Summary of Discussion of the Twenty-Ninth Meeting of the Cross Polar Trans East Air Traffic Management Providers Working Group (CPWG/29) 9 March – 10 March 2021 – Virtual ZOOM

1. Background

- 1.1 Due to the worldwide COVID-19 pandemic and health crisis all in person CPWG meetings were canceled in 2020 and at least the first quarter of 2021. By consensus of the body, it was determined to hold a virtual ZOOM meeting for two hours each day on March 9 and 10, 2021. Due to the abbreviated nature of the meeting, the schedule was limited to the CPWG/29 plenary meeting.
- 1.2 The CPWG was established to provide a forum for ANSPs and airspace users to meet and explore solutions for improving air traffic services (ATS) to aircraft that operate between North America and Asia via Cross Polar (CP) and Russian Tran East (RTE) routes.
- 1.3 Ms. Leah Moebius, FAA Air Traffic Organization and Mr. Blair Cowles, Regional Director, International Air Transport Association (IATA) co-facilitated the meeting. Attendees included representatives of the ANSPs from Canada, Finland, Iceland, Norway, the Russian Federation, and the United States, IATA, international airlines and operators,; and industry. The complete list of participants is provided in **Attachment A**.

2. Opening of the Meeting

- 2.1 Ms. Moebius opened the meeting at 1405 UTC. Ms. Moebius explained when the meeting was originally scheduled everyone thought we would be in a better place than we are today, but even so, we still wanted to meet and keep communications flowing. She expressed that hopefully, in a few months, we will start seeing some real progress towards restarting. She thanked everyone for their continued support and participation in the Cross Polar Working Group.
- 2.2 Mr. Cowles thanked everyone for joining. He reiterated Ms. Moebius's sentiments that when the meeting was scheduled, they had hoped to be discussing the restart, and we are not quite at that point yet. In addition, he stated that as we go through the presentations from the ANSP's and airlines in the next couple of days that will become clear. Mr. Cowles then asked if we could get everyone to turn on their cameras and do introductions.
- 2.3 Ms. Moebius called on everyone and completed introductions.
- 2.4 Ms. Moebius then described the agenda, an overview of the day. Everyone then did self-introductions.

3. Agenda Item 1: Review and approve Agenda

3.1 The following agenda was presented:

Agenda Item 1: Review and approve Agenda

Administrative

Agenda Item 2: Airlines Briefings

- Update on Airline Preparations for Restart
- Provide information on possible fleet changes
- Proposals for removing impediments for restart
- Specific Airlines to provide status during COVID, contingency planning. And preparations for restart.
 - o State of the Industry Briefing-Blair Cowles, IATA
 - American Airlines
 - o Finnair
 - o Air India
 - United Airlines
 - Cathay Pacific

Agenda Item 3: Industry Briefing - Jeppesen

Agenda Item 4: ANSP Briefings

- COVID status, contingency plans for ATC-Zero, best practices and challenges, travel restrictions, and projected return to normal status.
- What information do you need from IATA and ANSPs to start to ramp up for traffic?
 - State ATM Corporation
 - ADS-C CDP Update
 - AIDC Update
 - User Preferred Routes with Magadan Update
 - Development Plan for Flight Crews MET info Provisions
 - Provideniya Bay Update
 - o Federal Aviation Administration- Air Traffic Organization
 - o NavCanada
 - o Isavia
 - o ANS Finland
 - o AVINOR FLYSIKRING Polaris ACC

