



Federal State Unitary Enterprise "State ATM Corporation"

Branch "North East Air Navigation"



DARP-Like Procedure





## DARP-Like Procedure

In accordance with the decision made by COG 48/04 since 2013 in the Russian Federation there have been international volcanic ash exercises conducted on a regular basis in the Far eastern part of the ICAO EUR Region. The participants of the annual exercises are volcano observatories, volcanic ash advisory centers (VAACs), meteorological watch offices, national ATM and aeronautical information centers, airlines of Japan, China, Canada and the USA.

In April 2018 during the VOLKAM/18 Exercise Magadan ACC practised the reroute procedure using Controller-Pilot Data Link Communication. In accordance with the Exercise Directive the aircraft was changing its route within the Magadan FIR boundaries.

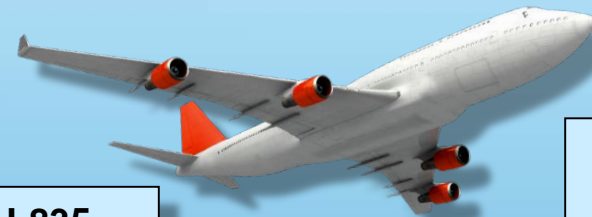


# DARP-Like Procedure CPDLC Utilization for Airborne Rerouting during VOLKAM/18

```
INF 19-04-18 22:59:26 SRV_2_ALPHA acars history
<Tail: N795UA, Flight: UAL835, Time: 22:59:16, TWDL Downlink, Msg ID: 27>
FREE TEXT [EXERCISE VOLKAM18 RTE REQ RUSOR T658 TK B237 BENGA T565 ANIMO]
```

**Magadan ACC**

**Rerouting request via CPDLC**



**UAL835**

**Rerouting Clearance via CPDLC**

**Airborne Flight Plan  
via AFTN (FPL)**

**Main ATM Center  
(Moscow)**

```
TNE 19-04-18 22:25:17 SRV_1_ALPHA acars history
```

```
FF UUUWZDZX UHHHZDZX UHHHRZX
(FPL-UAL835-IS
-B772/H-SDE3FGHIJ3J5J7M1M3P2RWXYZ/LB1D1
-AFIL2244
-N0485F300 RUSOR/M083F360 T658 TK B237 BENGA T565 ANIMO/M083F360 Y114 AWE Y116 CHE Y12 HWE Y14 ARIKA/M082F360 Y14 GOLDO Y36 NESKO Y142 SAMON
Y14 DGC Y28 ISAKY Y60 FUE/M077F300 Y60 ONIKU/N0455F300 A593
LAMEN/K0848F300 A593 AKARA/K0831S0840 A593 DUMET DCT
-ZSPD1351 ZSSS
-PBN/A1L1B1C1D1O1S2T1 NAV/RNP2 DAT/1FANSP2PDC SUR/RSP180
DOF/180419 REG/N795UA EET/ UHHH0035 RJJ0120 RKR0340 ZSHA0405 SEL/ASFG CODE/AACC5B RVR/75 OPR/UAL PER/C RMK/TCAS SOUTH KOREA
AAISD1736)
```

[565 ANIMO]



# Reroute Clearance

**LINK UP**

OTH	FRN	LINK UP	Delete
New	Pending		
AAR221 / HL7635		<input type="checkbox"/>	<input type="checkbox"/>
CCA810 / B-2037		<input type="checkbox"/>	<input type="checkbox"/>
CCA982 / B-2039		<input checked="" type="checkbox"/>	<input type="checkbox"/>
CCA988 / B-6102		<input checked="" type="checkbox"/>	<input type="checkbox"/>
CHH496 / B-8287 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NWS83 / N668US 1		<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Active**

AAL263 / N805AN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CBJ472 / B-8679	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CCA982 / B-2486	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CCA988 / B-7878	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CS338 / B-7368	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CHH482 / B-7880	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CHH7976 / B-6998	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CHH7990 / B-1540	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CSN434 / B-2071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DAL129 / N186DN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DAL159 / N667US	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DAL39 / N856NW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LAL128 / N26260	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LAL895 / N217UA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

EXPECT SHOW ROUTE CLEARANCE DEL

**Route Clearance**

Departure/Destination

Departure  Runway:   Procedure:

Arrival  Runway:   Procedure:

Approach  Airway Intercept:  Procedure:

Route

Airport [alphanumeric]: length: 4

EXP	SQK	SVC	RPT	NEG	RSP	FRE	
M						TXT	
CTM	DTM	MPS	PR	MR	MRC	MRA	URG
							TXT





## DARP-Like procedure

In August 2018 the Branch “North East Air Navigation” hosted the meeting of the Volcanic Ash Exercises Steering Group for the (far) eastern part of the EUR Region (EUR (EAST) VOLCEX/18. Taking into consideration the fact that the new equipment has been installed in Magadan ACC and the operational testing of the voiceless interaction between Magadan ACC and Anchorage ARTCC on AIDC protocol is being under way it was decided and introduced into the VOLKAM/19 Exercise Draft Directive to have a reroute trial with the usage of the CPDLC data link in the Anchorage FIR this time.

During the Exercise the reroute coordination between ATS units was supposed to be carried out on AIDC voiceless interaction protocol (between Anchorage ARTCC and Magadan ACC) and OLDI (between Magadan ACC and Khabarovsk ACC). The aim of this Exercise was to practise the coordination procedure between the involved Centers via AIDC under conditions close to reality using the current operational system.



## DARP-Like procedure

During the Exercise an aircraft (UAL79) simulated DARP procedure in Anchorage FIR. The aircraft was supposed to enter Magadan FIR from Anchorage ARTCC Sector 10 via RUSOR to Kamchatka-1 Sector. ABI message was received via AIDC (RUSOR/2327F340)

As previously agreed LRM message was sent in reply not to bring any confusion to the real planning system. It is noteworthy that equipment installed in Magadan ACC was capable of giving correct response to the coordination request.

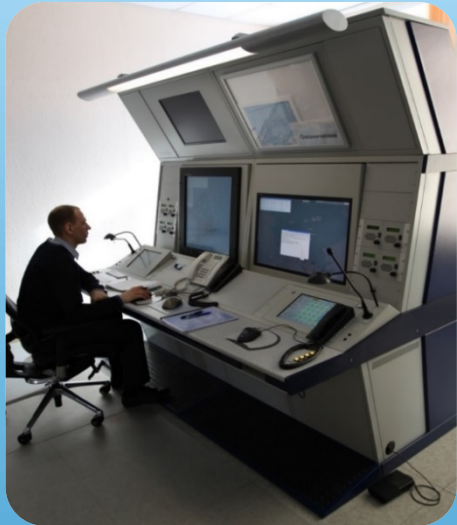
This interaction proved equipment of our Centers to be capable of carrying out coordination via AIDC protocol in case of non-standard situations including volcanic ash clouds avoidance.



## DARP-like



The Branch “North East Air Navigation” has plans to complete the modification of the automated Alpha system software this year to automate DARP-like procedure using CPDLC. Approval tests are scheduled for August of 2019.



The airborne reroute request and relaying these structured requests to Main ATM Center will facilitate the route change coordination.



**THANK YOU FOR YOUR  
ATTENTION!**

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