

Formal operation of Domestic CPDLC

IPACG FIT/35
September 2023



Formal operation of Domestic CPDLC

Trial operation of Domestic CPDLC began on March 1, 2022.
The target airspace was at or above FL335 in the domestic sectors.
As the first step, the data on the frequency transfers, the assignment of DBC, etc. was processed by the system.
As a result of the one-year trial operation, no specific problems about data link operation were detected and sufficient communication performance was confirmed.
Formal operation of Domestic CPDLC started on March 1, 2023.

◆ Features of Domestic CPDLC system

1. Seamless operation

- ✓ Seamless ATC operation between the domestic and the oceanic sectors by utilizing the ATC system of FANS1/A.

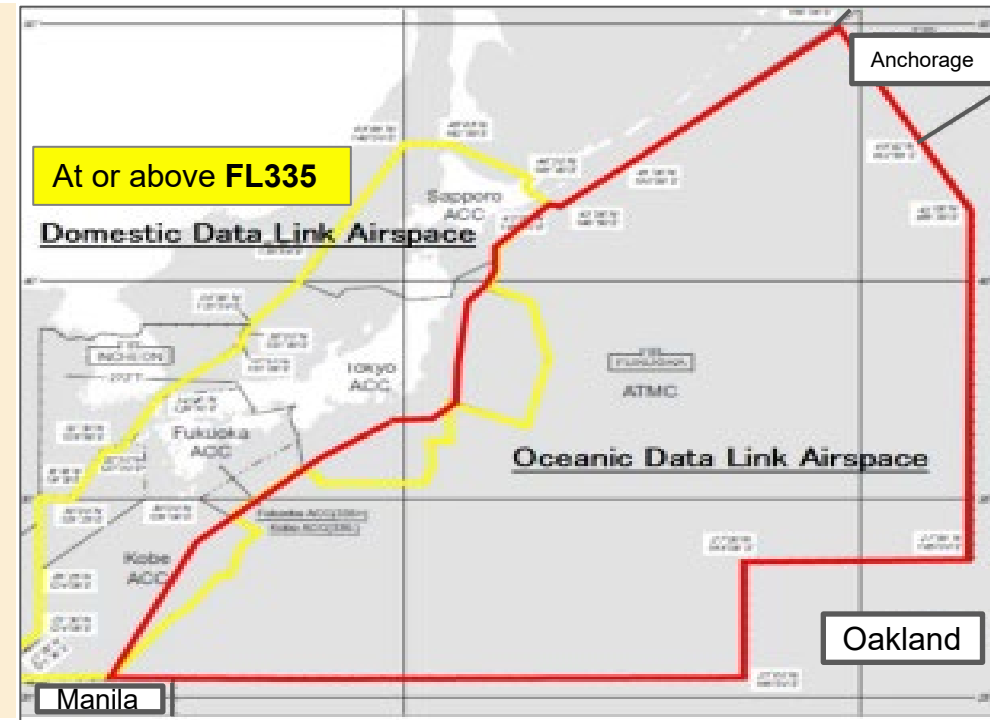
2. Improvement of the ATC management capacity

- ✓ The reduction of burden on the controllers by automating the frequency transfers.

3. Improvement of safety

- ✓ Preventing misstatement and mishearing.