Agenda Item 6: Discuss Next ANSP and Plenary Meeting

4. Agenda Item 2: Airlines Briefings

4.1 IATA COVID 19 impact on airlines

Mr. Blair Cowles provided a presentation on the most current data on the airline industry and the expectation moving forward. Mr. Cowles delivered information comparing every day in 2019 to every day in 2020 showing the stark difference. Daily in 2020, there were 7.5 million less passengers on 61,700 less flights every day with \$1.8 billion less in goods carried daily. He stated that there were \$118 billion in losses, and demand was down 65.9% over 2019. Mr. Cowles went on to show numerous graphs highlighting that while passenger traffic remains low, cargo has regained pre-crisis traffic level. He pointed out that has been more adversely impacted by the crisis. He went on to point out that domestic travel was starting a recovery, but in January 2021, domestic travel fell again to 47.4% of the pre-crisis level while international was down 85.6%. In January 2021, China's domestic flights fell, and the US domestic market rose slightly both to about 45%. He then showed a chart stating that the forecast for business air travel is expected to worsen before it recovers. Passenger load factors are low despite cutbacks, with load factors 25.7% lower than pre-crisis levels. A chart showed that there is substantial pent-up demand shown by a spike in bookings when UK announced exempt from quarantine rules and then plummet when the new COVID-19 variant emerged. Mr. Cowles presented two cash burn scenarios for 2021 with estimated losses \$75-\$95 billion. Travel has fallen as governments have imposed tighter restrictions and a graph showing the impact by country. Cargo remains strong and a chart displayed regional impacts. Passenger bookings remain low with February bookings down 78% year over year. International and Asia Pacific travel has been the worst performing and several charts and graphs were shown emphasizing the impact. Russia shows nearly a full recovery in domestic travel as of January but very fragile in all markets. Unique city pairs have declined during COVID-19. Revenues for passenger airlines are expected to be down 50% in 2021, and costs are expected to be higher.

4.2 American Airlines - AAL Status

4.2.1 Mr. Steve Smith stated that the restart from COVID-19 should be fairly easy because they are currently flying cargo where they would normally be flying passengers. Because of that, they have personnel in place and are operating to most cities they would usually fly. The only exception is Auckland, New Zealand. Mr. Smith went on to explain that during COVID-19, they have made some drastic fleet changes. American's wide body fleet consists of B777 and B787 and currently has no B787's parked. A total of 46 aircraft in the wide body fleet are presently operating. American retired all of their A330s, B767s, B757s, MD80s, and E190s in 2019 and 2020. Passenger demand to the Asia Pacific region is weak with operations to and from DFW, NRT, ICN, and PVG. There are plans to restart depending on various country restrictions. Many of these restarts have slid and are expected to slide further because of restrictions not being lifted. Very few aircraft are operating in the polar region because of the stops required to meet country restrictions. The one new service that Mr. Smith highlighted will start in October SEA to BLR which will be a polar operation. To restart, American will need country travel restrictions lifted.

- 4.2.2 Ms. Moebius asked if Mr. Smith sees pleasure travel rebounding before business travel. Mr. Smith said they have already seen that and have reallocated some of their wide body aircraft to Mexico and the Caribbean to match the leisure demand. Although the yields are lower than business they are trying to move assets to meet demand. Paul Layman stated the Americans executive leadership is getting indications that businesses may want to resume travel going into the second half of 2021.
- 4.2.3 Ms. Thordis Sigurdardottir ask if Mr. Smith or anyone else had information regarding current restrictions at U.S. airports. Mr. Smith stated that the only limitation he was aware of was a negative COVID-19 test within three days of entering the U.S., and that is for everyone.

4.3 Finnair - Update

4.3.1 Mr. Riku Kohvakka reported the long-haul flight schedule has been drastically reduced. He showed a graph showing March, April, and May 2019 compared to the same months in 2021showing a reduction of over 800 flights each month. Recent cuts by the airline have impacted about 700 of their 6500 employees. The CEO stated that their airline is resizing and becoming a smaller airlines for the years to come. Mr. Kohvakka presented the airlines traffic performance for February 2021 showing a 91.6% decrease in passengers from February 2021. He explained that the cargo portion of the fleet was the only positive area. Also, on the positive side, he explained that sustainability is at the heart of everything they do. He explained that Finnair is committed to reducing CO2 emissions 50% over 2019 levels by 2025. He thanked the ANSPs for their assistance and flexibility through the COVID-19 crisis, saying that it has helped a lot. He challenged all the stakeholders to standardize tools and processes for overflight, landing, and OpSpec permitting processes and harmonizing airspaces.

