



هيئة تنظيم الاتصالات
Telecommunications Regulatory Authority

Number Portability Regulation Consultation Report

Reference No. ICT/0410/047

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Public Document

Introduction

1. This report summarises the responses received to the public consultation and the Draft Regulation on the Implementation of Number Portability (Reference LAU/1008/222) issued by the Telecommunications Regulatory Authority (“TRA”) on 13 October 2008. The consultation included a Draft Regulation and an accompanying Explanatory Document (Ref: LAU/1008/223) with an indicative timetable.
2. This report is intended to provide Licensees and any concerned parties with an understanding of TRA’s position regarding comments and concerns raised by Licensees and members of the general public in relation to the introduction of Number Portability in the Kingdom of Bahrain.
3. The responses and positions stated by TRA in this report reflect TRA’s final position in relation to these comments and their impact on Number Portability.
4. References to paragraphs in the Draft Regulation and Explanation use the convention Rx.y for the Draft Regulation and Ex.y for the Explanatory Document.

Number Portability Implementation Overview

5. TRA identified Number Portability as a regulatory measure that would promote the interests of consumers and further competition as part of its 2008 Strategic and Retail Market Review¹. The legal justification for this is explained in more detail in Paragraphs 32 to 43 below.
6. Primary among the necessary foundational work for the implementation of Number Portability was the development of a Number Portability Regulation. For this purpose TRA appointed international consultants Mott McDonald to assist TRA in developing a Number Portability Regulation.
7. Mott McDonald held a presentation on Number Portability for all Licensees on 26th May, 2008. The presentation discussed the various benefits, challenges and requirements related to the implementation of Number Portability in the Kingdom of Bahrain.
8. TRA subsequently prepared a Draft Number Portability Regulation (“the Draft Regulation”) and initiated a public consultation on the Draft Regulation. This was accompanied by an Explanatory Document on the implementation of Number Portability (“the Explanatory Document”). Initially published with a deadline of 13th November, 2008, this was later extended to 30th November, 2008. A number of Licensees and some private companies responded to the consultation with their comments.
9. As a second form of consultation with the general public, TRA held an online voting campaign under the slogan ‘I Love My Number’. The purpose of this voting campaign was to further gauge subscriber interest in the availability of Number Portability. The results of this campaign indicated that Number Portability is a desired product for consumers in the Kingdom of Bahrain.
10. During this time the Directorate of Legal Affairs (“DLA”) was assisting TRA with legal review and the subsequent publication of the final Number Portability Regulation (“the Regulation”) on Thursday 13th May, 2010.
11. TRA, in the interest of introducing Number Portability to the Kingdom of Bahrain in as short a timeframe as possible, has determined that several processes must run in parallel. These processes included finalizing the Regulation as well as beginning work on the Number Portability Specifications (“the Specifications”). The development of the Specifications began soon after the conclusion of the ‘I Love My Number’ online voting campaign.

¹ The final statement and other materials of the Strategic and Retail Market Review can be found here: <http://www.tra.org.bh/en/consultations.asp#Strategic>

12. The Regulation establishes the legal framework and obligations placed upon Licensees, whereas the Specifications outline the technical requirements and procedures to be applied by Licensees when implementing Number Portability.
13. TRA has appointed Rabion Consultancy, of the Netherlands, on 6 September 2009 to develop the Specifications and supervise their implementation with the Central System solution provider.
14. During the months of September, October and November 2009 a number of Working Group meetings were held between TRA and the Licensees, at which the various Specifications were discussed and Licensee's feedback obtained.
15. Having taken into account the feedback from the Working Group meetings TRA published for public consultation the draft Specifications in January 2010. The consultation closed in 4th March 2010 and TRA is currently preparing the final version of the Specifications along with an associated report on the consultation responses.

Consultation Respondents

16. As part of the public consultation process on the Number Portability Regulation, TRA received responses from the following organizations:
 - Bahrain Telecommunications Company (“Batelco”);
 - Lightspeed Communications W.L.L (“Lightspeed”);
 - Menatelecom (“Mena”);
 - Zain Bahrain (“Zain”).
17. All comments raised by the aforementioned parties, as well as additional comments from the general public, are addressed in this report and reflected in the Regulation and/or Specifications , where relevant.

Format of the Consultation Report

18. Since numerous comments were made by each respondent to the various articles of the Draft Regulation it would be difficult for the reader to assess TRA's position if all responses of a given respondent were listed together without comment by TRA, and as such, TRA will address each comment individually.
19. Respondent comments listed in this report have not been changed from the original submissions, except for updates in terminology usage (e.g. 'Central Database' or 'CDB' is now referred to as Central System).
20. The format for the section 'Specific Comments' will generally be as follows:

(a) *First Respondent's* comments on the Draft Regulation:

1. Article .##: Specific comment made by the respondent on the article in question, including justification, arguments, or evidence presented.
2. TRA's Response: Provides TRA's response on the preceding comment.
3. Article #.##: Specific comment made by the respondent on the article in question, including justification arguments or evidence presented.
4. TRA's Response: Provides TRA's response on the preceding comment.

Second Respondent's comments on the Draft Regulation:

(b) Article #.##: ...

- i. TRA's Response: ...

Format of the Consultation Report

21. Amendments have been made to the wording of the Regulation between the Draft Regulation stage and the final Regulation published in the Official Gazette on Thursday 13 May 2010. Amendments have been made based upon a consideration of the responses to the Consultation and to clarify drafting and principles. The following Section outlines the significant amendments that have been made between the Draft Regulation and the final Regulation. TRA does not consider the amendments are material enough to require further consultation. Reasons for these and other amendments are outlined here and also throughout this Consultation Report where relevant.
22. “Bad Debt” – This definition and Article 6(g)(4) has been consulted upon in the Specifications and Working Groups and has been moved from the Specifications into the Regulation to ensure that there is no issue with respect to the definition of Bad Debt within the Regulation itself.
23. “Central Database” in the Draft Regulation has been changed to “Central System” in the published Regulation to more accurately reflect its functions. The Central System’s functions are more clearly outlined in Article 4(d) of the published Regulation.
24. “Number Portability Specifications”, “Number Porting Request” and “Number Port Period” have been added to the published Regulation to clarify amendments to the published Regulation, described below, which were added to clarify the process of the Number Porting Process outlined in Article 3 of the published Regulation.
25. Articles 5(b)(1) and 5(b)(2) of the Regulation consolidate Articles 4.1 to 4.3 of the Draft Regulation.
26. Articles 6(d) to 6(f), 6(h) to 6(i) and Article 10 of the Regulation only clarify the Number Porting Process.
27. Article 8 of the Regulation outlines in more detail the General Rules for the Number Porting Process.
28. Article 11(a) of the Regulation clarifies Article 8.4 of the Draft Regulation.
29. Article 11(e) of the Regulation is a restatement of TRA’s general powers.
30. Article 11(h) is a clarification of the general non-discrimination principle found throughout the Telecommunications Law, and in particular Article 58 of the Law.

General comments

31. This section presents, at a high level, the major comments raised by the public consultation respondents. This section will not address which respondents raised which comments, but will only give a general overview. For specific respondent comments, please refer to the section 'Specific Comments'.

Legal Justification for the Introduction of Number Portability

32. Article 3(b) of the Telecommunications Law states that:

"The Authority undertakes in carrying out its duties relating to Telecommunications services in the manner best calculated to:

1. protect the interests of Subscribers and Users in respect of:

- ...*
- availability and provision of service;*
- ...*
-*

2. promote effective and fair competition among new and existing Licensed Operators."

33. Article 3(c) of the Telecommunications Law states that:

"The Authority shall have the power to:

(1) issue regulations, orders and determinations as may be necessary for the implementation of the provisions of this Law, including in particular regulations,... numbering,... the promotion of competition,... and all other matters covered by this Law or the resolution of which is necessary to give effect to the provisions of this Law.

*.
. .
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(18) exercising all other powers granted to the Authority hereunder and taking all other actions as may be reasonably necessary to give effect to the provisions of the foregoing paragraphs."

