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Office of Utilities Regulation

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**ADOPTION  
OF  
ALTERNATIVE EMERGENCY NUMBERS**

(TOWARDS GLOBALLY HARMONIZED EMERGENCY NUMBERS)

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**Consultation Document**

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**OFFICE OF UTILITIES REGULATION**

December 2010

## ABSTRACT

As population size and with it the volume of international trade and travel increased, so did the concern for the safety and well-being of citizens when they travelled abroad. Surveys have shown that a high percentage of travellers do not know at all what number they could dial, or procedure to follow, to reach an emergency service in a foreign country. An outcome of this, unfortunately, has been the loss of lives.

This problem gave rise to the need for the establishment of a global emergency number to reach local police, fire, ambulance and other emergency services which would make it easy for a person travelling from one country to another, to get needed assistance in an emergency.

There was little question that a global assurance of safety and well-being through quick and easy dialling access to local emergency services could be realized only under the auspices of the International Telecommunications Union.

The Office of Utilities Regulation (the Office; the OUR) therefore, on behalf of the government of Jamaica, placed before the International Telecommunications Union (the ITU), with proposed solutions, the salient issues in relation to increasing international travel, the concomitant concerns for safety and well-being of persons travelling to a foreign country, and, the consequential need for an internationally harmonized emergency number solution for easy dialling access to local emergency services in case of personal emergencies (accidents, fires, interpersonal violence, etc.).

The Office also highlighted the fact of the significant on-going international cooperation in the development of technical, operational and procedural standards for public emergency telecommunications, most notably of course, in the area of disaster mitigation, to ensure timely and effectual responses to emergencies through available and easily accessible public telecommunications facilities and services. The Office proposed that the matter in question receive similar international consideration.

The Office reviewed the cases of two hundred and seven (207) countries known to have public emergency services, examined regional trends towards emergency number harmonization, and explored several options for its recommendation to the ITU for a globally suitable emergency number.

The Office's recommendation for emergency number harmonization was unanimously received by the ITU's Study Group 2 (2005-2008). The final outcome was the development and promulgation of the new ITU standard, **Recommendation ITU-T E.161.1**, the purpose of which is to provide guidance to help ITU Member States who are in the process of selecting a single emergency number for the first time, or selecting a secondary alternative emergency number for public telecommunications networks.

This document sets out the basis on which the Office proposes to adopt the provisions of ITU Recommendation ITU-T E.161.1 as approved on September 23, 2008, by ITU-T Study Group 2 (2005-2008), and seeks the views of industry stakeholders thereon.

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## 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 aspects of the issues raised and the specific questions posed.

Responses to this Consultative Document are due by **January 14, 2011** and should be sent by post, fax or e-mail to: -

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Information considered confidential should be submitted separately and clearly identified as such. In the interests of transparency, respondents are requested to avoid confidentiality markings wherever possible. Respondents are encouraged to supply their responses in electronic form, so that they can be posted on the OUR's Website (or a link included where a respondents wish to post their response on their own website).

### Comments on responses

The responses to this Consultative Document form a vital part of the consultation process, and so far as possible, should also be publicly available. Respondents will therefore have an opportunity to view and comment on the responses received from other contributors. Comments may take the form of correcting factual error or putting forward counter arguments, etc.

Comments on responses are requested by **January 28, 2011** and should be sent as indicated above.

### Arrangements for viewing responses

To allow responses to be publicly available, the OUR will keep the responses that it receives on files which can be viewed by, and copied for, visitors to the OUR's Offices. Individuals who wish to view the responses should make an appointment by contacting the information Officer by one of the following means:

Telephone: (876) 968 6053

Office of Utilities Regulation  
Consultation Document:  
Adoption of Alternative Emergency Numbers  
Document No. TEL2010013\_CON002

Fax: (876) 929 3635  
E-mail: [kmunroe@our.org.jm](mailto:kmunroe@our.org.jm)

Individuals may request photocopies of selected responses at cost price. Copies may also be ordered by post by sending a cheque made payable to “Office of Utilities Regulation.” (The contact details above may be used to find out the correct amount).

The consultation schedule is tabulated below:

<b>EVENT</b>	<b>DATE</b>
<b>Response to this Document by interested parties</b>	<b>January 14, 2011</b>
<b>Comments on respondents’ submissions</b>	<b>January 28, 2011</b>

# 1. INTRODUCTION

## Purpose of Document

- 1.1** Section 8 (3) of the Telecommunications Act 2000 (the Act, the Telecoms Act) provides that the Office, as Numbering Administrator, “In carrying out its functions ...shall develop a plan for the numbering of telecommunications services and may make rules pursuant to that plan regarding the assignment and use of numbers by carriers and service providers”.
- 1.2** This document sets out, for consultation purposes, the Office’s proposal to formally implement the provisions of the International Telecommunications Union (ITU) Recommendation ITU-T E.161.1, “Guidelines to Select Emergency Number for Public Telecommunications Networks”, and accordingly, to amend the National Numbering Plan.
- 1.3** Recommendation ITU-T E.161.1 provides guidance to help Member States who are in the process of selecting a single emergency number for the first time, or selecting a secondary alternative emergency number for public telecommunications networks.
- 1.4** Thus, the document provides an overview of the Office’s investigations, findings and proposal in relation to the need for, and ITU-T’s deliberations and conclusions on global harmonization of emergency numbers.

## 2. BACKGROUND

### The Local Concern

- 2.1 In a letter to the Office dated ..., the Minister of Commerce, Science and Technology requested that work be done that would form the basis of an approach to the International Telecommunications Union for that body to consider the matter of the standardization of emergency numbers. The basic intention was the creation of globally consistent secondary (to national emergency numbers specified by the respective national regulatory authorities) emergency number, which might be dialed in any country to reach the regular local emergency services.
- 2.2 The ministerial directive was in response to a local petition which detailed the dire consequences of persons not having known the number(s) for the emergency services in a visited foreign country during an emergency there.
- 2.3 Accordingly, the Office carried out a comprehensive investigation to determine the origin, scope and results of past and current initiatives and activities towards the harmonization of emergency numbers, and subsequently prepared an ITU Contribution<sup>1</sup>, entitled “Proposal for a Global Emergency Number”, which was presented at the ITU Study Group 2<sup>2</sup> meeting held in Geneva, December 6-15, 2005.