4.4 Air India

Ms. Rajneesh Sharma, the Director of Flight Safety, explained that she took over the job 4.4.1 about last year in late August. She stated that what we all have faced in the last year no one was prepared for. Air India never stopped operations, and no one lost their jobs. Salaries were reduced, but operations continued. In January, they began vaccine flights all over the world. She explained that when other airlines were reducing flights and services, Air India was adding flights. They started a new cross-polar route from SFO to BLR in January 2021. This route not only saves time but lessens the environmental impact. Each of these flights reduces CO2 emissions by 22 tonnes. She went on to say that domestic operations are up to 70% and international operations are at 30%. She then introduced Captain Bhasin who completed the presentation. She explained that on January 10, 2021 the operated a flight from SFO to BLR which was an all-women crew and was the airlines first cross-polar operation. A few recommendations were expressed; these included VOLMET frequencies to provide polar alternate weather in English to include solar storm information, radiation activities, lowtemperature forecasts, and frontal movements. She also suggested the addition of ADS-C/CPDLC stations in Russia to improve surveillance and communications. Additionally, they ask Russia to consider making QNH the norm; all airports use ICAO standard braking index, firefighting capabilities to be raised to 9 or 8, Svalbard airport be available for diversion at all hours, Canada and Russia consider allowing block flight levels and exploring more direct

- routings. He then showed that they saved 6.5 to 7 tons of fuel, 22 tons of carbon, and 55 to 60 minutes over the traditional route.
- 4.4.2Bryon Carlson from NavCanada informed Air India that NavCanada will be more than happy to assist with block altitudes and if they have ideas in improving routes to run it buy them that they would be more than happy to help. Thordis Sigurdardottir from Isavia and Tony Klancher from Anchorage ARTCC stated their willingness to improve routes and to contact them for assistance.

4.5 United Airlines

- 4.5.1 Mr. Gen Schnee explained that United Airlines capacity remains down 50% over 2019, but the company is optimistic for recovery. Expecting some city pairs to resume by mid to late summer as demand and operating environments improve. There has been a moderate improvement in the short to medium leisure routes. UAL has removed 24 777 aircraft powered by Pratt & Whitney 4000 series engines which will return when they meet safety standards. UAL's long haul routes are being served primarily by B787-/9/10 and B777-300ER. There is a growing demand for India to U.S., especially from the west coast, as it eliminates a stop in Europe or the Middle East. Mr. Schnee stated that this capability is because of this work group, and UAL much appreciates it. He explained that the great circle route from BLR to the west coast of the U.S. is not available yet because of some of the ANSP route restrictions and went on to explain their desires to improve routes through Magadan and Anchorage. He pointed out that while there have been improvements in the UPR capabilities it is extremely important to have cooperation between ANSPs to have the greatest success. He went on to describe where potential savings might be achieved if there were changes between Yakutsk-Magadan, Anchorage-Magadan, Magadan-Murmansk, Edmonton-Anchorage, and Krasnoyarsk-Magadan.
- 4.5.2 Mr. Steve Kessler from the FAA ask Mr. Schnee if the aircraft flying in the region were Iridium equipped. Mr. Schnee explained that they were not Iridium equipped.
- 4.5.3 Mr. Steve Smith from American Airlines stated they want to echo the request of UAL; while not flying the route yet, they see the benefit when they do begin the U.S. to India routes. Mr. Smith added that no AALs aircraft that fly in the polar region are Iridium equipped either.
- 4.5.4 Mr. Alexey Buevich from State ATM confirmed that they had received the proposal from UAL and they are working hard on them. The Magadan routes are scheduled for implementation in the fourth quarter of this year.
- 4.5.5 Mr. Tony Klancher stated that he had forwarded the request to operations, and they are working on the request. He explained some of the challenges posed by non-Iridium equipped aircraft about 82 north and some internal issues at 73 north.

4.6 Cathay Pacific

- 4.6.1 Mr. Julian Fung explained that their fleet consists of 229 aircraft with, 171 of those in operation 28 more waiting for delivery. Due to the high freight demand, 4-B77-300ER are operating with freight on the floor. He went on to explain their American Network. Before COVID-19 they provided passenger service to 10 North American destinations, but during COVID-19, they are now only servicing 4 North American airports with passenger service. Their cargo destinations remain unchanged with, 14 cities served through North and Central America utilizing Anchorage as a tech stop. Mr. Fung showed that from November 2020 to January 2021, they utilized Cross Polar routes 132 times and Russian Far East routes 161 times. He explained crew strategies because of quarantine restrictions and how they utilized a 30-hour extended duty for crews. He provided Cathay Pacific's strategies for passenger safety. He explained that in February and March, they had transported over two million doses of COVID-19 vaccines.
- 4.6.2 Mr. Alexey Buevich from State ATM asked if Cathay Pacific has considered using UPR routes through Magadan's airspace and the reason for using fixed routes and not free route airspace. Mr. Fung explained that they are changing flight planning systems, and resources are being utilized to get the work done for changing systems. They expect the project will be completed this year, and once the new system is running well they will use the UPR system in Magadan.

