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Jersey Competition Regulatory Authority,
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St Helier
Jersey
JE2 3RF

09/09/2013

For the attention of CICRA Chief Executive, Mr Andrew Riseley

Dear Andrew,

"Pan Channel Island Consultation on award of 800 MHz and 2.6 GHz spectrum"

Please find response below on behalf of Jersey Airtel-Vodafone Limited (JAL) and Guernsey Airtel-Vodafone Limited (GAL) regarding the questions set out within your letter dated 31 July 2013.

- 1. Respondents' views are sought on the above objectives. In particular, CICRA seeks views on the balance it should strike between these objectives and what that might mean in practice for potential applicants and users of the spectrum. These views are intended to inform the services to which CICRA should give greater priority and what obligations should be imposed on potential applicants in allocating the 800 MHz and 2.6 GHz spectrum.**

JAL/GAL response: Airtel-Vodafone believes that the objectives stated are of critical importance and any decision on spectrum should attempt to meet these wholly. To that end Airtel-Vodafone proposes that 800 MHz be reserved for the existing mobile operators. This will help meet two objectives: one, the existing operators, in light of the fact that they already have infrastructure in place, will be able to rollout new services quicker as compared to a new entrant, hence bringing distinct advantage in the way of superior mobile broadband to Channel Island customers. And two, this will help in reducing the impact on environment as 800 MHz, having better propagation characteristics, will pre-empt any need for greater number of masts. This will help reduce visual impact on environment and also aid in avoiding any unwanted publicity with regards to health impact of radio masts.

Further, we would like to draw your kind attention to our previous response dated 13th March 2013 in response to CICRA Consultation on Spectrum award in 3.4 – 3.8 GHz band. As stated there, we would impress upon CICRA that a mechanism should be built to verify the actual usage of allocated spectrum. CICRA should also reserve the right to revoke any licences issued where prescribed roll-out conditions have not been met. (Please see Annexure 1).

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Airtel-Vodafone agrees that it is advisable to consider, to the extent possible, the two Bailiwicks as a single economic and social entity. This objective could be achieved by harmonizing the spectrum holdings of the existing operators across the two islands. Further, as far as possible, the spectrum pricing should also be harmonized in a way that the consumers do not bear the burden of spectrum costs.

2. Respondents' views are sought on the above issues, namely:

- a) Commercial decisions based on the JCRA recommendation**
- b) Developments since the JCRA recommendation**
- c) Benefits of a pan-Channel Island approach**
- d) Scale of the available 2.6 GHz spectrum**

JAL/GAL Response:

- a) Airtel-Vodafone has not made any investments based on JCRA's consultation of 2009 for spectrum allocation in 2.6 GHz band.
- b) Airtel-Vodafone is of the opinion that, since 2009, LTE technology has matured and resulted in high demand for 2.6 GHz worldwide. But it is also worth mentioning that the poor transmission characteristics of 2.6 GHz do not make it very attractive for large scale coverage solution. This band is more suited to creation of small cells which offer capacity relief to wider cells.
- c) Airtel-Vodafone is of the view that the pan-Channel Island approach has great benefit, both for CICRA/Ofcom and the operators. A pan-Channel Island harmonized spectrum allocation is easy to regulate and monitor as evident with the revised 3G spectrum award in 2011. In terms of Technology this makes the task of network planning simpler hence reducing time investment required for expensive resources for this task. This approach will also help operators build economies of scale as any spectrum-specific network equipment to be bought can be negotiated for both islands. These will lead to lower costs for operators thus resulting in passing of the benefit to the consumer as an affordable service.
- d) Considering the amount of spectrum available and recommended allocation for CMJ, Airtel-Vodafone concurs with view held by CICRA that the recommendation does not have significant bearing on current allocation process. Further, it is also possible to invite separate expression of interests in the 2.6 GHz band to ascertain market demand for this.

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- 3. Views are also sought on any other relevant factors respondents believe CICRA should take into account regarding existing recommendations to the extent they are relevant to future spectrum awards.**

JAL/GAL Response: No, Airtel-Vodafone does not believe there is any other factor viz 2.6 GHz which needs to be taken into account which will impact future spectrum awards.

