



VIL/PB/RCA/2023/002

January 23, 2023

Advisor (Networks, Spectrum and Licensing)

Telecom Regulatory Authority of India,

Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road),
New Delhi – 110002

Kind Attn: Shri Akhilesh Kumar Trivedi

Subject: Comments on the TRAI's Consultation Paper on "Data Communication Services between Aircraft and Ground Stations Provided by Organizations Other Than Airports Authority of India" dated December 10, 2022

Dear Sir,

Kindly find enclosed herewith comments from Vodafone Idea Limited to the TRAI's Consultation Paper on "Data Communication Services between Aircraft and Ground Stations Provided by Organizations Other Than Airports Authority of India" dated December 10, 2022.

We hope our comments will merit your kind consideration please.

Thanking you,

Yours sincerely,

For **Vodafone Idea Limited**

P. Balaji
Chief Regulatory & Corporate Affairs Officer

Enclosed: As stated above

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**VIL Comments to the TRAI Consultation Paper on
“Data Communication Services between Aircraft and Ground Stations Provided by
Organizations Other Than Airports Authority of India”**

At the outset, we are thankful to the Authority for giving us this opportunity to provide our comments to the TRAI Consultation Paper on “Data Communication Services between Aircraft and Ground Stations Provided by Organizations Other Than Airports Authority of India” dated 10.12.2022.

In this regard, we would like to submit our question-wise comments for Authority’s kind consideration, as given below:

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.

VIL Comments to Q. no. 1

1. The consultation paper at para 1.1 provides extract of DoT’s reference to TRAI on frequency assignment made in VHF band to two entities to operate VHF Data Communication Link between aircrafts and ground. Relevant extract of the paper, is given as follows:

“During 2006-2010, this Ministry made frequency assignments to M/s Société Internationale de Telecommunications Aeronautiques, (SITA) and M/s Bird Consultancy Services (BCS) to operate VHF Data Communication Link between aircrafts and ground”

2. The DoT’s reference given in this paper i.e. at point no. 4 under para 1.1 mentions that the assigned radio frequency is used to provide data based services to airlines operators which is not provided by Airport Authority of India. This VHF data link service between aircraft and ground stations is used to obtain information and consists of data such as position reports, weather updates, engine health messages and can be beneficial to track aircraft on a real-time basis. Relevant extract of the paper, is given as follows:

“4. As per information made available to DOT by M/s BCS, both organisations use the assigned radio frequency to provide those service (data based services) to airlines operators which is not already provided by the Airport Authority of India (voice based communication mainly the Air traffic control service, i.e. 'ATC'). Further,



as per clarification provided by these organisations, the air-to-ground data link is used to obtain information from aircrafts such as passenger information, aircraft engine parameters, etc. through "Aircraft Communication Addressing and Reporting system (ACAR)" operated under relevant International standards (ARINC etc.). Aeronautical Radio, Incorporated (ARINC), established in 1929, is a major provider of transport communications and systems engineering solutions for eight industries viz. aviation, airports, defense, healthcare, networks, security etc."

3. The DoT's reference given in this paper at point no. 3 under para 1.1 further mentions that during processing of applications for additional locations, concern was raised about the commercial angle involved in the services rendered to airlines operators and whether such service should be regulated through 'service license' considering it being offered in a sensitive area. Relevant extract of the paper is given as below:

"3. While processing the applications for additional locations, a concern was raised that the operations by both M/s SITA and M/s BCS were not captive (internal use) in nature, and there could have a commercial angle in the operation that involved a service rendered to airlines operators. A further concern was whether such services, being offered in a sensitive area as civil aviation, should be regulated under any "service license"."

4. In this regard, we would like to bring your attention towards related provisions of Indian Telegraph Act, 1885, as given below:

*"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.
Explanation. – "Radio waves" or "Hertzian waves" means electro-magnetic waves of frequencies lower than 3,000 giga-cycles per second propagated in space without artificial guide;]*

"message" means any communication sent by telegraph, or given to telegraph officer to be sent by telegraph or to be delivered;

5. Thus, as per said provisions, the data communication services given over radio frequency in VHF for communication between aircraft and ground stations, will come under the ambit of Indian Telegraph Act.



