



Review of the National Numbering Plan

**A Consultation Document Issued by the
Telecommunications Regulatory Authority
of the Kingdom of Bahrain**

2 June 2015

Ref: TOD/ICT/0615/022

Purpose: to carry out a comprehensive review of the National Numbering Plan and to propose changes to further develop the National Numbering Plan.

Table of contents

Invitation to public consultation	3
Introduction to the public consultation.....	6
Draft Regulation No [] of 2015 – Regulation Enacting the National Numbering Plan.....	8
Reasoning for the Draft National Numbering Plan.....	10
1 Executive summary of the main changes.....	10
1.1 Messaging (SMS) short codes	10
1.2 Operator short codes	10
1.3 Sub-allocation of numbers.....	10
1.4 Collection of numbering information	11
1.5 Numbering allocation	11
1.6 Potential M2M number range	11
2 Introduction	11
2.1 Context of the review	11
2.2 Legal basis	12
3 Messaging (SMS) short codes	12
3.1 General principles concerning messaging (SMS) short codes.....	12
3.2 Issues with messaging (SMS) short codes and justifications for change.....	12
3.3 Relevant changes	14
3.4 Question(s) to stakeholders.....	14
4 Operator short codes	15
4.1 General principles concerning unused short codes	15
4.2 Issues with operator short codes and justifications for change	15
4.3 Relevant changes	17
4.4 Question(s) to stakeholders.....	17
5 Sub-allocation of numbers.....	17
5.1 General principles concerning sub-allocation of numbers	17
5.2 Issues with sub-allocation of numbers and justifications for change.....	17
5.3 Relevant changes	18
5.4 Question(s) to stakeholders.....	18
6 Collection of numbering information	18
6.1 General principles concerning collection of numbering information.....	18
6.2 Issues with collection of numbering information and justifications for change.....	18
6.3 Relevant changes	19
6.4 Question(s) to stakeholders.....	20
7 Numbering allocation	20
7.1 General principles concerning numbering allocation	20
7.2 Issues with numbering allocation and justifications for change	20
7.3 Relevant changes	21
7.4 Question(s) to stakeholders.....	21
8 Potential M2M number range	21
8.1 General principles concerning M2M numbering	21
8.2 Issues with M2M numbering and justifications for change.....	21
8.3 Relevant changes	22
8.4 Question(s) to stakeholders.....	22
9 General Questions	22
10 List of questions.....	22
Annex: Draft National Numbering Plan	24

Public Consultation on Review of the National Numbering Plan

Part 1 – Invitation to public consultation

Invitation to public consultation

Request for comments

1. The Telecommunications Regulatory Authority (“the Authority”) invites all interested parties to submit written comments with regard to the issues addressed in the consultation document.
2. The Authority particularly welcomes comments and responses to the specific numbered questions set out in the “Reasoning for the Draft National Numbering Plan”, supported by appropriate substantiation.

Instructions for submitting a comment

3. Comments should be submitted no later than 2 July 2015 at 4 p.m.
4. Responses should be sent to the Authority preferably by email to the attention of:

Telecommunications Regulatory Authority

NNP@tra.org.bh

P.O. Box 10353, Manama,

Kingdom of Bahrain

Fax: +973 1753 2125
5. Comments submitted in printed format, especially by fax or post, must be accompanied by a CD-ROM or USB storage key containing the same comments in electronic format.

Format of comments

6. In providing their comments, interested parties are kindly requested to use the following template. In particular, any comment should clearly specify the numbered questions it is referring to and indicate any attachment relevant to the specific comment.

Review of the National Numbering Plan		
[Name of the company/institution/association]	[Name of principal contact person and position]	[Contact information, i.e. email address, telephone number, postal address, etc.]
[Question number]	[Enter here the exact wording of the question referred to]	
Comment	[Enter here your comment on the question referred to above]	
Substantiation	[Enter here the substantiation in support of your comment]	
Attachment	[Enter here number and title of any attached document relevant to your comment]	

7. Responses should include:
 - a. the name of the company/institution/association etc.;

Public Consultation on Review of the National Numbering Plan

Part 1 – Invitation to public consultation

- b. the name of the principal contact person and his/her position;
 - c. full contact details (email address, telephone number, fax number, postal address etc.); and
 - d. in the case of responses from individual consumers, name and contact details.
8. The Authority expects the comments to follow the same order as the one set in the “Reasoning for the Draft National Numbering Plan” and summarized in the list of questions.
 9. The Authority also invites respondents to substantiate their responses. Any response submitted without any substantiation may not be considered. In case of disagreement with one of the approaches proposed by the Authority, the respondent is invited to provide an alternative to such approach together with detailed justifications.
 10. In the interest of transparency, the Authority intends to make all submissions received, available to the public. The Authority will evaluate a request for confidentiality in line with relevant legal provisions and the Authority’s published guidance on the treatment of confidential and non-confidential information¹.
 11. Respondents are required to mark clearly any information included in their submission that is considered confidential. Where such confidential information is included, respondents are required to provide both a confidential and a non-confidential version of their submission (soft copies and not scanned copies). If a part or a whole submission is marked confidential, reasons should be provided. The Authority may publish or refrain from publishing any document or submission at its sole discretion.

Structure of the consultation documents

12. The consultation documents consist of the following five (05) parts:
 - a. Invitation to public consultation (Part 1);
 - b. Introduction to the public consultation (Part 2);
 - c. Draft Regulation No.[...] of 2015 (Part 3);
 - d. Reasoning for the Draft National Numbering Plan (Part 4); and
 - e. Draft National Numbering Plan (Part 5).

Way forward

13. This consultation is open for public comments.
14. All relevant (substantiated) comments will be reviewed and the Authority may, at its sole discretion, integrate those acceptable to it in the finalized version of the new National Numbering Plan. Therefore, the Authority will not be bound to comply with any comment or opinion received and may not respond to comments or opinions individually.
15. Once the Authority has received and reviewed all the comments raised by respondents, it will issue the final Regulation enacting the National Numbering Plan and the final National Numbering Plan.

¹ The Authority, *TRA Treatment of Confidential and Non-Confidential Information*, 10 September 2007 (ref: LAU/0907/160)

Public Consultation on Review of the National Numbering Plan

Part 1 – Invitation to public consultation

15. Once the Authority has received and reviewed all the comments raised by respondents, it will issue the final Regulation enacting the National Numbering Plan and the final National Numbering Plan.
16. For generic information about the Authority's consultation processes, interested parties are invited to refer to the "Consultation Process Regulation" dated 10 August 2003 at the Authority's website².
17. For more clarification concerning this specific consultation process, interested parties are invited to contact NNP@tra.org.bh

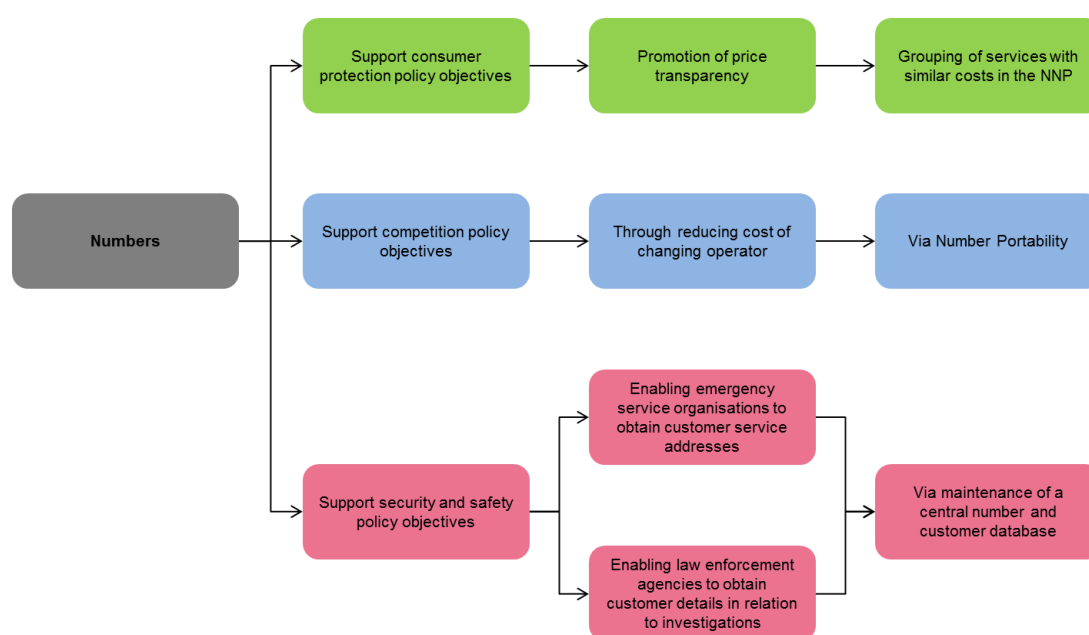
² http://www.tra.bh/media/document/Consultation_Process_ERU_RN_001_v1.0%5B1%5D_PDF.pdf

Public Consultation on Review of the National Numbering Plan

Part 2 – Introduction to the public consultation

Introduction to the public consultation

18. The present public consultation gives the opportunity to interested parties to contribute to the on-going process of the Authority to enhance National Numbering Plan to ensure it properly reflects changes in technology and the commercial market and takes into account anticipated growth in demand for numbers and the development of new services.
19. The Authority is in charge of regulation in the public telecommunications sector. It was established by Legislative Decree No. 48 of 2002 promulgating the Telecommunications Law ("Telecommunications Law"). Since its establishment, the Authority has been working with government entities, consumers, operators and investors to develop the Kingdom into the region's most modern telecommunications hub and to facilitate the growth of the telecommunications market.
20. The Authority carries out its duties independently and in a transparent and non-discriminatory manner. Its tasks include, inter alia, the introduction of competition in the telecommunications market, the promotion of effective and fair competition among licensed operators and the protection of the interests of subscribers and users of telecommunications services.
21. In particular, Section 3(c)12 of the Telecommunications Law assigns to the Authority the duty of preparing and maintaining the National Numbering Plan and allocating numbers to licensed operators in accordance with that Plan.
22. Pursuant to Article 3(f) of the Telecommunications Law, the Authority is, except in emergency cases, required to give interested parties the opportunity to share their opinions on any planned measure that will have a material effect on a particular Telecommunications market.
23. Numbers are an essential component in the telecommunications regulatory framework and facilitate different telecommunications policy objectives. This is highlighted in the following diagram.



24. In the present consultation document, the Authority outlines its positions with regard to a range of questions related to the National Numbering Plan and would like to collect views of interested parties on these issues.

Public Consultation on Review of the National Numbering Plan

Part 2 – Introduction to the public consultation

25. The consultation document consists of five (05) parts:
- a. the first part (Invitation to Public Consultation) provides specific instructions for the submission of comments;
 - b. the second part (Introduction to the public consultation) puts the whole consultation process to context;
 - c. the third part (Draft Regulation No.[...] of 2015) consists of the draft text of the new Regulation to enact the National Numbering Plan;
 - d. the fourth part (Reasoning for the Draft National Numbering Plan) contains explanatory statements for the Authority's position regarding the proposed changes; and
 - e. the fifth part (Annex A - Draft National Numbering Plan) contains the draft text of the proposed National Numbering Plan to be promulgated.