4.7 FedEx

- 4.7.1 Mr. Justin Leone from FedEx explained that FedEx went from busy to really busy because of COVID-19 moving PPE equipment to meet world demand. Currently, they have shifted from PPE to vaccine distribution and other necessary supplies as well as normal operations. FedEx has had no reduction in flights and is adding flights on as needed.
- 4.7.2 Ms. Thordis Sigurdardottir ask Mr. Leone if FedEx is expecting a reduction in their flight schedule after COVID-19. Mr. Leone stated that FedEx is not expecting any reduction in scheduled operations but expects that the ad hoc flights will be reduced.
- 4.7.3 Mr. Anthony Klancher asked if FedEx is planning any expansion in their Anchorage operation. Mr. Leone state that he is not aware of any expansion in Anchorage at this time.

5.0 Agenda item 3: Industry Briefing - Jeppesen

5.1.1 Mr. Volker Meyer from Jeppesen presented that in March of 2020, ICAO requested that states limit information to the AIRAC system because of COVID-19. Jeppesens work volume has increased and, so far, Jeppesen has been able to process all changes. Jeppesen has been in lockdown since March of 2020, and everyone has been working virtually. Many people in Germany were not use to virtual work but Jeppesen had people working one to two days a week prior to COVID-19, so the transition was much easier. Jeppesen will be make a gradual return to the office beginning March of 2021. Mr. Meyer pointed out the Russian airspace redesign that was effective December 3, 2020, and it was the largest revision in history with 7,700 terminal procedures revised or added and it took

- place during COVID-19. The EU will begin regulating aeronautical data and its accuracy by 2022.
- 5.1.2 Mr. Wayne Snyder from American Airlines asked if there was any update on the plans to switch airports in the eastern part of Russia to QNH yet or is that just in the western part of Russia. Mr. Meyer said they have spoken about that but State ATM might better answer that during their presentation.

6.0 Agenda Item 4: ANSP Updates

6.1 State ATM Update

- 6.1.1 Mr. Buevich provided a briefing on User Preferred Routes within Magadan Oceanic Airspace. He stated that there were 12,338 flights handled in the polar airspace in 2019. In December 2019, a working group was formed to develop improvements in Magadan Oceanic Airspace. In May and June of 2020, there was a paper trial held with five airlines to investigate the possibility of User Preferred Routes (UPR) in Magadan's oceanic airspace. The test results allowed for real test flights utilizing UPR's. The first UPR flight was on June 4, 2020, by UAL2865 from Chicago to Hong Kong. It proved to be successful with a savings of 5 minutes of flight time and 1760 pounds of fuel. A copy of the NOTAM allowing for UPRs was explained and shown. The trial was expanded to include Magadan North-2 Sector and to assist airlines with routes to India. As of February 28, 2021, there have been 825 UPR fights through Magadan Oceanic and North-2 Sector. Flights were tracked using ADS-C and used CPDLC and HF checks by SELCAL for communications and no issues were noted. Mr. Buevich showed a bar graph showing traffic volumes in oceanic airspace and then another bar graph showing the distribution of flights using UPRs, noting a steady increase of UPRs. He went on to show the fuel savings and CO2 reduction each month from the use of UPRs. Mr. Buevich stated that once the trial is complete, specification (RNP4, ADS-C, CPDLC, SATCOM, HF-Radio) for UPR airspace would be determined and published in the Russian AIP. In addition, there will be 14 new five letter entry/exit points between Magadan and Anchorage, as well as additional points in the adjacent Yakutsk, Murmansk, and Krasnoyarsk ACC's. He explained that the work will continue to improve performance from the west coast of the US to India. He thanked all the airlines that have participated in the trial.
- 6.1.2 Mr. Steve Smith from American Airlines thanked State ATM for all their work. Up to this point, American has not been able to take advantage of the changes due to COVID-19 but expect utilize the routes soon.
- 6.1.3 Mr. Gen Schnee from United Airlines thanked State ATM for their work in Magadan's airspace and all the conductivity in the entire Russian airspace and improvements.
- Mr. Mark Hebert from Air Canada asked if they would please also consider expanding UPRs after Yakutsk expanding it to Irkutsk to make the routing seamless. Mr. Buevich stated State ATMs expansion plans do include Irkutsk.

