Communications Regulatory Authority
State of Qatar

هيئة تنظيم الاتصالات
دولة قطر

Consultation on the Class License for the Provision of Public Telecommunications Services On-board Aircraft

(November 9, 2017 to January 4, 2018)

Responses Received

CRARAC 2018/04/05 (C)
April 5, 2018

On 9th November 2017, the Communications Regulatory Authority (CRA) launched a public consultation on the revision of the “Class License for the Provision of Public Telecommunications Services On-board Aircraft” and requested written comments from interested parties.

Six responses were submitted by the following parties:

1. Access Partnership
2. Inmarsat
3. Ooredoo
4. SitaOnAir
5. Viasat
6. Vodafone Qatar

As part of the consultation process and in the interest of transparency and public accountability, the CRA is herein publishing the responses received.

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10 December 2017

Dr. Rainer Schnepfleitner - Regulatory Affairs and Competition Department Manager
The Communications Regulatory Authority (CRA)
Al Nasr Tower B
Corniche
Doha
Qatar

Subject: Response to the Consultation Document "Review of Class License for the Provision of Public Telecommunication Services On-board Aircraft" (Re. CRARAC 2017/11/09)

Dear Dr. Schnepfleitner,

We refer to the CRA's Consultation Document "Review of Class License for the Provision of Public Telecommunication Services On-board Aircraft" (Re. CRARAC 2017/11/09).

We wish to thank the CRA for inviting Inmarsat to respond to the Consultation and we are pleased to provide our response herein.

Overall, we are satisfied with the proposed changes to the Class License, which will allow the use of Wi-Fi In-Flight Connectivity (IFC) below 3,000m and align with International Aviation Conventions including the Chicago Convention; to which Qatar has been a signatory since September 1971.

In addition, we foresee no challenges in allowing such services to be offered "gate to gate" – a service that is already authorised to be offered in countries including; the United States, United Kingdom, Canada, Australia, and New Zealand among others.

We do however, have a number of observations from the consultation document that for CRA's ease of reference, we will address in an Annexure to this letter.

I remain available to provide further clarifications on our response if required by the CRA.

Yours sincerely,

Zeina Mokaddem
Director, Regulatory
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Annexure: Inmarsat's Response to the Consultation

1) The Provision of in-flight Telecommunication Services above 3000 metres

Yes, Inmarsat agrees with the CRA's observations on the provision of inflight telecommunications services above 3000 metres and confirms that the CRA has taken into consideration all the relevant issues and debates associated with offering these services.

We do however wish to provide a number of comments relating to the text (by paragraph):

41 – In addition to Ku-band, National Regulatory Authorities (NRAs) around the world have been approving the use of Ka-band terminals while the aircraft is parked, taxiing, and in flight, thus allowing "gate-to-gate" connectivity within their jurisdictions.

42 - Whilst the section provides a comprehensive overview of development of Ku-band, we feel it is also important to recognise the evolution and importance of Ka-band within the IFC ecosystem. Most notably, Earth Stations in Motion (ESIMs) that were fully endorsed by WRC-15 under Resolution 156 and new footnote 5.527A, thus facilitating the deployment of Ka-band terminals in the Fixed Satellite Services (FSS) when operating under particular technical and operational parameters. Crucially, these parameters further mitigate any risk of harmful interference to existing Terrestrial systems, Satellite Networks or other aircraft.

43.2 – Inmarsat notes that in addition to being a satellite operator, we pride ourselves also on providing In-flight connectivity (IFC) directly.

43.2 – Inmarsat does not understand the relevance of *footnote 14.* There should be no comments regarding the strengths and weaknesses of the different IFC frequency bands within the consultation nor should it promote in this case, the Ku-band.

2) The Provision of In-flight Telecommunication Services below 3000 metres

Yes, Inmarsat agrees with the CRA's observations on the provision of IFC services below 3000 metres and do not believe allowing such services will have any negative effects on the terrestrial internet service market in Qatar.

