

EPISODE 307

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[0:00:08] IP: Hello, and welcome to episode 307 of AvTalk. I am Ian Petchenik, here, as always with –

[0:00:15] JR: Jason Rabinowitz. Hello, Ian. What's up?

[0:00:17] IP: Hello, Jason. Well, it's been a week of time that has felt much longer than a week since the last time we sat down and recorded a podcast. I've been through a whole home illness and we're bouncing back, so that's been not fun.

[0:00:35] JR: No, it doesn't sound fun at all.

[0:00:37] IP: I hope you're doing lesser.

[0:00:38] JR: I am apparently doing better than you, which is – I mean, it doesn't mean I'm doing great, but I'll take it.

[0:00:44] IP: But you'll take it. No, so it's on the upswing, so I apologize. I say that to say that my voice is not 100%. If you're listening to the podcast going, "Ian sounds different," that's why. Still on the mend here. Well, we've got snow on the ground here in Chicago and we're getting more. Our first honest to goodness snowfall of the year and it's the mid of February.

[0:01:06] JR: Which is really strange, because at least here in New York, we've had snow a couple times. DC and the Virginia area has been walloped a couple of times last couple of weeks.

[0:01:16] IP: Yeah. I want a walloping. I want to be walloped.

[0:01:19] JR: The southeast has also been rightfully walloped a few times recently. Chicago, you haven't had snow yet until this week?

[0:01:27] IP: I mean, we've had snowfall, but this is the first time people were going, "Oh, it's actually going to snow more than an inch and inch and a half." I'm excited about it.

[0:01:36] JR: Strange winter.

[0:01:38] IP: Everything is strange now. Let's dig into this week's news. We've got plenty to talk about. Some very bad news, some good news, and some very strange news. Let's start with more bad news. We have another crash to discuss. This one, we don't have much information about. The investigation is just getting started and the flight tracking data that we have doesn't really lend us a clue too much of what happened. I'm referring to the Bering Air Cessna 208 that crashed between Unalakleet and Nome, Alaska, late last week. The aircraft was carrying nine passengers and a pilot and was found 35 miles southeast of Nome on the pack ice.

Because it crashed onto moving ice, we're not actually sure where it crashed at this point. As part of the investigation, the NTSB will have to figure that part out of where the ice was when the aircraft actually crashed. There were no survivors onboard. The wreckage was discovered by the Alaska Coast Guard a few days later. Unfortunately, no one survived the crash. The NTSB is investigating. NTSB chair, Jennifer Homendy traveled to Alaska.

[0:02:54] JR: Oh, wow.

[0:02:56] IP: As tired as we are, I can only imagine how tired she is after the events of the past two weeks, because not only has she been in Washington, D.C., and Philadelphia, she has been in Alaska, and I can only imagine how tired she is. The NTSB is investigating that crash. We've had some history with Bering Air and their Cessna 208s. We sent our colleague Gabe out there a few years ago to do a couple flights with them and learn more about how they operate and what they do out there, keeping everyone connected out there. Because as we've talked about in the past in Alaska, these aircraft are the way communities stay connected, and some of the only ways these communities stay connected. It's the only way to get between various places with any measure of efficiency and is often the only way to get between these places, period. These aircraft and this airline especially is critical to folks in Alaska. Finding out what

happened, why it happened, and making sure it never happens again, certainly going to be something that folks want achieved as quickly as possible.

[0:04:10] JR: Yeah. Alaska oftentimes does not get the level of acknowledgement and reporting that it probably deserves whenever a crash, or incident, or something happens. We saw it even just a couple of weeks ago where there was a lot of commentary about how PSA and DC was the first crash in the US since Colgan Air, and that's simply not really true. There are lots of crashes. Primarily, the one that most people forget is the PenAir runway overrun that did lead to a death in Alaska, and that is often forgotten. It's good to see Jennifer Homendy, the chair of the NTSB, not just taking an active part in the investigation, but actually going out to Alaska to make sure that this gets eyes on it that it deserves. Like you said, Ian, Alaska is way more dependent on aviation, probably, than anywhere else in the country, maybe other than Hawaii, I would say. Like you said, there's some places in Alaska you can only reach by aviation, really.

