

Meeting Report

UNITED



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Figure 1 - NAMEUR members travelled a combined 157,000 miles to attend NAMEUR 31

NAMEUR 31 List of Attendees

Attendee	Company	Title
Sami Abou-Farhat	NAV CANADA	ATS International Coordination
Cirilo Araujo	NAV Portugal	Head of Santa Mario Air Traffic Services
Chris Blandford	NAV CANADA	Manager of Procedures – Gander FIR
Jean-Michel Bonnet	DSNA	Head of Brest ACC Ops Division
Michael Borland	NATS	Planning Manager, UK FMP
Louise Brennan	Aer Lingus	Flight Dispatch, ATS Manager
Sebastien Brindel	DSNA	LFRR FMP Manager
Greg Byus	FAA	Manager, CDM/International Operations
Gregory Calabrese	Atlas Air	Senior Manager – Dispatch
Brian Campbell	SWISS International Airlines	Senior Manager – Bispatch Senior Manager – Head of Dispatch NY
Williams Cobb	USAF	Chief, Flight Plans
Emma Corrigan	UK Met Office	NATS Operations Manager
Anthony Coult	Jeppesen	Functional Analyst
Nigel Cummins	United Airlines	Manager, Dispatch Operations
Adam Davis	UPS Airlines	Flight Control Manager
Mark Deacon	IAG	Category Lead - Airspace Regulation
Jeffrey DeVore	United Airlines	Network Operations Manager/Chief Flight Dispatcher
Gavin Dixon	NATS	Operations Supervisor (Prestwick and Shanwick)
	-	Flight Ops Technical Officer
John Declan Doherty	Aer Lingus	
Declan Downey	Irish Aviation Authority	Manager Operational Coordination Supervisor Flight Control - International
Gary Edwards	Delta	
Don Elson	USAF AMC	CMD Flight Manager
Travis Fiebelkorn	FAA	Sr International Representative
Fergus Flanagan	United Airlines	Sr. Manager international
Christopher Galli	Sabre Airline Solutions	Senior Solutions Manager
Jon Gunnlaugsson	Isavia	Senior ANS Expert
Theo Hendriks	MAASTRICHT UAC	CAPACITY PROGRAMMES MANAGER
Geoff Hillan	NATS	Head of Operational Performance
Mark Hurston	United Airlines	Regional Manager, Int'l ATC Operations
Kim John	Jeppesen	Test Engineer Flight Planning and Dispatch
Tristan Jones	AirTanker	Flight Planning Manager
Greg Knapp	American airlines	777/787 Fleet Captain
Peter Lay	Fliteplan International	Director
William Leber	PASSUR Aerospace Inc.	SVP
Aaron Levenson	Air Canada	Manager, Flight Dispatch Standards and Training
Jerry Linscott	AMC	Data Base Management
Justin Lonie	FedEx Express	GOC Specialist
Robert (Mike) McNease	Air Mobility Command USAF	Flight Manager Supervisor
Jim McVeigh	FEDEX	Manager, Air Traffic Flow and Airspace Assessment
Tobin Miller	American Airlines	Manager - International ATC & Airfield Operations
Mark Morton	NATS	Airline Customer Account Manager
David Noble	American Airlines	Dispatch Training Instructor, Euro Division
Paulo Raposo	NAV Portugal	ATC Supervisor
Edward Rosado	BAE Systems	Senior Principal Systems Engineer
Peggy Schorsch	United Airlines	Manager Line Operations, Flight Operations
Alexander Smith	British Airways	Regional Manager - Navigation & ATM
John Smylie	Maastricht UAC	Flow Controller / Tactical Capacity Manager
Katica Trenevska	EUROCONTROL	Deputy Operations Manager
Jeeja Vengal	FAA	Traffic Management Officer
Rene Vierke	Lufthansa Systems	Director Product Consulting Lido/Flight
Robert Wagner	American Airlines	Program Manager, Dispatch Support
Thomas Weber	Swiss	Head of Flight Dispatch

Sean Williams	NAV CANADA	Manager ATC Operational Requirements - Moncton FIR
Andy Woolin	EUROCONTROL	Network Operations Domain Manager
Mark Yezovich	WestJet	Chief Duty Dispatcher