Inmarsat does not foresee any challenge from a technical, operational and regulatory perspective, 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, indeed the operation of Inmarsat's aeronautical terminals are already authorised for gate-to-gate operation in a number of countries and airports where our airline customers are operating.

In the European Union, restrictions regarding the protection of aircraft avionics from electromagnetic fields generated by earth stations in the vicinity of an airfield will soon be lifted due to the ongoing work at ECC Working Group Spectrum Engineering (WG SE). ECC liaised with aviation experts and confirmed that the aircraft protection criteria previously used to calculate the restrictions in ECC Decisions (as per ECC Report 066) is incorrect and has prepared a new report (ECC Report 272) on this issue. The revised calculations indicate that aircraft earth stations operating in both Ku and Ka-band can be operated within and in the vicinity of airfields with no impact on aeronautical safety (subject to compliance with relevant EIRP levels).

Following the closing of the public consultation process (on 28.11.2017) we expect the ECC Report 272 to be endorsed at the next WG SE meeting in early 2018 for further adoption by national administrations as well as revision of relevant ECC decisions to remove the current restrictions on use of Ku and Ka earth stations around and within airports. Separately, Inmarsat has also conducted its own technical *Airport Systems Interference Analysis*, which came to the same conclusion.

Regarding any potential impact on licensing and competition, we believe the service is not competing with licensed services on the ground, as connectivity within an aircraft is confined to the passengers within the cabin and not available to the population at large.

According to Qatar Airways, circa 8% of passengers travelling on board their aircraft are residents of Qatar and whom may have agreements with local telecom providers. It is therefore reasonable to suggest that the majority of the remaining 92% of passengers do not have direct access to mobile broadband services from local licensees and would wait until they reach the terminal building where they have complimentary access to internet services offered by the airport (through WiFi or Internet Kiosks (https://dohahamadairport.com/airport-guide/facilities-services/connectivity), which removes the need for these passengers to access data roaming services from local licensees (at least until they exit the airport for those entering Qatar).

The addressable market for IFC services on the ground is therefore very different and a lot smaller than that for WiFi providers and/or terrestrial operators.

Foreign Registered Aircraft

The proposed revised licensing regime does not take into account the provision of Telecommunications Services on aircraft not registered in Qatar. However, due to the aforementioned technical and operational characteristics of the system coupled with consideration to the principle of reciprocity as per the ICAO Chicago Convention, we are of the strong opinion that Wi-Fi IFC provision on board foreign registered aircraft whilst in Qatari airspace should also be allowed at altitudes below 3,000m, including gate-to-gate. Especially, when considering that the aircraft would be licensed in the country of its registration and Qatari-registered aircraft would avail of the same privileges elsewhere based on the Chicago Convention.

Panasonic

7 December 2017

To: Communications Regulatory Authority (CRA) of Qatar

Subject: Response to the Consultation Document Review of Class License for the Provision of Public Telecommunication Services On-Board Aircraft

Dear Sir,

Panasonic Avionics Corporation ("Panasonic Avionics") appreciates the efforts of the Communications Regulatory Commission of Qatar (CRA) to formally open the consultation and discussion of matters that will broaden the operational parameters and market potential for in-flight connectivity (IFC) services, in particular to those related to Gate-to-Gate (G2G) operation. Panasonic Avionics and its implementation partners support IFC operations globally. In addition, we are working with local airline to maximize the benefits of IFC to the Qatar market.

Panasonic Avionics has worked with national regulatory authority in every region of the world to facilitate the introduction of in-flight connectivity, and is uniquely positioned to share a practical perspective on regulatory approaches that facilitate the advancement of IFC implementation. For its part, CRA can consider the collective input from this consultation process, Qatar's unique public policy considerations and the interests of major airlines to optimize its IFC regulatory regime.

In this connection, Panasonic Avionics believes that CRA would be best served by adopting a "light-touch" approach that minimizes the costs and complexity of IFC operations, and maximizes the flexibility and competitiveness of IFC offerings onboard airlines. Specifically, Panasonic Avionics suggests that CRA follows the practice of other jurisdictions, as described below, subject to compliance with basic regulations designed to prevent interference and satisfy other significant policy concerns. Such an approach would be consistent with the prevailing trends in international IFC licensing, afford IFC flexibility to airlines, and help ensure that foreign countries do not implement duplicative and burdensome IFC licensing requirements that may be applied to Qatar airlines operating abroad.

