Clear Mobitel (Jersey) Limited
Clear Mobitel (Guernsey) Limited

5G. Statement of Intent

June 2019

Introduction

Clear Mobitel is a new entrant operator in the Channel Islands. We intend to compete with the existing operators using an all IP network solution. It is therefore important to us that spectrum is available to supply these services effectively and efficiently.

Clear Mobitel currently holds spectrum that can be immediately deployed to launch 5G services but clearly to fully support all services additional spectrum will be required. Clear Mobitel looks forward to participating in whatever process for the distribution of suitable spectrum is deployed in the islands. It remains our concern that such distribution should be in the best interest of the end user and should not impose any undue financial burden on consumers so that the full range of services is enjoyed in the best interest of the community.

Response to Consultation

Q1 What '5G services' foresee could be delivered through this allocation of spectrum? What economic and social benefits will these bring to the Channel Islands?

Wireless technologies have evolved over time and 5G is the latest iteration of development that has been associated with delivering broadband as point to multipoint or nomadic services.

The key advantage with 5G is the low latency within the system which enables it to compete on equal terms with fibre technologies. 5G is also uses spectrum more efficiently giving greater data density that was achievable with earlier technologies. Because 5G will be delivered as all IP it is considerably simpler to manage with all services on a single platform. Because of this 5G devices will be more power efficient giving longer battery life. It will also enable networks to manage more devices than current technologies.

In order to achieve these goals more spectrum will be required and it is also likely that more base stations will be needed. The new base stations will be more densely packed than for previous systems but will be smaller and far less obtrusive.

The introduction of 5G will enable real-time transactions, this will enable the deployment of the Internet of Things (IoT) which will enable many new services for consumers. Real time services will include driverless cars, medical monitoring, traffic control, retail stock management, pollution and environmental monitoring and services yet to be developed.

For home consumers higher speed data will enhance streaming video and audio services and also enable these services to be become mobile. All the advantages of a fibre broadband service will be experienced without being tethered to the home.

eHealth

The improved speed and latency of 5G will mean that telesurgery will become possible such that it will be possible to have expert consultation remotely, thus reducing the need to travel. This will advance the possibility of robotic control of operations so that experts can assist local hospital staff. The potential

Autonomous driving

Driverless cars need to be able to read and react to the road in front of them, in order to do so they will need to communicate in real-time with other vehicles and infrastructure, traffic lights and detect pedestrians,they will also need to react to environmental conditions such as the weather. The speed and low latency provided by 5G will be essential in enabling the universal coverage necessary to ensure safety.

Connected Homes

The Internet of Things is already a reality that connects commercial and domestic devices to the internet to improve functionality and control. With 5G devices will not just be connected to the internet, but will be able to communicate with each other. This will allow increased functionality and control.

Portable VR

Virtual Reality systems are already with us but require low latency connections that currently is only available through fixed line services. 5G will enable VR free allowing mobile devices to stream content at any time and in any place.

Fixed wireless

Currently data connectivity in dense metropolitan areas is highly reliant on fixed connections. 5G with gigabit-per-second or better bandwidth will break this link and enable connections anywhere and any time.

Edge computing services

This will bring computing power closer to the source of data eliminating the latency present in cloud-based applications;

Machine-to-machine communications

Such services will bring low-latency connectivity to devices such as machine assembly robots within the factory environment where current WiFi based technologies exhibit too much latency for fine control.

Video delivery services

Will compete with current fixed line providers and give consumers a new level of flexibility and instant delivery anywhere, any time.
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Q2 In what timescale do respondents believe these services and benefits can be delivered?

The time in which the full benefits of these services will largely be dependent on the release of spectrum for 5G. For the Channel Islands there is sufficient spectrum available because of the small size of the area to be covered. Indeed some existing allocations could be re-farmed for use on 5G.

The key point with all new services is that we, as an operator, seek merely to facilitate and create the right environment for technology to bloom. The full functionality and possibility of 5G won't be realised until it becomes ubiquitous. Our aim is always to ensure that the channel islands can make full use of such innovation, and to encourage such innovation locally.