NAMEUR 31 Agenda

DAY 1	ONWARDS & UPWARDS
0900	United Airlines Welcomes the NAMEUR Task Force to Chicago United Airlines Team & NAMEUR Chairs Welcome, overview and dinner discussion
	Introductions and Group Objectives – "A Commitment to Change" Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Group expectations and an opportunity for participants to raise any other issues for consideration during the meeting
	Then & Now A look back on NAMEUR Peter Lay, Director, FlitePlan International The problems that launched NAMEUR and have they been resolved
	NAMEUR – The Future Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs A discussion on NAMEUR going forward and what YOU want it to be
	'The Wall of Thought'/ Prioritisation Round-up of any issues the Group would like to be addressed directly by the ANSPs, FPL Service Providers & AOs/IATA (Post-it note exercise) "With our thoughts we make the World"- Buddha
	Action Item (AI) List Update Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Update of outstanding Action Items including prioritisation of key issues over the next 3 days
1030-1045	Coffee Break
	NATS Shanwick Update
	Gavin Dixon, Ocean Service Manager/Relief Ops Supervisor, NATS Update from Shanwick and the Summer ahead

	PBCS – Performance Based Communications & Surveillance – A Discussion Gavin Dixon, Ocean Service Manager/Relief Ops Supervisor, NATS
	Chris Blandford, Shift Manager, Gander ACC, Nav Canada
	A discussion on PBCS, its implementation and learnings to be shared amongst stakeholders
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	Gander – An Update
	Chris Blandford, Shift Manager, Gander ACC, Nav Canada
	Gander Stats, PBCS, Changes without Clearances
1200 1400	
1300-1400	Lunch
	Rerouting of Eastbound Flights – Status Update
	Andy Woolin – Network Operations Domain Manager Update to last meetings presentation re-routing Eastbound Flights
	NAT NOP Portlet - LIVE
	Katica Trenevska, Deputy Operations Manager, Eurocontrol
	Introduction of the NAT Portlet on the Eurocontrol NOP
	Santa Maria FIR: An Update
	Paulo Raposo, Supervisor, Nav Portugal
	An ANSP Update
1530-1545	Coffee Break
	Open Session
	Open session for discussion of additional issues, areas of interests and ad-hoc presentations
1645 4700	Povinus of Day 1
1645-1700	Review of Day 1 Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs
	Review the capture of Action Items from Day 1 & set the scene for Day 2

DAY 2	WORKING THE ISSUES
0830-0915	Tour of United Airlines Network Operations Centre
0915	Group Objectives for Day 2 Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Setting the scene for Day 2
	PRM & CPR Futures – What can be done Alexander Smith, British Airways, NAMEUR Co-Chairs Setting the scene for Day 2
	Space-Based ADS-B in Gander OCA Sami Abou-Farhat, ATS International Coordination, Nav Canada
	Space-based ADS-B planning for Gander OCA & live demo of NAT Traffic
1030	Coffee Break
	NARS Discussion
	Fergus Flanagan, United Airlines Discussion on NAR improvements
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	FAA Update
	Greg Byus, Manager CDM & international Operations, FAA
	An update from FAA CDM
1200-1300	Lunch
	NMOC Update
	Katica Trenevska, Deputy Operations Manager, Eurocontrol
	An update from Network Manager Operations Control
	Maastricht UAC 2018
	John Smylie & Theo Hendrik, Maastricht UAC,
	Update on 2018 operations & customer-oriented services upgrade

1500	Coffee Break
1615-1630	Review of Day 2 Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Review the capture of Action Items from Day 2 & set the scene for Day 3
1900 onwards	NAMEUR Dinner Event – Self Funded. See Survival Guide for Details.

DAY 3	WORKING THE ISSUES and REVIEWING THE OUTPUT
0900-0945	NATS Monthly Outlook Telecon – Airlines Only Mark Morton, Airline Customer Account Manager, NATS
	Setting the scene for Day 3
0945	Group Objectives for Day 3 Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Setting the scene for Day 3
	Westbound NAT Enhanced CDM Planning Trial Mike Borland, Planning Manager UK FMP, NATS Introduction of CDM Planning Trial for Westbound NAT Ops
	UK MET Office (UKMO) at NATS
	Emma Corrigan, NATS Operations Manager, UK MET Office
1100	An update UKMO working within NATS Swanwick (London ATC) and the future input on NAT Tracks & WAFS Coffee Break
	ISAVIA – Iceland ANSP Update Jon Gunnlaugsson & Arni Gudbrandsson, ISAVIA An ANSP Update
	Open Session & Wiggle-Room Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Open session for discussion of additional issues, meeting review and way forward to the Spring 2018 meeting. Expect this section to be filled with "overspill" from Days 1 and 2, so we're not home and dry just yet!