The Consultation Paper raises many questions and potential approaches to enhancing IFC offerings in Qatar. Panasonic Avionics respectfully offers the following input for CRA's consideration in enhancing the regulatory regime for IFC services in Qatar.

1. Panasonic Avionics strongly supports amending the Class license to allow G2G service for the provision of In-Flight Connectivity telecommunication services as per the proposed amendments.
2. It should be noted that the subject AES emissions comply with the provisions of ETSI EN 302 186 and the AES operations comply with the provisions of Recommendation ITU-R M.1643 on the protection of the fixed service (FS), fixed satellite service (FSS) and radio astronomy service (RAS). Therefore, operation on the ground at airports comes with no risk of interference to other systems and without the need for additional licensing.

Panasonic

3. In jurisdictions where G2G is allowed no distinction or discrimination is imposed on airlines based on their country of registration. Accordingly, G2G operations are allowed to all aircrafts equipped with the necessary systems complying with accepted industry standards, licensing, safety and technical requirements in their home countries.
4. Panasonic Avionics would also advise CRA to allow foreign airlines to provide G2G services while on the ground in Qatar. Moreover, no licensing obligations, requirements or any kind of restrictions need to be imposed on foreign aircrafts.

Panasonic Avionics is grateful for the CRA's outreach on these matters and their continuous support and cooperation. Please accept our appreciation for your attention to this request, and please do not hesitate to contact us with any follow up inquiry.

Sincerely,

Mark DeFazio
Panasonic Avionics Corporation
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Date: 04 January 2018
Reference No.: OQ/Reg-5123/2018-01

Mr. Mohammed Ali Al-Mannai
President, the Communications Regulatory Authority
P.O. Box 23264
Al-Nasr Tower B, Corniche
Doha
State of Qatar

Cc: Mr. Ahmad Sultan - , CRA
Cc: Mr. Stephen Nelson - Consultant, CRA

Dear Mohammed,

Subject: Ooredoo Response to the Review of Class License for the Provision of Public Telecommunication Services On-board Aircraft:

We refer to the CRA letter dated 09 November 2017 (Ref: CRA/RAC-L/141/2017) notifying stakeholders of the CRA public consultation on the above subject. Ooredoo thanks the CRA for granting Ooredoo an extension to respond to this consultation, until 04 January 2018.

Ooredoo welcomes the CRA proposal to maintain the altitude restriction above ground of 3,000m / 10,000 feet for public mobile telecommunication services and for removing this restriction for the provision of public internet telecommunications services, allowing passengers to benefit from uninterrupted "gate to gate" internet service onboard aircraft registered in Qatar.

Please find in Annex Ooredoo's detailed response to the CRA consultation.

Yours Sincerely,

Ali Bin Jabor Al Thani
Chief Legal & Regulatory Officer

Ooredoo Response to CRA Consultation on Review of Class License for the Provision of Telecommunication Services On-board Aircraft

1. Do you agree with the CRA's observations on the provision of inflight telecommunications services above 3000 meters? Please clarify your position if you do not agree.

   Ooredoo has no comments to the CRA observations.

2. Is there important information the CRA has not taken into consideration when describing inflight telecommunications services above 3000 meters? If so please clarify your position?

   Ooredoo has no particular comments on this aspect.

3. Is there currently any important issues or debates regarding inflight telecommunications services above 3000 meters that should be brought to the attention of the CRA?

   Ooredoo understands current backhaul mechanism uses satellite services. The consultation CRA footnote 9 recognizes the possibility of air-to-ground (ATG) connectivity however, the Class License does not prescribe a mechanism. Ooredoo submits that in the absence of specific and harmonized agreements in Qatar and in the Region, ATG to be excluded.

