

All IFALDA Members and Friends

November 2019

From Dave Porter - Special Assistant to the President - Editor and Publisher

This is the Ninth edition of "FLIGHT DISPATCHER'S WORLD" (FDW). FDW is meant to keep our membership and friends of IFALDA up to date on issues affecting flight dispatchers as well as our current efforts in the global Flight Dispatcher and Flight Operations Officer community. Articles are intended to be the basis for professional conversations and to solicit input from our membership.

While I have retired from active IFALDA service, I continue to support IFALDA as the <u>Special Assistant to the President</u> and try to serve and otherwise help when asked to do so. I've returned to editing and publishing FDW, at least for a little while. The IFALDA C&BL indicate that the VP Administration is responsible for this; that said, he has a real day job and a family, so I've volunteered to pitch in to reduce his workload when I can. While the rest of the senior IFALDA Board are elected officials and report to the membership, I am an appointed official and report directly to the IFALDA President and I serve at his pleasure.

ADS-B HERE IT COMES!

By Bernard Gonsalves – Director Global ATM IFALDA with additional material and editing by David Porter – Special Assistant to the President IFALDA



The following is an analysis of the impact of ADS-B. Automatic dependent surveillance—broadcast (ADS-B) is a surveillance technology in which an aircraft determines its position via satellite navigation and broadcasts it, enabling the aircraft to be tracked by ATC for separation purposes. The information can be received by air traffic control ground stations as a replacement for secondary surveillance radar, as no interrogation signal is needed from the ground. It can also be received by other aircraft to provide situational awareness and allow selfseparation. ADS-B is "automatic" in that it requires no pilot or external input. It is "dependent" in that it depends on data from the aircraft's navigation system.



Starting January 1, 2020, aircraft must be equipped with ADS-B Out to fly in most controlled airspace in the U.S. ... and in Europe in July 2020. The mandate requires that all aircraft operating is most airspace in the U.S. and Europe be equipped with ADS-B compliant hardware. This allows the air traffic service provider to be able to provide separation based upon the approved navigation equipment in the airplane rather than ground-based radar. The most precise form of ADS-B is Space-Based ADS-B, using GPS satellites for determining position.

In addition, there are two forms of ADS-B: ADS-B **Out** and ADS-B **In**. ADS-B **Out** means that the aircraft is automatically sending data out every second. ADS-B **In** means that the aircraft is receiving ADS-B data. The mandates in 2020 only deal with ADS-B **Out** so that is what we will discuss here in the article. First, we will look at the U.S. version of the system mandated in January 1, 2020. Then we'll look at the European ADS-B Mandate June 7, 2020.

Benefits:

ADS-B provides benefits to both pilots and air traffic control that improve both the safety and efficiency of flights.

- Traffic When using an ADS-B In system, a pilot can view traffic information about surrounding aircraft if those aircraft are equipped with ADS-B out. This information includes altitude, heading, speed, and distance to aircraft. In addition to receiving position reports from ADS-B out participants, TIS-B [USA-only] can provide position reports on non-ADS-B out-equipped aircraft if suitable ground equipment and ground radar exist. ADS-R re-transmits ADS-B position reports between UAT and 1090 MHz frequency bands.
- Weather Aircraft equipped with universal access transceiver (UAT) ADS-B
 In technology will be able to receive weather reports, and weather radar
 through flight information service-broadcast (FIS-B). [USA-only]
- Flight information Flight information service-broadcast (FIS-B) also transmits readable flight information such as temporary flight restrictions (TFRs) and NOTAMs to aircraft equipped with UAT. [USA-only]
- Expense ADS-B ground stations are significantly cheaper to install and operate compared to primary and secondary radar systems used by ATC for aircraft separation and control.

Unlike some alternative in-flight weather services currently being offered commercially, there will be no subscription fees to use ADS-B services or its various benefits in the US. The aircraft owner will pay for the equipment and installation, while the Federal Aviation Administration (FAA) will pay for administering and broadcasting all the services related to the technology.



Latency:

- The aircraft must transmit its geometric position no later than 2.0 seconds from the time of measurement of the position to the time of transmission.
- Within the 2.0 total latency allocation, a maximum of 0.6 seconds can be uncompensated latency. The aircraft must compensate for any latency above 0.6 seconds up to the maximum 2.0 seconds total by extrapolating the geometric position to the time of message transmission.
- The aircraft must transmit its position and velocity at least once per second while airborne or while moving on the airport surface.
- The aircraft must transmit its position at least once every 5 seconds while stationary on the airport surface.

Call-sign

If you use a temporary unique call sign, remember- call sign and ADS-B transmitter must match. (Attention: supplemental operators under airline contract using the contractor's call-sign)



For aircraft operating above FL180 (18,000 ft.) or to comply with ADS-B mandates <u>outside</u> the United States, you must be equipped with a Mode-S transponder-based ADS-B transmitter. For aircraft operating below 18,000 ft. and within the United States ADS-B rule airspace, you must be equipped with either a Mode-S transponder-based ADS-B transmitter or with UAT equipment. This can be either a 1090ES (DO-260B) ADS-B system or a UAT (DO-282B) ADS-B system.

Bottom line: In the U.S., after January 1, 2020, if you fly above 10,000' or, if you fly below 10,000' anywhere near an airport, you must be ADS-B compliant.

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Any airspace that requires the use of a Transponder today will on January 01, 2020 also require aircraft to be equipped with a Version 2 ADS-B Out system.

