

BIF Response to TRAI CP on In Flight Connectivity

**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**

BIF Response

While welcoming the TRAI Consultation on a subject of great contemporary interest and a service that will enable India to be on par with other developed economies which permit all international and domestic airlines to permit in-flight connectivity which besides fetching additional revenues for the carriers, provides and enhances consumer choice and better quality of experience for the time spent inside the aircraft besides helping and boosting overall productivity and efficiency

Having said that, BIF has since long been advocating opening up the skies to permit international quality services on par for domestic Indian customers as well as seamless quality of service for all international customers flying into and out of India .

BIF is in favour of permitting in-flight connectivity services, both Internet and MCA, which permits any traveler to connect to the terrestrial network including provision of Broadband/Internet services while inside the aircraft.

While the consultation focuses mainly on airline usage of IFC, BIF wishes to point out that private business aircraft are also served by IFC systems. The ITU and CEPT rules referred by the TRAI apply equally to these types of aircraft. BIF advocates that the rules eventually adopted by the TRAI pursuant to this consultation also allow IFC services on board business jets, private jets and executive transport aircraft.

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

BIF Response

Yes-BIF is of the opinion that for the purpose of in-flight connectivity, ESIM functionally serves the same purpose in the Ka band as AES does in the Ku band

Though all the global standards of AES/ESIM, as mentioned in Table 2.1, are based on standard international bodies viz. ITU, ETSI , ECC ; and they happen to be equivalent standards for similar applications, there are different administrations/regimes world over which follow different standards for the same or equivalent service.

While any of these global standards could be appropriately chosen for India, the following may be taken into consideration while choosing the same:

Since AES/ESIM is likely to operate on both National & International Airlines around the world and that circulation of AES is usually a subject of a number of national & international Rules & regulations including satisfactory conformance to a mutually agreed technical standard & operational requirements, identification of technical & operational requirements for AES/ESIM is perhaps more necessary.

Since India is closely associated with development and follows ITU-R activities closely and also that since ITU-R. M.1643 (06/2003) was issued in 2003 which provides the technical & operational requirements for AES of AMSS. Also AES Operations comply with the provisions of Recommendations of ITU-R M.1643 for protection of Fixed Services , FSS & RAS . Hence perhaps ITU-R regulations may be better suited amongst the global standards as the standards are available for operations in both Ku and Ka band as well.

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?

BIF response

With adoption of advanced technologies viz. NCU unit of MCA, Mobile devices in the aircraft are not permitted to connect to terrestrial networks on the ground. Also with the imposition of regulation of use of MCA systems on board the aircraft being permitted to aircrafts cruising at an altitude of 3000 metres and above, it is safe to suggest that there will be minimal risk of interference between the two systems

It should be made technology and frequency neutral as well and not restricted to only GSM services

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?

BIF Response

All Internet /Broadband services are desirable from 'Gate to Gate' on a seamless basis. However, it is understood that there are likely to be some challenges as regards interference to navigational systems with Cellular Mobile Communication during climb & approach as per DGCA guidelines i.e. up to 3000 meters altitude.

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?

BIF response

In keeping with the general principles of minimum regulation in all its discourse and responses to TRAI and also to other arms of the Government including DOT & DOS, BIF is of the opinion that IFC services should be treated as another class of data based services or Internet based services and not as an access provider.

Going by this line of reasoning, hence the IFC service provider could and should be treated similar to that of a M2M service provider or a Wifi hotspot service provider and in consonance with the liberal regime of permissions being accorded without need for any license (based on previous TRAI Recommendations for similar services), the same may be permitted with the help of a mere 'Registration'. For the backhaul connectivity and for all/any other resources required to facilitate the service (be it bandwidth/GSM/Mobile Connectivity etc), he may take recourse to a possible understanding/collaboration with any UL /VSAT Licensee.

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

BIF Response

As mentioned in the Consultation Paper itself by the Authority, under Section 4(1)(a) of the Indian Telegraph Act 1885, one option could be to give permission for the provision of IFC services by making rules under Section 4 of Indian Telegraph Act, 1885 for a separate category of IFC Service providers. We support that.

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?

BIF response

As mentioned in response to a previous question, an IFC service provider may be treated as a data based service provider or an Internet based service provider and hence he is not required to obtain any license. He can start the service using mere 'Registration'. For delivering services, he would definitely have to have an agreement/arrangement to get internet bandwidth on board the aircraft, for which he would need to have the same either from a UL with appropriate authorization or a VSAT –CUG licensee.

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 fulfillment of registration process?

BIF Response

As mentioned in response to a previous question, IFC may be permitted through mere 'Registration'. This may be done through perhaps an online portal with DOT. These requirements /compliances should be under 'no worse off' conditions/requirements than those which are proposed to be offered to PDOAs (Wifi hotspot aggregators) or M2M Service Providers using unlicensed spectrum, under the current dispensation as proposed in the existing TRAI Recommendations for the respective services.

However as a specific response to this question, no separate permission is required to be taken from DOT , once the IFC service provider is already registered with DOT

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?

BIF Response

An IFC Service Provider could possibly tie –up with any of the following service providers viz.

