the FO's nervous. He's
7 sitting there tapping to the music in his head, or whatever the
8 case may be.

9 A. Mm-hm.

10 Q. What does it compare to? Or does it just assume that's
11 turbulence? Or is that assuming that's kind of algorithmically,
12 that can't be, so therefore --

13 A. So they, when I say they, the SkyPath team, they are very
14 proud of their, their algorithm and they claim that it, it has the
15 ability to filter out those types of things like it, it, it
16 recognizes what a, what a tap is like, what, what typing is like.
17 Like a pilot could sit there and just, just do this, and it may
18 display to that user that, oh, there's turbulence. I'm getting,
19 I'm getting breadcrumbs of turbulence behind me as I go through.

20 But once it gets down to the SkyPath servers, they -- their
21 team claims that their, their algorithm on their server has the
22 ability to filter all that stuff out and will not display to other
23 users.

24 Q. Okay. Now also some of your flights have --

25 A. Mm-hm.

1 Q. -- more than two pilots on them.

2 A. Mm-hm.

3 Q. You know, sometimes pilots or United employees might be
4 (indiscernible) somewhere, take their work EFB for whatever
5 reason.

6 A. Mm-hm.

7 Q. Does it, if they get on the internet, does it look at that
8 too?

9 A. Yes. I actually, when I'm, when I'm sitting in the back of
10 a, of an aircraft going from one place to another, I'll -- when I
11 fly out this evening, I'll probably have SkyPath open, just
12 because, one, I, I like to have it just for my own sake of like,
13 oh, there's going to be turbulence coming up. I need to go to the
14 bathroom before that. And then I need to come back down and sit
15 down within the next ten minutes.

16 But it will, it will record turbulence as long as the device
17 is stable, even if it's in the back of the aircraft, it will --
18 you could have a United employee in every seat on the aircraft and
19 it will record from every, every device, I think. In their, in
20 their eyes they, they believe the more recordings, the better.
21 The more, the more accurate the information will end up being.

22 Q. Okay. Now I know this is probably an odd question, but does
23 the cabin crew have access to SkyPath, other than in the initial
24 briefing with the pilots?

25 A. They do not at this current time.

1 Q. Okay.

2 A. We have discussed that. The, the SkyPath team just recently
3 rolled out a -- an application for the iPhone as well as for the
4 Apple Watch. And that is something that we are currently working
5 on as part of a turbulence working team that we have here at
6 United, to determine how we want to proceed with that.

7 One of the skepticisms or concerns, I guess, from the, from
8 the pilot group is if we just added it to the flight attendant
9 iPhones, or their what we call their linked devices, if we just
10 added it on right now and they had the same access to it that the
11 pilots had, they'd be more concerned, they'd be more preoccupied
12 looking at it on their, on their phone instead of doing their job
13 that they need to be doing, which it is at this -- currently, as,
14 as our operation stands, it is the responsibility of the pilots to
15 be observing turbulence information and keeping the flight
16 attendants safe.

17 And one of the, one of the options that we have discussed and
18 been in communication with the SkyPath team about, is having the
19 ability to -- for the pilots to share turbulence notifications to
20 crew members. But we have not rolled anything out like that yet.
21 We are -- there'd still be some procedural steps that would need
22 to be put in place on what does that mean for the, the flight
23 attendants, what -- how often should a -- should the pilots be
24 sharing that information with the, the flight attendants.

25 And then how would the, how would the app look for the, for

1 the flight attendants. There was some, some demos that we were
2 provided that we provided feedback to the SkyPath team saying we
3 like this, we don't like that. Make some, make some tweaks here
4 come back to us and we'd like to look at that in the future. But
5 it is, it is something that we are considering, just have not,
6 have not rolled out yet.

7 Q. Okay, perfect. The last question I have, I know when you and
8 Paul we're talking, you said that the -- during climbs and descent
9 that the alerts are disabled.

10 A. Mm-hm.

11 Q. So during that descent phase, and this event kind of occurred
12 during a descent, if you will. They definitely were down lower
13 than they were. Do they have to be looking at the app to see or
14 on the Flight Deck Pro to see that there's turbulence ahead,
15 because they're getting alerts? Or does it not even display
16 turbulence ahead of them as they're descending?

17 A. It will display turbulence ahead of them if they have the,
18 the application open. I guess if we could, I would like to pause
19 just to, just to look that up so I'm not --

20 Q. Oh, sure.

21 A. -- telling you the, the wrong information here. I could
22 probably pull that up real quickly in the user guide. So I
23 haven't, I haven't found it yet, but the more I'm thinking about
24 it, I think I may have been incorrect on the fact that it doesn't
25 provide notifications on climb or descent, the entire climb or

1 descent. I believe the correct -- there it is. I believe the
2 correct operational window is just above 10,000 feet.

3 So it does not provide notifications, let's see, because yes
4 the, the SkyPath app will not even record turbulence below 10,000
5 feet. It only starts recording above 10,000 feet.

6 Q. Okay. So it has a (indiscernible) cockpit rule for itself
7 then, I guess.

8 A. Yes.

9 Q. Okay.

10 A. So sorry for that misinformation.

11 Q. Oh no, and thank you for clarifying it, because that, you
12 know, you can't expect, I can't expect you to know everything
13 about it, so it's, it's -- I appreciate you looking it up.

14 A. Mm-hm.

15 Q. And clarifying that.

16 MR. ETCHER: Like I said, that was my last question. I'll
17 see if Paul has anything further?

18 MR. JANOWIAK: Oh, even, even more, more accurate
19 information. I just found it. So turbulence readings will start
20 at 5,000 feet. But turbulence cautions will not start until
21 10,000 feet.

22 MR. ETCHER: Okay.

23 MR. JANOWIAK: Yep. This table placed out entirely here, so
24 PIREPS are only operative above 10,000 feet. Data history
25 default, two hours. Yeah. The -- each tile, hexagon tile is ten

1 miles, but ten by ten miles and 1,000 feet.

2 MR. ETCHER: Okay.

3 MR. JANOWIAK: Yes.

4 MR. ETCHER: And, and just for clarification that 5,000 and
5 10,000 feet, is that AGL then I assume? Or is it MSO?

6 MR. JANOWIAK: MSO.

7 MR. ETCHER: Okay. So it will record in theory as soon as it
8 comes off the deck in Denver?

9 MR. JANOWIAK: I believe -- let's see. That is a good
10 question because I, I would believe. So I'm not positive on that.
11 But my initial assumption would be yes, because the only, the --
12 they did add the capability for pilots to manually put in their
13 pressure altitude, but prior to that the only, the only altitude
14 that it could record, or the only altitude it could know was GPS
15 altitude.

16 MR. ETCHER: Mm-hm.

17 MR. JANOWIAK: So I guess I will say I am, I'm unsure about
18 that, whether it is AGL or, or, or MSL, of those limitations. But
19 yeah, I am not, I'm not certain whether the app knows you were
20 taking off from a mountainous location, and knows that you started
21 at, at 5,000 feet. So don't, don't start notifying for 10,000
22 feet AGL.

23 So I guess I will have to say I do not know.

24 MR. ETCHER: All right.

25 MR. JANOWIAK: Yeah.

1 MR. ETCHER: That's okay. I appreciate it. Appreciate you
2 trying to find it.

3 MR. JANOWIAK: Yep.

4 MR. ETCHER: Very helpful. As I said, that was my last
5 question. I'll see if Paul has anything else.

6 MR. SUFFERN: Yeah. I just have, have one and it's a two
7 parter.

8 MR. JANOWIAK: Okay.

9 MR. SUFFERN: So I guess I could split it into two.

10 BY MR. SUFFERN:

11 Q. Is there anything that you, first of all for the SkyPath
12 tool, anything that, man, I wish they had that in the tool, either
13 natively in the SkyPath app or integration into the flight charge
14 thing that the pilots are using all the time, is there anything
15 you wish that they had?

16 A. Well, definitely the -- I'm very -- or much anticipation for
17 the inclusion of notifications into the, the weather layer
18 integration. That is coming out in the next release of the Flight
19 Deck Pro application, the FD Pro. And that, that should be
20 available here in I think the next quarter, I think.

21 And -- but as, as for the application itself, I would say not
22 at this time. I do -- I like the simplicity of it. There's a
23 whole lot of things that I, I could say like, oh, like, like the
24 route optimization that we were talking about earlier, the ability
25 to communicate directly with dispatch right from the application.

1 That would be an interesting concept, but I do like the simplicity
2 of the app because that's, that's one thing that we're, we're kind
3 of focusing on right now with our EFB program, is the balance
4 between value and distractions.

5 We want to make sure that we are giving just enough
6 information to add to the safety or to the, the ease of use, but
7 not to overload or distract.

8 Q. Okay. And then I guess part two to that question, is there
9 any, since you work with EFB's, and flight deck, and stuff like
10 that, is there any weather tool that you wish, as working on that
11 program, that you wish, you know, you had to help the pilots be
12 safe or flight crews to be safer, is there any -- outside of
13 SkyPath, is there other weather tools or anything like it, you
14 wish --

15 A. There is another weather -- or another turbulence source
16 that, that we are working with right now. We -- there's the IATA
17 turbulent source that I believe something like 300 or so of our
18 aircraft report to, which we are looking to also integrate into
19 the Flight Deck Pro application as another weather layer, which I
20 really think just the, the more, the more sources of information
21 that we can use to aggregate together to provide the most accurate
22 picture possible, the better.

23 Q. Okay. All right.

24 MR. SUFFERN: That's all I got, John.

25 MR. ETCHER: All right. Thanks, John. You've been very

1 educational and that's what I asked for was an education. You
2 gave me a thesis education, so I appreciate that. This is
3 excellent. Is there anything you can think of that we didn't
4 cover that you're like, oh, this might help too.

5 MR. JANOWIAK: I don't believe so. Yeah, one of the, one of
6 the things I wanted to make sure that we communicated was how the,
7 how the application filters out for noise, or at least to what
8 it's been communicated to me, because I obviously didn't develop
9 the algorithm myself, but how it filters out for noise.

10 And, and then just the, the way that the pilots are using it
11 today, so I think, I think I'm all set.

12 MR. ETCHER: Okay. Well with that, we will call this
13 concluded at 10:19 local. All right.

14 MR. JANOWIAK: Okay.

15 (Whereupon, at 10:19 a.m., the interview was concluded.)
16
17
18
19
20
21
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25

CERTIFICATE

This is to certify that the attached proceeding before the
NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: UNITED AIRLINES FLIGHT 1890
TURBULENCE ENCOUNTER ENROUTE TO
NEWARK, NEW JERSEY ON FEBRUARY 10, 2024
Interview of John Janowiak

ACCIDENT NO.: DCA24LA097

PLACE: In person

DATE: April 16, 2024

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.

A black rectangular redaction box covering the signature of Sandra Hirsch.

Sandra Hirsch
Transcriber

JOHN JANOWIAK AMENDMENTS

The following amendments were requested by Mr. Janowiak:

Pg. 14 Line 15 - This should be "moderate-occasionally-severe". The SkyPath App does not have a symbol for strictly severe turbulence.

Pg. 14 Lines 16-18 -

...up to severe. And it will display those using a gray, a gray color for indicating clear, up to yellow to be moderate or light moderate, to orange being moderate to moderate severe. And then red being a severe indication.

Should read:

up to severe. And it will display those using a gray, a gray color for indicating clear, up to yellowish-orange for light-moderate, orange for moderate, and red for moderate-occasionally severe.

Pg. 19 Lines 19-20 - I was mistaken, this should be removed. This functionality is still in development.

Pg. 19, Line 21 - "...before were just kind of..." with "are"

Pg. 19, Line 24- Pg. 16 Line 1

...But in, I think it was 2022 might be 2023, that they rolled out the ability to report official PIREP's that, that get sent to the FAA.

Should be removed:

I was mistaken, this should be removed. This functionality is still in development.

Pg. 24 line 19 and Pg. 25 line 6 "jet" should be "Jepp"

Pg. 36 Line 25 - Pg 37 Line 6

"...So I don't -- I'm not 100 percent positive on this, but I don't believe that you actually have to select a flight number for it to record turbulence. If it notices, if the application sees that your device is at 35,000 feet and it's stable, and the app is open in the foreground or the background, it will record turbulence to

that, I believe it is a ten mile diameter, hexagon, 1,000 feet, and 1,000 foot block of altitude space."

Should be removed:

"This response is incorrect. The SkyPath application will not record turbulence nor notify the user of turbulence until a flight number has been entered and the flight begins. This is meant to mitigate unnecessary battery drain."

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

* * * * *

Investigation of: *

*

UNITED AIRLINES FLIGHT 1890 *

TURBULENCE ENCOUNTER ENROUTE TO * Accident No.: DCA24LA097

NEWARK, NEW JERSEY ON *

FEBRUARY 10, 2024 *

*

* * * * *

INTERVIEW OF: MARY CEGLAREK, DISPATCHER

United Airlines

United Airlines
Network Operations CenterMonday,
April 15, 2024

APPEARANCES:

SHAWN ETCHER, Operational Factors Investigator
National Transportation Safety Board

PAUL SUFFERN, Meteorologist Investigator
National Transportation Safety Board

JIM LAROSA, Central Air Safety Committee Chair
ALPA

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I N T E R V I E W

(11:06 a.m.)

1 MR. ETCHER: Well, good morning. It is April 15th, 2024.
2
3 It's 11:06 local time. My name is Shawn Etcher. I'm an
4 Operational Factors Investigator with the NTSB. So all that means
5 is I look forward of everything -- forward of the cockpit door and
6 how it interacted with the crew. You're here because you're a
7 dispatcher. You interact with the crew. You help them as well on
8 the flight. So you're going to educate me.

9 MS. CEGLAREK: Okay.

10 MR. ETCHER: And I hope you're willing to educate me. But
11 thankfully I don't have to know everything. I get a lot of smart
12 people working with me on this one and I want to have them go
13 around the room here in just a minute and introduce themselves.
14 But we usually have people from the FAA -- we don't on this one,
15 we have people from ALPA, sometimes we have people from the
16 company -- the operator -- to help educate me as well. And so
17 they're the smart ones. I just get to kind of put together
18 everything they say to try and draw a better conclusion, a better
19 understanding.

20 So you're -- you being here and educating us is awesome. I
21 appreciate that. I know it's taking time out of your day, but I'm
22 hoping you could educate me and I'll -- when I'm done talking with
23 you I could be a licensed dispatcher, go take the test and me a
24 genius of all. How's that?
25

1 MR. ROTHMANSKY: We're hiring, so.

2 MR. ETCHER: See --

3 MR. ROTHMANSKY: You're a NOC.

4 MR. ETCHER: But I'm going to go around the room and have the
5 other two guys introduce themselves and we'll start with Paul.

6 MR. SUFFERN: Sure. So, hey, Mary, I'm Paul Suffern. I'm a
7 meteorologist investigator with the NTSB, so Shawn looks at
8 everything forward of the cockpit. I look at the weather side of
9 things and just to try and describe what's going on with the
10 weather with an accident or incident or anything like that and
11 just kind of learn. So, before working at the NTSB I worked up in
12 Alaska --

13 MS. CEGLAREK: Okay.

14 MR. SUFFERN: -- with the crabbers and the aviation community
15 up there so.

16 MS. CEGLAREK: So, good to meet you.

17 MR. SUFFERN: Yeah, you too.

18 MR. ETCHER: Thanks Paul. And Jim.

19 MR. LAROSA: Jim LaRosa. I'm the Central Air Safety
20 Committee Chair for ALPA.

21 MS. CEGLAREK: Okay.

22 MR. LAROSA: I'm also a line check pilot in quality control
23 for the Triple Seven. I also did 737, same role, before switching
24 over.

25 MS. CEGLAREK: Okay. I used to be in IO scheduled line

1 checks.

2 MR. LAROSA: There you go.

3 MS. CEGLAREK: When I first started with United 35 years ago.

4 MR. LAROSA: So we share the same pain. Enjoy.

5 MR. ETCHER: That is everybody that's going to be asking you
6 questions this morning. So --

7 MS. CEGLAREK: Okay.

8 MR. ETCHER: -- I don't even want to say asking questions, I
9 know you're just going to give us all sorts of knowledge and with
10 -- the only question I might have to say is hold on, can you slow
11 down, I'm trying to absorb it here. All right?

12 MS. CEGLAREK: I'm not Jim Detwiler.

13 MR. ETCHER: But just for the record, in case you were
14 wondering, we're looking at that turbulence event that occurred
15 back in February. It was the -- February 10th near Kelsey, New
16 York going into Newark and that's why you're here because you were
17 working that event at some point. So you're going to educate me a
18 little bit as well.

19 MS. CEGLAREK: Okay.

20 MR. ETCHER: As part of our process though we always record,
21 and we take that recording and send it out to be transcribed.
22 That transcript will become part of the public docket. The
23 recording itself will not. So, you don't have to worry about
24 hearing your voice on the 10:00 news at night or anything like
25 that. But the transcript itself will become part of our public

1 docket.

2 MS. CEGLAREK: Okay.

3 MR. ETCHER: And as part of our policy when we get the
4 transcripts back, we can send them to your representative via e-
5 mail so he can review them with you if you'd like to add an
6 addendum to it or anything.

7 We won't change your words, but if you need a -- if you think
8 there's something that needs a little bit more clarification we
9 can attach that right to it because we want to learn everything we
10 can even smallest detail helps me a lot more than you can even
11 imagine.

12 MS. CEGLAREK: Okay.

13 MR. ETCHER: So, are you okay with us recording and having
14 them transcribed?

15 MS. CEGLAREK: Yes.

16 MR. ETCHER: All right. Thank you very much. As part of our
17 regulations you actually can have a representative with you. Do
18 you wish to have one?

19 MS. CEGLAREK: I've got Ivan here.

20 MR. ETCHER: All right. And Ivan, for the record, could you
21 introduce yourself as well?

22 MR. ROTHMANSKY: Sure. My name is Ivan Rothmanskyy. I'm a
23 Flight Dispatcher for United Airlines. I am also the PAFCA safety
24 chair and ERC Primary Association Member.

25 MR. ETCHER: All right. Thank you very much. So just so you

1 know there will be two rounds of questions. I usually start.
2 You're going to get sick and tired of talking with me so then I'll
3 pass you off to Paul because he'll probably ask the really good
4 questions and then I'll pass it off to Jim and he'll probably even
5 ask the bigger, deeper questions yet.

6 MS. CEGLAREK: Okay.

7 MR. ETCHER: And then round two is always a lot quicker so
8 you don't have to think you get through round one after three
9 hours and you have another three hours to go. It's never like
10 that.

11 MS. CEGLAREK: Okay.

12 MR. ETCHER: So, once you make it through round one, round
13 two is always quicker. It's usually just follow-up questions.

14 MS. CEGLAREK: Okay.

15 MR. ETCHER: Alrighty?

16 MS. CEGLAREK: Mm-hm.

17 MR. ETCHER: During this whole process if you need to
18 reference anything, feel free, this is not a -- this is not a
19 check right, we just want to learn.

20 MS. CEGLAREK: Okay.

21 MR. ETCHER: If you need a break, just say so. It's
22 perfectly fine. I'll ask every now and then as well, but if you
23 need a break for anything just say so and we'll take a break.
24 It's not a problem. It's easy to hit pause and then hit resume
25 when you come back.

1 MS. CEGLAREK: Okay.

2 MR. ETCHER: Alrighty?

3 MS. CEGLAREK: Mm-hm.

4 MR. ETCHER: Any questions before we get started?

5 MS. CEGLAREK: Nope.

6 MR. ETCHER: Alrighty. One of my main rules that I always
7 tell people, unlike check rides and tests and everything like that
8 if you don't know an answer, I don't know works perfect.

9 MS. CEGLAREK: Okay.

10 MR. ETCHER: So, don't think you have to have an answer. If
11 you don't, you don't and that's okay. We -- I love facts,
12 sometimes I'll ask for an opinion, sometimes you might give me an
13 opinion, just let me know if it's an opinion.

14 MS. CEGLAREK: Okay.

15 MR. ETCHER: So, when I'm reading this a month from now I
16 know, that's an opinion, okay and then I can help -- it'll help me
17 later on as well.

18 MS. CEGLAREK: Okay.

19 MR. ETCHER: Alrighty? But I always start every interview
20 with the toughest questions.

21 INTERVIEW OF MARY CEGLAREK

22 BY MR. ETCHER:

23 Q. Can you please state your name and spell your last?

24 A. Mary Ceglarek, C-E-G-L-A-R-E-K.

25 Q. Perfect. And what is your job title?

1 A. Flight Dispatcher.

2 Q. For?

3 A. United.

4 Q. United. All right. And how long have you been at United?

5 A. Thirty-five years.

6 Q. Always being a flight dispatcher?

7 A. No, the first year I was in RES and then I did a year in crew
8 scheduling, scheduling LCA check rides and then I was a flight
9 information coordinator for two years and then the rest was all
10 dispatch.

11 Q. Okay, perfect. Alrighty. What FAA certifications do you
12 hold?

13 A. Just dispatch.

14 Q. Okay.

15 A. I have my license if you need that.

16 Q. No, nope, I don't need it. I just, you know --

17 A. Okay.

18 Q. -- sometimes a dispatcher is like, oh, yeah, I'm type rated
19 in 37 different aircrafts. I just want to know what your
20 references are and you're a dispatcher which is perfect because
21 then you don't get pilot stuff intertwined as well so I appreciate
22 that. Can you recall when the last, most recent training event
23 had occurred for you?

24 A. I had some e-learning a month ago and I had recurrent for the
25 North Atlantic in February, I think, and I have domestic training

1 in a week.

2 Q. Wow. Okay. That's a lot of training.

3 A. Yep.

4 Q. Alrighty. Can you kind of give us just a nice broad cliff's
5 notes version, if you will, of your aviation history?

6 A. As far as --

7 Q. I know you've been here for a lot of years, what got you into
8 being a dispatcher? Kind of help me understand --

9 A. Okay.

10 Q. -- why you chose the path you chose?

11 A. I started in reservations, which was just a stepping ground.
12 I worked there a year because you had to stay before you could
13 transfer. You had to stay a year, then I went to crew scheduling
14 and dispatch was right next to us and it seemed really
15 interesting. That's when -- well, that's when everything was
16 printed and way before we had the split screen, but and I -- it
17 just seemed really interesting.

18 So, me and Alice Luna, who also works here took a leave of
19 absence and went to Sheffield and got our licenses. And then we
20 became flight information coordinators waiting for a class and
21 been in dispatch since.

22 Q. Okay, perfect. That just -- it just kind of helps me
23 understand how you got here. So, I greatly appreciate that.
24 Let's talk about United for just a little bit since you have been
25 here long enough -- a long time you know all of the ins and outs,

1 but who's in your chain of command?

2 A. My chain of command. It's usually the AMDO.

3 Q. The what, I'm sorry?

4 A. AMDO.

5 MR. ROTHMANSKY: Manager dispatcher.

6 MR. ETCHER: Oh, okay.

7 MR. ROTHMANSKY: It wouldn't be aviation without acronyms,
8 right?

9 MR. ETCHER: Oh, I know, but that's a new one on me. So, see
10 you're already teaching me.

11 MR. ROTHMANSKY: Yeah, and that's an internal United thing
12 so.

13 MR. ETCHER: Okay.

14 MS. CEGLAREK: Yeah, that's the one thing that in training
15 that everything you do you had to talk to the AMDO, talk to the
16 AMDO. And we have -- what's Ken Cooper's title?

17 MR. ROTHMANSKY: Network director.

18 MS. CEGLAREK: Network director.

19 MR. ROTHMANSKY: ND.

20 MS. CEGLAREK: Yes, and we have the ODM.

21 MR. ROTHMANSKY: Right, flight ops duty manager.

22 MR. ETCHER: Okay. Wow, all sorts of -- I mean, how many
23 pages or novels is the acronym decoder ring here?

24 MS. CEGLAREK: Thank God that Google is around.

25 BY MR. ETCHER:

1 Q. All right. So, how is your interaction with, is it, MANDO
2 or?

3 A. AMDO.

4 Q. AMDO. I knew I'd mess that up. How is your interaction with
5 AMDO? Is it easy, is it open door, is it okay, I don't want to
6 talk --

7 A. Oh, it's easy. They are on the bridge they call it -- the
8 network director and the AMDO and all of them -- FODM -- they all
9 sit on the bridge so you can Skype them, you can get them through
10 Teams, you can call them. It's set up on the autodial, you just
11 hit the button.

12 Q. Okay. Alrighty.

13 A. And they are very good. I -- I'm -- Kim Cooper -- so I work
14 Atlantic most of the time and I had a Frankfurt flight and they
15 had heavy snow forecasted for six hours and you start working
16 those play out because I worked the Transcon Atlantic San Fran
17 Europe and Frankfurt's notorious for not being able to ice or
18 clean runways.

19 So I went up to her and I said, you know, Kim this isn't
20 going to happen, and they ended up canceling half the operation.
21 So I mean they do take your opinions and we do start you know
22 because that's a long flight, so we start working those quite a
23 ways out. We canceled half the Frankfurt flights that day.

24 Q. Wow. There must be a mirror behind me because that was my
25 next question is, I know, is you see a problem how do you address

1 it? So, you must be looking over my shoulder so -- I know I was
2 on camera earlier and that was -- I think there is one behind me.

3 MR. ROTHMANSKY: That's why I turned that off because I hid
4 it with my cell phone camera.

5 MR. ETCHER: You didn't tell me I was on there and I saw what
6 I saw, and I didn't like it so.

7 MR. ROTHMANSKY: It's like (indiscernible) through it.

8 MR. ETCHER: Perfect.

9 BY MR. ETCHER:

10 Q. Now, is dispatch for United, is it all just in this building
11 or are you split between a couple of different buildings?

12 A. Two buildings.

13 Q. Two buildings.

14 A. Willis Tower and here.

15 Q. And where are you predominantly?

16 A. In here.

17 Q. You're here. So, is AMDO -- are they here or are they down
18 at Willis?

19 A. There is one at each.

20 Q. Oh, okay.

21 A. Isn't there? Or is it just one?

22 MR. ROTHMANSKY: No.

23 MS. CEGLAREK: Oh, because they don't -- yep, they're here.

24 MR. ROTHMANSKY: Yeah, all of the --

25 MS. CEGLAREK: The chiefs are at both but the --

1 MR. ROTHMANSKY: -- all of the grade bridge functions are
2 here.

3 MR. ETCHER: Okay.

4 BY MR. ETCHER:

5 Q. So, I'm going to ask for an opinion.

6 A. Okay.

7 Q. Since you guys are in two separate facilities -- dispatch,
8 not, you know, you but since you are in two separate facilities
9 how does that work, you know, when you have to communicate with
10 somebody at the other facility? Is it kind of easy? I mean, I'd
11 assume in the same room you could just literally yell at them if
12 you needed to but --

13 A. No, actually it's really easy with the Skype and the Teams
14 and you can call them.

15 Q. Okay.

16 A. Yeah, I've never had a problem.

17 Q. Okay. No issues then at all? I mean, I know my Skype
18 doesn't always work because I'm technologically unfit, but --

19 A. Nope, and even at shift turnover you wait until they take the
20 phone, and they take the dispatch view and then you know they are
21 into the system, but you can usually see that they are in Skype
22 ready.

23 Q. Okay, all right.

24 A. Because we are waiting to see if our reliefs have showed up
25 yet, so --

1 Q. Okay.

2 A. -- once it shows up --

3 MR. ROTHMANSKY: Most important part of the day.

4 MR. ETCHER: Yeah, you don't care about the rest of the day
5 as much, right? You've just got to make sure that relief is
6 there. No, I'm just kidding.

7 BY MR. ETCHER:

8 Q. All right, perfect. So, how would you categorize dispatch
9 staffing? Are you guys well staffed?

10 A. Yes, now we are. Last year not so much but we are very well
11 staffed now.

12 Q. Okay, excellent. Do you have to work overtime often or
13 extended time or anything?

14 A. No, I pick it up if I have, you know, like I went to this
15 destination wedding and I needed extra money so, yeah.

16 Q. Okay.

17 A. No issues.

18 Q. Okay, perfect. Now I know you talked about the snow in
19 Frankfurt and being proactive, but when have you just like, you
20 know what this -- I need to cancel this flight for whatever
21 reason, how -- do you make that decision to cancel it or does
22 somebody else take your input and make that decision?

23 A. We talk to the Ops manager and express the reason why what's
24 happening and there's a discussion, sometimes you can delay it if
25 it's going to get them -- correct the issue but no, if -- I've

1 never had an issue with talking with the Ops manager or the AMDO.

2 Q. Okay.

3 A. They are very, very good.

4 Q. Okay.

5 A. And I could very -- I was working the San Fran, Tel Aviv and
6 this was when we were still going there obviously, and the captain
7 was concerned about missile fires, and I checked security. I go,
8 no, there's nothing. He goes, if anything comes up, please tell
9 me. I'm like all right.

10 So then the AMDO -- the manager sends me an email and says
11 there has -- they reported 40 missile filings but don't tell the
12 captain because we don't want him to panic. And I'm like, huh?
13 So, I hung up the phone and I talked to the flight ops duty
14 manager, and he says you 100 percent have to tell him and you're
15 in control, do it. I'll deal with the AMDO. So, really it works
16 out and I'm very proactive --

17 Q. Okay.

18 A. -- at what I do. I'm just glad I work the Atlantic. I'm at
19 home there.

20 Q. So, you're saying if they put you on the Pacific route you
21 wouldn't be as happy or is that something --

22 A. Oh, no I used to be Pacific qualified but now they do it by
23 -- they want big reliefs to get quals so I can't get a second qual
24 unless I bid that desk.