34. Article 40 of the Telecommunications Law states that:

"Public Telecommunications Operators with Significant Market Power and every other Licensee whose License Provides for the following obligations to Subscribers and Users or other Licensees provided for in his/its License shall provide the following:

1....

2. **Number Portability in fixed services:** when the Authority determines that sufficient requests exist for such a service

3. **Number Portability in mobile services:** when the Authority determines that sufficient requests exist for such a service.

4...”

35. In July 2007, TRA conducted a Consumer Survey as part of a Strategic and Retail Market Review. The survey conducted by Nielsen had a Nationality representative survey sample of 1052 residential consumers and 159 businesses in Bahrain.
36. Within the Consumer Survey the following questions pertaining to Number Portability were asked:
- a. Residential: How important would it be for you to keep your present number in deciding whether to switch your fixed line provider?
 - b. Business: Please tell me if you are thinking about changing your telecom provider both for mobile and fixed line, how important would it be to retain your existing telephone number(s)?
37. to which:
- a. 40% of residential users who have fixed line responded that retaining their old number is “important”;
 - b. 93% of business users responded that retaining their old number is “important” (71% responded to the question as “essential”);
 - c. 36% of business users indicated that the main reason for not switching fixed line provider was that they did not want to change their number;
 - d. 41% of business mobile users said that the reason for not switching the mobile provider is they don’t want to change the number;
 - e. 27% of residential mobile users said that they have not switched to another mobile operator because they are not able to keep their current number.
38. On 3 June 2008 the TRA issued the Final Statement of its Strategic and Retail Market Review and issued a determination Significant Market Power on Batelco in a number of markets².
39. Regulatory Measure Number 7 of the Final Statement noted that:
- “Number portability will be introduced to facilitate any fixed or mobile customers switching provider by giving them the possibility to retain their existing phone number when*

² These documents can be found at <http://www.tra.org.bh/en/consultations.asp#Strategic>.

changing operator. TRA intends to work with the industry to identify the most cost effective and pragmatic solution to implement mobile and fixed Number Portability.

If necessary, TRA would be minded to consider financing some of the costs of introducing Number Portability from proceeds of auctions or similar revenues subject to necessary approvals and/or consultations. This could minimize the cost to the industry of activities beneficial to all operators and ultimately to consumers”.

40. On 14 October 2008 TRA launched the Draft Regulation for consultation. Responses closed on 30 November 2008.
41. Additionally, TRA developed the “I Love My Number” campaign launched in July 2009 which included a questionnaire on TRA’s website³. The campaign was designed to gauge the level of public interest in Number Portability and asked the public to register their details for the purposes of Number Portability. The questionnaire noted that upon Number Portability being implemented, TRA would contact the individuals who had registered with the campaign. During the course of the campaign from 15 July to 15 August, 2009 TRA received over 5,300 registrations.
42. Based upon the results of the 2007 Consumer Survey, the 2008 Strategic and Retail Market Review determination of Batelco having Significant Market Power and the results of the 2009 “I Love My Number Campaign”, TRA concluded that the requirements of Article 40 of the Telecommunications Law have been satisfied and on 13 May 2010 the Number Portability Regulation was published in the Official Gazette.
43. Furthermore, and in line with the 2008 Strategic and Retail Market Review TRA has given an undertaking to fund the cost of the capital expenses of implementing the Central System, which will facilitate Number Portability in the Kingdom. TRA has the option of selling, assigning, leasing or licensing the Central System, in which case most if not all of the capital expenses may be recovered by the TRA.

Number Portability Solution Specifications

General concern raised by respondents

44. A number of Licensees expressed the views that there should be a “whole industry buy-in” regarding the Number Portability solution chosen and that selection of the “solution” itself should be implemented by the Licensees themselves.

TRA Response

45. All relevant Licensees (fixed and mobile service providers) are required to comply with the relevant Regulation and the Specifications in order to ensure that Number Portability

³ This can be found at <http://www.tra.org.bh/en/noportability.asp>.

functions correctly. In establishing the Regulation and Specifications TRA held the Number Portability Specification Working Group meetings during which Licensees were encouraged to provide feedback with respect to the solutions proposed. These meetings in conjunction with the two public consultations on the Regulation and Specifications respectively have transparently provided Licensees with opportunities to express and have aired all relevant concerns.

46. TRA is concerned that “whole industry buy-in” and “operator selection of the final Number Portability solution” could lead to un-necessary delay in the implementation of the final solution for Number Portability caused by the potential failure to reach agreement by the Licensees.
47. Consequently having regard for the transparent and inclusive consultative approach adopted by TRA in establishing the Regulation and subsequent Specifications TRA does not consider it either necessary or appropriate to have “whole industry buy-in” or “operator selection” of the final solution. However, when procuring the Central System, as per Article 11(a) of the Regulation, TRA may, at its sole discretion, consider the merits of including within the evaluation committee representatives of interested Licensees in addition to TRA staff.

Cost Allocation and Recovery

General concern raised by respondents

48. A number of respondents expressed concern regarding the proposed distribution of both the capital and operational costs associated with the implementation of the Number Portability solution as well as the basis underpinning the setting of the maximum per Porting charge by TRA and therefore cost recovery.

TRA Response

49. With respect to the Number Portability solution cost, TRA has reviewed the concerns expressed by the respondents and has amended the language of the Regulation to include an explicit statement that TRA will be responsible for the initial capital expenses for the set-up of the Number Portability Central System and all subsequent operational expenses relating to the Central System (Article 11(a) of the Regulation). The relevant Licensees will be responsible for the cost of:
 - a. Links connecting the Licensees’ distributed copies of the database of Ported Numbers contained within the Central System to the Central System.
 - b. Any costs related to maintaining the distributed databases on their own individual network.
 - c. Each Licensee’s own costs associated with the set-up of Number Portability facilities and systems within their own network, as per Article 11(b) of the Regulation.

50. A Donor Operator may recover its administrative costs associated with Porting a Subscriber Number from the Recipient Operator, and the Recipient Operator may recover its administrative costs associated with Porting that Subscriber's number from the Subscriber, up to a maximum charge as set out in Articles 11(c), 11(d) and 11(g) of the Regulation.
51. The most recent readily available data regarding the inter-operator charges for Number Portability is that presented by Cullen International. This focuses on the European countries in which Number Portability has already been implemented. In the most recent report, published in November 2009, twelve countries are listed with recipient paid inter-operator charges based on an "all call query" routing approach. The maximum inter-operator charge levied was Euro 13 with Germany, Spain and Sweden (except for Telia Sonera) having Euro 0 inter-operator charges. The average cost was Euro 5.9, the equivalent of which is BHD 3.3 (based on the exchange rate current at the date of the Cullen International report). The weighted average inter-operator charge for Porting based upon the price and annual volume of Ported Numbers equated to Euro 5.05, the equivalent of which is BHD 2.826. The European Commission's Information Society 14th Annual implementation report, based on data for the year October 2007 – October 2008, covered 22 countries in which inter-operator charges ranged from Euro 0 to Euro 45. Whilst the average per-country charge equated to Euro 9.68 or BHD 4.93, the weighted average charge per Ported Number was significantly lower at Euro 5.65 or BHD 2.878.
52. Whilst BHD 2.878 is almost 30% below the BHD 4.000 maximum charge set in the Draft Regulation for Mobile Number Portability, TRA considers BHD 4.000 to be a fair and reasonable initial benchmarked ceiling for inter-operator charging for Mobile Number Portability in the absence of cost data.
53. A review of the data presented in the same two reports for Fixed Number Portability shows that for 22 EU member countries the average per country charge for Fixed Number Portability was Euro 8.05 with a weighted average charge per Ported Number of Euro 6.7 or BHD 3.444.
54. Whilst this figure is in excess of 40% lower than the BHD 6.000 maximum charge set in the Draft Regulation for Fixed Number Portability, TRA considers BHD 6.000 to be a fair and reasonable initial benchmarked ceiling for inter-operator charging for Fixed Number Portability in the absence of cost data.
55. Article 3(c)(14) of the Telecommunications Law affords TRA the power to review tariffs to ensure that they are "fair and reasonableand determine tariffs, if necessary, including by benchmarking tariffs charged in comparable telecommunications markets". In the absence of cost information directly relating to the implementation of Number Portability in the Kingdom of Bahrain it is therefore appropriate to use a benchmark approach to establishing the initial maximum charges.
56. In assessing the data available from which benchmarks could be established, TRA considered both countries within the region that have already implemented Number