4. Do you agree with the CRA's decision to allow onboard internet services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason.

   Ooredoo supports the CRA decision to allow onboard internet services below 3000 meters.

5. Do you agree with the CRA's decision not to allow onboard public mobile services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason.

   Ooredoo supports the CRA decision to maintain the 3000 meters altitude restriction for the provision of public mobile services onboard aircrafts.

6. Do you foresee any challenges, if 'gate to gate' internet services are made available on aircraft registered in the State of Qatar i.e. from the boarding gate of the departure airport until the disembarking gate at the arrival airport?

Ooredoo understands the same technical infrastructure will provide the internet service and is not aware of any particular technical challenge resulting from the removal of the altitude restriction.

7. **If 'gate to gate' internet services are made available on aircraft registered in the State of Qatar should any restrictions to the service apply?**

   Ooredoo submits that the internet service (since an aircraft cabin space is considered territory of the State) should be subject to the applicable regulatory framework throughout all phases of the flight.

8. **Do you think that allowing internet services below 3000 meters on-board aircrafts will have any negative effects on the terrestrial internet service market in Qatar?**

   Ooredoo has no particular comments on this aspect.

9. **Are there any additional state security issues likely to arise as a result of 'gate to gate' internet services being made available on aircraft registered in the State of Qatar?**

   Ooredoo submits at minima the applicable regulatory framework (see response 7) should apply, however Ooredoo is not able to comment on behalf of concerned Government Agencies.

10. **Are there any other issues or concerns that should be brought to the attention of the CRA with regards to onboard connectivity services being made available below 3000 meters on aircraft registered in the State of Qatar?**

    When 5G will be commercially launched, on the basis of current standard discussions, the option to avail mobile service via WiFi could be available. However it is unclear under the Class License wording if the provision of public mobile service over WiFi is allowed. Can the CRA clarify this point?

11. **Do you have any comments on amendments made to the Class License for the Provision of Public Telecommunication Services On-board Aircraft as contained in Annex II of this document?**

    The Class License includes in Annex A the definition for "Service Provider", however the term "Service Provider" used in two different occurrences in the document, respectively in article 23 in reference to a mobile service provider and in the definition of Class License in reference to the aircraft operator, suggest for different interpretation. Ooredoo seek the CRA to clarify this point in the Class License, in particular in reference with relevant provisions of Article 9 of the Telecommunications Law.

SITAONAIR
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Switzerland

Cointrin, 09 December 2017

The Communications Regulatory Authority
P.O. Box 23404
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Al Corniche Street
Doha, Qatar

Subject: Consultation on the Review of the Class License for the Provision of Public Telecommunication Services On-board Aircraft

Dear Sir,

As a global provider of in-flight connectivity solutions, SITAONAIR welcomes the opportunity to comment on CRA's public consultation regarding the aforementioned subject.

The consultation document raises further questions related to the introduction of a gate-to-gate internet services and seek the view of stakeholders. SITAONAIR' specific responses are provided in the Annex.

Sincerely yours,

Technical manager – Regulatory Affairs

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SITAONAIR

SITAONAIR submission in reply to the CRA consultation document on the Review of the Class License for the Provision of Public Telecommunication Services On-board Aircraft

Question 1 Do you agree with the CRA's observations on the provision of inflight telecommunications services above 3000 meters? Please clarify your position if you do not agree.

SITAONAIR agree with the CRA's observation.

Question 2 Is there important information the CRA has not taken into consideration when describing inflight telecommunications services above 3000 meters? If so please clarify your position

Although there is a reference to the requirement related to the NCU in the section 42.1 (b) in the consultation document, we believe that the CEPT report 63 should be reference in the Table 2 of the consultation document as it provides the rationale of the need of the NCU to increase the noise floor only in the UMTS bands. This CEPT report provides technical studies regarding the possibility of making the usage of the network control unit (NCU) optional onboard MCA enabled aircraft. The outcome of the studies mentions that MCA operations without a Network Control Unit ("NCU") are sufficient to guarantee a reasonable protection against resulting interference and signalling issues to and from terrestrial GSM and / or LTE wireless telecommunication systems while an NCU is necessary to prevent connection of User Equipment onboard to UMTS networks on the ground.