25 Q. Oh, okay.

1 A. And I have like the good desk in the Atlantic so I'm not
2 going to do that.

3 MR. ROTHMANSKY: I don't blame you giving that up.

4 MR. ETCHER: Seniority has it's perks, right?

5 MS. CEGLAREK: Yes.

6 MR. ROTHMANSKY: We're talking real estate right there.

7 BY MR. ETCHER:

8 Q. So, let's kind of -- for a minute teach me if you will, I
9 mean you've been teaching me so far, so I know you'll continue,
10 walk me through a normal day in the life of you on dispatch.

11 A. Okay.

12 Q. You know, if you've got a flight how do you know -- just kind
13 of let me be a fly on your shoulder for a moment and learn what I
14 can.

15 A. Okay, well now -- well, the first thing I do when I come in
16 is I review the weather charts, look at the NOTAMs and I'm doing
17 North Atlantic -- I know this one's domestic but on a normal day
18 I'll look at the euro control websites, see if there's any delays.

19 I start looking at my stations because each ops alternates
20 we're -- it's always critical so it kind of -- it's what I base my
21 routing on is what, if I can't have Colovic in Frobisher Bay I
22 can't go far up north so I got to go down. So, I look at all of
23 the weather, look at all of the NOTAMs, look at the flights to
24 make sure they are showing up on our Fusion, you know, where we
25 can see them, make sure everything checks there.

1 And then I'll start looking at routes at 7:00 a.m. for my
2 1:00 releases because they are very -- they are long routes. They
3 are time-consuming and we fine tune them to avoid turbulence and
4 weather and all of that. San Fran, I've got to take them way up
5 north initially to keep them out of turbulence and then go over
6 look at all of my destination weather.

7 That's pretty much, you know, and then I go from there and
8 make sure everything checks for the ETOP alternate, the
9 destination, and yeah, that's, I guess, in a nutshell what I do.

10 Q. Okay. So, let's start breaking that down just a little bit.

11 A. Okay.

12 Q. I know you said you always worked the Atlantic -- you're at
13 home in the Atlantic.

14 A. Yep.

15 Q. How was it on the day of the event you were working a
16 domestic first?

17 A. I was on overtime.

18 Q. Oh, okay. So, that's not your normal bid then?

19 A. Yep.

20 Q. Okay. That helps. So you come in and you get your list of
21 flights you are working, or do you always work the same flights?

22 A. Nope, they change daily, even in the Atlantic. I mean, my --
23 I'll have San Fran, LA or Denver and they bounce between two
24 desks. And on the floor I was working a Transcon desk so they are
25 -- but they are not the same daily.

1 Q. Okay. So, you -- the flights you typically work are out of
2 the West Coast over or you don't do like --

3 A. Yeah.

4 Q. -- Washington, or Newark or Chicago?

5 A. Nope, if I was in a different desk I would, but the desk I --

6 Q. Okay.

7 A. -- bid is all of the West Coast.

8 Q. Okay. So, you get your list of flights and about how many is
9 that on an average day, a normal day?

10 A. For the North Atlantic?

11 Q. Mm-hmm.

12 A. Five to six because they're long, very labor intensive.

13 Yeah, so -- some desks have seven but if you have a marquee flight
14 like Johannesburg which is very -- you need to fine tune it to the
15 second because if it's -- if the runway is wet you are taking a
16 ton of payload off because of the elevation there. So, they have
17 less flights on their desk because they have the marquee flight.

18 Q. Okay. So is five to seven flights is that your normal
19 workday or is that just the Transatlantic stuff and you have other
20 flights as well?

21 A. It's just when -- on my desk in the North Atlantic.

22 Q. Okay.

23 A. The floor has quite a bit more because they are short and --

24 Q. Okay. So you start working your flights -- I'm just
25 visualizing here and walking through. You come in at 7:00, you

1 start visualizing your flights leaving at 1:00. You start
2 planning those. Does it really take -- I don't want -- I don't
3 mean to sound weird, but does it really take six hours to plan
4 five flights, six flights?

5 A. Pretty -- I come in at 6:00 but you have to make sure they go
6 through the euro control because they're -- euro control is very
7 picky on what goes through there and, you know, I'll take the
8 route that SABER gives me and I'll display it and then I'll decide
9 whether I want to go further north for turbulence or if I -- or
10 avoid, you know, sometimes I forget -- Bagotville in Canada you
11 got to avoid Bagotville.

12 So the first flight I'll probably work on for two hours and
13 then after that I have my base of where I want to enter the North
14 Atlantic and where I want to exit. And I'll use that on the other
15 flights, but then you got to keep in mind different destinations
16 in Europe.

17 Q. Mm-hmm. Okay. So where do you -- I know you pulled, you
18 know, SABER gives you the flight plan or whatever. Where do you
19 pull your weather from?

20 A. We do it -- I do it from Fusion. I do it -- you can do it on
21 SABER. You can do it on DV. You can do it on Unimatic which is
22 going away, but they've been telling us that for 15 years, so I
23 don't know.

24 MR. ROTHMANSKY: Right, we'll be retired. It will still be
25 here.

1 BY MR. ETCHER:

2 Q. Okay. And do you feel that that weather is accurate,
3 helpful? Is it like why I have to see all these different spots
4 because I don't really trust them? Kind of help me understand how
5 you know it's good weather.

6 A. Well, it -- WSI gets -- it's the same weather as DV.
7 Unimatic, but what I like about DV, like say London Gatwick -- the
8 WSI forecast, and the government forecasts differ a bit usually.
9 So if I pull it out of dispatch view I can see both. I could see
10 the government and the WSI forecast. Certain stations, like
11 Keflavik they do it for also. The do -- WSI and this were -- so I
12 like it from there and I like it from Unimatic.

13 Q. Okay. All right, perfect. So I know your -- you typically
14 work international, but on the day of the event you were on
15 overtime and working domestic. How does working a domestic differ
16 or does it differ from working your normal international orders?

17 A. Well it differs just the area you don't have to worry about
18 ETOPS. You don't have to worry about any of that, but I treat
19 them the same. I mean, I remember that day. I don't remember the
20 particular flight because it happened a couple hours after I was
21 gone.

22 But I was busy fine tuning routes, you know, the San Fran
23 ones I think it took up over Badger, I don't remember and just
24 trying to see what the best route you know when you -- you could
25 pull the timer by route out and see where the turbulence is going

1 to be and the weather and all of that. And yeah, basically I'm
2 crazy on comments -- I put a ton of comments on everything. Yeah.

3 Q. Okay. So on that day working that event, how many flights
4 were you working that day? Do you -- I know it's been a while and
5 you've worked one or two flights --

6 A. Yeah, and I don't work it very often.

7 Q. -- since then but --

8 A. I think I had around 20 to release and then just a couple in
9 the air when I came in, if I remember correctly, I don't know.

10 Q. All right. So, 20 on your schedule to work that day, that's
11 a lot more than what you normally do.

12 A. Yeah.

13 Q. Was that -- I'm going to ask for an opinion.

14 A. Okay.

15 Q. Was that too much work? I mean, 20 flights juggling in a
16 shift, is that a lot of work, is that not much, is it?

17 A. No, on a domestic because you -- the length of the flights
18 are shorter, you don't, you know, so it's a lot easier. You don't
19 have to watch ETOPS alternates. You don't have to watch any of
20 that. So it's a lot easier to do a domestic flight but they're
21 still labor intensive to appoint.

22 Q. Okay. So when you've watched these fights, a domestic --
23 we'll stick with just the domestic --

24 A. Okay.

25 Q. -- for a little bit. When you've watched these flights, I

1 mean, are you constantly going to the screen, clicking on the
2 flight bar, seeing what's happening ahead of it? What -- help me
3 understand what you mean by watching the flights?

4 A. Well, the flights display on Fusion, and I have -- everybody
5 has a stored view. So I have the turbulence stored. I have the
6 weather stored. I have the like FPG's that we call them pickles
7 for turbulence because they are green and they kind of look like a
8 pickle.

9 And you just, you know, keep moderates them and like with --
10 one thing about working the Transcon desk is you'll have a lot of
11 flights from San Fran to Newark and the first guy, you ask him,
12 hey, if you hit any turbulence or there's anything's out of the
13 order let me know I've got a bunch of flights behind you. And
14 yep, it's kind of -- and you just obviously monitor the weather.

15 MR. ROTHMANSKY: There's your pickles. That was just in case
16 you didn't know.

17 MR. ETCHER: Okay.

18 BY MR. ETCHER:

19 Q. So you ask crews to give you feedback if they hit stuff.
20 Does that happen often?

21 A. Yeah, especially -- well domestically, I don't know as much,
22 but if they hit turbulence they will definitely tell you.

23 Q. Okay. And when they hit turbulence, did you see the
24 turbulence on the screen as well or is it like, wait how did you
25 hit turbulence? Does it catch you off guard? Kind of help me.

- 1 A. Usually you could see it.
- 2 Q. Okay.
- 3 A. But sometimes obviously they'll hit it and once, you know,
4 you put in PIREP. I -- this is just my opinion -- I think WSI
5 kind of monitors that because you'll see a pickle come up if they
6 see a bunch of turbulence reports in that area.
- 7 Q. Okay. So what's you know, you put went in and put PIREPs --
- 8 A. Yep.
- 9 Q. -- if you see them. Okay.
- 10 A. Crews can do it also.
- 11 Q. How hard is that to input a PIREP?
- 12 A. Oh, it's easy.
- 13 Q. How --
- 14 A. It's a -- you just click the flight and hit PIREP entry, his
15 position, everything time, altitude is all filled in so you just
16 have to say if it's occasional, light, moderate and it's boxes you
17 check and you can put comments in a little box if you want and you
18 just hit enter. And it also has a little area with all of your
19 flights that you can click on those flights, and it'll send it to
20 all of your flights for you.
- 21 Q. Okay. Just your flights or will it send to all United
22 flights or?
- 23 A. Just my flights but I could -- but the PIREP goes into the --
24 you'll see the PIREP on -- in Fusion so -- and if, you know, like
25 the Transcons -- anybody sitting or you know you can see everybody

1 else's flight -- you can tell them, hey, I just entered a PIREP
2 for that area that your flight's coming up on and they send them.

3 Q. Okay. Kind of give me a -- just a ballpark how often do you
4 put in PIREPS?

5 A. Oh, I do them all the time. Even if it's smooth, I put it in
6 just so the flights behind them know.

7 Q. Okay. And again, ballpark only, you get a PIREP, give me an
8 idea of just how long does it take you to -- I know you said -- it
9 sounds simple to click on it, click a few things, type a little
10 bit if you want and you're done. How long does it take you? I
11 mean, I know you're real experienced and all but just kind of help
12 me understand.

13 A. Less than 30 seconds.

14 Q. Okay. So it's not --

15 A. Yeah, it's --

16 Q. -- hard to do -- it's not hard to get to, you know, it --

17 A. Yeah, see I was off work a couple years ago for about three
18 years for a car accident but before I left it didn't auto fill for
19 you, when I came back they had that, so it auto fills which is
20 great.

21 Q. Okay. And when you when in and put that PIREP it goes out to
22 the whole world, or does it just go within the United system --
23 PIREP?

24 A. I believe it's just the United system, but I could be wrong
25 on that because there is like, you know, the grades of turbulence,

1 there is an extreme severe that's in there and somebody, I think
2 it was Southwest accidentally hit that and it came up, so I think
3 -- I don't know if it's the intensity that makes us get ones from
4 the other. Because then we called Southwest and they were like,
5 oh, we did that in error. So, yeah. So, I guess I don't know --
6 do you know?

7 MR. ROTHMANSKY: It does populate it to the National Weather
8 Service System from our PIREP screen.

9 MR. ETCHER: Okay.

10 MR. ROTHMANSKY: It does go out to the aviation community and
11 that's what populates on Fusion as well and in textual.

12 MR. ETCHER: Okay.

13 MR. ROTHMANSKY: So all the carriers will see it. I think
14 you might be thinking of TAPS.

15 MS. CEGLAREK: Okay, yeah.

16 MR. ROTHMANSKY: So which I don't know if Southwest is on
17 TAPS or not but no, we do go out to the --

18 MR. ETCHER: Okay.

19 MR. ROTHMANSKY: -- aviation community. I'll put it at that.

20 MR. ETCHER: Sure, all right. That's good. Okay. Because I
21 was going to be concerned for a moment if you are putting in all
22 of these great PIREPs and I'm on another carrier for some reason
23 and they don't get it and I get bounced so.

24 MR. ROTHMANSKY: You've got to pay for that -- no, kidding.

25 BY MR. ETCHER:

1 Q. Alrighty. So help me understand if you've got a turbulence
2 PIREP, what kind of levels can you put in for your PIREP? I know
3 you said extreme severe, which I've never heard of that one. I'll
4 be curious what that means to you but --

5 A. Light, moderate, severe, extreme severe and there's a smooth
6 option and then there is occasional, light, continuous, and I
7 think there's one more column, but I don't remember. And you can
8 put like if somebody says they had light and then it was moderate,
9 there's like three lines that you can click for all of them.

10 Q. Okay.

11 A. So you can put the different intensities in.

12 Q. Okay. So, if you see one that's moderate, I want -- you're
13 teaching me here -- I'm a new dispatcher, let's say --

14 A. Okay.

15 Q. -- and I -- you're educating me, but when you see moderate,
16 does that do anything in your mind like okay, I've got to do X, Y,
17 and Z or I need to -- help me understand what --

18 A. Moderate -- I definitely send to everybody that's -- that I'm
19 working that's going to be affected and I have like all of the
20 North Atlantic flights in a different color on my screen. So then
21 I'll look, and I'll see it -- you know, Brian's over there, he's
22 -- his flight's coming up. I'll make sure he knows about it and
23 send it to him via Skype.

24 Q. Okay. So I'm curious because extreme severe, I think you
25 said was one.

1 A. Hm-mm.

2 Q. What is that? Have you ever had that before?

3 A. Just the Southwest one and one of our guys in the last month
4 both entered it in error, and everybody sees that immediately,
5 it's a different color, it's, you know, yeah -- but I've never
6 seen it other than in error.

7 Q. Okay. So it's nothing that you've ever had to input or --

8 A. No.

9 Q. Okay, all right.

10 MR. ROTHMANSKY: If you need it I can show you the -- that
11 screen.

12 MR. ETCHER: We might later.

13 MR. ROTHMANSKY: Okay.

14 BY MR. ETCHER:

15 Q. So, if you see turbulence along your plan to flight from
16 somewhere out west to somewhere out east -- Transcon and you see
17 some turbulence along the route, is there any turbulence level
18 that you're like, oh, you know, it's just -- it's this so we can
19 go through it or oh, it's greater than this so I'm going to avoid
20 that at all cost.

21 A. Well, I do everything to avoid anything greater than light
22 and I'll even avoid light to moderate, but yeah, that's the first
23 thing I do is I look for the best routing. Yeah, so I try my best
24 to avoid everything.

25 Q. Okay. All right.

1 A. My captains in Euro plan call me anal Mary. They say we like
2 seeing your name.

3 Q. Well, that's a good thing being that because you might have
4 one that would be like, I don't want to see your name because
5 that's never good. So, I like that better though. So, alrighty.
6 Do you have the same equipment at your desk as a pilot would in-
7 flight? Like, I know they have stuff on their iPads or their EFBs
8 like SkyPath -- different things. Do you guys have access to
9 that?

10 A. Yes, we do have it on the iPad now.

11 Q. Okay. So -- oh, you have an iPad right beside you as well?

12 A. Yes, we just got iPads in our last training -- recurrent
13 training we got the iPads.

14 Q. Okay. How do you like it -- the iPads that is?

15 A. I'm getting used to it. I'm still learning a lot. It's a
16 little cumbersome because you -- we have three big screens and
17 then you have another one but, yeah.

18 Q. So do you -- have you used any of the apps on there, like the
19 turbulence app? Have you used any of that kind of information or
20 do you rely solely on your desktop?

21 A. I don't rely solely on it because I'm still learning.

22 Q. Okay.

23 A. So --

24 Q. Okay. Have you -- I know you're still learning it, but have
25 you seen any perks to it? Is it just another -- I don't want to

1 call it just another tool, but is it -- are you seeing any benefit
2 to that or?

3 A. I know it's easier to do a DSAP from the iPad. I think
4 there's perks to it once I get more in tune with it.

5 Q. Okay, alrighty. So, let's get back to our event flight.

6 A. Okay.

7 Q. I know you worked it, and it happened after you left, you
8 already said. So when you were looking at it and you might have
9 to really dig back in the gray matter there because it's been a
10 few months ago. Do you remember any concern along that route?

11 A. I -- all of them that day -- pretty much from the Midwest to
12 the East Coast the RPM data was showing turbulence. There was
13 pickles all over the place, so I was building my own routes all
14 day long, so it was -- the LA ones, most of them I think I took
15 south but some I took north and all of the San Fran ones I took up
16 over Badger. I went way up north and then dropped them in and
17 held them down if I could or climbed them.

18 Q. Okay. Were there are certain areas that you -- I mean was it
19 -- I know you said from about the Midwest to the East Coast but
20 were there certain areas that you were really trying to avoid,
21 like, oh that's moderate or that's severe or that's whatever?

22 A. Well, the Rockies, as usual, but pretty much anything that
23 was north of Texas, Louisiana, over Tennessee and it pretty much
24 went almost all the way to Canada. So I had to either go all the
25 way down or all the way up.

- 1 Q. Okay. Did you get any --
- 2 A. But --
- 3 Q. I'm sorry, go ahead please.
- 4 A. -- I built every route -- hand built every route that day.
- 5 Q. Okay. And you guys don't have any policies like, you know,
- 6 you can, you know, deviate a flight around conditions, but don't
- 7 add more than X number of minutes to the flight plan, do you have
- 8 any restrictions?
- 9 A. You know, I don't know if there's a policy on it, but I don't
- 10 care what it costs. And timewise if it's, you know, but yeah I
- 11 avoid it -- everything that I can.
- 12 Q. Okay. Now, once your flights are airborne do you have to
- 13 monitor them?
- 14 A. Of course.
- 15 Q. Is it just you or is there somebody else monitoring them with
- 16 you?
- 17 A. Nope.
- 18 Q. It's all you?
- 19 A. Just my flights, yeah, but like I said Brian will be across
- 20 from me, he's behind -- his flights are behind me or in front of
- 21 me. You'll pass information back and forth.
- 22 Q. Okay. So, back to that day, the flights were coming
- 23 eastbound and before you left for the day, did you have any PIREPs
- 24 coming in from pilots flying and going, oh, it's rough, it's
- 25 moderate, it's whatever, did you have any --

1 A. I had some. It was moderate on dissent and pretty much it
2 was mainly on the East Coast.

3 Q. Okay.

4 A. So really you couldn't avoid it because you had to go through
5 it to land there but I had everything noted on the flight plan,
6 passing any PIREPs I get.

7 Q. Okay. So, when you say it was on dissent, is that just
8 dissent into Newark or was that dissent into anywhere on the East
9 Coast?

10 A. In the Newark area, Boston was getting it, LaGuardia.

11 Q. Okay. Did you have to send your crews messages just as a
12 hey, I see you're -- and maybe you were gone before they got close
13 enough to it but --

14 A. Yeah, I was gone before he was not even half way across the
15 U.S. so he wasn't hitting any rough area yet. But we have a
16 system that automatically sends them, but I send them also if I
17 get them.

18 Q. Okay.

19 A. Any, you know, FPG, any turbulence box or moderate or greater
20 turbulence automatically goes up to the airplanes also, but as you
21 -- as Tom Berry who is -- he is more senior than me says, I don't
22 trust it, I just do it myself. I know they go up, but I still do
23 it.

24 Q. Okay.

25 A. So --

1 Q. All right. Do you get responses from crews when you send it?

2 A. Oh, yeah.

3 Q. So, you can see that they actually get it?

4 A. Yeah.

5 Q. Okay. What's that -- what is that response?

6 A. It's usually, copy, thanks for the update, you know, we'll
7 let you know if we get anything, you know, they're very -- they're
8 great.

9 Q. Okay. All right. My last little batch of questions and I'm
10 going to pass it on because you've got to get tired of talking to
11 me. I'm tired of talking to me so it's okay. Is there -- I know
12 you said there was pickles all over the place, is there a distance
13 you -- I know you try to avoid them --

14 A. Mm-hm.

15 Q. -- and sometimes it probably is more challenging than other
16 times, but is there a distance you want to remain away from your
17 -- those pickle areas?

18 A. Yeah, you know it depends on the area you know but I try to
19 avoid them and I can't really put a distance on it. But I do my
20 best to avoid them and if I can't, I hold them down or climb them.

21 Q. Now, there is no -- I know some airlines have a distance you
22 have to be 20 miles from a storm or 20 miles or 40 miles from this
23 or that. Do you guys have any of those?

24 A. Yeah, there is guidance in our dispatch ops manual, but I
25 couldn't read it off to you because I haven't read it in a long

1 time. I just avoid it, it's --

2 Q. Okay, perfect. Now I know I told you that was my last
3 question. I'll hold true only on this one round but before I pass
4 it on to Paul, do you need a break or anything?

5 A. I could use some water.

6 MR. ETCHER: Let me hit pause and --

7 MS. CEGLAREK: All right.

8 MR. ETCHER: -- we will go off the record at 11:43 local.

9 (Off the record at 11:43 a.m.)

10 (On the record at 11:47 a.m.)

11 MR. ETCHER: And we are back on the record at 11:47. Thank
12 you again for all of your education you have given me so far. I'm
13 going to let my brain absorb because it's -- I think it's probably
14 starting to ooze out my ears. It went so fast I can absorb it.
15 But in the meantime, Paul's got these wonderful questions so you
16 don't have to dumb it down for him because he's smart like you had
17 to for me.

18 MR. SUFFERN: I don't know about that.

19 MR. ETCHER: So, I will pass it off to Paul.

20 MR. SUFFERN: Thanks, Shawn.

21 MR. ETCHER: Yeah.

22 MR. SUFFERN: Hey, Mary, I appreciate you educating all of
23 us. It's been very, very helpful to learn how you work things and
24 just understand all of your tools.

25 BY MR. SUFFERN:

1 Q. And speaking of tools, I know you mentioned several times the
2 -- this tool called Fusion and stuff like that. Could you maybe
3 describe that a little bit more because obviously Shawn and I
4 don't have the fusion tool and kind of how it works for you?

5 A. It's -- you set it up. It's a map of the world and you can
6 fine tune it to your area, what flights you want it to display,
7 what colors you want it to do. We get solar activity through
8 there. We get ozone. We -- the FPG weather, it shows all of the
9 flights, and it shows the PIREPs, weather, obviously
10 thunderstorms. Basically, you know, it's one whole screen.

11 You can -- well, you can have two, like some people, like
12 because our flights are so far -- I work at the Atlantic all of
13 the time which I've told you -- they'll get two windows which one
14 they keep in a live mode and the other one they'll use to get the
15 timer bar, so you know what time the flight is hitting what area.
16 So some people even do two. I do two all of the time.

17 Q. Okay. That's very help, okay, I can picture --

18 A. There is all kinds of stuff you can put on there, yeah.

19 Q. Okay. And so you've -- and everybody in the room has
20 mentioned the pickles and the FPGs and stuff, but you mentioned
21 weather a couple of times. What would you -- what would be
22 included in weather or kinds of things you could pull up? Are we
23 talking about like surface observations, radar, kind of?

24 A. Yeah, they've got all of that and you can click on your
25 flight -- I'm sorry, click on an airport or type in your airport

1 and it will open a whole screen where you can get live weather
2 from it, you know, by the hour. And then it will show you
3 crosswinds, it'll show you government and WSI, TAPS, all kinds of
4 good stuff in there. And it's just -- you just type in the
5 airport code.

6 Q. Okay. Well, that's very helpful. Okay. Now, you've
7 mentioned the government and WSI weather forecast. Is one
8 controlling for United? Is it the WSIs since you guys are
9 EWINS --

10 A. Yeah.

11 Q. -- certified? Okay. And so are there particular challenging
12 weather scenarios where since you have both up, where the
13 government one is a little bit better or a little bit more helpful
14 and the WSI is a little bit more helpful in this scenario or is
15 this kind of --

16 A. The only time I will pick government over WSI, like, if it's
17 for ETOPs alternates I'll just change the alternate, I won't -- so
18 I do use both as a guidance, but I won't use a -- usually won't do
19 an alternate or an ETOPs alternate if I don't like the difference
20 in the two forecasts.

21 Q. Okay.

22 A. I'll just pick something else and for destination alternates
23 also.

24 Q. Okay. That's really helpful and so shifting a little bit to
25 I guess looking at thunderstorm activity, what does that look like

1 on Fusion? Does it just look like colors? Does it have like
2 lighting displayed or like how high they are or anything like
3 that? Could you describe that?

4 A. Got a lightning display on there. It shows the storms, their
5 colors, yeah, I don't really know how else to describe it.

6 Q. Okay.

7 A. I've been off for ten days so.

8 Q. Okay. No, I'm just trying to get a picture because I --
9 neither Shawn nor I work at United so I'm just trying to
10 understand what all of this looks like and your descriptions are
11 very, very helpful.

12 Are there different tools that you would use, you know, from
13 before flight -- so we're talking about weather here -- probably
14 all of my questions will be like that --

15 A. Okay.

16 Q. -- are there different weather tools that you are going to
17 use before a flight as to now they are all in-flight and you're
18 looking out there, what kind of weather tools would you look at
19 there?

20 A. I'll look at the same tools -- I'm having a brain freeze --
21 what's the convective one with the satellite? CoSPA.

22 Q. Okay.

23 MR. ROTHMANSKY: Yes.

24 MS. CEGLAREK: I use CoSPA, I use -- we actually use Windy
25 that shows a lot of TAPS but that's not authorized by United, but

1 I use it for guidance. And DV, Optima, WSI Optima which is
2 different than DV, you know, you can pull up all different places
3 on there -- different areas, different charts.

4 BY MR. SUFFERN:

5 Q. Okay. This is really helpful. This is really helping me
6 paint a picture. I know Shawn asked a question earlier about the
7 SkyPath turbulence and it sounds like you guys just got iPads and
8 you said you got it from your, I think, recurrent training. Is
9 that correct?

10 A. Yes.

11 Q. Okay. Do you remember or do you recall when you had your
12 recurrent so --

13 A. It was -- I think it was in -- no, we got it in domestic --
14 MR. ROTHMANSKY: October, right?

15 MS. CEGLAREK: October, yeah.

16 BY MR. SUFFERN:

17 Q. Okay. So, that's how I'll -- okay. And so just not being
18 knowledgeable at SkyPath at all is the SkyPath view that you would
19 see as a dispatcher would be the same view that a pilot would see
20 in the cockpit if you are both looking at the same area kind of a
21 thing?

22 A. Yes, I believe it's the same. I've never seen the pilots,
23 but our iPad should be the same as what they see.

24 Q. Okay. I've known some 121 carriers United included have --
25 and I'm going to mess up probably the name of the tool and stuff

1 but it's like Turbulence heartbeat information and maybe that's
2 the TAPS that you were talking about earlier maybe, I don't know.

3 MR. ROTHMANSKY: Yeah, it is TAPS.

4 BY MR. SUFFERN:

5 Q. Okay. Is that something you have access to?

6 A. Yep, that's one of the things you can click on under settings
7 for dispatch view.

8 Q. Okay. And is that something you normally have up when you're
9 working?

10 A. Mm-hm.

11 Q. Okay. And I don't know anything about the TAPS tool. What
12 does that look like for you as a dispatcher? Is it just little
13 dots and it shows up in different colors?

14 A. It's like a little red dot, almost looks like there is a tiny
15 bell on it. Isn't it?

16 MR. ROTHMANSKY: Like a triangle kind of.

17 MS. CEGLAREK: Yeah.

18 MR. ROTHMANSKY: Colored coded.

19 MS. CEGLAREK: Red.

20 BY MR. SUFFERN:

21 Q. Okay. And then if it lights up a certain color, you know,
22 let's just say you're working the North Atlantic like you usually
23 do and, you know, I'm assuming when that little heartbeat has like
24 a maybe a moderate or something like that it pops up as a color,
25 when you see that, do you reach out to -- is there a particular

1 intensity for turbulence that, hey, I saw you guys just had a
2 moderate, are you guys -- is everybody okay? Is there anything
3 like that?

4 A. Yeah, but usually if our guys will report through that but if
5 I see a report on -- in TAPS, I obviously would share that.

6 Q. Okay. And then do you reach out to the crew as well --

7 A. Yeah.

8 Q. -- via message? Okay.

9 A. Yeah, I send them an ACARS.

10 Q. Now, does it have to reach to a level? So, say you are
11 working North Atlantic, you've done all of your planning and
12 things there and man, it looks like the weather guys say
13 everything is going to be smooth today, it's going to be just
14 great flights going across the North Atlantic. You get two hours
15 into a flight and all of a sudden like a light pops up. Is that
16 kind of a threshold for you to reach out or does it need to be a
17 greater --

18 A. No, if -- any report I would send.

19 Q. Okay. Shifting a little bit.

20 A. Okay.

21 Q. Since you are working in dispatch, do you have access or the
22 ability to reach out to meteorologists?

23 A. Yep.

24 Q. Okay.

25 A. We have some in-house here --

1 Q. Okay.

2 A. -- and right on the phone -- speed dial.

3 Q. Okay. Are they -- I don't know how all of this works.

4 Again, your education is wonderful. Are they United
5 meteorologists or are they WSI contracted meteorologists or?

6 A. I think we have some that are United, and the rest are from
7 WSI. Is that correct?

8 MR. ROTHMANSKY: No, it's all WSI contract.

9 MS. CEGLAREK: Okay, so those four guys who sit by ATC they
10 are --

11 MR. ROTHMANSKY: They are all contract.

12 MS. CEGLAREK: Okay.

13 BY MR. SUFFERN:

14 Q. Okay. And this is great to learn and things like that and
15 then I apologize for -- I feel like I'm jumping around a little
16 bit here.

