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To,
Shri Akhilesh Kumar Trivedi,
Advisor (Network, Spectrum and Licensing)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
JawaharLal Nehru Marg,
New Delhi – 110 002.

Subject: Response to Consultation Paper on "Data Communication Services Between Aircrafts and Ground Stations Provided by Organizations Other Than Airport Authority of India"

Dear Sir,

This is in reference to TRAI's Consultation Paper on "Data Communication Services Between Aircrafts and Ground Stations Provided by Organizations Other Than Airport Authority of India" dated 10.12.2022 (CP No. 14/2022).

In this regard, please find enclosed our response for your kind consideration.

Thanking You,

Yours' Sincerely,

For Bharti Airtel Limited

Rahul Vatts

Chief Regulatory Officer

Encl: a.a



Executive Summary:

We appreciate the Authority for issuing this important consultation paper that relates to spectrum assignment and allocation for purpose of data communication services between aircraft and ground station - a service that is crucial for safe and secure operations of flights, and, this critical service is being used by two commercial operators.

On the licensing part, we recommend to create a simple and consistent unified licensing framework for such data communication services. Accordingly, this service should be added as a separate authorization under the Unified License with appropriate Terms & Conditions (T&Cs). A proper licensing framework will ensure level playing field in terms of service that uses spectrum and, will be consistent with the approach that the Government accepted post TRAI recommendation on Captive Non-Public Networks (CNPN) which has been brought under licensing.

On spectrum assignment approach, our understanding of international regimes suggests that this spectrum is allocated on an administrative basis, since it is shared. Hence the same approach in India may also be continued with, albeit with associated cost recovery of administering the spectrum and licensing. The spectrum should not be used for providing services of any sort to customers onboard the flight or any access services to customers by using VHF spectrum.

In summary we, submit that:

- Data communication services between Aircraft and Ground Stations should be brought under unified licensing as a separate service authorization.
- Assign this spectrum on administrative basis, subject to cost recovery of administering the spectrum and licensing.
- Spectrum should not be used for providing any service/access to customers on-board flights.

With these aspects on licensing and spectrum assignment approach, we provide our question wise response in the subsequent sections.



Q1. Whether there is a need to bring data communication services between aircraft and ground stations provided by organizations other than Airport Authority of India under service licensing regime? Kindly provide a detailed response with justification.

Airtel Response:

Yes, there is a need to bring in data communication services between aircraft (restricted to communication inside cockpit and crew members) and ground stations provided by organization other than AAI under service licensing regime i.e. Unified License.

As rightly recognized by the TRAI in this paper that as the Government has brought the establishment, maintenance, and working of Captive Non-Public Network (CNPN) under a licensing regime, the proposition to regulate data communication services between aircraft and ground stations under service license does merit consideration. Furthermore, this is a critical communication being used for commercial services, it needs to be regulated under a proper licensing regime with suitable technical, financial, security and operational conditions.

- Q2. In case your answer to Q1 is in the affirmative, should the providers of data communication services between aircraft and ground stations be licensed through —
- (a) an authorization under Unified License; or
- (b) a separate service license.

Kindly provide a detailed response with justification.

Airtel Response:

We support the inclusion of a separate service authorization under the Unified Licence.

- Q3. What should be the broad terms and conditions of the licensing framework for data communication services between aircraft and ground stations, such as
- (a) licensed service area,
- (b) validity period of the license
- (c) scope of the license,
- (d) technical conditions,
- (e) operating conditions,
- (f) security conditions, and
- (g) financial conditions (such as application processing fee, entry fee, license fee, bank guarantees, etc.)?

Airtel Response:

The broad framework for data communication between aircraft and ground stations is listed below

- (a) Licensed service area National however communication should be restricted for usage within cockpit of the Aircraft or with crew.
- (b) Validity period of the license initial 20 years similar to other service authorizations under UL.
- (c) **Scope of the license** The UL should authorise ("the Licensee") to establish, install and/or use radio transmitting and/or receiving stations and/or radio apparatus/Radio equipment onboard Aircraft.

Technical, operating, security and financial conditions should be in line with the international best practices.



Q4. What should be the methodology for assignment of the spectrum in frequency range 117.975-137 MHz to the providers of data communication services between aircraft and ground stations? Should the spectrum be assigned administratively, or through auction, or through any other method? Kindly provide a detailed response with justification.

AND

Q5. In case administrative assignment is to be followed, what should be the mechanism for charging the VHF spectrum in the frequency range 117.975-137 MHz to be assigned to the providers of data communication services between aircraft and ground? Whether the auction determined prices for other frequency bands can be accounted for estimating the value of VHF spectrum in the frequency range 117.975-137 MHz? Kindly provide a detailed response with justification.

Airtel Response:

In the National Frequency Allocation Plan (NFAP), the frequency band 117.975-137 MHz has been allocated for Aeronautical Mobile (R) service, and on shared basis.

Since multiple or same flights cross paths over sky (of specific countries) as well as same flights travel to different foreign countries; it becomes imperative to have a harmony in frequency bands (including this range) in-line with international countries to facilitate flight operators with same frequency bands in different countries over different make and models of airplanes. For example, frequency 121.5 MHz is meant only for Aeronautical emergency situation across the globe for all Aircrafts.

Hence, we recommend that the methodology for assignment of the spectrum in frequency range 117.975-137 MHz to the providers of data communication services between aircraft and ground stations should continue to be on administrative basis since this spectrum has limited and restricted usage.

The administrative cost recovery should be simple, and set in a fair, objective and transparent manner. Further, all license holders in a given frequency band should be treated on an equitable basis.

We also propose the usage of frequencies assigned in the band 117.975 to 137 MHz, should be restricted within the cockpit of the Aircraft and restricted to only Flight Crew Members. In no-case should any spectrum be used for providing services of any sort to customers onboard the flight.

Q6. If auction methodology is to be followed, whether the valuation of VHF spectrum in frequency range 117.975-137 MHz assigned to the providers of data communication services between aircraft and ground stations should be derived by relating it to the valuation of other frequency bands by using technical efficiency factor? If yes, with which frequency band, should these frequencies be related to and what efficiency factor or formula should be used for estimating the value of VHF spectrum in frequency range 117.975-137 MHz? Kindly justify your suggestions.

AND

Q7. What are the prevalent international practices being followed in other countries for assignment and charging (including other applicable charges and fees) of spectrum in the frequency range



117.975-137 MHz, which is used for providing data communication services between aircraft and ground stations? Please provide a detailed response.

AND

Q8. Whether the valuation of VHF spectrum assigned to the providers of data communication services between aircraft and ground stations be derived using the methodologies used internationally in this regard? If yes, which of the methodologies can be followed? Please provide a detailed response.

AND

Q9. Apart from the approaches highlighted above, which other valuation approaches should be adopted for valuation of the VHF spectrum in the frequency range 117.975-137 MHz? Kindly support your suggestions with detailed methodologies, related assumptions, and other relevant factors.

Airtel Response:

Refer to our response to Q4 and 5.

Q10. Whether there are any other issues/ suggestions relevant to the subject? The same may be submitted with proper explanation and justification.

Airtel Response:

No Comments.