In their observations, CRA made some references to the Ku- and Ka-bands. Nevertheless, we would like to point out that Qatar Airways still use the SwiftBroaband ("SBB") services provided by Inmarsat and operating in the L-band's following frequencies:

- 1518-1559 MHz (Space-to-earth)
- 1619.5-1660.5 MHz (Earth-to-space)

The relevant standards related to the L-band are as follows:

- Decision ECC (12)01 on Exemption from Individual Licensing and Free Calculation and Use of Terrestrial and Satellite Mobile Terminals operating under the control of networks
- Resolution 222 (REV.WRC 12) Use of the frequency bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite service, and procedures to ensure long-term spectrum access for the aeronautical mobile-satellite (R) service
- ETSI EN 301 473

SITAONAIR believe that the ECC report 140 "Compatibility between RLAN on board aircraft and radars in the bands 5250-5350 MHz and 5470-5725 MHz" could be considered in the section 45. This ECC report addresses the issue of compatibility

between RLAN on-board aircraft and radars (military and meteorological) in the bands 5250-5350 MHz and 5470-5725 MHz and the outcome of the compatibility study concludes that "when implementing RLAN on board aircraft the aviation industry must avoid the use of the band 5600-5650 MHz".

Question 3: Is there currently any important issues or debates regarding inflight telecommunications services above 3000 meters that should be brought to the attention of the CRA?

SITAONAIR has no important issues/ debates to report to CRA.

Question 4: Do you agree with the CRA's decision to allow onboard internet services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason.

SITAONAIR agree with the CRA's decision.

Question 5 Do you agree with the CRA's decision not to allow onboard public mobile services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason

SITAONAIR agree with the CRA's decision.

Question 6 Do you foresee any challenges, if 'gate to gate' internet services are made available on aircraft registered in the State of Qatar i.e. from the boarding gate of the departure airport until the disembarking gate at the arrival airport?

SITAONAIR does not foresee any challenges on allowing internet service being available from the gate.

Question 7: If 'gate to gate' internet services are made available on aircraft registered in the State of Qatar should any restrictions to the service apply?

In Europe, the use of earth station is currently restricted in the vicinity of airport based on the ECC Report 66 "PROTECTION OF AIRCRAFT FROM SATELLITE EARTH STATIONS OPERATING ON THE GROUND IN THE VICINITY OF AIRFIELDS". We believe that a similar restriction may be in place in Qatar.

Nevertheless, with the help of aviation expert, the CEPT Working Group Spectrum Engineering ("WG SE) performed new studies by taking into account current regulation on aircraft protection from electric field and concluded that there will be no impact to aeronautical safety due to the operation of earth stations in both Ku and Ka bands. Based on these finding, an ECC Report 272 has been prepared by the WG SE and is currently under public consultation until 28 November 2017.Once adopted, the ECC report 272 will supersede the ECC Report 66 and it will therefore remove restrictions on the use of AES/ESIM within the airport.

In the event CRA has such restriction on the use of AES/ ESIM in the vicinity of airport, we would counsel CRA to follow the same approach as it will be done in Europe.

Question 8: Do you think that allowing internet services below 3000 meters on-board aircrafts will have any negative effects on the terrestrial internet service market in Qatar?

SITAONAIR believe that there will be no negative effects on the terrestrial internet service market in Qatar. The provision of inflight internet services from the gate will in any case not enter into competition with local internet service provider as the passenger will not be able to connect to an access point located inside the airport due to his/her location (i.e. inside the aircraft) and due to the aircraft attenuation.

From a technical aspect, no interference will be experimented from the onboard wireless access point when the aircraft is at the gate to the other access point located outside the aircraft. The reason being the low power level and all the attenuation due to the aircraft and the airport walls.

Question 9 Are there any additional state security issues likely to arise as a result of 'gate to gate' internet services being made available on aircraft registered in the State of Qatar?