Portability for which information regarding the charging principles and the actual inter-operator charges are publically available, as well as those countries from the European Union for which data is readily available. With respect to the regional countries three have implemented Number Portability as follows:

- a. Saudi Arabia, which introduced Mobile Number Portability in July 2006 using a central clearing house solution. CITC in its MNP Guidelines (page 28) states that “The charges shall reflect the Long Run Average Incremental costs (LRAIC) standard using a narrow definition of increment”. The current inter-operator charge per Ported Number is SAR 50 or BHD 5.
 - b. Oman, which introduced Mobile Number Portability in August 2006, has a rate set by TRA Oman at OR 3 or BHD 2.938 which is chargeable to the Subscriber but paid through the Recipient Operator directly to the Donor Operator for using Mobile Number Portability. This fee can, at the discretion of the Recipient Operator, be waived for the Subscriber but remains payable to the Donor Operator by the Recipient Operator
 - c. Egypt, which introduced Mobile Number Portability in April 2008 using a central clearing house solution, has a charge for Porting a number of LE 75 or BHD 5.
57. As can be seen from the above the inter-operator charges per Ported Number from regional countries, and supported by the wider European data, the BHD 4.000 maximum for Mobile Number Portability is in line with the benchmarked average charge per Ported Number.

Exemptions for New and Niche Operators

General concern raised by respondents

58. A number of respondents expressed strong objections to allowing new or niche Licensees to be exempt from the requirement to implement Number Portability. The arguments presented were prefaced by TRA’s assertion that Number Portability is a “user right” and therefore any exemption would be in contradiction to this assertion. One respondent supported the exemption, stating that new entrants should have a period of three years to opt-out.

TRA Response

59. Whilst TRA considers that the requirements of Article 40(2) and 40(3) of the Telecommunications Law have been satisfied (as discussed in Paragraphs 32 to 43 inclusive above) TRA also maintains that Number Portability is fundamentally a “user right” that promotes freedom of choice of service providers, reflected in the provisions of Article 3(b)(1) and 3(b)(2) of the Telecommunications Law. TRA therefore agrees that the requirements for Number Portability should apply to all Licensees who have been granted Telecommunications Licenses that allow the use of Numbers for the purpose of providing

Telecommunications Services and which assign Numbers to Subscribers and provide Telecommunications Services through such Numbers. This is reflected in the definition of “Licensee” contained in Article 3 as well as in Article 5 of the Regulation.

60. However, notwithstanding the above, TRA remains of the belief that, as explained in Articles 4.7 to 4.9 of the “Public Consultation - An Explanatory document on the implementation of Number Portability”, it is necessary to make provisions within the Regulation to allow TRA, at its sole discretion, should it consider it necessary, to grant a temporary period of exemption. Article 5(c) of the Regulation stipulates an outline process that is triggered by a written formal request to TRA for exemption and should such an exemption be granted, TRA is obliged to publish on its website the reasons for making such a grant.

Porting Process

General concern raised by Respondents

61. A number of respondents expressed views that the Porting Process lacked clarity, particularly with respect to triggers, messages and reasons for request rejections.

TRA Response

62. Having reviewed the views expressed by the respondents, TRA has amended the language of the Regulation to reflect the request for greater clarity and increased levels of detail pertaining to the Porting process itself.
63. The Specifications will now contain details of all necessary documents that a Subscriber is required to submit in order to initiate the Porting Process (referenced in Article 7.1 of the Draft Regulation which has been replaced by Article 6(a) of the Regulation). The Regulation also explicitly requires the Recipient Operator to have entered into a contract with the Subscriber prior to commencing the Porting Process (Article 6(b) of the Regulation).
64. Article 7.3 of the Draft Regulation, which describes the communications paths, has been redrafted within Article 6(c) of the Regulation. This now clarifies that at no time shall there be any contact relating to the Porting Process between the Donor Operator and the Subscriber requesting Number Portability and that all contact with the Subscriber is managed through the Recipient Operator.
65. Article 7.4 of the Draft Regulation articulated three circumstances under which a Porting Request can be rejected. Article 6(g) of the Regulation now clarifies that the Donor Operator is permitted to reject a Porting Request but is only permitted to do so for reasons under the four circumstances that are articulated in Article 6(g) The fourth circumstance, ‘Bad Debt’, was included from the proposed Number Portability Specifications in order to have greater legal certainty over the rejection reasons.

Winback

General concern raised by Respondents

66. A number of respondents expressed strong views against the restriction placed on Winback activities in the Draft Regulation, stating that it was unworkable due to not having an associated time period and that it was a viable commercial activity.

TRA Response

67. Having reviewed Article 8.2 of the Draft Regulation, which articulated a blanket restriction on Winback activities, TRA has revised the language associated with the prohibition of Winback activities in Article 9 of the Regulation. This Article now expressly describes the types of activities TRA considers to fall under the umbrella of Winback and also provides under Article 9(a)(1) and 9(a)(2) specific time frames during which such activities are prohibited.
68. Article 15 of the Explanatory Document that accompanied the Draft Regulation public consultation articulates the thinking of TRA with respect to the appropriateness of a prohibition of Winback activities. More specifically, Article 15.4 clearly states that the prohibition of Winback activities provides incentives for continuous improvement in levels of service and performance by Licensees. Whereas the permitting of Winback would delay the performance improvements until such time as a Subscriber decides to port.
69. TRA maintains its position that the prohibition of Winback activities, though within predetermined timeframes, is an appropriate mechanism to provide incentive to Licensees to ensure continuous improvement in service and performance levels offered to Subscribers.

SPECIFIC COMMENTS

Batelco's comments on the Regulation

Charging and Cost Recovery

Respondent Concern:

70. **Article R6.1:** The TRA is forcing the majority of costs onto Batelco and Zain. Main beneficiaries will be other OLOs including the 3rd mobile operator. Recovery of Batelco and Zain's costs should be from OLOs - they need to share in the costs and pay for NP implementation.

TRA's Response:

71. TRA has addressed the concerns raised by Batelco with respect to the distribution of costs associated with the establishment of the Number Portability solution required under the Regulation in Paragraphs 49 to 57 above.

Respondent Concern:

72. **Article R6.2:** The TRA is not letting Batelco recover its costs by setting the charges applicable to ports without operators' input. As noted in Section 5 of the response, the main cost burden is borne by Batelco (and Zain), given that Batelco will not be the main beneficiary of NP, which the TRA ensures by introducing exemptions from exporting numbers. This equates to a direct value-transfer from Batelco to OLOs

TRA's Response:

73. Articles 11(c), 11(d) and 11(e) of the Regulation establish: that the Recipient Operators pays the Donor Operator a charge no greater than the maximum charge; the maximum charge per number port that can be levied for each of the three number types that are eligible for Porting; and that the maximum charge can be amended from time-to-time by way of a resolution passed by TRA and published in the Official Gazette. Therefore Batelco has the ability to recover costs.
74. Batelco asserts in its response that it will not be the main beneficiary of Number Portability and furthermore that this assertion is compounded by the retained right of TRA to grant temporary exemption from the implementation obligations. TRA considers that the statements made by Batelco are not supported by any empirical evidence.
75. With respect to the retained right to grant exemption and the applicability of the Regulation to appropriately licensed operators, TRA has addressed these points under the section on General Concerns in Paragraphs 59 to 60 above.
76. It is unclear from the response submitted by Batelco what is the intended meaning of the expression 'This equates to a direct value-transfer from Batelco to OLOs'.

Respondent Concern:

77. **Article R6.5:** This provision allows for OLOs to pass the call to Batelco (rather than using All Call Query (“ACQ”)), who would then pass the call to the Number Range owner. The Number Range owner would subsequently query his database or the Central System or send the call back to Batelco if it does not have a direct interconnection arrangement with the destination operator. Such an arrangement would lead to Batelco's costs being two times the ITAS service. In addition, TRA is limiting Batelco's recovery of its costs by setting a 2.5 fils per minute charge. Moreover, who would pay the charges; the originating network? How does the originating network know how many "transit" networks are used?

