Office of Utilities Regulation

Toward Universal Service/Access Obligation for Telecommunications Services in Jamaica

Second Consultative Document

OFFICE OF UTILITIES REGULATION

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Second Consultative Document: Toward Universal Service/Access Obligation for Telecommunication Services in Jamaica
Document No: TEL 2003/09
October 21, 2003

Abstract

Part VI of the Telecommunications Act 2000 sets out the principles governing the provisions of universal service/access. It outlines the obligations of a provider and also describes the minimum level of basic telecommunication services that are to be provided by designated operators. The main objective of this document is to provide advise to the Minister with responsibility for telecommunications on issues relating to universal service/access in Jamaica. The intention is to gather the most relevant and current information available so as to ensure the proper design and implementation of the programme.

The document summaries the comments made on the initial document and put forward the views of OUR on these issues. In addition, the OUR is proposing the establishment of Regional Broadband Networks (RBNs) to provide public institutions with broadband access to the Internet. The Document also outlines the process in which potential RBNs operators would be selected to provide universal service/access.

Comments From Interested Parties

Persons who wish to express opinions on this Consultative Document are invited to submit their comments in writing to the OUR. Comments are invited on all of the issues raised in the document.

Responses to this Consultative Document should be sent by post, fax or e-mail to: -

David Sullivan
Office of Utilities Regulation
P.O. Box 593
36 Trafalgar Road,
Kingston 10
Jamaica
Fax: 1 (876) 929-3635
E-mail: dsullivan@our.org.jm

Responses are requested by November 21, 2003. Any confidential information should be submitted separately and clearly identified as such. In the interests of promoting transparency, respondents are requested to limit as far as possible the use of confidentiality markings. Respondents are encouraged to supply their responses in electronic form, so that they can be posted on the OUR's website (www.our.org.com).

In order to facilitate the broadest possible participation in the consultation process, the OUR may arrange appropriate fora where the issues can be discussed.

Comments on Responses

As in all the OUR's consultations, there will be a specific period for respondents to view other (non-confidential) responses and to make comments on them. The comments may take the form of either correcting a factual error or putting forward counter-arguments. Comments on responses are requested by December 5, 2003.

Arrangements for Viewing Responses

Those who wish to view the responses received should make an appointment by contacting Lesia Gregory at the OUR by one of the following means:

Telephone: (876) 968 6053 (or 6057-8)
Fax: (876) 929 3635
E-mail: lgregory@our.org.jm

The appointment will be confirmed by a member of the OUR's staff. At the pre-arranged time the individual should visit the OUR's office at:

3rd Floor,
PCJ Resource Centre,
36 Trafalgar Road,
Kingston 10.
Jamaica

The individual may request photocopies of the responses which will be provided at a price which reflects the cost to the OUR for using its photocopying facilities. Also, copies of this document may be downloaded from the OUR's website at www.our.org.jm.

Timetable
The timetable for the consultation is summarized in the table below. This includes an indicative timing for the Advisory to the Minister.

Summary of timetable for consultation

Event	***Date***
Second consultation document	October 21, 2003
Responses to second consultation document	November 21, 2003
Comments on responses	December 5, 2003
OUR Advisory to the Minister	December 23, 2003

Table of Contents

CHAPTER ONE: INTRODUCTION

1.0 The first consultation document on universal service/access was issued in December 2002.[1] The OUR would like to use this medium to express its appreciation to all who responded to the document. Written responses were received from the following organisations/persons/groups:

- Cable and Wireless Jamaica Limited;
- Mossel Jamaica Limited (Digicel);
- Infochannel Limited/Reliant Corporate Communications Limited;
- Georgia Gibson-Henlin;
- Stefan Wright.

1.1 In addition, the OUR conducted public meetings in the following parishes in a effort to solicit as much information as possible from a wide cross section of the society:

- Manchester;
- St. Mary;
- Portland.

1.2 In an effort to promote transparency, each chapter (except chapters five and six)[2] is structured in the following format:

- Summary of Consultation Issues;
- Comments from Interested Parties;
- OUR's Comments/Views and;
- OUR's Conclusion(s).

1.3 It should be noted that all views were taken into consideration in the preparation of this document. Therefore, even though some views are not explicitly stated, the Office would like to assure all participants that they were given due consideration.

[1] This document and the responses can be downloaded from the OUR's website at www.our.org.jm
[2] Chapters five and six are structured differently because they contain issues that will be consulted on for the first time.

Purpose of Document

1.4 Part VI of the Telecommunications Act 2000 (the Act) sets out the principles governing the provisions of universal service/access. It outlines the obligations of a provider and also describes the minimum level of basic telecommunication services that are to be supplied by a designated provider. In addition, this Section outlines the powers/responsibilities of the Minister and the OUR.

1.5 The first consultation document examined these issues from a general perspective, however, this consultative document goes further in that it builds on the issues raised in the initial document and draws conclusions where necessary. In addition, the document introduces new issues to be consulted on.

1.6 As was the case with the first consultation document, the main objective of this document is to provide advise to the Minister with responsibility for telecommunications on issues relating to universal service/access in Jamaica. The intention is to gather the most relevant and current information available so as to ensure the proper design and implementation of the programme.

Structure of Document

1.7 The rest of the document is organized as follows:

- Chapter two looks at the policy framework;
- Chapter three outlines the legal framework;
- Chapter four examines provision, funding and administration;
- Chapter five addresses universal service/access delivery;
- Chapter six explores implementation issues and;
- Chapter seven reports on other consultation issues.

CHAPTER TWO: POLICY FRAMEWORK

MARKET EFFICIENCY AND ACCESS GAPS

Summary of Consultation Issues

2.0 In the initial consultative document the Office invited comments on the concepts of Market Efficiency and Access Gaps and whether or not these concepts are relevant to the provision of universal service/access in Jamaica.

Comments from Interested Parties

2.1 Stefan Wright commented that both concepts are relevant to the development of any universal service programme in Jamaica. The growth in the mobile market testifies to the importance of allowing the market to close the market efficiency gap. The number of households that now have access to voice services is overwhelming. Like the OUR, the respondent also shares the view that the Market Efficiency Gap should only be filled by the forces of demand and supply and regulatory or other means used to fill the Access Gap.

OUR's Comments/Views

2.2 The OUR believes that the application of these two concepts is critical to the development of any universality programme in Jamaica. The voice telephony market (fixed and mobile) is still in its developmental stage and therefore more time is needed to truly assess any access gap that might occur. The intention is to allow the market to develop to its full potential before any assessment is done. The OUR is of the view that a more suitable time to conduct this assessment would be after the expiration date of the mobile operators' licence obligation. It is believed that at this time the market efficiency gap would have been realised and any remaining gap (access gap), if any, would require regulatory intervention. At that time a detailed study would be done to ascertain the number of households without service. In addition, the study would also assess the cost of providing service to these households.

OUR's Conclusion(s)

2.3 Application of the two concepts mentioned above is critical to the universal service/access process and therefore a time period should be set to determine whether an assessment of the voice market is necessary to

identify any access gap.[3]

AFFORDABILITY

Summary of Consultation Issues

2.4 The first consultation document looked at affordability from the following perspectives: Current consumer expenditure; impact of rate rebalancing and competition and options to address affordability problems.

2.5 Data from the Jamaica Survey of Living Conditions (JSLC) 2002 show that households who fall within the lowest quintile are spending an average of 7.7% ($1112) of their monthly consumption on telecommunication services meanwhile those in the highest quintile spend approximately 5.3% ($2090). With respect to overall utility spending, households in quintile one spend up to 14.9% of their disposable income on utility services meanwhile those in quintile five spend an average of 10.1%.

2.6 The Office noted that rate rebalancing might have a greater impact on households within the poorest quintile compared to those in the richest, since most of the calls the former make are domestic. However, as competition intensifies, it is expected that overall prices will fall.

2.7 The initial consultative document highlighted four options to address affordability problems. These are call barring, limited minutes, a prepaid scheme and a low user package.

2.8 The Office also requested comments on how concepts of affordability can and should be defined and applied to the circumstances in Jamaica.

Comments from Interested Parties

2.9 Stefan Wright suggested that rates should be at a “reasonable cost” and varies with the location of households. A reasonable rate for households living in urban areas would be one which is lower than the average rate paid by urban consumers meanwhile for those in rural areas a reasonable rate could be similar to what urban subscribers pay. Essentially, this respondent supports de-averaged rates.

2.10 CWJ outlined two approaches that could be used in defining and targeting households with affordability problems: An income approach and a usage approach. With the income approach, a threshold would be set and

[3] In an earlier paragraph the OUR suggested that the time period should be after the licence obligation of the mobile operators have been expired.

households who fall below that limit would be entitled to funding. However, even though this approach might be theoretically ideal, it would prove difficult identifying households who qualify. With respect to usage, the Company argued that since telecommunications usage is correlated with household income, it is reasonable to assume that customers with low usage might be experiencing affordability problems. Of the two approaches, CWJ believes that the usage approach is more appropriate for Jamaica.

2.11 In addition to the above, CWJ speaks to its Low User Package which is offering affordable services to customers with affordability problems. Also, the Company points out that it provides assistance to customers who *"encounter difficulty in paying their bills, thereby allowing customers access to, at least, make calls to emergency services and receive calls."*

2.12 Further, CWJ suggested that one of the main issues with affordability is the high fixed-to-mobile charge that is levied on its fixed line customers. The Company argued that it is currently costing its fixed line customers up $12 to call a Digicel phone.[4] This has significantly increased its bad debts and has resulted in the disconnection of many customers from its network.

2.13 Infochannel suggested that affordability *"should be augmented with customer choice, customer control of expenditures and ease of use from the customers' perspective."* It is clear from the experiences in the mobile industry that customers are willing to pay a higher per minute call rate to get access to services. The growth in the mobile industry and the numerous packages being offered by operators such as calling party pays and prepaid, have being addressing the affordability concerns of households. The prepaid scheme offers customers flexibility and gives them direct control over the amount spend on telephone services.

2.14 Digicel believes that in order to fully assess the issue of affordability, the OUR will need to conduct a study so as to determine the cost to provide service to uneconomic customers and areas. In addition, the Company is in support of the affordability options put forward by the OUR in the first consultative document.

OUR's Comments/Views

2.15 The OUR recognises that rebalancing will have an impact on the amount paid by customers especially those whose calls are mainly domestic. The Price Cap imposed on CWJ has been constraining rapid movements of prices and hence customers' bills. However, overtime rates will be fully rebalanced therefore the objective then would be to ensure continued

[4] This rate has subsequently been reduced to $7 since September 1, 2003.

access to voice services.

2.16 Since the entrance of a new player in the mobile market in April 2001, the number of mobile subscribers has quadrupled – moving from approximately 0.33M to well over 1.4M to date. Mobile operators have expanded into both economic and uneconomic areas. The prepaid options offered by these operators are addressing the affordability need of households to a large extent. These options afford customers the flexibility needed to control their bills. Even though the average call from a prepaid mobile phone is approximately $11.36, compared to $2.97 from CWJ fixed network, customers are willing to use prepaid mobile because there are no bills to pay at the end of the month and they have total control over the amount spend on telephone calls.

2.17 According to the current policy of mobile operators, a customer has up to sixty (60) days to make and/or receive a call before being disconnected from the network. Essentially, what this means is that the customer can choose to spend as little as $60[5] on a mobile prepaid over the two-month period. This policy has certainly being benefiting customers with real affordability problems. Preliminary figures from the JSLC 2003 show that households in the poorest quintile are opting for mobile service and are spending less per month using this service. With the fixed line phone service however, households are required to pay a fixed monthly charge.[6] This serves as a deterrent since customers have no control over paying this fixed amount.

2.18 Between April 2001 and March 2003, the number of customers on CWJ's fixed network has been reduced by approximately 10.36%.[7] The OUR seeks comments from CWJ on the effect rebalancing and competition are having on its fixed line customer base. In addition, the OUR is urging CWJ to introduce a prepayment option for its fixed line customers; that is, customers should be given the option of applying for prepaid or post-paid fixed line packages.

2.19 With respect to rates, Stefan Wright mentioned that different rates could be charged depending on the location of households – rural consumers would pay a higher per minute rate compared to urban consumers. While the OUR might not object to this pricing under normal conditions, it is of the view that geographically averaged rates should be made available for universal service/access purposes.

[5] CWJ offers prepaid calling cards in denomination as low as $50 plus GCT.
[6] This charge is currently $400 for customers on the standard package and $190 for those on the low user package on the CWJ network.
[7] Based on reports submitted to the OUR by CWJ.