- a) Unified Licence with Access Service or Internet Service authorization
- b) Unified Licensee (UL) having authorization for Access Services for the provision of Internet as well as MCA service.
- c) Unified Licensee with authorization for Internet Service (Category-A), if it wants to provide only Internet Service. IFC service provider may possibly be permitted to provide IFC services in association with Access Service licensees such as Cellular Mobile Telephone Service (CMTS) licensees, Unified Access Service (UAS) licensees, Unified Licensee (Access Service) and also ISP (Cat-A) licensees.
- d) VSAT-CUG licensee who has also acquired ISP authorization
- e) Unified Licensee having Global Mobile Personal Communication by Satellite (GMPCS) Service authorization.
- f) Licensee having Unified License (with authorization for all Services)

However it is desired that the IFC Service Provider should enter into agreement with a UL with authorization for VSAT Services and also ISP (Cat A) Internet Services

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

BIF Response

Once registered with DOT and with necessary agreements in place for provision of requisite bandwidth inside the aircraft, perhaps no other restrictions/regulations are

required except those that are required as per statutory regulations viz. No use during climb & approach i.e. up to 3000 meters altitude .

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?

BIF Response

Under the Convention on International Civil Aviation (The Chicago Convention), aircraft registered to a member country may use radio transmitter equipment over another country's territory provided that the transmitter is licensed by the country that registered the aircraft and that said use is in compliance with the regulations of the country over which the aircraft is flying.

The concept of reciprocity (i.e. “the granting of a right or benefit by a State to a foreign airline when it has no international obligation to do so, on the condition that the same treatment will be accorded to its airline by the home State of that airline”) is used frequently in the aviation sector.

When offering IFC services on International flights, Indian airlines will overfly other countries airspace and will want to have the ability to provide continuity of service. The authorisation for IFC provision on foreign aircraft while overflying is already provided on a global basis, with very few exceptions. Foreign airlines, while in Indian airspace, may like to have the same rights to provide IFC services to their passengers.

As regards the regulatory requirements for an IFC service provider to offer IFC services in Indian airspace in foreign airlines (registered outside India) vis-à-vis those if IFC services are provided in Indian registered airlines, it should be on reciprocal basis.

For ICAO mandated communication equipment, reciprocity is already in place.

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?

BIF Response:

As responded earlier, BIF agrees.

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?

BIF Response:

It should be ensured that the lawful interception issues are fully addressed before permitting IFC. There is no need to introduce any difference between domestic and international carriers in this respect.

As regards how to provide Lawful Intercept capability, BIF suggests that the choice may be left to the IFC providers to decide as to how they shall accomplish it, without compromising on the lawful interception requirements.

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

BIF Response

BIF has advocated in several forums that we should be more permissive, flexible and open about the choice of satellite capacity when it comes to selection of the satellite bandwidth/capacity supplier for commercial applications like the one under discussion. Keeping in view that ethos/principle, BIF seriously urges the Authority not to curtail /constrain the choice of the service providers of IFC services by permitting only through DOS controlled and owned satellites (INSAT/GSAT series etc.) but to be liberal and flexible enough to permit international satellites with footprints over India as long as the security guidelines are complied with and satellite(s) proposed to be used are coordinated with Indian satellite systems.

This will enable global efficiencies and lower costs when it comes to delivery of IFC services and thereby lead to a better overall customer experience

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?

BIF Response

BIF is in favour of a liberal and flexible approach, so as to leave the choice of satellite to the IFC service provider, as long as the security guidelines are complied with and satellite(s) proposed to be used are coordinated with Indian satellite systems.

Q.16 Please suggest how the IFC service providers be charged in the following cases? (a) Foreign registered airlines. (b) Indian registered airlines.

BIF Response

IFC service provider typically charges a flat fee for usage of the service by the passengers while inside the aircraft. However, it is quite possible that there would be a graded charge

depending on the service used/bandwidth deployed just like it is in the case of terrestrial services which are based on different plans

It is perhaps more appropriate to treat IFC Service providers just like one would treat an M2M Service Provider or a PDOA for example. Since the chosen model is registration based and this is a new service with the potential of enhancing the quality of customer experience while travelling, it may be perhaps more prudent to incentivize& encourage its deployments over all carriers at this stage and therefore not to charge any entry fee for this new category of service. The same can be reviewed say after 3 years.

However, as the IFC service provider shall enter into commercial agreements with Unified Licensee/VSAT licensee for the provision of IFC services, the revenue earned by the Unified Licensee will get added to its Adjusted Gross Revenue (AGR) which is subjected to the Licence Fee and SUC. So, the Government shall anyway be able to enhance their revenue base with the proliferation of IFC services.

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

BIF Response

BIF favours a market driven approach instead of a regulated one. Hence it recommends that IFC services should be provided on spectrum neutral basis and operators should be freely permitted to consider which bands are best suited for their needs in order to deliver high quality IFC services in the most efficient and productive manner, from amongst the ITU Recommendations applicable for India under the Region 3(for Allocation of frequency bands to different radiocommunication services), and once the satellite(s) proposed to be used has been coordinated with Indian satellite systems.

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?

BIF Response

BIF is of the view that it is best left to the operators of IFC services themselves to decide, from amongst the ITU Recommendations applicable for India under the Region 3(for Allocation of frequency bands to different radiocommunication services).