17 A. No.

18 Q. But you're really, really helpful. When you're working -- so
19 let's go to in-flight here. You're working with the crews and
20 things like that, and you see some weather pop up that was kind of
21 unexpected and you say, hey, it looks like we need to get around
22 this weather that's coming up in 200 miles.

23 Do you ever -- as an opinion, do you ever receive any push-
24 back, number one from the crews or number two from air traffic as
25 far as that?

1 A. They are usually pretty good. You know, I'll say, you know,
2 request going via so and so and request is from ATC. Never really
3 had a problem with ATC except for when they have staffing issues.

4 Q. Okay. But do you -- could you describe the staffing issues
5 from what you hear, from what you understand from the ATC side
6 they just can't put anymore planes through that particular route
7 because they are --

8 A. Yeah.

9 Q. -- out? Oh, okay. I think that's all of the questions I
10 have for this round. Thank you.

11 A. Okay.

12 Q. Thank you, Mary, this has been very helpful.

13 MR. ETCHER: Thanks, Paul. Jim, sir, any questions?

14 MR. LAROSA: Sure.

15 BY MR. LAROSA:

16 Q. Thank you, you are doing a great job.

17 A. Thanks.

18 Q. During the planning stages of this, did the pilot -- the
19 captain call you for a debriefing?

20 A. For debriefing when they land?

21 Q. Or a briefing I should say.

22 A. No.

23 Q. No, okay. And probably doing international that's probably
24 uncommon because international it's always --

25 A. It's required, yeah.

1 Q. Yeah, it's recommended. So during the planning stages when
2 you filed that -- when you created the flight plan, your initial
3 build essentially, is it typically the most efficient route first
4 and then you re-evaluate for things like weather?

5 A. Correct, yeah.

6 Q. Okay. And was this the most efficient route?

7 A. No.

8 Q. No, so during that phase there was that FPG for turbulence
9 and that's why I think you did the routing over Flossy instead of
10 Williamsport.

11 A. Yeah, I believe so I haven't seen it in months, so.

12 Q. I think so from look -- from what -- me looking at it, it
13 looked like that's where the turbulence was. There was a segment
14 to the south and then the FPG --

15 A. Okay.

16 Q. -- to the area where you were going through. And it was
17 associated with that line of thunderstorms that was tops anywhere
18 from, you know, 20,000 feet or so -- 23,918, I think it was. So as
19 this flight was progressing and there was that line of
20 thunderstorms, you know, moving, which would have kind of put them
21 in the path of the descent into, was there any discussion, any
22 communication with the crew at all during that period of time
23 maybe?

24 A. I think there would have been more after I left.

25 Q. Okay.

1 A. Because that -- he landed, I think, what two and a half hours
2 after I left.

3 Q. Okay. So that would have been the dispatcher that came in?

4 A. Yes.

5 Q. Okay. All right, fair enough. And, I know -- because I
6 noticed there was an ACARS message sent from a 787 pilot but that
7 was about 30 minutes after they encountered this -- so that
8 wouldn't have been you either?

9 A. Correct.

10 Q. Okay, understood. On SkyPath is there a push to start
11 utilizing SkyPath more in your planning?

12 A. Yes.

13 Q. How is it being received?

14 A. I think a lot of people are getting into it. I'm slowly
15 learning it, but yeah, they are taking a look.

16 Q. Okay.

17 A. I see the iPad's out on the desk with all of that.

18 Q. Is there a way to -- and this could be for you too, to
19 overlay this on some of your planning screens and tools that you
20 use because we can actually overlay this on our FD Project so when
21 we have our routing we can actually mount and put SkyPath on it.
22 Is there any discussions to do that?

23 MR. ROTHMANSKY: I'm hearing that they are talking about
24 trying to integrate that into Fusion.

25 MR. LAROSA: Okay.

1 MR. ROTHMANSKY: Right now they haven't so right now SkyPath
2 is as we know via the iPad only, but the problem there too is I --
3 SkyPath -- it seems to be -- it's set up for a singular flight,
4 right, for the flight deck where you're just worried about one
5 flight versus us trying to monitor numerous flights, right?

6 So, I know a lot of the dispatchers -- domestically, I see we
7 don't use SkyPath the iPad policy -- it just became policy to have
8 it on our desk. We got them in October, but it hadn't been put
9 out as an official policy that you must have the iPad with you on
10 your desk. So it's not being that widely accepted yet because we
11 haven't really been trained on using it -- let me put it this way,
12 integrating it into our workflow.

13 MR. LAROSA: Okay.

14 MR. ROTHMANSKY: Right.

15 BY MR. LAROSA:

16 Q. And you both understand how it works?

17 A. Yeah.

18 Q. Okay. I'm just going to show -- I just pulled up -- there is
19 SkyPath for today and I'll show you as well. So, to your point
20 about individual flight, like, for example, this is probably what
21 you're more familiar -- this is a bunch of airplanes coming in
22 from the North Atlantic.

23 A. Mm-hm.

24 Q. And in this particular case, this was our path -- this is a
25 rough ride. Now in something like this, would -- by having this

1 tool available to you, you can make communications to these four
2 airplanes in tow saying, you know, to deviate, you know,
3 suggestions or plan on it at that altitude. Is this type of
4 training being implemented?

5 A. Well, it looks the same as Fusion does. I can see everybody
6 else's flights that are behind me.

7 Q. Can you see the turbulence associated with them?

8 A. Yep.

9 Q. You can?

10 A. Mm-hmm.

11 Q. So, in a case like this, you would contact these crews if you
12 are working those flights or if it's the person you would
13 communicate that?

14 A. Yep.

15 Q. Because they would see the same thing as well?

16 A. Right.

17 Q. Right? Okay.

18 MR. ROTHMANSKY: Just -- except this is not displayed on
19 Fusion.

20 MR. LAROSA: This is just an example --

21 MS. CEGLAREK: Yeah.

22 MR. LAROSA: -- of today on this flight and the questions
23 that I was asking were in relation to these four airplane coming
24 in, in tow behind this. So, that's where my question was, is
25 SkyPath being utilized, and it doesn't seem like not quite yet.

1 MR. ROTHMANSKY: No, we're not.

2 MR. LAROSA: We're working on it.

3 MR. ROTHMANSKY: Yeah, I know we have a recurrent coming up
4 that's starting out.

5 MR. LAROSA: Okay.

6 MR. ROTHMANSKY: I don't know what is being covered in
7 there --

8 MR. LAROSA: Okay.

9 MR. ROTHMANSKY: -- with regard to the iPads. I know we were
10 told you needed to have your iPads with you, charged and all of
11 your apps on there so, but I can't answer to what is on the
12 training agenda.

13 MR. LAROSA: Okay. Thank you very much for that.

14 BY MR. LAROSA:

15 Q. I noticed on your dispatch remark you do put a lot of
16 information in there. Thank you for that. You did reference
17 about five different FPGs along the route and one particular one
18 was the last one, light to moderate from Hextall to Newark,
19 160.230. So thank you for doing that. So it did -- you did make
20 this aware -- this is release 2 and North route for turbulence
21 avoidance that was your first line in your remarks section. So
22 thank you again for that as well. And this would have been a much
23 longer timewise.

24 A. Yes.

25 Q. Okay. So --

1 A. Yeah, I don't -- I do everything to avoid it. I don't care
2 -- I'm -- what the time is.

3 Q. And we appreciate that. I guess my question would probably
4 be more geared to the person that took over.

5 A. Okay.

6 Q. Because the weather developed and the -- that line
7 established a little bit closer where they would have descended
8 into that. And I know when this happened they were clear -- it
9 was clear. They were not in the conductivity path at that path,
10 so.

11 A. Okay.

12 MR. LAROSA: But that's all I have.

13 MS. CEGLAREK: All right.

14 MR. ETCHER: You're good, Jim?

15 MR. LAROSA: I am.

16 MR. ETCHER: All right. Thank you much. Round one -- so it
17 didn't even take us three hours, but I only have 39 pages of
18 questions left.

19 MS. CEGLAREK: Oh, lovely.

20 MR. LAROSA: You asked a lot of my questions -- as an ops guy
21 you should.

22 MR. ETCHER: Well, but you've given me a lot of great
23 information. Like I said, my brain is still oozing trying to
24 absorb it all. So I appreciate the education.

25 MS. CEGLAREK: Okay.

1 MR. ETCHER: Before we start round two and it's always
2 quicker, but before we start do you need a break? You doing okay?

3 MS. CEGGLAREK: No, I got my water, I'm good.

4 MR. ETCHER: Like I said, you've answered a lot of my
5 questions. I have a few that popped up as they were talking.
6 It's like, oh, I want to dig in a little bit on that if you don't
7 mind. But I don't have that many so thank you for being so
8 forthcoming and giving me all of this great information and I
9 would say, just like Jim said, thank you for putting all of those
10 notes on there because as a pilot, I like those notes. You
11 couldn't put anything dumb on a note to me. It's like, tell me
12 everything. You see a bigger picture than I do. So I appreciate
13 that.

14 BY MR. ETCHER:

15 Q. Let's talk about the event flight for just a moment. Did you
16 -- I know on international flights you guys -- you brief the crew
17 before they go and all of that, but domestic you don't. Did you
18 talk to this crew at all?

19 A. Not that I can recall.

20 Q. Okay. That's perfectly fine.

21 A. I think I might have had one flight that day that called and
22 says, thanks for release 2 for the route change, but I don't know
23 if it was that one.

24 Q. Okay. All right. No problem.

25 A. I can't remember what I ate for dinner last night, so.

1 Q. I had breakfast just a few hours ago and I still don't
2 remember what it was so it's -- I know what you're feeling like
3 there. I know we keep saying you just, you know, reach out and
4 talk to the crew, get in touch with the crew. How do you get in
5 touch with the crew, just for the record?

6 A. You can e-mail them, you could go -- there was TREKS I think
7 that's what the app is called on DV where you can click it and you
8 can find the crew info. So, you can get a cell number. I believe
9 that's on there. I don't know if we have to get that from the
10 crew desk or not. Or if their e-mail is in there, you can e-mail
11 them, send them an ACARS, call me, cancel their filing so they
12 can't leave if you really want to tell them something.

13 Q. So in-flight icing you don't call them on their cell, I
14 assume emails, maybe --

15 A. On -- at least on my Atlantic ones I can email them.

16 Q. Okay. So does that kind of leave you mostly with ACARS or do
17 you -- can you reach out and get a hold of them via a frequency
18 somehow?

19 A. You can do a frequency, you can -- I do SAT phone all of the
20 time in Europe and some of them work domestically or if they are
21 SAT count equipped.

22 Q. Okay. I guess that's easy for you to find it if they have --

23 A. Yeah.

24 Q. Okay. Alrighty. Is it -- when you send a message to them,
25 let's say you just want to let them know something, you send them

1 an ACARs message. I know you -- earlier you said, you know, there
2 were flight things or whatever -- you're teaching me. I'm a brand
3 new dispatcher. So you're educating me, so I learn from the best.
4 Is there a time you'll wait before you try and ping on the crew
5 again if you're like, I really want to tell them something?

6 A. Yeah, it depends, you know, how far ahead if it's weather or
7 whatever, but if they don't respond I will click it, so it chimes.
8 Did you receive my message? And they'll get a bell that goes off
9 in the cockpit. Then they'll usually answer.

10 Q. Okay. All right, perfect. I know earlier you were talking
11 about Fusion and all of the stuff you can pop up on there. I'm a
12 new dispatcher, teach me what you would put on Fusion.

13 A. I've got all kind of weather charts where you can click them
14 on and click them off so they are not crowding the screen. It's
15 real easy to do that, but I've got all of my flights. I've got
16 all of the North Atlantic flights in different color so I can tell
17 the difference. There's tags on them. So you -- it's got the
18 flight number, what flight levels he's at and I'm trying to
19 remember what else I have clicked on there. But yeah, you can put
20 a lot on the tags.

21 So, that's basically when I came back from my medical that
22 was the first thing they did with me because Fusion was new. So
23 we did the whole setup with Jim Detweiler who anybody -- he knows
24 everything about everything, and I don't mean that as he's a smart
25 ass, he's just super intelligent. So he helped me set mine up so

1 you -- and then I have like VHF airspace over the Atlantic which I
2 can click on and click off if they have to go VHF.

3 There is all kinds of things you can take on and off daily,
4 but I do have my base set up. I get my solar weather from there.
5 Ozone, like I said you can set anything up on there. It's pretty
6 -- it's a good tool.

7 Q. So is the solar, the ozone, is that part of your base or what
8 is your base? What are your like this -- again I'm new remember
9 so teach me, this is the bare minimum, if you will.

10 A. Definitely have to have ozone, solar is you just click it,
11 and you see what, you know, what the forecast is, and you really
12 mainly need that for the North Atlantic and the Pacific because it
13 -- if there is a solar storm over the US everybody will know about
14 it.

15 It'll come out so it's really something, but you can have it
16 store -- you just click the button, and it comes up in a box and
17 it tells you what the forecast is. So the flight numbers -- you
18 can click the flight and it'll show you -- you can see what
19 reroute he got, you can show his current route that he's filed on,
20 and you can click his -- or his reroute, copy that, send it up to
21 the crew. Did you receive this reroute? And then we would redo
22 -- update the flight plan. So that's in there. I'm trying to
23 remember. There's a whole lot of stuff. Unfortunately, like I
24 said, I'm been off 10 days.

25 Q. And you didn't want to come back and have this talk with us.

1 And so I'm sorry for that. That's the bad timing on my part but I
2 appreciate you --

3 A. No problem.

4 Q. -- giving me this education. I'll ask for an opinion.

5 Again, pretend like I'm a brand new dispatcher. Can I have too
6 much stuff up on my screen?

7 A. I, you know, I don't think so. It can be -- it can clutter
8 stuff up, you know, we have a little -- you can just tag it on,
9 tag it off, but like I said I have two windows so you can have
10 different views on each window. So, I have my live weather, you
11 know, current weather and then the other one is the one I do with
12 the slider bar.

13 Q. Alrighty. You were talking a little bit ago about you can
14 see if the crew got a reroute and you can cut and paste it and
15 send it to them. Do you get this all in like real time or is
16 there delays or?

17 A. It's -- as soon as they say, you know, we get a message on
18 our -- it's there --

19 Q. Okay.

20 A. -- it picks it up.

21 Q. Oh, okay, nice. Oh, times have changed.

22 A. Yeah. But we do send the route up just to confirm it's the
23 correct route.

24 Q. Okay. So I know that day of the event you were talking about
25 it was a fun day in turbulence shall we say. Did you have to give

1 your relieving dispatcher a briefing?

2 A. Yes.

3 Q. So, brief me. Just kind of give me what you -- I know you
4 probably don't remember because it's been two months ago --

5 A. Yeah.

6 Q. -- and you've probably done a few of these. But considering
7 what you know about that day, kind of what would you -- what
8 should I expect from you --

9 A. Okay.

10 Q. -- as a --

11 A. Everything coming out of the West Coast -- it was a
12 challenging day to find routes but I planned everybody pretty much
13 north of the RPM data and the FPGs and even if they were just
14 skirting the edge of the FPGs I put -- still put them in the
15 comments and then a couple of the LAs earlier in the day I took
16 south and they were coming -- they were going to Dulles, tell them
17 -- brief them about the destination weather and you know how the
18 rides were -- what ride reports I've been getting. I'm trying to
19 -- any MEL items, anything out of the ordinary, any ATC reroutes
20 that are published.

21 Q. Okay. Now, when you're given a briefing can I interject and
22 say what's the weather like, you know, if you had alternate
23 issues? I mean, is that a --

24 A. Oh, sure.

25 Q. -- two-way street or do you just give this line of

1 information and then it's all yours, have fun, see ya, goodnight?

2 A. No, they can interject and then if they don't at the end it's
3 always, do you have any questions, any concerns, anything you want
4 me to do, and it's usually good.

5 Q. Okay. Alrighty. I know I talked -- we talked a little bit
6 about this in my first round and I'm still trying to wrap my pea-
7 sized brain around it so I'm going to ask another question and
8 hopefully it will clear it up in my head a little bit if you don't
9 mind. You get these turbulence PIREPs, or your crew sent you
10 something like holy cow, we just -- it was a good little E ticket
11 ride there for a minute, whatever. Can you -- I don't know what
12 term you guys would use, but can you blast it to all dispatchers?

13 A. Yes, share all sends it everybody in both offices.

14 Q. Oh, so it hits here and Willis?

15 A. Mm-hm.

16 Q. Okay. All right. Does that happen often?

17 A. Sure.

18 Q. Okay.

19 A. Yeah.

20 Q. All right. Perfect.

21 A. And if it's just -- see if it's the -- something over the
22 Atlantic you can send it to all Atlantic desks and all South
23 America desks. They each have a little different code that you
24 can send that to everybody so they get it.

25 Q. Oh, nice. Okay, because I was just going to follow up with

1 what if I'm working, you know, going south over central America
2 and South America, why would I care about something over the
3 Atlantic.

4 A. Yeah.

5 Q. So, when you answer, I swear there's got to be a camera or
6 mirror back there because you're hitting my questions. Do you
7 have ASAP -- oh, wait, this is United, so you guys probably have a
8 new term, DSAP, is that what it's called?

9 A. Mm-hm.

10 Q. Okay. Have you used it much?

11 A. It's the first and only time today.

12 Q. Okay. Did you get a -- today -- hopefully, you didn't
13 just --

14 A. Oh, no, yeah I didn't for this flight.

15 Q. -- because you're talking to me. Okay.

16 A. Never did one before though.

17 Q. Okay. So, when you submitted it, did you get a response back
18 from them or anything?

19 A. Yeah, it came to my e-mail.

20 Q. How'd the whole dealing with DSAP work for you?

21 A. It worked good.

22 Q. Okay.

23 A. Yeah, then -- I did it on the iPad because Tom Berry whose --
24 I rely on him a lot. He knows everything too. He says it's a lot
25 easier to do it through the iPad. So I did it through the iPad.

1 I had no issues. I got a confirmation that it was received
2 properly.

3 Q. Okay. And then when they, I mean, let me rephrase it -- did
4 they close it out yet?

5 A. I don't know that.

6 Q. Do you get -- do you know if you'll get a response if they
7 do.

8 A. I believe I do --

9 Q. Okay.

10 A. -- because I've been getting some updates.

11 Q. Alrighty. Is that system something -- I know this is your
12 first time you've filled it out. Is it something dispatchers
13 don't want to fill out, is it new, is it --

14 A. Oh, no. If they do, they fill them out.

15 Q. Okay, alrighty.

16 A. They asked me to on this one because I thought, well it
17 happened on afternoon shift, but they said no, you have to do it
18 also, so I did it. But yeah --

19 Q. Okay.

20 A. -- people use it frequently.

21 Q. Alrighty. So, considering the ease to report it and I know
22 you don't know if it's closed yet or not and that's okay. Would
23 you ever, if you needed to, would you ever use it again?

24 A. Sure.

25 Q. Okay. Is there any things you would like to do different

- 1 with it next time maybe?
- 2 A. No, I found it pretty easy.
- 3 Q. Okay. That's always good. I'm all about easy so.
- 4 A. Yeah, and I actually was able to take a picture of the
5 remarks and paste it in there and send it so.
- 6 Q. Okay, perfect. Do you have to do in routes, jump seat with
7 United?
- 8 A. Yeah.
- 9 Q. How often?
- 10 A. Once a year.
- 11 Q. Once a year. So, do you remember when your last one was?
- 12 A. Last May.
- 13 Q. Okay. Now, I'm going to assume so please, I know I'm
14 probably wrong but I'm going to assume your in-routes aren't what
15 you normally work, like, they don't have you go out to the West
16 Coast somewhere and catch a European flight or something, do they?
- 17 A. I'm Atlantic-qualified, so I have to -- all of your
18 qualifications have as domestic, Atlantic and South America. You
19 have to rotate -- do one of those each year.
- 20 Q. Okay.
- 21 A. So, I did Atlantic last year. This year I'll do domestic.
- 22 Q. Okay. And is there -- I know Atlantic there is probably not
23 an issue getting minimum time, but is there a minimum time
24 domestically?
- 25 A. Five hours.

1 Q. Five hours. So you couldn't just go from O'Hare to Detroit
2 and back --

3 A. No.

4 Q. -- and be done?

5 A. You can reduce it after the first landing, but you reduce an
6 hour, right?

7 MR. ROTHMANSKY: Right, by each landing, yeah, so you can get
8 it down, I believe, three hours.

9 BY MR. ETCHER:

10 Q. Okay, right. How do you like doing those in-routes?

11 A. They're -- I don't mind them.

12 Q. Okay.

13 A. You know, I've been to some interesting places and it's nice
14 -- I went to Munich, the crew they took me out to dinner, you
15 know, get a rest seat if it's long -- if it's over eight hours you
16 get a rest seat in back.

17 Q. Nice.

18 A. Well, over eight hours you could get a Polaris seat, below
19 eight hours you get a coach seat.

20 Q. So you want to go for the long one then. I see how this
21 works, okay.

22 MR. ROTHMANSKY: We need your contract.

23 BY MR. ETCHER:

24 Q. Alrighty. When you do these jump seats -- or the crews, do
25 they -- I know they take you out to dinner when you went to

- 1 Austria or wherever you went.
- 2 A. Munich.
- 3 Q. Munich, sorry. But do you interact with them, do they give
4 you feedback like hey, why on earth do you send me 10,000 notes on
5 dispatch release or anything?
- 6 A. Yeah. No, they talk --
- 7 Q. Okay.
- 8 A. -- most of them. Sometimes you get ones who aren't very --
9 don't talk much but usually yeah, I've never had an issue.
- 10 Q. Okay, excellent. Let's talk just a little bit about your
11 training.
- 12 A. Okay.
- 13 Q. I know you just -- it seems like you're doing quarterly
14 training or remote training or something. It's not like once a
15 year, is it?
- 16 A. Yep.
- 17 Q. Oh, it is just once a year.
- 18 A. Well, we get two domestic in a year, and you get one -- and I
19 get an Atlantic every year.
- 20 Q. Okay.
- 21 A. And then we get -- you'll get an e-mail that there's
22 eLearning so it's like on the computer you got to do -- we'll get
23 those -- quite a few.
- 24 Q. Okay.
- 25 A. I think we've had like four -- four or five this year. When

1 cold weather comes up they do it so you're updated on freezing,
2 precip and, you know, buy the season you'll get those kind of
3 online trainings.

4 Q. Okay. So that online training or e-learning, is that helpful
5 for you? I know you've been doing this a long time. You -- I
6 don't want to say you've seen everything because every time I say
7 I've seen everything I see something new every time. So I don't
8 wish that on anybody but are they helpful, do they?

9 A. Yeah, I think they're helpful. The ones that I find not very
10 helpful is the ones that we get from human resources on, you know,
11 how to talk to people or -- those are kind of obnoxious but you
12 know, pay me to do them, I don't care.

13 Q. So the eLearning isn't just necessarily specifically dispatch
14 or meteorology, things like that, it could be anything?

15 A. Mm-hm.

16 Q. Okay. And your -- the one or the -- do you get training
17 that's specifically for dispatch and what to do? I assume that's
18 just your recurrent or?

19 A. Yeah, it's recurrent, but we do get to, you know, like cold
20 weather apps we'll get, you know, just to update people before you
21 know the weather comes in. We'll get dispatch eLearning also.

22 Q. Okay, alrighty. Is there any kind of training that you would
23 like to see change, see modified, improved, got rid of? I know
24 the HR stuff --

25 A. Yeah.

1 Q. -- everybody wants that gone? But is there anything that you
2 can -- you'd like to see changed with training -- with learning
3 and training?

4 A. Yeah, I don't think so. You know, they -- one of the things
5 I find obnoxious is when they make the questions into a Jeopardy
6 game, and they try to make it amusing but --

7 Q. You just want to be done with it and get -- move on to the
8 job.

9 A. Yeah, I'm fine with it, you know.

10 Q. Yeah, alrighty. My last question and you're done with me.
11 You only have to deal with these other two gentlemen. I know
12 SkyPath is new for you and you're still learning it, but how --
13 from your perspective now since you're just learning it, how is
14 SkyPath, do you like it, is it -- you're still trying to -- let me
15 figure this thing out first? I'm not so sure.

16 A. I like it from what I've seen because I will have crews say,
17 well, I -- this is on SkyPath so I kind of can tell what they are
18 looking at but yeah, I need to get more up to date on it.

19 Q. Okay. I lied that wasn't my last question. You knew that
20 was coming. All right, I just felt like it, but this will be.
21 Before you got the iPads and SkyPath and all of that, was it hard
22 for you to communicate with the crew? Like if they were like
23 well, we are seeing this on our EFB, our SkyPath was telling us
24 blah, blah and you don't have access to that, was it hard on the
25 communication part?

1 A. No, not so much because it just shows in a different way on
2 the tools that we had.

3 Q. Okay.

4 A. So --

5 Q. So you could kind of get a similar look at what they were
6 looking at then?

7 A. Yeah.

8 Q. Okay. All right. I know I lied before, so I'll keep it
9 true, that was my last one, but I do appreciate the time you've
10 given me, educating me. Thank you for letting me record because
11 now -- I know my brain is not going to absorb all of this. So I
12 can review it, so I greatly appreciate that.

13 A. No problem.

14 MR. ETCHER: Paul, do you have any other questions, sir?

15 MR. SUFFERN: Just a couple.

16 MS. CEGGLAREK: Okay.

17 MR. SUFFERN: Not too many. You've been great. Very, very
18 helpful.

19 BY MR. SUFFERN:

20 Q. I know going back to the training question that Shawn had.
21 For scenarios that are -- and I'll call them out of season here
22 and I'll just pick a couple of examples like snow in Texas in May
23 or thunderstorms in North Dakota in the winter time, is there any
24 kind of training that United has provided you on how to deal with
25 those kind of out of season, really random type of events?

1 A. You know, we have our Dispatch Operations Manual, which will
2 address stuff, but I don't think we publish training for that kind
3 of weather stuff.

4 MR. ROTHMANSKY: Not that I'm --

5 MS. CEGLAREK: Yeah.

6 MR. ROTHMANSKY: -- totally aware.

7 BY MR. SUFFERN:

8 Q. Yeah, just more out of season type of thing, like a hurricane
9 hitting South Carolina in March or something like that. I'm just
10 trying to pick out kind of an example so there's no real training
11 on how to deal with something just a little bit -- I know when
12 you're -- when Shawn asked you the question it sounded like there
13 is weather ops training that probably comes out I would say in
14 probably September or October as you are ramping up for the winter
15 and --

16 A. Right.

17 Q. -- maybe is there kind of a summer one that comes out in like
18 February or March for that?

19 A. I don't recall but if there is like an event like a hurricane
20 or something like that, the Chiefs and the AMDOs -- managers will
21 send a message out to everybody with guidance and WSI will publish
22 a special weather briefing and I think it's every -- I don't know
23 how many hours it is, but you can get that through Fusion and you
24 can -- and it's for thunderstorms and snowstorms that there will
25 be special briefings in there.

1 Q. Okay. An opinion question and just over your experience as a
2 dispatcher, have you ever been over saturated at not this event in
3 particular, but have you ever been over saturated with the number
4 of flights and the weather and you're rerouting five at the same
5 time, and things like that or any scenario like that you've had to
6 deal with?

7 A. Oh, many times. It will be -- I'll call the AMDO and say,
8 hey -- I can't handle -- I stop -- I'm stopping to release any
9 flights because I can't -- I'll lose control, you know, I got to
10 be able to flight follow along with dispatch. So, they will
11 either be delayed on the release, or they will call in extras and
12 open desks and move flights off the desk.

13 Q. Okay. And when that's happened you felt management -- other
14 people have responded to be able to help shed that load and things
15 like that?

16 A. Yeah, and then there's, you know, like the Chiefs and we have
17 the Charter desk sometimes the charter desk will be light. They
18 will have them -- Tom Berry picks up flights all of the time and
19 they will move flights to them while they are trying to call
20 people in.

21 Q. Okay. Just a couple more questions and I will try not to lie
22 like Shawn did. Yeah, just two more. As far as it relates to
23 turbulence, do you have any guidance or either guidance from
24 United or rules of thumb that you have used and developed as a
25 dispatcher for keeping flights away from different types of

1 turbulence? So mountain wave turbulence, there's an FPG for
2 mountain waves over the Rockies and then there is something for
3 thunderstorms and then there is clear air with a jet stream over
4 the Northeast. Are there any rules that you've used as far as how
5 far you should keep flights away from those?

6 A. There is something in the Dispatch Operations. Manual, but
7 I'll avoid it as best I can even like the LA flight that put on a
8 lot of time going way up north, but -- so that's just the way I do
9 it.

10 Q. Okay. And then I will keep it to the truth here. I only
11 have one more question now. A couple and that's two -- the last
12 one. If I put you in charge and you won that \$1 billion lottery
13 and you would decide to be generous and give everyone in dispatch
14 a new weather tool that was out there that you wish you had, is
15 there anything that you wish that you would be generous giving
16 some of that money back?

17 A. I can't think of one offhand. I know like flight radar I
18 purchased the upgrade on it for flight radar and Windy I purchased
19 that one also that -- the upgrades but not ones that I can think
20 of off hand.

21 MR. SUFFERN: Thank you, Mary. This has been very, very
22 helpful. I appreciate your time.

23 MS. CEGLAREK: No problem.

24 MR. ETCHER: Thanks, Paul. And Jim?

25 BY MR. LAROSA:

1 Q. My question is on the enroute that you did to Munich. Are
2 you involved in -- right up to the beginning, are you with the
3 crew during the briefing?

4 A. I do. Some people don't go in for the briefing, but yeah, I
5 go with the crew.

6 Q. Okay.

7 A. And Munich is actually really good because they will let the
8 dispatchers go through security and back into security with them.