As for current allocations in 1800 MHz, Airtel-Vodafone is of the view that it is extremely important and pertinent that realignment of spectrum holdings be done so that each existing operator can get at least 2x20 MHz of 1800 MHz to complement the 800 MHz allocation.

- 4. Respondents' views are sought on the above aspects and on any other which respondents consider relevant. Views are also sought on the weight that should be given to each of these in any decision around spectrum awards and what these mean in practice for the construction of any award process.**

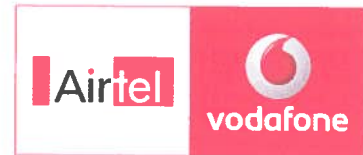
JAL/GAL Response: Airtel-Vodafone believes that the Channel Island specific aspects as enumerated by CICRA and reproduced below are all extremely relevant and sufficient.

- i. A high proportion of sub-1 GHz spectrum is held by the two local incumbents, Sure (Guernsey) Limited in Guernsey and JT (Jersey) Limited in Jersey;
- ii. Reliance is still placed on using the incumbent's fixed network in each island;
- iii. Environmental concerns exist around the number and size of masts;
- iv. There is a desire to maintain consistency with the approach and timing of awards in larger consumer markets;
- v. The small scale of the Channel Islands has potential implications for the number of competitors feasible in these markets; and
- vi. The option of an auction approach

The historical award of sub-1 GHz has created an unfavourable situation for the 2nd and 3rd operators on each island. Considering that this is a highly prized band due to its favourable transmission properties, Airtel-Vodafone is of the view that the spectrum holdings of all operators in the sub-1 GHz should be reviewed to achieve a more equitable distribution. This aspect should be of prime importance for construction of any award process.

The second point to consider should be how the newly available spectrum should be distributed to gain maximum benefit for consumers and citizens of Bailiwicks (point's iii and v). Airtel-Vodafone is of the opinion that bearing in mind the interest of the consumers/citizens it is advisable to reserve the 800 MHz spectrum for existing three operators as this will avoid need of building more masts or taller poles to launch new services. This will also speed up the rollout of LTE and equal and sufficient bandwidth will be possible for the three operators.

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Introduction of a new operator, in our opinion, may not be in the best interest of Channel Islands' telecom market. It will not offer any distinct advantage to consumers while resulting in highly fractured spectrum allocation in the critical sub-1 GHz band.

Airtel-Vodafone believes that spectrum allocation should be done based on equitable distribution, rollout plans and with safeguards in place for rollout obligations. Spectrum auction will not best serve the telecom consumers in the Channel Islands.

5. CICRA seeks views on whether it should structure its work so as to encourage a fourth telecommunication operator to provide mobile services in the Channel Islands.

JAL/GAL Response: Airtel-Vodafone is of the opinion that the telecom market in Channel Islands is not big enough to warrant a new/fourth mobile operator. As pointed out earlier this will have huge impact on environment in terms of new masts and taller poles required for sharing. Furthermore it will not bring any new advantage for consumers. Prices for telecom services are already extremely competitive. A fourth operator will only lead to a highly fractured spectrum distribution thus hindering the provision of high quality LTE services.

6. CICRA seeks views on whether spectrum caps should apply as part of any award process and to what extent the issue of contiguity of any existing or new allocation is material to any decision process. If caps are seen to be appropriate or the need for contiguity of spectrum is important, respondents are asked to set out their preferred approach to dealing with these areas and reasons.

JAL/GAL Response: Airtel-Vodafone agrees with CICRA on both issues, viz. spectrum caps and contiguity of spectrum. On spectrum cap Airtel-Vodafone believes that the following aspects should be kept in perspective while deciding allocations:

- Minimum spectrum as required by the technology to operate satisfactorily and enable an operator to offer reliable and desirable service should be guaranteed.
- If demand exists for larger chunk of spectrum to be allocated, CICRA can create a weighted pricing system for additional spectrum within the same band.
- CICRA should place obligations on usage of spectrum awarded and reserve the right to revoke any unused spectrum which is in violation of accepted obligation.

On spectrum contiguity, Airtel-Vodafone is of the opinion that as far as possible contiguous spectrum should be awarded and the same is possible considering the number of operators in the Channel Islands. However, if the same is not strictly possible then modern technologies (LTE) have features whereby different chunks of spectrum can be combined to offer reliable services.