### The Global Context

- 2.4 The United Nations defines emergencies as “sudden and usually unforeseen events that call for immediate measures to minimize their adverse consequences” (UN-DHA<sup>3</sup>, 1992), and much work continues to be done at national, regional and international levels to develop comprehensive emergency response capabilities, to ensure quick and effective responses to emergency situations, through available and easily accessible telecommunications resources. To this end, there have been significant developments in technical, operational and procedural standards for Emergency Telecommunications.
- 2.5 It is true to say however, that the focus, at the international level, exclusively had been on ensuring effective communications to support disaster recovery work resulting from natural disasters and terrorist attacks. Thus, there was an unattended need to consider in the international arena the issue of provisions for responses to

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<sup>1</sup> A proposal by ITU-T members and associates relating to or requesting a draft, revised, or new ITU-T Recommendation

<sup>2</sup> A Study Group is comprised of experts from both public and private sectors, and is designed to develop Recommendations for a particular area of ICT. The Study Group 2 mandate covers **Operational aspect of service provision, networks and telecommunication management.**

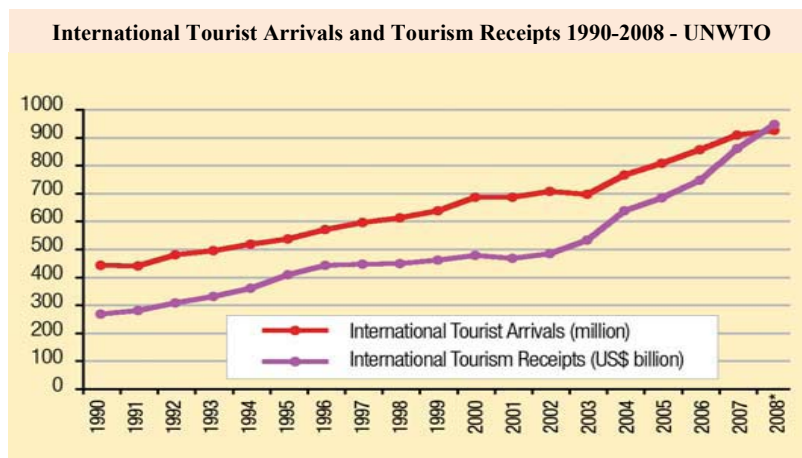
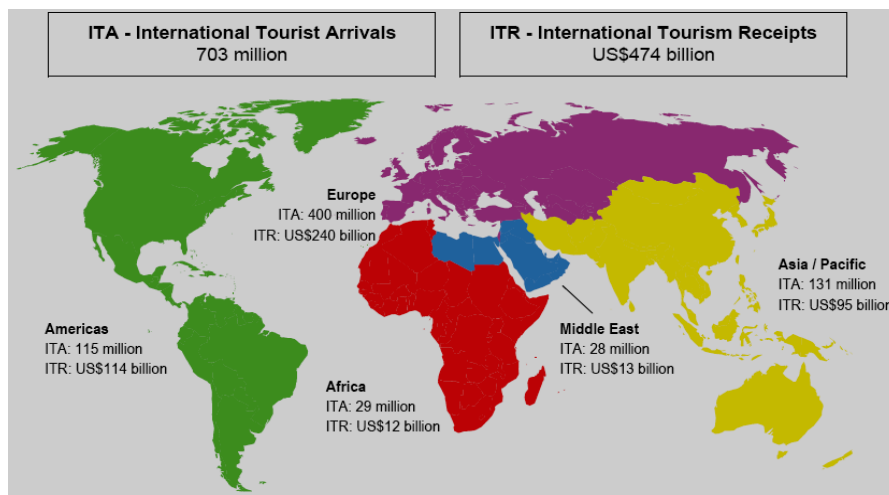
<sup>3</sup> United Nations - Department of Humanitarian Affairs

personal/individual emergencies during normal times, and particularly as it relates to dialling access to local emergency services by foreigners in any country.

**2.6** People normally know how to reach emergency services within their country, that is, by dialling the easily remembered abbreviated dialling sequence specified by the national regulatory authorities, when they face a life-threatening or otherwise time-critical situation. But they should also readily know how to make similar contact with emergency agencies in any foreign country to which they travel, and get timely and quality help at the place of an emergency. Ensuring the latter facility, however, would require the availability of a globally consistent emergency calling arrangement to reach regular local emergency services. This is especially important in today's globalised world.

**2.7** Globalisation is now a routine fact of our everyday lives and the main ways in which it is experienced are through communications, trade and travel. The World Tourism Organization reported that international tourist arrivals worldwide in 2003 totalled 703 million. The figure grew to over 900 million in 2008.

**International Tourist Arrivals in 2003 by Region - World Tourism Organization**





- 2.8** Surveys<sup>4</sup> in 2002 indicated that: 90 million European citizens travel abroad at least once a year; 41.3% of European citizens did not know at all what emergency number they could dial when travelling abroad; and 65.2% of European travellers experienced a reduced sense of security abroad than at home.
- 2.9** The International Forum on ANSI-41<sup>5</sup> Standards Technology (IFAST) noted in its International Roaming Guide: “international roaming subscribers are usually not aware of the required digits to dial or procedure to follow, to reach an emergency operator in a foreign country”. IFAST proposed two solutions to this problem: one was the creation of a “Global Emergency Number”. There appears not have been any substantive response to the proposal.
- 2.10** According to the European Telecommunications Standards Institute’s EMTEL, the “organization of emergency and public safety services may vary from country to country, depending on how the society is structured. Citizens are increasingly mobile. They travel for business, for holidays, etc. In order to provide an optimum level of security and accessibility to these citizens in situations of emergency, the emergency telecommunications services need harmonization”. This statement, although made in a euro-centric context, undoubtedly had global relevance and application.
- 2.11** TruePosition, Inc, which provided insight and recommendations to the European Commission in the Commission’s consideration of an EU-wide 112 emergency wireless location system, noted that medical emergencies and road accidents were high on the list of causes of death throughout the developed and developing world. In Europe alone, there were over 1,300,000 accidents per year resulting in 40,000 fatalities and 1,700,000 injuries, at an estimated cost of 160 Billion euros. The report stated further that 30 percent of deaths occurred within minutes of a crash, and 50 percent occurred before the patient arrived at a hospital. In the case of medical emergencies: acute stroke victims, for example, must have full medical treatment within 60 minutes from initial medical examination.
- 2.12** The twin problem of crime and violence is a major challenge in growing numbers of societies. And while the underlying causes are numerous and complex and may vary among peoples and cultures, there is ever the common need of affected persons everywhere to be able to get quick and effective help, usually from the authorities, at the place of a resulting emergency.
- 2.13** The emergency telephone numbers specified by national regulatory authorities differ from country to country in several ways. Moreover, many countries do not have a single central emergency dispatch service and consequently maintain separate numbers for police, fire and ambulance services.