OUR's Conclusion(s)

2.20 It can be clearly seen that the prepaid option is one of the tools that can be used to address the affordability concerns of households. To date, over 90% of mobile subscribers are on a prepaid plan. This option has proven to be very successful in the mobile market and no doubt similar success could be enjoyed in the fixed line market. The OUR therefore believes that all operators, including fixed operators, should afford their customers the opportunity of signing up for a prepaid plan. In addition, CWJ fixed network should continue to provide its customers the opportunity of accessing the Low User Package currently being offered as well as any other packages that might be suitable in addressing the affordability concerns of households. It is worth noting that at least one operator in Africa has introduced prepaid fixed line services to its customers in an effort to compete with the mobile operators for customers.

Question 2.1: Do you agree with the OUR's view that a time period should be set for any assessment of the voice market?

Question 2.2: Do you support the OUR's view that the prepaid option could be used to address the affordability concerns of households? Explain.

CHAPTER THREE: LEGAL FRAMEWORK

INTRODUCTION

Telecommunications Act 2000

3.0 Section 39 (2) of the Telecommunications Act 2000 sets out the services that are mandated under the universal service/access program. These are outlined below:

- Single line voice telephony services;
- Payphone services;
- Free calls to emergency services and;
- Internet access to public institutions – schools, public libraries and post offices.

SINGLE LINE VOICE TELEPHONY

Summary of Consultation Issues

3.1 The provision of basic voice services is one of the universal service/access objectives in Jamaica. The Act speaks to the provision of single line voice telephone services throughout the Island to persons regardless of residence or work, having due regard for economical and technical constraints. Currently both mobile and fixed line technologies are being used to provide this service.

3.2 Since the Act did not specify which technology should be used to provide single line voice telephony services, the Office postulated the view that the provision of the service should not be limited to any one technology. In other words, any technology that can provide the specified services at the least possible cost should be the technology of choice.

Comments from Interested Parties

3.3 Cable and Wireless Jamaica Limited (CWJ) has suggested that the provisions in the Act refer to the use of fixed line technology only, to provide voice services to persons islandwide irrespective of place of residence or work. The Company referred to other jurisdictions such as

the European Union, Australia and the USA as areas where fixed line technology has been used to provide universal service/access. In addition, CWJ indicated three reasons why fixed line technology should be favoured to mobile:

a) *The fact that fixed line phones are fixed to a location they are better able to serve households and/or businesses rather than a mobile phone that is more for individual use;*

b) *Traditionally fixed line phones are more appropriate for Internet service provision;*

c) *Mobile phones require frequent charging and therefore might not be available for use when most needed.*

3.4 Digicel commented that universal service obligation has already been imposed on mobile operators by virtue of their licences which stipulated that *"the licensee shall provide 90% geographic coverage of Jamaica within five (5) years of the grant of this licence."* The Company noted that it is currently working to accomplish this requirement. In addition, Digicel made the following comment:

> *"The successful introduction of competition in Jamaica has resulted in a very rapid increase in the percentage of the population that now has access to a telecommunications network (through either a fixed or mobile operator) and…...the traditional view of universal service must be modified. For example, a household with no fixed line but with a mobile phone satisfies the objective of universal service. Through geographic coverage obligations mobile operators must provide access to uneconomic areas and therefore are already funding the provision of universal service. Mobile operators should not be expected to contribute to any other (fixed line) universal service program. This would amount to double counting…. If a contribution is sought then a corresponding fund must be created to cover the existing universal service provided by mobile operators."*

3.5 Infochannel pointed out that within the past three years wireless access has increased much faster than wireline and the OUR should give due consideration to issue of expanding voice services via fixed line and/or mobile. The Company however gave more support to wireless technology especially for rural areas.

3.6 Stefan Wright spoke of the wide range of technology that is currently available to provide voice services compared to earlier years. There is now wireline, wireless (cellular), satellite, fixed wireless, cable and Wi-Fi.

The respondent suggested that the provision of service should not be limited to any one technology but *"Jamaica should therefore choose the method of delivery which is most appropriate and cost effective."* Georgia Gibson-Henlin spoke of the use of spread spectrum technology to provide basic telecommunications services. The example of the Kingdom of Tonga, located in the South Pacific, was related. This country has built out a wireless network which has resulted in huge savings in the provision of voice, Internet and other data services compared to the traditional fixed line.

OUR's Comments/Views

3.7 Section 39 (2) of the Act states:

> *The obligation to provide universal service shall be based on the following principles, that is to say the need –*
>
> *(a) to the extent technically feasible and economically reasonable, to promote access to single line voice telephone services throughout the Island to persons regardless of place of residence or work;*
>
> *(b) to ensure that payphone services are reasonably accessible to customers on an equitable basis;*
>
> *(c) to permit access to free calls to emergency services and;*
>
> *(d) to the extent technically feasible and in so far as the necessary resources are available, to promote Internet access throughout the Island in schools, public libraries and post offices.*

3.8 The analysis for this section will concentrate only on Section 39 (2)(a) of the Act. All the respondents to the first consultation document except CWJ suggested that the provision of single line voice telephony services should be technology neutral and therefore not limited to only fixed line. The international experiences alluded to by the Company speak to a line that is capable of not only providing voice but also data. Currently, this would more favour fixed line technology. However, it should be noted that mobile technology is fast eroding this perceived advantage. In fact, mobile operators in many countries, including Jamaica, have been testing or have already started providing these services to their customers.[8]

[8] It might be argued that the price for this service is expensive and the bandwidth might be low but the fact of the matter is that it shows the potential of mobile technology.

3.9 The Act speaks to a line that is capable of providing single line voice services, not necessarily voice and data. In addition, there is nothing in the Act to suggest connection at a fixed location. Therefore, the comparison made by CWJ is somewhat misleading.

3.10 Currently, both fixed and mobile operators are providing single line voice services to households across the Island. The real issue therefore is to assess whether operators are currently reaching all households at affordable prices. As mentioned earlier, mobile operators are required to provide 90% geographic coverage of the Island within five years from the date the licences were issued. This means that by March 2005, at least two of the three mobile operators currently operating in Jamaica should have accomplished this requirement. The other operator CWJ, though not obligated to, will be compelled by competition to do so. Interestingly, Digicel is reporting that it is well on its way to meeting this obligation and its website is reporting that the Company is now reaching 95% of the population. In addition, the prepaid packages offered by these operators are providing households with affordable access to services. Consequently, the OUR maintains the view that single line voice telephony services should not be limited to any one technology but any technology that can provide the specified services at affordable prices should be the one chosen.

3.11 In the first consultation, the Office reported that approximately 52% of households across the Island have fixed line service. However, subsequent information received by the OUR has indicated that this number is trending downward - approximately 48.2% are now connected to a fixed network. CWJ argued that the reduction is due mainly to the high fixed-to-mobile charge that fixed line customers are experiencing. However, despite the reduction in the number of households connected to fixed networks, the number connected to mobile networks has been increasing significantly. According to a study conducted by the OUR in April 2003, approximately 71%[9] of the households throughout the Island have at least one mobile phone in their homes.

OUR's Conclusion(s)

3.12 Based on the analysis above, the Office is of the view that the single line voice telephony service objective has been substantially met or will be substantially met in the near future. Hence, no universal access or service regulatory intervention is required with respect to single line voice telephony.

[9] Based on a recent study conducted by the OUR.

3.13 Approximately 74.3%[10] of Jamaican households currently have direct access to at least one telephone within the home. Also, the Office is convinced that with the prepaid scheme currently offered by mobile operators, households now have more control over the amount they spend on telecommunications services and therefore disconnection should be significantly reduced. The Office is therefore of the view that any required universal service/access regulatory intervention be focused on some of the other objectives set out in the Act. Currently, the view is that regulatory intervention should be limited almost exclusively to fulfilling the Internet access objective to public institutions.

3.14 The decision to place more emphasis on Internet service provision compared to single line voice will have implications for the costing of universal service/access. Generally, elaborate costing studies would have been done to arrive at the net cost of serving customers with voice services. These are deemed necessary since operators (usually the incumbents) would have been designated the universal service provider without any form of competitive bidding. However, it is believed that such studies will not be necessary since the operators would have to go through a competitive bidding process before they can be chosen as a provider. It is also worth noting that an operator would have to be successful in the bidding process to be designated.

PUBLIC PAYPHONES

Summary of Consultation Issues

3.15 The provision of reasonable access to payphones is one of the universal service/access objectives established in the Act. As such the Office, in its first consultation document, outlined a proposal that could be adapted to fulfil this requirement. The OUR proposed the installation of payphones at schools, post offices, shops and public libraries as well as along main roads. Installation could be based on, but not limited to the following minimum criteria:

(1) One payphone for every community or town with at least 25 households or 90 persons;

(2) Payphones should be within reasonable walking distance from homes. A maximum of two kilometres (2km) would be considered a reasonable walking distance to a payphone.

[10] This figure is a composite of both fixed and mobile phones. These figures are based on a recent study conducted by the OUR.

3.16 In addition to the proposal above, the Office invited comments on the use of payphones as a means of extending and facilitating access to telecommunications services. Specifically, the following questions were asked:

a) What criteria should be used to establish a sufficient number of payphones?

b) What are the factors that have prevented the necessary or needed number of payphones from being provided?

c) What can be done to promote the use of payphones as a means of public access?

Comments from Interested Parties

3.17 Stefan Wright suggested that *"while public telephones form an integral part of providing universal service, they should not be used as the main medium through which universal service is provided."* As far as possible, wireless solutions should be used to address the needs of uneconomic households and areas. However, where wireless solutions prove too expensive for customers, payphones should be installed.

3.18 In addressing the question as to what factors have prevented the expansion of the payphone market, four main issues were highlighted: Competition from mobile; high maintenance costs; vandalism and failure to use appropriate technology.

3.19 In determining the number of payphones to be installed, CWJ believes that a bottom up approach should be employed to assess the demand for the service in communities across the Island. From this study, the OUR would be able to identify "strategic" communities, that is, *"communities that are unserved by payphones or have limited mobile coverage."* These communities would naturally require more payphones compared to the others. As such, CWJ believes that priority should be given to communities with these characteristics instead of having a policy where payphones are installed just about everywhere throughout the country.

3.20 Digicel suggested that the OUR could use the approach taken by Oftel in determining the number of payphones to be installed. The criteria used were:

a) The size of the community in the local area that was not currently served by an existing payphone;

b) The type of accommodation in the area (rented, owner

occupied);

c) Walking distance to an existing payphone.

3.21 Infochannel believes access to essential services should be the main criterion in determining the number of payphones to be installed. In other words, there should be adequate geographic coverage such that citizens can access payphones, within walking distance from home, in cases of emergency. With this approach, it is clear that payphones would be installed in both economic and uneconomic areas. Where the payphones are installed in the latter, operator(s) should be compensated for any net costs incurred.

OUR's Comments/Views

3.22 The demand for and use of public payphone services have been reduced significantly. This phenomenon is not unique to Jamaica. Due to the introduction of competition in and growth in the mobile market, a number of countries are experiencing a similar process. In Ireland for example, the number of payphones have declined by approximately 14.25% in just eighteen months (January 2001 to June 2002) - moving from 7796 to 6685.[11]

3.23 The Office is of the preliminary view that the role of public payphones in meeting universal service/access objectives will continue to decline as single line telephony services are expanded in Jamaica. That is, public payphones will essentially become increasingly irrelevant in the daily lives of most Jamaican households. As such, the number and distribution of public payphones are not necessarily a good indicator of the of the public payphone objectives set out in the Act.

3.24 The OUR is also of the view that the intention of Parliament in including this service objective in the Act was to ensure that citizens without access to single line voice telephony services would have reasonable access to payphones. Hence, as the number of households with single line voice telephony increases, the need for payphones decreases.

3.25 The Office is also aware of the increasing vandalism and maintenance costs that CWJ is experiencing with its present payphone operations.

[11] See "The Future Framework for the Regulation of Universal Service in the Irish Market" published by the Commission for Communications and Regulation in Ireland. http://www.comreg.ie/_fileupload/publications/ComReg02116.pdf.

OUR's Conclusion(s)

3.26 Based on the analysis above, the Office is of the view that the public payphone service objective has been substantially met or will be substantially met in the near future in most areas of Jamaica. Hence, no universal service/access regulatory intervention is required with respect to public payphone service objective in most areas of Jamaica.

3.27 However, the Office recognizes that in some isolated and rural areas in Jamaica there are still households with neither access to single line voice telephony or public payphones. Therefore, universal service/access regulatory intervention is indeed required with respect to public payphone service in these areas.

3.28 Hence, the Office is proposing to include a public payphone component to its proposed Internet access to Public Institutions initiative. Under this combined approach, the two objectives of the Act that have still not been substantially met will be addressed in a joint manner.