◆ ATS data link airspace during trial period

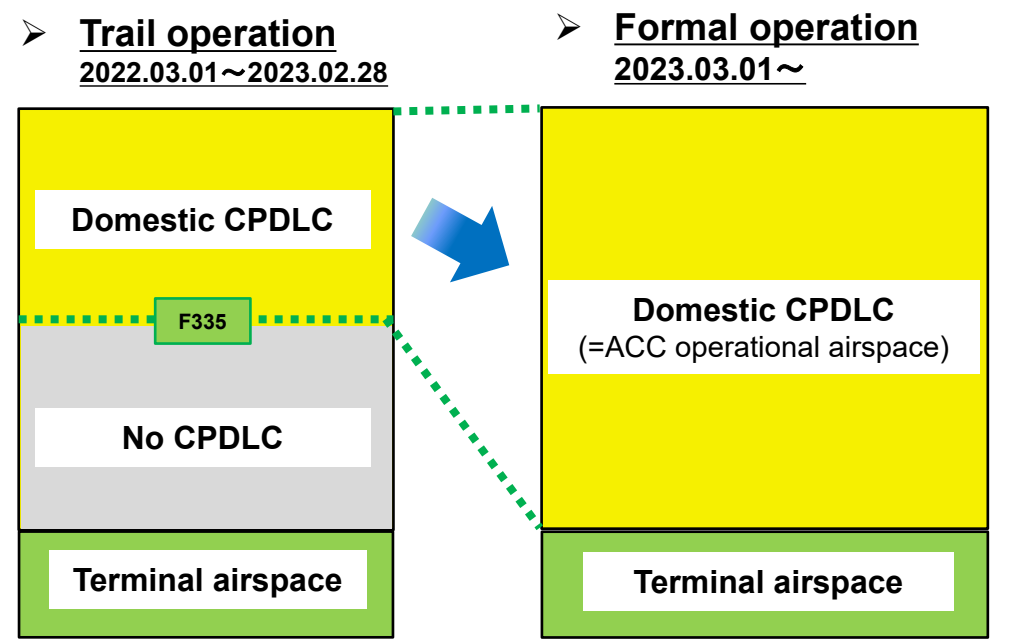


Changes after official operation of Domestic CPDLC

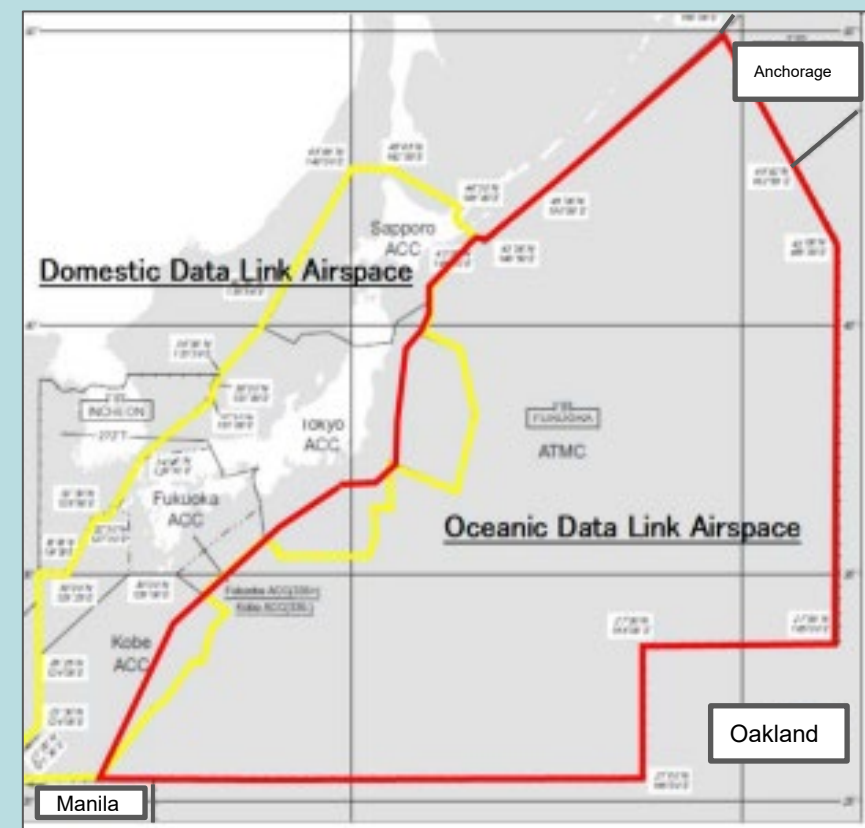
Target airspace was expanded from “at or above FL335” to “ACC operational airspace”.

※ Only the altitude stratum is changed.

◆ Altitude stratum



◆ Data link airspace



◆ Expansion of target messages is scheduled for 2027

➤ Current target messages : 4 messages

1. Instruction on frequency changes.
UM117 CONTACT (ICAO unit name) (frequency).
2. DBC assignment.
UM123 SQUAWK (beacon code).
3. Microphone check.
UM157 CHECK STUCK MICROPHONE (frequency).
4. Other fixed messages.
UM154 RADAR SERVICES TERMINATED.

NOTE: The text messages above will be primarily used for ATC communication instead of the conventional vocal communication on VHF.



➤ Expansion of target messages

The proposed messages examples to be introduced are as follows. (※possible changes)

- Altitude change instructions
- Route change instructions
- Hold instructions
- Heading instructions
- Turbulence information
- Message Latency Monitor etc.