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<sup>4</sup> According to the European Commission’s Co-ordination Group on Access to Location Information for Emergency Services (CGALIES, 2002)

<sup>5</sup> A mobile cellular telecommunications system standard, established by the American National Standards Institute, to support mobility management by enabling the networking of switches

- 2.14** Visiting travellers rely on the same sources of assistance and intervention as ordinary citizens of a country but potentially are at far greater risk because of their usual lack of knowledge of how to reach local emergency services by telephone.
- 2.15** These issues underscored the need for the establishment of a global emergency number to reach local police, fire, ambulance and other emergency services, making it as easy as possible for a person travelling from one country to another, to get needed assistance in an emergency, regardless of the country and location.

### 3. DISCUSSION

#### Major Considerations

- 3.1** A variety of factors will weigh in on any consideration of a globally-common emergency number, both with respect to the ITU's existing standards in relation to numbering and the prevailing domestic numbering conventions in ITU member countries. However, the resolution of concerns in this matter requires more than simply numbering solutions.
- 3.2** A point of first importance, therefore, in the approach to the ITU for its consideration of a global emergency number was that emergency numbers are generally considered "access codes" and are outside the scope of ITU-T E.164 applications. ITU-T Recommendation E.164 is the formal designation of the standards for the International Public Telecommunications Numbering Plan administered by the ITU and which specifies the format, structure, and administrative hierarchy of public telecommunication numbers. The E.164 numbering plan covers three categories of numbers used for international public telecommunication. These categories are: **Geographic Areas, Global Services, and Networks**. E.164 numbers in one country are ultimately accessible to subscribers in other countries by means of international dialling procedures which involve the dialling of the ITU assigned country code<sup>6</sup>
- 3.3** The country code in international public telecommunication numbers for **Geographic Areas** identify *a specific country, countries in an integrated numbering plan, or a specific geographic area*. An E.164-based **global service** is a *service defined by the ITU-T and provisioned on the public switched network, and to which the ITU-T has assigned a specific country code to enable the provision of that international service (e.g. Universal International Freephone Service) between two or more countries and/or integrated numbering plans*<sup>7</sup>.
- 3.4** The essential point to be made here is that *public telephone numbers that exist only at the local, intra-Network and/or national level are not considered E.164 numbers*,<sup>8</sup> (*...they do not have any provisions for distinguishing between countries, nor do they conform to any international numbering plan*) **and thus, the treatment of such public non-E.164 numbers, for all practical purposes, is a national matter.**
- 3.5** The second consideration, therefore, was that the emergency telephone number, traditionally, is a special case in a country's telephone numbering plan and, with the exception of the European Union's pan-European emergency number 112, is not constrained by any universal convention. As stated at paragraph 2.14, the emergency telephone numbers specified by national regulatory authorities differ from country to

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<sup>6</sup> Source: ITU-T Recommendation E.164

<sup>7</sup> Source: ITU-T Recommendation E.164

<sup>8</sup> Source: ITU-T Recommendation E.164

country in several ways. Moreover, many countries do not have a single central emergency dispatch service and consequently maintain separate numbers for police, fire and ambulance services. The numbers are typically short, two to three digits.

- 3.6** Taking the two considerations into account, the Office reviewed the cases of two hundred and seven (207) countries known at the time to have public emergency services. One hundred and one (101) had a single number for all emergency calls, and the numbers were 3-digits except in the case of Sri Lanka (6-digits). Seventy (70) countries (including Argentina, Bangladesh, Bulgaria, Chile, China, Egypt, Georgia, Grenada, Guatemala, Honduras, India, Indonesia, Iran, Israel, Italy, Japan, Jordan, North Korea, Lebanon, Malaysia, Morocco, Nicaragua, Pakistan, Panama, Romania, Russia, Saudi Arabia, Singapore, South Africa, Switzerland, Syria, Taiwan, Trinidad & Tobago, Turkey, Ukraine, Vietnam) had a different emergency number for each of the different emergency services (the difference often being in the last digit) or, at least, as in sixteen(16) of the countries in this group, two of the three services shared a single number. These countries used 2-digit and 3-digit numbers. The remaining thirty-six (36) countries applied local telephone numbers and some services might have been non-existent. Jamaica falls in the first category, with an operator- assisted service, but also has a separate number for direct access to the police.
- 3.7** National emergency numbers are generally in the formats shown in Table 1 below where the letter ‘X’ represents any digit 0 through 9. The quantities (of the 207 countries considered) indicated in the table did not include the instances of emergency numbers 112, 911, and represented countries that had a different emergency number for each of the different emergency services.

**Table 1 Instances of 2-3 Digit Emergency Codes – Excluding 112 and 911**

<b>Number Format ▶</b>	<b>0X</b>	<b>1X</b>	<b>11X</b>	<b>1XX</b>	<b>9XX</b>	<b>999</b>
<b>Quantity(Countries/Codes)▶</b>	10	7	17	21	12	29

- 3.8** There have been changes since the survey was done. For instance, some countries (e.g., Bonaire, Georgia, Norway) have moved away from having a different number for each emergency service to having a single number to reach all emergency services. Some (e.g., Angola, Côte d’Ivoire, Ghana) now use 11X codes instead of local telephone numbers as emergency numbers.
- 3.9** The Office considered it reasonable to assume that if a Global Emergency Number were to be adopted, the decision was likely to be predicated on one or several of the following factors (they are not necessarily in order of importance):
- The choice of number (in terms of the characteristics and status: new, existing, digit length, etc.)
  - The resulting demand for technical network changes
  - The resulting demand for changes to existing numbering plans and dialling plans
  - The commercial implications

- The scope of requisite awareness campaigns
- The nature and effectiveness of enforcement mechanisms

## Options for Emergency Numbers

**3.10** The Office explored several options for its recommendation to the ITU for a globally suitable emergency number. The Office opined that *choice of number* was arguably the most crucial of the foregoing factors and had practical implications for all the others; importantly, the number selected had to be adaptable to the numbering plans of most countries.