Q3 Are there any potential opportunities for existing or new operators to partner with government(s) to enhance the economic value of the 5G network or to better meet the policy ambitions in either or both jurisdictions?

Competition is generally thought to enhance innovation and development of technologies and this would also be the case with deployment of 5G. New operators bring new ideas and services as well as promoting efficiency and competition for consumer benefit.

The Guernsey States have issued a policy statement that seems to indicate that it has a preference for a single 5G network on which all operators would provide their services. The current States of Jersey policy is unclear on this matter.

As a company we are content to offer a shareholding in the company to the States of Guernsey to ensure a degree of democratic accountability and to provide good value for the consumer.

Q4 Respondents are asked to consider the most appropriate means for the allocation of 5G spectrum for the Channel Islands – an auction, a comparative selection process ('beauty parade') or alternative method.

Since Ofcom is responsible for distribution and management of the Channel Islands spectrum an auction would seem unrealistic since the costs of setting up the necessary Act of Parliament would far exceed the eventual revenue from any auction of packages for such small jurisdictions.

A beauty parade would be highly subjective and would favour the operators with the deepest pockets and largest available packages of existing spectrum.

Therefore as in the past the local spectrum should be distributed with the benefit of consumers in mind and thus should not effectively tax the end user by disproportionately increasing operator's costs.

Q5 Respondents are asked what spectrum allocation would be necessary and in what bands for an operator to offer the services and provide the benefits described in Question 1.

5G requires more and smaller base stations in order to give the full benefit of bandwidth with nomadic services. The amount of spectrum required is dependent on the overall demand from users.

The GSMA[1] suggests that 80-100 MHz of contiguous spectrum per operator in prime 5G mid-bands (e.g. 3.5 GHz) and around 1 GHz per operator in millimetre wave bands (i.e. above 24 GHz) will be required.

It also suggests that to deliver widespread coverage and support all use cases, three ranges are required: Sub-1 GHz, 1-6 GHz and above 6 GHz.

Q6 Would this demand for spectrum vary depending on whether there were single or multiple networks developed in future, or as technologies develop in future?

Clearly spectrum efficiency can be maximized by the development of a single network on which all operators can manage their services. There are several different models but Clear does not advocate an MVNO solution but rather a separately managed active spectrum sharing model[2].

[1] GSMA: https://www.gsma.com/spectrum/wp-content/uploads/2018/11/5G-Spectrum-Positions.pdf
[2] BEREC Report on infrastructure sharing: https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/8164-berec-report-on-infrastructure-sharing_0.pdf

Ideally such a network would be jointly owned and funded by all participating operators and thus be independent of individual operator influence. This would not preclude operators from providing their own core infrastructure. Clear sees this as a logical step in the provision of 5g in such small jurisdictions where infrastructure costs are disproportionate compared to the available market.

Q7 Does this Draft Statement of Intent support and align with the policies of the States of Jersey and Guernsey? If not, what alternative approach could CICRA take to implement government policies?

The current tone of the Statement of Intent seems to sit with the previous policies of allocating spectrum separately to each operator in order to fulfil individual network requirements.

5G is a quantum step in wireless network development and a different approach is indicated. While the States of Guernsey have expressed a preference for a single shared network the position of the States of Jersey is less clear.

Clear is of the view that the regulator should take a new look at wireless network development and requirements in the light of the considerable advantages of 5g and the production of a network that provides the highest quality and competitive solution of the end user.

Q8 Respondents are asked to comment on the issue spectrum initially only to one operator in Jersey and one operator in Guernsey, which may be the same operator.

Clear does not subscribe to this policy as there is opportunity for margin squeeze. We have proposed an open shared network infrastructure that is equally owned by all participating operators. Ultimately this would be the most cost effective solution and would provide the greatest possible consumer benefit.

Q9 What period of exclusivity would be sufficient to ensure a fair return on investment for a single operator before the remaining spectrum became available for allocation?

Clear’s view is set out above.

Q10 Respondents are asked to consider the types of conditions which would be necessary to encourage the development of retail competition during the rollout of 5G services

Development of 5G will be a costly exercise for all operators anything that reduces direct costs to the operators would be of benefit. The migration to 5G will inevitably be a relatively long process as retirement of existing technologies may be protracted, although this could be accelerated by proactive operators.