ACCESS TO EMERGENCY SERVICES

3.29 Based on observations, all single line voice telephony operators are providing their customers with free access to emergency services as stipulated in the Act. Therefore, it is reasonable to assume that as voice coverage expands (fixed, mobile and/or payphones) more citizens will be able to get free access emergency services. The Office is therefore of the view that the emergency access service objective is being substantially fulfilled or will be substantially met in the near future in Jamaica. Hence, no universal access/service regulatory intervention is required in this respect at this time.

INTERNET ACCESS TO PUBLIC INSTITUTIONS

Summary of Consultation Issues

Concentration of Internet Access

3.30 Investigation by the OUR revealed that the level of Internet access in schools at the primary and secondary levels are very low compared to schools at the tertiary levels. As such, the OUR proposed that the government should concentrate more on providing Internet access to schools at the primary and secondary levels.

Provision of Computer Hardware and Software

3.31 The Office is of the view that public institutions, by themselves, might not be in a position to purchase the required number of computers/terminals to provide access and has therefore proposed two funding arrangements to address this problem. The first one is to get funding from the USAFJ meanwhile the other would be through other government programmes.

Level of Connectivity for Public Institutions

3.32 Operators currently provide both dial up and broadband Internet services to their customers. The OUR proposed broadband over dial up for three different reasons: Speed, economic efficiency and "always on" connection.

Tariff Packages and Payment of Monthly Bills

3.33 The OUR suggested that any tariff packages implemented for schools must take into account the financial limitations of these institutions. As such, it is believed that a tariff package based on usage would not be ideal given the expected level of usage especially in the schools. The Office therefore proposed a fixed or flat rate package.

3.34 The Office proposed three methods of paying the monthly Internet bill of schools. Firstly, the universal service/access fund (USAF) would cover the monthly payments; secondly, the USAF would cover a portion of the bill and; thirdly, no funding would come from the USAF.

3.35 The Office proposed similar packages for libraries and post offices except the full funding package. This was based on the fact that these institutions could sell the corresponding service(s), thus generating revenues.

Comments from Interested Parties

Concentration of Internet Access

3.36 All respondents supported the OUR's view that Internet access should be concentrated at the primary and secondary levels. However, Stefan Wright suggested that the OUR should focus on providing Internet access to all public libraries and post offices in the initial stages of the process. Access to schools should be limited given the amount of resources that will be required. In the interim, the Ministry of Education and the schools themselves should be responsible for providing Internet access. Over time, when more resources become available, the USAF could then focus its efforts on schools. The assumption is that students (schools) would still have access because they could use the facilities at these other locations.

Provision of Computer Hardware and Software

3.37 CWJ firmly opposed the provision computer hardware and software to

public institutions from the USAF. In its response the Company stated: *"CWJ is of the firm view that both legally and on policy grounds, any universal service obligation in relation to Internet services should focus only on the provision of connectivity and not subsidise the provision of computers, internet kiosks or software."* Essentially, CWJ argued that universal service/access funding should not be used to provide IT services, as this would amounts to an unfair tax on the industry.

3.38 Stefan Wright argued that the Government of Jamaica ("GOJ") should seek funding from external sources such as hardware and software manufacturers instead of relying on the telecommunications industry.

3.39 Infochannel argued that the OUR and the GOJ should look to a wide cross section of the society as well hardware/software vendors, not just members of the telecommunications sector, to provide support for the provision of hardware and software to these institutions. A programme could be initiated where companies make voluntary donation of computers to public institutions. This, they argued, is important since the provision of Internet access will benefit the entire society.

Level of Connectivity for Public Institutions

3.40 CWJ also strongly opposed the provision of broadband access to public institutions at this time and is insisting that connection should be limited to narrowband (dial up). The Company cited a number of reasons for its view. Firstly, priority should be given to the provision of fixed line service to more households; secondly, the delivery of broadband service is expensive and given the 5% limitation on industry revenue for funding universal service, enough resources might not be available to accomplish this task; thirdly, the additional benefits that broadband may afford might not justify the cost of providing the service and; fourthly, subsiding broadband access may result in distortion in the market for broadband services. The Company also cited additional reasons why narrowband should be chosen over broadband. The USA for example, concentrated on the development of its telecommunications infrastructure (expansion of fixed line access to households) during which time narrowband was provided to public institutions. Broadband access was only considered after all of this was in place. The EU excluded Internet service from its USO definition after being persuaded by member states that it was not necessary.

Tariff Packages and Payment of Monthly Bills

3.41 One respondent suggested that post offices and libraries should be able to charge rates that are sufficient to cover the their monthly expenses. However, students should be offered the service at these locations at a subsidized rate.

3.42 CWJ argued that public institutions should be responsible for the payment of their monthly expenses and subsidy should only be made available where necessary. The OUR and the GOJ should assess the maximum price that can be charged for public Internet access such that the level of funding, if any, would be significantly reduced. Universal service funding could therefore be concentrated in other areas such as increasing fixed line access to households.

3.43 Infochannel is advocating that operators make at least one Internet access point available to each school free of charge. Any additional access point should be funded by the USAF. In addition, flat rate billing is preferred to usage. With respect to Internet access at post offices and libraries, they argued that the cost should be borne by individual users. The Company suggested that prepaid cards, similar to the ones currently used by mobile operators, could be made available to the public for accessing the Internet.

OUR's Comments/Views

Concentration of Internet Access

3.44 As was reported in the previous consultative document, the level of Internet access in public schools at the primary and secondary levels are very low compared to that of schools at the tertiary level. As such, the OUR expressed the view that priority should be given to schools at the former levels. The respondents to the consultative document supported this view and the OUR is therefore reiterating the point that priority should be given to these schools.

Provision of Computer Hardware and Software

3.45 The general view of the respondents is that the provision of hardware and software to public institutions should be out-sourced, that is, the telecommunications industry should not be asked fund the provision of these facilities instead contribution should be solicited from the society as a whole, businesses and/or hardware/software vendors.

3.46 Even though this view seems credible, there are still concerns that funding from these sources might not fully accomplish the task at hand within a specified period of time. For example, suppose the target is to have access to institutions within three years after the designation of an operator or operators but within that timeframe not all institutions are equipped with computers, what will happen? Could the USAF administrator purchase computers or would the institutions have to wait until additional funding is sourced from these other channels? Answers to these questions are critical to the advancement of the process and therefore the OUR seeks comments from interested parties. The OUR

also believes that serious consideration should be given to the importance of Internet access to citizens in general since it is currently and will remain a vital ingredient to the development of the country's economy.

3.47 The OUR still share the view that the provision of Internet access should include the provision of the equipment necessary to facilitate access to the Internet. For example, when public payphone services are being made available, operators not only provide the line or the access point; the equipment necessary to access voices services, that is, the payphone apparatus itself, is also provided.

3.48 A similar situation exists currently where CWJ installs Internet kiosks in post offices. The Office notes that CWJ not only provides the telecommunications access line, it also provides the informatics equipment needed to access the Internet. The same principle could or should be applied to the overall provision of Internet access to public institutions.

Level of Connectivity for Public Institutions

3.49 CWJ is the only respondent who commented directly on the issue of the level of Internet connectivity to public institutions. As stated above, CWJ opposed the provision broadband access at this time; instead its preference is for narrowband. However, the OUR maintains its view that broadband Internet connection should be the preferred choice for public institutions. In addition to increase speed, economic efficiency and 'always on' connections, there are other reasons why broadband should be implemented.

3.50 First, CWJ suggested that therefore would not be enough money available to provide the broadband connections given the 5% limitations on industry revenues and the fact that priority should be given to the provision of fixed line services to every household throughout the Island. The OUR believes that the single voice telephony objective has been substantially met. Hence, no public funds, including from the USAF should be channelled towards that objective at this time. Hence, taking CWJ point of USAF allocation, the OUR believes that, over time, there will be sufficient funds to meet the broadband objective. This area will be developed further in subsequent chapters.

3.51 Second, in deciding on whether to select broadband over dial up connection, the issue of future development should also be considered. Broadband provides users with the capabilities of meeting their current and future needs. Public institutions, especially schools, will view broadband connections to the Internet more useful for applications such as e-learning, communication, video conferencing among others. In addition, the more advance these services become, the less capable will

be the use of dial-up connections.

Tariff Packages for Public Institutions

3.52 There are advantages and disadvantages to each of the three options regarding the payment of the Internet access for public institutions. In essence, the OUR has to balance the interests of the public institutions with those of the USAF and with those of the operators that will provide Internet access.

3.53 Further, the most appropriate approach may differ depending on whether the public institution is a school, a public library or a post office, the location of the institutions and its relative size. In addition, given that the OUR is of the view that the designated public libraries and post offices that receive Internet access should also be able to provide public payphone access, the most appropriate solution will also depend on whether the public institution is receiving Internet access and/or public payphone. The issue of pricing of the Mandatory Services to public institutions is discussed in more detail in subsequent sections.

OUR's Conclusion(s)

3.54 Based on the discussions above, the Office is of the view that priority should be given to schools at the primary and secondary levels. In addition, the universal service/access fund should be made available to provide the necessary equipment to access the Internet as required. Further, broadband connection to the Internet is clearly the way forward and the tariff packages for the respective institutions would depend on a number of factors.

Question 3.1: Do you support the OUR's view on voice telephony? Please explain.

Question 3.2: Do you support the OUR's view on payphones? Please explain.

Question 3.3: Do you support the OUR's view on emergency access? Please explain.

Question 3.4: Do you support the OUR's view on Internet access to public institutions? Please explain.

CHAPTER FOUR: PROVISION, FUNDING AND ADMINISTRATION

INTRODUCTION

4.0 This section addresses the provisioning, funding and administration of the proposed universal service/access programme.

4.1 These issues will be considered within the context of the preliminary conclusions made by the OUR in the sections above. That is the single voice telephony and emergency access objectives do not require any universal service/access regulatory intervention. Public payphones only require limited regulatory intervention. On the other hand the OUR believes that the Internet access to public institutions objective requires very significant regulatory intervention.

UNIVERSAL SERVICE/ACCESS PROVIDER

Summary of Consultation Issues

4.2 In the initial consultative document the Office outlined two approaches that could be used to select/choose potential providers of universal service/access. The two approaches were: (1) Competitive Bidding and (2) Play or Play. In addition, the Office invited comments on other approaches that could be used to select potential providers for single line voice, Internet and payphone services.

Comments from Interested Parties

4.3 One respondent suggested that designated providers should include wireline as well as wireless providers; however, they should not include companies that have recently started operations such as those whose main focus is high speed internet connection since their initial objective would be to get as many subscribers as possible.

4.4 CWJ argued that since Jamaica's teledensity falls between that of countries with fully developed telecommunications infrastructure and those with minimal development, none of the two approaches proposed by the OUR would be fully suitable to address the universal service/access concerns. The competitive bidding approach is more ideal for countries with low teledensity and the "pay or play" approach is yet to be tested as

well as it "would add an unnecessary layer of complexity to the process." As a result, the Company proposed a new approach. This new approach draws on elements found in countries with both fully developed infrastructure and those with minimal infrastructure development.

4.5 In the countries with fully developed infrastructure, the main issue is really maintaining continuity of service due to affordability concerns. In other words, there is network presence but not every household can afford to pay the full cost of the services offered so funding is made available to maintain connection to the network. In areas where this situation exists in Jamaica, that is in areas where CWJ has network presence, the Company is proposing that it is designated the universal service/access provider. In doing so, this will eliminate the duplication of network presence and would therefore be a more efficient means of dispersing the universal service/access fund. However, in areas where there is minimal or no network presence, the competitive bidding approach should be employed.

4.6 Infochannel supports the competitive bidding approach as it is perceived to be more efficient; it allows the broadest participation of potential providers and it encourages the use of the most cost efficient technologies to deliver services. In addition, consideration should be given to operators who offer prepaid POTS services.

4.7 Digicel believes that both approaches have merits and the selection of any one approach will dependent on operators' willingness to participate in the process. It is Digicel's view that the subsidy incentives under the competitive bidding approach will entice operators to submit proposals to provide services.

OUR's Comments/Views

4.8 From the above it can be seen that CWJ is suggesting that it should be designated the universal service provider in areas where it has network presence. However, before designating any operator, the OUR believes that a number of factors should be taken into consideration. Three of these issues are discussed below.

4.9 Firstly, Jamaica must honour its World Trade Organization Agreement on Basic Telecommunications ("WTO-ABT") commitment which speaks to non-discriminatory and competitively neutral provision of services. To designate CWJ universal service/access provider for areas where it has network presence without giving other operators the opportunity to put forward their case, especially those who are providing services in those areas, could be considered as discriminatory and anti-competitive. For example, it would be unfair to designate CWJ the universal service/access provider for Town A without giving Digicel the opportunity to vie for this

privilege if it is currently providing service in Town A.