**3.11** The choice of number, therefore, had to be considered, first, in the context of what currently obtained in terms of actual numbers specified by national and regional regulatory authorities around the world for access to national emergency services, and general public awareness of them:

### 112 in CEPT<sup>9</sup> and EU Countries

**3.12** The European Commission (EC), in the treatment of Numbering, focused on establishing common access to certain services across Europe, and on the shaping of national and European numbering policies. In July 1991, the Council of Ministers adopted a Decision to introduce a single European emergency number, **112**, with subsequent legislative enforcement through the European Parliament and the Council of February 1998.

**3.13** Directive 2002/22/EC of the European Parliament and of the Council of March 7, 2002, on universal service and users' rights, provides the following:

*Member States shall ensure that, in addition to any other national emergency call numbers specified by the national regulatory authorities, all end-users of publicly available telephone services, including users of public pay telephones, are able to call the emergency services free of charge, by using **the single European emergency call number "112"**.*

Several Member States have adopted 112 as their unique national emergency number.

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<sup>9</sup> The European Conference of Postal and Telecommunications Administrations or *Conférence Européenne des administrations des Postes et des Télécommunications (CEPT)*. CEPT Countries as at August 25, 2004 include: Albania, Andorra, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom and the Vatican City.

### 112 in Australia

- 3.14** The 112 code had been included in Australia's national numbering plan since 1997 as a secondary emergency number, but was available only from mobile telephones. The standard emergency number is '000'. GSM mobile phones sold in Australia are required to have '000' in addition to 112, included in the firmware of the handsets.

### 911 in and outside Countries of the North American Numbering Plan (NANP<sup>10</sup>) Area

- 3.15** With the exception of five (5), including Jamaica, all NANP states implemented 911 as a standard emergency number for police, fire and ambulance services (separately or combined). It was also found to be an emergency number for at least sixteen non-NANP countries, including China, Uruguay, Nicaragua, and Argentina. Next to 112, 911 is the most widely used number for access to public emergency services, in the world. However, according to the Internet-based statistics provider, Nationmaster.com, 911 is used so pervasively in United States media that other countries sometimes have had difficulty in educating children not to dial 911 for help.
- 3.16** It was important to note that the NANP region is virtually limited to the use of X11 and 11X numbers as 3-digit emergency numbers in the PSTN if it is to avoid sacrificing potential telephone numbers, the basic format of the North American Numbering Plan, and the use of digits '0' and '1' as standard prefixes for operator services and long distance dialling in the NANP region, and current number assignments to other existing services.

### '100' '101' and '102' in South Asia

- 3.17** Emergency Number harmonization at the regional level was adopted in South Asia. The South Asian Telecommunications Regulators' Council (SATRC) whose membership includes Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka, handled numbering harmonization in the region. In 2003, SATRC recommended that the codes '100', '101' and '102' be adopted for emergency calls for police, fire and ambulance, respectively.

## **Towards a Standard International Emergency Service Number**

- 3.18** Whilst there was no world-common emergency service number, there was a growing international recognition of 112 as a quasi-global emergency number as a result of its adoption as the Pan-European emergency service number, its inclusion in the GSM mobile phone standard as a standard emergency number, and the generalization of the latter in statements by major industry stakeholders and observers as demonstrated in the following examples:

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<sup>10</sup>The basic numbering scheme which serves the United States and its territories, Canada, the Bahamas, Bermuda, Dominican Republic and 15 other Caribbean countries, including Jamaica.

- The UK's telecommunications regulator, Ofcom (in its Number User Guide publication): "Note: the emergency code 112 is a European and mobile standard, so you should be able to dial it for emergency assistance when you go abroad - anywhere in Europe, and anywhere else in the world that you can use your own mobile phone".
- Australia's Department of Communications, Information Technology and the Arts: "...because GSM is an international standard, GSM mobile phone users can also be connected to emergency services by dialling the international emergency call number 112 ...112 can be dialled anywhere in the world with GSM coverage and callers will be automatically translated to that country's particular emergency number".
- VodaWorld (website): "One of the major benefits of owning a cellphone is that you can contact someone in an emergency. The global GSM 112 emergency number is available to anyone with a cellphone anywhere in the world: calls will be routed to a local emergency service based on the type of crisis".
- A May 2005 official independent external report into the Police Communications Centres and published by the Office of the Commissioner, New Zealand Police, carried the following recommendation, among others:

"...the New Zealand Government in conjunction with the community and major stakeholders should consider a ... move away from the emergency number '111' due to ... worldwide trends toward a common emergency number...

**3.19** In the United States, several major wireless providers, such as Nextel, T-Mobile and Cingular (now AT&T Mobility, LLC), had programmed their systems to translate 112 into 911' this, reportedly, had been done to facilitate access to the United States 911 emergency services by in-bound roaming GSM customers.

**3.20** The Office held the view that the trend towards emergency number standardization was indicative of a global realization of the need to ensure the safety and well-being of citizens whether they were at home or abroad, but that only under the auspices of the International Telecommunications Union could this desired insurance of safety and well being be realized on a global scale.

## 4. OUR PROPOSAL TO THE ITU

### 4.1 The Office requested the ITU to consider its following proposal for the establishment of a global emergency number:

“The ITU should recommend the adoption of the 3-digit non-geographic number 112 as the Global Emergency Number to be dialled anywhere in the world to reach the local fire, police, medical/ambulance and coastguard emergency services.

