



ITU-APT Foundation of India

ITU-APT Foundation of India (ITU-APT) response to TRAI Consultation on IFC November 3, 2017

ABOUT ITU-APT

ITU-APT Foundation of India (ITU-APT) is a non-profit, non-political registered society, is working for last 10 years in India with the prime objective of encouraging involvement of professionals, corporate, public/private sector industries, R&D organizations, academic institutions, and such other agencies engaged in development of Indian Telecom sector in the activities of the International Telecommunication Union (ITU) and the Asia Pacific Telecommunity (APT). The society has been registered with the registrar of the societies with its secretariat working at New Delhi. Globally, the counterpart organizations of ITU-APT are the ITU Associations in Japan and in the USA, where predominantly manufacturing, R&D and operating entities engaged in Telecom sector are their members. ITU-APT is working to foster closer relationship with them. ITU-APT Foundation of India (ITU-APT) is sector Member of the ITU Development Bureau (ITU-D) and ITU Telecommunication Standardization Bureau (ITU-T) which manifests its usefulness of the Indian Telecom industry The Foundation members are entitled to participate in the activities of ITU-D, ITU-T and ITU-R.

ABOUT IFC

New satellite and wireless communications technologies are making it possible to provide ubiquitous coverage for In-Flight Connectivity (IFC) across the globe. It is possible for the passengers to have telecom services in the Aircraft travelling at cruising speeds and altitude As technologies to provide such access have developed, so too have consumers' expectations who now desire seamless connectivity regardless of their location - whether on land, in the air or on the sea.

It is estimated that the connected commercial aircraft are expected to grow to about 25000 in next 7-8 years. Since 2007, IFC services have been introduced by many airlines in Africa, Asia, Australia, Europe, the Middle East and South America. Although in-flight Wi-Fi hasn't been available for very long, passenger surveys show growing demand for this service among travelers and more than 70 airlines now offer in-flight Wi-Fi in most of the regions of the globe. The launch of High Throughput Satellites (HTS) in both Ku-band and Ka-band is expected to be a game-changer for the IFC market. HTS systems will not only tremendously increase data speeds to the plane compared to regular satellite systems, but will also significantly lower costs, thereby further driving the adoption of IFC services. In-flight Wi-Fi continues to grow in both airline adoption and capability.

In addition, mobile communication services on board Aircraft have already been deployed successfully in many countries around the world without any adverse incidence. There are currently over 30 airlines already allowing mobile phone use on aircraft. These services have successfully been operated without causing harmful interference to either to aircraft control and communications systems or to the terrestrial commercial wireless networks

Given this rapidly expanding demand for voice, data and video services over Indian airspace for domestic, international and overflying flights in Indian airspace, ITU-APT foundation of India is pleased to provide the following comments on TRAI consultation on IFC as below

ITU-APT RESPONSE TO TRAI

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

ITU-APT Response

IFC services are becoming important for increased velocity of business and to support countries' economic development. We therefore strongly encourages introduction of IFC services in India. We also fully support Mobile Communication services (MCA service) for both Indian and foreign carriers – whether operating locally, internationally or overflying over Indian airspace

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

ITU-APT Response:

Yes, ITU-APT believes that global standards should be mandated. Due to the cross-border nature of air transport and related IFC services, it is fundamental that internationally recognized and harmonized standards are adopted. The content of Table 2.1 is widely accepted and contains the essential technical and operational conditions for the operation of these types of terminals.

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?

ITU-APT Response:

Technical guidance in EC Decision 2008/294/EC, Commission Implementing Decision 2013/654/EU (as amended by Decision 2016/2317/EU) and ECC/DEC(06)07 should be

considered. The technical conditions therein contained have been successfully implemented and accordingly operated over a number of years without any emerging reason for concern about such interference.

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?

ITU-APT Response:

ITU-APT does not foresee any challenge from a technical, operational and regulatory perspective, arising from IFC services provided on aircraft from "gate to gate". On the contrary, users now demand gate-to-gate operation as an integral part of the internet service needed by all users.

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?

ITU-APT Response:

While duly licensed operators in India may be permitted to offer IFC services to Indian registered airlines, ITU-APT is of the opinion that no further license or registration should not be needed when Foreign Registered airlines provide IFC services while in or overflying Indian airspace. A simplified on line Registration process can be implemented for the Indian registered airlines providing IFC services. However, it must be ensured that the IFC operator in all cases has an agreement with a licensed Indian operator.