4.10 Secondly, the OUR believes that one the best ways of getting real value for the universal service/access dollar is to introduce competition in the provision of service. CWJ suggested that it would be an inefficient way of spending the universal service/access fund if another operator were to be designated universal service/access provider where it has network presence. The OUR does not support this view. As is evident in the mobile industry, it is clear that competition brings increase service quality, choices and reduce prices to consumers. Likewise, if operators have to compete to for the privilege of providing universal service/access, then similar benefits can be expected.

4.11 Thirdly, given that the OUR has concluded on a preliminary basis that the only significant regulatory intervention with respect to the Act's four universal service/access objectives is with respect to Internet access to public institutions, it is not practical to designate CWJ as the provider of those services because it currently does not provide such service to all the designated public institutions. A unilateral designation under these circumstances would be unfair to other providers that may be interested in providing such services.

OUR's Conclusion(s)

4.12 Based on the above discussions and comments, the Office is of the view that the competitive bidding approach would be the preferred mechanism to be used in the selection of the universal service/access provider for Internet access in public institutions. This approach will be discussed in further detail in subsequent sections.

UNIVERSAL SERVICE/ACCESS FUNDING

Summary of Consultation Issues

Mechanisms used to fund Universal Service/Access

4.13 Several mechanisms are used to fund universal service/access. The following is a list of options proposed by the OUR in the first consultative document:

a) **General taxation:** the government levy a tax on the society and use the proceeds to fund universal service/access;

b) **Interconnect charges:** the universal service provider (USP) is allowed to inflate its interconnect charges and use the

additional revenues to finance universal service/access;

c) **Cross subsidies:** the incumbent is allowed to price one or more of its service(s) above cost and use the additional revenues to subsidize other services and expand its local network;

d) **Universal service fund (USF):** operators in the industry contribute to a fund which is used to cover the net cost of universal service/access. Two types: (1) A physical fund that is administered either by the regulator or some other independent body and (2) a virtual fund where operators make their contributions directly to the USP instead of pooling the money in a physical fund.

Who Should Contribute and How Much

4.14 The OUR believes that all operators will benefit from an expanded telecommunications market and as such everyone should contribute. In order to capture the contributions of all operators, the OUR proposed that a tax should be levied only on operators with service provider licences.

Contribution – By What Means?

4.15 The OUR outlined three methods by which contribution to universal service/access fund can be measured. These include profits, minutes and revenues. The Office expressed its preference for revenue.

Recovery of Universal Service/Access Charges

4.16 The Office proposed two approaches that could be considered: (1) the charges could be built into the tariffs consumers pay to the operator or (2) charges could be shown as a line item on customers' bills expressed as a percentage of the total bill.

4.17 Comments were invited on the type of approach and funding options that would best serve the needs for funding universal service/access. In addition, specific comments were requested on the methods of contributing to the fund, who should contribute and how funds should be sourced and administered.

Comments from Interested Parties

4.18 Stefan Wright suggested that all providers of telecommunication services, excluding those providing high-speed Internet access, should contribute toward universal service/access. The fund should be managed and operated by an independent administrator. In addition, operators should be required to make contributions to the fund on a monthly or quarterly

basis based on their relative share of the overall voice telecommunications industry revenues. The respondent also believes that any universal service/access charges that customers are asked to pay should be clearly shown on their bills and customers should be fully informed of the purpose of these charges.

4.19 CWJ supports the OUR's view that a universal service/access fund is the most appropriate approach for funding universality objectives. However the Company believes that this funding should address two fundamental issues: (1) New projects and (2) Continued affordability concerns.

4.20 Given the current funding constraint of 5% of industry revenues, CWJ is proposing that only 1% of this amount goes toward expanding service to the unserved, while the remaining 4% should be used to ensure continued access for customers with affordability problems. In addition, CWJ believes that funding for new projects could be administered via a physical fund, (administered by an independent agency). However, funding for continued access to the network should be done via a virtual funding arrangement where the universal service provider would submit to the regulator its net cost of providing universal service/access who then verifies these costs and issue its approval once it is satisfied. In this approval, the regulator would also stipulate how each operator should contribute.

4.21 CWJ also supports the views of the OUR in that the Company believes that revenues should be the basis for contribution to the fund and "all operators, including downstream providers must contribute to the recovery of the net cost of universal service provision."

4.22 Infochannel believes that an independent agency should be established to administer the universal service/access fund. In addition, the Company also suggested revenue should be the basis for contribution and all service providers should contribute to the fund.

OUR's Comments/Views

Mechanisms Used to Fund Universal Service/Access

4.23 The general view of the respondents is that a universal service fund would be more appropriate, compared to the other measures highlighted, to address funding issues. However, unlike other respondents who suggested a physical fund only, CWJ advocated the use of both physical and virtual funding arrangements. However, the OUR believes that a physical fund is the preferred choice.

4.24 The OUR is of the view that the main focus of universal service/access should be that of achieving the objective of Internet access in public

institutions. Hence, a virtual fund is not a practical option for this type of objective. In this instance, the only feasible option is a physical fund. The physical fund is more transparent and it is perceived to be more fair than the virtual fund.

Who Should Contribute, By What Means and How Much

4.25 As mentioned earlier, an expanded telecommunications system will benefit all users and operators and therefore every one should contribute. To ensure the efficient collection of contributions from the industry, it would be more appropriate to levy charges only on operators with service provider licences. This is necessary to avoid double taxation since one operator may have both carrier and service provider licence. As such, all revenues net of any interconnection and/or leased line payments to other operators, generated from the provision of services prescribed under the Telecommunications Act 2000 using a service provider licence, would form the basis for contribution to the fund.

4.26 Operators would be required to submit audited financial statements to the fund administrator. This is necessary in order to verify the specific amount that each would be required pay on an annual basis. Sections 39(5)(a) and 42 (2)(a) of the Act stipulates that operators' contributions to the universal service fund should not exceed five percent of their revenues. As such, the amount that operators actually pay will depend on the requirements of the universal service/access programme in any given year which of course must adhere to the requirement of the Act. For example, if the programme only requires two percent of the industry revenues in a given year, then only that amount would be requested from the service providers.

Recovery of Universal Service/Access Charges

4.27 The OUR is of the view that the recovery of universal service/access charges should be clearly visible to the customer. Therefore, it should appear as a line item on the customer's bill. For those customers who use prepaid services, the charge(s) should be clearly identifiable on the calling cards purchased. This process is transparent since it affords the customer the opportunity to view the amount being contributed to the fund.

OUR's Conclusion(s)

4.28 Based on the above discussions and comments, the Office is of the view that a physical fund should be established. The OUR proposes that the Universal Service/Access Fund of Jamaica ("USAFJ") will be established to collect, administer, and distribute monies and to monitor, evaluate and implement universal service/access initiatives in the telecommunications sector in Jamaica.

4.29 Based on the above discussions and comments, the Office is of the view that all revenues net of any interconnection and/or leased line payments to other operators, generated from the provision of services prescribed under the Telecommunications Act 2000 using a service provider licence, would form the basis for contribution to the USAF.

4.30 Based on the above discussions and comments, the Office is of the view that the recovery of universal service/access charges should be clearly visible to the customer. Therefore, it should appear as a line item on the customer's bill. For those customers who use prepaid services, the charge(s) should be clearly identifiable on the calling cards purchased.

UNIVERSAL SERVICE/ACCESS ADMINISTRATION

Overview

4.31 International best practice suggests that an independent administrator should administer the universal service/access fund. This administrator would be responsible for the day-to-day operation of the fund and would have direct control over the collection and disbursement of funds as well as the enforcement of rules governing universal service/access provision.

4.32 The Universal Service/Access Fund of Jamaica ("USAFJ") will be established to collect, administer, and distribute monies and to monitor, evaluate and implement universal service/access initiatives in the telecommunications sector in Jamaica.

OUR's Comments/Views

4.33 Perhaps the fundamental administrative issue with regard to the USAFJ is the question of what entity or authority will have responsibility for managing its operations. The OUR notes that there is fairly strong consensus among a majority of countries implementing such policies, that such a fund administration should come under the control of the national regulatory authority ("NRA") – in this instance, the OUR. This approach has been recommended by the ITU, among other.

4.34 There are alternatives to this administration framework. One alternative is that the USAFJ be under the administrative control of the relevant Ministry. Another alternative is that the USAFJ be legally and administratively independent of the NRA and the Ministry.

4.35 However, within the consensus model of the USAFJ administratively

under the NRA, there are a number of detailed issues that have to considered and resolved. The following is a summary listing of some of the issues under consideration:

- **Management Autonomy.** Within the OUR, the operation of the USAFJ should be a stand-alone function, separate and distinct from the other regulatory activities relating to licensing, tariffs, competition, spectrum, and so forth. This suggests the creation of an autonomous Division or Department within the OUR, reporting directly to the Office. The USAFJ's management should be able to draw upon other resources of the OUR to support their activities, such as market studies and economic analysis, but there should be no bureaucratic barriers to dispensing universal service/access funds and pursuing mandated projects. This implies, for example, that day-to-day approval and disbursement decisions of the USAFJ should not require review or formal approval by agency authorities outside of the USAFJ.

- **Independent Budget, Separate Accounting.** The imperative to establish the autonomy of the USAFJ administration similarly requires that its budget be maintained entirely separate from the OUR's operating budget. This implies that a wholly independent bank account and accounting records be established, solely for the collection and disbursement of the Fund, with no co-mingling with other regulatory or government funds. There should be no circumstance, for example, whereby the OUR (or any other entity) "borrows" from the Fund, or uses its as security, or otherwise has access to this money. The USAFJ management must issue an annual, public report of all Fund contributions and expenditures, and there should be an annual independent audit as well.

- **Review and Revisions of USAFJ Activities.** The operation and objectives of the USAFJ should be subject to periodic review and revision, both from within the agency itself, and through a process of public and government consultation. Internally, the Fund administrator should issue an Annual Report, containing at least the following information:

    - Financial reports: collections, expenditures, reserves, etc.;
    - Descriptions of projects funded, goals, tasks, budgets;
    - Review of previously funded projects, accomplishments, problems;
    - Revisions to target objectives, estimates of progress.

- **Proposed USAFJ structure** is summarized below, with the following general roles and responsibilities. This is a relatively

idealised structure, based on ITU recommendations on the matter. In principle, many of the identified positions could be combined (e.g., Director, Assistant Director, Project Managers), with the caveat that such multiple responsibilities would necessarily limit the range and timing of Fund implementation and functioning.

- **Policy Direction.** The OUR (as Commission) should be responsible for setting the overall policy for implementation of the USAFJ, subject to any Ministry directives or a Universal Service/Access Policy. The OUR (as Commission) should approve annual plans and budgets, as well as Annual Reports and audits. It appoints the Fund Director and Assistant Director, and members of the Advisory Committee. When necessary, the Office is the arbiter of disputes and appeals that cannot be resolved by the USAFJ administration itself.

- **USAFJ Management**

  - **USAFJ Director**. Oversees all Fund activities, reports directly to the Office (as commission). Prepares and authorises annual operating plan, budget, and project plans.

  - **USAFJ Assistant Director.** Reports to Director, assists with day-to-day USAFJ management, project evaluations and decisions, public communication, and report preparation.

  - **Project Manager.** Specialist responsible for analysing market conditions, developing proposed project plans, and acting as liaison with USAFJ recipients in the implementation and evaluation of approved projects.

  - **Accounting and Legal Departments.** Personnel in these positions, especially accountants, are responsible for ensuring the proper operation of the USAFJ, maintaining the books, and executing necessary contracts and other legal documents. Note that the economics, legal, and accounting departments of the main section of the OUR could be available to assist the USAFJ's management with their expertise and resources, as necessary.

- **Accounts and Budgets.** USAFJ income should generally be collected into a single bank account, separate and independent from the operating accounts of the OUR, and accessible only by the USAFJ's management. The total amounts should be divided among three primary budget categories, which can be accomplished either

through accounting allocations and/or additional subsidiary bank accounts. These budget categories are:

- **Project Fund.** The bulk of the Fund, to be allocated to development projects according to the Fund's mandate and procedures.

- **Operating Budget.** Funds necessary to pay the costs of operating the USAFJ administration: Salaries, benefits, rent, equipment, services, etc. Should typically be in the range of 10% or less of total Fund income.

- **Reserve Fund.** A contingency amount to cover cost overruns and unexpected needs.

