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Singapore****AIP SUP  
013/2018****Effective from 23 APR 2018****PERM****Published on 29 MAR 2018****SINGAPORE CHANGI AIRPORT - IMPLEMENTATION OF DEPARTURE  
CLEARANCE (DCL) VIA DATALINK ON SELECTED ATS ROUTES****1 INTRODUCTION**

1.1 The purpose of this AIP Supplement is to notify aircraft operators of the implementation of DCL via datalink on selected ATS routes at Singapore Changi Airport with effect from 23 April 2018 0000UTC.

1.2 Voice communications through radio frequencies used by pilots and air traffic control (ATC) are becoming increasingly congested and will not be able to accommodate the projected increase in air traffic demand. The use of datalink to supplement routine voice communications will increase efficiency, capacity and safety.

1.3 DCL service provides an automated platform for requesting and issuance of departure clearance via datalink between the pilot and ATC. DCL will be able to reduce congestion on the Clearance Delivery radio frequency and also minimise errors as compared to voice communications.

**2 AIRCRAFT REQUIREMENTS**

2.1 Aircraft need to be equipped with Aircraft Communications Addressing and Reporting System (ACARS) to support DCL application and be compliant with the European Organisation for Civil Aviation Equipment (EUROCAE) ED-85A (Data Link Application System Document (DLASD) for the DCL datalink service) and ARINC Specification 623-3.

**3 APPLICATION OF DCL SERVICE**

3.1 The Singapore application of DCL is in accordance with ED-85A.

3.2 The logon ID of the ground system for the provision of DCL service is WSSS.

3.3 DCL service is only applicable for flights departing from WSSS to the following routes / destinations:

- a. Destinations in Peninsular Malaysia via ATS Routes A457 and B466
- b. Destinations in Thailand via ATS Routes B466 and B469 / M751
- c. Destinations in Indonesia via ATS Route A457, R469 and B470
- d. Destinations in Australia and New Zealand via ATS Route B470
- e. Flights with allocated Calculated Take-Off Time (CTOT) under Bay of Bengal Cooperative Air Traffic Flow Management (BOBCAT)

3.4 DCL message format does not include the requested cruising level and final cruising level.

- a. The planned flight level (PFL) filed in flight plan field 15b will be used as requested level unless otherwise specified by pilot.
- b. Final cruising level will be assigned by Singapore ATC after airborne and it is subjected to traffic disposition. No on-ground level negotiations or reservations are allowed.

3.5 DCL service does not provide clearance revision. Any revision to the clearance issued via datalink will be made by ATC through voice communications.

3.6 Clearance request through VHF using the existing voice procedures is still available for applicable flights under the DCL service.

## 4 DEFINITION OF COMMONLY USED TERMS IN DCL AND EXAMPLES OF MESSAGE FORMATS

4.1 Request for Departure Clearance Downlink (RCD) – DCL request message from aircraft system for the initiation of departure clearance process, i.e. Pilot request for clearance

```
RCD
SIA123-WSSS-GATE E3-WMKK
ATIS B
-TYP/B772
-RMK/<Free Text>
```

4.2 Departure Clearance Uplink (CLD) – DCL clearance message from ground system containing departure clearance, i.e. ATC clearance

```
CLD 0400 170426 (Time: HHMM and Date: YYMMDD) WSSS PDC 001
SIA123 (Callsign) CLRD TO WMKK (Destination) OFF
02C VIA MASBO2A (Runway and SID)
SQUAWK 2201
NEXT FREQ 121.65 ATIS B
<Free Text if any>
```

4.3 Departure Clearance Readback Downlink (CDA) – DCL readback message from aircraft system to acknowledge receipt of CLD, i.e. Pilot acceptance of clearance

```
CDA 0403 170426 WSSS PDC 001
SIA123 CLRD TO WMKK OFF
02C VIA MASBO2A
SQUAWK 2201
NEXT FREQ 121.65 ATIS B
<Free Text>
```

4.4 Flight System Message (FSM) – Logical response message generated by ground system in response to message received from aircraft system

```
FSM 0338 170426 WSSS
SIA123 RCD RECEIVED
REQUEST BEING PROCESSED
STANDBY
```

```
FSM 0403 170426 WSSS
SIA123 CDA RECEIVED
CLEARANCE CONFIRMED
```

## 5 DCL VIA DATALINK PROCEDURES

5.1 DCL request through RCD message shall be made no earlier than 20 minutes before Target Off-Block Time (TOBT).

5.1.1 For flights with allocated CTOT under BOBCAT, to input "CTOT HHMMz" under the free text field in RCD message.

5.1.2 For flights routed via ANITO B470, to input "ANITO FLxxx"(ANITO crossing level) under the free text field in RCD message.