	Action Item Review & Allocation Alexander Smith, British Airways & Sean Williams, Nav Canada, NAMEUR Co-Chairs Review of Actions and allocation of items from the past 3 days (this is important to ensure that we get the work done)
1300 (flexible finish)	United Airlines - Closing Remarks Closing remarks from our hosts and sponsors
1300- Onwards	Tour of United Airlines Network Operations Centre

Day 1 Discussion

Tuesday April 24, 2018

The conference was opened by co-chairs Alexander Smith and Sean Williams. A total of 55 delegates attended the meeting on the 10th floor of Willis Tower, Chicago.

Opening remarks were made by Susan Pfingstler, MD ATC Strategy and Meteorology and Capt. Howard Attarian, Senior VP Flight Ops who welcomed the group to United Airlines' Headquarters.

Peter Lay began the discussion with a history of NAMEUR, as he was one of the cofounders of the conference in 2003. His discussion centered on the accomplishments of the meeting and what if anything has changed since the original meeting in Iceland. He gave a briefing on some of the items that were discussed in those first meetings and it was evident of the progress. However, some of the topics are still being discussed today – such as PRMs and CPRs, the NAV CANADA TDA page, the requirement of a 30W SELCAL check - despite the data link mandate. All in all, it was a good segue to the next topic, which was the future of the NAMEUR group.

The chairs pointed out the lack of discussion topics that were presented and wanted to discuss the impact. The chairs felt that a meeting with ANSP updates was not the best use of time and resources and wanted input from the group — was the lack of topics a result of everyone being happy with the domestic to NAT operations? Was this just a period of complacency? The group was unanimous in their support of NAMEUR as a body that gets the operational level people in the room to discuss issues of all types and that the lack of topics presented did not reflect a lack of interest. In fact, many of the topics were in fact generated at the meeting as discussions began, not beforehand. Chris Blandford of NAV CANADA Gander noted a recent situation where 175 flights routed north of the OTS, prompting a call from a dispatcher about the number of reroutes. Having contacts from NAMEUR enabled him to get in touch with the right person to explain the issue. The benefit of this type of interaction, as the group pointed out, could not

be understated. The chairs agreed that the meetings were hugely beneficial and further work will be done on securing agenda items prior to the meetings.

The Action Item list from NAMEUR 30 was reviewed and those responsible gave updates to the group. A new Action Item list is being created by the Chairs to make the collection easier to update.

Gavin Dixon of NATS and Chris Blandford of NAV CANADA co-presented on their respective units, as well as a piece on the recently instituted PBCS. With regards to GoFli, both confirmed that their units only probe for 2000' separation. They explained that an offer of FL350 to a flight currently at FL330 should not be taken as an indication that FL340 is available. With respect to pilot requests, they both indicated that controllers should be offering options if the requested level is not available. A simple "unable higher" was not acceptable as controllers should be trying to accommodate requests. Chris asked the airlines if they would file their optimum route, even if it meant cutting the tracks to which the answer was 'No'. Gary Edwards of Delta commented that there appears to be so much traffic routing one degree north of the OTS that they intentionally route two degrees north to have a better chance of getting what they file.

The discussion then turned to the problems with the current Flight Level Allocation Scheme (FLAS). All felt that the time has come to incorporate FL420 as a useable level. Sami Abou-Farhat of NAV CANADA commented that this very item has been discussed at the ICAO level, and the expectation is that FL420 will become available.

Mark Hurston, United Airlines, asked Gavin and Chris what they felt was the "tipping point" in relation to traffic increases versus controller staffing. Gavin commented that the technology in use today has allowed them to be far more efficient with a smaller number of controllers that in the past. He said that the current staffing in Prestwick is sufficient for the upcoming summer. With respect to Gander, Chris also echoed Gavin's comments about the Gander Ocean sector – staffing is sufficient. However, the Gander domestic sector is experiencing staffing issues. He relayed to the group that they (QX) do have contingency plans in place for staffing shortages, but they are currently not expecting to implement them.