If you fly in this airspace you must be equipped with ADS-B

Airspace	Altītude	
Class A	All	
Class B	Generally, from surface to 10,000 feet mean sea level (MSL) including the airspace from portions of Class Bravo that extend beyond the Mode C Veil up to 10,000 feet MSL (e.g. SEA, CLE, PHX)	
Class C	Generally, from surface up to 4,000 feet MSL including the airspace above the horizontal boundary up to 10,000 feet MSL	
Class E	Above 10,000 feet MSL over the 48 states and DC, excluding airspace at and below 2,500 feet AGL	
	Over the Gulf of Mexico at and above 3,000 feet MSL within 12 nautical miles of the coastline of the United States	
Mode C Veil	Airspace within a 30 NM radius of any airport listed in Appendix D, Section 1 of Part 91 (e.g. SEA, CLE, PHX) from the surface up to 10,000 feet MSL	

Details:

- Automatic Dependent Surveillance Broadcast (ADS-B) is binary data being passively transmitted at 1 second intervals from the aircraft without need for interrogation. The data is sent to the Mode S Transponder and transmitted over the aeronautical protected frequency of 1090 MHz The Transponder "squits" the message through an Extended Squitter.
- The older Transponder was manufactured to a RTCA DO-260 Standard. They were not designed with Surveillance services in mind- but early pioneers in Australia and Canada found that the track signal could be used with mitigations. These 1st generation systems transmit a general emergency alert only, regardless of the code selected by the pilot. They are limited by a lower Navigation uncertainty, accuracy and integrity- which must constantly be benchmarked (NIC, NAC, SIL...more on this later). The Airbus 380 and Boeing 787 were built to an upgraded version designed to the DO-260A Standard with augmented alert conditions and discontinued. When the US

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and Europe decided to implement ADS-B Out for busy/dense terminal airspace to replace Radars and also for Airport applications the performance requirements & signal quality had to meet or be better than radar. Hence DO-260B (or version 2) was redesigned by EUROCAE and RTCA and regulatory requirements defined around this new equipment standard.

- This transmission is done 'automatically' through the way the avionics components are confederated to gather individual message elements. It is 'dependent' on data inputs from multiple sources (track vector, speed, altitude, lat/long etc.) to provide the data integrity. And it is used as a surveillance medium by ATC for which the minimum aircraft system performance specifications (MASPS) must be demonstrated to be met through regulatory compliance and state approvals.
- Air Traffic Service Providers also need a ground-based infrastructure to receive the signals and use it to provide surveillance at varying performance levels. For example, NavCanada and Australia introduced 'radar-like' separation services using ADS-B Out about 10 years ago in less dense enroute environments. The lower traffic densities allowed for the legacy DO260 Transponders to be used. The US & Europe had to Mandate much higher aircraft requirements through Regulation because they intend to reduce separations to 3NM in dense & terminal airspace. The ground system is designed around the EUROCAE ED129-B Standard.
- Broadly speaking, these regulatory changes apply to the entire data-chain of surveillance but in the case of airlines:
 - Broadcast the signal using a Mode S 1090 MHz transponder using an extended squitter (or UAT 978 MHz & TSO C154c in the case of US only) certified to Technical Standard Order (TSO) – C166b
 - GPS signal precision as an approved position source and interoperability compatibility with the transmitter and TCAS II systems
 - o Flight Deck annunciation for "ADS-B Out Fail" position data
- In Europe, this mandate has been achieved by European Commission Implementing Regulation EC No 1207/2011 and EC No 1028/2014 (AMDT to 1207/2011). It is effective June 7 2020.
- The US Regulation is described under Federal Register Final Rule Automatic Dependent Surveillance— Broadcast (ADS-B) Out Performance Requirements To Support Air Traffic Control (ATC) Service FAR 91.225/91.227. Advisory Circular AC 20-165B provides the regulatory means of compliance. The Regulation is effective 31 December 2019.

So, to recap, ADS-B Out is the one-way message coming out of the airplane. It can also be picked up by another airplane within a 250nm range picking up this "OUT" message to use it as an "IN" message for the next generation of ATC services: In Trail Management, Interval Management Services and Awareness & Advisory services.

1090 MHz is the broadcast frequency used by the Aircraft Transponders.

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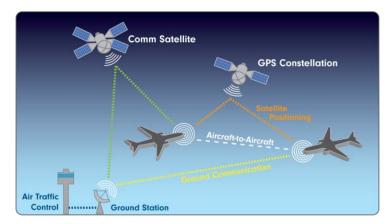
To be good enough to be used as a Surveillance medium, GPS is necessary for signal precision. Some of the older GPS with Selective Availability ON, required external Aircraft Based Augmentation System (ABAS) – for which a RAIM tool is required to ensure GNSS availability as a flight planning exercise.

Following Regulatory approvals, Crew Training and MEL Dispatch requirements being met, the ATC Flight Plan must use the correct Item 10B filings to enable ATC to provide an adequate level of service.

Simply put, ADS-B Out-equipped aircraft automatically broadcast (hence the "B") information once per second to receiving stations on the ground. This transmitted information includes (but is not limited to) a GPS-derived aircraft position, barometric pressure altitude, and aircraft speed and direction. The complete list of information required to be broadcast can be found in 14 CFR 91.227(d).

Through the ground receiving stations and fiber-optic cables, the broadcasted information is routed through the ATC automation systems and a "blip" appears on the controller's display...like a radar target.

But how does ATC know that the aircraft is ADS-B Out-equipped and what kind of installation is on board? This is done by



including the appropriate flight plan filing codes in Item 10 and Item 18 of FAA Form 7233-4.

We will cover the ADS-B Mandate in Europe in the spring issue of FDW.

Other countries

- Canada- currently voluntary equipage. Study ongoing from 2018-2022 to mandate ADS-B in designated airspace
- Australia- all aircraft operating under IFR
- New Zealand- All aircraft operating above FL245 after Dec. 31, 2019
- Mexico- All aircraft above 10,000' effective January 1, 2020
- Hong Kong- all aircraft operating at or above FL290
- Indonesia- all aircraft operating at or above FL290
- Singapore- all aircraft operating at or above FL290 on selected airways
- Sri Lanka- all aircraft operating at or above FL290 in Colombo TMA
- Taiwan- all aircraft operating at or above FL290
- Vietnam- all aircraft operating at or above FL290 on selected airways

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So, the question is: Could you fly from New York to Los Angeles without being equipped with ADS-B after January 1, 2020?