Question 4.1: Do you support the OUR's view on universal access/service provider? Please explain.

Question 4.2: Do you support the OUR's view on universal service/access funding? Please explain.

Question 4.3: Do you support the OUR's view on universal access/service administration? Please explain.

CHAPTER FIVE: UNIVERSAL SERVICE/ACCESS

DELIVERY

INTRODUCTION

Overview

5.0 This section provides an overview of some of the main elements of the delivery mechanism that the OUR has selected on a preliminary basis to implement the Internet access in public institutions objective.

5.1 The Office has undertaken significant research as to the possible options with respect to the manner in which the Internet access to public institutions objective could be implemented.

5.2 As noted in the first consultative document, a number of countries have recently successfully implemented auction-based schemes to provide public payphones in rural and isolated regions. These mechanisms were based on a competitive auction for a minimum subsidy required to provide a defined set of services (the "Mandatory Services").

5.3 The OUR believes that with some modifications the type of minimum-subsidy approach that has been used in over half a dozen countries would be the most appropriate manner to deliver the Internet access to the public institutions. In fact, a number of the countries that first used such minimum subsidy approaches to deliver payphones in rural areas are now using the same mechanism to successfully deliver Internet access and telecenters (telephony and Internet access).

5.4 The OUR considers this is as an encouraging development. As discussed above, the Office would like to jointly address the Internet Access in Public Institutions objective with that component of the public payphones objective that has not been met.

5.5 With this in mind the OUR undertook research as to the modifications required from the "standard" minimum subsidy approach. Perhaps the most significant modification relates to the interface with the end-user. In the standard approach used in the telecommunications sector over the last 8 to 9 years around the world, telecommunications operators that have been selected provided the end-services directly to the end-users. For instance, if the Mandatory Services were 1000 public payphones in designated geographic points, the telecommunications operator would install and maintain the required network (including transmission and switching) and would install and maintain the public payphone, including the payphone cabin and the required terminal equipment (telephone

apparatus).

5.6 For Internet access to Public Institutions ("IAPI") in Jamaica, however, the end-users are existing institutions housed in their own building infrastructure. This creates the potentially difficult administrative and legal issues of access to buildings and ownership and maintenance of the required terminal equipment, among other complexities.

5.7 Based on analysis of the options, the OUR is of the preliminary view, that the IAPI objective would best be met if the telecommunications provision component of Internet access were to be separated from the terminal equipment component of Internet access.

5.8 Most of the remainder of this section, therefore, will focus on the telecommunications provision of Internet access. The terminal equipment component aspect of Internet access is addressed in the last sub-section.

Regional Broadband Network

5.9 The OUR is of the opinion that a long term view of the IAPI objective requires that broadband technology be made available. Hence, the OUR is designating the telecommunications provision component of Internet access as the Regional Broadband Network ("RBN")

5.10 In summary, the approach that is being considered by the OUR and that is developed in the rest of this section and the following section, is that private-sector operators will be licensed to establish and operate subsidized RBNs. The selected RBN Operators will provide certain telecommunications services on a mandatory basis to schools, post offices and public libraries (the "Mandatory Services"). The RBN Operators would be selected by an international public bidding process. The successful bidder in each of the RBN geographic areas will be the qualified bidder that bids to provide the Mandatory Services with the lowest subsidy amount.

5.11 It is expected that a number of RBNs could be rolled out in the next 5 to 7 years. The first RBN could be licensed in about one year from the issuance of this document, with first expected rollout in one to two years later. The actual number of RBNs to be licensed at any one time and the total to be licensed in the expect 5-7 year period will depend *inter alia*, on the amount of USAF available and the definition of certain key cost and revenue parameters related to the RBNs.

RBN Principles

5.12 The RBNs should be required to adhere to a number of principles:

- **Clear Identification and distinction between Mandatory Services and Optional Services.** The RBNs will be required to provide the designated Mandatory Services in the licensed RBN Region. The RBNs will also have the option of providing certain Optional Services in the licensed RBN Region. The specific services to be included under each of these categories is not yet finalized. On a tentative basis, however, Mandatory Services includes broadband access to all the designated public institutions in order to allow said public institutions to provide certain services, including Internet access and voice telephony to their serving public (see below for further discussion).

- **Technology Neutrality.** No specific technology is being prescribed for the RBN. The decision on the technology will rest with the RBN Operator. The technology(ies) deployed must be suitable to support all initial and future services required by the Public Institutions, be scalable, support open network connectivity and meet defined quality performance specifications.

- **Scalability**. The network technology selected should be "scalable". The network (hardware and software) should have the ability to maintain performance without requiring architectural or technological changes as the volume of traffic increases. Another dimension of scalability applicable to today's telecommunications networks is the ability of the network to accommodate fairly obvious technological trends without changes in the architecture and technology.

- **Open Network**. The concept of an "open network" provides for an operator's basic network facilities and services to be available to other qualified operators in a manner that permits them to use the basic network to interconnect to specific basic network functions and interfaces.

- **Quality Performance.** The RBNs will be expected to meet a minimum set of quality performance requirements for the services that they a) provide to the public institutions and b) for the basic servicing arrangements and the basic service elements provided to other operators under the open network requirements.

RBN Network

5.13 The RBNs may be viewed as having four separate, yet interdependent components – the international backbone transport/transmission and

switching component (the “International Network”) the national network backbone transport/transmission component (the “RBN Transmission Network”), the local access component (the “RBN Access Network”), and the component associated with national switching and signalling (the “RBN Switching Function”).

5.14 The RBN Operator can use any technology in its network, subject to the condition that the resulting network must adhere to the principles discussed above.

5.15 The International Network is that portion of the network that provides international connectivity and terminates at the international gateway of the RBN.

5.16 The RBN Transmission Network is that portion of the network that terminates at designated points within the RBN Region for the purpose of carrying aggregated traffic to a designated network hub point.

5.17 The RBN Access Network is that portion of the network that connects various service points within the RBN Region to the RBN Transmission Network.

5.18 The RBN Switching Function allows voice telephones calls to be routed within the RBN and between the RBN and the PSTN.

International Network Technology

5.19 Submarine cables and satellite are the expected transmission technologies to be deployed for the transmission component of the International Network. OUR notes that the RBN Operator can use any technology in its network, subject to the condition that the resulting network must adhere to the principles discussed above.

RBN Transmission Network Technology

5.20 Optical fiber and digital microwave radio systems are the expected technologies to be deployed for the RBN Transmission Network. OUR notes that the RBN Operator can use any technology in its network, subject to the condition that the resulting network must adhere to the principles discussed above. Hence, OUR will not mandate any particular transmission technology.

5.21 The decision to choose either (or both) of these technologies will depend on a number of factors, including the expected volume of traffic from the public institutions, the designated bandwidth that is required for the public institutions, the expected costs of construction and maintenance, rights of way, spectrum availability, etc.

RBN Access Network Technology

5.22 There are a number of technologies that might be adopted for the RBN Access Network. The selection includes optical fiber systems, point-to-point wireless, point-to-multipoint wireless, mobile cellular and systems that operate over copper wire loops or coaxial cable. It is expected that digital technologies will be deployed.

Quality Performance

5.23 The RBNs will be required to provide a minimum standard of quality performance to the public institutions. Quality has two dimensions – availability and performance. The two dimensions are interdependent for digital services.

5.24 The measure of quality by users of voice services is ultimately more one of perception than one of measuring parametric values against objectives. The mean opinion score ("MOS") approach is commonly used to determine the users assessment of the quality of a voice service. However, parameters, as example signal-to-noise ratio, noise level, delay and echo do in part determine the quality of the voice signal.

5.25 Three metrics for measuring quality performance for digital services that have gained prominent importance for both carriers and customers and are commonly used: errored seconds, severely errored seconds and unavailable seconds.

- Unavailable seconds is the most important metric that determines availability.

- An errored second ("ES") is a second with one or more coding violations or in which one or more incoming defects have occurred. (The underlying data being transported on the digital pipe may not be affected or even may have been corrected by some of the digital technology capabilities to correct minor transport impairments).

- A severely errored second ("SES") is one with multiple defects and the underlying data probably are corrupted. In this case, the end user loses the use of the digital pipe for this second.

5.26 Unavailable seconds ("UAS") are declared when 10 contiguous SES are experienced. The digital pipe is considered unavailable at the onset of 10 contiguous SES, and it is not considered available again until the onset of 10 contiguous seconds that are error free.

RBN Services

5.27 The RBN will be required to provide the Mandatory Services and will have the option to provide Optional Services. Each of these concepts is discussed in more detail below.

Mandatory Services

Mandatory Services to Public Institutions

5.28 The RBN Operators will be required to provide broadband access for certain services to a specific number of public institutions to be established within the respective Region. The following services have been identified on a tentative basis:

- **Public Schools.** Access to the Internet for Web browsing and e-mail. Voice telephone calls to PSTN, mobile and international numbers. The former will meet the IAPI objective, while the latter will provide telephony services to public schools that previously did not have such access.

- **Post Offices and Public Libraries.** Access to the Internet for Web browsing and e-mail and E-government services. Voice telephone calls to PSTN, mobile and international. E-government services delivered through terminals. The former will meet the IAPI objective and promote the GOJ e-government initiatives, while the latter will meet the remaining payphone access objective.

5.29 The RBN Operators will be required to provide the telecommunications infrastructure needed to reach the public institutions and connect them to the Internet and the PSTN. Each public institution may require a complement of connections and services which will be determined by the size and type of public institution. The minimum connectivity requirement of the different public institutions is expected to include voice/fax circuits and data circuits of the appropriate protocol and bandwidth to support connection to the PSTN, the Internet and e-government services.

5.30 An associated question to the services to be provided is the bandwidth that the RBNs must provide the public institutions. There are a number of options in this respect. One is that a minimum and uniform bandwidth is to be provided to all public institutions. Another option is that different bandwidths be determined based on the identified needs of the public institutions. An intermediate approach is that a minimum bandwidth be determined for similarly-situated public institutions. For instance, 2 Mb/sec. bandwidth could be provided for public institutions situated in

smaller towns, 4 Mb/sec. bandwidth be provided to public institutions in larger towns and so forth. Another approach is that 8 Mb/sec. bandwidth is to be provided to public schools, 6 Mb/sec. bandwidth is to be provided to post offices and 4 Mb/sec. bandwidth is to be provided to public libraries.

Pricing of Services to Public Institutions

5.31 As discussed in the previous section, the most appropriate approach to the pricing of Public Institutions will depend on the service in question (Internet Access or Public Payphones), the tariff structure of the service and on the degree of subsidization between the USAFJ, the public institution and the RBN Operator.

5.32 With respect to Internet Access, it is the Office's preliminary view that Internet Access pricing should be based on a flat, capacity-based, usage-independent regulated tariff paid on a monthly basis.

5.33 For Internet access, which includes the access and connectivity components, the regulated tariff will differ based on the amount of capacity offered, on the type of public institution to be served and on whether the Public Institution is located in an urban area or a rural area, as defined by the Planning Commission. There will be no one-time or other types of connection charges. The monthly regulated tariff that the RBN Operator may charge the public institutions is proposed to be as follows:

	Urban			Rural		
	Public School	**Post Office**	**Public Library**	**Public School**	**Post Office**	**Public Library**
2 Mb	20	40	40	10	20	20
3 Mb	25	50	50	12.50	25	25
4 Mb	30	60	60	15	30	30
5 Mb	35	70	70	17.50	35	35
6 Mb	40	80	80	20	40	40
7 Mb	45	90	90	22.50	45	45
8 Mb	50	100	100	25	50	50

5.34 The OUR recognizes that in most instances these regulated tariffs are below their average long-run cost of installation and maintenance. That is why the USAFJ will be required to provide a one time subsidy to the RBN operator to cover the difference between average long run costs and revenues. In this manner, the RBN operator will be receiving revenues that should cover its marginal long-run cost of maintenance.

5.35 With respect to public payphones, the OUR is of the view that the applicable public institutions (public libraries and post offices) should run these Mandatory Services based on commercial principles. The Office considers the Internet Access as the "core" Mandatory Service. Hence,

given that the USAFJ would have subsidized Internet access, the incremental costs of the installation of a public payphone apparatus will be relatively modest.

5.36 Under this approach, therefore, the public institution is acting as a kind of public payphone reseller for the RBN Operator. Therefore, the public institution should receive a portion of the net revenues for incoming and outgoing calls generated by the relevant public payphone. The Office would welcome comments from interested parties as to how this arrangement may work and the size and structure of the payments from the RBN Operator to the public institution (e.g. by call, by minutes, flat monthly, by size, location or type of public institution, etc.) based on the reseller arrangement.