Draft Regulation No [] of 2015 – Regulation Enacting the National Numbering Plan

Preamble

26. This Regulation is issued by the Telecommunications Regulatory Authority (“TRA”) of the Kingdom of Bahrain pursuant to the provisions of the Telecommunications Law promulgated by Legislative Decree No. 48 for the year 2002 (the “Telecommunications Law”).
27. Section 3(c)12 of the Telecommunications Law assigns to TRA the duty of preparing and maintaining the National Numbering Plan and allocating numbers to licensed operators in accordance with that Plan.
28. The Regulation formally approves and enacts the National Numbering Plan and establishes the timelines for its implementation.

Definitions

29. Any word, phrase or expression used in this Regulation shall, unless the context requires otherwise or it is expressly defined herein, have the same meaning as in the Telecommunications Law of the Kingdom of Bahrain.

Scope

30. This Regulation applies to all Licensed Operators using or wishing to make use of the national resource of numbers.

Approval of the Plan

31. The National Numbering Plan attached to this Regulation is hereby approved and will be effective from the date of publication of this Regulation in the Official Gazette.
32. Any National Numbering Plan issued by TRA prior to the date of this Regulation will be repealed and no longer apply from the date of publication of this Regulation in the Official Gazette.

Entry into Force and Implementation

33. The Regulation shall be published on the TRA website upon its date of issue and enter into force on the day of its publication in the Official Gazette.
34. Any Licensed Operator which on the day of entry into force of this Regulation uses messaging/SMS short codes the purposes of which contravenes this Regulation and the National Numbering Plan approved herewith or the use of which contravenes the allocation rules of the National Numbering Plan, shall eliminate any contravention within 12 months of this Regulation coming into force.
35. Any Licensed Operator which on the day of entry into force of this Regulation uses numbers, formats or dialling arrangements (other than messaging/SMS short codes) the purpose of which contravenes this Regulation and the National Numbering Plan approved herewith or the use of which contravenes the allocation rules of the National Numbering Plan, shall eliminate any contravention with this Regulation coming into force.
36. Licensed Operators are required to be able to provide information regarding number status and customer information to the Authority via the Numbering Management

Public Consultation on Review of the National Numbering Plan

Part 3 – Draft Regulation No. [...] of 2015

System within 12 months following the Regulation for the new National Numbering Plan coming into force

37. Annual number charging for 3-digit Short Codes will commence 6 months from this Regulation coming into force.
38. The National Numbering Plan shall have full effect from the date of this Regulation coming into force except for the cases covered above in this section.

Enforcement and Penalties

39. This Regulation is issued pursuant to sections 3(c)(1) and 3(c)(12) of the Telecommunications Law.
40. Licensees that fail to comply with this Regulation and the National Numbering Plan approved herewith will be considered in material breach of the Telecommunications Law and will be subject to action under section 35 of the Law.

Issued by

Signed on [Day Month Year]

[]

Chairman

Telecommunications Regulatory Authority

Manama, Kingdom of Bahrain

Reasoning for the Draft National Numbering Plan

1 Executive summary of the main changes

41. Based on all relevant elements detailed in the present part of the consultation documents, the Authority has adopted a position with regard to the review of the National Numbering Plan 2008 as promulgated by Regulation 4 of 2008.
42. This position includes changes as summarized below, with the aim to ensure the National Numbering Plan properly reflects changes in technology and the commercial market and takes into account anticipated growth in demand for numbers and the development of new services.

1.1 Messaging (SMS) short codes

43. Explicit designation of the number ranges 81, 85, 88, 91, 95 and 98 to be used for 5-digit Type C messaging (SMS) short codes.
44. The tariff levels for these ranges will operate in a corresponding manner to the 5-digit Type B short codes in the same ranges, with limits placed on the Low and Medium band premium rate messaging (SMS) short codes of 0.5 BD and 1 BD per message (SMS) respectively.
45. Operators are required to provide means for their customers to be able to inform themselves of the cost of using any active messaging (SMS) short code, such as through the rates being listed on the operator's website.
46. Messaging (SMS) codes are not allowed to be used outside of designated ranges (unless as part of a mobile service in a designated mobile number range).
47. Type C short codes require a specific allocation from the Authority before use.
48. A period of 12 months will be allowed for operators to transition to compliance with these messaging (SMS) short code ranges.

1.2 Operator short codes

49. The designation of the current 3-digit Type C short codes will be Type B.
50. Charging for these 3-digit Type B short codes will begin 6 months following the Regulation for the new National Numbering Plan coming into force.
51. The 06 number series will be changed to be 5-digit Type C.
52. The 3-digit short codes and the 06 and 07 number series may only be used for services provided directly by the licensed operator and that calls and messages to these numbers are made at no charge to the originating customer.
53. The 04 number series (which has no allocations) will be changed to protected status.

1.3 Sub-allocation of numbers

54. Licensed operators will only be able to sub-allocate numbers to other licensed operators.

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

1.4 Collection of numbering information

55. Licensed operators are required to provide updates within 24 hours to the Authority regarding number status and customer information for numbers to which they hold an allocation or de-allocation.

1.5 Numbering allocation

56. Allocation of numbers for Fixed Services will be made in Number Blocks of 1,000.
57. Allocation of Universal Numbers will be made in Number Blocks of 1,000.
58. When applying for an allocation of numbering capacity, the applicant shall provide details of their current utilisation of existing allocations for the same service type and their expected numbering demand for the same service type over the next 6 months.
59. To be eligible for an allocation of numbering capacity, the applicant shall have met (or be reasonably expected to meet within the next 6 months) an 80% utilisation of existing allocations for the same service type for number ranges that are allocated in blocks, and 100% for the same service type for numbers that are allocated individually.

1.6 Potential M2M number range

60. The 385 Number Series is protected for the potential future use for M2M services.

2 Introduction

2.1 Context of the review

61. The current National Numbering Plan was promulgated by the Authority in 2008 by Regulation 4 of 2008.
62. This review of the National Numbering Plan is intended to ensure the National Numbering Plan properly reflects changes in technology and the commercial market and takes into account anticipated growth in demand for numbers and the development of new services.
63. The Authority has identified several specific issues that made the current review timely:
- a. The 2008 National Numbering Plan does not explicitly address the use of on-net SMS short codes. The Authority has investigated current industry practice and determined that use of on-net SMS short codes is occurring in an uncoordinated manner across the numbering plan.
 - b. Sub-allocation of numbers to unlicensed operators has caused some issues regarding law enforcement and determining the details of the end customer that has been issued with the number.
 - c. The current mobile specific numbering range is approaching full allocation.
 - d. The utilisation levels of numbers that have been allocated to operators is relatively low and needs to be improved to promote efficient use of numbering resources.

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

2.2 Legal basis

64. Section 3(c)12 of the Telecommunications Law assigns to the Authority the duty of preparing and maintaining the National Numbering Plan and allocating numbers to licensed operators in accordance with that Plan.

3 Messaging (SMS) short codes

3.1 General principles concerning messaging (SMS) short codes

65. The National Numbering Plan specifies several ranges of Type B and Type C short codes that can be used by operators. The use of these short codes is not constrained to only voice related services.
66. The National Numbering Plan states in Convention 5 that an operator shall not use numbers from the Plan other than those allocated by the Authority. Type C short codes may currently be used by any properly licensed operator without a separate allocation by the Authority.
67. The National Numbering Plan should designate specific number ranges for use as messaging, such as SMS, short codes.
68. In addressing this issue, the Authority has given consideration to:
- a. creating sufficient numbering capacity to cater for messaging (such as SMS) short codes while ensuring that numbers are still available for traditional voice telephony services;
 - b. consistency with the existing National Numbering Plan designated number series;
 - c. transparency of messaging (SMS) short code tariff levels;
 - d. allowing operators to easily provide a service for consumers to be able to block access to premium rate messaging (SMS) services; and
 - e. minimising disruption and inconvenience to consumers, business customers and industry.

3.2 Issues with messaging (SMS) short codes and justifications for change

69. The current National Numbering Plan does not explicitly state that numbers may not be used for messaging (such as SMS) services outside of what is explicitly specified in the plan (including as use as part of a mobile service).
70. Current industry practice use a substantial number of SMS short codes on an on-net basis from across the number plan with the majority seeming to be used for premium rate SMS services.
71. The current National Numbering Plan specifies 5-digit Type B short codes in different number ranges to indicate whether the cost of the call:
- a. is paid by the called party (81XXX);
 - b. shared between the caller and the called party (85XXX);
 - c. is paid by the caller (88XXX);
 - d. is a low band premium rate (91XXX);

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

- e. is a medium band premium rate (95XXX); or
 - f. is a high band premium rate (98XXX).
72. Aligning the messaging (SMS) short codes with these ranges would have the benefits of:
- a. customers already being aware of the pricing structure (at least at the free, standard rate, low, medium and high premium rates level);
 - b. allowing for the possibility of business customers advertising a single 5-digit short code that can be accessed via voice or messaging (SMS); and
 - c. the majority of the current unauthorised use of premium rate SMS short codes seems to be already within the level 9 range, reducing the impact on the public and industry of the transition.
73. Specifying messaging (SMS) short codes as 5-digit codes would align with the existing length of the Type B short codes and with the length of the current majority of industry usage. However, in their response to the Authority's Article 53 information request, operators indicated current usage of more than 6,000 premium rate SMS short codes, although it is unclear what portion of these are actually in active use.
74. There are two potential options to provide a greater numbering capacity for messaging (SMS) services:
- a. The first is to allow a mix of 5-digit messaging (SMS) short codes (aligned with the existing 5-digit voice short codes) and 8-digit messaging (SMS) codes aligned with the existing adjacent 8-digit voice special service and premium rate number ranges, being 80, 84, 87, 90, 95 and 97; and
 - b. The second is to use 6-digit messaging (SMS) short codes instead of 5-digit messaging (SMS) short codes (aligned with the existing 5-digit voice short codes).
75. The Authority has taken an initial view to create 5-digit messaging (SMS) short codes in line with the existing Type B short codes, however, the Authority is interested in industry's views regarding demand for SMS short codes and how this can best be met.
76. The Authority also considered whether the messaging (SMS) short codes should be designated as Type C or Type B codes. Central to the decision to designate messaging (SMS) short codes as Type C was that this aligns with current technical and commercial practice and allows for a simpler industry transition.
77. In the interests of consumer protection, the Authority intends to set maximum retail tariff limits for the Low and Medium band messaging (SMS) short codes of 0.5 BD and 1 BD per message (SMS) respectively. The current NNP specifies call levy limits of 0.5 BD per minute (with a total call charge limit of 3 BD) in the Low Band and 1 BD per minute in the Medium Band.
78. The Authority is aware that currently, business customers are often assigned different SMS short codes by each operator and must then advertise these different numbers to their customers. The Authority would like to see the industry develop a coordinated process for the issuing of single messaging (SMS) short codes to business customers that are then used across all mobile networks. Apart from the convenience factor for business customers and consumers, such a coordination process would help to reduce the number of different messaging (SMS) short codes that are in use. This will be easily coordinated and maintained using the existing NMS

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

which the Authority provides to Licensees, without the need for the industry to develop another system.