The short answer is – yes...but...you would have to stay below 10,000'...and below 2,500' above ground in mountainous terrain above 10,000'... and not fly within 30nm of the following airports:

Atlanta, GA (Hartsfield-Jackson Atlanta International Airport)	Miami, FL (Miami International Airport)
Baltimore, MD (Baltimore/Washington International Thurgood Marshall Airport)	Minneapolis, MN (Minneapolis-St. Paul International/Wold-Chamberlain Airport)
Boston, MA (General Edward Lawrence Logan International Airport)	Newark, NJ (Newark Liberty International Airport)
Camp Springs, MD (Joint Base Andrews)	New Orleans, LA (Louis Armstrong New Orleans International Airport)
Chantilly, VA (Washington Dulles International Airport)	New York, NY (John F. Kennedy International Airport)
Charlotte, NC (Charlotte/Douglas International Airport)	New York, NY (LaGuardia Airport)
Chicago, IL (Chicago-O'Hare International Airport)	Orlando, FL (Orlando International Airport)
Cleveland, OH (Cleveland-Hopkins International Airport)	Philadelphia, PA (Philadelphia International Airport)
Covington, KY (Cincinnati/Northern Kentucky International Airport)	Phoenix, AZ (Phoenix Sky Harbor International Airport)
Dallas, TX (Dallas/Fort Worth International Airport)	Pittsburgh, PA (Pittsburgh International Airport)
Denver, CO (Denver International Airport)	St. Louis, MO (Lambert-St. Louis International Airport)
Detroit, MI (Detroit Metropolitan Wayne County Airport)	Salt Lake City, UT (Salt Lake City International Airport)
Honolulu, HI (Honolulu International Airport)	San Diego, CA (Miramar Marine Corps Air Station)
Houston, TX (George Bush Intercontinental/Houston Airport)	San Diego, CA (San Diego International Airport)
Houston, TX (William P. Hobby Airport)	San Francisco, CA (San Francisco International Airport)
Kansas City, MO (Kansas City International	Seattle, WA (Seattle-Tacoma International
Airport)	Airport)
Las Vegas, NV (McCarran International Airport)	Tampa, FL (Tampa International Airport)
Los Angeles, CA (Los Angeles International Airport)	Washington, DC (Ronald Reagan Washington National Airport)
Memphis, TN (Memphis International Airport)	

Your route of flight would be somewhat serpentine...and long! Stay tuned with future issues of FDW for more information about ADS-B and other NexGen technologies.

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WHAT IS A FLIGHT DISPATCHER? WHAT IS A FLIGHT OPERATIONS OFFICER? WHAT IS A FLIGHT FOLLLOWER?

We get these questions from time to time...often from people in our own industry. The general answer is that at some level they mean pretty much the same thing; generally, all three titles function as airline flight planners and while the flight is enroute, they provide information to the pilot in command necessary for the safety of the flight. The differences come from the degree of authority, responsibility and complexity of the operation.

To roll back the clock, proto dispatchers began evolving in the late 1920s-early 1930s. Virtually all routes worldwide were air-mail routes controlled by government authorities and the new fledgling airlines carrying mail also carried a few passengers. These airlines only flew very specific named routes (for example "Air Mail Route 6") for the purpose of carrying mail...passengers were "top-off" payload...the money was in the mail contract. These routes were authorized by and contracted with the government authority. These proto dispatchers not only planned the flights; they also provided rudimentary air traffic control, by procedure.



Photo from Pan Am Flight Academy Miami – taken by author.

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WHAT WAS IT LIKE IN THE DAYS BEFORE FLIGHT DISPATCHERS?

(from our friends and colleagues at ADF, used with their permission)

This letter was forwarded to ADF by an unknown source. It appears to be a letter from one airline captain to another recalling an aircraft accident involving a United Air Lines Boeing 247. This operation was conducted in the days preceding the regulations requiring aircraft dispatchers.

We left Chicago at 5:00 PM on May 29, 1934 and I headed for our first stop at Cleveland. We were supposed to go on to Newark but the weather there was lousy and had been all day. Since it was the co-pilot's duty to check the gas before departure (stick the tanks) and thinking we might need all the gas we could get, I filled the tanks - ran them over - to be sure they were full (268 gals).

Night had fallen by the time we left Cleveland. I was at the controls and Johnny, the other pilot, requested clearance to Albany, N.Y. for better train connections for the passengers to New York. I headed for the Cleveland to Albany airway over to my left to follow the (airway) beacon lights to Albany. Johnny went back in the cabin and stayed quite a while taking to the passengers. At a point up the line to Albany, Johnny came up to listen to the weather broadcast. We



were near the north-south airway that crossed our route about 50 miles northwest of Newark.

The weather at Newark on that broadcast was better than planned, 600 - 1/2. Johnny signalled me to head for Newark. When we got down to the Newark range marker, Johnny reported our position over that range. That surprised everyone at air traffic, for at that time we should have been nearing Albany. Johnny took the airplane and as we approached Newark, the weather was down again. Newark had centerline runway lights and I think they were 200 feet apart. Johnny did a good job on each approach. He would let her right down to the ground but on each try was off to the left side of the lights because of the strong winds there that night. I had my head out the side window and could see only one light - dimly - at a time.

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Also, we could not stay down there too long because hangars were close to each side of the runway and at the other end. On each pull-out, the red hazard light on our hangar showed up much too close right off my wing tip. After the fourth attempt, we had to give up and go back up on top. The tops were 1200 ft, clear above with stars and moon out. The Empire State building was sticking out like a sore thumb. It was beautiful up there. We were now on our last tank of gas with 36 gallons left. I had pumped the other two tanks dry. As I remember, those engines used about a gallon a minute, (Boeing 247, NC13334) so we had 36 minutes to do something.

