JT's Non-Confidential Response to GCRA Call for Information – FTTP Future Approach to Emergency Calls

24th September 2021

1. Introduction

JT (Guernsey) Limited, ("JT") is pleased to respond to this Call for Information ("CFI"). The information provided in our response to the questions draws from our experience of installing and running a full Fibre To The Premise ("FTTP") network in Jersey and our experience of migrating customers from a copper network to a FTTP network. This is a non-confidential response and can be published in full.

It is important that the GCRA take into account the fact that it is only corded telephone handsets or directly connected devices such as alarm lines which are connected to the Public Switched Telephony Network ("PSTN") and powered through the local exchange, which allows them to function in a power cut. The majority of fixed voice consumers use a DECT cordless handset, which would not function in a power failure situation, as the equipment needs to be plugged into a power supply and fixed voice has been replaced by mobile voice as the primary mechanism used to contact the emergency services. It is also important for the GCRA to consider that many consumers do not utilise the fixed network to make calls and many no longer have a telephone handset plugged into the telephone socket. For the majority of consumers, the fixed network's primary function is to provide internet connectivity and this fact became very apparent to JT when it carried out is FTTP installation. In addition, when a consumer has a fault on their FTTP connection into their property, the priority service for the consumer is the broadband service and we get few fault calls relating to the voice service. This context is important when considering reliance on the fixed network to make a call to the emergency services in a power failure scenario.

JT does not have access to full fixed and mobile network statistics for Guernsey, but the Jersey data shows that more than 60% of calls to the emergency services are made from mobiles. Ofcom's 2016 Connected Nations report[1] cited that two thirds of emergency calls are made from mobile phones.

[1] CONNECTED NATIONS (ofcom.org.uk)

2. JT's Response to Consultation Questions

Q1. Is it appropriate for a vulnerable group to receive a free back-up solution from the telecommunications provider/operator on the conversion to FTTP and should they have this solution periodically replaced for free by the operator/provider? Please provide your reasons for this (which may include social, economic and other policy reasons).

JT believes that it is appropriate for vulnerable people to receive a free battery back-up ("BBU") solution when the operator converts a line from copper to FTTP if the person relies on the fixed network for a lifeline service. When JT rolled out FTTP in Jersey we provided a free BBU solution to those users who had a Community Alarm Service ("CAS") installed.

In Guernsey, Sure are the sole provider of the CAS service namely, Piper Lifeline Service, which provides vulnerable users with an alarm and pendant to enable them to alert their care giver in an emergency situation. A Sure retail line rental service is a mandatory requirement to avail of a Piper Lifeline Service and therefore Sure controls the database of users and manages the process to provide new lines (both landline and Piper Lifeline Service) as well as moves and changes. JT believes it is appropriate that the Piper Lifeline Service customers are categorised as vulnerable and eligible for a free BBU. The ongoing maintenance and replacement of the alarm battery should also be part of the requirements.

Q2. Which of the above qualification tests (Emergency Service Reliance, Landline Reliance or particular combination approach) or any other should be adopted to determine whether a household is vulnerable and qualifies for a free power back-up solution? Please detail why your chosen solution is the most appropriate (you may wish to consider its social, economic and technological desirability, effects or its costs and ease of administration).

As per the answer to Q1, those receiving a Piper Lifeline Service (or any future replacement of this service) should be provided with a BBU free of charge. It is difficult for a telecommunications provider to determine if a household is vulnerable, and it is JT's view that vulnerability should be defined by either the healthcare provider or by the social security department who then recommend that a BBU is provided free of charge. It is also important that a record is kept on the customer account so that the BBU can be managed through its life cycle and that a BBU can be installed if the customer moves house. This is further complicated by the fact that consumers can move their telephone service to another provider who would not have records to establish if the customer was classed as vulnerable. When a consumer is considered to be vulnerable in Guernsey, a Piper Lifeline Service is provided and if the consumer has a line rental service with a provider

other than Sure, the line is moved back to Sure to enable the Piper Lifeline Service to be fully managed by Sure. It is therefore our opinion that vulnerability should be defined as the need for a Piper LifeLine Service, and only Piper Lifeline Service customers should be eligible for a free BBU.