I don't know on this Cessna 208 if it has your traditional CVR cockpit voice recorder and flight data recorder. I don't believe it does. But there's an article from Alaska's news source that say, there are components onboard that they're referring to as non-volatile, which means that data is not erased when power is lost, and those have been sent to the DC recorder lab for reading out. I don't know as far as actual black boxes as we know them are equipped on this particular aircraft.

[0:05:41] IP: Yeah. I don't know for sure, especially as this aircraft is operating in a more commercial configuration, I'm not sure exactly what it's equipped with, but it would be interesting to see what data they can get off of the recorders, such as they are. I will say, if you're interested in Alaskan aviation, especially and safety in aviation in Alaska, Colleen Mondor is the —

[0:06:04] JR: Yes. I was just going to mention her.

[0:06:05] IP: - person to follow. We'll put a link to her reporting in the show notes. She has been following Alaskan aviation for decades and probably knows more than anyone about accidents, incidents, and flying in Alaska. Her reporting has been absolutely crucial to understanding what's happening. We'll put a link to that in the show notes. Let's shift back to DC and talk about

some updates to the investigation into the mid-air collision between the PSA CRJ-700 and the US Army UH-60 helicopter. The NTSB reports that on-scene investigative activities have now been completed, and they are shifting to working in their working groups, so that they can continue the investigation wherever that needs to be and wherever that takes them.

At DCA, the two other runways, 422 and 1533, have reopened. Those had been closed since the crash. All three runways are now reopened at DCA, though the arrival rate for, and Jason, correct me if I'm wrong, the arrival rate for aircraft is still limited below what it was pre-crash.

[0:07:22] JR: I'm not a 100% sure, but the FAA did put out a statement last night, that would be Tuesday, February 11th, saying the arrival rate was increased from 26 back up to 28, but also said that the actual maximum arrival rate is 32 for DCA. I don't know if DCA was actually operating at 32, because I believe it was reduced from 28 to 26 is what I recall reading over and over, but it is at 28 now, but the actual "regular maximum hourly arrival rate is 32." But I don't think they were actually doing that.

[0:08:04] IP: Well, they've increased the arrival rate slightly again. Then today, the Wall Street Journal is reporting that the FAA is investigating a permanent change to how the airspace is structured around DCA to accommodate helicopters, or in this case, to no longer accommodate helicopters. This is just the Wall Street Journal reporting. The FAA has not commented on this, or announced anything publicly yet. But, given all of the comments that we've seen from FAA officials and the DOT so far, it wouldn't be outside the realm of possibility, and certainly, I wouldn't be surprised if we do hear an announcement saying that they are permanently restricting helicopter flights in and around DCA.

[0:08:54] JR: Yup. That's probably prudent. Given the outcry we heard from pilots after this crash on how many close calls there have been and how tight the airspace is between arriving aircraft and the helicopter route, this just seems logical. It's good to see that even the current administration could potentially take action on this and restrict helicopter traffic through the area. I think, what was it? The new DOT head saying, "Get in your damn suburban and drive," or something like that. It's a very weird. Things are weird right now, okay? But that was good to see, at least. That's an actual safety-related thing. The FAA can and might just do as opposed to

all the other nonsense they appear to be doing right now. So, hey, credit where it's due, even if it's the smallest thing they can do.

[0:09:42] IP: I mean, we'll take it. Let's go to Brazil where, this is a weird one.

[0:09:49] JR: Yeah, and probably could have been a lot worse than it was.

[0:09:52] IP: It definitely could have been a lot worse than it was, because a Gol 737-8 MAX struck a pickup truck on the runway during its takeoff roll.

[0:10:05] JR: Going 100 knots, or something like that.

[0:10:09] IP: We're not talking about wingtip-to-wingtip taxi. We're not talking about somebody drove the truck into the engine cowling, or something like that. This is maintenance pickup truck stopped on the runway, 737 MAX taking off, and thankfully, it didn't hit the engines, or anything like that to cause a fuel leak, spill, fire, anything like that. Basically, drove over top of the pickup truck. If you've ever seen Smokey and the Bandit and you know the Sheriff's car, that's what happened. If you haven't, A, watched the movie. B, it took the entire top structure above the doorframe off. Now, the airport authority has a convertible pickup truck.

[0:10:57] JR: Hey, that's great. You usually have to pay extra for something like that. Given the video and the imagery of the underbelly of the 73, it's not going anywhere for a long time. I'm sure it's fixable, because we've seen more fixed, but it's going to take a while.