At about the 15-gallon mark Johnny started letting down slowly, hoping to get underneath. He looked for a flat area -apple orchard or corn field- we couldn't be fussy about an airport. I had my head out my side window, looking for breaks or a field or anything, when I noticed what appeared to be ''white caps'' behind the prop on my side! I thought we were out over the Atlantic, running out of gas, and I couldn't swim. I checked the altimeters and they showed 900ft. It then dawned on me that the ''whitecaps'' were the undersides of tree leaves. I horsed back on the wheel and we busted out on top again at 1200 feet. That was a narrow escape - but we had more coming. I then suggested to Johnny that we turn 90 degrees to the coast and maybe we would run off (the edge of) the overcast and find an open field. We headed northwest but as far as we could see it was overcast.

Now we were down to 4-5 gallons. Johnny started letting down slowly again - we didn't how what the hell was under us. Finally, I saw lights below under the clouds. - We were over a town. Johnny took a quick look and told me to kick out a flare. In just seconds the flare landed among a lot of houses. We went ahead for a minute and Johnny asked for the other flare. It wouldn't release. We had hit something that had partially closed the tube the flare slides out through. (We found out later we darned near knocked over a church steeple in this little townwhich was Bethel, Conn.-70 miles northeast of Newark).

By then we were down to 1 or 2 gallons of gas - nothing to do but level off - go straight ahead and get away from this town. Finally, after just a few seconds, the fuel pressure lights came on. I pulled my head back in -''might as well hang on to it as long as possible'', I thought. We said so long to each other - Johnny slowed her down as much as possible and the last thing I remember was seeing tree branches going by the right landing light which was turned on. When I ''came to'' it seemed as quiet as a vacuum. My first thought was, 'This trip is over''.



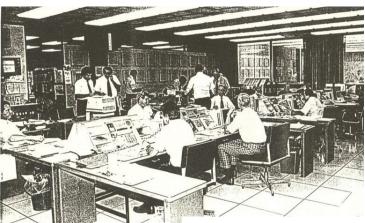
We had crashed 18 minutes after midnight, May 30, 1934. The tail section broke off behind the cabin door. It had whipped around and turned upside down. The end of the stabilizer leaned right up to the cabin door, so the passengers could slide right down it to the ground. We woke up this little town and a lot of people came over to the wreck and hauled the people over to Danbury, Conn. Hospital, 3 or 4 miles away.

That wreck, I think germinated a few ideas - like having an alternate before take-off - reserve fuel - to get there, landing minimums and <u>dispatchers</u> to watch out for us. When landing back then, if I remember correctly, we had no minimums - if you could get in with 0-0 weather conditions-fine, there were no questions. Also, I think that might have been the beginning of thinking about approach lights, etc. I don't believe we had any of those things in '34.

Now, still in 1934, Delta received Air Mail Route 24 (Ft. Worth, Texas to Charleston, South Carolina) from the U.S. Post Office. Only Delta could fly that route and the "dispatcher" cleared the flight at a specific altitude for a specific time period so that he or another "dispatcher" could also clear another company flight going in the opposite direction at a different altitude. When an airline's route crossed another airline's route, each airline dispatcher would have to coordinate with the other airline to avoid crossing conflicts by assigning crossing times and crossing altitudes. This was long before radar came into the picture...in 1952 for approaches and in 1956 for long-range enroute separation.

By 1938, the differing functions of our proto dispatchers were split in two separate professions...aircraft dispatchers who planned and monitored flights and air traffic controllers who provided separation for flights.

Today.....In the Western
Hemisphere the Flight Dispatch
profession has remained
confined to the regulatory
requirements to exercise
operational control; the
Standards by which these
regulations have been
promulgated are in ICAO Annex
6 Part 1 Chapter 3.1.4: to
authorize/initiate flights; to
conduct flights and to terminate
flights; the qualifications are



Delta Dispatch Office (circa1978)

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listed in ICAO Annex 6, Part 1 Chapter 10. In the Western Hemisphere the Flight Dispatcher has significant regulatory authority and responsibility. This system has also been adopted, with local variations, in many Eastern European, Asian, African and Middle Eastern countries. In the U.S. Flight Dispatchers are called "Aircraft Dispatchers" under 14 CFR Part 121.



Southwest Airlines Network Operations Center

In addition both the Flight Dispatcher and the Flight Operations Officer share ATC slot coordination duties working with the U.S. FAA Air Traffic Control System Command Center (ATCSCC) in Herndon, Virginia (near Washington, DC) and EUROCONTROL in Brussels.

In many parts of Europe, however, the term Flight Operations Officer (FOO) has been adopted. FOOs generally function in a manner like Flight Dispatchers except they normally do not have enroute regulatory authority or responsibilities. They generally plan longer range flights (short-range flights in Europe are mostly "canned flight plans" and are pulled from the computer by the flight crew with little or no involvement by the FOO). FOOs brief the flight crews and provide information to the pilot-in-command necessary for the safety of flight, on request by the crew.

Within Europe, in most cases, the sole authority and responsibility lies with the pilot-in-command, with the FOO in an advisory capacity. In addition to many of the above duties of Flight Dispatchers, FOOs are also often tasked with peripheral operational duties including crew and equipment planning and tracking, data base management, long-range flight and fuel analysis and other operational support functions.

Some charter and cargo operators use Flight Following Systems, very similar to Flight Dispatch systems however the Flight Follower's authority is not regulatory; it is as delegated by the airline Director of Operations.

ICAO has adopted the term Flight Operations Officer/Flight Dispatcher as the universal term of reference for what we do. ICAO makes no distinction between the two terms.

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FRALDA President



IFALDA ACTIVITIES AROUND THE WORLD **SUMMER AND AUTUMN 2019** Your Membership Dues at Work

NAT TECHNOLOGY AND INTEROPERABILITY GROUP (NAT TIG)

IFALDA affiliate FRALDA (French Airline Dispatchers Association) attended the ICAO NAT TIG/08 representing IFALDA at the Airbus Facilities in Toulouse, France 07Oct -110ct 2019.