79. As messaging (SMS) numbers exist in parallel to voice numbers, that is, the any given voice short code can also be used as a messaging (SMS) short code, and since the messaging (SMS) short codes will be of Type C, that is, its use by one operator does not preclude its use by other operators, the Authority is of the view that no separate numbering fee will be applied for the use of Type C messaging (SMS) short codes.
80. To assist with industry monitoring and short code usage, the Authority is of the view that while multiple licensed operators can simultaneously use the same Type C short code, operators will require a specific allocation of Type C short codes from the Authority before they can be used. This includes use of Type C short codes for voice or messaging services. Operators will be required to report usage information regarding Type C short codes (along with other numbering ranges) through the NMS as discussed in Section 6 below.

3.3 Relevant changes

81. Explicit designation of the number ranges 81, 85, 88, 91, 95 and 98 to be used for 5-digit Type C messaging (SMS) short codes.
82. The tariff levels for these ranges will operate in a corresponding manner to the 5-digit Type B short codes in the same ranges, with limits placed on the Low and Medium band premium rate messaging (SMS) short codes of 0.5 BD and 1 BD per message (SMS) respectively.
83. Operators are required to provide means for their customers to be able to inform themselves of the cost of using any active messaging (SMS) short code, such as through the rates being listed on the operator's website.
84. Messaging (SMS) codes are not allowed to be used outside of designated ranges (unless as part of a mobile service in a designated mobile number range).
85. Type C short codes require a specific allocation from the Authority before use.
86. A period of 12 months will be allowed for operators to transition to compliance with these messaging (SMS) short code ranges.

3.4 Question(s) to stakeholders

- Q. 1 Do you agree that all the tariff levels (81, 85, 88, 91, 95 and 98) are needed for messaging (SMS) short codes?
- Q. 2 What is your current demand for messaging (SMS) short codes, and how do you see that changing in the future?
- Q. 3 Do you agree that using 5-digit Type C messaging (SMS) short codes in these designated ranges provides sufficient capacity to meet demand? If not, what is your proposed solution, taking into account the numbering principles of tariff transparency and consistent with other parts of the numbering plan?
- Q. 4 Do you agree that messaging (SMS) short codes should be specified as Type C?
- Q. 5 Do you agree that the industry should develop a coordination process for issuing Type C messaging (SMS) short codes to business customers, and if so, how do you think this would best be progressed?

4 Operator short codes

4.1 General principles concerning unused short codes

87. Telecommunications technology and numbering use develops over time, and numbering ranges that were defined to serve specific requirements may need to be updated as those requirements change.

4.2 Issues with operator short codes and justifications for change

88. The National Numbering Plan designates 27 3-digit Type C (on-net) short codes. Of these, 9 are for specified common services (including 188 for directory inquiries) leaving 18 for other uses. Licensed operators may currently use a designated Type C short code without separate allocation from the Authority and currently do not need to notify the Authority of their usage of these designated Type C codes.
89. The National Numbering Plan also specifies 8 ranges of 1,000 blocks of 5-digit Type B short codes, with different ranges having different call costs. Two of these ranges, 06 and 07, are within the level 0 number range and have only a few allocations to operators. The National Numbering Plan does not designate tariffs for these number ranges. Although there is a historical view that these ranges are used for operator related services, this is not explicitly stated in the National Numbering Plan.
90. The intention of the 3-digit Type C short codes and the table of common 3-digit Type C short codes was to support competition through a level playing field by allowing all licensed operators equal access to on-net short codes for the provision of operator related services.
91. The development of the competitive market has resulted in different operators using different 3-digit Type C short codes for their operator services, and in some cases, providing off-net access to selected 3-digit Type C short codes.
92. The Authority is mindful of the way the market has developed, and is of the view that there is considerable benefit to both operators and customers if customers are able to contact certain operator related services of other licensed operators. In particular, the customer care number(s) of each operator.
93. Therefore, the Authority intends to change the designation of the 3-digit short codes from Type C to Type B. The initial allocation of 3-digit Type B short codes will be made through the NMS based on existing industry usage as shown in the table below.

Table 1: Initial allocation of 3-digit Type B short codes

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

Short code	Operator
100	Batelco
101	Batelco
102	VIVA
103	VIVA
104	VIVA
106	Batelco
107	Zain
108	Batelco
109	VIVA
120	VIVA
121	Batelco
122	VIVA
123	VIVA
124	VIVA
126	VIVA
127	VIVA
128	VIVA
140	Batelco
141	Batelco
151	Batelco
181	Batelco
188	Batelco
191	Batelco
196	Batelco

94. The use of 3-digit short codes by licensed operators will be charged per the numbering fees in the Authority's Schedule of Fees. Charging for the 3-digit short codes will commence 6 months following the Regulation for the new National Numbering Plan coming into force. This gives licensed operators an opportunity to return unneeded 3-digit short codes before charging commences.
95. In order to provide licensed operators with a number series for use for on-net operator related services, the Authority intends to change the designation of the 06 number series from Type B to Type C. The number length for this number series will remain 5-digit. Currently, there is only a single active allocation in this number series, which is currently being used in an on-net basis.
96. The Authority also takes this opportunity to remind licensed operators that use of Type C short codes is only allowed in those number series that are designated in the National Numbering Plan for such use.
97. To clarify the intent that the 3-digit short codes and the 06 and 07 number series are for the provision of operator services the Authority intends to add a clause to the National Numbering Plan stating that these numbers may only be used for services provided directly by the licensed operator and that calls and messages to these numbers are made at no charge to the originating customer.
98. The National Numbering Plan also specifies the 04XX range for carrier selection, however, there are currently no allocations of 04XX numbers to operators. The Authority is of the view to change the 04 number series to protected status and not allow allocations from this range.
99. To assist with industry monitoring and short code usage, the Authority is of the view that while multiple licensed operators can simultaneously use the same Type C short code, operators will require a specific allocation of Type C short codes from the Authority before they can be used. This includes use of Type C short codes for voice or messaging services. Operators will be required to report usage information

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

regarding Type C short codes (along with other numbering ranges) through the NMS as discussed in Section 6 below

4.3 Relevant changes

100. The designation of the current 3-digit Type C short codes will be Type B.
101. Charging for these 3-digit Type B short codes will begin 6 months following the Regulation for the new National Numbering Plan coming into force.
102. The 06 number series will be changed to be 5-digit Type C.
103. The 3-digit short codes and the 06 and 07 number series may only be used for services provided directly by the licensed operator and that calls and messages to these numbers are made at no charge to the originating customer.
104. The 04 number series (which has no allocations) will be changed to protected status.

4.4 Question(s) to stakeholders

- Q. 7 Do you agree with 3-digit short codes being designated as Type B?
- Q. 8 Do you agree with the 06 number series being designated as Type C?
- Q. 9 Should the 06 and 07 number series be retained as 5-digit numbers?
- Q. 10 Do you agree with changing the 04 number range to protected status?

5 Sub-allocation of numbers

5.1 General principles concerning sub-allocation of numbers

105. The National Numbering Plan is applicable to all licensed operators using or wishing to make use of the national numbering resources. The plan and its processes and structures are mandatory on operators.
106. Numbering allocations are made to licensed operators in order to ensure that national numbers are being used appropriately.

5.2 Issues with sub-allocation of numbers and justifications for change

107. Under Convention 5 – Conditions placed on allocations of the current National Numbering Plan, the operator originally allocated a block of numbers remains responsible for them. This convention currently states that the recipient may sub-allocate the numbers. However, if the numbers are allocated to an unlicensed entity, the Authority's visibility of how the numbers are being used is diminished and control over an unlicensed entities use of the numbers is more challenging.
108. The Authority understands that licensed operators who receive allocations of numbers from the Authority are currently making sub-allocations of numbers to unlicensed entities, including to Over-the-Top (OTT) VoIP operators. This creates two potential issues:
 - a. It is difficult and/or time consuming to determine information about the customer using the number; and

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

- b. It is possible for calls terminating on or originating from this number to never transit infrastructure in Bahrain making it difficult to trace or intercept calls involving this number.
109. There is value in allowing an operator to sub-allocate numbers to a secondary licensed operator. For example, the primary operator might be providing interconnection services and hence the routing for these numbers will still follow the original number allocation. Alternatively, the secondary operator might only have need for a small range of numbers, and requesting an entire number block directly from the Authority could be less efficient.
110. The Authority's view is that the National Numbering Plan should only allow sub-allocation of numbers to other licensed operators.

5.3 Relevant changes

111. Licensed operators will only be able to sub-allocate numbers to other licensed operators.

5.4 Question(s) to stakeholders

- Q. 11 Do you agree with the view that sub-allocation should only be allowed to other licensed operators?

6 Collection of numbering information

6.1 General principles concerning collection of numbering information

112. There is value for the Authority, other government agencies and the general public in centrally capturing additional information about the services linked to numbers.

6.2 Issues with collection of numbering information and justifications for change

113. The IT systems of the licensed operators are in the process of being connected to the Authority's Numbering Management System (NMS) and the interface could be used to capture information regarding the status of individual numbers and the customer registration information when those numbers become active.
114. The Authority's preliminary view is to utilise the NMS to capture the following information:
- a. Number status – e.g. active, quarantined, internal usage or available to issue;
 - b. Whether the number has been sub-allocated to another licensed operator;
 - c. For a number that has been issued to an end customer the following customer related information would be captured:
 - i. Whether the customer is an individual or business/organisation;
 - ii. For individuals:
 - 1. Customer name;
 - 2. ID number (CPR/Passport);
 - 3. Physical address of the service for a fixed service;

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

4. Nominated home address for a mobile service; and
 5. Billing address if different from above.
- iii. For businesses:
1. Business/organisation name;
 2. Physical address of the service for a fixed service;
 3. Nominated address for a mobile service (could be head office); and
 4. Account contact person and number.
- iv. Whether the number is an unlisted number (not to be listed publicly); and
- v. Type of device the number is being used with, such as, fixed PSTN connection, fixed fibre connection, fixed wireless connection, mobile handset, mobile tablet, mobile broadband dongle or mobile hotspot, or M2M device.
- d. For Type B (off-net) and Type C (on-net) short codes that have been assigned to an end business customer the following information would be captured:
- i. Business/organisation name;
 - ii. Type of service the short code is being used for (e.g. competition, information service, payment, etc.);
 - iii. The cost to the originating customer for the call/SMS; and
 - iv. Account contact person and number.
115. The preliminary view is that this information should be updated by operators to the Authority within 24 hours of a change of status.
116. To maintain flexibility and allow updating of the NMS interface and the details of the information collected, without the need to also update the National Numbering Plan, this information will be specified in the NMS documentation.
117. Where a sub-allocation is made to another licensed operator, the primary number holder should indicate this in their information update, and is responsible for ensuring the sub-allocatee provides the detailed number status and customer information to the Authority. This might be done directly through their own connection to the Authority's NMS, or via the primary number holder's connection.
118. Licensed Operators will work with the Authority to develop the NMS interface. Licensed Operators are expected to be able to provide this information to the Authority via the NMS within 12 months following the Regulation for the new National Numbering Plan coming into force.
- ### 6.3 Relevant changes
119. Licensed operators are required to provide updates within 24 hours to the Authority regarding number status and customer information for numbers to which they hold an allocation or de-allocation.

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

6.4 Question(s) to stakeholders

- Q. 12 Do you agree that information outlined in paragraph 111 is the appropriate information to be collected?