TRA's Response:

78. Having considered the issues raised by Batelco with respect to cost recovery for the routing of calls with incomplete routing information, TRA has revised the language in the Regulation to provide clarity. Article 10(b) Regulation now places an obligation on all Licensees who either originate or route a call to a Ported Number to ensure efficient routing. Article 11(h) of the Regulation now places a non-discrimination obligation on Licensees with respect to the treatment of Ported and Non-Ported Numbers, within which conveyance charges would be included.
79. TRA has also removed Article 6.6 relating to the maximum charge allowable for cost recovery of 2.5 fils per minute.

Respondent Concern:

80. **Table 1 p. 23 of the Explanatory Document:** Based on the principles set out in Table 1, given that NP has very uncertain benefits and is not a viable business proposition for anyone involved, the TRA should fund the entire project, including the operational costs of the Central System. Any retail charge levied by operators to customers should cover the administrative and Porting costs incurred by each operator. Should the TRA still believe that the operating costs of the Central System should be funded by operators, the TRA should have regard to Ofcom's recent Central System decision: Ofcom stated that funding was a matter for the industry, although it did acknowledge that the task of working out funding was “considerable” and it would appoint an independent project management team to assist.

TRA's Response:

81. TRA has addressed the question of cost recovery in Paragraphs 49 to 50 above.
82. Article 13.1 to 13.3 inclusive of the Explanatory Document on explanation of the cost elements; cost principles; and cost distribution relating to the establishment of the systems required to operate Number Portability.
83. TRA remains of the views that in order to expedite the introduction of Number Portability, TRA will establish and administer the Central System. This has now been included as an

explicit undertaking (Article 11(a) of the Regulation) and has been expanded from the proposal stated in Articles 12.13 and 13.3 of the Explanatory Document to include all subsequent operational costs associated with the Central System. In order to ensure that the costs reflect the principles of cost minimization, distribution of benefits (i.e. to all operators) and practicability, the Licensees are required to bear their respective costs.

Respondent Concern:

84. **Article E13.4 and E13.5:** Batelco disagrees with the TRA's proposition put forward in Paragraph 13.4 of the Explanatory Document on the implementation of Number Portability. In the case that OLOs all choose onward routing, given the substantial investment that will fall on Batelco, there should be asymmetrical charging allowed for each Porting - at least until Batelco has recovered the majority of its capital investment. Batelco would refer the TRA to CPS and Bitstream investment, which Batelco has not been able to recover.

TRA's Response:

85. Having reviewed the comments made by Batelco with respect to Article 13.4 and 13.5, TRA has amended the language of the Regulation with respect to Routing. Article 10 of the Regulation now obliges each Licensee to host a local copy of the database of Ported Numbers contained within the Central System and that such a local copy of the database of Ported Numbers is used in originating, routing and receiving calls to/from Ported Numbers. Furthermore, having regard to the purpose of the local copy of the database of Ported Numbers, each Licensee is obliged to ensure that calls will be routed in the most efficient way. Therefore, an All Calls Query (ACQ) approach to routing will occur using the local database of Ported Numbers as the first option and the Central System database as a secondary source of routing information.
86. With respect to the comments raised by Batelco concerning charging and cost recovery, TRA has established within Article 6 of the Draft Regulation and the supporting Explanatory Document (Articles 13.4 and 13.5) the principle of reciprocal non-discriminatory incremental charging in which the maximum charge is regulated by TRA. The maximum charge in the Regulation is set at benchmarked rates with a view to these being revised in the future and set at the costs of an efficient operator.
87. Batelco implies in its comments that it will bear greater establishment costs than other Licensees and therefore that its cost per Ported Number will be greater than that of other Licensees. Consequently it would like to be able to charge an asymmetrical i.e. higher rate. However, since the Donor Operator recovers its costs from the Recipient Operator and the Recipient Operator potentially recovers its costs from the Subscriber, the permissible use of asymmetrical (i.e. non-reciprocal charges) would most likely create an artificial barrier to Porting. That is to say that if a Subscriber wishes to Port from Batelco, the Recipient Operator would have to pay a higher charge to Batelco and would then be faced with either absorbing the additional costs or passing these on to the Subscriber. The likely effect would be to discourage Porting away from Batelco.

88. Consequently, TRA does not consider asymmetrical charging mechanisms appropriate, as these would serve to discourage the take-up of Number Portability.

Respondent Concern:

89. **Article E13.6:** Batelco disagrees with the TRA's methodology and proposed average charge. It is not at all clear why Bahrain will average around the EU average and not be closer to the EU maximum, which was EUR29. The TRA is reminded that Bahrain is a micromarket, where the capital investment for available numbers is much higher than the average. In addition, the TRA has set a maximum charge ceiling of only 50% (approx) of the European average. Whereas the European operators had charges set at a rate whereby a sizeable portion of the capital expenditure could be recovered, the TRA proposes at the outset to charge only the incremental cost of Porting, which entirely ignores the initial capital required. Given the choice of routing, the TRA will need to revisit this issue. Given the above, Batelco requests the TRA to provide a better-reasoned approach based on actual Bahrain figures in order to support any charges that have been put forward. In any case, given the absence of specifications, Batelco requests the TRA to remove any charges from the Regulation.

TRA's Response:

90. TRA has addressed the points raised by Batelco in Paragraphs 51 to 57 above.

Respondent Concern:

91. **Article E13.8:** Batelco would observe that the TRA's calculation is flawed and will not be sufficient to cover costs, given the very limited number of retail 800xxxxx and 900xxxx customers. Expected ports can therefore only be negligibly small in numbers, so that even a charge of EUR 18 will fall short of the costs of implementing this service.

TRA's Response:

92. Whilst Batelco has challenged the calculation used by TRA it has failed to provide any empirical evidence to support its claim that the initial maximum charge of BHD 10 would not cover the cost of Porting special and premium rate numbers. In the absence of actual cost data to support such an assertion by Batelco TRA is unable to comment further. However, Article 6.2 of the Draft Regulation stated that "TRA will determine and update the values of the maximum default reciprocal charges for each type of portability as necessary. TRA has determined the initial charges as follows:.....". As previously stated, the maximum charges outlined in Article 11(d) of the Regulation for each of the three number types eligible for Number Portability are initial charges. These will, as per Article 11(e) of the Regulation, from time-to-time be reviewed and may be amended.

Respondent Concern:

93. **Article E13.10:** It is not true that additional conveyance charges are avoidable if ACQ is implemented, given that not all operators are interconnected in Bahrain. Thus, additional conveyance charges will always apply, unless all operators interconnect. However, the interconnection of all operators in such a small market would not follow the principle of an efficient and cost-minimizing network. Batelco therefore strongly disagrees that the originating operator should bear the additional conveyance costs – this would, by default, increase the cost burden on Batelco disproportionately.

TRA's Response:

94. Having reviewed the comments raised by Batelco, TRA has amended the language of the Regulation to remove the references to additional conveyance charges. TRA has included in Article 11(h) of the Regulation a non-discrimination obligation that ensures Ported and Non-Ported Numbers are treated in the same way. Therefore, by implication, only appropriately approved interconnection charges can be imposed where additional conveyance is required.

Respondent Concern:

95. **Article E14:** Whilst Batelco expressed a number of concerns regarding termination rates/tariff transparency as proposed by the TRA in Section 14 of the Explanatory Document the primary concern relates to the use of Universal Numbers and the appropriate Number Portability Number type. By way of illustration: given the assumption that a Mena fixed customer has a Universal Number (Mena has 77xxxxxx range) and Batelco was paying fixed PSTN termination rates to Mena. Further assuming that this same number gets Ported to Zain, i.e. mobile - what would the termination rate be given the TRA's proposal?

