

## **INMARSAT'S COUNTER COMMENTS TO THE ISSUES RAISED IN THE TRAI CONSULTATION PAPER 14/2017 on IFC**

### **Introductory Note:**

Inmarsat counter-comments on all the questions raised by TRAI are provided below. One general comment is that it appears that some respondents addressed the IFC services from a pure Air-To-Ground (ATG) point of view, claiming that ATG may offer a better alternative for airlines in India compared to satellite based solutions.

Inmarsat prides itself for being a global connectivity player, having covered aeronautical communications needs for decades. Inmarsat IFC solutions include satellite networks (in L and Ka-band) as well as a pan-European integrated satellite and ATG network in S-band. While Inmarsat acknowledges the inherent benefits of ATG connectivity for the Indian market, we believe the consultation document does not address a number of important considerations (including global coverage) related to this potential IFC solution, which would merit a separate consultation by TRAI in due course. In the meantime, Inmarsat is not providing any further specific comments related to ATG in this document.

### **Q.1: Which of the following IFC services be permitted in India? a. Internet services b. Mobile Communication services (MCA service) c. Both, Internet and MCA**

Inmarsat notes that the majority of respondents recommend the introduction of both Internet IFC and MCA and we reiterate our support to this. Inmarsat also understands the concerns raised by some respondents with regards to the potential higher complexity of MCA compared to Internet IFC when it comes to regulatory measures. In this regard, we concur with the majority of industry stakeholders that, in case TRAI decides that such potential complexity requires further considerations, this should not delay the introduction of Internet IFC in the short term. MCA on foreign aircrafts transiting Indian airspace at cruising altitude could also be introduced in the short term, as the concerns voiced against MCA are not relevant in this case.

### **Q.2: Should the global standards of AES/ESIM, shown in Table 2.1, be mandated for the provision of AMSS in Indian airspace?**

While most of the respondents are supportive of TRAI adopting global standards for the introduction of IFC services in India, some positions reflect a more restrictive approach whereby, for instance, only Ku-band is mandated. Inmarsat strongly disagrees with such restrictive approach as this will adversely affect the competitiveness in the Indian IFC market place, to the detriment of end users. Inmarsat reiterates its support to adopting global standards for the bands widely used for IFC (L, Ku and Ka) and ensuring the relevant provisions of the IFC policy are flexible enough to adopt any new or updated global standards and/or spectrum bands in the future.

**Q.3: If MCA services are permitted in Indian airspace, what measures should be adopted to prevent an airborne mobile phone from interfering with terrestrial cellular mobile network? Should it be made technology and frequency neutral or restricted to GSM services in the 1800 MHz frequency band, UMTS in the 2100 MHz band and LTE in the 1800 MHz band in line with EU regulations?**

Inmarsat concurs with the majority of respondents that the already available technical guidance in relevant ECC decisions (as detailed in our response to the consultation) are sufficient to address any concerns about potential interference between MCA services and terrestrial mobile services in the given band. Hence, no additional measures would be required. We also note that such concerns are not relevant when foreign aircrafts are transiting India at cruising altitude, as there would be no risk of interference) and subsequently, MCA should be allowed without any additional measure in this particular scenario.

In all cases, any regulatory considerations specific to MCA should not delay the introduction of Internet IFC services in the short term.

**Q.4: Do you foresee any challenges, if the internet services be made available 'gate to gate' i.e. from the boarding gate of the departure airport until the disembarking gate at the arrival airport?**

Inmarsat notes the large consensus amongst the respondents on the importance of allowing Gate to Gate as a key factor for a successful adoption of IFC services in India. Most respondents also agree that there are no regulatory, technical or operational challenges associated with it.

Inmarsat believes that the concerns raised by some of the respondents with regards to the risk of interference are largely driven by a misunderstanding of the nature of the service. While such concerns may be valid for MCA services (and are addressed accordingly by the technical guidance provided in the relevant ECC decisions), WiFi based Internet IFC services are different in nature and do not present any risk of interference (as detailed in our response to the consultation).

We also note that some of the responses are specifically addressing Gate-to-Gate from an MCA angle, which is not relevant given that Question 4 relates Internet IFC services only.

Accordingly, we urge TRAI to discard any concerns raised in the responses to this question which are related to MCA.

**Q.5: Whether the Unified Licensee having authorization for Access Service/Internet Service (Cat-A) be permitted to provide IFC services in Indian airspace in airlines registered in India?**

While Inmarsat does not object to the views of some respondents supporting the eligibility of a Unified Licensee holding an authorization for Access Service/Internet Service (Cat-A) to offer IFC to Indian registered airlines, we note the following:

- We reiterate our position that Unified License may not be considered as a necessary condition to offer IFC services. Other types of telecommunication service license holders in India could also be permitted to offer IFC services to Indian registered airlines.
- As mentioned by many respondents, as well as Inmarsat, a number of requirements attached to a Unified License would be excessively cumbersome in the context of international IFC, as such requirements would seem more suitable to a domestic service provision framework. Given the nature of IFC services, it would be appropriate for different requirements to be adapted in order to facilitate the introduction of IFC services, to the benefit of end users in India.