[0:11:15] IP: Yeah, it'll be on the ground for quite some time, if it ever flies again. Thankfully, no one was injured, neither in the vehicle. I'm not sure if anybody was actually in the vehicle, or if the vehicle was just parked for some reason on the runway. The passengers and crew onboard were not injured. They were de-planed safely, and no one was injured, which is, I'm very surprised.

[0:11:39] JR: All right. Yeah, do yourself a favor and go look at some photos of this pickup truck.

[0:11:43] IP: Yeah, we'll put the link in the show notes, just to check out what the aircraft and what the pickup truck now looks like.

[0:11:49] JR: What's left of the pickup truck.

[0:11:51] IP: It's the middle of February, which means that we now have data for January from major manufacturers. We can talk about what Airbus has done as far as orders and deliveries in January, and some of the changes they're making to their future products, as well as Boeing's growing backlog, but also, somewhat shrinking backlog, and their improved delivery schedule. Jason, do you want to start with Boeing or Airbus, or should we flip a coin?

[0:12:17] JR: Well, we have it with Airbus in our show notes. Really, you started this with what has Airbus been doing. It might be better off to introduce this topic as what Airbus isn't going to do. It's a long list of stuff. Airbus has said, "You know what? Never mind."

[0:12:33] IP: Yeah. Last week, I think we talked about the City NextGen urban air mobility electric, the eVTOL that Airbus has shelved, because the batteries aren't there. This week, Airbus, or at least the reporting is coming out of the French Trade Union most affected by the postponement of these projects, that Airbus is not proceeding, or at least pushing back its zero E project by at least 10 years. In 2020, Airbus announced a goal of fueling a 100-seat, 1,000 nautical mile hydrogen-powered aircraft. Basically, a hydrogen-powered regional jet by 2035.

The Trade Union says that Airbus has told them to prepare for that not happening. They're delaying that by five to 10 years. If I'm being honest, I think that's probably soft. They're reducing the budget by 25% and terminating some of the projects that go along with zero E, as well as, and this is the thing I am most in awe about.

[0:13:42] JR: No, don't say it. Don't say it.

[0:13:44] IP: They're getting rid of the plan to flight test, the hydrogen-powered fuel cell power train installed on the rear fuselage of the A380 flying test bed.

[0:13:57] JR: Oh, I told you not to say it. That is crushing. Forget all this other stuff. Hydrogen-powered aircraft, electric-powered aircraft. That was all fantasy for all I'm concerned, but not even getting a tech demonstrator on the A380. That's real. That hurts.

[0:14:13] IP: That's a bummer. That's a real bummer.

[0:14:13] JR: That stinks. Yeah.

[0:14:15] IP: No word on if they're still going to partner with CFM to fly the RISE engine on the A380. Though, with this announcement, I have to imagine that's somewhat under strain, if not going to be canceled.

[0:14:33] JR: I hope not. I just want something cool to look at. With all the bad things happening in the world, can't we just have something nice to look at? Even if it's not commercially viable.

[0:14:43] IP: You mean, in two years? Sure.

[0:14:46] JR: No. I need it now.

[0:14:48] IP: Well, then you're really not going to like this news, because in addition to Airbus's announcement, ATR has also said, it's pushing back its EVO, which is the hybrid electric version of the ATR 72. That was going to enter service in 2030. That has now been pushed back to 2035. Who knows? Next, we'll see.

[0:15:16] JR: This industry is going to be hinging on SAFs, sustainable aviation fuel, seemingly for the foreseeable future. If battery technology doesn't work, if hydrogen technology doesn't work, if battery electric hybrid doesn't work, we're not left with much options other than SAFs, or magic. I've lost my magic wand, unfortunately, so it seems like SAFs is the answer.

[0:15:43] IP: Oh, that's a bummer.

[0:15:44] JR: Yeah, it is a bummer. But that seems like where we're at and all the news regarding SAFs these days is also not good. Production is lower than expected and needed. It's expensive. We're in a bit of a pickle here, aren't we?

[0:15:59] IP: Maybe we should see if we can power airplanes with pickles.

[0:16:03] JR: It would be nice. Pickle juice is salty. You can drink it. You could maybe fuel airplanes with it. I don't know. Someone should look into this.

