



RJIL/TRAI/2022-23/397

23rd January 2023

To,

Sh. Akhilesh Kumar Trivedi

Advisor (Networks, Spectrum and Licensing)

Telecom Regulatory Authority of India

Mahanagar Doorsanchar Bhawan

Jawaharlal Nehru Marg, New Delhi - 110002

Subject: RJIL's Comments on TRAI's Consultation Paper dated 10.12.2022 on "Data Communication Services between Aircraft and Ground Stations provided by organizations other than Airports Authority of India"

Dear Sir,

Please find enclosed the comments of Reliance Jio Infocomm Limited on the consultation paper dated 10.12.2022 on "**Data Communication Services between Aircraft and Ground Stations provided by organizations other than Airports Authority of India**".

Thanking you,

Yours Sincerely,

For Reliance Jio Infocomm Limited

Kapoor Singh Guliani

Authorized Signatory

Enclosure: As above

**Reliance Jio Infocomm Limited's comments on TRAI's Consultation Paper on
"Data Communication Services Between Aircraft and Ground Stations Provided by
Organizations Other Than Airports Authority of India" dated 10th December 2022.**

Preface:

1. **Reliance Jio Infocomm Limited (RJIL)** thanks the Authority for issuing this consultation paper to deliberate the critical issues pertaining to **data communication services between Aircraft and Ground Stations Provided by Non-Government Organizations**.
2. We submit that the air-to-ground data link to obtain information from aircrafts such as passenger information, aircraft engine parameters, etc. through "Aircraft Communication Addressing and Reporting system (ACAR)" is a **critical telecommunication service for Aircraft and passenger safety and should be brought under permanent regulatory oversight instead of adhoc permission-approval methodology in prevalence**.
3. We submit that under the prevailing regulatory oversight, all telecommunication services being offered in the country need to be offered under a license or authorization under section 4 of the Indian Telegraph Act 1885. **Therefore, it is imperative that the data communications between ground radio stations and the aircraft is also brought under the Unified License regime**. It is also evident from the perusal of International precedents shared by the Authority that Licensing is most preferred mode of regulating this ground to air service.
4. We understand that currently, there are only a handful of global service providers offering this particular service, however, with the rapid growth of air-traffic and airports in the country, this can be another area of growth for Indian service providers. **Therefore, it is important that this service sector is opened up to competition by providing a settled regulatory oversight**.
5. The Wireless Planning and Coordination (WPC) wing of Department of Telecommunications (DoT) has already allocated the frequency band 117.975-137 MHz for Aeronautical Mobile (R) service under the National Frequency Allocation Plan-2022 (NFAP-2022), in line with primary allocation by International Telecommunication Union (ITU). Considering the fact, the mentioned VHF communication can take place only in 'line of sight', this spectrum assignment is sufficient for these important ground to air communication services.
6. However, as currently the spectrum is assigned in an ad-hoc manner, it is critical that regular assignment should be done. We have a firm belief that auction is the best and

only mode of allocating spectrum is auction. It is also submitted that **international precedents have no relevance on the matter of spectrum allocation for any spectrum that will be used in commercial communication networks in India**, as India has a stable and predictable legal position on the subject. **The Hon'ble Supreme Court has clearly and unambiguously enunciated that right to use such spectrum can only be alienated by a transparent auction. We understand that this policy on allocation of spectrum, should be implemented for the VHF spectrum as well.**

7. Over the years, the Authority has derived various modes of valuation for spectrum. The auction determined price (ADP) and efficiency factor vis-à-vis other similar spectrum bands are the most used valuation methodologies. However, as ADP is not available in this case and there does not appear to be a similar usage of spectrum under any other services, this appears to be an uncharted territory.
8. Nevertheless, the closest range to have been auctioned near this spectrum band is the spectrum assignment for FM Radio. The Authority can use a combination of ADP for FM radio, the business case for the service basis data available with existing service providers and derive an initial valuation for the spectrum.
9. Further, as this spectrum assignment will be for a specific service, the scope of this service should be restricted only to line of sight data communication between ground station and cockpit of the aircraft. In no case, should this spectrum be used for providing any other service including to any customers onboard.
10. To summarise, we submit as under:

1. **The data communication services between Aircraft and Ground Stations should be offered only under a Unified License Authorization**
2. **The license should be given under a light touch regulatory oversight**
3. **The spectrum for this service should be auctioned**
4. **The scope of service should be limited to line of sight data communication between ground station and cockpit of the plane.**
5. **The valuation of spectrum should be done basis the empirical data and ADP of already auctioned spectrum closest to this band**

Issue wise response:

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.

