

Introduction

Honeywell is appreciative of this TRAI consultation on the critical topic of In Flight Connectivity (IFC) for India and is very pleased to reply.

Receiving and sending email, updating social media accounts and downloading or streaming content has become an everyday occurrence. We don't treat internet access as "nice to have," but rather an expectation allowing us to complete those tasks almost anywhere, with ease. Whether we're on the ground or in the clouds, connectivity matters.

In fact, 90 percent of respondents in Honeywell's Connectivity Survey said a reliable connection throughout their entire flight, no matter where they are, is essential. Especially if no connectivity would diminish their ability to remain productive on the go, or entertained by the latest Netflix hit.

That's why Honeywell's JetWave™ satellite communications hardware, which powers Inmarsat's GX Aviation network, has won 2017 Aviation Business Awards. The category showcases companies demonstrating a commitment to provide significant technological, productivity and customer benefits. JetWave™ accomplishes this by enabling a connection to a Ka-band Inmarsat satellite network that offers high-speed and global connectivity — even at 35,000 feet.

In fact, by offering two antenna options for commercial and business aviation aircraft, Honeywell can provide connectivity equivalent to the Wi-Fi experience passengers are accustomed to at home and in the office — at 10- to 100-times faster Wi-Fi speed than older in-flight technologies can achieve.

As a testament to Honeywell's expertise with in-flight connectivity, JetWave™ has gained approval by the FAA and EASA across the United States and Europe for many of the most broadly used aircraft. This includes the 737, 757, 767, 777, 787, A320 family, A330, A340, A380 and A350. Amid 800 deliveries to date, over 20 leading global airlines are putting their faith in Honeywell, including Qatar Airways, Lufthansa Group and Singapore Airlines.

What's more, business aviation aircraft are also using the technology. Bombardier was the first business aircraft manufacturer to offer the fastest worldwide onboard connectivity to business jet travelers on the Global 5000/6000 and Challenger aircraft, but was quickly followed by Gulfstream G650 and G550 and the Dassault family of Falcon aircraft.

More than fifty of the world's airlines already offer IFC today, while operating flights covering most of the globe. The expected new IFC policy for India will bring this advanced capability to aircraft and their passengers, while operating in Indian Airspace, and is expected to improve the aircraft safety, passenger experience and competitiveness of Indian airlines in global markets.

HONEYWELL'S REPLY TO THE ISSUES RAISED IN THE TRAI CONSULTATION PAPER 14/2017 on IFC

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

Honeywell Response:

High data rate Internet IFC services, such as the one provided with Inmarsat Global Xpress in Ka-band leveraging Honeywell JetWave™ satellite communication hardware, are becoming widespread and an imperative for Airlines to maintain competitiveness. Honeywell therefore strongly encourages introduction of IFC Internet services in India.

Honeywell also suggests for MCA services to be permitted for airlines when traversing the Indian airspace, as they have already been globally provided for several years.

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

Honeywell Response:

Yes, Honeywell 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.

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?

Honeywell Response:

Honeywell does not foresee any challenge arising from IFC Internet services provided on aircraft from "gate to gate". On the contrary, airlines are now routinely requesting gate-to-gate operation as an integral part of the onboard internet service provision requirement.

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?

Honeywell Response:

Honeywell is of the opinion that Unified license should not be considered as a necessary condition to offer IFC as a number of requirements therein contained would likely constitute a regulatory burden hindering a rapid and successful adoption of IFC services in the Indian airspace as well as limit competition.

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

Honeywell Response:

Yes, in line with the above, we believe that a separate category of IFC Service Provider may be created to permit IFC services in Indian airspace for airlines registered in India. This would permit the adoption of regulatory requirements that are relevant and adapted to the nature of IFC services and ecosystem.

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?

Honeywell Response:

Honeywell 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 airlines registered in India. However, such an arrangement should be left to the discretion of the parties involved based on their commercial considerations rather than made a mandatory requirement to provide IFC service. In other words, an IFC service provider shall be allowed to operate independent of a Unified Licensee as well.

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?

Honeywell Response:

In flight internet services are set to quickly become mainstream due to high customer demand and ongoing deployment. Customers will soon have the same expectation of Wi-Fi on board an airplane as they do on the ground. Honeywell believes simplicity of requirements to be of utmost importance to assure a timely and cost-efficient provision of the services once the rules are in place. As such, minimizing the number of requirements is advisable. If permission is granted under a partnership with a duly licensed operator, there is no obvious need for the licensee to provide further notifications of its partner supplier. In case the IFC service provider is independent of any unified licensee, then there could be some simplified rules / processes for registration. Also, while this market segment is highly competitive, there are only a handful of suppliers.

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?

Honeywell Response:

For the case of IFC/Internet, a duly licensed operator with the equivalent of an Internet Service Provision authorization could be permitted to tie up with an IFC Service Provider.

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

Honeywell Response:

Honeywell does not see any need for any additional restrictions or regulations, keeping in mind the overall interest of the passenger.

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?

Honeywell Response:

Authorization for IFC provision on foreign registered aircraft while in Indian airspace (i.e. foreign visiting aircraft) is a fundamental aspect to allow global operations, which is an inherent characteristic of this type of service provision. When considering IFC provision to foreign based airlines, it is paramount to consider the principle of reciprocity. International aviation depends on the principles of reciprocity.

The authorization for IFC provision on foreign aircraft while overflying a foreign country is already widely implemented. Foreign airlines, while in Indian air space, should have the same rights to provide IFC services to their passengers. If restrictions are imposed, this could lead to lack of reciprocity in the airspace of other countries.

In summary, foreign registered airlines should expect to be treated while in Indian airspace, similarly to the established policies applied internationally. This would include the option to access IFC on non-Indian satellites, especially if these satellites can provide global/international coverage.

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

Honeywell Response:

This distinction would not work efficiently in practice, as, quite often, the same aircraft can be used on both domestic and international routes, depending on airline and operational needs. Airlines require that their aircraft are internationally interoperable. Imposing limitations to domestic flights would have the effect of reducing the numbers of aircraft able to use other options internationally, as Airlines limit investments to equipment that has global usability. This is particularly true for aircrafts taken on lease which is the case with most Indian airline operators, as lessors would not want an equipment on their aircraft that cannot be used in other countries.

Also, the choice of satellite system shall be left to the discretion of customers (airlines, business jet operators, etc.) depending on their specific needs (e.g. bandwidth, band/frequency, etc.) and commercial business case. This will ensure a level playing field and fair competition within the industry.

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?

Honeywell Response:

IFC service provision on international flights is across multiple countries and continents. Foreign satellite systems, especially when providing seamless global coverage, are ideally suited and should be permitted to be used. In summary, 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.

(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) In case of Indian registered airlines, if the IFC service is provided under a duly authorized domestic service provider (unified licensee), associated fees will already be paid based on the commercial arrangement between the IFC provider and the licensee. Further to this, it is necessary to not 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, 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. Revenue may then come indirectly via advertising and increased product sales already on board.

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

Honeywell Response:

Honeywell 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.

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?

Honeywell Response:

Not Applicable.