From the consultation document, we understood that the security items raised is only relevant when the aircraft is within the Qatari airspace and in the event the service is available to the passenger. However, we believe that once the aircraft leave the Qatar airspace, it is out of the Qatari jurisdiction.

Question 10 Are there any other issues or concerns that should be brought to the attention of the CRA with regards to onboard connectivity services being made available below 3000 meters on aircraft registered in the State of Qatar?

In the section 55, it is mentioned that "*designated security agencies should have the ability to monitor the traffic to and from a user's while that user is in Qatari airspace*". We would in particular draw your attention on the architecture which differs from any local service providers as the ground IFC infrastructure is located outside Qatar and any traffic generated onboard the aircraft does not land in Qatar whatever the aircraft location.

Question 11 Do you have any comments on amendments made to the Class License for the Provision of Public Telecommunication Services On-board Aircraft as contained in Annex II of this document?

With respect to the Mobile service, the use of frequencies and associated technologies are clearly listed in the Class licence for the provision of Public telecommunication services on-board aircraft. The Mobile system could operate in the band 1710-1785 /1805-1880 MHz for GSM or LTE or in the band 1920-1980/ 2110-2170 MHz for UMTS. However, with respect to the WI-FI band, we believe that there is no doubt that the onboard wireless access point could operate in the band 2400 -2483.5 MHz. However, it is unclear which part of the band 5 GHz can be used for the internet service. We would therefore counsel CRA to list the band(s) that are allowed for such inflight communication service within the class licence for the provision of public services on-board aircraft.

Viasat

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9 December 2017

To: Communications Regulatory Authority (CRA) of Qatar

Subject: Response to the Consultation Document Review of Class License for the Provision of Public Telecommunication Services On-Board Aircraft (CRARAC/2017/11/09)

Dear Sir,

Viasat is a global communications company that designs and deploys transformative communications products and services that are enabling fast, secure and efficient communications globally, including on all types of aircraft.

Viasat appreciates the CRA's efforts to update and modernize the regulatory framework, particularly those related to provisioning of public telecommunication services on-board aircraft. ViaSat is pleased to submit its response to the Public Consultation on "Review of Class License for the Provision of Public Telecommunication Services On-Board Aircraft (CRARAC/2017/11/09), which was recently published by the CRA.

Our views and contributions listed below intend to offer suggestions for improvements to the current class license for the provision of public telecommunication services on-board aircraft and to relax unnecessary constraints and limitations on aeronautical radio systems in general, and specifically in-flight connectivity systems, in line with global best practises in the aviation industry. To that end, our comments are:

1. Viasat supports amending the Class License to allow Gate-to-Gate (G2G) service for the provision of In-Flight Connectivity services limited to broadband internet over WiFi frequency bands. Viasat encourages CRA to take the lead in the region and to be the first country to allow G2G services.
2. Viasat has concerns about the proposed amendments to the current Class License that are limited to aircraft registered in the State of Qatar. Gate to Gate (G2G) service is not an added value to airlines only, but it also contributes to the attractiveness of international hubs (airports) as a preferred destination or connection point for airlines. In-Flight Connectivity (IFC) provides a new revenue stream for airlines in addition to conventional passenger revenue stream, either directly or through passenger loyalty. In that sense, allowing services to be offered only by aircraft registered in the State of Qatar will make the Qatari airports less likely to attract international carriers. Viasat urges the CRA to treat domestic and foreign aircraft on an equal basis. This is the case for the current situation where, for example, Mobile Communications on-board Aircraft (MCA) and IFC are allowed for both types of aircraft above 3000 m.
3. Normally, whenever G2G service is allowed in a given country or specific airports within that country, permission includes all aircraft at domestic airports, regardless of their state of registry. Therefore, limiting the option of offering G2G services to Qatari registered aircraft may encourage other regulators around the globe to apply the same measures

against foreign (i.e., Qatari registered) aircraft. Taken to the extreme, the principle of reciprocity could apply on Qatari registered aircraft throughout the world, something that would be unfortunate.