This is, perhaps, the most feasible and pragmatic solution given: the telecommunications industry’s de facto recognition of 112 as “the international emergency number”; the incorporation of “112” in mobile telephony standards for emergency calling; the actual implementation of “112” in major countries of the world as the standard or alternative emergency number.

Countries that are concerned about possible changes to their numbering plans may consider the possibility of benefits accruing. Such changes were required of many European countries with the adoption of 112 as the pan-European emergency number. However, they benefited because a substantial set of new 11X to 11XXX numbers became available for present and future services.”

“... Conclusion”

“The world’s population is expanding and the need and desire for international travel will continue to increase”... A global emergency number will save people’s lives... and enhance their feeling of security and well-being when they travel [abroad]...”



## 5. ITU DELIBERATIONS AND DEVELOPMENTS

5.1 The OUR Contribution to the December 6-12, 2005 meeting of ITU-T Study Group 2 (SG2), in Geneva, received immediate and unanimous support among the participants. The issue was given specific attention through an ad hoc sub-group created by SG2 and charged with the responsibility of developing the necessary Recommendation<sup>11</sup>. Up to the start of its consideration of the matter, the ITU did not have a definition for 'Emergency Number'. Subsequent related Contributions, (from Italy and Germany only) were in respect of a draft Recommendation produced by the ad hoc group, and were editorial in nature.

### Key Events

5.2 This section of the document outlines key events in the ITU deliberations on the issue of the global harmonization of emergency numbers.

5.3 **The OUR's contribution, entitled Proposal for a Global Emergency Number**, was presented at the Study Group 2 meeting in Geneva, December 6-15, 2005, as Document COM 2 – D 74 – E. SG2 noted that previously there had been only general discussions regarding emergency numbers and that particular Member States had submitted contributions suggesting that broader harmonization in this domain could be desirable.

5.4 **On May 29, 2006**, the Director of the Telecommunications Standardization Bureau (TSB) issued a communiqué, TSB Circular 94 COM 2/RH, to the Administrations of Member States of the Union, requesting their exclusive participation in a questionnaire survey which, among other things, would collect information on numbers for emergency services. Specifically the request was:

- a) *To obtain information on the actual numbers used at present for emergency services.*
- b) *To investigate the feasibility of a single (as a target) three-digit toll free short number for emergency services.*
- c) *If no single number is feasible, then to investigate the possibility of using only a limited set of numbers.*
- d) *To review the current deployment and possible future availability of national, toll-free, resources ("short numbers") of 3 to 6 digits for such purposes.*

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<sup>11</sup> The international standards that are produced by the ITU-T are referred to as "Recommendations" (with the word ordinarily capitalized to distinguish its meaning from the ordinary sense of the word "recommendation"), as they only become mandatory when adopted as part of a national law, etc.

- e) *To identify the number or numbering space dedicated to or available for such emergency services, if any, at the national, regional and international levels”*

**5.5 The Questionnaire results reported by the TSB indicated:**

1. *50% of responding countries would be willing to commit to supporting one (or a limited number of) easy to remember, emergency numbers to be used around the world. [28% offered no response (‘yes’ or ‘no’) to the applicable question. Only 22% were unambiguously not willing to commit to supporting the idea of a global emergency number.]*
2. *Each country has a variety of numbers that would be available if it were desired to have a single world-wide emergency number but, unfortunately, there are few, if any, common numbers available in all countries.*

**5.6 At the Study Group 2 meeting in Geneva, 30 October –8 November, 2007,** the SG2 Chairman postulated regarding the implications of the survey results that it must be that some countries/regions would find it difficult to depart from the use of their accepted emergency numbers, and that harmonization might therefore actually work as follows:

- *Agree a small set (2 or 3) numbers to be used*
- *Use the agreed numbers in addition to existing numbers used nationally. (This is already the case in several countries, for example in Europe, where the European emergency number 112 is used in addition to a previously-used national emergency number.)*

**5.7** Additionally, the chairman proposed that the number formats 11X and 91X be considered for emergency numbers. He acknowledged however, that issues of implementation were national prerogatives and outside the scope of ITU-T Recommendations, but that a Recommendation, nevertheless, could lay down an optimal approach to meeting the requirements.

**5.8** Initially, it was proposed that the best way to treat with the matter was to add a new clause to ITU-T Recommendation E.164, but it was later agreed that the development of a draft Recommendation was the most practical way to proceed. An Ad-hoc committee was therefore created to begin development of the draft Recommendation including defining what emergency service are to be included.

**5.9** The ad-hoc group agreed *“that any recommendation would be focused upon the numbers that might be utilized to provide an emergency number for the first time or as a secondary number, and by implication the recommendation did not propose replacing current implementations”*. The group designated the newly developed headings of the draft recommendation on Harmonized Emergency Numbers *“ITU-T e.hen”*.

**5.10** At the Study Group 2 meeting in Geneva, May 6-15, 2008, the ITU-T e. then draft Recommendation was considered under the ITU’s Traditional Approval Procedure (TAP) and the formal designation for the new Recommendation **ITU-T E.161.1** adopted.

**5.11** The TAP provides, in part:

“If 70% or more of the replies from Member States support consideration for approval at the Study Group meeting (or if there are no replies), the Director should advise the chairman that consideration of the approval may proceed. (With the authorization given by Member States that the Study Group may progress with the approval process, they also recognize that the Study Group may make the necessary technical and editorial changes...)”

**5.12** At the Study Group 2 meeting in Geneva, September 23, 2008, a draft of the new standard, Recommendation E.161.1 was discussed and changes recommended by Germany and Italy accepted. China pointed out that relevant terminology would have to be aligned between E.161.1 and a future version of Recommendation E.101<sup>12</sup>.

**5.13** On September 24, 2008, the Director of the Telecommunications Standardization Bureau issued **TSB Circular 239 COM 2/RH**, to the Administrations of Member States of the Union that 14 Member States participating in the last meeting of Study Group 2, approved Recommendation E.161.1 during its plenary session held on 23 September 2008.

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<sup>12</sup> This Recommendation provides terms and definitions for use in the field of identifiers (e.g., names, numbers, addresses and other identifiers (IDs)) for public telecommunication services and networks. Consistent terminology is seen as an important factor in ITU-T Recommendations, especially in Recommendations having some form of regulatory implications.