7 Numbering allocation

7.1 General principles concerning numbering allocation

120. The Authority manages the National Numbering Plan to ensure that there are sufficient numbers available to meet all reasonable demands that subscribers and licensed operators might have.
121. Numbers are allocated to licensed operators with the expectation that they will be used in the provision of services to customers.

7.2 Issues with numbering allocation and justifications for change

122. The utilisation level of numbers that have been allocated to licensed operators is relatively low. The current utilisation levels are:
- a. Fixed numbers: 26%;
 - b. Mobile numbers: 55%; and
 - c. Universal numbers: 10%.
123. While the exact reasons for this are unclear, it could be due to a combination of smaller/niche market entrants who are allocated larger blocks of numbers than they need and operators requesting new blocks of numbers without efficiently using their existing allocations.
124. The current allocation block size for fixed, mobile and universal service numbers is 10,000 numbers per block. With the current growth in the mobile market and only 3 operators, the number block size for the mobile number range seems appropriate.
125. For the fixed and universal number ranges, with both a lower market growth rate and smaller/niche market entrants, the Authority is of the view that moving to a number allocation block size of 1,000 will facilitate more efficient use.
126. Allowing licensed operators to request a sufficient numbering allocation for a 6 month demand projection will avoid overly frequent number applications and allow for adequate business planning. This provides a fair accommodation of both large and small operators.
127. Convention 1 of the current National Numbering Plan states that the Authority will take into account the utilisation of previous numbering allocations, although it does not state a threshold utilisation for licensed operators to meet to be granted new allocations of numbers.
128. Typical utilisation levels used by regulators when considering approval of allocations of number blocks are in the 70-80% range when the number range has no geographic restrictions. The Authority is of the view that an 80% threshold is appropriate for fixed, mobile and universal service numbers.
129. Along with the utilisation threshold, the Authority proposes to use the following utilisation formula:

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

$$\text{utilisation(\%)} = \frac{(\text{quantity in service} + \text{quantity in quarantine})}{(\text{quantity allocated} + \text{quantity ported in} - \text{quantity ported out})} * 100\%$$

130. The utilisation threshold and formula would be applied to the same type of numbers as per the allocation request.
131. The Authority is of the view to set the quarantine period to six months to provide standardisation across the industry and to provide certainty in calculating the utilisation level.

7.3 Relevant changes

132. Allocation of numbers for Fixed Services will be made in Number Blocks of 1,000.
133. Allocation of Universal Numbers will be made in Number Blocks of 1,000.
134. When applying for an allocation of numbering capacity, the applicant shall provide details of their current utilisation of existing allocations for the same service type and their expected numbering demand for the same service type over the next 6 months.
135. To be eligible for an allocation of numbering capacity, the applicant shall have met (or be reasonably expected to meet within the next 6 months) an 80% utilisation of existing allocations for the same service type for number ranges that are allocated in blocks, and 100% for the same service type for numbers that are allocated individually.

7.4 Question(s) to stakeholders

- Q. 13 Do you agree with the change in the number block size for fixed and universal service numbers?
- Q. 14 Do you agree with the application of a utilisation threshold for the allocation of new numbers and the method of calculation?
- Q. 15 Do you agree with the application of a standard quarantine period?

8 Potential M2M number range

8.1 General principles concerning M2M numbering

136. The National Numbering Plan should properly reflect changes in technology and the commercial market and take into account anticipated growth in demand for numbers and the development of new services.
137. The Authority manages the National Numbering Plan to ensure that there are sufficient numbers available to meet all reasonable demands that subscribers and licensed operators might have.

8.2 Issues with M2M numbering and justifications for change

138. Machine-to-Machine (M2M) communications refers to the fully or largely automated communications between devices with little or no human intervention.
139. M2M services are starting to grow at a faster rate in developed markets with growth expected to expand in time across all markets. There is still some uncertainty over the relative timing of the expansion of active M2M services and the transition of M2M services from using mobile numbers to IP (v4 or v6) for addressing purposes.

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

140. While the number of M2M devices in aggregate is expected to be high, the number of these devices requiring access to E.164 numbers is significantly lower. The GSMA has forecast that M2M devices will account for 10% of the global demand for mobile numbers by 2020³, though there are several assumptions driving this, including the shift of M2M devices to using IP for addressing.
141. Although the Authority is of the view that direct action in the National Numbering Plan to account for M2M numbering demand is not necessary at this time, the Authority intends to monitor the growth of M2M services to ensure it does not create undue pressure on numbering resources.
142. The Authority intends to reserve a sub-range (385) of the mobile number range for potential future use for M2M services. If M2M usage of numbers reaches 10% of the active mobile numbers, this would be an appropriate point to activate the M2M number range. If this occurs, then the M2M number range will be designated as 12-digit numbers.
143. By creating the M2M range within the mobile number range, these numbers are already enabled for interconnection. In other countries that have proposed or specified an M2M service specific numbering range, the majority have used a range within the existing mobile number range, suggesting that the mix of number lengths is a relatively minor issue.

8.3 Relevant changes

144. The 385 Number Series is protected for the potential future use for M2M services.

8.4 Question(s) to stakeholders

- Q. 16 Do you agree with the approach adopted regarding numbering resources for M2M services?
- Q. 17 What are your views regarding the expected M2M market development within Bahrain?
- Q. 18 What are your views regarding how addressing for M2M devices will develop, particularly the use of mobile numbers versus other options such as IPv4/v6?

9 General Questions

- Q. 19 The Authority invites feedback regarding the Number Portability processes, any issues that operators have identified, and suggestions as to how these might be mitigated.
- Q. 20 Are the current limits on the tariffs for premium rate voice calls for the Low, Medium and High bands still appropriate?
- Q. 21 With the development of Number Portability it is more difficult for customers to know which network a given number belongs to, however, retail tariff plans generally still have a strong on-net versus off-net pricing differential. Do you provide any means for your customers to know whether a given call will be charged as on-net or off-net?

10 List of questions

- Q. 1 Do you agree that all the tariff levels (81, 85, 88, 91, 95 and 98) are needed for messaging (SMS) short codes?

³ "Cellular M2M forecasts and assumptions: 2010-2020", September 2014, GSMA

Public Consultation on Review of the National Numbering Plan

Part 4 – Reasoning for the Draft National Numbering Plan

- Q. 2 What is your current demand for messaging (SMS) short codes, and how do you see that changing in the future?
- Q. 3 Do you agree that using 5-digit Type C messaging (SMS) short codes in these designated ranges provides sufficient capacity to meet demand? If not, what is your proposed solution, taking into account the numbering principles of tariff transparency and consistent with other parts of the numbering plan?
- Q. 4 Do you agree that messaging (SMS) short codes should be specified as Type C?
- Q. 5 Do you agree that the industry should develop a coordination process for issuing Type C messaging (SMS) short codes to business customers, and if so, how do you think this would best be progressed?
- Q. 6 Do you agree with the proposed tariff limits for Type C messaging (SMS) short codes?
- Q. 7 Do you agree with 3-digit short codes being designated as Type B?
- Q. 8 Do you agree with the 06 number series being designated as Type C?
- Q. 9 Should the 06 and 07 number series be retained as 5-digit numbers?
- Q. 10 Do you agree with changing the 04 number range to protected status?
- Q. 11 Do you agree with the view that sub-allocation should only be allowed to other licensed operators?
- Q. 12 Do you agree that information outlined in paragraph 111 is the appropriate information to be collected?
- Q. 13 Do you agree with the change in the number block size for fixed and universal service numbers?
- Q. 14 Do you agree with the application of a utilisation threshold for the allocation of new numbers and the method of calculation?
- Q. 15 Do you agree with the application of a standard quarantine period?
- Q. 16 Do you agree with the approach adopted regarding numbering resources for M2M services?
- Q. 17 What are your views regarding the expected M2M market development within Bahrain?
- Q. 18 What are your views regarding how addressing for M2M devices will develop, particularly the use of mobile numbers versus other options such as IPv4/v6?
- Q. 19 The Authority invites feedback regarding the Number Portability processes, any issues that operators have identified, and suggestions as to how these might be mitigated.
- Q. 20 Are the current limits on the tariffs for premium rate voice calls for the Low, Medium and High bands still appropriate?
- Q. 21 With the development of Number Portability it is more difficult for customers to know which network a given number belongs to, however, retail tariff plans generally still have a strong on-net versus off-net pricing differential. Do you provide any means for your customers to know whether a given call will be charged as on-net or off-net?

Annex: Draft National Numbering Plan



National Numbering Plan

Approved by Regulation __ of 2015 of the
Telecommunications Regulatory Authority

_____ 2015

Purpose: To provide a framework for the allocation of numbers in the national telecommunications system to competing service providers.

National Numbering Plan

Table of Contents

1	Introduction	3
2	Definitions	4
3	The National Numbering Plan	8
3.1	Numbers.....	8
3.2	Short Codes	9
4	The National Numbering Plan Conventions	10
4.1	Introduction	10
4.2	Convention 1. Rights and responsibilities.....	10
4.3	Convention 2. Applying for numbers	11
4.4	Convention 3. Reserving numbers.....	12
4.5	Convention 4. Considering applications	13
4.6	Convention 5. Conditions placed on allocations.....	16
4.7	Convention 6. Re-allocating and withdrawing numbers	18
4.8	Convention 7. Notification of number allocation and activation of numbers	19
4.9	Convention 8. National Numbering Plan records	19
4.10	Publication of changes	20
4.11	Status indicators	20
4.12	Convention 9. The review procedure.....	21
4.13	Convention 10. Charging for Numbers	21
5	Schedules.....	23
6	Conventions for other codes.....	34
	Appendix 1. Licensed Operator's Numbering Report Template.....	35
	Appendix 2. Numbering Application Form (via NMS)	36

1 Introduction

Legislative Decree No. 48 of 2002 promulgated the Telecommunications Law of the Kingdom of Bahrain (“Telecommunications Law”). This Law established the Telecommunications Regulatory Authority (“TRA”) which has responsibility for the regulation of the telecommunications sector in the Kingdom of Bahrain.

Section 3 (c) 12 of the Telecommunications Law assigns to TRA the duty of preparing and maintaining the National Numbering Plan (“Plan”) and allocating numbers to Licensed Operators in accordance with that Plan.

This document details the Plan for the national telecommunications infrastructure, so that competing operators can configure their networks with confidence.

The Plan is applicable to all appropriately Licensed Operators using or wishing to make use of the national resource of numbers, including the use of numbers for messaging (such as SMS). The Plan and its processes and structures are mandatory on all such operators.

2 Definitions

Any word, phrase or expression used in this Plan shall, unless the context requires otherwise or it is expressly defined herein, have the same meaning as in the Telecommunications Law of the Kingdom of Bahrain.

“Access Number” means a Short Code, used to access services of another operator or certain other services of the same operator.

“Allocated” means a status of a number or a Number Block that has been assigned to an operator for a particular purpose. If a number has been ported to another operator, the operator to which a number has been ported assumes all the responsibilities and rights under this Plan of the operator to which a number has been allocated.

“Call” means communication conveying voice and/or data, and includes where appropriate messaging services (such as SMS).

“Closed Numbering Scheme” means a numbering system in which all national numbers are used of the same length irrespective of which national geographic area they are dialled from.

“Convention” means a rule or a principle that governs the use, management and allocation of the national resource of numbers from the Plan.