Gavin and Chris, with respect to staffing of units, both felt it would be helpful for operators to share their plans for the upcoming years so that the facilities could better determine staffing requirements. As this was an open meeting, all operators felt that it was not the place to discuss business decisions with their competitors in the room. However, they felt if the information could remain private, they may be interested in sharing. The operators did ask, in return for sharing of information with ANSP's, a reciprocal information share regarding the capacity of the facilities to accommodate traffic. Chris indicated the capacity of Gander Center, as in most units, is higher than the current throughput and is based on the number of flights the controllers can handle safely, but he would investigate sharing the information if and when it becomes required.

On the topic of PBCS, Chris and Gavin explained that PBCS separation could be applied outside of the OTS if both flights qualified. They also felt that the number of PBCS certified aircraft may be indicating low because many flights may be qualified but flying outside of the FL350-390 band.

Finally, Chris told the group that there is a movement to eliminate ocean clearances once Space Based ADS-B has been implemented.

Andy Woolin, EUROCONTROL, then gave the group a briefing on an Action Item from a previous meeting – rerouting of eastbound flights. The issue is a flight plan that requires a reroute due to an active military area that has since come active on short notice, for example. The current process is to send an ACH message to the ANSP, which ingests that message and updates the flight planned route in their system. The ACH is also sent to the flight crew, but they are instructed not to interpret that as a clearance. Now we have the ANSP with one route, thinking the aircraft is flying that route and the pilots still on the original route. As this has been identified as a safety concern, EUROCONTROL hosted a WebEx on the issue. Andy explained that is was a unanimous view that flight crews not input the ACH message without a clearance first, so effective May 8, 2018, IFPS will not change the route and will let the ANSP controllers handle the problem tactically.

Katica Treneveska provided the group with another action item list – the EUROCONTROL NAT OP Portlet. She showed where the Boston Advisory had been added to the web page, in response to a request from NAMEUR participants. The

link was incorrect and will be fixed as it currently points to the Boston Gate Forecast. The group was immensely appreciative of all the work that had gone into the portlet.

Paulo Raposo, NAV PORTUGAL -Santa Maria, provided the update for his facility. He illustrated the projects that have been completed such as the transition to a Linux operating system, an improved HMI, the implementation of PBCS and the associated separation standards. Still in progress, and planned for late 2018, are 20NM lateral separation with GNSS for level crossing traffic, 15 NM (Climb/Descent Procedure) CDP for FANS1/A, and ADS-B selected level conformance checking.

The final topic of the day was a Boston ARTCC update from Jeeja Vengal. She presented to the group the design of 145 new eastbound NAR routes. The hope was to have these routes in place for Spring 2019.

Day 2 Discussion

Wednesday April 25, 2018

Opening topic of the day was a recurrent one – PRM and CPR issues/concerns. John Smylie, Maastricht EUROCONTROL, stated that the data MUAC uses is not completely accurate which results in a lack of ability to properly plan. He felt the PRM/CPR information would be much more useful and made the request of the group to supply this data to MUAC, as he has done in previous meetings. Additionally, he inquired whether this information was available through the NM.

Andy Woolin, EUROCONTROL, replied that the pending rollout of FF-ICE (Free Flow Information in a Collaborative Environment) meant that there was no real change of a change in the NM at this time. He would like to see an automated process for the PRM/CPM data rather than the manual process currently being used.

From the NATS perspective, Mike Borland said that they do a lot of analysis of the tracks prior to publication. Unlike the FAA, NATS does not have the ability to ask the airlines for their intended flight plan. The problem inherently is how to create the best plan from data that may not be accurate when the flight departs. The question was posed to the group – at what time can you supply the ANSP's with the most accurate flight plan?

Fergus Flanagan, United Airlines, felt that the PRM exercise was fairly useless in that the dispatcher massages each flight much later. In fact, he estimates that 70% of the time, a flight will not actually fly the PRM route that was submitted. Gavin Dixon, NATS, replied that any data is better than none. With respect to the original issue brought up by John Smylie, Gavin suggested that MUAC use the AFTN to receive the PRM data. Jeffery Devore, United Airlines, confirmed that all the operators need is the AFTN address and it can be included when they send the PRM data to NATS and NAV CANADA. Chris Blandford, NAV CANADA Gander, suggested that the PRM discussion may well be an exercise in futility as they do not know how much longer the OTS will be required once Space Based ADS-B is available. Fergus summed up the conversation by indicating that airlines are

interested in the flexible use of airspace. They have spent millions to invest in technology, but they still feel "handcuffed by ATC" and used the example of oceanic tracks, and NAR routes. From this discussion, an action item was generated (see Action Item List) to have the airlines do an analysis on the PRM and the actual flight plan to determine the accuracy of the PRM. Fergus agreed to run an analysis for a three-month period and report back to the group.