FRALDA President Francois Eraud reports:

Francois Eraud ANSP (Air Navigation Service Providers) concerning:

- Delayed or failed messages during media transitions (VHF/HF/SATCOM)
- Routing policy used for media advisory transmission on each manufacturer
- Repeating failed uplink, uplink timeout function
- PBCS Compliance and Message Latency Monitor function included information awaited at NAT TIG/9 on that subject (ULT project team)
- CSP (comm service provider) and SSP (sat service provider) outage reporting concerning NAT OPS (NODAR Network Outage Detection and Reporting Project Team)
- Data link performance monitoring and analysis
 - Good criteria (95% and 99.9% RSP 180 and RCP 240) met for NAT aggregate and individual FIR with VHF and SAT media but not met with HF
 - It must be noted that some ground station performed badly in BIRD FIR and also some VHF stations in NY FIR

Problem Report discussion:

- Method of analysis has been discussed as well as frequency and how deep should analysis would be done
- Some ANSP reported that it could require too much work
- At NAT TIG/9 will be discussed the opportunity to investigate deeply each aircraft non-compliant
 - Based on feasibility studied by some ANSP during the next 6 months

SLOP (Strategic Lateral Offset Procedures) capabilities:

- Currently 0/1/2NM should go to 0.1NM spacing (horizon 2024)
- Statistical analysis unveils safety benefit and best collision avoidance but aircraft reporting their SLOP could cause an issue and needs to be addressed at NAT TIG/9

Inmarsat on satellite replacement:

- confirmation of Inmarsat that 2 new satellites will be implemented before shutting down old one (13)
- Inmarsat SATVOICE update using SATVOICE instead of HF used as primary voice. Testing pending

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Airbus Automated Formation Flight:

- Very interesting and quite fascinating presentation of Airbus on Formation Flight like migrating birds
- 10% reduction fuel burn (and CO2) at stake due to improved lift
- first test with commercial flight expected in 2021

(Graphics by Airbus)





- NAT Doc 004 (Common Aeradio Communication Interface Control Document) modification alignment of the terminology to use "oceanic exit / entry points" instead of "landfall"
 - CPDLC testing issues with crews could arise if 3rd parties' facilities that perform tests do not strictly follow test rules.
 - NAT TIG/09 will be held from 16 to 20 March 2020 in Paris, France.
 - NAT TIG/10 is planned to be held from 21 to 25 September 2020 in Santa Maria, Portugal.

Airbus Facilities visit:

- New ATM functionality concerning collision avoidance by using FMS data downloaded to ANSP
- Cockpit simulator providing complete CPDLC/ADSC testing (aircraft type A320/A330)
- A350 001 visit with in-situ test of CPDLC function from the cockpit with connection to the real testing airbus facilities used to test aircraft before delivery.



In addition to the meeting, Francois reports....:

- I've personally requested to Airbus organizer to meet with airbus flight dispatchers.
- This has been organized and I've been able to meet test flight dispatchers.
- There are also a separate team of dispatchers dedicated to Beluga ops
- Discussion also with Shanwick staff concerning eastbound in flight reclearance with an ACH that takes in account the new European route. This is confirmed that such an ACH is automated and that sometimes some weird routes are selected.
- In that case it could be a good practice to contact by phone Shanwick to amend the ACH in order to have better route for computing a new inflight flight plan





NAT TIG/08 Toulouse FRALDA President and IFALDA Representative Francois Eraud 5th from the left back row

Recommendations to IFALDA and Dispatchers:

- Be careful at filling flight plan regarding CPDLC and PBCS compliance (RSP180 and RCP240) required in ATC Flight Plan especially with MEL.
- Dispatchers should be aware of PBCS compliance of his aircraft including under MEL.
- Dispatchers will see the disappearance of OCA entry point or LANDFALL terminologies in some messages replaced by new terminology such as oceanic entry point and oceanic exit point.
- Dispatchers should know that if an aircraft is confronted with TS area on OTS, avoiding such an
 area could become a safety issue due to proximity of other aircraft on tracks or to their wake
 turbulence.
- IFALDA should attend NAT TIG/9 and /10 (see previous bullets)

Best regards
Francois Eraud
President FRALDA

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From APADA (IFALDA-South America) From Marcelo Sana, Secretary to APADA and IFALDA's Director – South America

Summary of APADA activities from May 2019 to November 2019

Preliminary:

From May 2019 to November 2019, Argentina suffered a considerable economic and monetary devaluation, with an estimated 55% inflation rate for the entire year of 2019. The Dollar is trading at ARS\$ 65 to the U.S. Dollar, when during the IFALDAS AGM in Buenos Aries in 2017 ARS\$ 19 to the U.S. Dollar, which forced us to suspend some trips due to its cost. Argentina will have a new President that will assume office December 10, with the consequent changes that will come in different authorities and also changes in National Commercial Air Policy.

Activities:

- -Confirmation of the purchase of our Buenos Aires's Office at the downtown, location maintaining the original price, so as not to suffer inflation effects. It was a considerable effort for our Association.
 - Realization in August of our Annual Associates Assembly to design APADA's
 policies for next year in which there will be change of Authorities, and
 possible relationships with the Authorities of the new National Government.
 - Cancellation of assistance to the VII Congress of the RIDITA (Ibero-American Air Transport Network), which was held in October at the Beira University in Covilha Portugal, being that APADA is co-founder of the Network, due to the increase in costs.
 - Assistance of our previous President, Mr. Ricardo Gonzalez, APADA's Board member, to the APLA Security Seminar, (Airline Pilots Association), in Buenos Aires, on behalf of IFALDA / APADA, where most of its members they have been serviced by us along the years, in the Dispatch of their flights, while we serve in Aerolíneas Argentinas.
 - Preparation for our next Congress, on Professional Practice in Aviation and Airports Operations, to be held at the UPE, (Ezeiza Provincial University, close to the Airport), where our current President, Mr. Gustavo D'antiochia, will present on behalf of IFALDA / APADA, sharing the meeting with other Aeronautical Associations. With what we hope this complicated year be finished.