“Country code” (“CC”) means the combination of one, two or three digits that identifies a specific country or countries in an integrated numbering plan or a specific geographic area. The CC for the Kingdom of Bahrain is 973.

“Designated” means the use of a number series or range of numbers specified for a particular purpose. Designated numbers shall be used only for a purpose specified in the Plan.

“Fixed Services” means Telecommunications services other than Mobile Services. Designation of numbers for Fixed Services allows usage of such numbers for any services (including Mobile Services) provided that the wholesale rate for termination of voice calls, if applicable, to users of such services does not exceed by more than 20 per cent the wholesale rate for termination of voice calls to users of Fixed Services (such as PSTN) of the biggest (in terms of number of subscribers) provider of such services in the Kingdom of Bahrain. Designation of a Number Range to Fixed Services does not allow direct use of such numbers for provision of Premium Rate Services or Special Services.

“Free” is a status of a number or a Number Block that is available for allocation.

“GSM” means the Global System for Mobile communications.

“International Prefix” means a digit or combination of digits added before the called number to indicate that the call is an international one. In the Kingdom of Bahrain, the International Prefix is 00.

National Numbering Plan

“ITU Telecommunications Standardisation Sector” (“ITU-T”) is a permanent organ of the International Telecommunications Union (“ITU”), the United Nation's specialised agency in the field of telecommunications. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardising telecommunications on a world-wide basis.

“Licensee’s Numbering Plan” means a plan that a Licensed Operator adopts for such numbers as are allocated to it from the Plan. Such a plan describes the method adopted, or to be adopted, for allocating and reallocating a number to any network termination point, subscriber, telecommunications apparatus or service element.

“LTE” means Long Term Evolution and supports both frequency division duplexing (FDD) and time-division duplexing (TDD).

“Mobile Services” means Telecommunications services typically provided to a mobile terminal (i.e. a terminal which can be used while the user is on the move, without being restricted to an area served by one base station). Designation of numbers for mobile services shall not preclude using such numbers for other services provided that the wholesale rate for termination of voice calls and the wholesale rate for termination of SMS messages, if applicable, to users of such services does not exceed by more than 20 per cent the wholesale rate for termination of such services to users of Mobile Services (such as GSM/UMTS/LTE (FDD)) of the same Licensed Operator or, if such Licensed Operator does not provide Mobile Services, to users of the biggest (in terms of number of subscribers) provider of such services in the Kingdom of Bahrain. Designation of a number range to Mobile Services does not allow direct use of such numbers for the provision of Premium Rate Services or Special Services.

“National Destination Code” (“NDC”) means a digit or a combination of digits (not including any prefix) identifying a numbering area within a country (or group of countries included in one integrated numbering plan or a specific geographic area) and/or network/service. NDC is a nationally optional code field, within the international public telecommunications numbering plan as set out in the ITU-T Recommendation E.164, which, combined with the SN, constitutes the NSN. In the Kingdom of Bahrain, NDC is not used.

“National Rate” means an indication that the price for the call is equivalent to the rate for a fixed national call set by the relevant originating operator.

“National Significant Number” (“NSN”) is the portion of a number that follows the CC. The NSN usually consists of the NDC followed by the SN. In the Kingdom of Bahrain the NSN is identical with the SN.

“NMS” means the Numbering Management System that is used by TRA to manage numbering processes and numbering interactions with operators.

“Number” means a string of decimal digits that uniquely identifies a subscriber or a point where a service is provided. Any identifier, use of

National Numbering Plan

which may conflict with use of any number, shall be used in accordance with the Plan and any other regulations of TRA.

“Number Block” means a sequence of contiguous numbers with the same leading digits used as the basis for allocating numbers to operators. In this Plan a Number Block consists of 1,000 or 10,000 numbers as identified in the Plan for a specific Number Range, except in cases where the Plan explicitly states that numbers are assigned individually (in such cases a Number Block is equal to 1 number).

“Numbering Plan List” (“Number List”) means the list of numbers published by TRA on its website and updated on a regular basis in order to provide information on the current status of parts of the Plan, e.g. Allocated, Free, Protected or Reserved.

“Number Range” means a set of contiguous numbers of a specified or unspecified size.

“Number Series” means a set of numbers, having the same leading digit or digits.

“Ported Number” means a number that has been allocated to a particular operator, but has subsequently been ported to another operator according to the laws, rules and regulations governing Number Portability.

“Premium Rate Services” (“PRS”) means services that are used via Telecommunications services and are paid for through the telephone bill of a calling subscriber, and the rate of which is typically higher than the rate applied to calls to subscribers of Mobile Services and Fixed Services. Revenues from Premium Rate Services are typically shared between an operator providing such services and a called subscriber (i.e. the subscriber to whom the respective number is assigned).

“Protected” is the status of a number or a Number Block that is withheld from allocation and use.

“PSTN” means a Public Switched Telephone Network.

“Reserved” is the status of a number or a Number Block that has been reserved for future allocation to an operator.

“Schedules” are those sections of this document that detail the designations of numbers and other conditions of use specific to the Plan.

“Short Code” means a short number (i.e. a number not longer than 5 digits).

“SMS” means Short Message Service. SMS services can be provided independently of a mobile service.

“Special Services” means telephone services charged at special rates (with respect to callers) - from free up to, and including, National Rate. Charges for these calls can be paid by the called party, shared between the caller and the called party, or paid wholly by the caller.

National Numbering Plan

“Subscriber Number” (“SN”) means a number identifying a subscriber in a network or numbering area.

“UMTS” means the Universal Mobile Telecommunications System.

“Universal Number” means a number which can be used for any purpose except for Special Services and Premium Rate Services.

3 The National Numbering Plan

3.1 Numbers

3.1.1 The Plan makes use of a Closed Numbering Scheme based on 8-digit NSN length (except for Short Codes, which are explicitly identified as such). Figure 1 shows the broad structure of the Plan.

Leading Digit	Main Purpose (the Purpose for parts which are not identified as Protected in this table is detailed in the Schedules of the Plan below)
0	Access Numbers, Type B and Type C Short Codes
1	Numbers for Fixed Services and Type B Short Codes
2	Protected
3	Numbers for Mobile Services
4	Protected
5	Protected
6	Universal Numbers
7	Universal Numbers
8	Special Services Numbers
9	Premium Rate Services Numbers and Type A Short Codes

Figure 1. Numbering scheme

3.2 Short Codes

3.2.1 Short Codes are subsets of the number scheme and consist of variations to the full 8-digit number to allow short dialling sequences. Where designated, Short Codes may be used for messaging services such as SMS. Short Codes are designated as one of the following categories:

3.2.1.1 Access Numbers used to access services of other operators (using specific Access Numbers allocated to these operators) or certain other services of the same operator.

3.2.1.2 Type A is designated for use as emergency service codes. The Short Code is allocated against a service (not associated with any Licensed Operator). Callers must be able to call such a code at any time from any network without charge. Operators are able to obtain information necessary for proper routing of the calls to these numbers from the Ministry of Interior.

3.2.1.3 Type B is designated for use as Short Codes, accessible from any network ("Off-Net"). Licensed Operators are required to hold the relevant Type B numbering allocation in order to terminate services on Type B Short Codes. All Licensed Operators shall ensure accessibility of these Short Codes from their networks.

3.2.1.4 Type C is designated for use as "On-Net" Short Codes for the purpose of accessing services that terminate on the same network. Licensed Operators are required to hold the relevant Type C numbering allocation in order to use Type C Short Codes.

4 The National Numbering Plan Conventions

4.1 Introduction

- 4.1.1 The Plan is governed by a number of Conventions that are outlined in this section. These Conventions apply universally to all aspects of the Plan and generally describe the administrative mechanisms whereby the Plan can be executed. In addition to the Conventions, a set of Schedules attached to this document defines the Plan in relation to specific numbers.
- 4.1.2 The Conventions govern the specifications and the application of the Plan and the Licensees' Numbering Plans. An operator which has allocated numbers shall have its own Numbering Plan, which complies with these Conventions. Each Licensed Operator with allocated numbers is required to submit its Numbering Plan to TRA, and to report to TRA on a regular basis (quarterly) the status of its usage of numbers.
- 4.1.3 TRA may publish information on the National Numbering Plan and the current usage of numbers on its website at www.tra.org.bh.

4.2 Convention 1. Rights and responsibilities

4.2.1 TRA's guiding principles:

- 4.2.1.1 TRA is responsible for developing and managing the Plan and issuing the Conventions. Numbers are a national resource and the following principles will be taken into account by TRA when allocating, reserving and managing numbers:
- 4.2.1.1.1 TRA will manage the Plan in such a way as to ensure that there are sufficient numbers available to meet all reasonable demands that subscribers and Licensed Operators might have. This includes ensuring that Licensed Operators use allocated numbers efficiently.
- 4.2.1.1.2 The Plan will, where applicable, be compatible with relevant international agreements, standards and recommendations.
- 4.2.1.1.3 The Plan will, wherever possible, seek to ensure that numbers of different types give a broad indication of service type and/or tariff so that users can be aware of the service type they are using and the likely charge for it.
- 4.2.1.1.4 TRA will ensure that costs or inconvenience to subscribers, users and Licensed Operators are objectively justified, and kept to the minimum consistent with meeting demands for numbers and sound management of the Plan.

4.2.1.1.5 TRA will allocate or reserve numbers in a fair and equitable manner, normally to the first operator that requests the respective numbers (i.e. on a 'first-come-first-served' basis). TRA will only allocate or reserve numbering capacity to operators who meet the eligibility criteria set out in Convention 2 (Section 4.3).

4.2.1.1.6 TRA will take into account the need to anticipate growth in demand for telecommunications services as well as development of innovative services. In particular, the utilisation of previous numbering allocations will be taken into account when considering new requests for numbers.

4.2.2 Operators' responsibilities

4.2.2.1 Operators who have received allocations of numbers shall publish their own Numbering Plan, detailing the use of allocated numbers in accordance with the Conventions, and shall submit their Numbering Plan to TRA annually by 31 January.

4.2.2.2 Operators who have received allocations of numbers shall update the TRA through the NMS within 24 hours regarding changes in number status and customer information. Details of the information to be provided is specified in the NMS documentation.

4.3 Convention 2. Applying for numbers

4.3.1 Criteria for the eligibility of applicants for number allocations and reservations

4.3.1.1 Only holders of individual licences are eligible to apply for allocations and reservations of numbering capacity.

4.3.1.2 To be eligible for an allocation of numbering capacity, the applicant shall have met (or be reasonably expected to meet within the next 6 months) an 80% utilisation of existing allocations for the same service type for number ranges that are allocated in blocks, and 100% for the same service type for numbers that are allocated individually.

4.3.1.3 Utilisation shall be calculated according to the following formula:

$$\text{utilisation(\%)} = \frac{(\text{quantity in service} + \text{quantity in quarantine})}{(\text{quantity allocated} + \text{quantity ported in} - \text{quantity ported out})} * 100\%$$

4.3.2 Information to be supplied by an applicant for a number allocation and/or reservation

4.3.2.1 When applying for an allocation or reservation of numbering capacity, the applicant shall provide the following information to TRA through the NMS:

4.3.2.1.1 Name and contact details of the applicant.

4.3.2.1.2 Details of their current utilisation of existing allocations for the same service type and their expected numbering demand for the same service type over the next 6 months.