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7. Views are sought on whether a sub 1 GHz spectrum cap is appropriate as a criterion for making any award, and the appropriate level of such a cap, if any.

JAL/GAL Response: Airtel-Vodafone believes that incumbent operators in both islands have got majority of spectrum in sub 1GHz band. We recommend that a cap of 2x20MHz on total spectrum holding should be put in place for any new allocation in sub-1 GHz band. This will ensure that existing operators with larger 900MHz assignments will relinquish excess 900MHz spectrum if they want to acquire new 800MHz spectrum. The relinquished 900MHz spectrum could then be allocated to 2nd and 3rd operators in each island.

8. Do you agree that CICRA should use the opportunity provided by the allocation of new spectrum to rationalise other parts of the spectrum?

JAL/GAL Response: Yes, Airtel-Vodafone strongly supports the suggestion forwarded by CICRA to rationalize total spectrum holdings of all three mobile operators. This will provide equal opportunity to all operators to migrate UMTS services to the 900 MHz band. This will create possible opportunity to achieve greater spectral efficiency in the 900 MHz band and will improve coverage for UMTS technology.

9. Views are sought on whether the charge proposed by the States of Guernsey raises special issues for CICRA in determining an appropriate allocation of spectrum in Guernsey or in the Channel Islands.

JAL/GAL Response: Airtel-Vodafone believes that the charge proposed by States of Guernsey will increase the cost of mobile operators and in turn increase in price customers will pay for those services. We believe that additional charges proposed by States of Guernsey should be seen along with additional cost which operators might incur for using the spectrum.

The additional cost which can be incurred by operators may be,

- To supply filters to resolve Interference issues to DTT customers
- To bear cost of putting filters to resolve interference to Airport Radar

These costs along with the spectrum charge payable to Ofcom and any other state agency will only add to operator's costs and hence disadvantage the consumer and defeat CICRA's objective of providing new improved services on the islands.

10. Views are sought on the benefits of these two areas in which spectrum can be deployed and to what extent a strategic choice between them may be needed in any allocation decision.

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JAL/GAL Response: Airtel-Vodafone is of the opinion that with advancement of mobile technology the gap between fixed broadband speeds and those achievable with mobile technologies is reducing. With LTE, given that sufficient spectrum is made available, a guaranteed QoS can be provided. This enables LTE to directly compete with any fixed wireless technology. Airtel-Vodafone believes that considering the size of telecom market in Channel Islands it will be prudent to focus on one technology to provide suitable alternatives to consumers for their broadband needs.

11. Respondents' views are sought on the issues in this section and, where additional considerations are identified, they are invited to set these out also. In particular, CICRA seeks views on the environmental factors – including actions in which telecommunication companies should engage – that might inform the construction of any award process and the weights or priorities it should give these factors in deciding on awards.

JAL/GAL Response: Airtel-Vodafone believes in supporting the local environment and doing all in its capacity to lessen the impact of its activities on the environment. But newer technologies and rollouts bring challenges of all sorts. Not least in how to strike a balance between providing a reliable, profitable, desirable service and giving due consideration to environment. To that end Airtel-Vodafone intends to inform CICRA of the following:

- In LTE size of antenna is generally larger than GSM/UMTS
- This is to support the concept of MIMO which is responsible for boosts in speed
- New antennas will be required on rooftops, especially in town to offer the superior service
- While it is possible to offer LTE service with small sized antennas it will not allow operators and hence consumers to derive full benefit of the technology
- In outer parishes, it may be required to install new antennas on the outside of the wooden poles

12. Respondents' views are sought on the above issues and, in particular, what specific combinations of 800 MHz and 2.6 GHz spectrum should be made available, or whether spectrum in these two bands should be made available as separate awards. Operators that intend to seek spectrum awards are requested to set out, in as detailed a manner as possible, what spectrum is sought and to what purpose.

JAL/GAL Response: It is Airtel-Vodafone's view that spectrum in these 2 bands should be made available as separate awards. Airtel-Vodafone wishes to deploy LTE-A, and would expect to be awarded at least 2x10 MHz spectrum in the 800 MHz band. This will help in quick rollout of high speed network while minimizing impact on environment. Consumers will also benefit from greater reach of this band.