[0:16:10] IP: I agree. Someone should look into –

[0:16:11] JR: You do know where to go with that, do you?

[0:16:13] IP: Airplanes. I really don't. That's where we're at with future aircraft. Let's talk about your favorite airline and mine, undisclosed airlines, because Airbus took –

[0:16:25] JR: Everyone's favorite.

[0:16:27] IP: - a good drink of business from undisclosed airlines in January.

[0:16:30] JR: Yeah, we don't know who undisclosed airlines is. We may never know. What we do know is that January 2025 was a big month for undisclosed airlines. There were one, two, three, four, five separate orders, I believe. One, for 25 A320neo. That's a pretty substantial order. 10 A330-900, six A350-900, three A350 freighters, and one single solitary A321neo. Undisclosed airlines continues to build up its mega fleet. One day, we'll find out who is behind these orders. Today, all you know is that it's undisclosed.

[0:17:13] IP: There you go. Boeing, for its part, began the year with a higher delivery cadence than last year, which, I mean, to be fair –

[0:17:24] JR: Bar is real low, Ian.

[0:17:25] IP: - hard to do, but they did deliver 45 aircraft, including 40 737 MAX, one 777 freighter, and four 787s, including the first 787 for tag Angola Airlines.

[0:17:41] JR: Hey, that's something. Yeah. Four 787s is a real sad number. But yeah, it's better than none.

[0:17:48] IP: It's better than none. On the other hand, they also moved 38 777X orders into the, we don't think we're actually going to sell these airplanes to a customer accounting bucket. That's an accounting rule that allows them to move those orders away from expected revenue. With Boeing saying, "We don't actually think anyone's ever going to produce these –"

[0:18:16] JR: 30 something?

[0:18:18] IP: 38.

[0:18:20] JR: I mean, there aren't all that many airlines that ordered the 777X, let alone in numbers that large to suddenly not take them anymore. Who do you think it is? Is it our favorite airline undisclosed? Because there are 40 orders for the 777X that are apparently undisclosed.

[0:18:41] IP: It might be.

[0:18:42] JR: Yeah, I don't know. Apparently, some of those are –

[0:18:44] IP: That would be a bummer.

[0:18:45] JR: Yeah. Apparently, some of them are for Qatar. But that is a large number to suddenly not be confident enough to put on the order book anymore.

[0:18:54] IP: Yeah, that's not great. They're still under contract, but that's Boeing thinking, "We are probably not going to actually sell these." Though, they could in fact sell them at some point.

[0:19:06] JR: They could, but between Air India, A&A, IAG, Cargo, Luxe, Cathay, Emirates, Etihad, Ethiopian, Lufthansa, Qatar, Silkway West, Singapore, and unidentified, that's not a

huge range of airlines. I feel like, if any one of those decided they didn't want how many was it?
38?

[0:19:24] IP: 38, yeah.

[0:19:25] JR: 38 777Xs, we would probably hear something about that, especially considering there aren't all that many on that list that ordered 38 plus of those aircraft. Somebody is going to be talking pretty soon, I feel like.

[0:19:41] IP: It's entirely possible. Maybe we'll have more info next week. Boeing ended January with about 5,500 aircraft in the order backlog. The vast, vast, vast majority of which are 737 MAX aircraft. A total of 4,296 737s, 109 767s, which are all of the freighter variety and all need to be built right quick. Although, that build might include KC-46s. I'll have to double check if that number gets split out between commercial and military contracts. 427 777s, and 722 787s. There you go.

[0:20:28] JR: All right.

[0:20:29] IP: Let's head off to Korea, where following the crash of the Jeju 737, Korea is planning on rolling out a wide-ranging set of bird detection and mitigation technologies. That aircraft suffered bird strikes to both engines as it was approaching Muan. Now, the Korean authorities are going to launch installations at multiple airports that include bird detection radar, imaging and bird deterrent technology, which includes yelling at birds and scaring birds.

[0:21:13] JR: Generally, just making loud noises scares them away. There's not all that much you can do to deter birds, but usually, it literally is just make loud noises every now and then and birds get annoyed and leave.

[0:21:27] IP: They are also encouraging recruitment drives for anti-bird airports, so that they can have multiple staff on site at all times at these larger airports.

[0:21:40] JR: Hmm, I see. They should recruit. The birds aren't real, people. A real combination of interests there.