And

- 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.**

RJIL Response:

1. We understand that all communication services being offered by Non-Government organizations should be offered within the **purview of Section 4 of Indian Telegraph Act and should be offered only under a suitable authorization under Unified License.**
2. The Authority in its Recommendations on Licensing Framework for Establishing and Operating Satellite Earth Station Gateway (SESG) dated 29th November 2022, noted that establishment, maintenance, and operation of Telegraph activities should be licensed under the Section 4 of the Indian Telegraph Act 1885. We are extracting and reproducing the clauses herein below:

While examining the views of stakeholders, the Authority observed that as per the section 3(1) of Indian Telegraph Act 1885, "telegraph" means any appliance, instrument, material or apparatus used or capable of use for transmission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, visual or other electro-magnetic emissions, Radio waves or Hertzian waves, galvanic, electric or magnetic means. Accordingly, the antenna sub-system and radio frequency (RF) sub-system, which are installed at SESGs, are, essentially, telegraph. Therefore, establishment, maintenance, and operation of SESGs should be licensed under the Section 4 of the Indian Telegraph Act 1885.... The Authority further observed that under such a license, the licensees will only provide satellite-based resources to service licensees, and will not provide services to the end users, therefore, it would be apt to regulate establishment of SESGs through a light touch license.

3. We submit that the data communication between a ground station and aircrafts, although only at line of sight level would come under **Telegraph and therefore should be licensed under Section 4 of Indian Telegraph Act. We submit that as in case of SESG, this license can be light touch.** However, we submit that the purpose of Unified License was to bring all licensing for communication services under one umbrella license, and all new licensing should be done only under Unified License.
4. Although, the complete unification of the license is yet to be completed. The fragmentation of licenses by creating new licenses outside the purview of the Unified

License should be strictly avoided and all licenses pertaining to telecommunication services should be issued as separate authorizations under Unified License only.

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.)?

RJIL Response:

1. The licensed service area should be pan-India and the licensees should be required to take permission through Saral Sanchar portal to operate at any new airports/locations. The license validity should be of 20 years.
2. The scope of service should be limited to data communication between ground-based radio station and aircraft radio station in cockpit of the plane. There should be explicit bar on any other service and the licensees should be prohibited from offering service to any customers onboard. **The remaining terms and conditions can be in line with the existing authorizations under the Unified license for data communications like Internet Services authorization and service specific relaxations can be provided.**
3. The Government has already relaxed the requirements pertaining to Bank Guarantees etc. and further simplifications are under discussion, therefore, the financial requirements for these service licensees should be drawn under the new paradigm and should not be onerous.

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.

RJIL Response:

1. We reiterate our firm belief that all spectrum for commercial/non-commercial telecommunication networks operated by non-Government entities should be assigned through a free and fair auction. **There is no need to continue re-inventing the mode of assignment of spectrum, when a settled and legally sanctified position is available.**

2. Therefore, we submit that auction is the only possible mode for assigning spectrum to providers of data communication services between aircraft and ground stations.

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.

RJIL Response:

We do not support administrative assignment of spectrum. This mode of spectrum should be strictly reserved for public utility activities undertaken by Government entities.

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.

RJIL Response:

1. The Authority has, over the years, evolved a detailed methodology for valuation of spectrum, involving various factors like technical efficiency, auction determined price and comparison with other bands. However, we believe that any new spectrum to be auctioned for the first time, the International benchmarking is most critical criteria, and should be given suitable weightage.
2. The frequencies used by providers of data communication services between aircraft and ground stations are closer to FM Radio frequencies than any other communication services, therefore, the auction prices of FM Radio can be an important factor in valuation of the spectrum.
3. **Further, the Authority can obtain actual data from the incumbent service providers SITA and M/s Bird Consultancy Services to understand the real value of spectrum for these services. A combination of international benchmarks, technical efficiency**

comparison with FM spectrum and actual data can be used for valuation of this spectrum.

4. As this will be a first of its kind auction, **we support a rational reserve price that will help discover the true market price of the spectrum.**

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.

RJIL Response:

We reiterate our submissions in response to question 6. Further, we reiterate that basis the jurisprudence evolved for spectrum allocation in the country, we do not need to look at international examples to support the auction-based model. Instead, Indian auction-based model should be the one to aspire for the rest of the world.

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

RJIL Response: None