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Aside, Airtel-Vodafone proposes that CICRA realigns the spectrum in 1800 MHz so as to make available at least 2x20MHz to Airtel-Vodafone for LTE-A. As pointed out by CICRA, the low frequency and high frequency bands are complementary for LTE-A. Consequently, Airtel-Vodafone is of the view that CICRA should aim to combine 800 MHz with 1800 MHz for award of LTE spectrum and consider 2.6 GHz as a totally separate award.

13. Views are therefore sought on whether this approach is desirable and what CICRA might need to ensure is in place to give effect to any such approach.

JAL/GAL Response: Airtel-Vodafone, in principle, is in favour of tradeable licences. However, CICRA will need to ensure that caps should be in place to avoid any single operator from possessing majority spectrum in any band as a result of trading. Any such trading should be subject to regulatory clearance.

14. Views are sought on whether responsibility, if any, for the cost of filters for the Jersey airport radars should be on telecommunication operators in Jersey only.

JAL/GAL Response: Airtel-Vodafone is in agreement with the view cited by CICRA whereby it is not Telecom operators who are driving the requirement for filters in airport radars. Moreover, any such cost will directly add to Telecom operators project cost and will end up as an increased cost of service for the consumer.

15. Views are sought on how the cost of installing filters at Jersey Airport should be shared among telecommunication operators, whether it should be the operators active in the 2.6 GHz band only, or those operating in all the bands that could be substituted for the 2.6 GHz band, or those offering 4G services, or operators using other spectrum also.

JAL/GAL Response: As stated in 14, telecom operators should not shoulder the extra burden for filters to be fitted on airport radars.

16. Respondents' views are sought on all five points above: value of forecasting model, KPIs, survey of existing DTT services, the setting up of a central delivery service, and the allocation of DTT mitigation costs.

JAL/GAL Response: Airtel-Vodafone agrees with the view held by CICRA that interference modelling is not required given the small size of Channel Islands. We believe that surveying actual DTT usage within Channel Islands would be quicker and cost effective. The initial estimates of likely interference can also be

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done by determining the actual DTT channels being used in Channel Islands and their proximity to 4G 800MHz band.

We believe that there is no immediate need to set-up a separate organisation to deal with interference from 4G. The decision to set-up separate organisation should be based on outcome of the DTT survey and likelihood of significant impact. We believe that existing infrastructure (call centre, retail outlets) of telecommunication operators should be used to provide assistance to affected customers. The assistance level can be modelled on UK guidelines in terms of who gets the support and how much.

Airtel-Vodafone is of the view that all operators will stock this filter and the consumer can go to any of the operator's retail outlet to procure the same. Advice will be forwarded on how to install the filter. In case consumer needs more than one filter he will be extended all help in purchasing these. In case of consumers who need special assistance, an allowance of £50 can be provided to help with the installation of the filter.

17. Views are sought on an appropriate competitive or comparative selection process and how best it might be structured to achieve the benefits sought.

JAL/GAL Response: Airtel-Vodafone agrees with the view held by CICRA that considering the small size of telecoms market in Channel Islands, spectrum auction will be highly detrimental to the rollout of affordable high speed services. Excessive fee for spectrum can negatively impact consumer pricing and inhibit the ability for operators to invest in network deployment ultimately impacting the intended benefit to be realised for economy and consumers.

We believe that comparative selection process should be used with intention to meet following objectives,

- Spectrum to be divided in minimum block sizes of 5MHz which is suitable to 3G and 4G technologies
- Preference to existing operators for spectrum allocation as this will allow for quicker rollout
- Each operator intending to apply for spectrum can get access to minimum block (5MHz) to roll out 2G/3G/4G service in that band
- Operator intending to get more than minimum block size pays comparative or weighted price for additional spectrum
- Facilitate the realignment of spectrum in 1800MHz band and release of excess spectrum in 900MHz band by incumbent operators in both islands
- Spectrum to be put in use within 3 years of allocation
- There is overall cap on sub 1-GHz spectrum per operator.
- Operators should be consulted regularly in whole process to make sure that the final allocations are economically and technically efficient
- Spectrum is technology neutral
- Spectrum is tradable