9 Q. Okay.

10 A. So, that's everybody's favorite.

11 Q. So, yeah, that was my question. Like how engaged were you in
12 the whole planning part? What -- you know, we as a crew like I'm
13 going to Milan this week and you know it's a process. You get to
14 see how we work through that, and the dispatch briefing is a very
15 important part of it. So I was wondering if you were able to see
16 that. Were you there with the phone call?

17 A. Yes.

18 Q What they call it -- okay, great. And did you stay with them
19 in the cockpit up until -- of course you're not going to stay up
20 there the whole time all the way to 30 West or so but are you
21 there throughout the process where they get the clearance, and
22 they start the Oceanic and the exit points and things like that?

23 A. Yep.

24 Q. Are -- is the captain or the first officer, are they
25 interactive with you? Are they including you in on the process?

1 A. Yeah, they were really good.

2 Q. Excellent. All right, good. Did you kind of criticize the
3 route a little bit that the other dispatcher gave?

4 A. It was a good route. I forgot -- oh, we did have an issue.
5 They loaded the wrong -- they loaded Frankfurt's freight onto our
6 plane. We were in line for take-off, and we had to come back, and
7 they pulled the freight off, and we had to open the doors and
8 offer egress and -- yeah, no, that wasn't fun.

9 Q. It's part of the process, sure. And again the same thing on
10 the return flight -- same thing all of that. Is that -- and I can
11 ask both of you, is that typically how they do it? Is it more
12 interactive where they are actually involved in it or is it just a
13 ride to Munich?

14 A. It's --

15 MR. ROTHMANSKY: Domestically, I'm going to say it's not
16 like --

17 MR. LAROSA: Okay.

18 MR. ROTHMANSKY: -- typically you show up and they are
19 already pre-flighted -- flight crew has already got --

20 MR. LAROSA: Sure.

21 MR. ROTHMANSKY: -- preflight process on the flight deck.

22 MR. LAROSA: Okay.

23 MR. ROTHMANSKY: So, you got to find that moment where you
24 don't want to interrupt.

25 MR. LAROSA: Good.

1 MR. ROTHMANSKY: Yeah.

2 MR. LAROSA: Understood.

3 BY MR. LAROSA:

4 Q. So on your flight, was there anything that was surprising to
5 you that the crew did, things that you are not aware of that you
6 took back saying, oh, that was interesting or how they responded
7 to dispatch messages or along the route or how they managed it?

8 A. No, I don't recall anything like that.

9 Q. Okay, all right. Good.

10 A. Okay.

11 MR. LAROSA: No other questions.

12 MS. CEGLAREK: All right.

13 MR. ETCHER: Thank you, Jim. Now I always -- I'm always
14 fearful -- you've helped us a ton and we've asked 1000 questions -
15 - maybe not -- 999, but I'm always afraid I'm not going to ask one
16 question and you're like, oh man, if he would have asked something
17 about -- it might have really helped them. Is there anything that
18 I failed to ask that you think that would really help us
19 understand a day in the life -- weather, everything just?

20 MS. CEGLAREK: No. The only thing like when I was working
21 those flights that day I had Dan Hine and Brian Gossett both work
22 over there a lot. Dan's a domestic line holder and I said hey,
23 what's your opinion on this route, do I want to take them north or
24 do you think south is better because you work this everyday?

25 He's like no, definitely north the way it's moving so I like

1 to -- it's good to have -- know who to go to, whose got good
2 opinions on stuff because I don't work that area -- well, every 90
3 days I work it but its required. Yeah, that's about all I have to
4 add.

5 MR. ETCHER: Okay, well you've given us a ton and I cannot
6 thank you enough. Sorry, it's right after you come off vacation.
7 So I know my brain after it comes off vacation, so you did
8 wonderful. You helped me, so I can't thank you enough.

9 MS. CEGGLAREK: Okay.

10 MR. ETCHER: And with that, we can call this concluded at
11 12:33 local.

12 (Whereupon, at 12:33 p.m., the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the
NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: UNITED AIRLINES FLIGHT 1890
TURBULENCE ENCOUNTER ENROUTE TO
NEWARK, NEW JERSEY ON FEBRUARY 10, 2024
Interview of Mary Ceglarek

ACCIDENT NO.: DCA24LA097

PLACE: United Airlines
Network Operations Center

DATE: April 15, 2024

was held according to the record, and that this is the original,
complete, true, and accurate transcript which has been transcribed
to the best of my skill and ability.


Julie Brumbarger
Transcriber

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

* * * * *

Investigation of: *

*

UNITED AIRLINES FLIGHT 1890 *

TURBULENCE ENCOUNTER ENROUTE TO * Accident No.: DCA24LA097

NEWARK, NEW JERSEY ON *

FEBRUARY 10, 2024 *

*

* * * * *

INTERVIEW OF: BRENT CONKLIN, DISPATCHER

United Airlines

United Airlines
Network Operations CenterMonday,
April 15, 2024

APPEARANCES:

SHAWN ETCHER, Operational Factors Investigator
National Transportation Safety Board

PAUL SUFFERN, Meteorologist Investigator
National Transportation Safety Board

JIM LAROSA, Central Air Safety Committee Chair
ALPA

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I N T E R V I E W

(12:45 p.m.)

MR. ETCHER: All right. Good afternoon. It is April 15th at 12:45 local time. My name is Shawn Etcher. I'm an Operational Factors Investigator with the NTSB. So all that means is I look at everything kind of forward of the cockpit door and how it all interacts with that. You are here because you were working a flight that was involved in an event and I just want to have your subject matter brilliance to help me understand everything that goes on on a flight so we can kind of avoid this from happening in the future.

Thankfully, I don't have to be all that smart because I -- there's a lot of people a lot smarter than me and I brought a lot of them along here with me. And in just a minute I'm going to have them introduce themselves, but typically we have parties to our investigations. It could be FAA, it could be the operator, could be the Unions, people that are subject matter experts in their areas of expertise just to make sure we capture everything we can because the more we learn, the better we can make it.

And one of those experts is sitting right next to me. I'll have them introduce themselves. Paul.

MR. SUFFERN: Yeah, hi, Brent. Hi again. I'm Paul Suffern. I'm a Meteorologist Investigator. So while Shawn looks forward of the cockpit door, I just kind of look at weather things and just trying to understand that perspective, whether it's how the

1 weather works or weather forecast or something like that. And
2 before working for the NTSB, I worked for the National Weather
3 Service up in Alaska.

4 MR. CONKLIN: Oh, nice.

5 MR. SUFFERN: Yeah.

6 MR. ETCHER: Thank you, Paul. And Jim.

7 MR. LAROSA: So, I'm, again the same thing, I'm a pilot, 777
8 line check pilot. I'm also Central Air Safety Committee Chair.
9 So, my focus is more on the pilot perspective of this.

10 MR. CONKLIN: Sounds good.

11 MR. ETCHER: Thank you, Jim. Now that's everybody that's
12 going to be asking you questions today. So what -- is there
13 anybody you don't want here? You can tell me, and I will go find
14 some good pizza somewhere but no, I'm just kidding. No, but is
15 there anybody you don't want here?

16 MR. CONKLIN: No.

17 MR. ETCHER: Okay, perfect. As part of our process, we
18 record all of our interviews. We send that recording out to be
19 transcribed. That transcript itself, when it comes back, we as a
20 group will review it and correct any misspelled names or
21 misspelled acronyms. We never change what you say. But we do,
22 you know, correct any misspellings. We will then send that back
23 to get recertified, that recertified copy I will send to your
24 representative, and he can send to you as well to make sure -- you
25 can read through it if there is anything you want to add, like,

1 oh, I didn't really mean it that way, it's okay. You can -- we
2 can attach it right to it. We can't change the transcript, but we
3 can attach it right to it.

4 MR. CONKLIN: Sounds good.

5 MR. ETCHER: So that way you know what's going to be out
6 there but that transcript itself will actually become public at
7 some point. Yeah, you won't -- so you won't have to worry about
8 hearing yourself on WGN News or whatever --

9 MR. CONKLIN: Fantastic.

10 MR. ETCHER: -- with your voice. So, just have peace of mind
11 of that. Are you okay with us recording?

12 MR. CONKLIN: Yeah.

13 MR. ETCHER: Okay, perfect. Now as per our regulations, you
14 actually can -- are entitled to have a representative with you.
15 Do you wish to have one?

16 MR. CONKLIN: Nah, that's okay. The safety guy is helping me
17 out.

18 MR. ETCHER: All right. Ivan, would you be so kind to spell
19 your -- state your name and your position.

20 MR. ROTHMANSKY: Sure. My name's Ivan Rothmanky. I'm a
21 United Airlines flight dispatcher and the PAFCA Safety Chair and
22 ERC primary Union representative.

23 MR. ETCHER: Alrighty. So, that's everybody in the room. I
24 have a few rules before we get started if it's okay. I mean --

25 MR. CONKLIN: Sure.

1 MR. ETCHER: -- I'm the government, right, we've got to have
2 some kind of rules. During this interview, if you don't
3 understand something, it's okay, ask for clarification. There's a
4 lot of things that go on in my brain if it's not always connected
5 to my mouth. So it may sound good up here but doesn't come out as
6 well. So please feel free, ask for clarification. You give me an
7 answer I don't understand, I'm going to ask for clarification.
8 So --

9 MR. CONKLIN: Sure.

10 MR. ETCHER: -- I just want to make sure I understand
11 everything correctly. If you need a break, just say so. I'll
12 check in with you every once in a while during this interview.
13 It's okay. We can take breaks anytime. If you need to confer
14 with your representative, that's fine, just say so. We hit pause,
15 we'll leave the room, we'll go wherever, whatever, we'll figure it
16 out. So, if you need a break just say so.

17 MR. CONKLIN: All right.

18 MR. ETCHER: I love dealing with facts. Sometimes I ask for
19 opinions, if you have one or if you want to give me an opinion,
20 just let me know that that's an opinion.

21 MR. CONKLIN: Sure.

22 MR. ETCHER: So, when I'm reading the transcripts a month
23 from now and I read something like oh, he did say the sky was
24 purple then, you know, at least then I understand that's his
25 opinion. Okay, perfect. So I just can --

1 MR. CONKLIN: Yeah.

2 MR. ETCHER: -- separate the two. And the most important
3 question unlike a check ride or a test, if you don't know an
4 answer, I don't know works perfect every time. All right? So
5 don't be afraid to use it if you don't know an answer, it's okay.
6 We're just -- we're here to learn. So and I appreciate you coming
7 in and educating me.

8 MR. CONKLIN: Sounds good.

9 MR. ETCHER: Any questions before we get started?

10 MR. CONKLIN: No.

11 MR. ETCHER: All right. I'm mean. I always start with all
12 of the toughest questions first and then they get easier from
13 here.

14 INTERVIEW OF BRENT CONKLIN

15 BY MR. ETCHER:

16 Q. So if you could, could you state your full name and spell
17 your last.

18 A. Yeah, Brent Nicholas Conklin. Conklin, C-O-N-K-L-I-N.

19 Q. Perfect. And what is your job title?

20 A. Flight Dispatcher.

21 Q. For?

22 A. For United Airlines.

23 Q. Perfect. And how long have you been a flight dispatcher?

24 A. About a year and a half here at United, four-ish years in
25 total.

1 Q. Okay. How long have you been then at United?

2 A. A year and a half.

3 Q. Okay, so it's --

4 A. Yeah.

5 Q. Okay, perfect. What kind of FAA certificates do you hold?

6 A. A Flight Dispatching Certificate and UAS Drone Certificate.

7 Q. Perfect. Can you recall what your most recent training event
8 was and when it was done?

9 A. I just had a desk check again in March since our base months
10 are reset to our birth month. So I just had a recent desk check
11 there and they used that as a time not only to check that you're
12 current and competent and know what you're doing, but also kind of
13 show you what's changed or other gotchas that can get people
14 tripped up.

15 Q. Okay, perfect. Now, can you just kind of -- I know you said
16 you've been here about a year, a year and a half, something like
17 that. Sorry, I'm terrible with numbers in my head some days, but
18 could you kind of give us a Cliffs notes version, if you will, of
19 your aviation history. What -- how did you get to where you are
20 today?

21 A. Sure. So, I went to College of DuPage initially for
22 meteorology, transferred over to University of Illinois to finish
23 up the degree there with Atmospheric Science and then was looking
24 for a way to tie that into an aviation career. So I went over to
25 Jefferson Academy for their dispatch program and then started at

1 Elite Airways. During COVID got laid off and went over to
2 Northern Cargo and then went from Northern Cargo to Frontier and
3 then Frontier to here, at United.

4 Q. Okay, perfect. Just kind of dig down a little bit here and
5 we'll talk about United for a minute -- moment. Who's in your
6 chain of command? Or do you have a chain of command?

7 A. We do have a chain of command. It normally comes up as
8 talking to AMDO, or manager of dispatch on duty if there is an
9 issue. So, they would be a phone call away if you have problems.
10 And then for, I guess more HR or administrative purposes we're
11 assigned an AMDO which is not always the same person as the AMDO
12 on duty currently. And then above them is the director and I
13 guess a head of the department.

14 Q. Okay. So, lots of AMDOs, but --

15 A. Yeah.

16 Q. -- do you have one that is, I don't want to say specifically
17 tied to you as a dispatcher?

18 A. Yeah, you do get assigned an AMDO for whoever deals with
19 certain groups of dispatchers. So, I have an AMDO, Sara Branscome
20 who would be my manager I would report to I guess.

21 Q. Okay. How's that interaction?

22 A. We don't have to interact a lot.

23 Q. Okay.

24 A. Only if there is like a sick day problem or some sort of
25 attendance issue or something like that. Otherwise, it seems like

1 if you're doing okay, you mostly just get left to keep working on
2 your own.

3 Q. Okay. All right. So, help me understand if you're working
4 the dispatch desk and you see a problem. It could be anything
5 from gate issues to weather, to -- you name the problem, it's
6 aviation so you name it, it's -- somebody's dealing with it
7 somewhere.

8 A. Sure.

9 Q. But is there somebody you would report that to? Is there
10 some mechanism that you would report the problem? I mean --

11 A. It depends on what.

12 Q. Okay.

13 A. So if it's like a fleet issue, if you're looking for a tail
14 swap because of an MEL or some issue you might go to the
15 Operations Manager and ask to see what they can do and that varies
16 depending on what kind of airplane. It's broken out into
17 different groups of people managing different aircraft. If you
18 have a problem concerning ATC, you might reach out to the ATC
19 desk.

20 And then there's other issues that pop up -- security or
21 medical issues where you'd reach out to the AMDO. And then if
22 it's something kind of all-encompassing like a diversion, you kind
23 of reach out to an OPS manager and an AMDO and possibly ATC desk
24 if it, you know, it depends on the scenario. If you had an
25 emergency you might reach out to them to make sure the tower

1 they're going to knows what's going on.

2 Q. Have you ever had to do that here at United?

3 A. Yes.

4 Q. So how'd that work for you? Was it, you know, things change
5 -- change is always good but sometimes change is stressful so kind
6 of help me understand when you had to go through that process, was
7 it pretty easy? Was it, oh, my word this is a royal pain?

8 A. It's different from other airlines I worked at. The other
9 airlines were a lot smaller so it's a lot easier to like
10 physically turn around and say something to the person behind you
11 or there is one kind of person wearing all of these hats of like
12 fleet manager and manager of dispatch and you'd reach out just to
13 them and it's very easy to communicate whatever is going on.

14 There was a bit of a learning curve when coming here as to who
15 wants to hear what when. You can get tripped up into talking to
16 ATC desk about a wheels up time but that's not theirs to control,
17 that's the operation manager to reach out to them to coordinate.

18 Or you could reach out to the security desk directly thinking
19 that's the person you are supposed to talk to, but you're really
20 supposed to talk to the AMDO who talks to the security desk for
21 you. Stuff like that. There were a lot of trip-ups initially but
22 after you step on the wrong feet enough times it gets corrected
23 who you talk to.

24 Q. I -- that's usually how I learn.

25 A. Yeah.

1 Q. So I understand that. All right. Has there ever been issues
2 that you've seen, like, I don't know, the weather it's, you know,
3 you look at one report and it says one thing, you look at
4 something else it says something different and it's consistently
5 different. Is there some mechanism you can go through to say,
6 hey, why is product X saying -- always saying something different
7 than product Y? Is there a mechanism that you can report those
8 kind of problems with?

9 A. I don't think I've seen that come up too much. But I have
10 called over to our weather contractor -- The Weather Company WSI
11 forecasters and talk to them about what they are seeing. So
12 usually it's a lot easier to talk to -- talk through a discrepancy
13 with them on the phone than any sort of like emailing or instant
14 messaging would kind of take care of.

15 Q. Okay. And is that pretty receptive, I mean, are they quick
16 to respond? Are they helpful? Has it been more questions yet?
17 Kind of help me understand that.

18 A. No, they're pretty good. And coming from a meteorology
19 background, I can kind of talk the lingo with them and understand
20 a little bit more of what's going on. I've had to reach out to
21 them a couple of times for either ash forecasts from Popocatepetl,
22 if I'm saying that right, in Mexico or lines of thunderstorms
23 going through Florida, things that may not necessarily be covered
24 with a TAF but clearly would have some sort of impact on aviation.

25 Q. Okay. You said it much better than I ever could have. I

1 wouldn't even have attempted it. So, kudos to you for that.

2 A. Thank you.

3 Q. All right, perfect. How would you categorize staffing here
4 for dispatchers? In your own opinion, factually, whichever is the
5 easiest. How would you categorize it?

6 A. It's changing, that's for sure. When I was hired a year ago
7 we were understaffed definitively. I was getting junior manned
8 quite a lot and that could be forced eight hour shift turns all of
9 the time. Just where you fall on the seniority list, and I was
10 pretty new and pretty junior, so I was getting hit a lot. And
11 it's tiring and it wears you out and it can lead to burnout and
12 other issues.

13 But that was last summer and then going into fall and winter
14 it started tapering off and then all of a sudden there was a
15 magical day where there was no more junior manning anymore and all
16 of a sudden there was just ample staffing because we had a whole
17 bunch of new hires come through and when you're a new hire here
18 you get trained in domestic and we had a whole bunch of domestic
19 staffing. So it went from very understaffed to normal seemingly
20 overnight. It was quite a change.

21 Q. Okay. So when you were getting junior manned staffing wasn't
22 where it -- as robust as it is today.

23 A. Yep.

24 Q. How many hours a day is your shift, first of all?

25 A. It's an eight hour shift.

1 Q. Okay. Is there a certain shift you normally work?

2 A. So, at that time I was bid relief and I preferenced
3 afternoons so I would typically work 2:00 to 10:00 p.m. And then
4 the junior mans could be days or midnights or afternoons. It just
5 depends.

6 Q. Okay.

7 A. Yeah.

8 Q. And that was my next question was, did -- is -- are you only
9 on that section or is it anytime within a 24 hour clock?

10 A. Yep.

11 Q. Okay.

12 A. Yep.

13 Q. Alrighty. So now you're getting a little better with
14 staffing. And you said that junior folks are always domestic --
15 or new hires are always domestic.

16 A. Yes.

17 Q. All right. Are you domestic? Do you do domestic
18 international? Kind of help me what --

19 A. I am just domestic.

20 Q. Okay. Now doing domestic -- just domestic to quote you with
21 new hires do you have to do their training or does somebody else
22 get assigned to train new hires that come on?

23 A. There's different groups that can do the new hire training.
24 I don't. There is the classroom group. I'm sure there's more
25 appropriate names for them that I'm forgetting. And they do full

1 time classroom training, and they work on the new hire training
2 material. And then we have on the job trainers, which I think are
3 split into two different groups of IOE and ADI or FDI -- I'm
4 probably butchering which is which but there are dispatchers who
5 hold the ability to train the new hires.

6 Q. Okay. Alrighty. Since you're not junior anymore so that's
7 good, but you haven't been here 100 years, tell me -- let's go
8 back to when you were hired on here. How was that training? I
9 know you had been to other airlines, so you have some comparison
10 in your mind --

11 A. Sure.

12 Q. -- but how was the training here for you to get you used to
13 the United way -- the United, you know, tools that are available
14 to you?

15 A. Sure, so we had a longer classroom footprint than other
16 airlines. The other airlines is maybe two or three weeks and here
17 I think it's two or three months. I wouldn't remember the exact
18 timeline but I'm sure I could go look. So, we had a lot of time
19 in the classroom going over more background information, more
20 weather background or fleet background, kind of history of United,
21 a whole bunch of other stuff like that.

22 And then we spent a good amount of time working through our
23 in-house, like, website software that interfaces with FPM, SABER,
24 CAEFPM, the flight planning software which is Dispatch View. We
25 spent a good amount of time working over dispatch view and what

1 columns did what and how to achieve tasks through that. And then
2 we also spent a good amount of time working through WSI, Fusion,
3 the flight following tool and kind of how to get the company
4 preferenced base layers applied and how to save it and how to set
5 up a view and how to accomplish other tasks through that.

6 Q. Okay. So when you came out of training, before you started
7 at IOE, just the ground school part --

8 A. Sure.

9 Q. I'll call it the ground school part so --

10 A. Sounds good.

11 Q. -- how did you feel? Did you feel like, dude, I'm ready to
12 hit the floor running and I can dispatch 50 flights an hour or was
13 it like, oh, I hope this kind of comes together?

14 A. I felt pretty confident in my skills because I had dispatched
15 a good amount previously. I kind of know what the job entails and
16 how to get around common issues like reroutes and how to deal with
17 weather, fueling strategies, take off, landing performance. I
18 felt pretty confident about that. Maybe a little less confident
19 in how to coordinate with other groups in dispatch because it
20 seemed like even in our dispatch operations manual that's not
21 entirely clear or up to date. My dispatch class had a good amount
22 of people failed the final test. I was one of the two to make it
23 through and everyone else failed and had to do a retest. And I
24 know that one of the sticking points was what group to coordinate
25 with that to do what.

1 Q. Okay. So you were one of two that passed, everybody else got
2 to enjoy it one more time --

3 A. Sure.

4 Q. -- at least. How many was in your class?

5 A. I want to say it was like 15 to 17.

6 Q. Okay.

7 A. I know I could go look it up and find a real number
8 somewhere.

9 Q. Oh, just a ballpark is close.

10 A. Sure.

11 Q. Compared to your other airlines was that a -- I don't want to
12 say a high unsat rate, but was it a -- was that kind of surprising
13 to you that only two of you passed?

14 A. Yes.

15 Q. Okay.

16 A. Yeah, it was surprising to most people.

17 Q. Okay.

18 A. Other airlines it wasn't uncommon that like two or three
19 people out of the class would have to retest or get coached on
20 something and then retest.

21 Q. Okay.

22 A. But the high not passing rate was different, for sure?

23 Q. Okay. And after you finished ground school and you passed
24 that final, since you passed it the first time out you go, right?

25 A. Yep.

1 Q. Did they pair you up with anybody on the floor to -- an IOE
2 person or?

3 A. Yeah, I rotated through different IOE instructors. It seemed
4 like dispatch scheduling tried to set me up with the same
5 instructor for at least two days in a row and it rotated through
6 dayshifts and afternoon shifts and midnight shifts. And I think
7 the footprint is 10 days of OJT.

8 Q. Okay. So when you're paired up with an IOE person, a
9 training dispatcher, do they show you, you know, here's what they
10 teach you in the schoolhouse, but this is real life, this is how
11 we do it, this is how we set it up? Did that go on or was it
12 pretty much what you were taught in ground school, you show it on
13 the floor?

14 A. There were definitely those differences. It seemed like
15 there was maybe a disconnect between the full time ground school
16 instructors and the OJT instructors that things had changed over
17 time. And especially after COVID it seemed like so many things
18 had changed in aviation. So there were some points where they
19 pointed out like you know, the company manual it says four minutes
20 for getting around weather and ATC staffing's worse so like that's
21 the company policy for four minutes, but you're going to divert
22 and here is my strategy or here is how I set up my software
23 differently. It seemed like every one of the on the job
24 instructors had a -- their own like tweak of how they did things.

25 Q. Okay. Did their tweaks help you in the long run or was it

1 just kind of like oh, that's a -- that's something that just they
2 do?

3 A. Yeah, there were definitely instructors that stood out to me
4 of having kind of better strategies for dealing with problems.
5 Like I think in our dispatch manual it talks about manually
6 calculating the amount of fuel it takes to divert and what your
7 decision fuel point would be. And there are other dispatchers who
8 are like we're going to work through this on the software and
9 we're going to come up with some more realistic numbers and, you
10 know, this is -- in reality, you know, the crew, you can tell them
11 about a 30 minute reserve fuel. They don't like that. They are
12 going to land at their diversion airport with X amount and, you
13 know, have a little bit more realistic expectation of how holding
14 might work out.

15 Q. Okay. All right, perfect. So, let's start easing down now
16 into that -- the day of the event. Can you kind of walk me
17 through kind of what life is in the dispatch and you kind of -- I
18 want to be a fly on your shoulder, if you will.

19 A. Sure.

20 Q. And walk me through that day. I assume you didn't dispatch
21 it. I assume you picked it up. I don't know.

22 A. Yep.

23 Q. Please correct when I'm wrong, but just kind of walk me
24 through that.

25 A. Sure.

1 Q. As best you can.

2 A. So I reported for duty at Willis Tower. I'll just start out
3 with that. I'm one of the few dispatchers in the recent hiring
4 pool that has the right to still work at Willis Tower where we
5 signed a letter of agreement that the classes after me don't have
6 a right to work there and have to come down to Arlington Heights.
7 So I reported to Willis Tower that day and I went and sat at a
8 computer, and you have to start pulling up all of your software to
9 get everything ready.

10 I think at the time it was Citrix, which is the portal to
11 launch, SABER or CAE FPM flight planning software and then you
12 have to open up all of the windows, make sure they are set up for
13 the right dispatcher's desk and then you have to open up Microsoft
14 Edge and you have to get all of your required tabs opened. So you
15 have to have Dispatch View open, you have to have WSI Fusion
16 launched, you have to have the dispatch center page launched. You
17 have to look through your dispatch bulletins. I take a look
18 through the pilot bulletins as well to see what's going on.

19 And then we have an in-house developed website for weather
20 briefing that one of our dispatchers set up and it pulls in charts
21 from WSI Optima website so you can scroll through on one page and
22 have kind of an idea of what's going on. And it has icing charts
23 and other things that are good for like a quick reference. So I
24 pulled that up.

25 I pull up the OIS page and all of the other websites you need

1 and pulled up the desk in Fusion and I overlay the route for where
2 my aircraft are going currently from ATC data, and I take a look
3 at all of that, and I go over to dispatch view and I scroll
4 through taking a look at MELs and weather. And kind of a quick
5 glance of what's going on before I call the day shift dispatcher
6 on 92 for the brief and turnover.

7 Q. Okay. So going through, getting all of that set up before
8 you make the call to the turnover, how long does that take you? I
9 mean, that sounds like you're doing a whole lot of things there.

10 A. I've gotten it down to five or ten minutes.

11 Q. Okay.

12 A. When you start it, it takes longer.

13 Q. Right.

14 A. Yeah.

15 Q. All right. So, you get your turnover -- was it a face to
16 face? Was it virtual? Was it on the phone?

17 A. A phone call.

18 Q. Okay.

19 A. So because we're in this strange temporary situation where we
20 have the two offices you can't be logged in on the touch screen
21 trade phones at the same time. So I use the backup phone to call
22 over to extension 92 and take the brief on that.

23 Q. Okay. So, how did that briefing go? I mean, I know it's
24 been a few months ago. You've probably worked one or two flights
25 since then at least, but how'd that briefing go that you can

1 recall?

2 A. I remember Mary was very thorough in a brief and every
3 dispatcher does it differently. Some are short and hit the most
4 important points, here is where weather is going on, here is a
5 captain having an issue, here is a broken plane or the situation,
6 but I remember Mary had a very thorough brief. It was a longer
7 brief than I would say what's normal, maybe five minutes worth.
8 Most people wrap them up quicker which everyone has their own
9 style, but I remember she was highlighting certain sticking points
10 and as she was talking about it, I was kind of clicking through
11 dispatch view as to what flight was what to try to have a little
12 bit of image with what she was saying.

13 Q. Okay. You said she was a little bit more thorough. I hate
14 to use the phrase too thorough, but you know it kind of worries me
15 when I hear people say they were really thorough. It's like,
16 okay, are they overly thorough like give you too much information
17 and you're not going to obtain it all, or are they a good amount
18 of thorough and everybody else is -- okay, not so thorough, like
19 maybe there needs to be some more briefing time?

20 A. Sure. I remember she highlighted so many things maybe it was
21 getting kind of hard to remember certain sticking points, certain
22 highlights of what I should be looking out for. She talked a lot
23 about MELs and weather, I kind of remember that but other than
24 that, no real detail is sticking out at me.

25 Q. Okay. No problem. Did she brief you on any turbulence, do

1 you recall?

2 A. I remember her talking about turbulence in the West Coast or
3 maybe over the Rockies, other areas not so much.

4 Q. Okay. Alrighty. So, before we continue on with this, kind
5 of walk me through. You checked in, you read the MELs, you read
6 all of that, you got your turnover, do you look at how many cases
7 -- how many cases, wow -- did you look at how many flights you
8 were going to be working that day?

9 A. Yeah. So, after I accepted the turnover we go into Unimatic,
10 and some people chose to print out a worksheet and some people
11 don't. I like the paper worksheet. I print it out and the first
12 thing I write in the upper right hand corner is how many flights I
13 have left to dispatch still and then I take a look at DV or how
14 many flights I have released and in the air. So, that's one of
15 the first tasks after you take over the desk is look at how busy
16 you are going to be.