TRA's Response:

96. In accordance with Article 5.2 of the National Numbering Plan "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." Consequently, when a Universal Number is Ported the "purpose" of that Number has already been determined by the Number Block Owner. As such, the appropriate Number Portability charge for that number type will be applicable. Therefore, it also follows that a Universal Number, the purpose for which has been stated by the Number Block owner as "fixed" cannot be Ported as a "mobile" Number and vice versa.

Respondent Concern:

97. **Article E14.6:** Batelco asserts that TRA is suggesting in Article 14.6 that the termination rates with the 3rd MNO will not be reciprocal to which Batelco rejects any proposal for asymmetry.

TRA's Response:

98. In February 2010 TRA issued its final determination and position paper with respect to Mobile Termination Rates⁴. In Paragraphs 40 to 47 of the position paper TRA articulates its position on symmetry. In summary, this states that it is the view of TRA that “mobile termination rates should be symmetrical unless there are objective and material cost differences which are outside the control of operators, Further TRA considers that asymmetry can only be considered for a transitory period in two specific cases”.
99. TRA identified in Paragraphs 43 and 44 of the position paper two reasons why asymmetrical rates could be objectively justified: differences in frequency allocation (this would apply to STC-Viva which has a smaller number of frequency channels assigned in the GSM 900 MHz range than either Batelco or Zain, both of which have roughly equal assignments); incumbency advantages arising out of the fact that new market entrants are required to make significant capital expenditures in order to meet coverage requirements, whilst having relatively few customers to support the network roll out that has been required to achieve coverage and, perhaps, to meet regulatory/license obligations.
100. Since STC/Viva has not been determined dominant in the 1 February 2010 “Dominance designation for termination services on individual mobile networks” STC/Viva would be free to negotiate and set its own termination rate within the guiding parameters of the 1 February 2010 “The Regulation of Mobile Termination Services” position paper published in support of the Dominance Designation.

Process Concerns

Respondent Concern:

101. **Article R7.2:** How does the Subscriber contact the Recipient Operator; a retail shop, website, call centre, via sms? Batelco would submit that the customer channel will be mainly determined by the Porting time and the degree of automation of the process. Given that customers will have to provide physical proof of identity, Batelco suggests that the only appropriate customer channel is the physical retail outlet. What information will be contained / requested in the Porting authorization request form, and what “other documents as required” does the TRA refer to? Batelco requests the TRA to elaborate.

TRA’s Response:

102. Having reviewed the concerns of Batelco and the request for elaboration with respect to the details of the Porting authorisation request form and “other documentation” TRA has amended the language of the Regulation. Article 6(a) of the Regulation now states that the necessary documents will be detailed in the Specifications.

⁴ <http://www.tra.org.bh/en/pdf/FinalDominanceDeterminationMTRsPublic.pdf> and http://www.tra.org.bh/en/pdf/FinalPositionPaper_onMTRsPublic.pdf

103. The Regulation remains silent with respect to the appropriate customer channel. As such, TRA, without prejudice to other regulatory requirements such as Regulation 2 of the year 2008 concerning the registration of prepaid mobile telecommunications subscribers, leaves this to the discretion of each Licensee.

Respondent Concern:

104. **Article R7.2:** If the Ported Number is ceased, who owns the number and who will be the donor for 2nd time Porting? If a Ported Number is ceased, because a customer leaves the country, will the number be allocated back to the initial donor?

TRA's Response:

105. Article 19 of the Explanatory Document sets out the Implementation Plan. Within this, Article 19.7 identifies the need for Number Portability Working Groups to be established in order to develop the appropriate specifications. Two such groups were dedicated to the tasks of preparing the appropriate processes for Fixed and Mobile Porting. Article 19.13 identified a non-exhaustive list of processes that required development which included subsequent Porting; Porting back to the Block Operator and Porting where neither Donor Operator nor Recipient Operator is the Block Operator; and termination of service. TRA had therefore clearly anticipated that such processes would be developed under the Specifications rather than within the Regulation.

106. However, TRA has modified the language of the Regulation to include direct reference to the termination of service and the requirement to return the Ported Number to the Block Operator within 30 calendar days after a service has been terminated (Article 8(c) of the Regulation). All other processes will be developed as appropriate within the Specifications.

Respondent Concern:

107. **Article R7.2:** The Porting Process is not very explicit and it is unclear as to how the process should work in terms of Order Management in CRM. When a request for Porting is received, should the circuit be ceased by the Donor Operator in the network, in provisioning and in billing applications? Or is it just a temporary suspension? Is the ownership of the number transferred onto the Recipient Operator? As regards the Porting Process, how will the communication and messaging via the Central System work between the Recipient and Donor Operator?

TRA's Response:

108. As per TRA's response in Paragraphs 105 to 65 above, the Explanatory document explained that Porting Processes will be developed as part of the Specifications.

109. With respect to the question regarding Number ownership, it must be noted that the processes relating to the ownership of a Number Block (not an individual number) remains unchanged from that detailed in the National Numbering Plan ("NNP").

Respondent Concern:

110. **Article R7.2 and R7.7:** What information will be supplied in the Porting request form as IT applications and databases require specific information to develop. The TRA needs to define what a “valid Porting request form” needs to contain and when a Porting Request is “valid”. What are the validation processes prior to submitting the form to the Donor? Batelco suggests that part of the valid Porting Request form is the requirement to include a copy of the last paid bill. The request form and Porting application process should also include advice by the Recipient Operator that the customer has to clear any outstanding debt and pay all his outstanding bills. The Recipient Operator should ensure that he verifies the number of times that the customer has Ported before, to avoid fraud.

TRA’s Response:

111. The Number Porting Request information requirements will be detailed in the Specifications.

Respondent Concern:

112. **Article R7.3:** The requirement to directly communicate only with the Central System and not other operators will require the definition of KPIs for response times. What is the error handling mechanism in the event of Porting Request refusals?

TRA’s Response:

113. TRA has amended the language of the Regulation. Article 6(c) of the Regulation now states that all communications with the Subscriber requesting to Port its Number will be made through the Recipient Operator. Furthermore Article 6(e) of the Regulation places a requirement on both “the Donor and Recipient Operators to do all things necessary, including communicate with each other in a clear and precise manner, to coordinate the handover of the Ported Number.....”. Article 4(c) of the Regulation requires “all Number Portability Requests, communications and messages between Recipient and Donor Operators regarding the Number Porting Process shall be electronic and must be exchanged through the Central System”
114. With respect to the process related issues and KPIs, these issues will be addressed in the Specifications.

Respondent Concern:

115. **Article R7.4:** Any operator should be allowed to reject the Porting Request if there is an overdue amount on the number (including those customers who have been temporarily out of service due to non-payment) (see the Explanatory Document at Paragraphs 16.23 & 16.24). There should be a possibility for rejection where any number owned by same account is overdue. As set out above, as part of a valid Porting Request, the last paid bill will have to be provided as proof. Alternatively, Batelco proposes that any overdue amount payable by the customer requesting the port should be borne by the Recipient Operator. The overdue amount can be added to the port charge applicable. In addition, there is an issue with any Ported Number with an outstanding amount that becomes overdue after

being Ported. In this case the Donor Operator can “blacklist” the customer on his own network, but the customer can still originate calls on the Recipient’s network and continue to refuse to pay the Donor Operator’s network overdue invoice. There must be a possibility where the Recipient network blocks the customer or agrees to pay the outstanding amount, including any roaming charges (Roaming TAP files are often received up to 6 months post-incurrence of charges). In the absence of direct debit, there is no guarantee for the Donor, that the Ported Subscriber will pay his outstanding amount

TRA’s Response:

116. Having reviewed the views expressed by Batelco, TRA has amended the language of the Regulation to include a “Bad Debt” definition as well as adding Bad Debt to the list of valid reasons for Donor Operator rejection of a Porting Request. However, the Bad Debt definition is restricted to only those overdue amounts in excess of BHD 3 that have been notified to the Subscriber and are directly attributable to the Number for which a Porting Request is being submitted. This figure was agreed by a forum of licensed operators at a meeting held on 27 October, 2009. Any other unpaid fees do not constitute Bad Debt within the context of Number Portability and must not be used as a basis for the rejection of a Number Porting Request. Notwithstanding the above the Subscriber still remains liable for any amounts due not directly relating to the Number for which a Porting Request has been submitted and the Donor Operator maintains full right to reclaim these fees from the Subscriber.