5.37 The tariff that end-users shall be charged for using the public payphone shall be the same as the current payphone tariff for CWJ.

Mandatory Access by Other Operators to the RBNs

5.38 The RBN Operator will be required to provide wholesale access to its network by other operators, through interconnection and bandwidth (leased lines) arrangements. The RBN Operators will be required to provide points of interconnection ("POI") to their networks for other licensed operators at designated locations, and at cost-based, non-discriminatory rates approved by the OUR. The RBNs will also be required to provide leased lines on cost-based, non-discriminatory rates approved by the OUR.

5.39 The costs faced by the RBN Operators to construct infrastructure from their serving areas to the points of interconnection of other operators may be high. The RBN Operators should therefore have the flexibility to build their own infrastructure to serve the public institutions and other operators and to extend the backbone transport to Kingston, Montego Bay or the other POIs of the existing operators, or to lease or swap facilities and services with other operators. The RBN Operator would be the single responsible operator for the public institutions and end-to-end requirements must be met irrespective of the make-up of the network.

Pricing of mandatory access of other Operators to the RBN

5.40 The OUR is of the preliminary view that the relationship between the RBN operators and existing operators should be based on commercial principles and subject to the standard regulatory provisions established by the OUR in respect of interconnection and other matters.

Optional Services

5.41 The OUR is of the preliminary view that, given the significant infrastructure to be developed by the RBN operators, the RBN should be able, on an optional basis, to offer other retail and wholesale services.

5.42 As such, the OUR would encourage the RBN operators to avail themselves of the market liberalization on the telecommunications sector in Jamaica and study the commercial viability of offering other services. Licensing and other provisions (e.g. spectrum, tariffs, etc.) in this respect will be the same for RBN operators as for existing operators.

RBN Geographic Areas

5.43 There are two principal approaches to the definition of the RBN Regions. One is to not define them *per se*, but rather define the specific locations of the public institutions that are to be served.

5.44 The other approach, is to define the Regions as the contiguous geographic territory that includes the relevant public institutions. Note that this approach does not preclude the identification of specific public institutions that must be provided with RBN service within the specific Region. The OUR proposes to adopt the latter approach - specifically, on a preliminary basis, the OUR proposes to define each of the Regions as one or more contiguous grouping of parishes.

5.45 The OUR has built a numerical model of Jamaica in which a wide array of geographic, community, population, demographic, economic (household income), social and physical infrastructure data are assembled on a parish-by-parish basis. The objectives for the model are to provide a comparison of parishes to identify physical, population and socio-economic differences across the Island, as an aid to qualitative study and analysis. In particular, the model is used to compare parish rankings on socio-infrastructure and income.

5.46 The available indicators that could be usefully compared to reflect parish's endowment or lack of endowment with physical and social infrastructure, were the following:

- percentage of parish population that resides in rural areas;
- percentage of parish population that is under 15 years of age or over 64 years of age (dependency ratios);
- percentage of parish population that has not reached primary level of education;

- percentage of parish households that do not have piped water into their living quarters;
- percentage of parish households that do not have access to either a mobile or fixed telephone within that household;
- household average spending on fixed telephone services;
- percentage of parish school that are located in rural areas;
- percentage of schools, public libraries and post offices in the parish that have no access to telephone service;
- percentage of schools, public libraries and post offices in the parish that have no access to Internet service.

5.47 The indicators were combined into a "socio-infrastructure indicator" in such a way as to reflect their deviation from the national average, with the higher scores indicating least well endowed parishes. Note that some parts of all parishes will be relatively well endowed compared to the majority of their land areas. The table below shows the preliminary "needs" ranking, with the least endowed parish having the highest score:

Rank	Parish	Score
1	St. Ann	132
2	Hanover	128
3	Westmoreland	124
4	Portland	122
5	St. Elizabeth	118
6	Trelawny	118
7	St. Mary	115
8	Manchester	114
9	Clarendon	113
10	St. Thomas	110
11	St. James	92
12	St. Catherine	79
13	Kingston	66
14	St. Andrew	62

Terminal Equipment

5.48 As discussed in the previous section, the OUR is of the view that the USAFJ should provide for the required terminal equipment to give effect to the IAPI and public payphone objectives.

5.49 With respect to public payphones this does not appear to be significant a issue in that there are a number of mechanisms to implement the payphone reseller model within public libraries and post offices. In essence, the OUR expects the RBN operator to provide the payphone

apparatus, while it is the Public Institution that will be responsible for its maintenance and security (vandalism, etc.). It could be expected that the public institution would also act as distribution agent for prepaid public payphone telephone cards.

5.50 With respect to Internet access, however, the OUR is of the view that the USAFJ should provide subsidies for the provision of the required terminal equipment. This will include servers, routers and PCs.

5.51 Given of the different nature of the business, however, the OUR does not expect the RBN Operators to provide said terminal equipment. Instead, the USAFJ shall hold minimum subsidy auctions for the provision of the designated Internet terminal equipment to specialized entities (the "Internet Terminal Providers" or "ITP"). The ITPs will also be required to update and maintain the Internet terminal equipment for a certain designated period. The OUR expects that ITPs will be the main technical interface with the RBN operators, rather than the public institutions directly.

As outlined in the document, the OUR is of the view that broadband connection to the Internet is the preferred choice for public institutions. This chapter sets out some of the issues involved the provision of the service. Detailed comments are invited on all issues proposed by the OUR. For example, what are your views on the concept of regional broadband networks? Do you support the OUR's view that the telecommunications component of Internet access should be separated from the equipment component? Should there be a minimum broadband connection speed to the Internet and what should that be? Apart from mandatory services, do you think the RBN operators should be given the opportunity of providing optional services and should there be any limit on how many of these services are provided? How do you think the RBN geographic areas should be defined?

CHAPTER SIX: RBN IMPLEMENTATION

Introduction

RBN Selection Process

Selection Objectives

6.1 The following are some of the major objectives to implement the RBN selection process:

- **Competitive Bidding.** As concluded in the sections above, OUR is of the view that market-oriented processes are more likely to result in the selection of the most appropriate RBN Operators. Based on a review of the international experience for these types of processes, it is clear to the OUR that in other countries the preferred means to select the RBN Operator and to determine the actual subsidy amount to be disbursed for each RBN Region is through competitive bidding. OUR notes further that competitive bidding has the advantage of generally reducing the total funding required to meet USO objectives.

- **Transparency**. The OUR is committed to designing a transparent selection process. The OUR is committed to ensuring that the entire competitive process is designed to be procedurally transparent. Transparency requires that the process be conducted openly and that the selection of the winning operators be made based on criteria published in advance.

Ensuring a Level Playing Field

6.2 Given its preference for a competitive and transparent process, the OUR wants to ensure that all qualified parties have an equal opportunity of being selected – that is, there should be a level playing field in this respect. With this in mind, OUR is cognizant of the potential for existing operators with transmission networks in the RBN Regions to have a significant advantage in the RBN selection process.

6.3 In an open competitive bidding minimum subsidy auction process to build and operate the RBNs, some current network operators may have a cost advantage over those that are currently operating in the RBN Regions. This is because those operators with infrastructure in the RBN Region would have to build incremental network, compared to others that may be required to build a new network.

6.4 A further cost advantage may result from transmission facilities to the main international gateways in Kingston and Montego Bay. This is

because to interconnect with the national and international PSTN and Internet those operators without the national transmission network would have to either:

- Construct new transmission infrastructure from the RBN Regions to Kingston and/or Montego Bay; or

- Lease transmission capacity from operators with national transmission capacity from a POI in the RBN Region to Kingston and/or Montego Bay.

6.5 The OUR will further investigate current and future availability and expected cost of national transmission capacity in order to design the RBN schemes accordingly. If the OUR believes that there is insufficient national transmission capacity or if the expected lease transmission prices are too high, it will likely require one or some of the RBN Operators to build new and additional national transmission capacity.

6.6 Another significant cost advantage is related to international transmission capacity. This is because to carry Internet and voice traffic in and out of Jamaica, operators who currently do not have international transmission facilities would have to either:

- Construct new international transmission infrastructure from Jamaica to other countries and/or to other existing international transmission facilities; or

- Lease international transmission capacity from operators with international transmission capacity.

6.7 The OUR will further investigate current and future availability and expected cost of international transmission capacity in order to design the RBN schemes accordingly. The OUR is concerned that the lack of sufficient or reasonably-priced international transmission capacity may constitute a bottleneck on Internet access development in Jamaica generally, and on the viability of the RBN program specifically.

6.8 If the OUR believes that there is insufficient international transmission capacity or if the expected international transmission lease prices are too high, it will examine the following options:

- Require that at least one of the RBN Operators build new and additional international transmission capacity to be offered to other RBN operators and to other operators on cost-based prices.

- Designate one Operator to be the International Broadband Network ("IBN") to provide only international transmission capacity to other RBN operators and to other operators at cost-based prices. The IBN would be selected on the same basis as the RBN – that is, on a minimum-subsidy competitive auction.

Number of RBN Licenses

6.9 Given that at any one time the UASFJ may be holding auctions for more than one RBN Region, the OUR is concerned that one entity may be the successful bidder for more than one RBN Region. That entity would enjoy certain efficiencies in equipment purchases and in organization of its business that may be beneficial and lead to lower subsidy requirements. On the other hand, there is a risk of over-dependency on this one entity, especially if the entity fails to perform as promised.

Qualification and Selection Design

6.10 The following subsections describe a generic licensing process, typical of the processes that have been implemented in a number of countries that have successfully implemented minimum-subsidy auction processes.

6.11 It is proposed that a three-phased approach be implemented for the RBN Licensing Process:

- **Prequalification Phase** would be used to select the entities that would be included in a short list and be entitled to submit an application for the RBN Subsidy and Licence. This phase limits the eligibility of applicants who can participate in the final qualification process and is often used where there are high costs incurred in conducting a detailed qualification process or where confidential access to information or facilities is granted to applicants.

- **Qualification Phase** would be used to determine which of the applicants will be qualified and thus proceed to the selection phase.

- **Selection Phase** would be used to select the applicant to receive the RBN Subsidy and Licence. On a preliminary basis, the OUR is of the view that a sealed envelope submission of the subsidy required from each of the applicants and selecting the lowest subsidy from amongst the qualified applicants.

Prequalification and Qualification Phases

6.12 The principal objective of the prequalification and qualification phases is to ensure that the selected RBN Operator is financially and technically able

to meet its RBN obligations.

6.13 The prequalification and qualification phases can be considered as a series of thresholds, each of which must be met by each applicant to proceed to the subsequent phase. There are three practical approaches in this respect:

- **Low prequalification threshold and high qualification threshold.** This approach will tend to increase the number of prequalified applicants, and hence the potential interest in the RBN process. At the same time, however, it is likely that only a few of these prequalified applicants will meet the more stringent requirements of the qualification phase.

- **High prequalification threshold and high qualification threshold.** In essence, this approach would bring forward the qualification phase to the prequalification phase. This approach would have the benefit that those applicants that met the relatively onerous prequalification threshold would be almost guaranteed of meeting the qualification requirements (which would be similar). The disadvantage is that there could be significantly reduced participation, given the high up-front costs on the potential applicants to participate in the prequalification phase.

- **Medium prequalification threshold and high qualification threshold.** This intermediate approach is probably the preferred option in that, if designed properly, it strikes the right balance between having a relatively large yet manageable set of prequalified applicants. The prequalification criteria should be based directly on the proposed qualification criteria, except that the level detail or implementation may be somewhat lower. For instance, while we may require commercial registration for the qualification phase, at the prequalification phase we may only require a written commitment that such a registration would occur if the applicant is short-listed.

Most Common (Pre)qualification Requirements

6.14 Based on the intermediate approach above, this sub-section discusses most the common prequalification and qualification requirements from a policy perspective, and where appropriate, develops specific prequalification criteria.

- **Financing Capacity.** The applicant should have sufficient financing capacity to undertake the RBN project and provide the Mandatory Services. The required financial capacity must take into account the estimated maximum subsidy (to be determined subsequently) and the

amount of subsidy the entity plans to submit in its bid. There are traditionally two means by which to show financing capacity. One is to have a substantial net worth. This provides evidence that the applicant has the independent means to finance the subsidised project and is a general proxy for the financial status of the applicant. The other means is through the submission of financial documents that show the applicant will be able to raise the required financing. These financing criteria may be employed singly or jointly, with a joint approach perhaps providing greater flexibility. With respect to the Prequalification Phase it may make sense to include some form of requirement to establish financing capacity. The full financial capacity requirement would be implemented at the Qualification Phase.