Q3. Should all life, fire and burglar alarm lines be provided with free power back-up systems or should this depend on whether the household ultimately served is within Emergency Service Reliance, Landline Reliance or a particular combination approach.

As per our answer to Q1 and Q2 we believe that a free BBU should only be provided to Emergency Service Reliance consumers i.e. those consumers provided with a Piper Lifeline Service. Those consumers with fire and burglar alarms purchase these separately and should have the choice to purchase a BBU, should they rely on the fixed line for these services.

Q4. Should the above qualification tests be applied to each person in the household (as suggested above) or only to the landline subscriber and, in the former case, how best should one determine/define what should constitute a household for these purposes?

Please see answer to Q2.

Q5. Should business premises and subscribers using the service for the conduct of a business be excluded from the above free backup solutions and if so:-

- **Is there any particular class of subscriber conducting business from a residential premises who should still enjoy these free solutions?**
- **Should business lift, fire and burglar alarms enjoy these free solutions?**

As per our answer to Q1 and Q2, we believe that a free BBU should only be provided to Emergency Service Reliance consumers i.e. those consumers provided with a Piper Lifeline Service. Those businesses or consumers with fire and burglar alarms purchase these separately and should purchase a BBU, should they rely on the fixed line for these services.

Q9. Does the mobile communication network have the capacity to handle the increased call volumes during an outage where consumers have all migrated to an FTTP system (and there is no PSTN)? Please provide details of relevant capacities, expected increase in call volumes and your calculations in regard to the above.

Ofcom's 2016 Connected Nations report[2] cited that two thirds of emergency calls are made from mobile phones. JT's own figures show that over 60% of calls to the emergency services in Jersey are made from the mobile network. Sure should be able to provide the GCRA with figures for Guernsey.

Based on the fact that almost two thirds of the calls to the emergency services are made using a mobile, the small number of additional calls that would be made by those that would currently have a preference to use a fixed line instead of a mobile, would be insignificant. We therefore do not have concerns that the current Guernsey mobile networks would have any problems handling the very small increase in calls that may be made during a power outage. It should also be noted that mobile operators will prioritise emergency service calls over other calls within their network.

Q10. If the capacity of the mobile network is exceeded by calls placed during an outage, to what extent and with what degree of certainty, can emergency calls still be identified, prioritised and connected?

See answer to Q9.

Q11. In what specific areas of Guernsey is there mobile reception that would be sufficiently poor to risk 999 call failures or prevent adequate communication on any connected call ?

The Guernsey mobile operators networks are independent of each other and with different areas of coverage. We would therefore expect there to be near 100% outdoor coverage and only a very small number of properties where indoor coverage from any operator is not available. However, if there was a power failure, network coverage would likely be reduced where mobile sites do not have an alternative power supply such as a generator or battery.

However, this would be impossible to determine exactly, even if a joint coverage prediction was carried out, as indoor coverage is based on estimates due to the varying degrees of signal attenuation through buildings from differing constructions, locations of windows, etc.

[2] CONNECTED NATIONS (ofcom.org.uk)

Q12. To what extent are all poor reception areas known and well documented or, if not, able to be easily and accurately determined (and, if so, how is this determinable)? How large is the number of potentially affected households ?

With reference to the answer in Q11, whilst each mobile operator will have coverage prediction maps, no work has been done on a joint prediction and even if it was, this would only provide rough estimates of no coverage (indoor) areas.

Q13. For what period could the mobile network be expected to function (on reserve battery power) in an ongoing outage, where there is only a FTTP system (and no PSTN) and factoring in any expected increase in mobile usage during such an outage? (Please show relevant calculations, expected call loads and consequent during of back-up power sources to mobile masts etc).

The majority of JT's mobile sites have batteries installed with a target backup time of 2 hours. However, this time can vary depending on site loading, configuration and battery age. Additionally, some sites have generator backup.

Q14. What are the installation costs of the relevant specifications, size and bulk costs of BBU units able to deliver 1, 4 and 8 hours of standby power (and what talk time would each deliver).

The average installation time of a BBU is approximately 45 minutes. For CAS customers JT provide the installation free of charge in Jersey. In addition, we provided a free installation for alarm and lift lines and this is completed as part of the initial FTTP installation. For customers who do not fall into CAS, alarm, or lift line categories, the installation of a battery is charged at standard labour rates.