[0:21:48] IP: All the conspiracy theories just coalescing into one. I mean, yeah, good rollout. Hopefully, all goes well and that decreases the incidence of bird strikes in South Korea.

[0:21:59] JR: It's tough, especially at airports, like where the incident happened with on the water. There's only so much you can possibly do. There are many airports where this is a problem and it's pretty much insolvably here in New York, La Guardia and JFK. Both of them are water adjacent, actually. Everywhere, well, not everywhere. most of the area, the landmass, or not landmass, the water area around JFK is literally a nature preserve. So, it's difficult to weigh, how do you deal with the birds, versus this is also waterfront real estate that is also a nature preserve. It is a problem that doesn't really have an answer. But whatever you can do to mitigate it can't really hurt.

[0:22:40] IP: Yeah, I think you're exactly right. There's only so much you can do. However, if you can do anything, then please do. This is an interesting one. Russia's civil aviation regulator is now telling pilots, "You really need to train for worst-case obligation loss and flight control failures, because of all of the GPS jamming and flight control failures that we ourselves are causing."

[0:23:14] JR: Okay. Read the thing. Read what you wrote in the show notes, please.

[0:23:17] IP: No, I'm not reading that.

[0:23:18] JR: Read it, Ian. Read it. Come on.

[0:23:23] IP: I paraphrase the late great Bob Marley.

[0:23:26] JR: It's too good to not read.

[0:23:27] IP: Then you read it.

[0:23:29] JR: No, you wrote it. You brought it up. It's your duty to read what you wrote.

[0:23:34] IP: I do not like being put on the spot this. The subheading of this particular story is, we be jamming and we hope you like jamming, too.

[0:23:41] JR: There it is.

[0:23:41] IP: You're happy now?

[0:23:43] JR: Yes, I am quite happy. Thank you.

[0:23:45] IP: I would just like to talk about the fact that the Russian regulator is warning pilots that, "Well, we are jamming GPS. You need to deal with all of that." Not just GPS, but in Russia's [inaudible 0:23:57] and things like that.

[0:23:59] JR: And it's never going to end.

[0:24:01] IP: Also, you need to be prepared for flight control failures, because we might shoot you down.

[0:24:07] JR: That one's harder to get onboard with. Flight crews should probably be familiar on how to fly and navigate without GPS, literally anywhere in the world with or without GPS jamming or spoofing. You lost me at the part where you say, "You should figure out how to fly when we shoot you twice with missiles and you lose all your hydraulics and flight control surfaces." That one's a little less rational to tell flight crews to figure out on their own, because you shouldn't do that. The part about GPS is legit. Figure it out, learn how to fly without it. You used to do it all the time. There is a time before GPS.

[0:24:45] IP: I think that's just a good and interesting reminder of aviate, navigate, communicate. The second part is where they really lost me.

[0:24:54] JR: Russia forced GPS's commercialization and adoption by the general public into existence. If you don't know how GPS became available to the public, look it up. It has to do with Russians shooting down a Korean aircraft when they were off course. What was it? Over

west of Alaska, over Russian airspace. Decades later, here we are, where Russia itself was saying, “Now, fly again without GPS.” Everything has come full circle. Why not?

[0:25:26] IP: Just the duality of that statement that they've put out is rather, it irks me. Let me put it that way. Let's talk about some more commercial stuff. We're commercial heavy this week, mostly because we haven't really had a chance to talk about the business of aviation for a few weeks. Indigo, which has been expanding, expanding, expanding, expanding, and then ran up against the fact that if you order planes, you have to wait for them to be delivered before you could fly them.

[0:25:53] JR: Also, when you get many of them, they don't work.

[0:25:57] IP: That's true. They said, “No, no, no. We're going to go a different route. Hey, Norse, can we damp lease some 787s?” Norse said, “Okay.”

[0:26:07] JR: I don't like that damp, please. That's not a term we hear very often. Usually, it's a dry or wet lease. Damp lease just sounds weird.

[0:26:15] IP: Damp lease. Jason, should we explain the distinction between damp lease and –

[0:26:18] JR: We should. I think most people are familiar with dry and wet lease. If not, you should school them. But damp lease is, well, it must be a combination of the two, right?

[0:26:28] IP: In terms of leasing and Italian beef, wet lease is the best.

[0:26:33] JR: You went there. Okay.