4. If CRA insists on keeping the wording as described in the proposed amendments to the current Class License, Viasat would suggest that CRA issue a waiver to all non-Qatari registered aircraft given such aircraft meet the safety and technical requirements in their registry and home market countries.
5. Viasat notes that security concerns are addressed in the consultation. Viasat seeks the CRA's guidance on the meaning of the statement that the designated security agencies should have the ability to monitor traffic to and from a user's terminal while that user is in Qatari airspace. Also, it should be clear what measures service providers can take to meet this requirement given the system architecture of different networks.
6. Consistent with the recent draft *ECC REPORT 272*, given that certain technical parameters are met in satellite broadband terminals they can be operated with no risk of interference to aviation or other networks.

Viasat would appreciate updating of the Class License to bring it into line with industry views and concerns. Viasat agrees for its comments to be made available for public viewing on the CRA website.

Yours sincerely,

Christopher J. Murphy

Associate General Counsel
Viasat
Carlsbad, California
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Email: christopher.murphy@viasat.com

By email

10 December 2017

Mohammed Al-Mannai
President
Communications Regulatory Authority
PO Box 23404
Doha, Qatar

Cc: Rainer Schnepfleitner and Stephen Nelson

Dear Mohammed,

Re: Review of Class License for the Provision of Public Telecommunication Services On-board

Vodafone Qatar P.Q.S.C ("**Vodafone Qatar**") refers to the Communications Regulatory Authority ("**CRA**") Consultation Document on the above subject dated 9 November 2017 on the above subject. Please find in **Annex A**, Vodafone Qatar's submission.

We remain at your disposal to discuss further the content of our submission.

Yours sincerely,

Alexandre Serot
Head of Regulatory
Vodafone Qatar P.Q.S.C.

Annex A:

Vodafone Qatar's submission to the Review of Class License for the Provision of Public Telecommunication Services On-board

The CRA has requested Vodafone Qatar to respond to certain questions on the Forthcoming Review of Class License for the Provision of Public Telecommunication Services On-board Aircraft. Our response is provided below.

General Questions

Question	Vodafone Qatar Response
Do you agree with the CRA's observations on the provision of inflight telecommunications services above 3000 meters? Please clarify your position if you do not agree	Yes
Is there important information the CRA has not taken into consideration when describing inflight telecommunications services above 3000 meters? If so please clarify your position?	No
Is there currently any important issue or debates regarding inflight telecommunications services above 3000 meters that should be brought to the attention of the CRA?	No
Do you agree with the CRA's decision to allow on board internet services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason	Yes
Do you agree with the CRA's decision not to allow on board public mobile services below 3000 meters on aircraft registered in the State of Qatar? If not please provide a detailed reason	Yes
Do you foresee any challenges, if 'gate to gate' internet services are made available on aircraft registered in the State of Qatar i.e. from the boarding gate of the departure airport until the disembarking gate at the arrival airport?	No
If 'gate to gate' internet services are made available on aircraft registered in the State of Qatar should any restrictions to the service apply?	No
Do you think that allowing internet services below 3000 meters on-board aircrafts will have any negative effects on the terrestrial internet service market in Qatar?	If services are offered below 3000m while customers are in Qatar, there will not be a major impact on local data usage. However, as the customer will still be in Doha, should the customer's mobile device connect to the on-board cellular network, then the customer will be charged the standard roaming rates. This will invariably lead to customer bill shock and dissatisfaction.

Are there any additional state security issues likely to arise as a result of 'gate to gate' internet services being made available on aircraft registered in the State of Qatar?	As there are no additional technical interfaces which will be added and the traffic will follow through the normal intercept interfaces; we currently do not see any state security issues arising as a result of gate to gate internet services.
Are there any other issues or concerns that should be brought to the attention of the CRA with regards to on board connectivity services being made available below 3000 meters on aircraft registered in the State of Qatar?	No
Do you have any comments on amendments made to the Class License for the Provision of Public Telecommunication Services On-board Aircraft as contained in Annex II of this document?	No

-End-