BBU Dimensions; 16.7 × 19 × 8.3 cm, weight 3.03 kg with Battery.

The cost to JT of 1 BBU unit is £31.50 however costs may reduce for bulk purchase.

The standby power time of the unit varies depending on the environment, temperature, etc. However, we believe on average a BBU would give between 4 and 8 hours standby power and sufficient talk time to call the emergency services or care giver for a CAS customer.

CSN27U12V - Indoor FTTx Series - Product Details, Specs, Downloads | CyberPower (cyberpowersystems.com)

Q15. What are the relevant specifications and bulk costs of PAYG mobile phones (without SIM cards) able to provide 1, 4 and 8 hours of standby power (and what length of talk time would each deliver).

JT currently supply a Nokia 105 (2019); cost price is £15.75/ retail price is £27. Talk time on a charged battery would be 14 hours with 18 days on standby on a charged battery. However, this model is 2G only, and is due to be replaced with a more expensive 4G model mid to end October 2021. The new model will be the Nokia 105 (4G); cost price is £27 (retail to be confirmed but it is estimated to be around £34). Talk time on a charged battery would be 5 hours and 14 days on standby on a charged battery.

Q16 With due regard to the above and any other relevant factors you describe, for what minimum period of time should any back-up solution provide the ability to make emergency calls ?

Ofcom consulted on this and provided guidelines for telecommunication providers[3]. Their guidelines propose that providers should have at least one solution that enables access to emergency organisations for a minimum of one hour in the event of a power outage in the premises. We believe that this timeframe is appropriate for Guernsey.

Q17. Where both solutions (BBU and PAYG mobile) are available, which is superior/preferable? Please detail why.

It is our opinion that a BBU solution is preferable for those consumers who rely on a Piper Lifeline Service as their medical needs/ability rely on the fixed network to place a call to their emergency care provider with minimum intervention from the user. For those other consumers that do not have a mobile phone and rely on the fixed line network, we believe a PAYG mobile is the appropriate method of contacting the emergency services in a power failure scenario.

Q18. Are there particular subscribers for which either a BBU or PAYG mobile would be an unsuitable solution, give any relevant facts (including technical competence to operate, charge and maintain)? Please detail who these would be and why.

See answer to Q17.

[3] Guidance: Protecting access to emergency organisations when there is a power cut at the customer's premises (ofcom.org.uk)

Q19. In the circumstances outlined above, do you have any information that might indicate the level of demand for paid BBU installation, financial viability/profitability of such BBU installation business (particularly for a telecommunications operator) and likely price levels? If so please provide the same.

In JT's experience there is little demand for BBUs outside of the vulnerable Piper Lifeline Service group. In the last 8 months we have supplied 150 new BBUs, therefore, we provide around 20 new units a month. The installation of the BBU could be carried out by a qualified electrician and would not need to be carried out by a telecommunications company. We therefore have not answered questions 20, 21, 22 and 23 as we have no further comments on this subject.

Q24. What subscriber and household data do network operators hold from which they may be able to determine/deduce: (i) Emergency Service Reliance or (ii) Landline Reliance (and how would this be done)?

The only operator that would have subscriber information from which to determine reliance on Emergency Services would be Sure as they provide the Piper Lifeline Service. No operator has information that would allow them to deduce landline reliance, and this would have to be determined by way of a customer questionnaire, for example.

This answer is also relevant to Q25 and Q26.

Q27. To what extent, in what circumstances and how would a network operator be likely to migrate subscribers, en masse and/or without consent, to an FTTP system.

A migration from PSTN to FTTP can be carried out without individual consumer consent as the operator will be providing the consumer with the same services, i.e. voice and broadband, with only the underlying technology changing. The terms and conditions that are provided to consumers when they sign up to a voice or broadband service usually allow the telecommunications provider to provide the service by the most appropriate means that the telecommunication provider chooses which allows the operator to upgrade the network as appropriate from time to time. This is no different to the move from ADSL to VDSL, or when the telecommunication system developed from manual exchanges to automated exchanges. Some elements of functionality of the service will of course change, but the underlying service (voice and/or broadband) remains the same.