Q6: Whether a separate category of IFC Service Provider be created to permit IFC services in Indian airspace in airlines registered in India?

ITU-APT Response:

Yes, in line with the above, we believe that a separate simplified on line Registration process can be implemented for the airlines providing IFC services for Indian registered airlines

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?

ITU-APT Response:

Yes, ITU-APT believes that entering into an agreement with a duly licensed operator in India should allow an IFC service provider to provide IFC services in Indian airspace to aircraft registered in India. With such agreement, the roles would be complementary while guaranteeing a local presence. Both parties would use their own infrastructure and

operational/commercial expertise for ensuring best experience to the customers at the lowest price.

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?

ITU-APT Response:

As long as the IFC service provider enters into valid agreement with existing licensed services providers and all customers billing is handled through existing licensed operators in India, There should be no need for any further registration with DOT. However for wireless equipment installed on the aircrafts, necessary WPC license should be taken by the IFC operators as the case may be.

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?

ITU-APT Response: An IFC service provider must enter into an agreement with a duly licensed operator of the type of service that is proposed to be offered under IFC

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

ITU-APT Response: An IFC operator must obtain necessary WPC license to own and operate a wireless station in the aircraft.

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?

ITU-APT Response: For foreign Registered airlines, the process should be same as it is today for the wireless equipment they carry. In addition, they must enter into an agreement with an Indian operator for providing services while in Indian Airspace.

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?

ITU-APT Response

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Yes, Necessary rules under section 4 of ITA-1885 should be sufficient

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?

ITU-APT Response:

ITU-APT is of the view that alternative option along the lines described in Para 3.21 may be best for the introduction of IFC services.

While the deployment of a gateway, as outlined in Para 3.20, may provide the stable, long term solution, the possibility of alternative options (e.g. those in Para. 3.21) should also be considered, at least on an ad-interim basis, to allow for prompt deployment with the most appropriate IFC technology to fit the Airline needs. As far as Para 3.19 and 3.22 are concerned, it is clearly essential, given the intrinsic international nature of the service, that the option of flexibly using foreign satellites is retained.

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

ITU-APT Response:

No. The option of which satellite to use should be left to the discretion of the airline or the IFC operator

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?

ITU-APT Response: IFC services on international flights, both on Indian registered and foreign airlines flying over multiple jurisdictions, should be permitted to use any suitable satellite system which caters to the technical and commercial needs of airlines for IFC service provision.

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

ITU-APT Response:

(a) Due to the principle of reciprocity and the common policy on this issue in other countries, foreign airlines should not be charged for IFC service provision, also as they are already regulated under the jurisdiction of the country of registration.

(b) Due to the proposed authorization under a duly authorized domestic service provider, associated fees will already be paid accordingly, based also on the commercial arrangement between the IFC provider and the licensee. Further to this, it necessary not to forget that, in order to make the service commercially viable, any additional fee/expense will ultimately be passed on by the airlines to the customers(e.g. reflected in the service price), to the detriment

of the associated benefit. Also, revenue based fee calculation may not be straightforward, as some airlines may decide, for instance, to include basic connectivity already in the price of the ticket.

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

ITU-APT Response:

ITU-APT believes that, similarly to the terrestrial mobile industry, provision of IFC services should be addressed on a spectrum and technology neutral basis. For instance, in the context of bands for which there is an internationally agreed regulatory framework for IFC internet services available, limiting the IFC service to a subset of bands will not be the best solution for passengers and airlines, as it will limit the choice by creating unnecessary regulatory limitations. Operators should be left free to consider which bands and technologies best suit their needs in order to deliver connectivity services in the most efficient and productive manner. Finally, it is necessary to keep an open mind for the future. As an example and also as pointed out in the consultation paper, under A.I. 1.5 of WRC-19, possible technical and operational conditions for use of ESIM in the 17.7-19.7 and 27.5-29.5GHz bands are also under assessment. Satellite technologies are evolving rapidly with new approaches revolutionizing the industry in frequency bands such as Ka and S band, but extending also to future bands for satellite services evolution, such as Q and V bands. This is one more reason to adopt a principle of a spectrum neutrality in the policy.

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?

ITU-APT Response:

Not Applicable