## 6. Recommendation ITU-T E.161.1 (Summary Extract)

### Purpose

The purpose of the Recommendation is: **To provide guidance to help Member States who are in the process of selecting a single emergency number for the first time or selecting a secondary alternative emergency number for public telecommunications networks.**

### Terms defined

Recommendation E.161.1 defines the following terms:

**Emergency call** [as defined in ITU-T Q-Sup.47]: A call requesting emergency services. A caller is given a fast and easy means of giving information about an emergency situation to the appropriate emergency organization (e.g., fire department, police, ambulance). Emergency calls will be routed to the emergency services in accordance with national regulations.

**Emergency number:** A non-E.164 number allocated in the national numbering plan to enable emergency calls. Normally, the emergency number is a short code.

**Short code:** A string of digits in the national numbering plan, as defined by the National Numbering Plan Administrator which can be used as a complete dialling sequence on public networks to access a specific type of service/network. The short code is referred to as a non-E.164 number, and its length is normally shorter than a subscriber number.

### Key Provisions

The following are the key provisions of the Recommendation:

- **Single initial Emergency Number**

A Member State that is planning to introduce an emergency number could use either 112 or 911, in adherence with applicable regulations concerning emergency numbers (e.g., the usage of 112 for EU Member States [b-EU 91/396/ECC]).

- **Selection of a second alternative Emergency Number**

A Member State that is planning to introduce a second alternative emergency number could use either 112 or 911, or both, which should be routed to the existing emergency number. A second alternative emergency number facilitates, for example, emergency calling by travellers visiting the country.

- **Emergency Numbers for mobile networks**

This clause give examples of how emergency numbers are used in terminals and identity module cards (e.g., SIM) for different kinds of mobile networks (PLMNs).

- **PLMNs based on GSM/UMTS system**

For mobile equipment (ME) based on the GSM/UMTS system, there is a built-in recognition of the emergency numbers 112 and 911. If the SIM/USIM/ISIM card is not present in the ME, then, in addition to 112 and 911, the following national numbers will act in a similar way as national emergency numbers: 000, 08, 110, 999, 118 and 119 [b-3GPP TS 22.101]. It will be left to the Member State to decide whether the public telecommunications network accept emergency calls without the SIM/USIM/ISIM.

## 7. OUR DECISION CONSIDERATIONS

7.1 The Office proposes to implement the provisions of Recommendation ITU-T E.161.1 with the expectation expressed in the stated scope (Section 1) of the Recommendation: “in the long run, this Recommendation will contribute to globally-harmonized emergency numbers”.

### Use of Short Code 112 Jamaica

7.2 The short code 112 ( one of 100 1XX short codes allocated in the National Numbering Plan) has been used in Jamaica, since the early 1970’s, as the access code for Domestic Operator Assistance Service; LIME has been the only telecommunications service provider to offer this service, and only to fixed line subscriptions.

7.3 In 1999, LIME automated its Domestic Operator Assistance Service and limited the service to Local Collect Calling only, using the ‘0+’ prefix and the dialling format ‘0-NXX-XXXX’ (N = digits 2 through 9; X = digits 0 through 9.). The company thereby discontinued its use of 112 for Domestic Operator Assistance Service.

7.4 In its 2003 Determination Notice on the National Numbering Plan (Document No. Tel 2003/10), the Office, in Determination 3.8, retained 112 and the other nine 11X codes in their traditional application and status, as follows:

<b>110</b>	<b>Emergency Services (Fire, Police, Ambulance) – Operator assisted</b>
111	Unassigned (It is not likely that this code will be assigned <sup>13</sup> )
<b>112</b>	<b>Domestic Operator Assistance Service</b>
113	International Service / International Operator Assistance Service
114	Directory Enquiry
115	Repair Services
116	Special Public Interest Announcements (e.g. meteorological bulletins)
117	Time of Day & Weather Announcements
118	Local office Access (Repair Crew)
<b>119</b>	<b>Police (Emergency) – Direct access</b>

7.5 LIME has now discontinued its Domestic Operator Assistance Service altogether and no other telecommunications service provider provides such a service.

7.6 With GSM technology and mobile roaming services, mobile network operators in Jamaica have allowed the dialling of 112 for local emergency service, presumably to accommodate inbound international roamers. Such calls are directed to the Police 119 emergency service. However, notwithstanding the fact that this dialling

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<sup>13</sup> Service access codes consisting of “1s” only are typically avoided in an environment where dial pulse signalling is accepted over telephone lines for the dialling of such codes. This is because there is a strong potential for the codes to be falsely generated as a result of faulty line conditions that can simulate the action of the telephone dial.

capability is a GSM technology standard, its current application in Jamaica contravenes the provisions of the National Numbering Plan, and the Telecommunications Numbering Rules (Document No. Tel 2009/01: Det/01).

## Use of Short Code 911 Jamaica

7.7 911 is one of the nine N11 codes that are allocated in the National Numbering Plan to provide three-digit dialling access to special services that are categorised in the National Numbering Plan under **Public Interest (Nationally uniform)**. This means that a qualifying service must be for some **general welfare** purpose and accessible across public networks using a uniform number assigned by the OUR, exclusively for that purpose.

7.8 Current authorised N11 Code Assignments:

211	Children Registry/Ministry of Health and Environment (Child abuse reporting)
311	Crime Stop* (National Crime Prevention Fund - NCPF)
411	Vacant
511	Vacant
611	Vacant
711	Vacant
811	Operation KingFish* (Ministry of National Security)
<b>911</b>	<b>Reserved for Emergency Number</b>

\* = calls handled by NCPF call centre

The current use of the “911” code in Jamaica is similar that of the 112 code as explained (including the stated regulatory contraventions) at paragraph 7.6.

## Standard Emergency Numbers in Jamaica

7.9 The National Numbering Plan formally recognizes two emergency services for which access codes, which have been designated Emergency Numbers, have been allocated. These are the Emergency Operator Service, traditionally provided by LIME, (to reach the Fire Department, the Police and an ambulance service, separately or jointly, depending on the nature of the emergency), and the Police Emergency Service provide by the Jamaica Constabulary Force, for direct access to the police in case of emergencies – including air/sea rescue. The standard Emergency Numbers 110 and 119 have been assigned, respectively, as indicated in paragraph 7.4.