6. Further, the data communication service is being given by a commercial entity to another commercial entity and thus, we agree with DoT's concern that this service is certainly commercial in nature as well as for sensitive purposes.
7. Considering all above, in our view, said data communication services being provided through radio frequencies, shall be regulated through a suitable licensing framework under Section 4 of Indian Telegraph Act, 1885.

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.

VIL Comments to Q. no. 2

1. In the National Frequency Allocation Plan, 2022, the frequency band 117.975-137 MHz has been globally allocated for Aeronautical Mobile (IR) services. These entities provide the aforementioned services within the range of 131.725 MHz and 136.975 MHz. Thus, the NFAP already takes care of purpose for which said frequencies can be assigned and used.
2. However, there is a need to regulate such data communication services and radio frequency usage, between aircraft and ground stations and it should be brought under service licensing regime. In our view, they **should be regulated through a suitable license (separate Authorization under Unified License) with a defined scope and for data communication services between Aircraft and Ground stations and no services to aircraft passengers or otherwise.**
3. As services rendered by such organizations are highly technical in nature and being offered in such a sensitive zone like aviation, hence, they should be regulated by the Government. Any sort of spectrum assignment should be equipped with a monitoring and enforcement mechanism to ensure adherence to terms and conditions of its usage.

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.)?

VIL Comments to Q. no. 3

1. The terms and conditions should also be defined for assignment and use of such spectrum as well as provision of data communication services to airlines. In our view, following would have to be included in the said terms and conditions:
 - a. **Licensed service area:** The Service Area for such communication services between aircraft and ground stations should be at National Level.
 - b. **Validity period of the license:** Since the services are sensitive in nature and involve safety of air passengers coupled by the fact that the market is served by only 2 entities, the validity period should be 20 years, as in the case of other authorizations.
 - c. **Scope of the license:** The scope of the license should restrict it to be used only for communication between aircraft / its crew and Ground station. It should be clearly mentioned that aircraft passengers would not be given service through this license, to avoid any ambiguity and overlap with access or in-flight communication services.
 - d. **Technical conditions:** Since these activities involve safety and security aspects, the equipment and products involved should meet Indian standards prescribed by Government bodies. In the absence of such mandatory standards, these entities can be allowed to meet relevant international standards as recognized by the aviation authorities. Further, conditions for inspection and testing by the Licensor or through its nominated 3rd party, should also be added.
 - e. **Operating conditions:** Certain operating conditions like ensuring continuity of services to its customers unless license is revoked or suspended by the Licensor, should also be formulated.
 - f. **Financial conditions:** There should be suitable financial conditions covering License fees and securitization of payments.



- g. **Miscellaneous:** Further, conditions pertaining to review of License and power to issue guidelines/instructions should also be included.

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.

And

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.

VIL Comments to Q. no. 4, 5 and 6

1. Considering spectrum is a valuable and inexhaustible natural resource as well as having element of public good, we believe that it is vital to ensure efficient management and use of the spectrum as well as no loss to the National Exchequer.
2. As the spectrum is being given for commercial services to a commercial entities, therefore, same should be allocated through a transparent and open auction process. The valuation should be derived by relating it to the valuation of other nearest frequency bands, based on the auctioned determined price of such frequency band along with the other technical factors.



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.

VIL Comments to Q. no. 7

No comments.

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.

VIL Comments to Q. no. 8

No comments.

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.

VIL Comments to Q. no. 9

1. The principle being used for spectrum allocation model and valuation approach for providing services, should be uniform across different spectrum bands and services.
2. For the instant case as well, the spectrum should be allocated through auction and the valuation should be derived by relating it to the valuation of other nearest frequency bands, based on the auctioned determined price of such frequency band along with the other technical factors.



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

VIL Comments to Q. no. 10

No comments.

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