Marcelo Sana APADA

Marcelo Sana - IFALDA Director – South America and APADA Secretary



Next UPE meeting, (Ezeiza Provincial University), where our current APADA

President, Mr Gustavo D'antiochia, will be one of the speakers, on 29th November 2019.

Marcelo will also attend this meeting, a great effort of the UPE and APADA working together!

(Below) Captain Willy Masnata, A330 Captain (left), and Mr Ricardo Gonzalez (right), previous APADA President, along ALPA's safety meeting, (Airline Pilots Association), and meeting announcement – right, center.









(left) APADA Leaders...from the left:

Mr. Esposito- APADA Treasurer

Mr. D'antoni- APADA NW Rep.

Mr. Giacomelli- APADA Patagonia Rep.

Mr. D'antiochia- APADA President

Mr. Sana- APADA Secretary

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From the EURNAT VOLCEX19 Working Group Paris Sept. 6-7, 2019

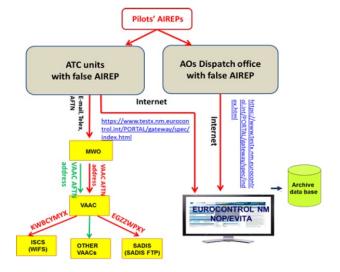


Sevda Tantan - IFALDA VP East-center, front row Dave Porter - IFALDA Special Assistant to the President- big & tall guy in back row

IFALDA's VP-East Sevda Tantan, assisted by IFALDA Special Assistant to the President Dave Porter, attended and participated in the ICAO-Paris EURNAT Volcanic Exercise Workshop (VOLCEX19). The purpose of the workshop was to

finalize a tabletop exercise to be held November 20, 2019 that will simulate an eruption of Mt. Vesuvius near Naples.

Simulated flight plans will be generated by various airline operator (AO) dispatch offices in Europe. The various ANSPs (Air Navigation Service Providers) and State Met offices will collaborate with the airline dispatch offices in order to plan flights that could continue to operate around ash clouds depending on the actual



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winds-aloft that day and the height of the ash cloud.

Since most Western European airspace is normally highly regulated and controlled, depending on city-pairs and direction of flight, some adjustment of these ATC constraints will have to be made.

Exercise participants who will deal with AIREP are: AOs dispatch offices and pilots, ANSPs, EUROCONTROL NM, VAAC, ICAO, MWO etc. It was agreed that the airline dispatch offices in addition to them uploading onto the NOP (Network Operations Portal) will send their fictitious Special AIREPs by email to VAAC Toulouse.



Mt. Vesuvius

A debriefing will be held near Rome January 16 and 17. IFALDA has been invited and plans to attend.



NAT Operations Forum London Oct. 29-30, 2019

IFALDA VP-West Sergey Vakrushev and Special Assistant to the President Dave Porter

Sergey and I were invited to attend and participate in the NAT Operations Forum held in London October 29-30. The forum, hosted by NATS (UK) and NavCanada, was a gathering of all North Atlantic stakeholders to review and discuss technological and procedural changes and evolutions in the NAT. In addition to NATS and NavCanada, representatives from other NAT ANSPs (Air Navigation Service Providers) such as ISAVIA (Iceland CAA), NAV Portugal, U.S. FAA (NY Oceanic) and the IAA (Irish Aviation Authority) made presentations. Numerous air carriers as well as IATA also participated including representatives from several dispatch offices including Delta, Air Canada, Israel and France.



Although difficult to see clearly, Dave Porter is in the very back row, center directly under the white chandelier while Sergey in in the middle row about 5th from the right

Topics discussed during the two-day Forum:

- Review of action items from previous forum
- NAT ANSP Updates
 - FAA: Provided an update on the FAA's ATOP refresh platform, traffic, CDM messaging, CPDLC rejected logons and extended an invitation to the NY OWG which is being held in Manhattan during the last week of January 2020.
 - o IAA: Aireon ALERT which was launched in July 2019; H24 from Ballygreen HF Station already implemented; ASEPS procedures in place.

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- ISAVIA New initiatives include GNSS separation implemented in BIRD FIR below FL285; flight planning rules changes for aircraft flying to/from Reykjavik and Keflavik;
- o NAV Portugal Provided an update on the traffic demand, showing a decrease of 1% to Europe, showing a tool they are now using to depict traffic in a space-based environment. noted that with the introduction of PBCS, they have been able to accept more flights on the vertical profile, showing a higher number of traffic on the TANGO routes to/from Shanwick and they have been able to answer 85% of requested cruise climbs this year.
- NavCanada Provided the update for NAV CANADA which indicated a steady growth since 2014 and a slight decline in July. Equipage rates increased the use of PBCS, ADS-B, FANS 1/A and SATCOM. Current initiatives included: SB ADS-B implemented in Gander Domestic, OCA, Edmonton FIR and now Moncton FIR. OWAFS (Operations Without an Assigned Fixed Speed) was automated between Gander and Shanwick.
- NATS Current initiatives included: the integration of ADS-B and the ASEPS longitudinal trial, both occurring on the evening of 28 March 2019; OWAFS implemented on 15 April 2019; ASEPS trial expanded to include lateral separation in October 2019.
- Developing the Nat Vision
 - o The discussion outlined the high-level principles, goals and objectives of the NAT Vision 2030 workshop that occurred earlier this year January 2019 EURNAT Paris...IFALDA participated). He noted that the group is on the right path but ANSPs and air operators have a significant amount of work to do to continue of this path set by the group. The NAT IMG will start on the work outlined in the following week and it is up to the NAT SPG to feed that work plan. Each panel member outlined their main goal out of Vision 2030, indicating that while safety is the number one priority, user preferred routes (UPRs), collaboration and technology improvement are key objectives. The FAA announced they have begun testing SB ADS-B on their ERAN System and are looking at implementing in Bermuda and NY OCA airspace.
- Avoiding CFIT at Shannon Airport
 - Explained the difference between CFIT (Controlled Flight Into Terrain) and a level bust, indicating that it is the level bust that frequently occurs on approach at Shannon while there have been no instances of CFIT. This was followed by some data analysis on what type of aircraft and which operations are more likely to be involved and what measures the ANSP is taking to correct the issues.
- NAT Ops Bulletins
 - Explained what NAT Doc 007 is and that NAT Ops Bulletins are mainly produced by the NAT POG and NAT TIG to provide relevant information to operators on current or upcoming NAT Implementations, listing 8 current publications effective for 2019 operations. Each panel member