## Code Confusion

7.10 Given the nature of the services to which the codes 110, 119, 211, 311, 811 have been assigned there is a danger of the public assuming the services to be similar. But

Crime Stop, for example, is not an emergency service, but rather one for the public to call (or write in), at an appropriate or suitable time, to share useful information about unsolved crimes or provide advance knowledge about a crime that is (not critically) imminent.

- 7.11** This assumed equivalence of purpose among the services consequently leads to a confusion of the codes. Introducing structurally similar codes in this environment potentially could exacerbate the problem.

### **Resource Conservation**

- 7.12** The only 3-digit numbering resources in the existing Jamaican National Numbering Plan that may be used equally on both fixed and mobile networks, without dialling conflicts, are the 11X and N11 abbreviated dialling arrangements. There are only eight possible N11 codes, making them the scarcest of numbering resources. All 11X codes are currently assigned to services to services.

- 7.13** Given this extreme scarcity, the Office must weigh all resource requirements very carefully, on a case-by-case basis, to decide which code to assign, to whom and for what purpose. In making such decisions, it must determine whether the resource is essential to making the service in question available to the degree necessary. (Generally, the Office must consider too, whether there are reasonable alternatives to satisfy the respective demands for the resources; in other words, whether there are other ways currently available to achieve convenient dialling that do not drain scarce resources). Any request for these resources therefore, must demonstrate a compelling need that warrants a national N11/11X assignment. As the supply of codes reduces, the likelihood for some purposes to be satisfied by assignments may decrease more sharply than for others.

### **Numbering/Dialling Plan compatibility**

- 7.14** In any proposal of numbering change, the Office must safeguard against introducing service anomalies. For instance, an assigned code should not unintentionally allow for service access other than what is explicitly determined in the National Numbering Plan. Additionally, implemented numbering changes, or externally recommended standards in and of themselves, should not be used by anyone as a basis for justifying existing or future misappropriations of unassigned numbering resources.

### **ITU-T E.161.1 Implementation Options**

- 7.15** The Office proposes an implementation approach that will optimise: the attainment of the global harmonisation objective, caller confusion avoidance, the conservation of scarce numbering resources, and conformance with the National Numbering and Dialling Plans.



**7.16** The five (5) alternative approaches in Table 1 involve simultaneous introduction of the two ITU-T E.161.1 recommended short codes, 112 and 119.

**Table 2 Alternative Implementations of ITU-T Recommendation E.161.1**

OPTION	CALLING TO		COMMENTS	
	Emergency Operator {For Fire, Police} {or Ambulance }	Police (Direct)		
S T A T U S  Q U O	A	110	119	Standard authorised uses – on fixed and mobile network
	B	110	119; 112; 911	- Unauthorised 112 & 911 uses on mobile networks. - 112 & 911 use not consistent with other countries’. - Utilizes four codes.
C H A N G E  A L T E R N A T I V E S	1	110; 112	119; 911	- Least disruptive change. - Utilizes four codes.
	2	110;112; 911	119	- Use of 112 & 911 consistent with other countries’. - Potential confusion of 119 and 911. - Utilizes four codes.
	3	112; 911	119	- Start with option 2 and withdraw 110 after 1 year. - Use of 112 & 119 consistent with other countries’. - Potential confusion of 119 and 911.
	4	112	119, 911	- Start with option 1 and withdraw 110 after 1 year. - Use of 911 not consistent with other countries’.
	5	112	911	- Start with option1; withdraw 110 & 119 after 1 year. - Most closely meets the ITU Harmonization goal. - Most disruptive change.

**7.17** With option B (the status quo on mobile networks), calls from inbound roaming callers, who are most likely to be foreigners dialling 112 or 911, are directed to the police, necessitating redialling for fire or ambulance services - presuming they are advised of the correct dialling procedure by the police call centre personnel. To prevent an adverse outcome from this calling arrangement, all calls from calls from inbound roaming callers should be routed to the Emergency Operator Service.

**7.18** Option 1, while being the least disruptive (no withdrawal or confusion of codes), is at the same time, as options B and 2, resource-intensive. As with option B, the use of 911 in option 1, as well as in option 4, to reach the police emergency service directly, could result in the service anomaly mentioned at paragraph 7.17.

**7.19** Option 5 is the ideal solution in terms of meeting the ITU harmonization objective and optimising numbering resource utilization. This option, however, requires withdrawal of the traditional emergency numbers, 110 and 119 and is the most

disruptive, not simply because of the mere fact of the withdrawal of codes, but also because of the potential impact on the police emergency service, especially given the current national concern about crime and violence, and the concomitant efforts to improve the effectiveness of policing. It is the view of the Office, therefore, that it is neither expedient nor prudent to disturb the current use of the 119 code in such an environment.

- 7.20 Option 3 best meets the Office's implementation objective stated in paragraph 7.15 is therefore proposed for adoption.

***Question: Do you agree with the foregoing analysis of the ITU-T E.161.1 implementation options and the proposed choice of option 3? Flow is in general agreement with the foregoing analysis and we support the choice of option three given the fact that both 112 (mainly Europe) and 911 (mainly North America) are well known and widely used for accessing emergency services in these large jurisdictions where most of our visitors come from. The retention of 119 for accessing the Police directly is extremely important and should be retained going forward.***

## **Application of 3GPP Specification TS 22.101 in Jamaica**

- 7.21 ITU-T Recommendation E.161.1 draws attention to the 3GPP<sup>14</sup> specification TS 22.101 which provides that if the identity module card (e.g., SIM) is not present in the mobile terminal the following national numbers: 000 (used in, e.g., Australia, Fiji, and Papua New Guinea), 110 (used in, e.g., China, Guatemala, and Japan), 999 (used in, e.g., Barbados, Hong Kong and the UK), 118 (used in, e.g., Bolivia, Haiti, and Italy) and 119 (used in, e.g., Honduras, South Korea, and Taiwan) will act in a similar way as national emergency numbers. That is, a person should be able to reach the local emergency service if any of those numbers is dialled from a mobile terminal from which, e.g., the SIM card has been removed. Recommendation E.161.1 states, however, that it will be left to the Member State to decide whether the public telecommunications network accepts emergency calls without the identity module card.
- 7.22 Presently, 999, 119, 118 & 110 are the most commonly used codes, in that order, after 112 and 911, and which, perhaps, explains their choice in the 3GPP specification. 000 is used in only four countries, including Australia (an island continent). 28 (33%) of the 84 countries using these codes (excluding 119) also use 112 and 911. The majority of the 48 countries using 999 (code for the UK) are former British territories – most, currently members of the Commonwealth.
- 7.23 The only countries in the America's, among the 84, that do not use 112 or 911 are Bolivia, BVI, Dominica, Guatemala, Haiti and Trinidad & Tobago. Other countries