[0:26:35] IP: I had to. You can take the guy to Chicago, but you can't take Chicago out of the guy. Wet lease is when airline B asks airline A for a plane, pilots, and flight attendants.

[0:26:50] JR: Everything you need to operate an airplane.

[0:26:53] IP: Often called ACMI leasing, ACMI. So, aircraft, crew, maintenance, and insurance. Dry leasing is when you say, “Can we borrow your plane for a while and we'll give you some money?”

[0:27:06] JR: We'll probably give you the plane back.

[0:27:08] IP: Yeah, and we'll give you the plane back. Damp leasing is when you say, can we have the aircraft and some of the crew? Some of the crew usually means pilots. Usually, what will happen on a damp lease is airline B will ask airline A for the aircraft and the pilots and then supply the cabin crew themselves, usually in an effort to provide a consistent cabin experience as much as possible. I mean, the Norse cabin layout is a bit different than, I think, anything Indigo has, but they'll provide as consistent, an Indigo cabin experience as they can with a Norse aircraft and Norse –

[0:27:54] JR: Well, yeah. It's also with 787, which is famously not an aircraft in Indigo's fleet. Presumably, that cabin crew will have to go through training for the 787, which is interesting. It's not like they can just pluck their flight attendants out of an A321 and plopp them in a 787. No. They have to go somewhere to do training. I wonder where. Maybe they'll just go to Norse headquarters. That'd be fun.

[0:28:21] IP: Yeah. That'd be interesting. The other place they could get some 787s though, if they were in the market for use, is Hainan.

[0:28:29] JR: Oh, how do they still even have any 787s?

[0:28:33] IP: They're trying to sell their entire fleet of nine 787-8s that no one wants. These are 10-year-old 787-8s. Nobody's going to want these, but Hainan's trying to sell them.

[0:28:50] JR: There are so many Hainan aircraft operating in every quarter of the globe for airlines that are not Hainan. I have lost track there, especially the – The 787s, actually, they mostly operating right now, but 737s, A350s, they don't operate any A350s anymore. A330s. Hainan had a huge run up in the early 2010s and the bubble burst and a lot of airlines operated

Hainan aircraft that were shed from its fleet to gain some revenue, or stay afloat. Why wouldn't the 787s be one of them? 787-8s, I wonder who has the appetite for those?

[0:29:35] IP: No one. Literally, no one.

[0:29:37] JR: Okay. Well, there's your answer. I don't know.

[0:29:42] IP: We'll see. Depends on what the price is, right?

[0:29:44] JR: Who's desperate enough for 12-year-old Hainan 787-8s? I don't know.

[0:29:51] IP: How about Spirit?

[0:29:54] JR: Spirit, man. I wouldn't call them desperate, but what's old is new again, isn't it?

[0:30:02] IP: Let's talk about Spirit, because they have said no again to Frontier's new offer. They still don't want to merge with Frontier. They still want to exit bankruptcy alone. They said, "No, we're good."

[0:30:19] JR: Okay. If you say so. I don't believe you. Apparently, 99% of their shareholders are in favor of going it alone, coming out of bankruptcy and figuring things out. I personally, my favorite part of this story is last night, the slide deck for Frontier's proposal to buy out Spirit was revealed, or at least this iteration of it. One of the slides titles this entire thing as Project Galaxy. A very dramatic term for Frontier buying Spirit. I don't know what the origin of Project Galaxy is, but I guess, it's good to hype something like that up internally.

[0:30:59] IP: I hope it's a reference to Galaxy Quest.

[0:31:02] JR: I don't know. What we do know is that Spirit said, "Get lost. This isn't enough. We'll figure it out on our own." Frontier's probably saying, "You should have taken our offer a couple years ago, because this one is nowhere near as good."

[0:31:19] IP: Nope. Good luck to Spirit and good luck to Frontier when it inevitably tries again.

[0:31:26] JR: Keep trying. You'll get it eventually.

[0:31:28] IP: Exactly. Nolinor, which is the Canadian operator of, among other things, gravel kit equipped 737-200s is jumping all sorts of generations of aircraft and has, what is that? Secured production slots for what will be a either piloted, or not piloted blended-wing body Nautilus aircraft, that they're calling the Kona. This particular aircraft looks like all of the other blended-wing body concept aircraft that we've ever seen. I'm intrigued that Nolinor is going for this. They're trying to have a prototype. A full-scale prototype within the next two years and begin deliveries in 2028. Nautilus also says that it's developing a 200-passenger blended-wing body platform called Horizon. Good luck.