Respondent Concern:

117. **Article R7.4.1:** Definition of Material Errors required.

TRA’s Response:

118. TRA has amended the language in the Regulation to provide the appropriate level of clarification. Article 6(g)(1). A material error is qualified as an error in the Porting Request, such that the Request cannot reasonably be used.

Respondent Concern:

119. **Article R7.4.3:** Definition of “account number” required.

TRA’s Response:

120. The term “account number” had been used in the Draft Regulation by way of an example of where information may have been inconsistent or incorrect. TRA has amended the language of the Regulation which no longer contains the term “account number”. Article 6(g)(3) of the Regulation which replaces Article 7.4.3 of the Draft Regulation addresses generically the requirement for accurate and consistent authorisation information.

Respondent Concern:

121. **Article R7.5:** Batelco is unable to agree with the proposed Porting time, in particular given the absence of specifications. The Porting time proposal below is therefore only indicative, but could be in excess of 4 and 5 days. Batelco will be in a better position to assess the time required once the Porting type and process has been agreed with the other operators. Batelco has the following concerns with the proposed Porting times:

- a. Firstly, reducing the amount of porting time over time is unreasonable, given that Batelco will have to develop systems, processes and resources in compliance with the initial timeframes (2, 3 and 5 days). Two years later, Batelco will have to re-develop systems, processes and resources in compliance with a new porting time of only one day. This is a waste of resources and time, as Batelco would have to ensure at the outset, that the systems, processes, and resources are already developed for one day. From an economic viability point of view, Batelco would note that a reduction in the minimum does not make sense. Batelco would have to spend [X] for 2 and 3 days respectively. It would cost [Y] to change all systems again and achieve a “new” minimum of 1. Thus, Batelco would have to spend [Z] ($=[X] + [Y]$). If Batelco had configured systems from the outset to conform with the new proposed minimum of 1 [day], Batelco would have only spent [W], which is likely to be less than [Z]. (In particular considering any NGN vs Legacy implications, which also applies to the entire NP project).
- b. Secondly,, the proposed porting times for both fixed and post-paid mobile subscribers are too short. How would the verification mechanism be integrated?
- c. Thirdly, the porting time is restricted by technical constraints and depends on the degree of automation of the process. Batelco would note that the Porting Process in Bahrain is unlikely to have a high degree of automation, given that customers will have to provide physical evidence, which is only possible when physically visiting a retail outlet. This constraint will make the reduction of the initial minimum impossible, as porting will never be achieved within one day. There should also be a restriction on the number of ports per day that can be allowed into one direction to avoid administrative delay and congestion.
- d. As the process is Recipient led, Batelco can only commit to times it has control of and would therefore put forward the following possible approach given current processes for mobile and fixed NP (dependent on implemented solution and specifications):
 - i. (Where Batelco is recipient): Processing the request and submitting to the Donor: [excised] days.
 - ii. (Where Batelco is donor), in cumulative days:
 - a Validation of a request from Recipient Operator: [excised] days
 - b Implementation of mobile number: [excised] further days [excised].
 - c Implementation of single fixed line: [excised] further days [excised].

TRA's Response:

122. Article 7 of the Regulation replaces Articles 7.5 and 7.6 of the Draft Regulation.
123. Articles 16.7 to 16.17 of the Explanatory Document explain the relationship between Porting time and Porting take-up with a clear correlation between higher rates of take-up and shorter Porting times. It also identifies a number of countries that have, over time, shortened the permissible time allowed to complete the Porting Process. However, as stated in Article 16.13 of the Explanatory Document, TRA is sensitive to the trade-off between accelerating the permissible time allowed for Porting and the cost of supporting enhanced processes. As such TRA has established a requirement that all Porting should take no longer than 24 hours within two years of the Regulation coming into effect (Article 7(b) of the Regulation). The intent of including this article within the Regulation is to ensure that the systems and processes implemented by Licensees are capable, at minimal additional cost, of achieving these requirements within the two year time limit.
124. TRA therefore rejects Batelco's Porting time proposal on the basis that the obligation is to implement systems and processes that are designed to achieve a Porting Period of no longer than 24 hours within 2 years and the requirements of Article 7(a) of the Regulation.
125. TRA rejects Batelco's assertion that the permissible time allowed to complete the Porting process is too short. Articles 16.7 to 16.17 of the Explanatory Document clearly demonstrate that Porting times measured in single digit hours are achievable. Furthermore the EU Telecoms Reform Package which was approved by the European Parliament on 25th November 2009 (Directive 2009/136/EU) requires under Article 47 that Number Portability "...should be implemented with the minimum delay, so that the number is functionally activated within one working day and the user does not experience a loss of service lasting longer than one working day...".
126. Batelco's assertion that the Porting Process in Bahrain is unlikely to have a high degree of automation given that customers will have to provide physical evidence, which is only possible when physically visiting a retail outlet, is ill founded. At a basic level the Number Portability solution requires each Licensee to have connectivity to the Central System. The Central System will manage the flow of Number Porting Requests, communications and messages between the Recipient and Donor Operators. These will be in an electronic format to be defined in the Specifications. This in itself will require a relatively high level of automation. The decision of where a Subscriber makes a Porting request is at the sole discretion of the Licensees. However, the fact that there must be a signed contract between the Subscriber and Recipient Operator would imply physical presence at that point in time. Consequently TRA does not agree with the assertion made by Batelco.
127. Please also refer to Paragraphs 62 to 65 of this Report.

Respondent Concern:

128. **Article R7.5.1:** When does the clock start ticking? When the customer submits the request to the Recipient Operator? When the Donor Operator receives the request?

When the Donor Operator accepts the request? If the request is rejected by the Donor Operator, when does the Donor Operator have to notify the Recipient Operator and how long does the Recipient Operator have to notify the rejection to the end user?

TRA's Response:

129. Article 7.5. in the Draft Regulation has now been replaced by Article 7 in the Regulation. In order to provide greater clarity, Article 7(a) of the Regulation now states that the time and date on which the Porting Period starts is that on which a Porting Request is approved by the Donor Operator. Maximum permissible Porting times have also been restated in hours rather than days as stated in Article 7.5 of the Draft Regulation.
130. Whilst the Regulation provides clarity with respect to the point in time at which the "clock starts" and the maximum permissible Porting Period, details of the process itself and associated KPIs will be articulated in the Specifications.

Respondent Concern:

131. **Article E16.7:** Batelco is unable to find any supporting evidence as regards the TRA's statement "...allowing times longer than 2 days does not provide any further savings". Batelco seeks clarification regarding the correct interpretation of this statement. Savings to whom?

TRA's Response:

132. Experience has shown that the main cost savings to Licensees for the implementation for Number Portability has been derived from automation and batch processing. There is no evidence to indicate that Porting Periods longer than 2 days would achieve greater cost savings.

Respondent Concern:

133. **Article E16.11:** TRA confirms in Paragraph 16.11 that Fixed and Mobile Portability cannot be achieved within the proposed timeframes of 2 days for mobile and 3 days for fixed numbers: it takes 4-5 days in the UK for a single fixed line and 17 days for multi-lines (PABX).

TRA's Response:

134. Batelco's response has omitted certain facts and is taken out of context. Please refer to Paragraphs 62 to 65 above and Article 7 of the Regulation

Respondent Concern:

135. **Article R7.8 and R7.9:** What is the process for the Recipient Operator to check that the customer has been assigned the number? This paragraph is somewhat in conflict with the Paragraph 7.4, where the Donor Operator checks the account number, customer and number match.

TRA's Response:

136. The process of handover will be fully detailed in the Specifications. Please also refer to Article 8(b) of the Regulation.

Other Requirements

Respondent Concern:

137. **Article R8.1:** NP should not be ordered by the Recipient until he (1) has advised the customer to clear any outstanding debt with the Donor; and (2) has received evidence that the Porting Subscriber has no outstanding debt with the Donor.