- 6.1.5 Mr. Volker Meyer from Jeppesen asked if Mr. Buevich had any idea of a timeframe for upcoming changes. Mr. Buevich stated that the second quarter of 2021 State ATM expects Magadan and Leningrad once all the documentation is completed and will be done on the AIRAC cycle.
- 6.1.6 Mr. Alexey Buevich then provided the meeting with a State ATM overview. He showed the current and future structure of the ATC system in Russia and facilities providing air traffic control and air traffic management. He went on to show the decline of traffic in 2020 to 1,299,063 IFR flights, with 70% of those being domestic operations. Mr. Buevich showed a graphical depiction of the growth of traffic from 2000-2019 and then the dramatic drop in traffic in 2020. Notably, domestic traffic, while impacted, the impact was notably less than international or transit flights. Russian ATS routes increased by 6 in 2020 to 1078 routes. He showed the capacity of numerous top airports in Russia. He explained the changes made on December 3, 2020 to Moscow and adjacent FIRs and capacity increase by 1.8 times. With the changes, QNH was introduced to 75 airdromes in 5 terminal areas. He explained that they had developed a roadmap for the implementation of remote ATC services. They are also developing a methodology for the use of UASs within their airspace. Mr. Buevich then explained COVID-19 protocol and vaccinations at their facilities.
- 6.1.7 Mr. Gen Schnee from United ask where he can find the documents for Kaliningrad's free route airspace. Mr. Buevich explained that free route airspace has been published in a NOTAM and that he will provide Mr. Schnee the NOTAM.
- Mr. Steve Kessler from the FAA stated that he did not see the Murmansk airspace in the presentation and ask if St. Petersburg has taken over that airspace. Mr. Buevich explained that by mid-summer St. Petersburg will take over numerous smaller ACC's in the north. Mr. Kessler went on to ask if there would need to be a new Letter of Agreement between Anchorage and St. Petersburg. Mr. Buevich stated that when the transition is finalized, then the new agreement would be signed. Mr. Kessler also asked if they used the same system in domestic and oceanic airspace of is it the same system. Mr. Buevich explained that since Magadan oceanic used ADS-C and CPDLC the systems are different, but the rest of the system use the same equipment.

6.2 Anchorage ARTCC (FAA) Update

Mr. Anthony Klancher from the FAA presented the COVID-19 facility cleaning plan at Anchorage ARTCC (ZAN) and advised that the COCID19 ATC limited plan, while it remains available, is not expected to be needed going forward. Mr. Klancher advised that traffic levels at Alaska airports and ZAN are near 80%. Mr. Klancher explained that NOPAC redesign is in the final stages of coordination and is expected to Phase 1 implementation in mid to late 2022. A UPR test in the NOPAC will be held from April 15 to June 15, 2021.

6.3 FAA UAS Operations

6.3.1 Mr. Steve Kessler from the FAA provided a briefing on the FAA's current guidelines on Unmanned Arial Systems (UAS) in the U.S. National Airspace System (NAS). He

showed a chart that contains the rules that the FAA uses in the governing of UAS operations. He explained the differences between operations in class G airspace below 400 AGL and classes B, C, D, and E around an airport. There is a manual and automated process to gain approval and each process was explained as well as the differences between them. Then Mr. Kessler gave an example of how a LANCE UAS approval process works. Mr. Kessler then gave an overview of the FAA's approach to integration of UAS's into the NAS.