[0:32:37] JR: No. I don't like any of this. No. Nolinor is supposed to operate the 737-200 for eternity, forever.

[0:32:45] IP: They will. That's mostly why I brought this up. I thought about, this is when I saw the initial announcement is, can you imagine seeing one of these parked next to a 737-200 in Mirabelle, or –

[0:32:58] JR: Well, maybe I do want this now. Maybe my no is becoming a yes, because that would be quite interesting.

[0:33:02] IP: Wouldn't that be so cool?

[0:33:03] JR: As long as Nolinor never gets rid of its now on average 45-year-old 737-200s, that's fine.

[0:33:10] IP: 45 737-200. I mean, it's just a baby.

[0:33:14] JR: It could go on forever. I mean, we talk about this sometimes, but aircraft can live on forever, as long as you keep putting the money into it and maintaining it. Sure. Why not? Why not keep operating 737? I mean, this has got to be one of the earliest frames out there. They have one that is over 50-years-old. It is half a century old, line number 354 737. Let's see

where it is right now. Just out of curiosity. Not only is this thing still operating, it is thriving. Right now, it is in Montreal, having just operated from Edmonton. There's just a 50-year-old 737 bopping around Canada. No big deal. I hope it never ends.

[0:33:59] IP: I actually just learned something today, not about the 737, but about a different aircraft. When they convert DC3s to Basler BT-67s, they rebuild the entire aircraft. That rebuild resets the flight hours clock to zero.

[0:34:21] JR: See, there's a path forward for the 737-200, never, never –

[0:34:25] IP: I mean, the pressurization cycle becomes a bit more of an issue here.

[0:34:30] JR: Then you flight under 10,000 feet, Ian, and you just don't pressurize it. Problem solved forever.

[0:34:36] IP: Perfect. Perfect. Done. What more do you want? Jason, let's switch up the order bit and stick with things that may or may never happen in the future, and talk about Boom's second Supersonic XB-1 flight.

[0:34:51] JR: The last flight.

[0:34:52] IP: The second and last. Yes. The XB-1 demonstrator made 13 total flights, two supersonic flights for a total of six supersonic flight passes and it'll never fly again. I assume it'll end up in a museum somewhere and all that good fun stuff as Boom begins work on its full-size overture passenger carrying supersonic plane thingy. But that's not what I really wanted to talk about. ADS-B and GPS and receivers and all of those things were always learning something new about each and every one of those every day. As something breaks, as something happens, we figure out, oh, that's interesting. That was unexpected. Oh, that is part of what's supposed to happen. But we've never had a condition for it to happen before. We've never dealt with supersonic aircraft before, right?

This is the first time that we had an aircraft being tracked, making sharp turns at 500 miles an hour broadcasting ADS-B, or 500 knots broadcasting ADS-B. What we found out is that the filter

in GPS receivers tends to break, because it says, no, you can't do that. You just can't do that. We can't process that information. But the aircraft continues sending the data. Through tracking the XB-1, we actually developed better MLAT, basically, and better switching between ADS-B and MLAT, so that we could switch as fast as Boom was flying. As part of that, we've been able to start implementing better switching between ADS-B, when coverage drops off, and MLAT when we still retain the ability to calculate MLAT positions.

If you're following a flight that's flying through GPS jamming, or spoofing, or interference of any kind now, the path is going to start looking a lot better when ADS-B drops out and the NIC values fall, which are the basically, how good is my position uncertainty. Am I certain of my position? I'll continue to use the ADS-B. Am I uncertain of my position below a certain level? We'll say, no, ADS-B is no good here. Let's go for MLAT. One of the little edge cases that results in improvement across the service.

[0:37:17] JR: All right. Next, we'll have to start worrying about the limitations of GPS itself. I don't think Boom is going to get to that point, but I believe GPS shuts itself off at the receiver level at 1,200 miles per hour, which I think is something like Mach 2 plus, and has a surface ceiling, I think, of 60,000 feet. If Boom ever eclipses that speed and that ceiling, well, Ian, you're going to have to figure something else out entirely. Or will MLAT just kick in and work from there?