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then described the importance of some of these bulletins to NAT Operations, including the following:

- NAT OPS Bulletin 2017_001 Rev 4, NAT Common DLM AIC, notifying the commencement of Phase 2C on 30 January 2020
- Bulletin 2018_003 Waypoint insertion / verification;
- Bulletin 2018_005 Rev 1 Special Procedures for In-Flight Contingencies in Oceanic Airspace;
- Bulletin 2018_004 Implementation of PBCS;
- Bulletin2019_002 Trial Implementation of ASEPS (Lateral) using ADS-B
- Oceanic Gateway Partnership

This presentation was more an announcement of a new partnership between NATS and IAA to combine their operations into one, using common procedures, technology, training and services among the two centers; and there will be no competition or hard borders between the regions. It has been agreed upon, in principle, by the IAA and NATS CEOs and is still in the concept phase.

Data Analytics

The data showed that overall, service has improved and there are more flights being cleared for the requested flight level, speed and oceanic entry point (OEP). The metrics were based on number of flights transiting the North Atlantic, and also based on common city pairs. It was noted that the success rate was higher for half degree tracks than whole degree tracks because there were significantly fewer flights on the half degree tracks. Air operators confirmed that they have not been planning half degree tracks mainly because their flight planning systems are legacy systems and the default is whole degree tracks, but they will soon have upgrades that will allow for half degree tracks which should even out the performance results.

• Flight and Flow Information for A Collaborative Environment (FF-ICE) Outlines the ICAO instruments used in advancing FF-ICE and TBO (trajectory-based operations) including documents such as the GATMOC (Global ATM Operations Concept), GANP (Global Air Navigation Plan), initiatives such as the ASBUS (Aviation System Block Upgrades) and ICAO panels such as the ATMRPP (ATM Requirements and Performance Panel). He continued to outline key attributes of TBO and why FF-ICE is being developed as the next flight planning system. Anthony noted that provisions for phase one (FF-ICE/1) is being delivered to the Air Navigation Commission in Q1 2020, followed by state letter towards the end of 2020. The target for implementation is with ASBU Block 2 (initiatives available for implementation from 2025 onwards). There is no mandate for FF-ICE, which means FP2012 will continue to be available in parallel; however, since the full benefits of FF-ICE won't be realized without transition to a full FF-ICE

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environment, there will be a "sunset" date determined for legacy flight plan systems eventually.

- NAT OTS Development Focus Group (NODFG)
 - The outcomes of this meeting were an agreement that data is the best way to determine efficiencies and taking advantage of airlines' investment in new technology in paramount. They discussed the possibility of removing lower tracks or shortening them on either end to improve efficiency.
- Formidable Shield 21 (FS21)
 - Presented an initiative by NATO in collaboration with affected service providers to ensure appropriate communication, notification and management of traffic during the exercise. He began by explaining what it is and how they train their recruits to combat a threat. Noting that sometimes the problems associated with this type of exercise is that people don't understand why they can't fly and what is happening, his job is the "middle man"; to explain these things and coordinate the appropriate means of notification with airspace, space, and marine stakeholders. The exercise is currently planned to occur in late May 2021 and into the first week of June 2021 (three-week event), sometime after 1300UTC so as not to affect the westbound traffic flow. The dates will be formalized in the next 6 months. The main event will affect the NAT with the final coordinates for NOTAM areas fixed by mid-October 2020. Jeff noted the ANPs separation criteria is required to apply the boundaries, including a buffer zone for debris.
- Data Link Performance/PBCS
 - Described what the NAT Groups are doing to make this work for the aviation industry, outlining the various different groups and what they are working on. This included the following:
 - NAT POG –operational procedures and the impact of data link outages on ATC operations; NAT Ops Bulletin 2017_004 FANS Data Link Special Emphasis
 - NAT TIG –performance monitoring (RCP240 and RSP180);
 CPDLC, ADS-C transaction times including Pilot Operational Response Time (PORT) and technical problems (aircraft, ATS system, network) that may affect data link operations.
 - NAT NODAR PT (Network outage detection and reporting project team) –working with CSPs and SSPs on availability and outage reporting issues; working together to find a common terminology
 - NAT SG –investigates all operational occurrences in the NAT
 - NAT PBCS NPRH PT (non-performance reporting harmonization project team) –establish the criteria for determining that a PBCS approved aircraft is not meeting RCP240 and/or RSP180

FLIGHT DISPATCHER'S WORLD -9TH EDITION

requirements and what process should be followed for reporting such aircraft.

Decision making groups: NAT IMG, NAT SOG, NAT SPG

OWAFS/OCR

The discussion began by relating to the NAT OPS Bulletin 2019_001 OWAFS (Operations without an Assigned Fixed Speed) in the NAT. Describing what cost index is to an air operator and how important it is to flight plan and manage fuel based on the cost index (also referred to as ECON speed). He noted the 2012 ENGAGE trials and the trials conducted by Delta Airlines in 2017 showed good results from the FMS data. There is now a CONOPS within Annex 2 on how to fly variable speed and indicates that it is to be offered to all aircraft regardless of equipage, surveillance and to be offered whenever feasible. There will also be a new NAT OPS Bulletin released in July regarding these procedures. NATS pointed out that they are waiting for the AIC to be released before they can implement. ISAVIA noted there is no change to flight planning requirements.

