



Date: 31st August 2023

To,

Shri Akhilesh Kumar Trivedi,
Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India
New Delhi

Sub: Counter Response to Supplementary TRAI Consultation paper on “Data Communication Services Between Aircraft and Ground Stations Provided by Organizations Other Than Airports Authority of India”

Dear Sir,

This is in reference to the Supplementary Consultation Paper on “Data Communication Services Between Aircraft and Ground Stations Provided by Organizations Other Than Airports Authority of India dated 3rd August 2023” for which SITA has already filed its responses with TRAI on 17th August 2023. SITA has also shared its views earlier on the Consultation paper.

We wish to submit our counter response to some of the observation received by the Authority which have been published on TRAI portal.

We thank you for your consideration,

Yours sincerely,

For SITA Information Networking Computing (India) Private Limited

Rajesh Ballal

Director, Regulatory Affairs, Asia Pacific Region

- **Auction of entire band of spectrum:** SITA has observed some advocacy for the whole range of spectrum be auctioned. We believe that there is a misunderstanding on the use of the concerned band discussed within the public consultation. The VHF band is assigned to different establishments providing different services.
- SITA believes the thought process behind these suggestions are that there should be sufficient spectrum available for allocation of spectrum for all interested CSPs. As mentioned in our earlier response, the traffic volume in the India is increasing exponentially, therefore there is a need for CSP to have minimum two POA and VDL channels of 25 kHz bandwidth each. SITA is of the opinion that 4 to 6 channels of 25 kHz each would be sufficient for VHF service. There would be many other use case that may come in future for the remaining spectrum, thus placing the whole band of spectrum may restrict the future growth.
- It's important to note that in the band 117.975 – 137 MHz there are some frequencies that are reserved for specific use (tower and approach services, emergency, operational control services, just to name a few) and are not assignable to the CSPs. (Table 4-1 of Annex 10, Vol V providing the allotment table).

Table 4-1. Allotment table

<i>Block allotment frequencies (MHz)</i>	<i>Worldwide utilization</i>	<i>Remarks</i>
a) 118.000 – 121.450 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in the light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
b) 121.500	Emergency frequency	See 4.1.3.1. In order to provide a guard band for the protection of the aeronautical emergency frequency, the nearest assignable frequencies on either side of 121.500 MHz are 121.450 MHz and 121.550 MHz.
c) 121.550 – 121.9917 inclusive	International and National Aerodrome Surface Communications	Reserved for ground movement, pre-flight checking, air traffic services clearances, and associated operations.
d) 122.000 – 123.050 inclusive	National Aeronautical Mobile Services	Reserved for national allotments. National assignments are covered by the provisions of 4.1.4.8 and 4.1.4.9.
e) 123.100	Auxiliary frequency SAR	See 4.1.3.4. In order to provide a guard band for the protection of the aeronautical auxiliary frequency, the nearest assignable frequencies on either side of 123.100 MHz are 123.050 MHz and 123.150 MHz.
f) 123.150 – 123.6917 inclusive	National Aeronautical Mobile Services	Reserved for national allotments, with the exception of 123.450 MHz which is also used as an air-to-air communications channel (see g). National assignments are covered by the provisions of 4.1.4.8 and 4.1.4.9.
g) 123.450	Air-to-air communications	Designated for use as provided for in 4.1.3.2.
h) 123.700 – 129.6917 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
i) 129.700 – 130.8917 inclusive	National Aeronautical Mobile Services	Reserved for national allotments but may be used in whole or in part, subject to regional agreement, to meet the requirements mentioned in 4.1.6.1.3.
j) 130.900 – 136.875 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
k) 136.900 – 136.975 inclusive	International and National Aeronautical Mobile Services	Reserved for VHF air-ground data link communications.



- **Direct Frequency Assignment to Airlines:** To our understanding there are restriction on airlines seeking frequency assignment from DOT. However, it is important to note that the existing CSPs use only a small portion of the band 117-137 MHz to provide their voice and datalink services while other incumbents use the remaining band for some operational services, tower communications, etc. if every airlines also becomes a CSP then there may be few other consideration to be looked into:-
 - The CSC whose acronym is Common Signaling Channel operate at 136.975 MHz. This channel is reserved on a worldwide basis regardless of the Communication Services Provider (CSP) and all the avionics providing VDLM2 have this frequency recorded or hard-coded in their database. Doc 9776 Manual on VHF Digital Link mentions the following: *The designation of a common signaling channel (CSC) provides a ready means for an aircraft first to log on to the system. When coverage exists in an area, it will always exist at least on the CSC. Once a connection is established on the CSC, an aircraft can be returned to any discrete frequency within the assigned frequency range. The CSC also may be utilized as a common channel, when there is an emergency, or as a default channel whenever communication is lost; when traffic is light in an area, it may be used as a normal data channel.*

Giving auction of the VHF band will simply jeopardize the way the VDL mode 2 and ACARS system works and the fact that this band is allocated to the Aeronautical services, managed by the ICAO. In addition, each airline which have a contract with one of the CSPs have their onboard avionic configured to get access to the services provided by the CSP. The avionics table get the following information's:

 - List of the preferred CSP base frequency for POA.
 - List of preferred service providers for VDLM2.
 - It is also important to recall that the use of the VHF band assigned to the CSP is to provide services to the cockpit part, not to the passengers.
 - The technologies to be used is the VHF Datalink system or voice system operating respectively within 25 kHz and 8.33 kHz or 25 kHz.
 - A central VHF management entity which will dictate to the aircraft when to hand over to another alternate frequency or hand off to another station.
 - A Need to have an assigning service provider identification which is provided by AEEC. However, the difficult part is to get aircraft to actually use the network because the DSP ID must be configured inside the datalink avionics and that process takes years and costs a lot of money. As a result, by allowing other entrants to obtain the licence to provide the aforementioned services, it would simply mean that no ACARS and datalink services would be provided over India.
 - a datalink processor is requested in order to pass all communications between a datalink user and the aircraft through the datalink processor
 - In addition:-
 - If every airlines (domestic & International) considers to take WOL for every airport they are operating in India, then it would be very difficult for them to manage and they will deviate from Aviation to Telecom related activity. This is the very reason they are managed by operators like SITA and BCS.
 - If these airlines chose to not just use the allocated frequency form themselves but for all other airlines, then they would be no different from existing CSPs.