6.4 NavCanada – ANSP Update

Mr. Scott Williams from Nav Canada explained that the COVID-19 numbers are falling. He described what they are doing to keep the workplace safe and within the country to keep the population safe. A graph was shown of Canada's new COVID-19 cases over the last year, showing a peak in January 2021 and showing a decline in cases since. A vaccine rollout slide was then shown, with Canada being 30th in a ranking of worldwide country rollouts. There is an expectation of much higher vaccine availability soon and the majority of the country being immunized by fall. In September 2020 there had been a 62.6% drop in traffic and as of January the average decrease had improved to only 56.8% drop in traffic. Recovery is considered to be a moving target. Arctic high traffic last week was the busiest in 11 months, so hopes are high that traffic will continue to increase. Mr. Williams explained that their UAS operations will be completed by an online app that will be available later this year.

6.3 Isavia ANS Update

6.3.1 Ms. Thordis Sigurdardottir from Isavia ANS provided a graphical depiction of traffic by kilometers flown comparing 2020 to 2019 traffic levels. She explained that there has been no real increase in traffic and that their traffic remains at about 40%. The total decrease for 2020 was 58%. Ms. Sigurdardottir then described the situation in Iceland with COVID-19 cases at 1.1 per 100,000 and 6% of the population currently vaccinated. There are also border restrictions requiring testing and 5-6 day quarantine. She then explained the NAT Data Link Mandate and that it was reinstated on February 24, 2021. In addition, Spaced-Based ADS-B was implemented south of 70 50' N FL255-FL600, and further expansion will be considered after a cost-benefit analysis. Ms. Sigurdardottir then explained new messages utilized to inform flight crews on which satellite service to use at a given time in their airspace, either Inmarsat or Iridium. She also explained about new VHF standby radios that have been installed in SW Iceland for redundancy and safety. Earthquakes began February 24, 2021, at Litli Hrutur Mountain. An eruption is imminent, but there is no expectation of any impact to aviation because it is expected to be slow moving lava only. VOLCEX20 was postponed due to COVID-19, and VOLCEX21 will be held in November 2021.

6.4 Fintraffic ANS Update

Mr. Kimmo Lehtimaki from Fintraffic explained that they recently changed their name to Fintraffic, but nothing has changed beyond the name, brand, and logo. He then showed a graph with traffic counts explaining that traffic levels are about 30% of what they were before the pandemic, with overflights at about 40% of what they were. He explained that the COVID-19 situation in Finland had worsened recently, with well over 100 cases per 100,000 inhabitants. The vaccination rollout has begun but remains low at about 9% of the population. Controllers expect to get the vaccination in the July to August timeframe. Travel restrictions are being tightened to prevent the spread of the virus. Finland has had a partial lockdown since 8 March. Fintraffic is working with Finnair on a project called Perfect Flight to enhance operational efficiency and create a sustainable aviation model to make the most environmentally favorable airspace in the world.

6.5 AVINOR FLYSIKRING Polaris ACC-BODO Update

6.5.1 Mr. Morten Tjonndal from Avinor Flysikring explained the name changes of Norway FIR to Polaris FIR, Norway ACC to Polaris ACC, and facility name to Polaris Control as of 5 November 2020. Mr. Tjonndal explained the aspects of a cost reduction program from 2020-2023 with the goals of improving efficiencies and reducing employees. He explained that they are working on a project to replace their ATM system with the goal of implementation in the upper airspace by 2023-2024. Norway's COVID-19 cases increased in November 2020 and remain high. Norway's vaccine rollout is starting with the older population and moving from there to other parts of the population with expected a gradual opening in May depending on vaccine distribution. Mr. Tjonndal then showed a graph showing the traffic levels for 2019, 2020, and January of 2021 showing a stark difference in traffic levels. He explained that traffic expectations are not expected to increase at least for the next two months. Overall the traffic in 2020 was down 41%.

6.6 Future Meeting

- Ms. Leah Moebius from the FAA then discussed when the next Cross Polar Working Group meeting should occur. She asked the membership to discuss the possibility for the next meeting to be held virtually in August or September. Mr. Buevich from State ATM suggested that the meeting be held in September because it is still vacation time in Russia during August. Ms. Sigurdardottir from Isavia also recommended avoiding August due to vacation times. Ms. Moebius suggested September 14 and 15, 2021, and there were no objections. Ms. Moebius thanked everyone for their attendance.
- Mr. Cowles then expressed his appreciation to the ANSP's as well as the airlines for their assistance through these difficult times. The meeting was then closed.

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