Q28. How and at what stage of an FTTP migration process, especially on an involuntary migration, would the operator be able to:

- **Provide information to transition subscribers as to the requirements to be able to claim vulnerable status and the process for doing so?**
- **Obtain the information necessary to determine a subscriber's Emergency Service Reliance or Landline Reliance and then implement any solution?**
- **Determine a non-vulnerable subscriber's desire to purchase a BBU and then install it?**
- **Explain the risks of a FTTP (especially in power outages) and the subscriber to opt out of any migration (if PSTN remains)?**
- **Explain the operation, testing and maintenance of any back-up solution supplied/installed?**

It is JT's opinion that the consumer should be advised of the process and provided with all information at the beginning of the migration process from copper to FTTP. In Jersey, JT wrote to each consumer with details of the migration programme, what consumers could expect and provided a video which described the key elements that consumers should consider during the installation process.

When the consumer's property is ready to be migrated to FTTH they should be alerted to the information around BBU and they can then make an informed decision on whether they wish to purchase a BBU.
When JT was carrying out its FTTP migration in Jersey, it was provided with a full listing of all CAS customers from the occupational therapy section of the Government of Jersey Health and Community Services Department ("the Health Department"). This information was added to JT's fibre migration switchover tool and therefore JT engineers were aware prior to the FTTP installation that the customer had a CAS service. Before disconnecting the CAS customer's copper service, the engineer called the Health Department control centre to advise of the migration to FTTP. Once the FTTP installation was complete, the engineer carried out a test call using the CAS unit/pendant the outcome of which was then recorded by the Health Department.

JT also took the following additional steps prior to any CAS unit FTTP installation:

- ensuring that the voice profiles were set accordingly prior to installation;
- ensuring engineers were aware of vulnerable consumers before site attendance to ensure they had the BBU equipment to install on site; and
- during the migration if there was an alternative contact for a vulnerable customer, it was preferred if that contact person was on site during the migration to agree the method of install and location of the BBU.

Q29. On what time-scale should (i) PAYG mobiles and (ii) BBU units be replaced to ensure reliable operation and appropriate back-up duration ?

It is our opinion that BBU's should be replaced/maintained as part of the Piper Lifeline Service and PAYG mobiles should be provided at the point of switch over from PSTN to FTTP and should a new handset be required at a later date then the consumer should have the ability to request one.

Q30. Should network operators be required to replace PAYG mobiles/BBUs at the end of their effective life, if they become faulty or malfunction and what would be the projected costs of imposing this duty on operators?

See answer to Q29.

Q31. What testing may be required of BBUs or PAYG mobiles to ensure that they are still functioning normally and reliably on an ongoing basis (and what testing equipment can be supplied with the solution to enable this to be done easily by laymen)?

In Jersey, the occupational therapy section of the Health Department regularly contact their CAS users and ask them to press the CAS pendant to carry out a test call. This is recorded within their CAS management system. We believe this test call is carried out every month. There is also a code which is entered when configuring the CAS units which triggers a 'periodic test' every 3 days from the unit.

Q32. Should the duty to test for reliable functioning of the solution be imposed on vulnerable subscribers or on operators (and what would be the costs of imposing this on operators)? Please provide full reasoning and costing.

The maintenance and replacement of BBUs for vulnerable subscribers i.e. Piper Lifeline Service users should be provided as part of the service.

Q33. Which, if any, particular categories of vulnerable subscribers would not be capable of doing any testing of back-up devices (whether BBU or PAYG mobile) and would it, in any such case, be more appropriate to impose this duty on the operator ?

As per the comments to the questions above, we believe that a free BBU should be part of the Piper Lifeline Service and be maintained by Sure as part of that service. We do not believe that a PAYG mobile is appropriate for vulnerable users and we do not believe that any operator should be responsible for testing PAYG mobile devices.

Q34. Should a network operator be required to monitor whether a subscriber has become vulnerable and is entitled to the relevant back-up protections, and if so, in what fashion and how regularly should it conduct such monitoring ?

Please see answer to Q1.

Q35. Should a network operator be required to investigate and respond to a change of a vulnerable subscriber's address (which might require protective measures at a new site) or their switching to a new FTTP provider (who might need to be informed of his/her vulnerable status)?

Please see answer to Q1.

Q36. Comments on any matters relevant to a potential dispute resolution process that may need to be put in place.

None in relation to BBU.