TRA's Response:

138. The Donor Operator may reject a Number Porting Request if the Subscriber has any outstanding 'Bad Debt' with the Donor Operator, as per Article 6(g)(4) of the Regulation. 'Bad Debt' is defined in the Regulation. Any other unpaid fees do not constitute Bad Debt and must not be used as a basis for the rejection of a Number Porting Request. However, the Subscriber still remains liable for these fees and the Donor Operator maintains full right to reclaim these fees from the Subscriber. At no time is the Recipient Operator liable for the fees payable by the Subscriber.

Respondent Concern:

139. **Article 8.2:** Winback is a viable commercial strategy and has clear competitive benefits. There is no rationale for a prohibition. As the TRA describes in the Explanatory Document in Section 15, in most countries Winback is not prohibited but regulated by codes of practice. Such a "regulation" or "guideline" could be incorporated into the TRA's Competition Guidelines. (To a degree, a prohibition can hardly be enforced in situations where a customer walks into a retail shop. A prohibition would mean that the sales staff would have to greet a customer with the question whether the customer has Ported or not. If yes, then no more sales activity is allowed). TRA should also remain in line with other access products, such as CPS, which allows Winback after a lapse of 6 months. Batelco can therefore not agree with the TRA's outright prohibition of "Winback". On the contrary, Winback encourages competition, not the other way around, given that there is an incentive for the Recipient Operator to ensure that what he promised to the Porting customer with more attractive offers will materialize. If there is no Winback, there is no threat of customer loss, hence room for complacency. Batelco can therefore not agree with the TRA's proposed prohibition of Winback.

TRA's Response:

140. TRA has addressed the question of Winback under the section on general comments. Please refer to Paragraphs 67 to 69 above.

Respondent Concern:

141. **Article R8.3:** Batelco is concerned that the TRA, rather than an NP technical expert, will establish the database. Also, a database is the most complex and costly solution, given that routing would only be most efficient when all operators are interconnected, which is not the optimal and cost-minimizing network architecture for a country the size of Bahrain. The “functions” and “services” that the Central System is meant to perform have not yet been defined. Batelco therefore cannot endorse the TRA’s proposed approach. Batelco would suggest, however, that the establishment, running and set-up is performed by a third party expert (or an operator), who is appointed by the industry.

TRA’s Response:

142. TRA agrees that experienced individuals and/or teams should implement the Central System, and to this end, TRA established a working group for the Central System that will define the specifications of the Central System. However, TRA reserves the right to appoint the necessary specialists to implement the project as is necessary to serve the interests of the industry as a whole. As per Article 11 of the Regulation, TRA will establish and administer the Central System.

Respondent Concern:

143. **Article R8.4:** Firstly, Batelco does not agree with TRA’s proposal that operators are to pay for the operation of the Central System. This is against the principle of “cost causation”. Also, Number Portability is a non-viable, no-benefits, non-profit generating and a very expensive “service”, that none of the private operators would offer as part of their product portfolios in the absence of regulation. Hibbard Consulting’s Cost-Benefit Analysis has clearly shown that benefits are net negative, regardless of the Porting solution adopted. It is also clear from the Regulation and the Explanatory Document, that Number Portability is not central to the Central System, given that operators have a choice of routing and given that the Central System is envisaged to cover other services, such as ENUM and/or .bh, routing allocation of numbers and individual number allocation. Why should operators that clearly have no business interest to supply such a service pay for NP development and for other capabilities in the Central System.
- Secondly, TRA will determine by issuance of a formula what the payments by operators due to cover the Central System’s operating costs should be. If there are any operating charges to be paid by operators, then such a formula will need to be consulted upon and agreed, in particular when the operating costs depend on the number of “dips” and porting volume per operator (what is the cost standards used, what is the chosen method of depreciation etc). In any case, TRA will have to set out clearly, in the case where operator “opt-out” of ACQ routing, whether such operators are also subjected to Central System operating cost contributions, given that the Central System is meant to be established for the benefit of all operators.

TRA’s Response:

144. The comment raised by Batelco does not raise any additional concerns beyond the cost of implementing and operating the Central System. TRA has addressed the question of Cost Distribution under the section on General Comments. Please refer to Articles 11(a) and 11(b) of the Regulation and Paragraphs 49 to 57 above. Please also refer to Section E3 for the benefits of Number Portability.

Respondent Concern:

145. **Article R8.5:** As per Paragraph 8.3 - Batelco is concerned that the TRA leaves “discretion” as to whether it will appoint a third-party administrator or not to establish or administer “TRA may appoint”. Batelco would strongly recommend a third independent party (or operator) to be appointed for both the establishment and administration of the Central System, given the TRA’s lack of technical and NP implementation expertise.

TRA’s Response:

146. TRA will appoint suitably qualified individuals or teams to implement the Central System, whether as an internal resource or a third party. However, it remains TRA’s preference to outsource the operations of the Central System to an experienced third party.

Respondent Concern:

147. **Article R8.5:** A third party Central System administrator should make all information and performance indicators available for all OLO’s in case a Central System solution is implemented.

TRA’s Response:

148. This comment has been duly noted, and will be incorporated into the requirements of the Central System operator.

Respondent Concern:

149. **Article R8.7:** TRA states in its Explanatory Document in Paragraphs 14.8 and 14.9 that providing a free website or voice response service where potential callers can find which operator serves a particular number, has not been very successful. It is questionable why the TRA is still proposing it? In this regard, however, the TRA will need to closely observe any legal obligations (contained in the Telecommunications Law, Licenses or Competition Guidelines) that operators have towards customers to ensure tariff transparency. If there are obligations, then any costs incurred will need to be taken into consideration when setting routing and Porting charges.

TRA’s Response:

150. This comment has been duly noted. TRA had proposed to enable an online service to check with which Licensee a Number is being served as a value-added service that comes as a by-product of implementing the Central System (i.e. the information is already

available and requires a simple query interface for online users to access). TRA is still minded to include such a service with the Central System.

Respondent Concern:

151. **Article R8.8:** Exemption of operators: The TRA states that the reason for NP is “user right” based (clause 2.2 a). If this statement is adhered to by the TRA then there is no valid reason to exempt any operator for any amount of time. This also applies to Paragraph 8.4 of the Explanatory Document regarding VoIP NP.

TRA’s Response:

152. TRA has addressed the question of Licensee Exemption under the section on General Comments. Please refer to Paragraphs 59 and 60 above.

Respondent Concern:

153. **Article E12.9:** TRA is looking to enhance the functionality of the Central System. Batelco is concerned that the costs of such a database will be allocated to the NP implementation. Whilst it is a good idea to plan for the future there is no need to invest in a system with added functionality unless absolutely required. A cost-benefit analysis would be required and any operating charges levied onto operators that relate to the Central System will have to reflect NP-related direct costs ONLY.

TRA’s Response:

154. TRA has addressed the question of cost distribution under the section on General Comments. Please refer to Paragraphs 49 to 57 above.

Respondent Concern:

155. **Article E12.10:** Same comment as above - the TRA is suggesting that the role of the TPA (third party administrator) should be expanded beyond Number Portability. This will also expand the operating costs of the TPA and hence the costs Licensees will pay and ultimately pass on to consumers.

TRA’s Response:

156. TRA has addressed the question of cost distribution under the section on General Comments. Please refer to Paragraphs 49 to 57 above. Should TRA consider the introduction of new functions to the Central System beyond the scope of Number Portability TRA will, where required, duly consult upon these new requirements and any cost allocation. It is important to note that the fact that TRA has determined to bear the initial capital costs and subsequent operational expenses of the Central System in this case, does not preclude TRA for charging or allocating costs amongst operators for other functions that the Central System may undertake.

Respondent Concern:

157. **Article E12.11:** TRA should implement a NP solution without a Central System.

TRA's Response:

158. Batelco provides no arguments to support this comment. TRA does not agree with this assertion, and has previously provided its reasons and justifications for implementing Number Portability with the use of a Central System. These reasons, which remain valid, are as follows:
- a. The Central System facility ensures a central overview of the Porting Process; troubleshooting of faults is made much easier;
 - b. The Central System maintains measurements of Porting KPIs and individual operator performance; and
 - c. The Central System will accelerate the implementation of Number Portability in Bahrain;
 - d. The Central System can support other industry functions such as ENUM.