Notwithstanding the above, Inmarsat concurs with the views of the respondents suggesting that international airlines overflying India should be permitted to offer IFC services without the need to enter into agreement with a local licensee, as common elsewhere.

**Q.6: Whether a separate category of IFC Service Provider be created to permit IFC services in Indian airspace in airlines registered in India?**

Inmarsat welcomes and supports the views of some respondents in favour of creating a new category of IFC service provider (although not necessarily under the Unified License regime) to permit IFC services in Indian airspace for airlines registered in India. As mentioned also by several respondents, the ultimate goal of creating such a new category is to ensure flexibility and adaptability of the regulatory requirements to the nature of IFC services and a lighter and simpler framework. This also likely to invite foreign players to invest more substantially in the Indian telecom market.

However, given that creating a new category of service provider may take time and may need further consultations, Inmarsat also supports the views in favour of partnering with already duly licensed operators, as an interim solution for IFC services in Indian airspace in airlines registered in India

**Q.7: Whether an IFC service provider be permitted to provide IFC services, after entering into an agreement with Unified Licensee having appropriate authorization, in Indian airspace in airlines registered in India?**

Inmarsat notes that the majority of the respondents support the proposal of allowing IFC service providers to provide IFC services in Indian airspace for airlines registered in India after entering into an agreement with local licensee having appropriate authorization. Inmarsat supports this general approach, reiterating the belief that a Unified License should not be considered as a necessary condition for such an agreement. In other words, Inmarsat suggests a more open approach by extending the eligibility for an IFC service provider to enter into an agreement with any duly licensed operator in India.

Inmarsat concurs with the respondents suggesting that once such an agreement is in place, the IFC service provider should not be requested to seek spectrum authorisation or any other type of additional authorisation and/or license, since such authorisations would already be covered by the local duly licensed partner.

**Q.8: If response to Q.7 is YES, is there any need for separate permission to be taken by IFC service providers from DoT to offer IFC service in Indian airspace in Indian registered airlines? Should they be required to register with DoT? In such a scenario, what should be the broad requirements for the fulfilment of registration process?**

Inmarsat is in agreement with the majority of respondents objecting to the need for any separate permission from (or registration with) DoT for IFC service provider to be able to offer IFC service in Indian airspace in Indian registered airlines. Any potential benefits from such requirement would already be covered by the mandate to enter into an agreement with a duly licensed operator in India (or ultimately to hold own authorisation if specific category of IFC service provider is created for licensing purpose).

**Q.9: If an IFC service provider be permitted to provide IFC services in agreement with Unified Licensee having appropriate authorization in airlines registered in India, which authorization holder can be permitted to tie up with an IFC service provider to offer IFC service in Indian airspace?**

There is a large consensus amongst respondents that the type of authorisations should be adapted to the nature of the service to be offered. For instance, while Internet Service Provider authorisation holder should be permitted to offer Internet IFC services in partnership with an IFC service provider, MCA may require a different type of authorisation.

In this context, Inmarsat reiterates that Unified License should not be considered as a necessary condition to grant a permission to tie up with an IFC service provider to offer IFC service in India.

**Q.10: What other restrictions/regulations should be in place for the provision of IFC in the airlines registered in India.**

Inmarsat notes that several respondents also hold the same view that no additional restrictions should be placed upon the provision of IFC in Indian-registered airlines.

Most respondents mention the need to address security concerns regarding traffic being transmitted in the Indian Territory. Inmarsat acknowledges that this is a key area of concern, which is, however, already addressed under Question 13.

**Q.11: What restrictions/regulations should be in place for the provision of IFC in the foreign airlines? Should the regulatory requirements be any different for an IFC service provider to offer IFC services in Indian airspace in airlines registered outside India vis-à-vis those if IFC services are provided in Indian registered airlines?**

The majority of respondents concur with Inmarsat's position that the principle of reciprocity, as also enshrined in the Convention on International Civil Aviation 1944 (The Chicago Convention), signed by India in 1947, should be the key consideration with respect to foreign aircraft overflying India.

Where some respondents have commented that IFC on domestic and foreign aircraft should be treated the same, Inmarsat notes that, in addition to other consideration, should restrictions be placed on foreign aircraft overflying India, Indian registered airlines may be disadvantaged when overflying other countries.

It is also recognised by some respondents that foreign aircraft may be utilising foreign satellite systems to support their IFC services, as it would be impractical otherwise. Inmarsat does agree with this position, as explained in its response to Question 15.

Several respondents, including Inmarsat, acknowledge the importance of security aspects. The implementation of an in-country gateway for foreign airlines will take a long time to procure, prepare for and build. Furthermore, depending on the satellite network configuration, it may not be generally straightforward. Suitable alternative ad interim solutions, as proposed also by Inmarsat, could both meet the increasing pressure from airlines as well as the stringent security needs of the Indian government.