17 Q. Okay. Do you recall that day how busy -- how many flights
18 you worked or were supposed to work or?

19 A. I want to say it was like 12 or 13 flights.

20 Q. Okay.

21 A. And the way that the transcontinental desk is balanced, it's
22 very front loaded. You have five or six flights that are in your
23 first hour and they are due within 15 or 20 minutes of each other,
24 and it takes me about 15 to 20 minutes to plan one flight. So,
25 the start of the shift is very task saturated. You have a lot of

1 aircraft in the air, and you have a lot of releases you have to
2 start working on pretty quickly. And I think that continues for
3 the first one to three hours of the transcon desk. And then after
4 that you have a giant lull in planning where you are waiting for
5 the red eyes or the later transcon flights to depart.

6 Q. Okay. So, you get the briefing, did you have any flights you
7 had already in the air that Mary had sent up?

8 A. I think there were 20, 22 somewhere in that ballpark of
9 flights already released. So probably about 15 in the air is
10 about typical.

11 Q. So you as the dispatcher, whether you're the one that
12 released them or you're assuming the responsibility from the one
13 who did, do you have to monitor them -- their route -- their whole
14 route, like, keep an eye on them, know where they are?

15 A. Oh, yeah, constantly. Yeah, that's part of your flight
16 following ability. And your flight following responsibility is to
17 monitor your flights.

18 Q. Okay. Is there, I mean, is it all on you or do you have
19 somebody else that, you know, like you and the dispatcher right
20 next to you, hey, you watch my flights, I'll watch yours too. I
21 mean, how does that all work if you have that many flights in the
22 air and you're busy doing all of this other stuff?

23 A. It's just on whoever is working that desk. So for me that
24 was just me. Now, I do have some nice people that I sit by in
25 Willis Tower, and we do some dispatch resource management. So if

1 we see something that's popping out at us we'll kind of call it
2 out to make sure everyone sees it. But that day no one had called
3 anything out.

4 Q. Okay. Was there anything that day that gave you a little,
5 hmm, this could be challenging or fun?

6 A. Not particularly.

7 Q. Okay.

8 A. It seemed like just about any other day on the transcon desk.
9 It seemed busy and I was trying to stay ahead with planning so
10 that you do have more time flight following because if you get
11 behind on planning your task saturation starts to increase
12 rapidly. As things are mistimed with planning, you'll get more
13 phone calls from load planning or crews looking for their releases
14 on stations looking for fuel amounts. And if you get behind in
15 planning you start getting further behind as you get buried with
16 more workload -- with more manual coordination.

17 Q. Okay. All right. So for a moment, pick any day, any time
18 you wish, but you're getting ready to dispatch or work up a plan
19 for flight X. I'm a fly on your shoulder. I'm learning
20 everything I can. Walk me through what you do to get that whole
21 flight plan done and fire it off to the crew.

22 A. Sure. So, I start out in dispatch view and the first thing
23 that I click on is the aircraft to see what's broken on it or what
24 dispatch MELs are applied to the aircraft. And then I'll have the
25 flight open and in CAEFPM or SABER FPM and click on the MEL tab

1 and make sure that that matches and then I go over to the flight
2 tab. And I pull open Unimatic, and we have another script that
3 was developed, it's called the JJ3000 script where you can do
4 control F and you type in the flight information and the day, and
5 it'll go pull in all of the relevant information through Unimatic
6 and our other sources and display in one spot.

7 So, the aircraft, the crew, the expected zero fuel weights
8 and some other information on there. So I'll use that in dispatch
9 view, and I'll make sure that the zero fuel weight that's in SABER
10 CAEFPM is correct. And then I'll start in the takeoff and landing
11 performance. It has something where it auto populates the weather
12 and the temperature, the pressure, and the dew point. It's almost
13 always off and wrong and it will not apply wet runway, it defaults
14 to dry. So I will correct all of those things and take off and
15 landing performance. And I'll calculate the flight and it'll come
16 up with normally defaulted the least cost routing variance.

17 I'll take that and I go into the messages tab in the FAA
18 flight plan page, and it produces an output with the route string
19 that I have to copy and paste over into WSI Fusion. And I paste
20 it in there to display the route based off the weather. And then
21 from there most times I have to change the routing because SABER
22 will default to planting you in the middle of the jet stream which
23 is great for tailwinds but not always great for ride quality or
24 avoiding weather.

25 So from there half of the time I have to manually build a

1 route based off of looking at charts or sometimes I can pick other
2 routes that are stored in CAE SABER but it's not often that it
3 comes up with what I'd be looking for. Most of the routes it
4 optimizes are normally about the same corridor. So for whatever
5 reason, you don't like the route it defaults to most of them are
6 going to be pretty much the same.

7 So from there when I have the route I'll take a look at the
8 OIS page and the traffic demand, and I'll also be keeping an eye
9 on the FAA -- the ATC messages that we get through dispatch view
10 from our ATC coordinator. It's talking about what the demand is
11 and what the challenges are at airports and I'll kind of come up
12 with a fueling strategy from there of how much fuel I'll need for
13 ATC impacts along the route or possible reroutes or holding. And
14 I'll kind of put all of that together and do some minor tweaking
15 of running the flight plan a couple more times.

16 Then when I'm finally happy with that, I look at the route
17 again, my finalized route on Fusion and I'll move the time slider
18 through time and see where the aircraft is going to be and remark
19 what kind of turbulence they can expect in route or what kind of
20 weather is going on. Or ATC impacts or other pertinent
21 information in my remarks. And when all of that's done I finally
22 hit release, file flight plan, and add BP which will add it into
23 dispatch view and then the pilots can see it on their iPad.

24 Q. Okay. How long does that all take to do?

25 A. Maybe 15 to 20 minutes on a transcon flight. On shorter

1 flights if you're going to do something regionalized it's a lot
2 quicker. Like for instance if you had like a LaGuardia O'Hare air
3 traffic control has their preferred route, all you are really
4 adjusting is maybe the cruise level for a better ride and fuel
5 adjustments as needed and you're remarking what's going on on the
6 route, and you're sending it because air traffic control's system
7 is going to automatically default you back to the pref route
8 unless there's something going on. So those regionalized flights
9 are a lot quicker to produce than a transcontinental flight.

10 Q. Okay. So when you're doing all of that, are they all the
11 same aircraft type?

12 A. On transcontinental desk you can have just about anything.
13 Anything from a 319 to a 737s which have their own challenges on
14 longer routes, 757, 767, triple sevens, 787. You can get just
15 about anything.

16 Q. So not -- so basically having any kind of aircraft on any
17 route you might be working, does that add new complexities, does
18 that take a lot more time dealing with, oh, I got to, you know, a
19 319 on this on so I need to figure different.

20 Q. It does. One flight that pops out to me is we have a Newark
21 John Wayne flight -- John Wayne having a very short runway and
22 being very challenging presents its own issue, but the problem you
23 normally run into with that flight is the take off structural
24 weight out of Newark. So if you have a flight like that -- a
25 737NG crossing the country at a very high zero fuel weight, you

1 spend a lot more time with your planning to try to accomplish the
2 flight. And they normally end up being very skinny on fuel and
3 very close to max structural take-off weight. So, those flights
4 will demand a lot more attention than a triple seven or a 787,
5 which has so much ability because it was meant to do so much
6 larger routes. It's really easy for it to have the takeoff
7 performance and the takeoff structure and the landing performance
8 and landing structure.

9 Q. Okay. So you're doing all of that and still monitoring the
10 15 flights or whatever you have in the air?

11 A. Yes, it's busy.

12 Q. I was going to say I'm not in dispatch, but it just sounds
13 like that's a lot of multitasking going on.

14 A. Yes.

15 Q. Has that caused any concerns to you?

16 A. Yes, thinking back to the previous summer when there was a
17 lot more thunderstorms going on and air traffic control
18 constraints and diversions and all of that kind of stuff, there
19 hits a point where you just stop planning. You are too busy. You
20 give up on it and we have a kind of saying of working in the
21 green. It's when you're under the due time -- a flight comes due
22 two hours prior to its departure time, and it turns green saying
23 it's ready for you to release. What it's really saying, at least
24 in my opinion, is you're past due, that should have been out. So
25 there comes a point where you're so busy you just let your flight

1 start turning green. You're like I'm going to be behind. I have
2 tasks elsewhere I have to deal with.

3 Q. Okay. So is it a problem for you as a dispatcher if you're
4 like I'm delaying that flight because I'm so far behind or is
5 there a mechanism to -- oh, you're delayed on these two flights,
6 you work on that one and we'll pass this other one to somebody
7 else?

8 A. Sometimes your fellow dispatchers will just kind of notice
9 when you're too task saturated or you can reach out and your
10 neighbor will -- instead of having the flight moved to their desk
11 will just kind of help you work it up and release it for you for
12 you to monitor, which that works decently well in a pinch, but
13 when you're overworked you're supposed to call the manager of
14 dispatch to let them know that you are too busy. In my experience
15 though those phone calls normally result in the manager of
16 dispatch saying everyone is, do your best. And you're kind of
17 stuck with them.

18 Q. Okay. Is that -- does that come down bad on you if the
19 paperwork is late getting to the airplane and the flight leaves
20 late?

21 A. When I had first started and was first signed off I was a
22 slower worker and obviously you increase in speed over time and I
23 had made repeated phone calls to the manager of dispatch saying
24 that I was too busy and I got a -- I can't remember if it was a
25 call or an e-mail saying like hey, we want to make sure that

1 you're not just crying wolf all of the time that you're overworked
2 because we have other dispatchers who just don't want to send out
3 as many releases and these are the kind of complaints that we see.
4 And at that point, it kind of felt like I was being told everyone
5 is busy, kind of deal with it.

6 And being on probation at the time -- we're on probation for
7 one year and the company could choose not to continue your
8 employment, it kind of felt like saying everyone's busy, just deal
9 with it and don't make waves.

10 Q. Okay.

11 A. Yeah.

12 Q. All right. That helps. So, let's get back to the accident
13 -- the event flight.

14 A. Sure.

15 Q. You came in, you were given a briefing on it.

16 A. Yep.

17 Q. Did you have to monitor it a whole lot? Did you see
18 turbulence coming at it? Kind of walk me through -- did you even
19 have a chance to look at that flight and watch it?

20 A. Sure, yeah. So, I normally keep my Fusion zoomed out so it
21 displays the whole continental U.S. so I can kind of keep an eye
22 on all my flights at one time because if you zoom in on one
23 particular area you might know what's going on with one flight,
24 but then you don't know what's going on with your other flights.
25 So, I kept it zoomed out initially and I remember displaying all

1 my routes. So the remainder of the route was a red line to where
2 it's supposed to go based off the air traffic control strip. And
3 I looked over the flights and I saw some flights in the western
4 part of the country that were going through FPGs or flight
5 planning guidance that's put out through The Weather Company or
6 WSI and they were talking about light to occasional moderate
7 turbulence on the West Coast and I remember scrolling over to the
8 northeast for a little bit and looking at the flights that were
9 heading into Newark. And there was some light to occasional
10 moderate and nothing that really stood out at me of anything that
11 was all that different from a typical day.

12 Q. Okay. All right, so did you have to interact with the event
13 crew at all for any reason?

14 A. No.

15 Q. Okay.

16 A. Not until after they encountered the heavy turbulence, I
17 think is how they put it in their ACARS and had to coordinate that
18 later, yeah.

19 Q. Okay. What's heavy turbulence to you mean?

20 A. That felt like an older term that might have been used, heavy
21 turbulence, but I think I kind of got the point that that was
22 severe.

23 Q. Okay.

24 A. Yeah.

25 Q. All right. Okay. So, do you have a mechanism to reach out

1 to the crew and say if you have the time to say hey, I see in your
2 route, you know, four planes ahead of you had turbulence or
3 whatever? Do you have that opportunity or mechanism?

4 A. Yeah. So, if I see a bunch of turbulence, PIREPs or FPGs,
5 I'll try to copy and paste them into ACARS and send them to the
6 crew that way, that seems to work pretty well where they can just
7 view it on their MCD or their FMC of either the forecast and kind
8 of what they are expecting, what the region is or what aircraft
9 ahead of them reported. I think it just kind of depends on what I
10 see. Sometimes I'll type out a message of what I see or sometimes
11 I'll copy and paste the forecast out.

12 Q. Okay. Do you use the same tools that the crew would use in
13 flight like I think they have EFBs and SkyPath and different apps
14 on their EFB? Do you have the same thing available?

15 A. Yeah, we were given iPads, and we have SkyPath on it. It's a
16 little bit more difficult to use from a dispatch perspective
17 because the app is made for pilots and for inputting one flight.
18 So, it makes it a little bit harder to kind of rig the app to work
19 for dispatch. It can work.

20 It requires a lot more intervention or plugging in flights to
21 try to overlay a similar path as to what your aircraft would be
22 doing. I spend more of my time in Fusion because it's already on
23 my computer with my mouse. So it's easier to just interface with
24 Fusion and use the altitude slider to look at RPM forecasts and at
25 the time slider to see how things are going to change. And then

1 is also displays PIREPs so I'm looking for PIREPs on Fusion as
2 well.

3 Q. Okay. Does SkyPath not issue PIREPs or show PIREPs?

4 A. SkyPath has little hexagons that change color depending on
5 what other aircraft reported from the iPad being moved around and
6 using the accelerometer data. So it doesn't have -- I wouldn't
7 call them PIREPs per say, but it colors in a map of the U.S.
8 through these little hexagons of kind of what other aircraft
9 experienced.

10 Q. Okay. And do you know, like if a crew reaches out to you via
11 ACARS or, I don't know, maybe they can pick up the SAT phone or
12 pick up the radio and dial a frequency, however they get a hold of
13 you and they're like, oh my goodness, we just went through this
14 section of I'll say moderate turbulence. Have you ever had that,
15 first of all?

16 A. Sure, yeah.

17 Q. When you get that, do you have a mechanism to put in a PIREP?

18 A. I do. Yeah, we have a function in dispatch view where you
19 can right click on a flight and have a PIREP entry and it tries to
20 pull the last position report we received from the aircraft and
21 fill it in so we can just do some modifying, add remarks of what
22 they experienced for turbulence. Sometimes it pulls in the last
23 position report, sometimes it doesn't. So you have to right click
24 on the flights and send them an ACARS for an FMS position report
25 or do your best to try to manually use Fusion and use the -- a

1 drag measure tool to try to find a VOR or something nearby to
2 input a PIREP.

3 Q. Okay. Have you ever inputted a PIREP?

4 A. Yes.

5 Q. Is it a, I mean, to me it sounds like it's a bit of work to
6 input one.

7 A. Yes. It's cumbersome. It takes time. I would say about five
8 minutes would be about the average of just waiting for the
9 aircraft to get back to you on a position report or DV to update a
10 position report or manually finding the position and inputting it.

11 Q. Okay. All right. The last little batch of questions I have,
12 and I'm going to pass it off here for just a minute because you've
13 got to be tired of looking at me.

14 A. Sure.

15 Q. I would be too if I was you so it's all good. For that event
16 flight, I know you said -- and please do not let me put words in
17 your mouth, but I believe you said you didn't talk to the crew or
18 communicate with the crew until after the event.

19 A. Right.

20 Q. And I visualize you sitting there in dispatch, I'm going to
21 say juggling multiple flaming balls trying to get everything
22 moving along, in order, monitoring everything. Is it easy -- I
23 don't want to say easy to monitor a flight that's in-flight, but
24 is that one of those tasks that it's easy to see but it's easy to,
25 you know, not pay attention to because you are doing everything

1 else? Does that question make sense?

2 A. Yeah, I think kind of generally as you start getting busier
3 maybe that's the case of you might see it but may not process all
4 things. But I do remember looking at that flight, I want to say
5 it was right at turnover time, so maybe about an hour or an hour
6 and a half before the incident occurred. I remember looking up at
7 the northeast and seeing some rain showers and seeing the light to
8 occasional moderate FPGs that The Weather Company put out, but I
9 don't remember seeing any PIREPs in that region. It was pretty
10 blank. So there wasn't anything really particularly standing out
11 for me to tell them.

12 Q. Okay. There was no turbulence reported or no --

13 A. Not that I remember. Yeah.

14 Q. I know it's been a couple months so --

15 A. Yeah.

16 Q. -- I wish I could have been here the moment after so I could
17 have queried you but that means I would just never be home so
18 sorry.

19 A. Fair enough.

20 Q. But no, let me bring to you on all of this so far you've
21 given me a ton of info. I appreciate it.

22 A. Sure.

23 MR. ETCHER: But I guarantee you Paul has really good
24 questions and so I'm going to let him ask his, but before I do, do
25 you need a break or anything?

1 MR. CONKLIN: I'm good.

2 MR. ETCHER: You're good.

3 MR. CONKLIN: Thank you though.

4 MR. ETCHER: All right. Well, with that, Paul.

5 MR. SUFFERN: Thank you Shawn. Thank you, Brent. This has
6 been very, very helpful just to kind of understand how you do
7 things and then understand the day of the event and then just
8 things there.

9 BY MR. SUFFERN:

10 Q. Could you just kind of walk me through like you told Shawn a
11 couple of scenarios of what you had up on the screen there as far
12 as Fusion on your displays and things like that. What weather
13 tools do you have up there that are helping you monitor things?

14 A. Sure. So typically I have RPM turbulence forecast overlaid
15 which is a gradient of like different orange to red colors
16 depending on how severe -- I think it's the eddy dissipation rate
17 is what it's showing you. So I have that overlaid and then I have
18 the North American high resolution mosaic radar data overlaid. I
19 also have lightning data in there and then the WSI or The Weather
20 Company FPGs and end Signets overlayed.

21 Q. Okay. How --

22 A. As well as PIREPs, sorry.

23 Q. Yeah. Okay. All right, yeah. I apologize for cutting you
24 off there.

25 A. No worries.

1 Q. How accurate have you seen the turbulence eddy dissipation
2 rate information being as far as, you know, when you have a flight
3 that goes through there, does it report similar to what you are
4 expecting based on what you view there or is it like overpredict
5 stuff all of the time or?

6 A. It's kind of a mixed bag.

7 Q. Okay.

8 A. And I kind of expect that coming from a meteorology
9 background that some days there's -- the models do better at
10 resolving what's actually going on and some days they are a bit
11 off. There is times where pilots encounter turbulence and the RPM
12 data isn't really suggesting there should be any there and there's
13 other times where it does over warn and it says this area is going
14 to be really bad and I have pilots go through it and they're like,
15 hey, there was nothing and this flight level was smooth. It
16 varies.

17 Q. So shifting a little bit, have you seen it vary with type of
18 turbulence like -- and it gets to mountain wave it's great, but it
19 can't handle thunderstorm turbulence, you know, convective or?

20 A. Yeah, I think generally it does better with like I guess a
21 wind shear kind of event or over the mountains it seems to do
22 better. I don't think it resolves convection turbulence well.

23 Q. So go into the FPGs and things like that that you receive, do
24 you find them to be accurate or are there other tools like the
25 government SIGMETs or things like that? Do you have the

1 opportunity to overlay those and like compare or how does that
2 work?

3 A. The WSI ones are decently good. There is sometimes where
4 they over warn and there is nothing that ends up being there. And
5 you know, I guess that's okay because it's better to warn and
6 nothing ends up happening. And then there's other times where
7 they miss it and after a few flights go through a region and keep
8 reporting PIREPs they will come up with one. We can also, in
9 Fusion, overlay the NWS boxes and watches and warnings and the
10 AIRMETs and SIGMETs. It just becomes an issue of over cluttering
11 one display. So, sometimes I'll open another window and look at
12 that. It just really depends honestly how busy I am and how much
13 I can look at.

14 Q. Okay. And do you recall that, I mean, and like Shawn said
15 and as we know it was two months ago, do you recall what you had
16 opened around that time on that day or?

17 A. It was The Weather Company --

18 Q. Right.

19 A. -- or WSI, yeah.

20 Q. Okay. So speaking of The Weather Company, I guess, and do
21 you have any in-house meteorologists here at United that you can
22 call and talk to if you are --

23 A Yeah, we contract with The Weather Company or WSI, I forget
24 which they are going by right now, but we do have some lines
25 programed into our phone where we can call and ask if we have

1 questions. Honestly, it's pretty rare that that comes up, but
2 they are there, yeah.

3 Q. Okay. And what kind of scenarios would you call them for?
4 Would it be, you know, hey, we just had ten PIREPs of stuff in
5 here why isn't there an FPG yet or hey, I'm looking at this line
6 of thunderstorms it really looks like, you know, we need to --

7 A. I feel like most of the time I'd be calling them and asking
8 if the TAF that maybe the National Weather Service put out is
9 really the most accurate and there's sometimes where we'll request
10 a TAF from them if we believe the NWS TAF isn't doing a good job.
11 So it feels like that comes up more in below Cat 1 operations or
12 for timing of thunderstorms. I have called them in the past about
13 ash NOTAMs that they put out or convection in Florida seems like a
14 kind of common one of like, you know, is this thing going to
15 become an impassable line or is it going to be scattered or what
16 do you see happening?

17 Q. Okay. That's helpful. As a dispatcher do you have access to
18 -- and I'm going to mess up the name here, but like the turbulence
19 heartbeat information or maybe it's called TAPS or something like
20 that --

21 A. Yeah.

22 Q. -- in airplanes?

23 A. Yeah, TAPS is integrated into our Fusion product. It doesn't
24 seem like we get a lot of TAPS reports anymore. I'm not sure
25 which aircraft exactly report them. They do populate in there.

1 They show up as little triangles of different colors depending on
2 what's going on.

3 Q. Okay. Do you recall if you had that up on the day of the
4 accident or not?

5 A. Yeah, I default to having PIREPs and TAPS reports on. I
6 don't remember seeing any.

7 Q. Okay.

8 A. Yeah.

9 Q. And then I think Shawn asked the question earlier and you --
10 about SkyPath and do you have access to that and if so, where is
11 that?

12 A. I do. SkyPath would be on the company issued iPads.

13 Q. Okay. And so you talked about having Fusion up on two
14 screens. Where do you have the iPad compared to where you're
15 sitting or standing if it's a standing desk or things like that?

16 A. The iPad I usually have turned on and toward my right where
17 DV is, and it flips back and forth of what's displayed on there
18 whether that's Optima or SkyPath or Jeppson for charts.

19 Q. Okay. How accurate have you found the SkyPath information
20 being for you as you're helping out flights and stuff?

21 A. Hit and miss.

22 Q. Hit and miss.

23 A. Hit and miss, yeah. Some flights will ACARS me about things
24 they have seen on SkyPath and I'll, you know, look it up on
25 SkyPath and confirm and then go through the region and they are

1 like oh yeah, there is no turbulence there anymore. So, sometimes
2 it does well, sometimes not, yeah.

3 Q. Okay. And I would assume -- I -- and this is where I don't
4 know. Is it required of pilots to have SkyPath on as they are
5 taking their flight there and so?

6 A. I don't know.

7 Q. Okay.

8 A. I've seen it in the jump seat before. I don't know if it's
9 required.

10 Q. Okay. And so have you noticed when you have SkyPath up or
11 things like that where you'll see something on there and you'll
12 ACARS them a message and they are like, yeah, we don't have
13 SkyPath up right now but we'll, yeah, we're okay to avoid that,
14 you know, that area and such?

15 A. Yeah, it's a bit of a back and forth of who notices what
16 when, but it always starts a conversation. Sometimes the crew
17 will be looking at their iPads and say hey, an hour from now how
18 are the rides or how are things looking getting into this airport
19 or what have other flights said. And I'll either, you know, pull
20 up SkyPath or Fusion or both and kind of take a look and just tell
21 them what I see.

22 Q. Okay. This has been very, very helpful. You know when
23 you're deviating or working with the pilots to deviate around kind
24 of weather scenarios do you ever have any pushback from air
25 traffic control, you know, from a -- maybe a particular en route

1 center or something like that or --

2 A. Yes.

3 Q. -- how does that work?

4 A. Yeah.

5 Q. Okay.

6 A. It feels like in the Western Conus air traffic control will
7 let you deviate and change your route a lot more and have a lot
8 more flexibility of where you want to go especially based off of
9 weather. It seems like New York Center, Cleveland Center and DC
10 Center do not give you that same opportunity. And I think it's
11 because -- I can only speculate -- they have so much volume, they
12 can only do so much. But New York Center is typical weather.
13 Response will be changing your aircraft's arrival to a different
14 STAR. That seems to be what they do. They'll just assign you a
15 different STAR or maybe a vector as you get in closer to Newark.

16 Q. Okay. Do you recall, you know, again it was two months ago
17 -- do you recall that happening on the day of the accident or?

18 A. I think they remained on their flight plan route from what I
19 can remember.

20 Q. Okay. You've been very helpful. Just one more in this
21 round. For the different types of turbulence because you are
22 working domestic here and you've got mountains in the West and
23 then thunderstorms could be all over the place and then wind shear
24 turbulence. Is there a certain guidance or criteria that you use
25 to, you know, avoid areas of thunder -- or avoid areas of

1 turbulence depending on the type of turbulence like mountain way
2 are you trying to keep them, you know, 10 miles away of
3 thunderstorms, 20 miles away or this many feet of altitude?

4 A. It varies a lot depending on the flight and what you can
5 accomplish. I feel like if I have more room for more fuel or to
6 plan lower or plan longer routes I will try to. It gets a little
7 bit tighter on some of the smaller aircraft that are more
8 restricted. So then it becomes filing a more optimized route and
9 it all depends on the level of risk. If I think it's going to
10 elevate to a higher level of risk I want to do something
11 different, but if it looks like a lower level I'll remark it and
12 give them fuel and check in with them as they get closer.

13 MR. SUFFERN: Okay. Thanks Brent that's all I got for this
14 round. That's helpful. Thanks.

15 MR. CONKLIN: Sure.

16 MR. ETCHER: Thanks, Paul. Jim?

17 BY MR. LAROSA:

18 Q. Hi Brent. Thank you.

19 A. Sure.

20 Q. Just listening through your process and how you plug in, and
21 start is it's very informative to me --

22 A. Sure.

23 Q. -- to see all of the steps that you take and how you actually
24 manage through that. It's very refreshing after doing it for a
25 year and a half so --

1 A. Oh, thank you.

2 Q. -- thank you for that. You -- it's very helpful for me
3 educationally. So, a lot of the questions that have been asked or
4 just a couple of them. As when you took this over and you saw
5 that weather system that was kind of coming through the eastern
6 half of Pennsylvania how interactive are you with preceding
7 flights? Maybe flights that you're working with or other flights
8 that have gone through and then giving that feedback back to this
9 flight? I mean, is that something that is the normal process for
10 you?

11 A. Sure, yeah. On that day I think they were my first arrival
12 on my desk into Newark so there weren't any other Newark arrivals
13 that I could kind of like pick their brain and ask them questions
14 as they went through things. But on other days, if, you know,
15 they weren't my first flight in I might get an ACARS from the crew
16 being like, hey, the turbulence was pretty crummy back there or,
17 you know, that rain shower wasn't just a shower or something like
18 that. But on that day, there was no other flight in the area that
19 I could easily pick their brain. And yeah, that's all I got.

20 Q. Do you think being in Willis, because I've been there
21 recently where there's like one or two people in this massive room
22 and here you can see the continuity. You can see, you know, you
23 could slide back, you can talk. Being in Willis do you find that
24 you'll lose a little bit of that because you don't have that
25 ability or because your flight wasn't some of the flights that

1 were leading the pack, but there was certainly a hundred or
2 probably more --

3 A. Sure.

4 Q. -- earlier in the day. But you didn't have the ability.

5 A. I would say that actually wouldn't actually impact me so
6 much. I tend to sit near another dispatcher of mine -- or a
7 dispatch friend of mine who works a transcontinental desk as well
8 and we bounce ideas off of each other pretty frequently. Or if we
9 see something, we say something to each other. And I typically
10 sit near another dispatcher who works West Coast, and we all use
11 DRM pretty well because we don't have assigned seats. We can pick
12 the people that we work with well and that kind of helps the DRM.
13 I have worked a few shifts out here recently and sat at our
14 assigned seating and sometimes you end up with dispatchers that
15 are more talkative or do a little bit more dispatch resource
16 management and sometimes you end up with more, I guess introverted
17 people or dispatchers that just stick to themselves and just work
18 on their desk.

19 Q. Sure. So it was brought up about SkyPath, how comfortable, I
20 know it's new, it's a new tool. How comfortable are you using it?
21 The first question, and second question is, do you apply that --
22 do you overlay your route over the SkyPath?

23 A. It takes a lot of work to overlay the route on SkyPath
24 because we have 20-something flights. So most of the time I don't
25 overlay the route, but I will have like a mental image of where

1 the aircraft is and pan through the different altitudes manually.
2 Because we are not in the airplane it doesn't automatically pick
3 up the altitude or you don't have your altitude set to where you
4 are. SkyPath is more -- it's seen as an auxiliary tool that got
5 handed over to us more than a primary tool and it looks like the
6 primary tool at least still remains Fusion and RPM and the PIREPs.

7 Q. The only thing that weather -- the Fusion, for example, is
8 good it shows convectivity and it shows precipitation, but we'll
9 see a lot of clearer turbulence that is not going to show up in
10 Fusion that does represent in SkyPath because it's the pilots and
11 crews in front of you with their iPad moving around where you're
12 getting that. A good point on putting -- overlaying all of your
13 flights because you -- I don't believe you are allowed to do that.
14 You're gonna have to put in one flight.

15 A. Right.

16 Q. Do they -- have you been trained on the ability to put in
17 flight 1, 2, 3, 4, 5 if it pops up? Do you know how to do that or
18 do you -- have you been taught to manually enter physical weight
19 points and?

20 A. I can't remember what our exact training on SkyPath was. I
21 know that I can do it, it's just cumbersome. It takes more time
22 because unfortunately it doesn't relay into the rest of our tools
23 very well. So it takes a lot more effort to get that exacting
24 path put into SkyPath.