4.3.2.1.3 Any other information that the applicant considers necessary or appropriate to justify the application.

4.3.2.2 In addition, applicants shall provide to TRA any other information, judged by TRA to be relevant to the application. This may include a brief description of the applicant's technical and operational system configuration.

4.3.3 Timing of applications

4.3.3.1 Applications for numbering allocations should not, in general, be made more than six months prior to the planned in-service date.

4.4 Convention 3. Reserving numbers

4.4.1 Making reservations

4.4.1.1 In addition to allocating numbering capacity, TRA may, at its discretion, agree to reserve it. Reservations may be appropriate under the following circumstances:

4.4.1.1.1 to extend a previously allocated range;

4.4.1.1.2 where an applicant does not wish to be identified;

4.4.1.1.3 where the reason for the application should not be divulged prior to an application for the allocation.

4.4.1.2 A reservation may be made against a specific request submitted by any person eligible to receive allocations (for example, for the expansion or growth of existing services or for the introduction of new services).

4.4.1.3 An application for a reservation shall be made to TRA in accordance with Convention 2. Applications for reservations will be made public in the same way as allocations, unless the applicant

requests otherwise and TRA agrees that the request for confidentiality is reasonable.

4.4.2 Limitations

4.4.2.1 Wherever possible, TRA will endeavour to convert a reservation into an allocation upon request. However, it should be noted that a reservation does not automatically entitle an applicant to activate the capacity. Nor, where numbering capacity is reserved, is there any guarantee that a corresponding allocation will subsequently be made.

4.4.2.2 Reservations will be time-limited and the limit for reservations will normally be three months.

4.4.2.3 Reservations may be renewable on request to TRA, at TRA's discretion. Reservations must be converted into allocations before numbers can be activated.

4.4.3 Cancellation

4.4.3.1 Once a reservation has been made, that numbering capacity will be unavailable for allocation, except for the purpose and to the operator for which the reservation was made. However, a reservation will automatically be cancelled if:

4.4.3.1.1 the time limit has expired;

4.4.3.1.2 the applicant withdraws the reservation; or

4.4.3.1.3 TRA and the applicant agree a substitute reservation or allocation.

4.4.4 Competing requests

4.4.4.1 Where available number ranges are limited, and several operators have requested the same Number Block, TRA may reserve the block for more than one operator, but will allocate it to the first operator who submits to TRA a request for final allocation of the numbers, together with clear and reasonable plans for making use of the respective numbers. In these circumstances, TRA will inform each of the competing operators that their reservation is subject to competition.

4.5 Convention 4. Considering applications

4.5.1 When making number allocations or reservations within the Plan, TRA will take into account:

4.5.1.1 the guiding principles set out in Convention 1;

- 4.5.1.2 the provisions of the relevant licence of the operator;
 - 4.5.1.3 the views of the applicant and other interested parties (through consultation, where appropriate);
 - 4.5.1.4 whether the applicant has met (or be reasonably expected to meet within the next 6 months) an 80% utilisation of existing allocations for the same service type for number ranges that are allocated in blocks, and 100% for the same service type for numbers that are allocated individually;
 - 4.5.1.5 any other matters that TRA deems relevant (e.g. any requirement to open a new range or make changes to the Plan in order to allocate the required numbers);
 - 4.5.1.6 new number ranges or changes to the Plan; and
 - 4.5.1.7 the financial status of the Licensee with the TRA and whether any overdue fee is to be settled.
- 4.5.2 Before opening any protected ranges, TRA will specify a date for initial receipt of applications for those ranges and, prior to that date, no applications will be accepted.
- 4.5.3 TRA will notify the ITU Standardization Sector (ITU-T) of changes to the Plan in order to ensure that correct notification is given to foreign operators, administrations and other interested parties. Where TRA considers it necessary, it will also notify other overseas administrations directly.

4.5.4 Number portability

- 4.5.4.1 TRA will take into account how the applicant intends to provide portability for relevant numbers when considering applications. Applicants are expected to comply with TRA's Regulation on Number Portability and current Number Portability Specifications.

4.5.5 Timescale for handling applications for numbering capacity

- 4.5.5.1 TRA will use all reasonable endeavours to make an allocation or reservation in accordance with the Conventions, in response to applications for numbering capacity, within a period of 28 calendar days following receipt of an application that contains all of the information required by Convention 2. The 28 calendar day period may be exceeded where:
 - 4.5.5.1.1 additional information is required from the applicant;
 - 4.5.5.1.2 a period of consultation is necessary, as initiated by TRA;

4.5.5.1.3 there are significant issues relating to the application that cannot be reasonably handled within that period;

4.5.5.1.4 TRA considers that an alternative period of time is justified.

4.5.5.2 Where TRA considers that an exception to the normal period is required, then it will inform the applicant in writing or through the NMS of its reasons and of the revised period.

4.5.6 Refusal of applications for numbering capacity

4.5.6.1 TRA reserves the right to refuse applications for allocations of numbers to any operator that is not in compliance with the Plan, its Conventions and/or Schedules. This includes operators not being in arrears with the numbering fees as set out in Convention 10.

4.5.6.2 TRA may at its discretion refuse an application for an allocation or reservation of numbering capacity. Alternatively, TRA may grant the application not in full, or may attach specific conditions to the allocation which are consistent with the Conventions and/or Schedules and relate to the use and management of the numbering capacity allocated. Such specific conditions will be set out in the record in the NMS.

4.5.6.3 In the event of a refusal, whether in part or in full, or where specific conditions are attached, TRA will inform the applicant through the NMS of its reasons.

4.5.6.4 TRA may, following consultation with the applicant, make an alternative allocation that has the potential to satisfy the applicant's requirements without conflicting with the criteria that caused the original application to be refused.

4.5.6.5 Where TRA refuses an application, either in part or in full, or attaches specific conditions to the allocation, the applicant may write to the General Director of TRA disputing the reasons given by TRA for its decision or giving further information for consideration regarding the application. The General Director of TRA will then consider the request and respond to the applicant within 28 calendar days, except where a different period of time is justified.

4.5.7 Allocation of numbers in response to an application

4.5.7.1 Once TRA has made a decision to allocate a range of numbers to an operator for a specific purpose, it will create an allocation record in the NMS. The operator may not make any use of the requested allocation of numbers until it has received notification through the NMS that the allocation record has been created.

4.6 Convention 5. Conditions placed on allocations

4.6.1 General conditions

4.6.1.1 In addition to any specific conditions that may apply (see Convention 4, Section 4.5), the following general conditions relating to the use and management of numbering capacity apply to all allocations made by TRA:

4.6.1.1.1 the allocation shall be used for the purpose specified in the application (e.g. including any classification by type or tariff as set out in the Plan);

4.6.1.1.2 the Licensee originally allocated numbers shall be responsible for them. This includes ensuring that the appropriate information regarding the use of these numbers is reported to TRA. This does not prevent that recipient from sub-allocating numbers to other licensed operators, provided that the sub-allocation is still for the use specified in the original application and in accordance with the Conventions;

4.6.1.1.3 the holder of the allocation shall maintain a record of the numbers in use and the related customer information and update the TRA through the NMS within 24 hours of any changes;

4.6.1.1.4 the holder of the allocation shall maintain a record of Ported Numbers;

4.6.1.1.5 an operator shall not use numbers from the Plan other than those allocated by TRA and for which the operator has valid allocation record in the NMS (see Convention 4);

4.6.1.1.6 Licensed Operators shall use numbers allocated in compliance with number format and length as specified in this Plan. This includes the use of numbers for messaging services such as SMS. Shortening of numbers is not allowed;

4.6.1.1.7 Licensed Operators shall place a number in quarantine for a six month period when a number that has been in use is cancelled by the customer, or is recovered or replaced by the Licensed Operator, and during this period the number shall not be re-assigned to any customer other than the previous customer;

4.6.1.1.8 Licensed Operators with allocated numbers, including Licensed Operators with sub-allocations, shall not prevent or delay connection to those numbers, whether on their network or the network of other Licensed Operators.

4.6.2 Conditional allocations

4.6.2.1 TRA may allocate numbers to an operator on the condition that they will be used exclusively for traffic to and from a specified third party. In addition, the numbers may be allocated on the condition that they shall be capable of being transferred to that third party if, in due course, that third party becomes eligible to receive allocations of codes in its own right by satisfying the eligibility criteria in Convention 2.

4.6.3 Changes to allocations

4.6.3.1 Those who have been allocated numbering capacity are required to apply to TRA to make any changes:

4.6.3.1.1 to the allocation of the numbers;

4.6.3.1.2 to the purpose or use of the numbering allocation; or

4.6.3.1.3 which relate to conditions of use placed on the allocation.

4.6.3.2 Changes related to Number Portability are covered through the Number Portability Regulation and processes.

4.6.4 The audit process

4.6.4.1 Each holder of an allocation shall submit to TRA its quarterly numbering report. The Licensed Operator's quarterly numbering report shall refer to information at the calendar quarter end and shall be submitted to TRA within two weeks of the end of that quarter.

4.6.4.2 The following information shall be provided in the Licensed Operator's quarterly numbering report (through the NMS) for each allocation:

4.6.4.2.1 the current use of the allocation;

4.6.4.2.2 numbers assigned to subscribers (in-service);

4.6.4.2.3 details of numbers set aside for planned growth, customer orders or other usage, with explanations;

4.6.4.2.4 Number Blocks allocated to any person for purposes other than end use; and

4.6.4.2.5 the proportion of numbers ported, at the request of subscribers, to another operator, including those ported before allocation to a specific subscriber.

4.6.4.3 Each Licensed Operator's annual numbering report shall also provide:

4.6.4.3.1 a one year and a three-year estimate of demand within significant ranges (TRA may specify these in a more detailed manner);

4.6.4.3.2 any other information requested by TRA.

4.6.4.4 This information shall be supplied in a format specified by TRA (see Appendix 1) and reported through the NMS.

4.7 Convention 6. Re-allocating and withdrawing numbers

4.7.1 Reallocation

4.7.1.1 If a substantial proportion of numbers from an allocation has been transferred (e.g. sub-allocated or ported) to another operator, TRA may, with the agreement of the operators concerned, re-allocate the Number Block to the operator who has most users in the block. TRA will re-allocate Number Blocks only when it has received the written consent of both the existing and the intended new operator. In these circumstances the original Allocation Certificate will be withdrawn and a new one issued to the new holder of the allocation.

4.7.2 Withdrawal

4.7.2.1 TRA may withdraw capacity that it has allocated, or part of such capacity, if its continued use or allocation is not in compliance with:

4.7.2.1.1 the Plan, including the Conventions and/or Schedules;

4.7.2.1.2 any specific conditions of the allocation; or

4.7.2.1.3 it is no longer required.

4.7.2.2 Licensed Operators may request TRA to withdraw a numbering range that has been allocated to that operator. Licensed Operators may only request a numbering range allocation to be withdrawn in the same size numbering block as which numbers of that type are allocated and only if the Licensed Operator currently has no active nor quarantined numbers in the number block they request to be withdrawn.

4.7.2.3 Withdrawal of an in-service numbering range, which has been allocated by TRA, can be made only after TRA has consulted with interested parties for a period of not less than 28 calendar days. It will be subject to a period of notice of not less than three months following that consultation.