**Q.12: Do you agree that the permission for the provision of IFC services can be given by making rules under Section 4 of Indian Telegraph Act, 1885?**

Inmarsat is in agreement with the vast majority of respondents who have commented that the powers to introduce IFC services are contained within the current text of Section 4 of the Indian Telegraph Act, 1885. At the same time, we note the comments of one of the respondents has drawn attention to the need "to ensure that shortly after publication of IFC policy, holders of suitable licenses can enter into partnership with IFC providers".

**Q.13: Which of the options discussed in Para 3.19 to 3.22 should be mandated to ensure control over the usage on IFC when the aircraft is in Indian airspace?**

Inmarsat reiterates the need to draw a reasonable distinction between domestic (Indian) and foreign aircraft and is pleased to see this distinction also made in some of the replies.

Some respondents to this question have also commented that the solution proposed in Para 3.21 would be suitable, which is in-line with Inmarsat's comment to this Question, at least on an ad-interim basis. Most respondents recognise the complexity and long lead-time it takes to implement the options illustrated in Paras 3.19 and 3.20.

Further, Inmarsat agrees with several respondent's comments that the requirement to switching to a satellite of a different system is not efficient or easy to do. In any case, this issue is covered in Questions 14 and 15.

**Q.14: Should the IFC operations in the domestic flights be permitted only through INSAT system (including foreign satellite system leased through DOS)?**

The overwhelming majority of respondents advocate for a “more permissive, flexible and open choice of satellite capacity” based on the fact that the same aircraft may fly both domestic and international routes and mandating a specific satellite system would only add cost and complexity. Inmarsat therefore agrees with these same respondents that IFC service providers should be allowed to choose which satellite system works best for the customers and services they wish to provide.

Several of the same respondents note that security requirements should still be met; Inmarsat considers compliance with security conditions compatible with an open satellite choice for IFC service providers as satellite systems that endeavour to serve the Indian market will be in any case required to address security concerns.

Of the few respondents who responded in the affirmative to the question, no effort seems to have been made to mitigate the issues of international interoperability should the domestic aircraft be repurposed or be required to route internationally. It is important to bear in mind that such requirements would prove equally prohibitive for Indian aircraft wishing to fly over other countries that enforce use of a domestic satellite.

**Q.15: Should the IFC operations in international flights (both Indian registered as well as foreign airlines) flying over multiple jurisdictions be permitted to use either INSAT System or foreign satellite system in Indian airspace?**

Inmarsat emphasises the point that international flights cross multiple countries and continents, and therefore require seamless global coverage, which foreign satellite systems can provide and should, therefore, be permitted. Most consultation respondents agree with this assertion.

Some respondents suggest that instead of mandating the use of the INSAT system, the INSAT system could be one of several options available to IFC service providers to make the best choice for their market proposition.

As with responses to the previous question, few respondents who demand that aircraft on international routes must use INSAT do not address the issues of international interoperability, or the implications of requiring the use of INSAT frequencies and technology.

**Q.16: Please suggest how the IFC service providers be charged in the following cases?**

**(a) Foreign registered airlines.**

**(b) Indian registered airlines.**

(a) Most respondents suggest no fees for foreign registered airlines based on the principle of reciprocity. Inmarsat agrees with a fee-exempt status for foreign registered airlines. The remaining comments suggesting fees to be levied have suggested low or fixed fees, taking into account the difficulty of quantifying and identifying the number of aircraft per airline overflying the Indian Territory.

(b) Some comments relating to fees for IFC service providers of Indian registered airlines relate directly to the respondent’s respective view of how IFC service providers would be licenced in India. Several respondents advocate a simple regime with minimal charges, not to dampen demand. Inmarsat is supportive of the majority view on charges to be levied only on Indian registered airlines, where market forces should ensure it remains a competitive industry.

**Q.17: Should satellite frequency spectrum bands be specified for the provisioning of the IFC services or spectrum neutral approach be adopted?**

Most respondents reiterate the benefits and therefore need for a spectrum (and technology) neutral approach regarding IFC services. Freedom of choice for IFC service providers would ensure that the best service can be provided to suit the need of airlines. It is also important for the IFC policy to be "future-proof" by leaving the door open for potential new bands and technological advances in the coming years.

Counter to the above, some respondents advocate the specifying of a particular spectrum band. This will clearly limit the choice available to airlines and further condition innovation of the IFC market in India.

Finally, several respondents accurately note that IFC services on both foreign and domestic airlines would be better served by being able to use globally harmonised spectrum, which would facilitate international interoperability and Inmarsat is fully in favour of this.

**Q.18: If stakeholders are of the view that IFC services be permitted only in specified satellite frequency bands, which frequency spectrum bands should be specified for this purpose?**

As discussed in the counter comment to Question 17, many respondents are generally supportive of a spectrum neutral approach. Inmarsat also notes, once again, that few respondents specifically request only one spectrum band to be specified for IFC use, which will unnecessarily limit the choice and not encourage innovation.