25 Q. Okay. And that might be a good educational piece because

1 it's very easy for us to do it. Simply UAL flight number, enter,
2 and it pops up -- whatever you have created -- whatever the
3 dispatcher creates and then it pops up. And I understand it's an
4 auxiliary tool but what it does for that particular flight you can
5 get a little bit of SA on what other pilots are -- what their
6 airplanes are feeling --

7 A. Sure.

8 Q. -- in terms of turbulence. I showed, you know, just a
9 picture of it and I asked that question before and I don't know if
10 there is a push to put this overlay on to one of your screens
11 where you can actually see -- have all of your flights and then
12 have the SkyPath because there is a new version on the SkyPath
13 that we use now that comes up on Jepps. So the ability is there,
14 I'm just curious to see if there's a path forward there. On your
15 -- when you were seeing this flight starting to enter into the, I
16 guess, this line -- crossing this line of thunderstorms, was there
17 any discussions about, you know, asking them how other ride ahead
18 of them, any discussions on maybe deviating around north, around
19 or was it just hope for the best?

20 A. The flight just continued on their plan, yeah.

21 MR. LAROSA: Yeah, okay. That's typically because if
22 something -- and, you know, I'm looking at the snapshot on that
23 day and it did not look to me, you know, of any concern. It was
24 yellow and I think the turbulence that they actually got into was
25 clear above where they got into the turbulence and then turbulence

1 was light to moderate once they got into those heavy rain showers
2 so. You know, it's -- this would be one of those standard normal
3 -- I would traverse that weather. It doesn't look like there's
4 much there. That's all I have.

5 MR. CONKLIN: Okay.

6 MR. LAROSA: Thank you.

7 MR. CONKLIN: Yep.

8 MR. ETCHER: Thanks, Jim. You made it through round one. Do
9 you need a break? Are you doing okay?

10 MR. CONKLIN: I'm good.

11 MR. ETCHER: It's up to you. Round two I have only got like
12 354 questions. No, I'm just kidding. I don't have that many but
13 if you need a break by all means we'll take one.

14 MR. CONKLIN: I'm good to continue on.

15 MR. ETCHER: Okay. Well, if you change your mind just say
16 so.

17 MR. CONKLIN: Sure.

18 MR. ETCHER: But again thank you, you've been a great help.
19 I really don't have a lot of questions.

20 MR. CONKLIN: Okay.

21 MR. ETCHER: I just made that number up in case you couldn't
22 guess. But I have a few, they may be a little hodgepodge if you
23 will because I -- when they would ask a question I'd write it down
24 so it may seem a little odd. So, my apologies.

25 MR. CONKLIN: Sure.

1 BY MR. ETCHER:

2 Q. When you -- I know you said that this event flight was the
3 first one going in to Newark for you. Definitely wasn't the first
4 one going into Newark that day I assume.

5 A. Sure.

6 Q. Do you have any means to pull up all the United flights going
7 into Newark and just reach out to dispatch and say hey, this
8 flight's yours, any reports?

9 A. Yeah, that is possible. It's nothing -- it's something that
10 gets tuned in more as there is more concern about an area. So,
11 for example, if we've been seeing some severe turbulence PIREPs
12 around Denver, which is not uncommon given the mountains and the
13 Jetstream, I'll reach out to another dispatcher and say, hey, your
14 Flight 123 just departed, can I get a PIREP from them. Or another
15 event where we had some scattered severe turbulence around Houston
16 a few months back, I was reaching out to other dispatchers and
17 picking up the phone being like can you ask your flight that just
18 went through here how it was at this altitude, what they
19 experienced and it takes a few minutes, you know, for that
20 dispatcher to ACARS -- to get an ACARS back to pick up the phone,
21 but it can be done.

22 Q. Can you not ACARS their flight for them?

23 A. No.

24 Q. Okay.

25 A. I believe the ATC desk has an ability to ACARS flights for,

1 let's say they missed a frequency exchange, and they'll send a
2 message about contact this frequency and let us know when you're
3 talking to ATC. There is a way in Unimatic to manually ACARS
4 other flights and I suppose there are other ways that you could do
5 it through dispatch view via pseudo wing and looking at someone
6 else's desk. But it's generally frowned upon to just start
7 ACARSing other people's flights.

8 Q. Okay. No --

9 A. Yeah.

10 Q. -- I do understand that I just wasn't sure whether they --

11 A. Yeah.

12 Q. -- and so I appreciate that honesty too. The day of the
13 event you said first time you talked to the crew was after the
14 event. And they told you it was heavy turbulence, or I don't
15 remember what phrase they used, so forgive me.

16 A. Sure.

17 Q. What did you do with that information?

18 A. So their ACARS said about the turbulence and the flight
19 attendant injuries at the same time. So I took an order of
20 priority of let's deal with the flight attendant injuries and get
21 EMS set up first and I'll worry about the PIREP stuff later. And
22 then it became the process of calling MedLink and relaying what
23 was going on and entering a dispatch log. And by the time that
24 was all completed, there were other PIREPs already entering the
25 region. So it became more of a concern of let's make sure that

1 MedLink followed through and called the station, and everything is
2 set up so, you know, we can help the people.

3 Q. So for that event and I get it, somebody's hurt, you want to
4 get them help as quick as you can. Is there any mechanism within
5 dispatch that's like I've got a medical flight here, you know, I
6 need, you know, somebody to come down and get MedLink on the line
7 and deal with that. I've got to deal with this PIREP, you know,
8 is there any mechanism that you can -- I don't want to say offload
9 the duties but to me it's like, I get it, somebody is hurt, you
10 want to get them help.

11 A. Sure.

12 Q. But also if I'm the guy right behind them, man, I would love
13 to have known --

14 A. Right, you would want to know, yeah.

15 Q. -- that there was something here because I'll sit them right
16 now.

17 A. Right.

18 Q. So, is there a mechanism that you can off shed a little bit
19 -- off load a little bit?

20 A. Not easy enough that it would be helpful. You would have to
21 manually call and coordinate with like the AMDO to try to get some
22 workload relieved or to talk to maybe a dispatcher that's sitting
23 behind you, but they don't have your desk pulled up and they would
24 have to pseudo it and they would have to try to pull in the
25 position report and everything. So it ends up being so cumbersome

1 it's easier for one person to just deal with it.

2 Q. Okay. So, for a moment, let's pretend if I did indeed get
3 injured --

4 A. Sure.

5 Q. -- which if that was the case you wouldn't be talking to me
6 because it wouldn't meet our criteria but for a moment let's say
7 they didn't get injured --

8 A. Right.

9 Q. -- but they sent you a message that said we hit heavy
10 turbulence.

11 A. Right.

12 Q. What are you going to do with that?

13 A. Right click on the flight, send them an ACARS that is pulling
14 in an FMS position report and give that like a minute or two to
15 populate and then right click on the flight again and hit PIREP
16 and make sure that it actually pulled in the position report and
17 at that time there's a bunch of drop boxes for the turbulence
18 types and reporting and then a remarks area. So I'd enter in
19 everything and kind of interpolate the best as I can of what the
20 crew say versus what the proper formatting is and then add a
21 remark if they had one.

22 Q. Okay. So they told you it was heavy turbulence. Is there a
23 heavy turbulence drop box?

24 A. No.

25 Q. So what -- and I'm just -- I'm learning from you so I just

1 want to know what would you mark on your PIREP?

2 A. I would have to interpret it as severe --

3 Q. Okay.

4 A. -- because we have light, moderate and severe. So it doesn't
5 -- moderate doesn't seem to fit so much with heavy, it kind of
6 fits better with severe at least in my opinion. I don't know if
7 that's the old phraseology, but it seemed like it would go more
8 with severe.

9 Q. Okay. All right. I believe it was -- Paul was talking to
10 you about TAPS and you said some planes have it, some don't. Do
11 you know which planes do and don't?

12 A. If I remember right from the new hire training, I think it
13 was some of the Airbus fleet has TAPS. I think that's about it
14 from what I can remember.

15 Q. Okay. Do you find that system useful, more useful, less
16 useful, I never hardly use it because it's not fleet-wide? Your
17 opinion --

18 A. Yeah, there's not a lot of TAP reports that seem to come into
19 Fusion. Sometimes there are and I'll tell the flight crew about
20 it, you know, hey you've got TAPS reports of light to moderate
21 heading into Denver, let's say. And then they'll go through, and
22 they'd be like, it was fine. So sometimes it's right, sometimes
23 it is not.

24 Q. Okay. Do crews reply to you that give you follow on, like,
25 hey, we went through it and yeah, it wasn't that, it was smooth as

1 glass or --

2 A. Sometimes.

3 Q. (Indiscernible).

4 A. Most messages I send out to crew get copy, thanks, or no

5 reply or if they really do encounter something is most of the time

6 when they'll reply to me.

7 Q. Okay. So and I don't want to put assumptions, I'm just

8 trying to categorize it in my brain, from a dispatch side of view,

9 would you go with no news is good news from the crew if they

10 didn't reply back?

11 A. Most of the time, yeah, unless it's something that I see is

12 very pressing in which case I will keep ACARSing them until they

13 respond to me with increasingly strong language.

14 Q. And this is going to be public record so I don't want to hear

15 what that strong language is.

16 A. Sure, no but just using more like urgent phrasing, like

17 please confirm that you've received this message, stuff like that.

18 Q. Okay.

19 A. Yeah.

20 Q. That makes sense. You took the accident flight over from

21 Mary. Did you by chance check the weather? I mean, like, okay

22 she gave me a briefing but --

23 A. Yeah.

24 Q. -- you know --

25 A. Yeah, it's --

1 Q. -- trust but verify kind of thing?

2 A. Sure, yeah, well that's part of the initial, I guess like
3 self brief that I do before I take over and receive the briefing
4 from the previous dispatcher. So, part of pulling up Fusion is
5 like one of the first pieces of software that you open is to give
6 it time to pull in all of the weather info because it takes it
7 some time to start downloading everything. And you know get your
8 other software set up and once it's open I go back over to Fusion
9 and I kind of scan around the country as to what's going on. So,
10 radar data will be pulled up on there and all of the other
11 products we talked about before and I kind of move around the
12 continent and see what's going on.

13 Q. And I get the Birds Eye view, satellite view, God's eye view,
14 whatever anybody wants to call it --

15 A. Sure.

16 Q. -- but, you know, like if you're saying, okay, I've got --
17 I'm going to take these X number of flights. Well, let's see this
18 one is going to Newark, let me look at Newark weather and look at
19 airport-specific weather. Do you do that, or do you just get the
20 bird's eye view and then listen to the brief, the exchange, the
21 turnover?

22 A. Yeah, so part of the other like self-briefing is in dispatch
23 view, I'll click on the airports of where my flights are going to
24 and look at the TAF and the latest METAR.

25 Q. Okay. All right. Perfect. It sounds like in my pea size

1 brain I visualize, like I said, you're throwing flaming balls
2 juggling them all of the time but is there a mechanism within
3 dispatch to, you know, share workload balance between dispatchers
4 like you know you had 13 flights I think you said or 14 -- I don't
5 remember the exact number but is that kind of what everybody was
6 running, or might you have had 30 and somebody else has 10?

7 A. So I know that the AMDOs have a piece of software that is
8 supposed to balance the workload between all of the desks and some
9 of the flights are hard coded to go to certain desks and other
10 flights aren't. So the flights that aren't hard coded to go to a
11 certain desk number get distributed based off of the amount of
12 work and flight following or something like that. I believe it's
13 supposed to balance planning and following. In practice, it
14 leaves some desks more workload than others. It just depends on
15 what's going on with each specific flight.

16 Q. All right. So from your opinion, vantage point, does it seem
17 like the more junior folks get those desks that get dumped on or
18 is it more senior folks that?

19 A. It's hard to tell because I'm only domestic-qualified. I --
20 you will hear grumbles of the international desks have less
21 flights, which is true but I'm sure they also require more
22 planning and following. But it seems like the domestic side is
23 very high workload.

24 Q. Okay. And I'll take your opinion here so be blunt if you
25 wish. Is it too much of a workload?

1 A. It can be frequently, yeah. If the weather is VFR, it's
2 manageable.

3 Q. Okay.

4 A. As you start getting into tail swaps, broken aircraft, pilot
5 phone calls, other manual coordination stuff, it's very easy to
6 start getting buried.

7 Q. Okay. How do you -- if you were teaching me as a new
8 dispatcher, you are teaching me tricks of the trade, if you will,
9 how would you get unburied, how would you help me get -- learn to
10 get unburied.

11 A. So the -- I guess the best way of dealing with it is looking
12 around at your dispatcher instead of her sitting like immediately
13 next to you and asking if they can help plan a flight or help deal
14 with an issue while you deal with another one. So, kind of
15 distributing the workload like that but unfortunately there are
16 times where everyone is just busy.

17 Q. If I reached out to you and said, hey, can you help me here,
18 man, I'm getting buried, can you plan this flight and you say out
19 of silliness or whatever you say, sure, I'll help you and you
20 plan it. Are you the one dispatching it? Is it your certificate
21 numbers or is it mine on that dispatch?

22 A. So, if someone else plans a flight for you, like, let's say
23 that I'm desk 92 but desk 91 is helping me out, the person's name
24 who is on desk 91 will appear on the release.

25 Q. Okay. Can you leave notes on the release, like hey crew, I

1 noticed that you're going from west coast to east coast and when I
2 looked at the future fly-outs, you know, maybe coming across the
3 Midwest, you know, Kansas, whatever it's probably going to be
4 chopping? Can you leave them detailed notes like that or?

5 A. Yeah, you can. It's the flight plan remarks.

6 Q. Okay.

7 A. So some of the remarks appear on the first page of the plan
8 and as you add more remarks they go to a different page of the
9 plan. So you have to make sure that you read both pages, but
10 there can be remarks on the flight release, yeah.

11 Q. Okay. All right. The day of the event, how would you
12 categorize your workload? Again, I know two months ago, but, you
13 know, it seems like if it's bad you would remember it for a while.

14 A. I remember it being busy, especially at the start of the
15 shift it was busy.

16 Q. Okay. Busy -- normal busy, busy -- more than normal, kind of
17 -- everybody has a different --

18 A. Sure.

19 Q. -- opinion of busy.

20 A. The beginning of that transcontinental desk is normally
21 pretty busy, but it stood out at me as being particularly busy. I
22 remember trying to kind of more frantically balance all of my
23 different workload of talking to flights and planning and dealing
24 with zero fuel weight increases and phone calls and other
25 coordination things.

1 Q. All right. Have you ever done enroutes on United aircraft?

2 A. In routes -- oh, you mean jump seating?

3 Q. Jump seating, yes.

4 A. Yes.

5 Q. How was that?

6 A. It's a good time. It's really informative of kind of the
7 other side of things and how they interact with dispatch and
8 what's going on over the radios. I'll wear the headset and listen
9 in to COM 1 of what's going on. Yeah, it's a good experience. It
10 shows what the crew deal with.

11 Q. Okay. How often do you have to do that?

12 A. We get one of those once a year that you have to cover the
13 FAA requirement.

14 Q. And in the opposite, do you see crews coming in and sitting
15 with you guys to learn -- not learn your job, but learn what you
16 guys all do?

17 A. It's rare. I've had it happen once that two Airbus First
18 Officers came in to see what we were dealing with, and they were
19 kind of impressed of how busy we were. I know that in the past
20 they used to have captain upgrades come through dispatch, but I
21 don't think that's going on anymore.

22 Q. Okay. All right. The last little batch of questions I have
23 and then you'll be all done with me. So, the lights at the end of
24 the tunnel here.

25 A. All right.

1 Q. I know you've been here about a year and a half. Everybody
2 has opinions, you're off probation now so you can be really blunt
3 with opinions, right? But is there any areas of your training
4 that you wish would have been done differently whether removed,
5 you know, emphasized, maybe expanded upon? Kind of help me
6 understand.

7 A. Sure. I feel like I had a pretty good background of
8 dispatching at previous airline so I kind of knew what to expect
9 in the job. I think it would have been nicer to have more on the
10 job training. I think that footprint is pretty small especially
11 for kind of how more of that relates to differences of how United
12 does things versus previous airlines. I know that that took me
13 some time to adjust of who to contact and kind of what the norms
14 are for communicating with crews and flight plans and
15 expectations. That took me, I would say, quite a few months after
16 being signed off from training. So, maybe it would have been nice
17 to have a little bit more on the job training or maybe a little
18 bit more tailored to differences.

19 MR. ETCHER: Okay. All right. Well, like I've said you've
20 helped me a ton. I'm glad I'm recording because then the -- I can
21 at least read this again and my brain can absorb more --

22 MR. CONKLIN: Sure.

23 MR. ETCHER: -- because you've given me a lot of info. I
24 appreciate it. I'm going to pass it off to Paul to see if he has
25 any questions.

1 MR. SUFFERN: Yeah. Thank you, Shawn. Thank you, Brent.
2 I've just got a couple. So, I'm going to try to stick to that.

3 BY MR. SUFFERN:

4 Q. As far as dealing with, I guess I'll use the meteorology term
5 out of seasoned weather events and such and so I'll categorize
6 that as, you know, snow in Texas in May and thunderstorm activity
7 in North Dakota in December. Have you received any guidance from
8 United or any training on kind of how to deal with those oddball
9 weather scenarios?

10 A. Not that I can remember.

11 Q. Okay.

12 A. Yeah.

13 Q. Would you as a dispatcher -- how would you deal with those
14 type of scenarios if you -- one came up, for example, you know,
15 you are dispatching a bunch of flights from West Coast to East
16 Coast, you know, route them through North Dakota in December, and
17 there happen to be thunderstorm activity would that be a -- how
18 would you deal with those thunderstorms as opposed to thunderstorm
19 activity over Florida in the middle of the summer kind of thing?

20 A. Sure, yeah. I guess it comes up kind of more of the
21 discretion as to what you see as the hazards or the risks to the
22 flight. So it's not like we're not capable of having
23 thunderstorms in the middle of winter that seems to be a thing
24 that's happening so it would start out in the planning phase of
25 the flight where you could remark it or if you took the flight

1 over and you see that coming up on their route, you know,
2 something out of the norm, just call it out. Hey, we got some
3 cells. These are what the echo tops appear to be or here is what
4 other flights and that region are doing. So it would either end
5 up on the remarks initially if you're the one that planned it or
6 over ACARS most times if you see the flight heading toward a
7 hazard.

8 Q. Okay. Would you see a hazard of a -- flying through a 60,000
9 foot thunderstorm the same as flying through a 20,000 foot
10 thunderstorm? Kind of, would you see that hazard similarly from
11 your experience?

12 A. I would put them as different hazards -- of different hazard
13 levels. Kind of generally, the higher up the thunderstorm goes
14 its' harder to top it or overfly it if that's what they want to do
15 and then generally if I'm seeing higher echo tops it usually means
16 there's a little bit more instability going on or a stronger
17 updraft than a downdraft. It doesn't mean that shorter of
18 thunderstorms can't also be hazards, but as far as it relates to
19 aviation it seems that like the larger echo tops or the larger
20 alignments tends to present a little bit more of a risk than
21 smaller things.

22 Q. The last question is always my favorite one. If you won that
23 \$1 billion lottery that happened just a couple of weeks ago and
24 somebody else won it because you probably wouldn't be here if you
25 won it. But if you won that \$1 billion and were feeling generous

1 to United and gave some of it to your fellow dispatchers for a new
2 weather tool, what weather tool out there have you seen that you
3 wish you could have access to?

4 A. If there was better integration for SkyPath to work with our
5 tools because it is a very stand alone, off to the side thing that
6 we have to go deal with another device and a screen and a charger
7 and another way to interface with it other than our mouse, it
8 would be nice of somehow there was a way to overlay that data also
9 in WSI Fusion which is the source for all of our other route and
10 weather information.

11 MR. SUFFERN: That's all I got, Brent. Thank you.

12 MR. CONKLIN: All right. Thanks.

13 MR. ETCHER: Thanks, Paul. And Jim, any questions, sir?

14 MR. LAROSA: That's great that you suggested that. That was
15 my thoughts on those.

16 MR. CONKLIN: Yeah.

17 BY MR. LAROSA:

18 Q. So my question is have you ever taken over a flight much like
19 this where you looked at the routing and it's just right in the
20 middle of a major --

21 A. Yes.

22 Q. -- no, no?

23 A. Yep.

24 Q. You have? You have done that before?

25 A. Sure.

1 Q. And let's say this was somewhat forecasted, well how do you
2 go about -- what do you do at that point? Because it's
3 dispatched, the fuel is --

4 A. Yep.

5 Q. -- already done -- the fuel level is already done --

6 A. Yep.

7 Q. -- well, just walk me through briefly, just so I can see --

8 A. Sure.

9 Q. -- how you would manage that?

10 A. So if I had a flight that was routed right into a
11 thunderstorm and I see it coming, I'm going to open up Fusion,
12 pull in a position report from -- or not Fusion, I'm sorry, FPM --
13 CIEFPM -- pull in a position report and compute the flight to see
14 where the base state is of like what we can do. Then I'm going to
15 look at the flight on Fusion and other waypoints that we could
16 maybe request a deviation to or a route change from air traffic
17 control and I'm going to start running those scenarios in an FPM
18 to make sure that it's something that we can do. And then I'm
19 going to reach out to the crew say hey, there is a squall line
20 ahead, here's the information on it. I was thinking about we
21 could go to waypoint ABC and then EFG and then resume our route as
22 filed to get around it.

23 Q. Okay, good. Back to the enroute, you do one a year. Do you
24 do international or do you -- are you -- typically do what you're
25 doing now?

- 1 A. You have to do it in your area of qualification.
- 2 Q. Okay.
- 3 A. So, since I'm only domestic, I only do a domestic route
- 4 qualification.
- 5 Q. Okay. And one thing I noticed during a domestic is the lack
- 6 of the dispatch briefing before the flight, it doesn't happen
- 7 often.
- 8 A. Right.
- 9 Q. It's unfortunate, but that's just the way it is. When you
- 10 were -- so you said you were on those operations -- you were on
- 11 those flights, do you -- how interactive is the crew with you
- 12 during those? Are they just up there doing their job and you're
- 13 just there? Or are they like turning around, showing you kind of
- 14 keeping you into like into the operation?
- 15 A. It depends on the crew.
- 16 Q. Okay.
- 17 A. Some are more communicative of what's going on --
- 18 Q. Sure.
- 19 A. -- and pulling up Optima and what you see, and this is the
- 20 plan and other crews, you know, it's a busy time to just get set
- 21 up with the iPads and the cradles. And we get up into the air and
- 22 then we kind of talk about flight crew and dispatch --
- 23 Q. Sure.
- 24 A. -- and different things we see.
- 25 Q. Okay, great. Well, I don't have any further questions.

1 A. Okay.

2 MR. LAROSA: Thank you.

3 MR. ETCHER: Thanks, Jim. Well, you've given us a lot of
4 info. We've went a little over, so I apologize for that.

5 MR. CONKLIN: Oh, no problem.

6 MR. ETCHER: I hope you didn't have a busy day scheduled.
7 But I appreciate that. But I'm always afraid -- I know we've
8 asked tons and tons of questions.

9 MR. CONKLIN: Sure.

10 MR. ETCHER: But I always fear I miss one question that
11 you're like this might really help them. Is there anything you
12 can think of that might help us in trying to figure this out just
13 so, you know, we keep from injuring people in turbulence and
14 whatever?

15 MR. CONKLIN: Sure, it would be nice to see more domestic
16 desks created to start lowering the amount of flights that we deal
17 with regularly. It feels kind of busy and kind of high and like
18 there's an emphasis on planning right now. And I'd like to see a
19 reemphasis come of flight following. But because of the workload,
20 it seems like there's like a pressure to plan and get things
21 moving over flight following. So it'd be nice to see a reduction
22 in the amount of flights on a domestic desk and make more domestic
23 dispatchers around the -- distribute the workload a little more
24 evenly and reduce it.

25 MR. ETCHER: Okay, perfect. Anything else?

1 MR. CONKLIN: That's all I got.

2 MR. ETCHER: All right. Well, with that we can call this
3 concluded at 14:11 local.

4 (Whereupon, at 2:11 p.m., the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the
NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: UNITED AIRLINES FLIGHT 1890
TURBULENCE ENCOUNTER ENROUTE TO
NEWARK, NEW JERSEY ON FEBRUARY 10, 2024
Interview of Brent Conklin

ACCIDENT NO.: DCA24LA097

PLACE: In Person

DATE: April 15, 2024

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.


Julie Brumbarger
Transcriber

AMENDED STATEMENT – BRENT CONKLIN

NTSB Added statement

While reviewing the interview transcripts I felt there might have been some confusion on my answer of how to dispatch a flight. I realized I glossed over part of the most basic process, because it is cornerstone to the basics of dispatching. Before dispatching a flight the first steps are reviewing the weather, METAR and TAF for the departure destination and possible alternate airports, as well as reviewing the NOTAMs for all of the possible airports on the release. Then we resume the rest of the route building and dispatching process through Dispatch View (DV), Sabre (FPM), and WSI Fusion. I felt it might be useful to add this statement based off of follow up questions asking about METAR and TAF. Part of being a dispatcher is constantly scanning and checking for changes in the weather and NOTAMs for all of your flights, as well as using WSI Fusion for a situational awareness and ability to overlay turbulence forecasts radar and satellite data relative to your flights.



UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

* * * * *

Investigation of: *

*

UNITED AIRLINES FLIGHT 1890 *

TURBULENCE ENCOUNTER ENROUTE TO * Accident No.: DCA24LA097

NEWARK, NEW JERSEY ON *

FEBRUARY 10, 2024 *

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INTERVIEW OF: NATHAN POLDERMAN, Senior Manager of Meteorology
United Airlines

APPEARANCES:

PAUL SUFFERN, Meteorologist Investigator
National Transportation Safety Board

SHAWN ETCHER, Operational Factors Investigator
National Transportation Safety Board

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I N T E R V I E W

(1:05 p.m.)

MR. SUFFERN: All right. Well, good afternoon. My name is Paul Suffern. I'm an investigator with the National Transportation Safety Board. I'm a meteorologist for the United event that occurred back on February 10, 2024, near Kelsey, New York.

And my role here, like we discussed before, is just to learn things from the meteorology side. And as part of our process, we usually sometimes have parties to our investigation, but today you just get Shawn and I. And so we started the recording at 1:05 local time. And so again, I'm Paul Suffern. And then Shawn, if you want to introduce yourself for the record.

MR. ETCHER: Good afternoon. Shawn Etcher with the operational factors group, with NTSB. So all that means is I look forward of the cockpit door, and everything that interacts with the pilots. So I look forward to being trained on a little bit of meteorology here, because --

MR. POLDERMAN: Okay.

MR. ETCHER: I only know how to fly around it, hopefully. But you guys are the geniuses. So I can't wait to learn.

MR. POLDERMAN: Sure.

MR. SUFFERN: So thanks, Shawn. And so as part of the process, as we mentioned, we record the interview and then have the transcript made, and that will eventually become part of the

1 factual docket. The audio will not be part of the public docket.

2 So do you have any questions on that process?

3 MR. POLDERMAN: No, I don't think so.

4 MR. SUFFERN: Okay. And as we mentioned earlier, as part of
5 our NTSB regulations, you're afforded to have one representative.
6 I see you don't have a representative and you're okay with that.

7 MR. POLDERMAN: Correct.

8 MR. SUFFERN: For the record. Okay. Usually we'll have a
9 couple of rounds of, of questions. The second round goes super
10 duper quick. The first round we'll -- I'll probably just start
11 off with a little bit of background, learn about you and, and how
12 you came to United in your position here. And we'll go from
13 there.

14 So if at any time, this is not a test, like taking
15 differential equations in math or anything like that. If you
16 don't know an answer or you don't recall --

17 MR. POLDERMAN: Sure.

18 MR. SUFFERN: -- that's totally fine to say that.

19 MR. POLDERMAN: Yeah.

20 MR. SUFFERN: So that's -- this is not diff-eq, you know 101
21 or 201, or those hard math classes.

22 MR. POLDERMAN: Yeah.

23 MR. SUFFERN: Good times.

24 MR. POLDERMAN: Yeah. Good times, indeed.

25 MR. SUFFERN: All right. Well, we're -- and if you need a

1 break at any point in time, need to hit the restroom, need to grab
2 some water or whatever, we can just hit pause and that's totally
3 fine.

4 MR. POLDERMAN: Okay.

5 MR. SUFFERN: All right, cool. Well, we'll do the hardest
6 question first.

7 INTERVIEW OF NATHAN POLDERMAN

8 BY MR. SUFFERN:

9 Q. Could you state your name and then spell your last name for
10 the record?

11 A. Yeah. My name is Nathan Polderman, P as in Papa, O-L-D as in
12 delta, E-R-M-A-N.

13 Q. Great. And could you give your official title here at
14 United?

15 A. Yes. I'm the senior manager of meteorology for United
16 Airlines, part of our Network Operations division.

17 Q. Okay. And could you give me an overview of kind of what that
18 entails on a day-to-day basis?

19 A. Sure. So I'm responsible for all of, managing all of
20 United's weather information systems, regulatory approvals,
21 basically all things sort of weather decision support. So we
22 primarily have a vendor that provides most of our weather decision
23 support. So I oversee that vendor and all of the contracts
24 associated with vendors for weather.

25 As well as I manage our federally -- our Federal Aviation,

1 FAA approved EWINS program, which is the Enhanced Weather
2 Information Systems Program. So the EWINS program manager, and I
3 manage that manual and that process of with EWINS interfacing with
4 the FAA.

5 So that's really, you know, it in a nutshell. I do also have
6 some subject matter expert duties with our turbulence injury
7 mitigation, corporate level teams that we've had for a number of
8 years. So I do actively -- am an active participant in our
9 corporate level turbulence injury, injury mitigation efforts.