4.7.2.4 If an allocation or part of an allocation is not brought into service within six months, it may be withdrawn after consultation with interested parties.

4.8 Convention 7. Notification of number allocation and activation of numbers

4.8.1.1 TRA will via publication on its website (and, if TRA at its own discretion considers necessary, via other appropriate means) inform other Licensed Operators in the Kingdom of Bahrain, and, if necessary, other relevant authorities, including ITU-T, of the new number allocation. Other Licensed Operators, interconnected with the operator which has been allocated new numbers, shall ensure activation of these numbers in their networks and, if applicable, transit of the traffic to these numbers through their networks as soon as possible. If the activation takes more than one month from the date of publication of the relevant information on TRA's website or from the date of receiving a direct request to activate numbers (whichever is the earliest), the activating operator shall before the expiration of that period inform TRA accordingly and provide justification for a specific activation period.

4.8.1.2 Those who have been allocated numbering capacity are required to advise TRA, on an ongoing basis, of the names and contact details of persons in their organisations to which Allocation Certificates should be sent, who should have access to the NMS and who should be contacted for other numbering issues.

4.8.1.3 TRA will maintain a list of such contacts and will make it available on request to all operators listed on it, and others who, in TRA's opinion, have need of that information.

4.9 Convention 8. National Numbering Plan records

4.9.1.1 TRA will maintain comprehensive records of the status of all numbers referred to in the Plan. The Number List will be kept by TRA and made available on TRA's website. TRA will update the Number List on its website within 5 working days of changes being made.

4.9.1.2 Where available and not commercially sensitive, details of the operators' plans for reserved numbering will be included in the Number List on TRA's website. However, those requiring further details of reservations are advised to contact the person for whom the Number Block has been reserved.

4.10 Publication of changes

4.10.1.1 In addition to updating the Number List, within 5 working days of a relevant action being taken TRA will publish confirmations of allocations, reservations or withdrawals, setting out the numbers or Number Range(s) being allocated, reserved or withdrawn, the person to whom the allocation or reservation has been made or from whom it has been withdrawn, and the action date.

4.11 Status indicators

4.11.1 Those parts of the Plan that are not designated have not been set aside for a use specified in the Schedules, and are therefore not available for allocation, reservation and use. This includes numbers used for on-net services and numbers used for messaging services such as SMS.

4.11.2 Numbers that have been designated will, unless this is with reference to a Type A or Type C Short Code, have one of the following, more specific, status indicators within the Number List:

4.11.2.1 Allocated - indicates numbers that have been allocated to an operator whose name will be listed alongside. While the majority of numbers shown as allocated may also be in service, these records will not contain information about in-service dates. In addition, allocations will not appear with full details on the Number List when an applicant maintains a requirement to protect commercially sensitive information prior to the opening of service, subject to TRA's agreement with such a requirement.

4.11.2.2 Free - indicates that these numbers are available for allocation or reservation. Applicants should note that a Number Block shown as Free could have already been requested by another operator between the time of the last update of the Number List and the time of applying for the Number Block. TRA may decide that specific numbers of Number Ranges are not normally available for allocation or reservation while other numbers are still available for allocation for the same purpose. Such status of the number or Number Range will be indicated in the Number List.

4.11.2.3 Protected - indicates that numbers are protected until the Plan is changed or, where a date is shown, until that date. Numbers are protected, e.g., for future planning purposes or to avoid temporary or permanent dialling problems.

4.11.2.4 Reserved - indicates a provisional allocation, subject to confirmation by the applicant and/or TRA. The applicant's name

will normally appear alongside the reservation unless TRA has agreed to maintain commercial confidentiality.

4.12 Convention 9. The review procedure

4.12.1 Reviews of the Plan

4.12.1.1 TRA may from time to time review the Plan upon its own initiative, or upon a request in writing by any Licensed Operator, subscriber or other interested party.

4.12.2 Structure of the Conventions and Schedules

4.12.2.1 These Conventions set out the general rules or principles concerning the procedures for applications, reservations, withdrawals and other operations of the Plan from both TRA's and applicants' points of view. Specific rules relating to numbers within the Plan are defined in the Schedules below.

4.13 Convention 10. Charging for Numbers

4.13.1 TRA will charge Licensed Operators for managing and maintaining the resource of numbers.

4.13.2 The charges to be applied may be reviewed from time to time following consultation.

4.13.3 The number ranges that are charged are as follows:

4.13.3.1 3-digit Type B Short Codes;

4.13.3.2 8-digit Fixed Number Series 13, 16 and 17;

4.13.3.3 8-digit Mobile Number Series 3;

4.13.3.4 8-digit Universal Number Series 6 and 7;

4.13.3.5 8-digit Special Service Number Series 80, 84 and 87;

4.13.3.6 5-digit Special Service Type B Short Codes with leading digits 81, 85 and 88;

4.13.3.7 8-digit Premium Rate Number Series 90, 95 and 97;

4.13.3.8 5-digit Premium Rate Type B Short Codes with leading digits 91, 94 and 98;

4.13.3.9 5-digit Type B Short Codes with leading digits 07; and

4.13.3.10 5-digit Type C Short Codes with leading digits 06.

National Numbering Plan

- 4.13.4 Number applications (including applications for reservation and allocation of numbers) will incur an administration charge in accordance with TRA's Schedule of Fees.
- 4.13.5 Licensed Operators will have to pay for numbers allocated and reserved an annual fee (normally payable on a quarterly basis) in accordance with TRA's Schedule of Fees.

5 Schedules

5.1 The following sections contain the Schedules of the Plan. These Schedules contain specific rules relating to the use of number ranges within the Kingdom of Bahrain.

Schedule 1 Structure of the Schedules

Schedule 1.1 The National Significant Number (NSN)

5.2 The National Significant Number (NSN) is eight digits long (except for Short Codes), notated by the sequence ABCDEFGH.

Leading Digit	Main Purpose
0	Access Numbers, Type B and Type C Short Codes
1	Numbers for Fixed Services, Type A and B Short Codes
2	Protected
3	Numbers for Mobile Services
4	Protected
5	Protected
6	Universal Numbers
7	Universal Numbers
8	Special Services Numbers
9	Premium Rate Numbers and Type A Short Codes

Table 1. High level allocation of numbers to purposes within the Plan

Schedule 1.2 Allocation order

5.3 Numbers will normally be allocated from the lowest available Number Block upwards – exceptions to this rule will be made only at TRA’s discretion subject to sufficient justification provided by the Licensed Operator.

Schedule 2 Standards and standard presentation

Schedule 2.1 Standards

5.4 So far as it is practicable, TRA aims to ensure that the Plan conforms to the relevant international standards.

Schedule 2.2 International service numbering

5.5 ITU-T Recommendations describe the role of the ITU-T in managing the international public telecommunications numbering plan and the introduction of specific global (not related to a specific country) services. The management of allocation of numbers for such services is the responsibility of the ITU-T.

Schedule 2.3 Country Code

5.6 The Country Code allocated by the ITU-T to the Kingdom of Bahrain is 973. This code follows the international dialling prefix on calls made from outside the Kingdom of Bahrain, and should be followed by the National Significant Number (NSN) of the destination within the Kingdom Bahrain.

Schedule 2.4 Maximum number of digits

5.7 Particular attention is drawn to ITU-T Recommendation E.164, which states that the maximum number of digits that a national system is expected to handle on an outgoing international call is fifteen (15) (excluding the international dialling prefix). This requirement is implemented in Bahrain by prescribing specific length to numbers in this Plan.

Schedule 2.5 Alphanumeric arrangements

5.8 The Plan will use the decimal character set 0-9 for all number allocations. Letters and other non-decimal characters will not form a part of the Plan to the extent that usage of them does not interfere with the usage of numbers allocated under this Plan.

Schedule 2.6 International Prefix (AB = 00)

5.9 The International Prefix 00 is used for international dialling from within the Kingdom of Bahrain. The digits of the Country Code and

the NSN will directly follow this prefix. Where an operator supports the use of handsets with the '+' character, this shall be interpreted as the International Prefix when used at the beginning of a dialling sequence.

Schedule 2.7 Consistency of presentation

5.10 Numbers should retain a consistent format for number presentation and there must be no intention to deceive or confuse. The recommended formats for presentation of eight-digit NSNs under the Plan are as follows:

5.10.1 National format

ABCD EFGH

5.10.2 International format (incoming)

+973 ABCD EFGH

Schedule 3 Access Numbers

5.11 The Numbers Series with leading digit 0 (except for 00) are designated for use as Access Numbers.

5.12 The Number Series 02CDE is designated for national Carrier Pre-Selection ("CPS") Access Numbers, where the CDE digits identify a Licensed Operator or a specific service of a Licensed Operator, which needs to be distinguished from other similar services and be available for pre-selection. No operator shall have a right to use such numbers for call-by-call selection of such an operator (including for the override of CPS) or any other use where a caller has to enter these digits by himself/herself.

5.13 Access Numbers are allocated individually.

AB	Designation	Number Length
00	International Access	2
01	Protected	
02	Carrier Pre-Selection	5
03	Protected	
04	Protected	
05	Protected	
06	Type B Short Code	5
07	Type B Short Code	5

National Numbering Plan

08	Protected	
09	Protected	

Table 2 Designation of the 0 Number Series

Schedule 4 Fixed Numbers

5.14 The 13, 16 and 17 Number Series are designated for Fixed Services as 8-digit numbers.

5.15 Allocation of numbers for Fixed Services will be made in Number Blocks of 1,000.

Schedule 5 Mobile Numbers

5.16 The 3 Number Series is designated for Mobile Services as 8-digit numbers.

5.17 The 30 Number Series is protected¹.

5.18 The 385 Number Series is protected.

5.19 Allocation of numbers for Mobile Services will be made in Number Blocks of 10,000.

Schedule 6 Universal Numbers

5.20 The 6 and 7 Number Series are designated as 8-digit Universal Numbers. The Licensee's Numbering Plan shall include the specific purpose of the Universal Numbers (separate Number Ranges can have different purposes) allocated to a specific Licensed Operator.

5.21 The 60 and 70 Number Series are protected².

5.22 Allocation of Universal Numbers will be made in Number Blocks of 1,000.

Schedule 7 Special Services Numbers (8 Series)

5.23 The 8 Number Series is designated exclusively for Special Services (some of the Number Series in this range are protected as indicated in Table 3). The cost of the call to services in the 8 Number Series range according to the designation in Table 3 shall be:

5.23.1 paid wholly by the called party;

5.23.2 shared between the caller and the called party; or

5.23.3 paid wholly by the caller.

¹ Following the recommendations of the Final Report on the Review of National Numbering Schemes on their Openness to Competition, prepared by the European Telecommunications Office on behalf of the European Committee for Telecommunications Regulatory Affairs (European Conference of Postal and Telecommunications Administrations), 15 October 1997.

² Ibid.

National Numbering Plan

5.24 The Number Series with leading digits 81, 85 and 88 are shortened to 5-digit Special Service numbers (Type B Short Codes). These numbers are designated as detailed in Table 3.

5.25 The Number Series with leading digits 81, 85 and 88 are also designated as 5-digit Type C messaging (SMS) Short Codes. Operators must hold a Type C messaging (SMS) Short Code allocation for each number they intend to use for that purpose. Even where an operator has been allocated the 5-digit Type B Short Code for use, they still require a separate Type C messaging (SMS) Short Code allocation.