[0:37:45] IP: More MLAT. Yeah. More MLAT.

[0:37:49] JR: Okay. If Boom ever flies 60,000 feet plus and plus Mach 2, we'll deal with that then.

[0:37:54] IP: We'll deal with that. We'll cross that bridge when we get there. Alitalia is dead still, but long live Alitalia.

[0:38:01] JR: It was never dead. It was only lurking around the corner, waiting for its moment to jump out and scare you and go, "Ah, I'm back," and it's back.

[0:38:10] IP: It's back.

[0:38:11] JR: Sorta, kinda. Never left.

[0:38:15] IP: There is now a ITA Airways aircraft with the inspired by Alitalia stenciling on the fuselage.

[0:38:25] JR: I do wonder what the Lufthansa Group, they knew. Was it minority owner has to think about this? Was it just someone at the Alitalia hangar, or see, I'm doing it here. The ITA hangar was like, "Yeah, whatever. We got new owners. Who cares? Just slap it on the plane and see what happens. See if they even notice." This is all sorts of weird.

[0:38:46] IP: If you're looking to track this particular craft, its registration is EIIFA.

[0:38:53] JR: Okay.

[0:38:53] IP: Jason, let's close the show with some good news.

[0:38:57] JR: There's got to be some good news, right? We've had bad news, other bad news, silly news. Give me some good news.

[0:39:05] IP: What do you got for me?

[0:39:07] JR: I got for you that everybody, and I mean everybody's favorite in-flight snack. The Stroopwafel is back at United, in economy, on flights over 300 miles. That's exciting, just because the Stroopwafel is delicious and it's the best in-flight snack. It beats the pants off of Biscoff cookies, which I think are terrible in-flight snack. Come at me. Send your hate mail. I don't care. They're terrible. They're crumbly.

[0:39:32] IP: Oh. Hold on. Wait, wait, wait. Hold on. I don't even have to email. You're on the other side of this microphone from me and I don't even have to – I'm sorry, what?

[0:39:40] JR: They are a terrible in-flight snack. They are delicious, but they are crumbly and they leave crumbs everywhere. They're a terrible in-flight snack, because they have a mess. As delicious as they are –

[0:39:49] IP: I see.

[0:39:49] JR: - they are a terrible in-flight snack. A Stroopwafel is delicious and its structural integrity, even while placed over a cup of coffee, cannot be beat. I didn't think you'd think we were going that route, did you?

[0:40:02] IP: I didn't know we were getting this far. I would have prepared some sort of – I'm not sure what I would have prepared.

[0:40:07] JR: Well, think about it. Next week, you can come back with some points about Biscoff cookies and how they're not a terrible in-flight snack. I don't think you can do it, though.

[0:40:16] IP: I mean, now I just want some cookies and a Stroopwafel.

[0:40:20] JR: I mean, thankfully, I have both Stroopwafels and Biscoff in my cabinet in the kitchen, so I can smash them together and go have a bite of both at the same time right now. It's coping mechanism.

[0:40:31] IP: It's good. Let's end the show with some recipes for deliciousness. If you crush out the Biscoff cookies and put it in vanilla ice cream and then put it between two Stroopwafels, you have the perfect dessert.

[0:40:43] JR: Ooh, yeah, yeah. Okay, I can do that in-flight. That'd be good.

[0:40:47] IP: You could. The flight attendant might think you're nuts, but you do it.

[0:40:50] JR: I mean, there are some flights where all the ingredients necessary are onboard for that. I think if you fly United Polaris on a transcon route, they will have the sundae bar. They will have, if it's a morning flight, Stroopwafel in the back and probably, also some Biscoff cookies. If

you reasonably ask and be nice about it, “Can you make me an ice cream sundae and smash all of the economy treats together and crumbled over the top?” How could they say no?

[0:41:15] IP: Ian said.

[0:41:17] JR: Ian said, you do this.

[0:41:20] IP: Oh, great. Now, I've got in trouble with an entire airline's flight attendants.

[0:41:24] JR: Leslie, if you're listening, we need to make this –

[0:41:27] IP: Let's make it happen. Let's make it happen. All right. On that note, this has been episode 307 of AvTalk. I am Ian Petchenik, here, as always with –

[0:41:40] JR: Jason Rabinowitz. Thanks for listening.

[END]