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**Fwd: IFC Consultation paper response**

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**S. T. Abbas, Advisor , NSL -II TRAI** <advmn@trai.gov.in>

Fri, Nov 3, 2017 at 4:00 PM

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----- Original Message -----

From: **Vijay K Koul** <vijayk@hcl.com>

Date: Nov 3, 2017 3:43:23 PM

Subject: IFC Consultation paper response

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Cc: Naresh Khullar &lt;nareshk@hcl.com&gt;, Ramakrishnan V &lt;RamakrishnanV@hcl.com&gt;

Dear sir,

We thank TRAI for taking this initiative for release of Consultation paper for In Flight connectivity service in India. This has been a long pending request and we hope, with this exercise, we will be able to see a favourable policy roll-out soon.

Please find attached our response to the IFC consultation paper.

Warm regards,

**Vijay K Koul****HCL Comnet Ltd.****100% subsidiary of HCL Technologies Ltd.**A-2, Sector 3, Noida - 201301, U.P. **India**

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**2 attachments** **image001.jpg**  
3K **IFC-Consultation-Paper-HCL-Response.pdf**  
467K



# CHAPTER- IV: ISSUES FOR CONSULTATION

**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

ANSWER/SUGGESTION: Only **a) Internet Services** shall be allowed as we and/or our partner are not seeking any other Mobile Communication Services on-board an 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?**

ANSWER/SUGGESTION: There are primarily 3 standards to follow. These are:

- 1) ITU-R M.1643
- 2) European Communications Office (ECC) Standard Decision (05)11
- 3) European Telecommunications Standards Institute (ETSI) EN 302 186

are the universally accepted standards for AES and should be adopted. ETSI standard is effectively derived from ITU R M.1643 and establishes a framework and technical standards to which AESes may be operated in the European Union. Many regulatory bodies refer to compliance with EN 302 186 as the basis for radio type approvals or homologation of AESes for use on national airlines.

**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?**

ANSWER/SUGGESTION: MCA services are not sought and is not a need currently. As it is, Voice Communication is not permitted by IFC providers as it may lead to various issues including Security risks and Bandwidth choking. Currently, only basic Internet Services is sought.

**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?**

ANSWER/SUGGESTION: We seek a 'gate to gate' service, which is already permitted in various countries. From the Telecom connectivity point of view, we don't foresee any challenges in this. However, this should be left for DGCA to decide.

**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?**

ANSWER/SUGGESTION: We understand the existing Licensing regime shall be maintained to provide IFC service to the Airlines registered in India under the existing Unified License having authorisation for Access/Internet Service (CAT-A) and VSAT. The IFC is primarily a Satellite based Service.

The current UL permits only the Access & NLD services apart from VSAT for provision of satellite based internet. The internet authorisation on a standalone basis cannot provide this service, but the combination of both VSAT and Internet are required to fulfil the requirement. Therefore, we believe current Licensing structure should be maintained. Additionally, there seems to be no need for a new or a separate License be created for this service (whether Domestic or Overflying International Aircrafts). TEC can come out with an IR document dedicated for this service and NOCC/WPC can be the approving agencies for this service.

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

ANSWER/SUGGESTION: No, we think that the existing norms are sufficient enough. The primary authorization can be given to the Indian SP with a VSAT Operating License.

**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?**

ANSWER/SUGGESTION: On its own IFC SP cannot set up and operate its Teleport in India, which requires a huge Infrastructure investment besides various other obligations to be fulfilled. Therefore, IFC SP should enter into an agreement with an Indian SP, or else there can be a tripartite agreement between IFC SP, Indian SP and the Regulator.

**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?**

ANSWER/SUGGESTION: Please refer Answer to Q.7

**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?**

ANSWER/SUGGESTION: Only the existing VSAT service providers shall be permitted to provide IFC Service either by themselves or in Joint venture with a Global IFC SP. Currently VSAT service providers have adequate infrastructure for launch/provision of such a service and there are enough providers for a healthy competition. The VSAT service providers are well versed with the regulations of operating a Teleport. So this service should initially be restricted to existing VSAT service providers only. Since the service to be provided is internet, the VSAT service provider should also have an ISP CAT-A License for provision of this service. The VSAT service provider essentially is providing a telecom pipe into an Aircraft. For e.g, If Internet access is the required service in the aircraft, then VSAT service provider in conjunction with an ISP can provide the service. The primary responsibility of getting the pipe into the aircraft and complying with all the security guidelines rests with the VSAT SP and IFC SP.

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

ANSWER/SUGGESTION: The gateway for provision of this service should be located in India. Also the Internet termination shall be within India. This should be applicable for both domestic airlines and airlines that are operating in and out of India, whether Indian or International. Also a list of Do's & Don't's shall be issued by the Regulator for the IFC SP to comply with, as mandated by Law of the Land.

**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?**

ANSWER/SUGGESTION: A single gateway/teleport shall be used over Indian airspace, regardless of a Domestic or a Foreign Airline operating In & Out of India. This will ensure use of existing teleport Infrastructure. The existing regulations define the safety and security of the service. It also ensures that the service does not interfere upon other services and can be effectively monitored and controlled. So there should not be any distinction in terms of the regulations. However, w.r.t space segment, domestic airlines should be mandated to use Indian space segment.

**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?**

ANSWER/SUGGESTION: Yes

**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?**

ANSWER/SUGGESTION: For both domestic airlines and foreign airlines operating in and out of India, an India gateway with adequate Security measures like Intercept Monitoring should be mandated. The Internet termination shall also be mandated to terminate within India. This will ensure proper compliance to the Security norms. However, any billing data, Global NMS sync data and other Repository data shall be permitted to flow to the IFC SP's Global Data Centre hosted outside of India.

It is in the national interest to prefer INSAT/GSAT space segment for domestic flights and foreign satellites for foreign airlines operating in and out of India.

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

ANSWER/SUGGESTION: Yes. It is in the national interest to prefer INSAT/GSAT satellites for domestic operations. However, DoS should ensure that all the desired Technical specifications required for IFC services are provided.

**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?**

ANSWER/SUGGESTION: We do not foresee any challenges in using an INSAT/GSAT Satellite for both, unless the INSAT/GSAT Satellite complies with all the desired Technical specifications, as required by IFC SP as per Link Budgeting and other parameters.

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

- a) Foreign registered airlines
- b) Indian registered airlines

ANSWER/SUGGESTION: Both license fees and Spectrum Usage Charges are levied on the Indian Service provider operating the service. Today the “Other Service Providers” are exempt from any license fees. The same should be applicable to the IFC providers as well. However, any Taxes like GST etc. shall be clearly articulated.

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

ANSWER/SUGGESTION: In the current scenario, the regulator have laid down guidelines based on the frequency bands used for VSAT communication. These are C-Band and Ku Band. This IFC service is not any different from a fixed VSAT service but for the mobility part. This will also ensure seamless connectivity on the Airplanes, which are pre-fitted with VSAT complying these freq. band(s).

**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?**

ANSWER/SUGGESTION: Currently we are seeking permission only in Ku Band Uplink 14-14.5 GHz and Downlink 10.7 GHz to 12.75 GHz. However, as the Industry is moving towards Ka-Band, this band should also be considered in due course.

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