5.26 Allocation of numbers in the 8 series will be in Number Blocks of 1,000, except for the Short Codes, which will be allocated individually.

5.27 Special Service numbers are designated as follows:

Number Series	Service
80	No charge to caller (8-digit number)
81	Type B Short Codes (5 digits) – No charge to caller Type C messaging (SMS) Short Codes (5 digits) – No charge to message/SMS originator
82	Protected
83	Protected
84	Cost shared between the caller and the called party (8-digit number)
85	Type B Short Codes (5 digits) - Cost shared between the caller and the called party Type C messaging (SMS) Short Codes (5 digits) – Cost shared between message/SMS originator and receiver
86	Protected
87	Cost born by the caller (8-digit number)
88	Type B Short Codes (5 digits) - Cost borne by the caller Type C messaging (SMS) Short Codes (5 digits) – Cost borne by message/SMS originator
89	Protected

Table 3 Allocation of Special Service Numbers in the 8 Series

Schedule 8 Premium Rate Services Numbers (9 Series)

Schedule 8.1 General

- 5.28 The 9 Number Series has been designated for Premium Rate Services, except for the 99 Number Series designated for Type A Short Codes as stated below. Some of the Number Series in this range are protected as indicated in Table 4.
- 5.29 The second (B) digit of the numbers in the Premium Rate Services Range indicates a charge band.
- 5.30 The Number Series with leading digits 91, 94 and 98 are short 5-digit Premium Service numbers (Type B Short Codes). These numbers are designated as detailed in Table 4.
- 5.31 The Number Series with leading digits 91, 95 and 98 are also designated as 5-digit Type C messaging (SMS) Short Codes. Operators must hold a Type C messaging (SMS) Short Code allocation for each number they intend to use for that purpose. Even where an operator has been allocated the 5-digit Type B Short Code for use, they still require a separate Type C messaging (SMS) Short Code allocation.
- 5.32 Allocation of numbers in the 9 Number Series (Premium Rate Services Numbers) will be in Number Blocks of 1,000, except for the Short Codes, which will be allocated individually.
- 5.33 The charge bands identified in Table 4 below are designated as High, Medium and Low and are designed to give consumers an indication of potential costs of calling these numbers or sending a message/SMS to these numbers. To facilitate more stringent consumer protection, if required, these bands may be subject to a separate regulation. Callers shall be informed about the cost of the call by voice message and shall be given reasonable opportunity to terminate the call before the charging starts. Operators are required to provide means for consumers to be able to determine the tariffs for premium rate messaging (SMS) Short Codes, such as through the rates being listed on the operator's website.
- 5.34 The maximum levy for calls in the High Band will be unrestricted. The maximum levy for calls in the Medium Band will be not more than 1 BD per minute open ended. The maximum levy for calls in the Low Band will be 0.5 BD per minute, with a total call charge of no more than 3 BD.
- 5.35 The maximum levy for messages/SMSs in the High Band will be unrestricted. The maximum levy for messages/SMSs in the Medium Band is 1 BD per message/SMS. The maximum levy for messages/SMSs in the Low Band is 0.5 BD per message/SMS.

National Numbering Plan

Number Series	Charge Band	Status
90	Low Band	Designated - 8-digit number
91	Low Band	Designated – Type B Short Codes (5 digits) Designated – Type C messaging (SMS) Short Codes (5 digits)
92	N/A	Protected
93	N/A	Protected
94	Medium Band	Designated – Type B Short Codes (5 digits) Designated – Type C messaging (SMS) Short Codes (5 digits)
95	Medium Band	Designated - 8-digit number
96	N/A	Protected
97	High Band	Designated - 8-digit number
98	High Band	Designated – Type B Short Codes (5 digits) Designated – Type C messaging (SMS) Short Codes (5 digits)
99	N/A	Type A Short Codes (see below)

Table 4 Classification of Premium Rate Services numbering

Schedule 8.2 Premium Rate Services

5.36 Operators are required to publish allocations and sub-allocations in the interests of consumer protection.

5.37 Operators shall publish a list of the tariffs being applied to their allocated numbers including for messaging (SMS) services.

Schedule 9 Short Codes

Schedule 9.1 General

5.38 Short Codes are categorised by the type of service for which they are used. There are four types of Short Codes: Access Numbers and Types A, B and C. These types are defined in clause 3.2 of the Plan. Access Numbers are regulated in Schedule 3. Schedule 9 regulates other types of Short Codes.

5.39 The Type B and Type C Short Codes designated below may only be used for services provided directly by the licensed operator and calls and messages to these numbers are made at no charge to the originating customer.

5.40 For the avoidance of doubt, numbers not designated in the Schedules below are protected and these numbers cannot be used as Access Numbers.

Schedule 9.2 Type A Short Codes

5.41 Type A codes are three (3) digits in length and are designated as shown in Table 5:

Description	Short Code
Common international emergency code	112
Traffic Accident Police	199
Casualty Bureau	990
Protected	991
Criminal Investigation (CID)	992
Protected	993
Coast Guard (CGD)	994
Protected	995
Protected	996
Protected	997
Child Helpline	998
National Emergency Call Centre	999

Table 5 Type A Short Codes

Schedule 9.3 Type B Short Codes

5.42 Designated Short Codes in the Number Series 8 and 9 are Type B Short Codes. Furthermore, the 07 Number Series is designated for 5-digit Type B Short Codes. These Short Codes are allocated individually.

5.43 The following 3-digit Short Codes are designated as Type B and are allocated individually: 100-109, 120-129, 140, 141, 151, 181, 188, 191 and 196.

Schedule 9.4 Type C Short Codes

5.44 The 06 Number Series is designated for 5-digit Type C Short Codes.

5.45 The 3-digit Type B Short Codes specified above are also designated as 3-digit Type C messaging (SMS) Short Codes. The 06 and 07 Number Series are also designated as 5-digit Type C messaging (SMS) Short Codes. Operators must hold a Type C messaging (SMS) Short Code allocation for each number they intend to use for that purpose. Even where an operator has been allocated the 3-digit Type B, 5-digit Type B or 5-digit Type C Short Code for use, they still require a separate Type C messaging (SMS) Short Code allocation.

Schedule 10 Dialling arrangements

5.46 Full 8-digit numbers shall always be used for Fixed Services, Mobile Services, Premium Rate Services and Universal Numbers (except for Short Codes falling in the respective categories). Such numbers can be used as an NSN only or in the international format (Schedule 2.6). No prefixes can be used together with these numbers except where the Plan expressly allows them.

5.47 Type A and B Short Codes shall be dialled without any prefixes (including Access Numbers) from the networks of all Licensed Operators. Type C Short Codes shall be dialled without any prefixes within the network of a specific operator using this number.

5.48 National numbers, dialled after an Access Number, shall be dialled in either the international format (dialling in international format does not apply to the Type C Short Codes) according to the dialling sequence defined in Schedule 2.6 or in the form of NSN only. No digits can be inserted either before an Access Number (when it is used in the public telecommunications network) or between an Access Number and the number dialled after it.

Schedule 11 Use of numbers by subscribers

5.49 Subscribers that have a number assigned to them shall have the right to use the number for making use of other services both of the

National Numbering Plan

operator that has a number allocated to it, or of other operators, provided such services comply with the requirements for use of specific numbers.

5.50 Upon request of the relevant subscriber and subject to the Number Portability processes, subscribers may port their number (including Type B Short Codes) to any other Licensed Operator. Calls and messaging services such as SMS will be routed directly to the subscriber through the new operator's network, bypassing the network of the operator to which the number is allocated.

6 Conventions for other codes

6.1 TRA recognises that there is a need to manage other aspects of numbering in addition to those covered above. TRA has already undertaken the task of administering these resources and they are now included as part of the Plan under the responsibility of TRA. These include:

6.1.1 Data Network Identification Codes (ITU-T Recommendation X.121);

6.1.2 Legacy system codes (e.g. Telex);

6.1.3 Mobile Network Codes (ITU-T Recommendation E.212);

6.1.4 National Signalling Point Codes;

6.1.5 International Signalling Point Codes (ITU-T Recommendation Q.708);

6.1.6 Issuer Identification Number (ITU-T Recommendation E.118);

6.1.7 Other similar codes as required.

6.2 Applications, reservations and withdrawals for these codes are administered in the same way as other numbers, as detailed in the Conventions, taking into account adjustments as necessary, in particular in order to comply with the relevant ITU-T Recommendations. Applicants for these codes and their uses shall in addition comply with the relevant ITU-T Recommendations.

Appendix 1. Licensed Operator’s Numbering Report Template

The Licensee shall report using the NMS reporting form. Each service will then be reported with the following headings shown with example data:

Service:	e.g. Fixed, Mobile, Premium Rate, Special Services, etc.
Range:	e.g. 13600000 – 13609999
Type:	e.g. Fixed Wireless
Total Available Numbers:	e.g. 10,000
Total Working Numbers:	e.g. 6,200
Total Spare Numbers:	e.g. 3,700
Total Ported-out Numbers	e.g. 100
%Utilised End [Year X = Reported year]:	e.g. 72.2%
%Annual Growth:	e.g. 10.5%
%Utilised End [X+1]:	e.g. 79.6%
%Utilised End [X+2]:	e.g. 87.3%
%Utilised End [X+3]:	e.g. 94.7%

Appendix 2. Numbering Application Form (via NMS)

Telecommunications Regulatory Authority		
Numbering Application Form		
Applicant's Details:	Type of Request	
	Reservation	
	De-Reservation	
	Allocation	
	De-Allocation	
	Other:	
Applicant's Reference Number	TRA Reference Number	
Applicant's Licence Reference		
Numbers Requested		
Range	From	To
1st Choice		
2nd Choice		
3rd Choice		
Proposed Use of Requested Numbers:		
Special Conditions / Remarks:		
Current Allocated Block Ranges:	% Utilization of each Allocated Block Range:	
TRA Internal use only		
Received and logged:	Listed on Website:	
Recorded in database:	Certificate Issued:	

National Numbering Plan

Telecommunications Regulatory Authority

Numbering Application Form

Notes on completion

Applicant's details: Should include the name of an authorised person, together with address and contact details for further correspondence.

Type of Request: One of the boxes should be ticked or information provided in the field "Other".

Reference numbers: Forms submitted to TRA should include an applicant's reference number by which the application can be tracked. TRA will assign the application a TRA reference number during the processing of the application.

Licence reference: The identity of the licence under which the application is being made.

Range requested: Applicants should enter here their first choice of Number Range. To allow for the possibility of coincident applications, second and (if required) third choice Number Ranges may also be included to cover the possibility that the first choice range has been allocated already. As a general principle one form should cover one Number Range. In identifying the ranges applicants shall take into account the requirements of Schedule 1.2 of the Plan.

Proposed use of requested numbers: A brief description of the use to which the additional numbers will be put and why the request has been made.

Special conditions / remarks: Applicants may identify any special conditions applied to the requested allocation or include additional remarks. If an applicant requests an allocation which does not conform to the requirements of Schedule 1.2 of the Plan, the reasons should be explained here.

Ref: _____

Telecommunications Regulatory Authority

Page 37 of 37

Date: _____