Clear does not subscribe to an MVNO approach as this would be fraught with the regulatory processes necessary to ensure fair and reasonable access as well as the definition of individual operator requirements to ensure product differentiation.

Q11 Respondents are asked to consider the types of conditions which would be necessary to protect consumers and ensuring the most efficient use of spectrum as a scarce resource.

Accelerated retirement of older technologies could free-up more spectrum for the development of 5G. Currently the former incumbents on both islands use significant allocations of spectrum for these services. In addition to the promotion of a single radio access network Clear would promote the reallocation of spectrum together with the sharing of spectrum access by all participating operators.

Having said that, it is important to maintain backward compatibility for existing customers, thus it would be necessary to have a medium to long term plan for gradual withdrawal of 3G and 4G services as consumers migrate to 5G.

Q12 What are the environmental and planning considerations which CICRA should take into account when considering spectrum allocation? This may include respondent views on the number of any additional sites which may be required in each Island.

Both islands already have a considerable number of mast sites in operation somewhat inflated by the deployment of competing networks. 5G will require additional sites in order to provide sufficient spectral density to support high speed connections, although many of these will be in built-up areas and only require micro-sites which will pose minimal environmental impact.

To facilitate swift deployment of the network, a planning position that allows use of street furniture, light posts for example, on a fast track would assist. We would also suggest ensuring easy siting of restricted height posts for more rural areas to ensure continuation of service.

It remains Clear's view that a single network should be developed for the delivery of 5G. This would require an unprecedented degree of cooperation between operators but would ultimately provide the best commercial solution and the maximum consumer benefit as well as utilizing spectrum most efficiently.

The development of such a network would ultimately improve the environment and make the planning process smoother if this were perceived as the ultimate goal.

Q13 What are the health and safety consideration which CICRA should take into account when considering spectrum allocation? This may include respondent views on reassurance to the public.

The public is aware of the potential ionizing effects of microwave radiation as demonstrated in numerous domestic microwave ovens. However the power proposed for 5G transmitters is orders of magnitude lower than those used for heating food.

Wireless has been used throughout the world for over a century and multiple studies on the effects of electromagnetic radiation have been carried out. The World Health Organization has a statement on 5G and public health[3] which has various links to studies that allay fears surrounding electromagnetic radiation.

The public should be assured that the electromagnetic radiation from proposed 5G base stations is very low.

Q14 Are there any other considerations which CICRA should take into account in order to maximize the economic benefits which can be achieved through the allocation of this spectrum? Are their additional ways in which economic and social benefits could be maximized, perhaps through partnerships with government to stimulate additional growth or bring down costs for consumers?

In the past there have been attempts to raise revenue from the allocation of spectrum. The Channel Islands are small jurisdictions and have a relatively low user to spectrum ratio compared to larger countries. The overall size of networks is very small in relation to operators in other jurisdictions and therefore the cost per customer is consequently high.

Clear does not believe that there is any overall benefit to revenue raising from spectrum allocation. Auctions are valid in large jurisdictions but in the

[3] WHO: https://www.who.int/peh-emf/publications/facts/fs304/en/

case of the Channel Islands would be difficult to establish given that Ofcom would be required to conduct any such process. Beauty Parades are by their nature subjective and likely to lead to litigation. Therefore in order to gain maximum social benefit and to realize government ambitions spectrum should be shared among operators in an equitable fashion. Clear proposes a shared jointly owned network which would realize government ambitions and provide maximum consumer benefit by letting operators invest in services instead of infrastructure.

Having stated the above, there is considerable disquiet with some members of the public as to the safety of 5G. This isn't easily resolved by telcos, as we're viewed, quite rightly, as having a vested interest. We would suggest a joint approach between CICRA and Environmental Health to assure the public of the safety record of 5G and that Environmental Health could have the ability to set standards and police radiation from 5G.

For the avoidance of doubt, this document may be published in its entirety.

Clear Mobitel (Jersey) Limited
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To:
JCRA
2nd Floor, Salisbury House
1-9 Union Street
St Helier
Jersey
JE2 3RF