10 Q. As part of your role, do you have a day-to-day interaction
11 with the weather that's going on, and, and flights? Or is that
12 more the vendor handles those kinds of responsibilities?

13 A. Yeah. Yeah. So we have a team of meteorologists that works
14 for The Weather Company, that support us 24/7 in the app center
15 next door. So I'm -- my role is mainly management. So I'm not in
16 the day-to-day shift work situation. But I do, you know,
17 regularly interface with those on those shifts just, you know,
18 when things are going on, just to get updates and you know, touch
19 base every once in a while. So -- but I'm not directly plugged
20 into any live operational responsibility.

21 Q. So I guess as part of your position then, you probably -- do
22 you have any kind of main weather resources or forecasts that you
23 use or that you -- since you're, I guess, paying for a service
24 with the vendor --

25 A. Yeah.

1 Q. -- do you have weather forecast and things you, you prefer
2 they use? Can you kind of describe that?

3 A. Yeah. I mean when it comes to turbulence, we subscribe to a
4 package of forecasts from our weather vendor, The Weather Company
5 enroute hazard forecast package. That includes a number of
6 products that are used, as official controlling products, per our
7 EWINS approval.

8 So they're EWINS approved products that we use for flight
9 planning and flight following. So those are the products that we
10 train dispatchers to use, and what are used, you know, when we
11 investigate events, we look at those forecasts, what was issued,
12 what was valid at the time and that -- and, and those kinds of
13 things.

14 So the vendor does produce those mainly in a different
15 office. The local team here does not produce enroute hazard
16 forecasts, they produce terminal forecasts, and you know, sort of
17 strategic enterprise level planning for the airline, for IROP's
18 and that kind of thing.

19 The weather company's meteorology team in their Boston office
20 does create the enroute hazard packages 24/7, and you know, those
21 are shipped to us digitally, you know, and they're displayed in
22 our flight planning process and tools.

23 So that whole team, right, is all part of our EWINS process,
24 just different teams and that weather vendor do different things,
25 so that the team writing the enroute hazard forecast is located in

1 a different office.

2 But that is our, you know, the official products that we use
3 in addition to always looking at government products, government
4 issued products. But we do have approval from the FAA to use
5 their products for controlling -- operational control decision
6 making.

7 Q. And those I think probably going to mispronounce the names,
8 but those are the FPG's I think, and things like that.

9 A. Yeah. It's, it's basically custom SIGMET's, flight plan
10 guidance polygons. So FPG for short. The gridded proprietary
11 model data that they provide, they call it RPM forecast turbulence
12 right now, it's the marketing name. It is a gridded turbulence
13 model product based on the government's GTG algorithm.

14 They run -- they take the same algorithms and they run them
15 in house on their own model. Right. And tweak them a little bit,
16 you know, to run on their proprietary model. But it's, it's
17 essentially the same algorithms as the government research
18 algorithms.

19 So that is a product that we use. So they do produce sort of
20 the traditional polygon type products, as well as grid and model
21 data that we use.

22 Q. Okay. And if a, a dispatcher, I guess, needed more
23 meteorological support, like I'm 50/50 on this flight, helping out
24 his pilot, how -- could they reach out to a meteorologist, and if
25 so, would that be you, or would that be the one of the vendor?

1 A. Yeah. So in a live operational setting, they are instructed
2 to contact the on site weather team from The Weather Company for
3 any weather related need. Flight specific or otherwise. If they
4 need a second opinion. A lot of times they'll call them for MEL
5 related operational restrictions, like icing and that kind of
6 thing.

7 They'll ask them for an opinion on an existing forecast, like
8 a TAPS. They will also, you know, if there's turbulence or some
9 enroute hazard, they interface with the on site team as a sort of
10 first point of contact, and then if it's an enroute hazard issue,
11 the on site team will patch in the team from Boston to help out
12 with that question, since that's the team creating those
13 forecasts.

14 So yeah, that -- but the on site team is sort of their first
15 point of contact for any weather related issue they need. And
16 usually they coordinate through the chief dispatcher on duty as
17 well. Again I, I oversee all that process but I'm not a, I'm not
18 an operational go to person. You know, they would, they would be
19 instructed to go to the weather team.

20 And if there's an issue, I'll get copied in a lot of
21 messages, you know, and I'll follow up on some inquiries. Ask,
22 you know, I get copied on DSAP's about different events. Right.
23 So there's a lot of forensic review and analysis, and sort of
24 follow up that, that I'm responsible for.

25 Q. Excuse me, to understand the operation as a whole then, are

1 you -- I know the vendor has meteorologists both in Boston and
2 then here.

3 A. Mm-hm.

4 Q. Are you the only meteorologists that United has?

5 A. Yeah, I am the only one with -- really one of two people that
6 has meteorology in their title at United Airlines. So I also now
7 have two people working for me as an analyst role. Both of them
8 are degreed meteorologists. One of them doesn't have meteorology
9 in his title because he was hired under a different program, but
10 he is effectively meteorology.

11 So they are two recent meteorology grads, and they're
12 analysts. They're working with me on developing some new software
13 for United. So --

14 Q. Do they help you with -- you mentioned earlier, I think the
15 forensic stuff. Would they be kind of like --

16 A. Right now I don't give any of that to them because I have
17 been doing other things, so I take on most of that. And you know,
18 if for some reason I need some help with something, I can, I can
19 pull them in. But for the most part, that's not their primary
20 duty.

21 Q. All right. And then --

22 A. Those are new roles, like literally in just the last year.

23 Q. Okay.

24 A. Otherwise, before that, even my role as senior manager
25 meteorologist is pretty new. You know, when United and

1 Continental merged back in 2012, they did not have a meteorology
2 manager until finally that position was made permanent,
3 essentially in the last couple of years.

4 I sort of had a similar role before the pandemic. But yeah,
5 right now, the senior manager of meteorology effectively at United
6 is, is less than two years old on an official capacity.

7 Q. Okay. So how long have you been at United, then?

8 A. I mean, I started in flight dispatch at Continental Airlines
9 in 2007. And then moved up into different roles. I have a
10 master's degree in atmospheric science, moved into different roles
11 in dispatch. You know, dispatch training, EWINS stuff, and then
12 became the dispatch training manager when the merger hit.

13 And -- but I was still dabbling. People would come to me
14 with any -- with weather stuff. Right. We did a lot of stuff
15 with dispatch training with meteorology and EWINS and that kind of
16 thing.

17 And then, you know, turbulence mitigation became a hot topic
18 about 2016, 2017. I started getting more involved in that. And
19 then I basically started taking on that role full time back in
20 2018. And when the pandemic hit, that role was eliminated, and I
21 went just sort of a general management role.

22 And then, just in the last couple of years, the role of
23 senior manager meteorology was reinstituted as an official
24 capacity. But I've been doing a lot of the same duties literally
25 since probably 2015, so but you know, didn't really have the title

1 until recently.

2 So yeah, I've been, I've been sort of the go to for
3 meteorology related topics and discussion points, or questions at
4 United for quite a long time, and it's good now to have two people
5 working for me. It's a huge, huge thing. So we're, we're making
6 some progress.

7 Q. Sounds definitely like some progress.

8 A. Yeah. I'm excited about future so --

9 Q. So jumping around a little bit here, but just going back to,
10 I think, a couple of questions ago, we were talking about your,
11 your vendor, The Weather Company, and things like that.

12 A. Mm-hm.

13 Q. And you mentioned that if the dispatcher has a particular
14 flight where they have questions on, they can reach out, things
15 like that.

16 A. Yeah.

17 Q. Does The Weather Company or vendor ever reach out to a group
18 of dispatchers working, why don't you pick an area, you know?

19 A. Mm-hm.

20 Q. Tennessee to Florida, like today is going to be a rough
21 day --

22 A. Mm-hm.

23 Q. -- down here because of a squall line moving through. Do
24 they ever, you know, reach out, I guess, reach out in reverse kind
25 of that way or --

1 A. Not directly. It's mainly managed through their interface
2 with the on-site air traffic control coordination team, which sits
3 right next to them. And all the ATC coordinators are dispatchers,
4 current qualified dispatchers. And they directly interface with
5 that team about a lot of, you know, enroute stuff that's going to
6 impact the ATC system.

7 So I said that they don't do the enroute hazard forecasting,
8 but they're very much looking at the impact of things like
9 convection on United's route structure, because of the interface
10 with the FAA through the ATC desk. So what they would do is
11 provide guidance through the ATC desk, who would then send
12 messages to the dispatchers, hey, we're expecting this line of
13 storms to develop. You know, between these fixes, around this
14 time period. Please plan these routes. Right.

15 So -- but we don't have the weather team sending blast
16 messages to dispatchers. We don't really have the technology to
17 do that, unfortunately. So a lot of that interfacing is with what
18 we call the bridge and the NOC, which is sort of the centralized
19 hub of decision making.

20 You got the manager of dispatch on duty. The ATC manager,
21 and all the ATC coordinators, the network director, and they're
22 all interfacing with the weather team constantly throughout the
23 day, and then passing along that intelligence through various
24 messaging to the dispatchers.

25 So that's the primary way communication flows in the NOC with

1 weather. But again, dispatch can always call or walk over and
2 talk to them at any time. So there's a lot of that as well.

3 Q. Okay. How does -- and how does United use kind of the
4 SkyPath information and things like that, from a meteorology side,
5 and then I guess, you know, how does that filter down to how
6 dispatch can use that?

7 A. Yeah. So SkyPath is a relatively new tool that was mainly
8 geared towards pilots. It's an app on the pilot EFB, which I'm
9 sure you heard all about today. That, that is a proprietary tool
10 that our weather vendor does not have access to. In some cases,
11 maybe at some levels, SkyPath is a, is a direct competitor of The
12 Weather Company on some things. And really kind of different in
13 other ways because it's real time monitoring of automated
14 turbulence.

15 So The Weather Company meteorologists producing the enroute
16 hazard forecast that I talked about would not be looking at
17 SkyPath data since it's not a tool or source available to them.
18 It's proprietary.

19 Q. And then from, from your knowledge and use of it, do you work
20 with the folks in house that work on SkyPath to kind of work
21 through the training on that, either your interface with the pilot
22 side, or your interface with the dispatch side. How does, how
23 does that work?

24 A. Yeah, I've been involved with SkyPath from the very
25 beginning, when they first started testing it in flight ops. And

1 I was just sort of the subject matter expert and dispatch slash,
2 you know, weather and turbulence mitigation. Right. Because that
3 was a lot of my, my work, especially before the pandemic.

4 So yeah, and so basically I would be sort of the one advising
5 dispatch on the product and giving them heads up on how the
6 testing was going, you know, helping coordinate with dispatch
7 management on dispatchers testing it as well, using the web
8 interface.

9 So we did a lot of that. And then we also -- I also worked
10 with our dispatch training department to create a training module
11 for SkyPath. You know, they put it all together and I served as
12 more of a consultant, subject matter expert. I did provide some
13 specific guidance on policy for how SkyPath should or should not
14 be used.

15 I think that's an important part of EWINS is to make sure
16 that we understand the conditions and limitations of various
17 weather products, and how they're supposed to be used in
18 juxtaposition with other quote, unquote, official products.
19 Right.

20 The SkyPath, when it was first rolled out, was considered
21 supplementary, sort of secondary. I think you couldn't look at
22 SkyPath and say that it was equivalent to a PIREP. And by
23 definition, they're really different. Right. So a PIREP is an
24 official product that a pilot is supposed to issue. Right. If
25 they have no, moderate, or greater turbulence, something

1 significant. Right.

2 SkyPath was not able to serve as an official PIREP, so it was
3 informing. Right. The state of the atmosphere, which is really
4 valuable for safety. But if the pilot gets an alert that says
5 moderate turbulence from SkyPath, that doesn't constitute a PIREP.
6 They still have to report it. Right.

7 So that was an important part of the policy that we set up
8 initially with SkyPath, and I still believe it is the policy
9 today, although SkyPath is starting to become more integrated to
10 the point at which will probably have the ability for pilots and
11 or dispatchers to create PIREP's from SkyPath.

12 SkyPath has actually created a PIREP's module in their app
13 that would actually format a PIREP automatically and send it into
14 the National Weather Service. United has always been at the
15 forefront of PIREP submission. We've been, I think the industry
16 leader on that work, and we certainly don't want anything to
17 detract from that.

18 Albeit, we're moving into a world of automating PIREP's,
19 quite frankly, so it's an interesting, it's interesting to watch
20 the industry start to make this transformation on how that -- what
21 that's all going to look like in five years. It's going to be
22 interesting.

23 I know the NTSB has done a lot of PIREP's, so you're very
24 familiar with PIREP's in general. But that's kind of the way
25 SkyPath came about, and how it's being used. It is a valuable

1 safety tool. I wouldn't say from a policy, policy standpoint that
2 it's, quote, unquote, the official product. A pilot or dispatcher
3 can't look at SkyPath without looking at everything else. Right.
4 They can't use it as the product. It's a product.

5 So this issue of primary, secondary, I think you might be
6 familiar with that a little bit, but that's how SkyPath is
7 currently used. You know, like certain fleets don't have access
8 to SkyPath very well in the flight deck. You probably heard about
9 the 787 and its connectivity issues, so it would be hard for us to
10 make SkyPath the official product, when not everybody has great
11 access to it in real time.

12 Q. So touching on the, the PIREP's, just like you mentioned, how
13 does that process work here and is it kind of click of a button
14 and it goes to, not only The Weather Company, but it goes on to
15 the NAS, or how does that work here?

16 A. Yeah, so back in 2018, I led an effort to get funding to
17 rebuild our PIREP processor from the ground up. And so we did get
18 funding to do that with our digital technology team, and we
19 created a new PIREP processor.

20 We had a really good one, but it was archaic, running on old
21 software, old hardware. Created a new one that allows the
22 dispatcher to have a shell open up in their tool, I don't know if
23 you saw any of this when you talked to the dispatchers, but a
24 dispatch view of little shell pulls up, and it automatically
25 populates some fields.

1 They can click some drop downs, hit send, it formats the
2 PIREP's into, I believe AIREP format. And submits it
3 automatically to the National Weather Service. And so, you know,
4 within a minute or so, it'll show up in National Weather Service
5 displays or, you know, the fusion tool. Right. It goes into that
6 collective of PIREP's that's disseminated to the public.

7 And I don't even have United Flight number in there. You'll
8 see it's in UAL, and there'll be in AIREP format. We, we built
9 all of that. I led that effort to, to rebuild that tool. And so
10 that is our primary way of submitting PIREP's.

11 The pilots can do the same thing directly from the ACARS,
12 through the FMS. You know, the little shell pulls up. Right.
13 They fill it out, hit send. Dispatcher gets a copy of it, it goes
14 directly to the National Weather Service.

15 So either the pilot can do it, or the dispatcher can do it.
16 A lot of times, pilots will just send a free text to dispatch.
17 Hey, we hit moderate turbulence, no injuries. And then the
18 dispatcher will fill out the PIREP and send it.

19 So that's a, you know, I think it's a good process. But like
20 I said earlier, still a manual process at the end of the day. You
21 will see if you look at PIREP's, you'll see a lot of United issued
22 PIREP's with United flight numbers in them.

23 Q. So is there a policy or a preference for whoever has the
24 time? You mentioned the flight deck can, can do that or the
25 dispatcher.

1 A. Yeah.

2 Q. Is there a preference there or just --

3 A. I'd have to, I would have to refer you to the, the official
4 guidance in the flight ops manual, and the dispatch operations
5 manual. But it is, it is policy to submit the PIREP. Now who
6 actually does it, I don't know if we actually spelled that out. I
7 would have to refer to those manuals and how it's currently
8 worded.

9 But yeah, both manuals do touch on the PIREP submission
10 process as being a responsibility of the pilots and dispatchers.
11 And that's, you know, I think a regulatory responsibility that we
12 have to report significant turbulence. Right. To -- for the
13 safety of the air, the airspace. So --

14 Q. This is helpful. Just one more question kind of on the, on
15 the turbulence line, I guess.

16 A. Mm-hm.

17 Q. I think, and maybe I'm going to mispronounce an acronym or
18 things like that, but do you all have access to like turbulence
19 heartbeat information, not the SkyPath iPad, but maybe --

20 A. Mm-hm.

21 Q. -- like being calculated on the airframe itself, or anything
22 like that?

23 A. Yeah. Yeah. So there's, you know, multiple different
24 automated turbulence sensing technologies. United is sort of in a
25 unique position that we have three. So we have the, the older

1 version, the older TAPS software, which was another proprietary
2 algorithm developed by, you know, a company that, that eventually
3 got folded into The Weather Company or, WSI.

4 And then we did, we subscribed to that product back in 2015,
5 and so dispatchers see the TAPS reports on their display in
6 Fusion. We also get alerts generated off of TAPS, and the pilots
7 also get all of this and the flight deck on their Optima app as
8 well.

9 So yes, we have access to TAPS reports. We -- United has
10 about 90 airbus airplanes that have the TAP software installed on
11 the ACMF unit. So those airplanes will actually report, TAPS
12 reports automatically. And those get sent down via ACARS, and
13 then they show up on the screen to the dispatchers and pilots, or
14 it would generate an alert. That also gets sent over ACARS.

15 It'll say your flight is about to intersect a moderate TAPS
16 event. Right. We have a preformatted ACARS message that gets
17 sent out automatically if your flight is going to intersect one of
18 these, within 30 minutes.

19 And I, again, helped set that all up back in 2016, 2017. So
20 yeah, that's an automated alerting process. Again, it goes
21 through our vendor, The Weather Company. We worked with them to
22 set all that up. It is based on TAPS data. But United also since
23 then has a lot of EDR data, EDR software installed, which is just
24 the open source version of automated turbulence sensing, and a
25 little bit different algorithm.

1 TAPS uses the accelerometers, EDR uses vertical wind
2 calculations, and it really is trying to describe the state of the
3 atmosphere. United has almost 300 airplanes with EDR software
4 installed by Boeing. And we are working towards operationalizing
5 that data.

6 We see that as the future instead of TAPS. TAPS, quite
7 frankly, is sort of a dead product. And you know, we've got way
8 more airplanes with EDR than we have with TAPS. And quite
9 frankly, the TAPS airplanes are very old, and it doesn't even work
10 that well anymore.

11 So we are making it, we are committed to deploying EDR
12 software on basically every new Boeing, and we're even going to
13 try it on some of the new Airbus. So we have 300 and some
14 airplanes now, and it's growing, you know, as we take delivery.

15 Every new Boeing airplane that comes to United will have TAPS
16 -- I'm sorry, EDR software installed by the factory. So we're
17 working on operationalizing that data. The way, the way I see it
18 happening is that at some point we're going to have, again, EDR
19 data, TAPS, and SkyPath data all available on the same screen at
20 the same time, which is going to be an interesting conundrum as to
21 how you put all that information in front of people and make sense
22 of it all.

23 So there's a number of efforts ongoing both in the industry,
24 as well as with our vendors on how to do that. My philosophy is
25 that we should use all the data. Right. We shouldn't, you know,

1 just use one set. But we got to find a way to intelligently
2 combine that data to make sense of -- to make it useful. Right.

3 Especially with dispatchers. You can't ask them to have all
4 this data on the screen and expect to kind of manage by exception.
5 It's very difficult. But I would see TAPS as sort of going away
6 over the next several years, and we'll sort of replace that with
7 EDR, which is a similar type of interface. It's just a different
8 algorithm.

9 But it's again, it's automated turbulent sensing data, which
10 is the wave of the future. You know, that will eventually replace
11 manual PIREP's. So --

12 Q. So right now, do you all have a way of viewing the EDR data?
13 Anything like that?

14 A. No, not currently. We are working with the IATA turbulence
15 aware program. We've been contributing our data to that program
16 and The Weather Company is now just finally getting to being able
17 to integrate that data into their tools. Problem with the EDR
18 data is we didn't have an easy way to operationalize it.

19 We don't have a good way to show it to pilots and
20 dispatchers. We rely on vendors to do these displays. And so
21 until you can get all that data integrated into those vendors, and
22 due to a variety of factors, it's been a challenge to do that over
23 the years, but we're finally, we're getting ready to test the EDR
24 data in Jepp FD Pro, with a subset of testers working with flight
25 OPS on that.

1 And some dispatchers are going to test it as well. And then
2 it will be available as a layer in Fusion for dispatchers. So I
3 see us turning off TAPS layers, and turning on EDR. Will -- it
4 will require an agreement with IATA, since they're the ones
5 combining all the EDR data. I'm not sure if you're familiar with
6 the IATA program, but there's about 2,500 airplanes reporting EDR
7 in that program. So it's pretty big and it's the only collective
8 of EDR data that's out there.

9 Q. So do you see that kind of -- I know there are many different
10 121 carriers that use SkyPath.

11 A. Yep.

12 Q. So everybody's kind of contributing to that, and you have
13 access.

14 A. Yeah.

15 Q. So you -- do you see the EDR with IATA kind of similarly as
16 far as --

17 A. So EDR is free open source. Right. Meaning we own it, we
18 can share it, however we want to do it. Right. SkyPath, kind of
19 like TAPS was, is a proprietary implementation. Right. We don't
20 necessarily own the SkyPath algorithm. We can't just give it to
21 somebody. Right.

22 So we don't have the flexibility there. So EDR is our -- the
23 way I see it is EDR is our way of, you know, contributing data to
24 the broader airspace system. Now, you got to work with IATA if
25 you want to integrate it, and you know, and have a cohesive

1 display of the data, and that's not free. But the data itself is
2 owned by the airlines. Right.

3 So we have our own EDR data. I can do whatever I want with
4 our EDR data. I can give it, you know, directly to The Weather
5 Company if I want, and have them put it in their display. And
6 we've talked about doing that. The problem is then it would just,
7 just be United's EDR data. And we want to have all the other EDR
8 data.

9 So I think it's -- the IATA program is unique in that it
10 combines all the EDR data that is available, at least through IATA
11 partnerships. And it's a more comprehensive display of what's
12 going on in the atmosphere. So yeah, United's got a lot of great
13 data, but there's a lot of other data out there, so we want to use
14 all of it.

15 So we, you know, we work well with SkyPath, and they
16 understand EDR, and we're working through with the RTCA group.
17 I'm on that advisory, I'm on that committee working towards
18 turbulence standards. How you normalize all of this data and
19 SkyPath is an active participant in that.

20 And the goal there is that we normalize automated turbulence
21 sensing data to an EDR standard. And so that work is ongoing and
22 I'm part of that representing United on that RTCA committee. C-
23 206.

24 So all of those things will benefit United because at the end
25 of the day, if you can normalize all the data, and I have three

1 different inputs, but the resulting display to a dispatcher, to a
2 pilot is normalized, standardized, then you can -- it's going to
3 be a better implementation, and you maximize the benefit of the
4 data that way, in my opinion. So --

5 MR. SUFFERN: Well, I've been, you've been staring at me for
6 a bit so hand it over to Shawn for great pilot questions.

7 MR. ETCHER: Before I start, do you need a break or anything?
8 Need water?

9 MR. POLDERMAN: No, I think I'm, I think I'm good right now.

10 MR. ETCHER: Okay.

11 MR. POLDERMAN: Yeah.

12 MR. ETCHER: Well, if you do, just say so. Thank you so far.
13 It's been eye opening to me. I mean, I've not done what you've
14 done, so it's kind of nice to --

15 MR. POLDERMAN: Yeah.

16 MR. ETCHER: -- it's good for me to hear how it all works,
17 and --

18 MR. POLDERMAN: Yeah, right.

19 MR. ETCHER: A lot of information and my brain is the size of
20 a pea, so it's already full. But I'm going to keep going because
21 it's recorded, and I can read it later.

22 MR. POLDERMAN: Yeah. Right.

23 BY MR. ETCHER:

24 Q. So if you will, if we could go back just a little bit.

25 Again, I'm not a meteorologist. Not the smartest, sharpest tool

1 in the shed here. You talked about a polygon model. What is
2 that?

3 A. I wouldn't say polygon model. It's polygons and models.

4 Q. Oh, okay.

5 A. So polygons are basically human drawn advisory areas, kind of
6 like a SIGMET. A SIGMET is a polygon. Right. It's four sides.
7 So that's the traditional sort of 1950's era way of communicating
8 any hazards in aviation, is create a polygon. The points and
9 vertices. Ship it out in a text format, and somebody looks at it
10 and plots it. Right. Sort of the old way of doing enroute hazard
11 forecasting.

12 But still works. Right. And we use it now. We don't rely
13 on the text version of those anymore, like in the old days. We
14 look at them visually. Right. It's meant -- weather is visual.
15 This stuff needs to be looked at visually. Putting a text version
16 of a SIGMET is not nearly as powerful. It's just looking at it on
17 a screen.

18 Because then you can put it in context with other weather
19 layers, where your airplane is, points in space and time. Right.
20 So the polygon is just meant to summarize, here is a hazard area.
21 The flight planning guidance kind of is the proprietary product
22 that The Weather Company creates to forecast where that hazard
23 area is going to go in time.

24 So it's basically a blob on the screen that, you know, moves
25 in three hour chunks, and I can time slider, right, and figure

1 out, okay, this area is moving this way. So you know, it's
2 basically a forecast SIGMET. You can kind of think of it that
3 way.

4 SIGMET, current, flight plan guidance, where is that area
5 going to go in the future, or where our new areas going to develop
6 that aren't currently there. Now, in the last five, six, probably
7 ten years, the model data has gotten a lot better, which the
8 forecasters drawing these polygons are looking at the model data
9 to support where to draw the polygon. Right.

10 And in some cases, they're letting the model automatically
11 draw the polygons out in time, and then using the humans to just
12 forecast like the first six hours, and letting the automation take
13 over. Because the models are getting that much better. And so
14 the gridded model data, those GTG type algorithms I was talking
15 about, that, in a lot of ways, is becoming -- well in the future
16 may become the new polygon.

17 Because we have the ability to display this model data in our
18 tools now. Right. And if you talk to the dispatchers and the
19 pilots, you may have heard RPM forecast turbulence. It's a
20 gridded model data set, color codes of intensity. Then you can
21 just click it on as a layer. Right. And a lot of the FPG's and
22 SIGMET's are going to be drawn approximately around where these --
23 where the model is picking up on the hazard.

24 Now, meteorologists can add value on top of that because
25 sometimes the model is off, or it's overdoing things. Right.

1 It's a little too hot, saying the turbulence is going to be more
2 widespread or stronger than they think it is. You know, so
3 there's value to having a human summarize, rather than just
4 spitting model data at everybody.

5 So our approach, my philosophy, is that it's all good for
6 situational awareness as long as you train dispatchers and pilots
7 how to use it properly. They have to understand it's a model.
8 Right. And so models have known biases and issues that they run
9 into.

10 So you know, we might, you know, the philosophy I take is
11 that it's an all of the above approach. Now, maybe someday the
12 model will be so good that we won't even need the polygons
13 anymore. But we're not to that point yet. Because it's still, at
14 the of the day, dispatcher, pilot. This model has got splotchy
15 stuff all over the place. They're not necessarily going to know
16 what to do with that. Right.

17 They need -- so there's a lot of training involved in giving
18 model data to the pilots and dispatchers. It's not as
19 straightforward as looking at a polygon. Right. So I see a world
20 where both will continue to work together, but if you sit in on
21 and look at a dispatcher today on the floor, you will see them
22 using all of it. Right.

23 They'll have the RPM forecast turbulence. What's nice about
24 that model is I can get data at every thousand feet. I can start
25 slicing and getting refinement of a turbulence threat area that I

1 wouldn't be able to get with the polygon. Right. So I can start
2 to refine, okay, I know I've got a threat of moderate turbulence
3 over this polygon, but where inside that polygon, where the threat
4 might be the greatest.

5 And so I can start using the model data to help kind of
6 refine my approach to what to do with that hazard. Does that kind
7 of make sense?

8 Q. Mm-hm.

9 A. So it's all good, in my mind, as long as you train
10 dispatchers and pilots to understand the deficiencies or the
11 biases, conditions, limitations of these products and how to use
12 them together. So that's been our approach. Can't say it's the
13 same as others, but we -- there's a lot of pilots now who love
14 that RPM forecast turbulence grid, as they get all that
15 refinement. Right. And they can kind of see things play out.

16 And so they like it and it's fairly accurate. But at the end
17 of the day, it's still a model. So --

18 Q. Okay. No, and that that helps.

19 A. Yeah.

20 Q. Because I was like, okay. I at least want to make sure.

21 I'm --

22 A. Yeah.

23 Q. -- I understand what you're talking about, and I didn't at
24 the time. So thank you for getting that all clarified for me.

25 A. Yeah. Yeah. No problem, no problem.

1 Q. Perfect.

2 A. Hopefully it makes, makes sense.

3 Q. It does make sense. It's just now will my brain retain it.
4 That's the key. So but no, it does make sense. I know you were
5 talking about, you have people from the Weather Company here on
6 site, and then you also -- they have their counterparts in Boston.

7 A. Satellite offices.

8 Q. Right.

9 A. Basically what I call them.

10 Q. So how many on site do you have on a typical shift, day, you
11 know, however you break it out.

12 A. Yeah. We just added five more vendor meteorologists, which
13 is a really great improvement. That's been a long time coming.
14 So we have 14 on site meteorologists. There's never less than two
15 of them on shift 24/7, 365. It goes down to two on the overnight.
16 And then up to four sort of in the middle of the day.

17 So we have anywhere from two to four people on shift,
18 depending on the time of day. And that's recently. We used to
19 only have one on shift at night. And only three on shift maximum.
20 Now we're at two at night, and four maximum because we added five
21 more.

22 We're just, we're a much bigger airline than we were. We
23 needed more. So -- but you know again they also have their
24 satellite offices. There's probably 75 qualified meteorologists
25 across The Weather Company offices that in some way, either

1 directly or indirectly, support United. Right.