- **National Participation in the Applicant**. It may be desirable to ensure significant national participation in the applicant. One means of achieving this goal is to require some minimum level of national participation in the applicant. This could be implemented under one (or both) of the following criteria:

    - National Equity Participation. A minimum equity participation could be required. The reasonableness and appropriateness of this requirement would depend on, inter alia, the supply of equity capital in Jamaica and its level of sophistication. The national equity requirement could vary from a small but significant amount (say 10%) to as high as a majority stake (say 51%). Independent of whether this approach is adopted, it may be too early to require some form of commitment at the Prequalification Phase. Applicants could be told that they will eventually be required to have such national equity participation at the Qualification Phase.

- **Operational Experience.** To ensure that the facilities to deliver the Mandatory Services are appropriately installed and operated, there should be a requirement to show evidence of significant prior experience in operating similar types of networks. These requirements should probably be imposed in the Prequalification Phase. The type and extent of operational experience will depend on the size of the respective RBN projects and whether the wholesale and/or retail operations take precedence. It may be that the threshold is related to the operation of a network and the direct provision of retail services over the same network.

- **Legal Status of the Applicant.** There are two main issues in this respect, both of which should be considered from a legal and a policy perspective: one would be the requirement to register as commercial entity in Jamaica; the other is the requirement to be organized as a particular legal entity, such as a joint venture or a legal consortium.

- Commercial Registration of Applicant in Jamaica. It may be desirable to require that entities ultimately be registered in Jamaica. If this is the approach that is to be followed, the question then turns on at what stage such a requirement is imposed. It would seem premature to require commercial registration at the prequalification phase. Rather, a commitment from the entity to establish a commercial registration may be sufficient. Under this approach the actual commercial registration could take place after short-listing and in preparation for the qualification phase, for instance.

- Specific Legal Organization of Applicant. It may be desirable to require that applicants be organized from a series (or one type) of particular legal organizations. If this approach is to be followed, the two issues to be determined are what are the appropriate types of legal entities to be established and at what stage such a requirement is imposed. As per the commercial registration above, it would appear premature to require a specific legal organization at the prequalification phase. Rather, a commitment from the entity to establish such an entity may be sufficient.

- **Prequalification Participation Payments.** Another independent means to raise the prequalification threshold is to require the payment of a substantial Request for Applications to Prequalification document purchase fee. Alternatively, one could impose a substantial fee for the submission of Applications to Prequalify. The purpose of these payments is not primarily to collect revenues; rather they are to quickly filter out frivolous applicants and those that are considered too small.

Selection Approaches

6.15 There are two fundamental types of approaches to the selection of the RBN Operator from the qualified applicants. One is the quantitative basis and the other is the qualitative basis.

6.16 Transparency is increased by use of simple quantitative selection criteria. A competitive selection process that is based on qualitative criteria will be less transparent. The same is true of multiple criteria that cannot easily be compared. A lack of transparency undermines the credibility of the process. It also opens the door for complaints of bias, corruption or incompetence. To maximize transparency, a single financial or other quantitative selection criterion should be used.

Quantitative

6.17 The quantitative basis of selection is based on either one or several quantitative criterion. The most common and simplest quantitative methodology is the single criterion auction, which stipulates that the price paid (or the subsidy requested, as is the case in the RBN process), will determine the winner of the process from among the qualified applicants.

6.18 The single criterion approach is clearly the most transparent and simplest to use. It is the most consistent with international trade agreements, and the most frequently recommended approach of international financial institutions and international development organizations that promote telecommunications sector reform.

6.19 In some instances, multiple quantitative criteria have been used for the selection of operators. Criteria other than price may include roll-out commitments, investment guarantees, etc. To implement a multiple criteria process a weighting scheme has to be designed so as to be able to aggregate into a single score the different criteria.

Qualitative

6.20 Under a qualitative methodology (sometimes referred to as a comparative evaluation approach, or a “beauty contest”), the responsible government agency uses a set of qualitative evaluation criteria to choose among multiple applications. There are many forms of comparative evaluation schemes. In some cases, the respective licences are awarded to applicants expected to make the best use of the network or services in question.

6.21 There have been many criticisms of the comparative evaluation approach. Criticism generally focuses on lack of transparency. No matter how stringent the evaluation criteria, there is a subjective element to most comparative evaluation processes. Because of the subjective element, it is often suspected that regulators or other decision-makers may not exercise their judgement impartially. In some cases these suspicions have led to litigation.

Auction Design

6.22 Given that OUR is of the opinion that a single financial criterion (minimum subsidy) should be used to select the RBN Operator, the next step is to design the specific auction process to be applied. There are different types of licence auctions designs. The most common are:

- Single-round simple auctions
- Single-round combinatorial auctions

- Multiple-round auctions

Single-round Simple or Combinatorial Auctions

6.23 Based on the OUR's review of the international practice, most other countries that have implemented minimum subsidy auctions have adopted single round auctions. Most of these have been simple auctions where a certain number of projects where available the lowest subsidy bid was selected.

6.24 On the other hand, the Peruvian USF Administrator, FITEL, has adopted combinatorial multiple-project bidding approach. Bidders were encouraged to bid simultaneously on more than one project. The objective was to provide the lowest total subsidy for all projects involved. This way the USF Administrators can attempt to capture any economies of scale associated with multiple projects.

6.25 Assuming, for instance, that there are two RBN projects available at the same time and that the USAFJ decided to auction them simultaneously. A combinatorial process would work in Jamaica in the following manner: bidders would be permitted to bid on any combination of the two available RBN projects. The specific example to illustrate this process assumes there are two RBN projects (1 and 2) and five bidders (A, B, C, D and E). This is illustrated in the following table:

	RBN Project 1	**RBN Project 2**	**RBN Project 1 and Project 2**
Bidder A			100
Bidder B	70	50	110
Bidder C	90	45	130
Bidder D		40	
Bidder E	75		

6.26 In the example above the lowest individual bids for RBN Projects 1 and 2 are 70 and 40, respectively. However, the combined bid of 100 for both RBN Projects is lower than the sum of the two individual lowest bids. Hence, in this scenario, Bidder A would be selected for both RBN Projects 1 and 2 and the corresponding subsidy for RBN Projects 1 and 2 would be 100.

Multiple-Round Auctions

6.27 In recent years multiple-round auctions have increasingly being used in

the telecommunications sector around the world. There are multiple "rounds" of bidding - that is, a series of consecutive bids for the respective licence. The bids continue to increase during these rounds until a high bidder is determined. At the beginning of each round, every bidder receives information about its eligibility to bid and about the standing high bid on each licence. New bids must normally be higher than the standing high bid by at least a minimum pre-set amount. The rounds continue until there are no new bids on any licence. OUR is of the preliminary view that a multiple round auction process is not necessary for the RBNs.

Tender Process and Schedule

6.28 Based on the proposed approaches included in this section, a proposed schedule for the rest of the RBN licensing process could be designed for indicative purposes. The OUR would like to receive comments on the following schedule:

- Based on, inter alia, the comments received on this Second Consultation Document, the GOJ could issue the Request for Application for Prequalification ("RAPQ") on or about Day 0.

- It would be proposed that the deadline for the submission of Applications to Prequalify ("APQs") would be on or around Day 45.

- The Request for Proposals to Provide the RBN Services ("RFP") would be issued to the prequalified applicants on or about Day 75.

- The prequalified applicants would have to submit their Proposals on or about Day 165. These Proposals would include two separate sealed envelopes: one containing a Qualification and Service Proposal (which would include the legal, technical and other information corresponding to the Qualification Phase), and the other containing the Subsidy Proposal.

- The Proposal evaluation results and the announcement of the winning applicants could be made on or around Day 195.

- The RBN Licence would be granted and the other legal documents concluded on or around Day 240. Hence, the RBN Operators could start construction of the RBNs on or around Day 241.

RBN Subsidy

Determining the Subsidy Amount

6.29 The OUR proposes that the actual subsidy amount be determined based on the minimum subsidy auction. In most similar minimum subsidy auction processes around the world, the entity responsible for the processes has announced the maximum available subsidy for the corresponding project. This is based on the criteria of transparency and on providing potential bidders with a firm indication of the financial scope of the project.

6.30 In some countries, however, the responsible entities have not announced the maximum price because of concerns of collusion amongst bidders and/or to maintain flexibility with respect to the subsidy actually paid out. OUR is of the preliminary view that the GOJ should announce the maximum subsidy amount available for each of the respective RBNs.

6.31 A financial cost model may be used to determine the maximum subsidy amount for each project. In general, these financial cost models calculate the difference between the capital and operating costs of providing the designated services in a specific geographical area and the projected revenues from the designated services. Generally, the maximum subsidy available is calculated as the net present value ("NPV") of the difference between these expenditures and revenues over a determined study period.

What Expenditures to Finance

6.32 Once the total subsidy has been determined on a competitive basis, the amount cannot be varied – that is, it is fixed. As such, it can be considered one time. However, the question remains as to whether the respective subsidy should be used to finance the corresponding capital expenditures only or also incorporate the operation and maintenance (operating expenses). Given the proposed NPV methodology above, the OUR is of the view that an integral approach be implemented, that includes consideration of capital expenditures, operating expenditures and revenues. This is based on the following considerations.

- There is no policy reason to include only capital expenditures and exclude operational expenses (or more accurately operational deficits) in a minimum subsidy auction scheme. Most processes in other countries do not explicitly exclude operational deficits. There are strong policy grounds for seeking to ensure that at the end of the relevant project licensing period, the operator is financially viable on a going-forward basis and hence has the incentive to

continue to provide the Mandatory Services beyond the designated service period. This objective, however, does not necessarily mean that operational deficits should be excluded from the subsidy.

- In most other countries the winning bidders do not have to "justify" their subsidy amount. Further, if there were to be a requirement that the applicants justify the winning subsidy amount, such a requirement raises the issue of what would be done if the winning subsidy amount could not be "justified". In this respect, for instance, it is interesting to note that in country that has successfully implemented a number of these minimum subsidy auctions, it was stressed in the RFP when requesting financial statements: "The amount of the requested [subsidy] doesn't have to coincide with the referential costs [presented in forms below]."

- Even if, from a policy perspective, it was decided that only capital expenditures were to be subsidised, there would be significant practical difficulties in making such an approach operational. If the subsidy is not allowed to incorporate operational deficits, symmetry would suggest that operational surpluses also be excluded. This exclusion of surpluses would foreclose the possibility that the capital expenditure amount could be partially or fully offset by expected operational surpluses, as has been the case in a number of countries. This would mean that the actual subsidy amount may be higher than necessary.

RBN Subsidy Payment

6.33 The maximum subsidy for each of the RBNs may be significant. The GOJ wants to assure itself that the subsidy is used for the intended purposes and hence wants to design a series of compliance mechanisms to ensure this outcome. There are a number of such mechanisms that have been used in other countries and that the GOJ could consider.

6.34 The two most common forms of compliance are guarantees bid and performance guarantees. The latter has to be considered together with the disbursement schedule. Both types of guarantees are costly financial instruments. The higher the requested amounts, the more likely it is that applicants will require higher subsidy amounts to compensate for these costs. The OUR is mindful of this balance.

Bid Guarantee

6.35 The bid guarantee is designed to penalise a successful applicant from withdrawing from the process before the licence is issued. The amount of the bid guarantee has traditionally varied between 5% to 10% of the corresponding maximum subsidy amount, up to a maximum of about US

$5 million. A lower bid guarantee will increase the pool of interested applicants but provide less security to the GOJ. The preliminary view of the Office is that the auction process will incorporate a substantial bid guarantee on qualified applicants, in the upper end of the range discussed above.

Performance Guarantees

6.36 The RBN Operator, as a condition of the RBN Licence, will be required to rollout the RBN within a defined period of time. The RBN Licensee will also be required to meet certain specified quality of service (QOS) performance criteria. The performance guarantee is designed to reduce the risk of the operator installing none, some or all of the RBN network and then withdrawing from the project before the designated RBN licence period. The performance guarantee is also designed to ensure compliance with the QOS parameters. Under the withdrawal scenario the RBN Operator could have collected some or all of the subsidy amount for the RBN project without fulfilling its obligations, which is not acceptable. The type and size of the performance guarantee will depend on the proposed disbursement schedule.

Disbursement Schedule

6.37 Once the total subsidy has been determined on a competitive basis, the amount cannot be varied – that is, it is fixed. However, the manner in which the total subsidy is disbursed is an important consideration. There are several main aspects of such schedules: whether the payments are front-end loaded or back-end loaded, whether one or more disbursements will be paid, and the selection of milestones for disbursements.