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<sup>14</sup> 3<sup>rd</sup> Generation Partnership Project: is a partnership of telecommunications standards bodies involved in the maintenance and development of the Global System for Mobile communication (GSM) Technical Specifications and Technical Reports.

in the non-112/119 set include Angola Bahrain, Iran, Kenya, United Arab Emirates and Zimbabwe.

- 7.24** In the existing Jamaican National Numbering and Dialling Plans: codes with the leading digit '0' will serve as prefixes; YYY codes such as 999 are not used as access codes (such use of each of these nine codes will mean the elimination of 10,000 numbers). Besides, the YYY codes are earmarked for the development of a 5 to 6-digit Common Short Code numbering scheme; '118' is assigned for Repair Service; in the future, 110 could replace 112 in the latter's current assignment. Thus, there is no clear opportunity, in the contexts of these numbering Plans and the OUR's preferred E.161.1 implementation option, to allow the application of the specified provision of the 3GPP specification TS 22.101 in Public Land Mobile Networks (PLMN) in Jamaica. There seem not to be also, a compelling reason for such application.

*Question: Do you agree that there is no compelling reason to apply the specified provision of the 3GPP specification TS 22.101 in PLMNs in Jamaica? If no, please justify your response. We concur with the position of the OUR on this matter.*

### **Permissive Dialling of New and Legacy Numbers**

- 7.25** Implementation options 3, 4 and 5 propose a permissive dialling period of one year, during which time both the new emergency numbers and the ones to be withdrawn may be dialled to reach the respective emergency agencies.
- 7.26** Currently, across jurisdictions, permissive dialling periods to accommodate number changes typically range from three months to one year, based on the relative importance of the numbers involved and on the related circumstances. In proposing a one year permissive dialling period, the OUR took into consideration the factors highlighted below.
- 7.27** It has been posited that numbers which people rarely call are difficult to remember and that memory recall also deteriorates in stressful situations such as emergencies. Thus, knowing and being able to readily recall the local emergency number is of great importance to the safety and wellbeing of every person in the country, and therefore, such awareness, as far as practicable, must be ensured.
- 7.28** As mentioned in paragraph 7.2, the current assignments of 11X codes, in Jamaica, have been in place since the early 1970's. The 119 code undoubtedly is more publicized (posted on all police patrol vehicles), and more readily recalled or recognized as an emergency number than 110. Both, however, have a high level of recognition as emergency numbers. Locally, the 112 code is known primarily as the number for domestic operator call assistance service.
- 7.29** It stands to reason therefore that an implementation of the proposed substitution and reallocation of numbers for emergency services will require considerable time and effort for public education and information.

**Question: Do you think a permissive dialling period of one year is adequate? A permissive dialling period of one year is grossly inadequate in the context of Jamaica. At least 2 years are required with an extensive public education campaign programme.**

**Question: What is your view of the requisite consumer awareness campaign, including stakeholder roles? Consumers will need to be made aware of any changes leading up to implementation as well as post implementation. There should be collaboration between the OUR and stakeholders in the implementation process as stakeholders/service providers can help to sensitise and educate customers as they interface with these customers.**

### **Statutory Obligation to support Specified Emergency Numbers**

**7.30** All service providers have an obligation, in relation to their retail public voice services, to support specified emergency numbers free of charge and take the necessary measures to ensure that calls are appropriately delivered to the desired emergency services. In that connection, section 48 (1) of the Telecommunications Act, 2000 provides:

“48 - (1) Every service provider shall take such steps as are necessary to ensure that, in relation to its retail public voice services -

- (a) each customer of that service can reasonably and reliably reach –
  - (i) emergency services by dialling the number specified for use in connection with such services; and
  - (ii) subject to subsection (2), a directory assistance service;
- (b) no charge is imposed for calls to emergency services”.

## 8. SUMMARY OF QUESTIONS

*Question 1: Do you agree with the foregoing analysis of the ITU-T E.161.1 implementation options and the proposed choice of option 3? Flow is in general agreement with the foregoing analysis and we support the choice of option three given the fact that both 112 (mainly Europe) and 911 (mainly North America) are well known and widely used for accessing emergency services in these large jurisdictions where most of our visitors come from. The retention of 119 for accessing the Police directly is extremely important and should be retained going forward.*

*Question 2: Do you agree that there is no compelling reason to apply the specified provision of the 3GPP specification TS 22.101 in PLMNs in Jamaica? If no, please justify your response. We concur with the position of the OUR on this matter.*

*Question 3: Do you think a permissive dialling period of one year is adequate? As indicated before, a minimum period of 2 years of extensive public education will be necessary to make the changes more manageable and acceptable to customers.*

*Question 4: What are your views on a requisite consumer awareness campaign, including stakeholder roles? Consumers will need to be made aware of any changes leading up to implementation as well as post implementation. There should be collaboration between the OUR and stakeholders in the implementation process as stakeholders/service providers can help to sensitise and educate customers as they interface with these customers.*

Flow does not foresee any challenges implementing 112 and 911 as emergency number. Both numbers are not assigned in Flow's switch and can be provisioned to terminate to an appropriate destination to be agreed. Emergency number 110 is currently routed to emergency service for Fire, Ambulance and Police. 119 is routed directly to the police.

Respondents are asked to highlight potential difficulties or challenges with the proposed emergency service solution. Respondents are also encouraged to propose other options or alternatives. The responses should provide a thorough explanation of the benefits of those options or alternatives and how they serve the goals that the Office has outlined.