Sami Abou-Farhat, NAV CANADA International Coordination, then made a presentation on the status of Space Based ADS-B. He outlined the work currently being done, along with the requirements for operators. The tentative dates for implementation are in 2018, with the Ocean in March 2019. A question from the group was asked regarding exclusionary airspace – specifically, if there is no such airspace, how will the customers be guaranteed to get the service they pay for? Chris Blandford, NAV CANADA Gander stated that currently 95% of all flights are equipped for ADS-B, and there is no additional equipment required to use the Aireon service. If a flight is not so equipped, they will be the flight that is moved to accommodate the larger volume, just as is done today.

The group asked about the contingency procedures in the event of a failure, and Sami replied that the current contingency plans are still in place – i.e. revert to a procedural separation standard.

Sami then connected to Steve Bellingham, NAV CANADA, to provide a live demo of the Aireon feed, which was well received by the group.

After the presentation by Jeeja Vengal, FAA Boston ARTCC, yesterday, there was discussion regarding the implementation of 145 new eastbound NAR routes. Most operators felt that the NAR routes were too constraining on their ability to flight plan efficiently. When the westbound OTS is comprised of 8+ tracks on most nights, it removes a lot of flexibility to random route in domestic airspace due to the requirement for a NAR for each track. Additionally, as the comment was made about the possibility of removing the OTS in a Space Based surveillance environment, the operators felt that it was inefficient to have more restrictions in domestic airspace than on the ocean, specifically in the enroute phase of flight. Sean Williams, NAV CANADA Moncton, responded that the flow of traffic from the

northeast US is particularly heavy and that the NAR program provides a method to maintain the volume by reducing complexity, a thought that was equally shared by Jeeja. While the westbound NAR routes were virtually removed in 2008, the eastbound remains untouched since their inception decades ago. Sean committed to an analysis of the NAR structure and to report on any suggestions that arise for making the airspace "less restrictive", with the understanding that this is more than a Moncton ACC issue as it will greatly impact Boston ARTCC as well.

Greg Byus, FAA Command Centre, then gave the group an update from the FAA. As an update from the last meeting in London, Greg confirmed that the non-common portion of the westbound NAR routes is available and a link was supplied (see presentation). An update to PERTI (Plan, Execute, Review, Train, Improve) was given with the key elements being that an operational team is now responsible for the plan. There was an emphasis on the northeast departure plan - it now covers both terminal and enroute constraints, and finally, a link to PERTI can be made available to anyone who wants to be on the distribution list. Please email Greg to be included.

Greg then discussed the northeast initiatives that are in place to move aircraft out of the New York area during severe weather events. This will be accomplished through several initiatives such as: a more efficient use of playbook routes for users, improved cross facility communications, and the incorporation of systematic traffic reroute options as the weather becomes more severe. N90 plans to increase the utilization of available fix capacity and move NY arrivals through Boston to preserve departure capacity. They have proposed an 11.00 EDT daily telcon to discuss offload options for every SWAP event that is forecast. In relation to this item, Greg initiated a discussion from the operators about the good and bad from the JFK snow event in January 2018 which saw the airport shut-down operations. His questions centered around the communication process and what could be done better in the event that this happens again. There was a lot of feedback from the group - there were many diversions, some turnarounds, the airport was broadcasting as open, when the taxiways weren't passable due to snow, etc. One particular comment related that the UK will put out a NOTAM if the airport is not available as an alternate – why is this not done in the US?

Greg continued his presentation with an update on the SLA (Standing Letters of Agreement) request from NAMEUR, specifically if these could be made available to the operators so they can better plan their flights. Greg went through the top 10 US airports and outlined the current restrictions in place for those facilities, however, as of now; these are not available online for users to access.