• Southeast Corner Update (SE Corner of Shannon FIR)

Began the discussion describing the NAT Region Data Link Mandate (DLM) transitions to Phase 2C on 30 January 2020, which will affect FL290-410. There will be exemption provisions on the TANGO routes, describing the current TANGO route and what the changes will look like. Surveillance will be provided by SB ADS-B now that there is coverage in the Shanwick FIR. There will be a new frequency to monitor (128.360) which will be used as an intervention frequency; normal operations and communications will continue on HF. There is a UK AIC issued (y003/2019) to support the introductions of the new frequency.

SATVOICE

Explained to the forum why SATVOICE is being considered as a potential communication technology, noting that not a lot of work has progressed and there is a lot left to learn. Canada implemented a new technology, allowing for better quality and opening up interest in the capabilities, especially from other states such as Singapore. A communications panel (CP) project team was formed to determine equipment requirements, provide implementation strategies, support and training materials and develop RCP specifications to support advanced ATM Technology, if necessary. SASP requested this be considered for the collision risk modelling and possibly the subsequent development in separation standards. Outlined the objective of the project team and high level tasks, asking for operators to volunteer to help in the collection of data and understanding how it looks and works in the flight deck.

Closing Remarks



From the NAT POG/08

NORTH ATLANTIC PROCEDURES AND OPERATIONS GROUP
Sept. 16-20, 2019 Brest, France



IFALDA VP - West Sergey Vakrushev, 4th from the left IFALDA Director - Global ATM Bernard Gonsalves, 5th from left behind Sergey.

IFALDA was invited to attend and participate in the 8th meeting of the North Atlantic Procedures and Operations Group. Representing IFALDA were IFALDA VP-West Sergey Vakrushev and IFALDA Director – Global ATM Bernard Gonsalves.

The meeting was chaired by Mr. Luis Tojais from Portugal and Mr. Sven Halle from the European and North Atlantic (EUR/NAT) Office of ICAO was the Secretary. The meeting also welcomed the new participants from the International Federation of Airline Dispatchers Associations (IFALDA) and EUROCONTROL.

The Secretary noted that 18 working papers and 18 information papers had been prepared and submitted for consideration. The Secretary expressed the Secretariat's appreciation for the efforts made by all the members to meet the publication deadlines, which are two weeks for working papers and one week for information papers. The Secretary also invited IFALDA to prepare a Working Paper

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(that was initially submitted as an IP on the first day of the POG/08) to the next meeting.

The Group was presented with a joint working paper from the United Kingdom and Canada that proposed a change to the NAT OPS Bulletin 2018-003 advising airspace users that clearances containing a re-route issued by Shanwick and Gander Oceanic Area Control Centers (OACCs) via Voice or OCL may include half-degree waypoints.

The introduction of half-degree waypoints has been carefully managed as, notwithstanding that the operational concept remains unchanged, it was foreseen that there was potential for navigational errors to be made that relate to human factors surrounding the naming conventions and other processes associated with these positions. Furthermore, it was recognized that in a half-degree environment, deviation from cleared track must be identified to air traffic controllers quickly so that any necessary remedial action can be taken in enough time to allow effective intervention.

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OLD BUSINESS

Status: ICAO Flight Operations Officer/Flight Dispatcher Training Manual Competency Based Training and Assessment (CBTA)

The CBTA IFALDA project, headed by Joern Sellhorn Timm of Germany, is still in progress. It is not "instructional" to the same extent as the current ICAO Doc 7192 D-3 manual. It is, in accordance with current ICAO doctrine, "Competency-Based-Training (CBT)" in that it lays out a framework for the course syllabus and what/how learning objectives are achieved with measurable metrics. It is aligned with the newer editions of the ICAO pilot, mechanic, cabin safety and air traffic controller CBT manuals.





IFALDA Winter Board Meeting Atlanta January 10-12 Atlanta Airport Hilton Garden Inn

Address: 3437 Bobby Brown Pkwy, Atlanta, GA 30344

Phone: (404) 477-6600

(Note – there are two Hilton Garden Inn properties around the ATL airport. This one is on the north side of the airport near the Delta General Offices.)

The IFALDA Winter Board meeting is strictly a business meeting; there are no social activities planned. The agenda includes but is not necessarily limited to discussion and approval of current and pending technical projects, personnel issues, funding status and finalizing plans for the AGM. The agenda will be published on the website shortly before the meeting. The meeting is open to all IFALDA members in good standing as observers. If there is an issue or concern a member would like to put forth to the Board at the Winter Board meeting, please send an email with particulars to the IFALDA VP-Administration Richard Yeates (ryeates@ifalda.org)

IFALDA/EUFALDA Annual General Meeting 2020 Toronto, Canada (YYZ) Date: May 5-7, 2020

The Four Points by Sheraton

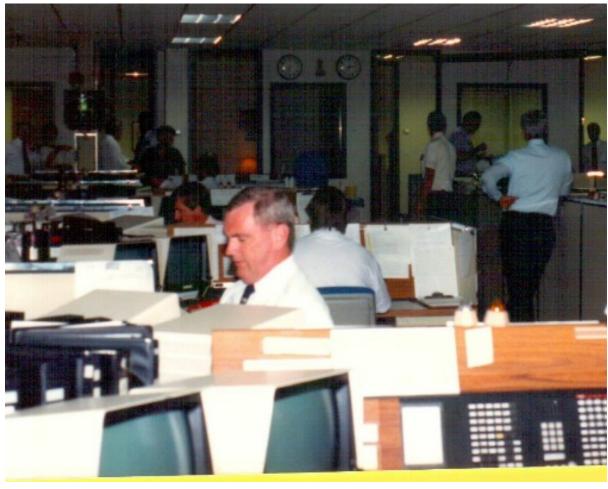
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Members \$100 USD or \$125 CDN Spouse \$60 USD or \$75 CDN Paid in <u>cash</u> during Reception





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