

August 3rd, 2016

Air Navigation Services Department, Civil Aviation Bureau

Data Extracted from the Air Navigation Services Department's Database Becomes Available

~Data made available for research and development in the air traffic field ~

For the construction of future air traffic systems, it is necessary to activate research and development carried out by industry-academia-government. By making the flight path data (time, position, etc.) of scheduled flights available for research and development, increased participation is encouraged in the air traffic system field.

At this time, FY2012, FY2013 and FY2014 data are available.

The Committee for Promoting Renovation of the Air Traffic System, chaired by Professor Tetsuo Yai, Department of Built Environment, Tokyo Institute of Technology, has been having discussions toward the establishment of air traffic systems for the next generation. Since it is necessary for its construction to activate research and development in the air traffic field carried out by industry-academia-government, this committee has made the FY 2012 flight path data (time, position, etc.) of scheduled flights available for research and development (R&D) to interested universities, research institutes, and private companies and positively encourages those organizations to participate in R&D in the air traffic field.

At this time, FY2012, FY2013 and FY2014 data are available.

1. Contents of the Database

FY2013 and FY2014 flight path data of time, position, etc. of scheduled flights
(For database details and conditions of use, please see Attachment 1)

2. How to provide data

Data from the database will be copied onto DVD-R/RW(s) and sent by mail at the requestor's expense. (For the steps to follow, please see Attachment 2)

3. Where to apply

Air Navigation Services Planning Division, Air Navigation Services Department
Secretariat of the CARATS

Contact Information;

Mr. ITO and Mr. KOJINA, Air Navigation Services Planning Division,
Air Navigation Services Department, Civil Aviation Bureau

TEL: +81-3-5253-8739, FAX: +81-3-5253-1664

Data Made Available to the Public – “CARATS Open Data”

1. Available Data

Six (6) weeks’ worth of data of scheduled flights within the Fukuoka FIR (Flight Information Region) in FY2013 and FY2014 (April through March)

○ Data Items

Time (JST), flight number (virtual Flt #), latitude (degrees), longitude (degrees), altitude (ft.) and aircraft type

Please note that data may contain device-to-device variations and errors caused by coordinate conversion.

○ Time Frames

Following six (6) weeks’ worth of data in FY2013

From May 6 (Mon.) to 12 (Sun.), from July 8 (Mon.) to 14 (Sun.),

From Sept. 2 (Mon.) to 8 (Sun.), and from Nov. 4 (Mon.) to 10 (Sun.) in 2013

From Jan. 6 (Mon.) to 12 (Sun.) and from Feb. 3 (Mon.) to 9 (Sun.) in 2014

Following six (6) weeks’ worth of data in FY2014

From May 12 (Mon.) to 18 (Sun.), from July 14 (Mon.) to 20 (Sun.),

From Sept. 15 (Mon.) to 21 (Sun.), and from Nov. 10 (Mon.) to 16 (Sun.) in 2014

From Jan. 12 (Mon.) to 18 (Sun.), From Feb. 9 (Mon.) to 15 (Sun.) in 2015

Please note that some data have partly missing time zones.

○ Data Format and Storage example

Data is stored in CSV format in the following sequence;

Time, virtual flight #, latitude (degree), longitude (degree), altitude (ft.) and aircraft type

(Storage Example) 08:00:00.0,FLT0300,42.413533,141.681313,6247,B763

2. Conditions for the Use of Data

- It is prohibited to use data for purposes other than R&D, education, or the dissemination and enlightenment of academic study. Business or commercial activity is prohibited, as is distribution of the data to a third party. Failure to adhere to these terms will result in denial of future requests for data.
- MLIT assumes no responsibility whatsoever on all matters resulting from the contents and the use of this database.
- MLIT will not be able to respond to inquiries about the contents of the database, purpose of the flight or control methods. Users must also refrain from making inquiries to airlines, area control centers, etc. Failure to adhere to these terms will result in denial of future requests for data.
- When releasing a document or publicizing a scientific paper containing this data, the document shall state that “The CARATS Open Data provided by MLIT” is used.

3. Others

- Requestor's personal information will be used for analyses, including to effectively check for data disclosures and analysis of measures for the development of air traffic systems, etc.
- For details on the data, please read the instructions "About the Use of the CARATS Open Data (Japanese only)" to be sent with the data.
- To help increase the degree of data accessibility, the software for data visualization, the "PlotTrack_v2 (Japanese ver. only)" developed by the Electric Navigation Research Institute (ENRI), will also be enclosed.
- Results and their outlines obtained from the utilization of the provided flight path data are requested to be referred for consideration about the measures of future air traffic systems. Please cooperate by providing information on the results and their outlines to the Secretariat of the CARATS.

Procedure for Requesting the CARATS Open Data

- ① You can apply via e-mail to the address shown below, with your name, address and purpose of use.
- If more than one person will use the data (for example, the data will be shared among the R&D team) you are requested to list all users.
 - Please state the purpose of use as clearly as you can, following the examples.
(Example 1) To carry out research and development of ●● simulation software
(Example 2) To use as study materials for △△ class at ××university
 - If information changes after the application is submitted, such as the addition or change of team members, or change of status of the applicant, please provide the updated information to the following e-mail address.

【E-mail】 carats@mlit.go.jp

- ② The secretariat of the CARATS will respond to the requestor whether the data is available after it confirms the conditions of use, etc. The requestor may be contacted to provide additional details on the purpose of use, etc.

- ③ Those who have received the response from the Secretariat saying that the data is available, shall send the items as specified below by mail to the following address.

- DVD-R/RW(s) corresponding to the number of request(s). However, the number of disc is limited to one for each user.
- Protection material, such as air cap to protect DVD-R/RW(s).
- Addressed and stamped envelope for reply, that can contain two items mentioned above.

【Mailing address】

Secretariat of the CARATS, Air Navigation Services Planning Division,
Air Navigation Services Department, Civil Aviation Bureau,
Ministry of Land, Infrastructure, Transport and Tourism (MLIT)
2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8918

- ④ Secretariat of the CARATS will copy the data onto DVD-R/RW(s) and return them to the requestor in the provided reply envelope.