- With the front-end loading the disbursement schedule will reduce or eliminate the financing costs of the RBN Operator. This is because the RBN Operator can use the subsidy funds to pay for the purchase and installation of the required equipment. Such an approach, however, increases the risk of the operator collecting and keeping the funds without installing the network. Front-end loading requires a higher performance guarantee than back-end loaded disbursements. It is not unusual to have a performance guarantee equal to 100% of the winning subsidy amount. Such a guarantee can be reduced as the network is installed and services provided, and eventually eliminated at the end of the licence period.

- Using only one disbursement rather than two or more is administratively simpler. For instance, the Chile USF Administrator pays 100% of the winning subsidy amount upon confirmation of operation of the Mandatory Services. The disadvantage with a single disbursement, however, is that it usually is back-end loaded (as in Chile), which means that the financing costs of the RBN

Operator can be very significant. The operator must finance the associated purchase and installation costs, without receiving any subsidy funds. Only upon installation will the USF Administrator disburse 100% of the requested subsidy amount. The need for a performance guarantee is less urgent under this scenario. A relatively modest guarantee (less than 25% of the subsidy amount) may be desirable upon disbursement to ensure the operator provides service for the entire designated period.

- Alternatively, the USAFJ could pay multiple disbursements with associated milestones. The disbursements could be tied to the rollout requirements specified in the request for proposal. If the government wishes to have operational 50% of the Services to be deployed through the project in 6 months and the remaining 50% within the next 12 months, the disbursement schedule could be designed to mirror such a rollout schedule. That is, 50% of the subsidy to be paid upon completion of the first milestone and the remainder paid upon completion of the second. The required performance guarantee could also be tied to the disbursement schedule, rising from 50% to 100% of the subsidy amount until all the payphones are installed, and subsequently decreasing to zero at the end of the designated licence period.

- The disbursement schedule could also be back-end weighted to ensure QOS and other GOJ objectives. The performance guarantee, which may start at 40% of the winning subsidy amount, would eventually be reduced. For instance, Peru's USF Administrator has used the following disbursement schedule:

    - 40% for first tranche on first milestone (50% installation after 12 months)

    - 40% for second tranche on second milestone (100% installation after 24 months)

    - the balance of 20% in two annual payments of 10% each at the end of each 6 month period following the 24 month installation period.

Ownership of Assets

6.38 A related issue that should be considered as a form compliance mechanism is the ownership of the RBN assets (physical and otherwise). It could be justified, for instance, given that the USAFJ paid a subsidy for the RBN, that prior to the completion of the designated mandatory licence period, the RBN assets could revert to the USAFJ in certain extreme circumstances. Hence, in the worst case scenario, if the RBN Operator

were to withdraw from the project, the USAFJ would be able to draw upon the performance guarantee and the existing RBN assets. With the RBN assets, including the physical assets, the RBN would be better able to guarantee the continuation of service, which is the ultimate objective of this RBN Licensing Process.

RBN Licensing

Licence Conditions Generally

6.39 Each RBN Operator will be issued a licence that sets out the rights and obligations applicable to that operator. The RBN Licence rights and obligations will include a number of provisions that are commonly found in telecommunications licences issued in other countries. The following paragraphs will highlight certain specific rights and obligations.

RBN Licence Rights

6.40 The rights granted to the licensee will include the following:

- The licence term shall commence on the Start Date (the date that the licence is issued) and shall run for 10 years, with an expectation of renewal for successive periods of 5 years each.
- The licensed Region will be the respective RBN Region.
- The licensee shall be free to use any technology in its network.
- The licensee shall be authorized to use a reasonable amount of radiofrequency spectrum in support of its services in the licensed territory, subject to availability.

RBN Licence Obligations

6.41 The licence obligations will include the following:

- The licensee must connect to all designated public institutions in the RBN Region. The connectivity shall be at a specific bandwidth capacity, and shall accommodate voice and data services.
- The licensee's prices to public institutions for services shall be tariff regulated. The initial level of prices will be described in a schedule

to the licence. These prices may be adjusted from time to time by the OUR.

- The RBN Licensee must interconnect with other operators at their request at one designated POI in each RBN Region.

- The RBN Licensee must lease bandwidth to other requesting operators at cost-based rates approved by the OUR.

- If the RBN Licensee is declared by the OUR to be a dominant operator in respect of specific services or specific geographic areas, the licensee will be required not to behave in an anticompetitive manner.

- The RBN Licensee will be required to establish accounts for its RBN business that are separate from other businesses.

- The RBN Licensee will be required to furnish specific categories of information concerning its operations to the OUR on a regular basis, or upon request.

- The licensee will be required, as a condition of licence, to construct a network with defined technical characteristics to specified locations in the RBN Region and in accordance with a defined timetable. The licensee will also be required to meet certain specified QOS performance criteria.

Agreement Between RBN Operator and USF

6.42 The RBN Licensee will enter into an agreement (the "RBN Agreement") with the USAFJ, the entity that is responsible for providing the subsidy, to build and operate the RBN. A number of provisions will appear in both the RBN Licence and the RBN Agreement. Some of these provisions could include:

- The RBN Licensee will be required to construct a network with defined technical characteristics to specified locations in the RBN Region and in accordance with a defined timetable. The entire network must be built and operational within a certain specified time period after the start date.

- The RBN Agreement will specify subsidy payments that will be made upon the achievement of key milestones. The milestones will be defined in terms of (1) operational network points of presence in specific geographic locations, and (2) numbers of Public Institutions operationally connected to the network.

- Failure to achieve a key milestone by more than a specific number days will entitle the USAFJ to declare the corresponding RBN Project in default. Upon a default the USAFJ shall have certain rights, including the right to discontinue providing any further subsidy funds to the RBN Licensee. The USAFJ shall also have the right to take over installed network in order to redeploy it with a new operator. If the fund chooses to take over the installed network, the purchase price will be nil. The USAFJ will also have the right to claim on any financial security provided by the licensee.

Radiofrequency Spectrum

6.43 The regulatory framework for spectrum management and allocation in Jamaica is set by the Telecommunications Act 2000. Existing spectrum management policy generally follows the United States policy framework and frequency allocation except in Jamaica there is no similar rule making process or public interest requirement. Spectrum Licensees have property rights to the assigned spectrum for the duration of the license and they can exclude others from using any portion of the assigned frequency spectrum even if it is unused.

6.44 The Spectrum Management Authority ("SMA") manages the radio frequency spectrum in Jamaica. There are no "class licences" in place, but this is under consideration.[12] The ISM frequency bands and other bands that are used for fixed wireless in the "last mile" (e.g., 902-928 MHz, 2.45 – 2.7 GHz, 8.7 – 8.8 GHz, 5.725 – 5.875 GHz) are currently licensed. The SMA is reviewing the licensing requirements for the 5 GHz band, including the consideration of this being opened as a license-exempt band.

6.45 The 2.4 GHz and the 5 GHz bands are license-exempt in many jurisdictions. These bands are becoming popular for local access "last mile" systems, generally for high-speed Internet services using a number of wireless standards, including Wi-Fi based 802.11x systems. Unlicensed bands are not subject to the controls and frequency coordination discipline as are licensed bands. Consequently, unlicensed bands are susceptible to interference amongst operators as more than one operator sets up service in the same area. The SMA is aware that there are unauthorized users of 2.4 GHz spectrum in the country.

[12] A Class License might apply to a technology, or a service; e.g., customer equipment for a point-to-point fixed wireless service.

6.46 Spectrum license fees are structured on a combination of the frequency bands and the transmit power levels. Fees are paid annually.[13] The present spectrum license fee structure is not suitable for fixed wireless operators and would result in exorbitant amounts for a fixed wireless operator intending to provide service over a broad area of Jamaica. The fee structure for fixed wireless networks is under review.

6.47 A challenge facing the SMA is to move forward with a frequency licensing regime that balances the objectives of enabling competitive entry consistent with regulatory policy, providing for a secure spectrum environment for the RBN operators (to protect their investment in economic challenging areas) and maintaining control over the use of all spectrum both licensed and license-exempt.

6.48 Some of the spectrum management considerations for a RBN scenario include:

- A spectrum license fee structure that encourages fixed wireless operators to extend networks into high-cost, low revenue areas. Approaches may include license fee bands with annual fees reflective of the assessed economic attractiveness of the coverage areas, perhaps decreasing to zero annual fee for the most challenging areas.

- A "protective license" for the RBN operators in the 5 GHz band should it be unlicensed whereby the RBN operator would be protected from interference resulting from other users transmitting in the 5 GHz band.

- Should it be decided to exempt the 5 GHz band from licensing, the SMA would require that all users setting up base stations in this band be registered with the SMA. Frequency coordination and interference mitigation would be on a mutual cooperation basis amongst the users with the exception of the RBN operators who would be protected from interfering systems.

Detailed comments are invited on all aspects of the chapter especially on the specific proposals made by the OUR.

Question 6.1: As the OUR identified the significant issues concerning spectrum management as it might affect the success of the RBN approach, and in particular:

[13] The total fee consists of a processing charge (one-time), spectrum fee and a regulatory fee.

- ***Is a fee band approach an appropriate license fee structure for the RBNs – should it apply to all operators willing to invest capital in these same areas?***

- ***Are there issues concerning a "protective license" approach?***

Please give your views on the effectiveness of all operators using license-exempt bands registering with the SMA and relying on mutual cooperation to mitigate interference within these bands.

CHAPTER SEVEN: OTHER CONSULTATION ISSUES

Summary of Consultation Issues

Service to the Disabled Community

7.0 The OUR strongly believes that special consideration should be given to the disabled community such that no undue burden is imposed on this group when using the services provided. As such, the OUR proposed some option that could be considered when providing service to the disabled population. In addition, the Office invited comments on the issue of whether the disabled community should be given special treatment and what should be the starting point for services.

Disconnection

7.1 The OUR postulated the view that disconnection should be minimized or even eliminated. The objective should be to ensure that every customer remains on the network. Also, comments were requested on how best to minimize disconnection of customers from the telecommunications network.

Monitoring and Review

7.2 As with any universal service/access programme, constant monitoring and review is critical. The OUR pointed to the rapid changes in the industry as one of the main reasons why monitoring and review should be considered seriously. Comments were invited on what programmes could be implemented to ensure an effective monitoring and review.

Comments from Interested Parties

Service to the Disabled Community

7.3 One respondent suggested that it is important that the disabled community get access to telecommunication services and special effort should be extended to those living in rural areas as well as the financially challenged.

7.4 CWJ commented that it has being providing a number of the services

proposed by the OUR to the disabled community among others and *"therefore does not believe that the current USO provisions in the Act need to be widened to include services specific to the disabled."*

7.5 Infochannel supports the OUR's view that special consideration should be given to the disabled community and have therefore re-emphasized the proposals postulated by the Office.

Disconnection

7.6 CWJ points out that it has introduced several programmes to reduce the level of disconnections from its fixed network. Some of these programmes include a bill payment plan for customers experiencing affordability problems. In addition, the Company makes reference to its Low User Package which it believes has been assisting customers immensely with controlling their monthly bills. Also, the Company mentioned that it is currently reviewing other options such as a prepayment scheme for its fixed line customers.

7.7 Infochannel supports that OUR's view that disconnection should be minimised, if not eliminated, but also pointed out that customers' inability to pay their bills has resulted in high bad debts for the incumbent. The Company argued that one of the main reasons for this is the monthly access fee which customers are required to pay on the fixed network. It is believed that if this is removed and a prepaid scheme introduced the level of disconnection would be significantly reduced.

Monitoring and Review

7.8 Both CWJ and Infochannel believe that effective monitoring and reviews are critical to the continued success of the universal service/access programme.

OUR's Comments/Views

Service to the Disabled Community

7.9 The OUR is of the view that special consideration should be given to the disabled community and the services offered to this group should be constantly reviewed.

Disconnection

7.10 Other sections of the document have already addressed the issue of disconnection to some extent. The general view of the OUR is that the prepaid option being offered by mobile operators is going a far way in reducing the number of households without connection to a network. In fact, it has significantly increased the number of households with connection to voice services. To further reduce the disconnection level (rate), the OUR is proposing that CWJ introduced a prepaid payment option on its fixed network. It is important that households remain connected to a network for various reasons. One reason is that of emergency – households should be able to call for assistance when these circumstances arise.

Monitoring and Review

7.11 Just like any other programme, the universal service programme will require effective monitoring and review. The OUR is proposing the establishment of a Fund Administrator who will be required to manage the day to day operation of the programme. This administrator will also be responsible for the monitoring and reviewing the programme and making the necessary adjustments as required.

Question 7.1: Do you support the OUR's view on service to the disabled community? Please explain.

Question 7.2: Do you support the OUR's view on disconnection? Please explain.

Question 7.3: Do you support the OUR's view on monitoring and review? Please explain.