5.2 ATC will reject the DCL request and send a "revert to voice procedures" message to the pilot if the following occurs:

- a. Flight's routes / destinations is not stated in paragraph 3.3
- b. RCD message does not comply with ED-85A or have inaccurate flight data, e.g. different Callsign / ADES from flight plan
- c. Invalid TOBT
- d. When required by ATC due to flow restrictions

Example of "revert to voice procedures" message

```
FSM 0402 170426 WSSS
RCD REJECTED
REVERT TO VOICE PROCEDURES
```

5.3 Upon receipt of any "revert to voice procedures" message, pilot shall cancel any clearance received previously (if any) and follow the existing voice procedures for clearance request, i.e. contact Clearance Delivery within 5 minutes of TOBT.

5.4 Pilot shall monitor the clearance delivery frequency once the DCL process is initiated. In the event of any issues encountered, ATC will revert to voice procedures.

5.5 ATC will revert with CLD message within 5 minutes of receipt of the RCD message. If no CLD message is received, pilot is to call on delivery frequency to verify request.

5.6 Pilot shall respond with CDA message within 5 minutes of receipt of CLD message. Failure to comply may result in a "revert to voice procedures" message being sent.

Note: The DCL process is only complete and clearance confirmed when CDA message is received and processed successfully. A "CDA received – clearance confirmed" message will be sent to the pilot.

5.7 Aircraft operator / ground handling agent shall continue to update TOBT to reflect any changes in readiness time in accordance to A-CDM startup procedures stated in AIP Singapore section WSSS AD 2.22 paragraph 5.

5.8 Pilot shall contact Clearance Delivery or the next assigned frequency in CLD message within 5 minutes of TOBT using the following phraseology:

- a. <"Callsign"...With P-D-C, fully ready>
- b. Provide requested flight level if it differs from PFL filed in flight plan
- c. Provide CTOT or ANITO crossing if not previously given in RCD message

Note: Regardless of clearance through voice or datalink, all departing aircraft must report to Clearance Delivery when ready for push within 5 minutes of TOBT.

5.9 ATC will check for TOBT compliance and update pilot of any revisions in departure clearance and flow restrictions before handing the flight over to Ground frequency for start-up and pushback.

5.10 ATC will cancel the clearance issued and send a "revert to voice procedures" message if pilot does not report ready for push within 5 minutes of TSAT.

## 6 QUICK OVERVIEW OF WSSS PRE-DEPARTURE PROCESS FOR PILOTS

### Definitions of commonly used terms

- **Target off-Block Time (TOBT)** - The time that an AO or GHA estimates that an aircraft will be ready, all doors closed, boarding bridge removed, pushback vehicle available and ready to start-up / pushback immediately upon receipt of ATC clearance.
- **Target Start-up Approval Time (TSAT)** - The time provided by ATC that an aircraft can expect start-up / pushback approval.

### TOBT and TSAT requirements

- Irrespective of the TSAT, the aircraft must be ready for departure at the TOBT +/- 5 minutes as the TSAT may be revised forward at short notice.
- Any time the TOBT or TSAT cannot be met, or an earlier departure is required, the TOBT must be updated expeditiously by the aircraft operator or ground handler.

### Departure Clearance

- Departure Clearance on selected ATS routes can be requested via Data Link Departure Clearance (DCL) at TOBT- 20 minutes.
- If DCL is not available, Departure Clearance should be requested via Clearance Delivery at TOBT +/-5 minutes.

### Start-up / Pushback Clearance

- Pilots must be ready for start-up / pushback at TOBT +/- 5 minutes.
- Pilots should request start-up / pushback clearance at TSAT +/- 5 minutes.

## **7 CANCELLATION**

7.1 This AIP Supplement will be cancelled when the contents are incorporated into AIP Singapore.