2 So obviously the 14 on site here are solely dedicated to
3 United, but then you have the other offices that back them up and
4 also provide the other hazard forecasts that we talked about.

5 Q. And those satellite offices, are they also 24/7?

6 A. Yes.

7 Q. All right.

8 A. Yeah.

9 Q. All right. So and again, I know I'm going ask questions and
10 you're thinking can this guy even walk straight. But I know
11 United flies to a few places in the in the U.S. and the world. Do
12 the meteorologists you have downstairs, do they look at all of
13 United's root structure? Do they look at just like the conus
14 area? Kind of help me understand it. Are they specialists in
15 certain areas, or they all graphically look at everything?

16 A. Yeah. I mean, they are primarily focused on the hubs. Our
17 contract with them stipulates that they will provide the highest
18 level of support and oversight of no more than ten airports at a
19 time.

20 So that's mainly our hubs. Right. And maybe a few
21 additional stations, kind of at our discretion. That's the
22 contractual, the way it's set up in the contract. Now, in
23 practice, if they see something that's significant outside of
24 those areas, they're also looking at sort of events. Right. I
25 got a major snowstorm moving into the, into the mountains. Right.

1 Maybe it's going to hit Denver, maybe not. Right. But they know
2 it's coming as they're watching the weather. Right.

3 So yes, their focus is on producing forecasts for the hubs,
4 but they're also looking at the general macro scale weather
5 pattern to see anything that might be impactful to United. So
6 yeah, they're producing special weather event packages for storms,
7 hurricanes.

8 You know, they'll even mention, hey, we got high winds in, in
9 London and Germany today. They'll mention that on the 8:30 a.m.
10 call. Right. So they're looking at whether globally. But in
11 terms of producing official products, it's mainly for the hubs.

12 Q. So I mean, to me, what -- the products that they produce
13 sounds huge. Does it take a while to produce these products? Is
14 that why you guys run them in the ten airports?

15 A. I mean, yeah. If we're going to have the same -- so there's
16 different tiers of support. Right. You know, you can monitor
17 weather and just say, hey, heads up, I see a chance of snow over
18 the Pacific Northwest. But they're not writing a forecast to, to,
19 to supplement what they just said, like a TAF, right.

20 So they're writing TAF's for all of our hubs except for Los
21 Angeles. And they're running those four times a day now. So
22 basically updating it every six hours. And there's discussions
23 that come with those. Right. Handwritten discussions that
24 accompany the TAF.

25 And then they're issuing a five day outlook that covers these

1 airports out for the next five days. They're issuing next day
2 convective outlooks for convective weather that's going to impact
3 either our inward structure or one of our hubs. And so that gets
4 issued around noon for the, the day prior. So they just issued
5 one yesterday for today in the Chicago area, for later on tonight.

6 So yeah, they are -- they're -- they are mainly looking at
7 conus hub based impacts, and there's a sort of a cadence, a
8 schedule to the products that they issue.

9 Q. All right, perfect. It's always hard to understand what
10 somebody's doing unless you have some detail on it.

11 A. Yeah.

12 Q. So I appreciate it.

13 A. Yeah. I mean, obviously, we couldn't have them writing
14 official forecasts for all these other airports. We'd need like
15 50 meteorologists to do that. So it's just not feasible.

16 Q. Right.

17 A. So, so there has to be some focus when it comes to official
18 products, and that's mainly the hubs.

19 Q. Okay. Now I know you use a contractor, a vendor for your
20 weather products. And maybe this is an opinion. Maybe there's
21 something factual. Is that better than using in-house
22 meteorologists? And if you can't answer, that's okay, because who
23 knows, but --

24 A. It depends on how you define better. You know, United
25 outsourced their meteorology department in 2006 and before they

1 outsourced, they were considered sort of industry leading. My
2 opinion, again, this is my opinion, which is shared by many in
3 United, is that we would get a better product if they were United
4 meteorologists.

5 Because we wouldn't be limited by a contract, they would be
6 stakeholders in our operation. Right. They would have some skin
7 in the game with, with how decisions are made. They would be more
8 embedded in United process, and you know, with the things that
9 we're concerned about, not that they don't know.

10 I mean some of these guys have been supporting United for 25
11 plus years, even though they haven't worked for United. Right.
12 They've been working for these other vendors, they've been
13 outsourced and sold a couple of times. So they -- a lot of people
14 in the office treat them as United.

15 But we're still limited by a contractual relationship. So
16 yeah, can I say that what, what they're producing is very good.
17 But could we do more with -- if they were in house? Sure, of
18 course we could. We wouldn't -- we'd have more flexibility. So I
19 mean, if you were to ask me what my long term goal is, that would
20 be my long term goal.

21 I shouldn't be the only person at United that's overseeing
22 meteorology. We should have all of it in house, if it's that
23 important. But you know, it doesn't mean that what we're getting
24 right now is somehow insufficient. But there's a lot of room that
25 we could grow. So --

1 Q. Perfect. Well, and the reason I bring that up is you had
2 mentioned how, you know, SkyPath being proprietary. You guys
3 can't share it with them.

4 A. Right.

5 Q. So you know, has there been any issues with a dispatcher
6 seeing something on SkyPath but can't share it with them? And so
7 they're not really playing the same sheet of music.

8 A. Yeah. I mean SkyPath isn't really a forecast. Right. It's
9 just real time monitoring.

10 Q. Right.

11 A. So most of the time that they're going to interface with The
12 Weather Company, the vendor, is about forecasts. And a lot of
13 times what's being seen on SkyPath will also be sort of supported
14 by PIREP's, or even TAPS data. Now, The Weather Company is going
15 to start putting the SkyPath data as a layer in Fusion, which all
16 the meteorologists have access to. So you could argue that
17 they're going to be able to see it.

18 And I don't think SkyPath necessarily has a problem with
19 that, but you know, I don't know what limitations they have, you
20 know, to be able to look at it, to help kind of understand what's
21 going on. I don't think you could tell a meteorologist if you
22 give them access to a data display in their tool, you can't tell
23 them not to use it.

24 Because if SkyPath really had a problem with that, they
25 wouldn't let them put it in there. Right. So SkyPath has been

1 pretty good to work with on that. They see the value of making
2 sure that their product is out there in the market. Right. And
3 being used.

4 So maybe at some point here in the next few months when that
5 data does become available, The Weather Company may be looking at
6 it. So, you know, and the same with the EDR layer. That's also
7 going to be available from IATA. So they can start looking at
8 that.

9 All right. So yeah, I see, I see them as benefiting from it,
10 but I wouldn't say that what they're doing right now is somehow
11 insufficient. Right. They're getting a lot of PIREP's, you know,
12 they're getting a lot of insight as to the nature of what's going
13 on with turbulence.

14 We're kind of spoiled here in the U.S. Right. Because we've
15 got so much data. Right. I think where a lot of these tools add
16 a lot of value is out over the remote oceanic environments where
17 PIREP's are harder to disseminate, there's fewer of them. Right.
18 So if you can have trails of reports from automated systems, you
19 could have a lot, a lot better insight as to what's going on in
20 some of these remote areas where we don't have a lot of data.

21 Q. Okay.

22 A. So --

23 Q. Excellent. Now, you were just talking about SkyPath, EDR,
24 and TAPS.

25 A. Mm-hm.

1 Q. And I know some airplanes have tablets, some are getting EDR.

2 A. Mm-hm.

3 Q. All pilots have SkyPath.

4 A. Right.

5 Q. They all can use it in certain aircraft in flight as well. I
6 guess maybe I'll ask for your opinion. Maybe that'll be easier.

7 A. Mm-hm.

8 Q. I know there's always pros and cons to absolutely everything.

9 A. Mm-hm.

10 Q. But in your opinion, out of those three, which do you find
11 gives you more consistent, reliable, accurate, whatever data
12 between SkyPath, EDR, and TAPS?

13 A. So that's kind of a hard, that would be a hard one to assess
14 because it's sort of apples and oranges, because they're different
15 technologies. And we have not operationalized EDR data. So we
16 have no way to sort of evaluate the EDR data against these other
17 data sources. Because we haven't put it out there to do that.

18 Right. So that hasn't happened yet. We're trying to do
19 that. Like I said, we're going to start a trial and Jepp FD Pro,
20 and one of the survey feedback mechanisms on that test is going to
21 be how does this data compare. Right. So we're moving into a
22 world where we could start doing what you just said. So far we
23 really haven't because those data sources have not been in the
24 same display at the same time.

25 SkyPath is its own set apart data visualization. TAPS is

1 separate, and a different tool. Right. EDR, currently not out
2 there at all for United, at least. So I don't think we really had
3 the opportunity to really do that. I would say they're going to
4 be a lot of differences because they're different technologies and
5 different algorithms.

6 I can already say from qualitatively, so that anecdotally,
7 SkyPath and EDR are very different. And it's going to be
8 interesting to see when they're both reporting turbulence in the
9 same area, which one is, quote, unquote, more accurate. Now,
10 things like TAPS, so much of turbulence intensity is highly
11 subjective and ultimately goes down to what the pilot thought
12 happened. Right.

13 That's, you know, still today, the pilot has the final say as
14 to whether or not it was severe turbulence. They don't think it
15 was severe, it doesn't get written up. It technically wasn't
16 severe. But it's, you know, you could take an automated system
17 and objectify that. Right. Take the pilot out of it entirely.
18 And we may move into that world eventually, but we're not there
19 yet.

20 Everything filters through the pilot. And honestly, you know
21 you're getting me now on my soapbox, but turbulence intensity is
22 so subjective that it almost becomes meaningless when it comes to
23 risk mitigation. Because really what you're trying to do at the
24 end of the day is mitigate injury risk to flight attendants and
25 passengers.

1 And we get plenty of injuries at light to moderate
2 turbulence. So just knowing where the severe turbulence is isn't
3 sufficient. Right. It's about knowing where the turbulence is
4 with respect to what's going on in the cabin. Do I have the carts
5 in the middle of the aisle and I'm about to hit a moderate bump.
6 Right.

7 Or is everybody strapped in and seated and belted in in their
8 jump seats on descent, and there's severe turbulence. Guess what,
9 the risk of injury is low. Okay. So really the intensity of the
10 turbulence is not really the issue. It's situational awareness of
11 turbulence with respect to what's going on in the cabin and being
12 able to give a heads up, and plan for, and understand where it is,
13 when it's going to happen.

14 And it's just very difficult, because turbulence is very
15 dynamic and fickle. Right. One guy hits moderate. The guy
16 behind him gets nothing. Right. Issue of convectively induce
17 turbulence. I know we didn't talk about this, but we don't just,
18 you know, we also have, you know, lightning data, radar data,
19 satellite data. Right. That dispatchers are trained to use to
20 help understand where convective updrafts are. Right.

21 Because these polygons aren't going to tell you that. Right.
22 I mean, this event had large polygons over most of the northeast
23 U.S. Saying moderate or greater turbulence. Yet we still hit it.
24 Right.

25 And you know, what we're hitting is convectively modulated

1 risks that are within a broader scale area of turbulence. You
2 know, an updraft of a, of a convective cell. How do you know when
3 that's going to hit? Right. So yeah, I had a risk of moderate
4 turbulence, but I hit this updraft and boom. Right. I didn't see
5 it coming. I wasn't prepared for it. Right.

6 So risk mitigation, injury mitigation is not just about
7 trying to avoid the severe turbulence. That's sort of my soapbox.
8 Because -- so these automated systems can help by providing an
9 objective data set. But how -- well, how do you calibrate those
10 data sets? Do you calibrate by what the pilot felt, or you
11 calibrate it by what the back of the airplane felt.

12 On the 777-300ER, the airplane is doing this, and the pilot
13 says what's the problem. It's light. Right. The flight
14 attendants are calling out, we're getting killed back here.
15 Right.

16 And that's the problem we've run into at United, is that the
17 perception of turbulence intensity from the flight attendants very
18 rarely matches the pilot's interpretation of the intensity. And
19 if you think about the differences, it makes sense as to why that
20 is.

21 So here, basically, the intensity becomes meaningless because
22 everybody's perception of it was completely different. And we
23 found that through data, through objective LOSA data, we have
24 verified that. In fact it was less than 40 percent of the time
25 the intensity is agreed between the flight attendants and the

1 pilot. So --

2 Q. Okay. So you mentioned the event back in February.

3 A. Mm-hm.

4 Q. I'm sure you heard about it pretty quickly.

5 A. Mm-hm.

6 Q. When you hear about a turbulence event, or any kind of
7 weather event, well, in this case, it's turbulence. What did you
8 do? Is there anything you do do as the manager?

9 A. Yeah. I mean, so I, I monitor the reports that come in, the
10 dispatcher logs. And then there's also other logs that get
11 generated. So the first responder logs when an event first is
12 reported.

13 And then I get emailed copies of those. I don't, I don't
14 monitor them in real time, meaning I'll look at them the next day
15 when they come in. Right. Unless somebody is asking me in real
16 time. But it just doesn't happen that often. Right. Because we
17 have 24/7 support for that kind of thing.

18 So I'm mainly monitoring from, you know, you know, just a
19 process review, event review, a supporting flight safety, you
20 know, a second opinion on what might have happened, what might
21 have caused it. I look at -- I help with forensic analysis. Our
22 weather vendor puts together a forensic package and I also will
23 review some events if I'm asked to by flight safety.

24 I did review this one myself in the Fusion replay data that
25 we have. And so I regularly do that when I'm asked, I respond to

1 dispatch safety action program requests about turbulence events or
2 FSAP's, as well I get action items on those, you know, asking for,
3 hey, what happened here. It said that the products wasn't
4 available or, you know, a variety of different inquiries about
5 turbulence.

6 And then I'm also on our corporate turbulence injury
7 mitigation program. We have meetings every other Friday, and
8 sometimes we'll talk about events. Most of it is we're talking
9 about data analytics and different project work, but so yeah. I
10 do, I do monitor the logs and I follow up when needed to help out
11 with flight safety or, or the FSAP programs.

12 Q. So on this event, when you reviewed it and everything, if
13 you, if you can, what did you learn? Anything good, bad?

14 A. Yeah, I was just looking it over again before, before I came
15 in here. This event was, you know, a lot of synoptic scale
16 turbulence. So it was sort of like there was no -- everybody knew
17 that it was turbulent. Right. There was no way you, I mean, it
18 was all over the flight plan remarks. Right. Dispatch was
19 remarking about it, I believe, if I recall correctly.

20 There was polygons all over the place from the weather
21 vendor. Right. FPG's, and even a SIGMET that came in afterwards.
22 So there was a lot of sort of broad scale turbulence risk. But
23 there was a narrow convectively forced line of precipitation along
24 this frontal zone. Right.

25 So -- and the nature of it was, it was fairly low topped

1 convection. So you know it wasn't summertime. Right. So we're
2 not getting the deep convection to 50,000 feet and all sorts of
3 lightning and all that kind of thing. So -- but at the end of the
4 day, it was still convection and convection is a updraft. Right.
5 And you've got all this horizontal shear with the jetstream
6 related frontal zone, and then all of a sudden these updrafts
7 embedded in that shear. Right.

8 And so the perfect storm and we've seen it. I shouldn't say
9 perfect storm. You know what I'm talking about, right?

10 Q. Right.

11 A. So that everything comes together to create a lot of these
12 events, and, and descending into convective weather is a high
13 risk, high threat environment for turbulence injuries. Because
14 you're still buttoning up the cabin and you have less maneuvering
15 capability around convective cells.

16 So this airplane was descending directly into this low top
17 convective line. There were moderate reports of turbulence,
18 several of them prior to the event. There seemed to be a lot of
19 sort of known turbulence and forecast turbulence. But what
20 appeared to happen is that they penetrated the, the updrafts in
21 these low topped cells, and probably hit an updraft that hit the
22 airplane pretty hard, which it would. Right. It's a rising
23 column of air and all of this horizontal moving air.

24 So we see it all the time, unfortunately. It's a common
25 problem, descent into -- inadvertent penetration of convective

1 updraft on descent. That is by far the biggest cause of
2 convectively induced, convectively induced turbulence injuries.
3 And the data supports that from previous flight safety
4 investigations. The ones that I've helped out with.

5 So this seems to be that -- this seems to be what happened
6 here again. That's my analysis. I don't necessarily have all the
7 data available, so I can't say that that's some sort of official,
8 comprehensive conclusion. The flight safety is still
9 investigating. It's still an open investigation. Obviously,
10 you're still investigating.

11 So but yeah, there was some lightning data in the area, some
12 lightning strikes, but it was like 20 to 30 minutes prior to them
13 getting there. But what I, I always look at lightning data
14 because it's a good proxy for the intensity of convection. Right.
15 Sometimes you won't even know there's a convective cell there, but
16 there's a little cluster of lightning strikes.

17 We can, the forensic, you know, software that we have, I can
18 play back all the lightning data. And there were a number of
19 strikes in this, in this line of low top cells prior to them
20 getting there. So to me, that meant there was enough vigorousness
21 in the updrafts to produce lightning because you need a strong
22 updraft to produce lightning.

23 So you know, just because it was February and it was, quote,
24 unquote, low topped, doesn't mean it wasn't significant. So that
25 appears to be what happened. Descended right, right through it.

1 Q. Okay.

2 A. Now, if they had stayed at altitude, they were still at
3 cruise altitude, they might have flown right over it and had no
4 idea it was even there. Right. Certainly possible because the
5 tops, I don't think, we're even above 30,000 feet. So -0-

6 Q. So and, and my last question on -- for you right now anyway,
7 is when you looked at it, and I know it was going to Newark, so
8 that's one of your hubs.

9 A. Yeah.

10 Q. Did what your meteorologists forecast, and what they were
11 seeing, did that kind of coincide with what you all saw? When you
12 start looking back at the data, did it make sense or was it --

13 A. Yeah. So again, what our forecast vendor is putting out are
14 polygons. Right. And polygons don't necessarily pinpoint
15 isolated convectively induced turbulence risks.

16 So you had convectively induced risk embedded in a synoptic
17 scale risk. Right. So the synoptic scale risk, sort of the
18 broader risk was clearly identified by the polygons. SIGMET's,
19 FPG's for moderate or greater turbulence.

20 So in that respect, it was well forecast, but what those
21 things don't necessarily do is pinpoint what's happening inside of
22 those areas when you have this unique stuff going on like
23 convective line forming along this sort of broader scale area. So
24 that was I think what was unique about this event, is that it was
25 a combination of both broad scale sort of synoptic scale risk of

1 turbulence and convective stuff developing within that.

2 Sometimes you just have convective stuff, you know,
3 especially in the summer when the jetstream weakens and moves
4 north. Right. The risk is really just where the convective cells
5 are. And you can go around them all day long, and you're fine.
6 Right. Because you're not embedded in this broader shear zone.

7 This one was not the case. You had a lot of vertical shear
8 with the jetstream, this frontal zone, and then you also have the
9 convective updrafts. And it's just sort of all came together at
10 the wrong time.

11 Q. That makes sense. So I'm going to chew on it for a little
12 bit, but I appreciate you giving me a lot of info and I know
13 you've got to be tired of talking to me, because I ask dumb pilot
14 questions, as some of my colleagues will say, but that's okay. I
15 got to learn.

16 MR. ETCHER: But I'll pass it back to you, Paul. Thanks.

17 MR. SUFFERN: You doing okay?

18 MR. POLDERMAN: Yeah.

19 MR. SUFFERN: Okay. I just have a couple of follow up
20 questions, like I said round two is much quicker.

21 MR. POLDERMAN: Sure.

22 BY MR. SUFFERN:

23 Q. And going along the lines that you mentioned there -- well,
24 first of all, do you provide as one of the meteorologists, or the
25 only meteorologist technically at United --

1 A. Mm-hm.

2 Q. -- do you provide like any recurrent weather training, like
3 once a year, twice a year? To either pilot groups, dispatch
4 groups, can you tell me how that kind of works?

5 A. Yeah. Like I said, for a number of years, I was the manager
6 of dispatch training. And, you know, I was always kind of working
7 to make sure we had weather training. And actually, we have
8 required weather training as part of EWINS. So it is embedded in
9 the FAA approved dispatch training program. It is recurrent
10 training on weather topics.

11 And there's some flexibility as to what topics they cover. I
12 do not personally produce training modules for dispatch. I
13 provide subject matter expertise to the dispatch training
14 department when asked. So like recently, they were preparing
15 spring recurrent training for spring 2024, which just started, and
16 the dispatch training instructor who was developing a module on
17 convective weather sent me a copy of it and said, hey, what do you
18 think? Can you give me your feedback?

19 And so I reviewed it and provided some, you know, some
20 feedback and recommendations to make it better. So that's kind of
21 my role. I am not overseeing the dispatch training function
22 anymore, there's a dispatch training manager since we're over
23 here. And you know, he oversees the, the instructor who is
24 developing the curriculum.

25 But I just, I support them in a SME role essentially. So but

1 yeah. And I know for a fact because I managed the program, that
2 United does a lot of weather training for the dispatchers. We
3 probably do more than most airlines, and it's more in depth, quite
4 frankly, I think than even most airlines. We train our
5 dispatchers on a lot of convectively induced turbulence
6 signatures, satellite imagery, you know, we go above and beyond
7 just the basics.

8 And yeah, I helped oversee the development of that training,
9 and from what I can tell, they're still doing it. And that's an
10 important part. Now, the pilots, I can't speak for what kind of
11 training specifically they get on turbulence. Their training is
12 very different, and there's a lot less flexibility in the pilot
13 training, the way it's administered. Right. So they don't have a
14 lot of flexibility to go in depth on any particular topic, from
15 what I can tell.

16 But I would definitely refer you to flight ops if you want
17 more specifics on how they do their training. I, I can't say that
18 I've been asked to review any flight ops training on weather in
19 quite a while. So I can't remember the last time. That doesn't
20 mean they're not doing it. So it just means I haven't been
21 involved.

22 Q. Thanks. That's really helpful, Nathan. And then just
23 tagging along on -- along that scenario, and just what you're
24 missing like this case, like low top convection in the wintertime,
25 in New England, kind of those oddball scenarios, which I'll pick

1 from the weather side like snow in Texas in May, or thunderstorms
2 in North Dakota in the wintertime. Are those types of scenarios
3 included in dispatch? And if so, kind of how?

4 A. Yeah. So dispatch is mainly focused on sort of the safety
5 related enroute hazard stuff. And so they will use case studies
6 of events in the training. I know for a fact that, that they've
7 done that. Have they done it recently? I don't know.

8 But yeah, I remember a module a few years ago where we looked
9 at, you know, a flight trying to deviate around a convective cell,
10 and a new cell developed right out ahead of them, and they didn't
11 see it. Right. And we actually looked at that and created
12 screenshots of how it progressed and used it to develop training.

13 We actually created a training module from it. Because you
14 can learn a lot in those situations. And I, back when I was still
15 overseeing dispatch training, we created a module that that, that
16 also did some of that. So yeah, we've, we've definitely done
17 that.

18 Now when it comes to other types of weather phenomena,
19 obviously, there's less in depth focus on those, because it's more
20 of the macro scale. Understanding the weather products,
21 snowstorm, that gets down to more applying like understanding
22 things like different weather conditions and how they impact
23 performance of the airplane, or holdover times, stuff that
24 directly, you know, affects the dispatchers' day-to-day work.

25 When it comes to how does United manage a winter storm,

1 right, a lot of that stuff is happening before the dispatchers
2 even get involved. Right. Because we cancel flights a day in
3 advance. Right. We manage in a weather event, strategically as
4 an airline, before it tactically gets to the dispatchers' process.

5 So the dispatch training tends to focus on flight specific
6 types of incidents and applications. Like aircraft performance,
7 winter ops, scenarios with deicing, holdover times. You know,
8 that kind of thing.

9 And then they'll, they'll also review the different products
10 that we're getting from the vendor, and making sure those vendors
11 understand where to get those, and what they mean, and stuff like
12 that. So --

13 Q. So you mentioned that scenario that was used in dispatch and
14 stuff like that.

15 A. Mm-hm.

16 Q. Do you know if low top convection in the wintertime has been
17 brought up? Or mainly the winter one is just so --

18 A. I don't know. I don't know. Like I said, I would, I would
19 talk to dispatch training and have them look at their previous
20 recurrence that they've done and see if they've done anything with
21 specifically on low top convection. I know they've done it on
22 convection.

23 And I, you know, I would argue that convection is convection
24 because you penetrate an updraft, doesn't matter if it's February
25 or July, you're going to have a rough ride. So I don't know if we

1 necessarily would differentiate it as a winter versus summer,
2 although I could see the benefit of doing it from the standpoint
3 of how can you use the products to identify a risk which may not
4 be as obvious when you don't have lots of lightning. Right.

5 Because in general, the low top wintertime stuff has very
6 little lightning, so it may not look as ominous on the screen to
7 the average user. But I would not be able to say whether or not
8 they've included something like that in training. I would refer
9 you to the dispatch training department.

10 Q. Okay. Last question, I said it was much shorter, last
11 question for me at least. Is there any weather tool that you wish
12 you had access to, and then were able to share it with other
13 folks? Anything that you know that's out there that you wish you
14 had.

15 A. When you say weather tool, I wouldn't say, I wouldn't put it
16 that way. I think, I think what we're lacking is integration of
17 weather products into a single tool that is integrated in such a
18 way that allows dispatchers and pilots to manage by exception,
19 have intelligent learning, high resolution.

20 So it's sort of a high resolution integrated display of
21 weather forecast information alongside their aircraft situational
22 display. To me that's -- we're overdue for something better
23 there. It's not that what we have is insufficient, but it could
24 be a lot better. And things like all this automated turbulence,
25 the fact that we have to open up multiple browser windows and

1 multiple disparate tools to look at this stuff, means they're not
2 getting the benefit of putting everything together.

3 So if I had my dream scenario would be a one tool that can
4 really truly integrate this stuff well and put it in front of the
5 dispatchers and pilots in an intelligent way at the resolution
6 necessary to maintain situational awareness and enhance safety.

7 So that would be my answer to that question. Sounds like
8 somebody should do that, but it's a lot harder than you think.
9 And the technology is now to the point where we probably can do it
10 without like completely bogging down your computer. Because your
11 weather data is high resolution, and you put all that together
12 with layers, not easy.

13 So -- but I really think that's what the industry needs.
14 What United needs and could benefit from. Too many tools, too
15 much stuff in disparate places.

16 MR. SUFFERN: Well, thank you, Nathan. Shawn, do you any
17 more questions?

18 MR. ETCHER: I only have one question.

19 BY MR. ETCHER:

20 Q. So again, thank you very much.

21 A. Mm-hm.

22 Q. How often do you interact with your counterparts at other
23 carriers --

24 A. Mm-hm.

25 Q. -- and share, I mean the, the knowledge that you guys have,

1 they share the knowledge that they've earned --

2 A. Yeah.

3 Q. -- because to me, why reinvent the wheel if we're all trying
4 to --

5 A. Yeah.

6 Q. -- keep a flight attendant from getting bounced off a
7 ceiling.

8 A. Yeah.

9 Q. How often does that happen, and how well does that happen, or
10 does it?

11 A. It does happen. In fact, prior to the pandemic, we were
12 doing a lot of industry stuff. We don't compete on safety, and I
13 would say myself, and others, and my colleagues at some of the
14 other airlines, we have done a lot to really sort of organize,
15 organize ourselves as an industry.

16 So I was -- I myself and my colleague at American Airlines
17 before the pandemic, we were commissioning a industry turbulence
18 safety action team, we called it. Called ITSAT. We actually had
19 a kickoff meeting in Dallas, and then the pandemic hit, and
20 everything just blew up. Right.

21 And we haven't really reconstituted that, but a lot of that
22 same kind of effort is still happening. I'm actively involved in
23 the A4A Meteorology Committee, and we actively collaborate on
24 turbulence topics with the A4A in flight committee, which has
25 representatives from all the major airlines.

1 So I, you know, we have regular monthly meetings. You know,
2 we have info share which you're probably familiar with. There's a
3 lot of turbulence topics that get talked about there. So yeah,
4 I'd say there's been a lot of good industry collaboration on
5 turbulence mitigation, probably less so since the pandemic, but
6 that doesn't mean it's not happening.

7 And you know, I've, I've been involved, like RTCA with
8 turbulence standards effort. That's an industry effort meant to
9 enhance safety at the end of the day, I'm involved in that. So
10 yeah, we very much are involved on an industry level, and we want
11 to continue doing that because it's important.

12 So quite frankly, a lot of the airlines have the same issue,
13 right. I mean we're all in kind of same boat.

14 MR. ETCHER: Perfect. Well, again, thank you so very much.

15 MR. POLDERMAN: Mm-hm.

16 MR. ETCHER: I know you're -- you sound like a very busy guy.
17 So you've taken the time out to educate me, so I do appreciate
18 that.

19 MR. POLDERMAN: Yeah.

20 MR. ETCHER: And back to you, Paul.

21 MR. SUFFERN: All right. Great. I lied like Shawn often
22 does, sometimes. But is there anything that we didn't ask that
23 you think we should have asked or should know about or anything
24 like that or --

25 MR. POLDERMAN: I, I don't, I don't think so. I think you

1 pretty much covered everything. I don't -- I can't think of
2 anything that's glaringly missing.

3 MR. SUFFERN: Okay. Well, so the interview is done at 2:16
4 local time.

5 (Whereupon, at 2:16 p.m., the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: UNITED AIRLINES FLIGHT 1890
TURBULENCE ENCOUNTER ENROUTE TO
NEWARK, NEW JERSEY ON FEBRUARY 10, 2024
Interview of Nathan Polderman

ACCIDENT NO.: DCA24LA097

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been
transcribed to the best of my skill and ability.

A black rectangular redaction box covering the signature of Sandra Hirsch.

Sandra Hirsch
Transcriber

p