In relation to a previous action item from Jeffrey Devore, United Airlines, about the DC escape routes; Greg provided an update to the group for their input. The new routing will see flights crossing STENT at 170 and below and then 230 and below to SYR. This will keep flights out of NY airspace, while still providing efficiency. Jeffrey agreed that this was an acceptable proposal.

The day concluded with a group dinner at the Beatrix restaurant in downtown Chicago. The meeting was well attended and by all accounts, was exceptional. Everyone thoroughly enjoyed themselves. Katrina Dembinski, United Airlines, deserves special recognition for the arrangements and facilitation of this event.

Day 3 Discussion

Thursday April 26, 2018

Mike Borland, NATS, began Day 3 with his presentation on NATS CDM Trial. The main issue is the traffic volume in the Humber sector when the OTS is in a northerly configuration. On occasions, the military area 323 is active which actually helps the situation as traffic must route around the area, however on weekends, and with a particular OTS orientation, traffic becomes overwhelming and TMIs (Traffic Management Initiative) must be initiated.

Mike made a request that operators file a "pseudo" flight plan that he hopes would have more accuracy than the current PRM/CPR. This should help mitigate traffic in the UK Humber sector and reduce the requirement for flow control. Mike asked the group if they were to file the "pseudo" flight plan at 0500z, would that be a fairly accurate representation of what the flight will actually fly. The trial is based, in part, on receiving accurate date to base decisions upon, on a timely basis.

Mike also committed to conducting a similar review of PRM/CPR accuracy (similar to what the airlines will be doing) from the NATS perspective. He will report on this at the next telcon.

Emma Corrigan, UK Met Office, gave the group a briefing on the World Area Forecast System (WAFS). The briefing contained information on the enhancement made to WAFS, such as higher resolution grids, increased time resolution, and integration with System Wide Information Systems (SWIM). The benefits of improving WAFS included: safe route planning in significant weather, improved fuel efficiency, and improved arrival time predictions. Being able to share meteorological data across all aviation domains through SWIM was also seen as a great benefit.

Toibn Miller, American Airlines, asked for clarification on the UK Met terms "LOW", "MEDIUM", and "HIGH" risk weather. His belief, as many in the room agreed, was that 70% chance of thunderstorms, for example, would be considered high risk. In fact, Emma stated that 50% or higher would be considered high. It is this unknown in the definitions that cause issues for operators. Emma agreed to explore the issue and report back at the next meeting. Jeffrey Devore, United Airlines, asked if there was any collaboration between the UK Met Office, the National Weather Service, and Environment Canada? He has seen forecasts from these agencies that are quite varied. The group felt that a more collaborative approach could yield a more accurate forecast. Emma agreed to discuss this with the UK Met Office and report back to the group.

Jon Gunnlaugsson, ISAVIA, made the final presentation to the group on the upcoming sector changes to Reykjavik's airspace. There will be an extra 150 nautical miles to the south in order to give extra capacity to their operation. He also echoed the comments of the other ANSPs in the benefit of the PRM/CPR information the operators supply. It is his estimation that only 60-70% of the airlines are providing them to Reykjavik.

ISAVIA has also changed their CPDLC functionality. The standard Welcome message has been replaced with "Set max uplink delay value to 300 seconds". This is due to the possibility that a pilot may respond to a CPDLC uplink message that has been delayed in the network and is subsequently sent when not intended. This procedure will take effect on May 24, 2018 and is outlined in NAT OPS Bulletin 2018 002.

NAMEUR 32 Update

Frankfurt, Germany

October 22-24, 2018

Rene Vierke, Lufthansa Systems, gave the group a preview of NAMEUR 32 which will be hosted by Lufthansa Airlines and Lufthansa Systems. The hotel has been secured for the selected dates and will include breakfast, lunch, and snacks. The hotel is well appointed, midway between the Frankfurt airport and the city, and offers single and double accommodations. We currently have most of the hotel reserved for our conference.

Further details will be supplied in due course.

Acknowledgements and Thanks

The NAMEUR group would like to express our sincere thanks and appreciation to the team at United Airlines, Chicago. Without their help, the meeting would not have been as successful as it was. Special recognition goes to Katrina Dembinski, Peggy Schorsch, Jeffrey DeVore, Julia Wislocka, Mark Hurston, and all the staff who facilitated our visit to United's Network Operations Center and who arranged our group photo to be taken on the 66th floor of Willis Tower.