General Comments by Batelco

Respondent Concern:

159. **General Comment:** The Central System requires a clear process and policy as regards security, confidentiality, and resilience/diversity.

TRA's Response:

160. TRA strongly agrees with this comment. There are several issues to be taken under consideration by TRA and the industry with regards to this matter, including without limitation planning for diversity and resilience, development of technical security processes and procedures and an administrative security policy, strong data privacy practices and governance of user information, strict change management procedures, and a clear set of communication protocols. These concerns will be addressed in the procurement and implementation of the Central System.

Respondent Concern:

161. **General Comment:** What is the proposed connectivity with the database and which protocol would be used?

TRA's Response:

162. The means by which the Licensees connect to the Central System is left to the discretion of each individual Licensee. In all instances, Licensees will be barred from accessing the Central System through the Internet; direct local connectivity is a requirement. Without

prejudice to the final decision, TRA is currently minded to use XML as the messaging protocol. This will be clearly defined in the Specifications.

Respondent Concern:

163. **General Comment:** What type of redundancy arrangements will be in place, given that the Central System would be a single node and thus in case of any issues would be a single point of failure?

TRA's Response:

164. These arrangements cannot be fully defined at this time as the details of such redundancy must be discussed with the solution provider. However, TRA will, as much as possible, adhere to industry best practices in the technical design of the Central System. In order to limit any risk caused by a potential failure in the Central System, TRA has mandated that all Licensees must maintain a local Licensee Copy of the database of Ported Numbers as contained in the Central System. This ensures that the Central System does not become a single point of failure with respect to lookup of Ported Numbers. Furthermore, the connectivity between Licensees and the Central System is the responsibility of each individual Licensee. Please refer to Articles 10 and 11(b) of the Regulation.

Respondent Concern:

165. **General Comment:** There needs to be a process in place for dealing with Number Portability Central System database mismatch issues.

TRA's Response:

166. Article 10(a) of the Regulation mandates that a local copy of the Central System's database of Ported Numbers be maintained locally on each Licensee's network. Central System technical details regarding database synchronization will be addressed in the Specifications.

Respondent Concern:

167. **General Comment:** In the context of Paragraph 11.18 of the Explanatory Document, Batelco would request the TRA to confirm Batelco's understanding that the Central System would only be accessed during the initiation phase of any Porting Request and once the Subscriber has been successfully Ported then the Central System would not be accessed for the normal calls until such time where the customer decides to port again.

TRA's Response:

168. The Central System will be used to process Number Porting Requests, and to provide a master copy of the database of Ported Numbers. The language of the Regulation has been amended to clarify the purpose of the local copy of the database of Ported Numbers. Article 10(a) of the Regulation now states that the purpose of the local copy of the database is for originating, routing and terminating a call to a Ported Number.

Respondent Concern:

169. **General Comment:** Would the Central System be able to accommodate caller location of emergency services and telephone directory?

TRA's Response:

170. The main purpose of the Central System is to serve as a repository of information about Ported Numbers, and is not intended to provide directory services to the level that is required of Licensee's as detailed in their License conditions. Furthermore, the information stored in the Central System is not conditional upon the Subscriber name. With regard to location of Subscribers, this capability is mandated under Regulation 9 of the year 2009 concerning the implementation of Lawful Access. TRA does not intend for the Central System to hold any Subscriber information that may be deemed confidential, including information such as the full registration details of the Subscriber or their location.

Respondent Concern:

171. **General Comment:** Batelco requests the TRA to explicitly state what type of reports and statistics the operators can obtain from the centralized databases and how frequent such reports would be.

TRA's Response:

172. TRA will expand upon the type of reports in the Specifications.

Respondent Concern:

173. **General Comment:** Impact on Numbering Plan (Section 10 of Explanatory Document): The TRA is examining in Section 10 how to allow Porting from Fixed to Mobile and Mobile to Fixed. Batelco submits that this cannot be allowed at this moment, as the difference in termination rates for PSTN compared to mobile is substantial. There are significant hurdles to be overcome in attempting to port numbers, which have changed their status. To our knowledge this has never been attempted anywhere else in the world on a significant scale.

TRA's Response:

174. Articles 4.1 to 4.3 of the Draft Regulation clearly stated the types of Number Portability that were to be required. This has now been replaced by Article 5 of the Regulation. Once again, the Regulation does not contemplate Porting between Number types.

Respondent Concern:

175. **General Comment:** Paragraph E10.1: This clause contradicts itself – the TRA states "Furthermore numbers are not ported between ranges" , but it also states in the same sentence "a number from a given range may be Ported to another operator with allocations in the same or different ranges". We believe the current definitions in the Draft

Regulation do not include the safeguard to prevent numbers of mixed status in the same range from being Ported. The implications of this are fundamental and all the scenarios need to be worked through in order to assess whether the cost is more than the benefit.

TRA's Response:

176. This statement reflects the fact that a Ported Number does not automatically become part of a Recipient Operator's Number Block. As Number Blocks are uniquely assigned to each Licensee, all Ported Numbers will form their own 'grouping' with each Recipient Operator and will be dealt with directly. Licensees will be charged for such Ported Numbers as though they were allocated to them.

Respondent Concern:

177. **General Comment:** TRA allows in Paragraph E10.3 the Porting of Universal numbers (range 6xxxxxxx and 7xxxxxxx) to either fixed or mobile services. This is a very significant issue for billing, in particular when the termination rates are different. The TRA should define and restrict the Porting of Universal Numbers to either fixed or mobile or set a different termination rate for these number ranges.

TRA's Response:

178. Please refer to TRA's response in Paragraph 96 above.

Respondent Concern:

179. **General Comment:** In the context of Article E10.6, TRA is looking to erode the difference between the termination rates to within 20% of each other. Currently, the rate for PSTN is from 2.382 to 3.040 fpm and Mobile from 6.626 to 7.332 - over 100% difference. The TRA must understand that given the substantial prevailing difference in termination rates that (1) convergence of mobile and fixed has not been reached, (2) the relevant markets are defined as separate mobile and fixed markets and still are separate given the difference in termination rates, (3) demand- and supply-side substitutability will determine convergence, not the setting of a 20% range. This would send wrong market signals.

TRA's Response:

180. This is a matter that has been established by the National Numbering Plan and not the Regulation. TRA has previously announced its intention to revise the National Numbering Plan and may address this matter in an upcoming public consultation.

Respondent Concern:

181. **General Comment:** In the context of Article 10.8 [of the Draft Regulation], with reference to Paragraph 10.3, TRA is attempting to allow Universal numbers to port to either Fixed or Mobile services. As mentioned, this is a very significant issue for billing systems. How would, for example, the IAA system decide if any particular Universal Number is Mobile or

Fixed? As proposed above, one way of "fixing" this may be to allow Universal Numbers to port to only Mobile or only Fixed.

TRA's Response:

182. Please refer to TRA's response in Paragraph 96 above.

Lightspeed's comments on the Regulation

Respondent Concern:

183. **Article R4.4:** The article fails to mention the financial penalties associated with a refusal to implement after 30 September 2009. This is crucial, in our view, to ensure that operators implement Number Portability. We understand that Article 9 of the Draft Regulation addresses this issue but we stress that the amount of financial damages that would result from refusing to implement Number Portability and/or creating obstacles and constraints to delay the implementation of Number Portability should be severely punished financially as well.

TRA's Response:

184. Article 5(b) of the Regulation replaces Article 4.4 of the Draft Regulation. Under Article 5 of the Regulation, TRA has amended its approach to setting fixed date deadlines in favour of a specific period of time from the date on which the Specifications are published on TRA's website.
185. With respect to the financial comments regarding "severely financially punished", Article 9 of the Draft Regulation has been replaced by Article 12 of the Regulation. Given that Article 12 contemplates failure to comply with the Regulation as a "breach" of License, in the eventuality that such a breach is committed then Article 35 of the Telecommunications Law would apply. Consequently, TRA does not consider it necessary to impose specific sanctions in the Regulation itself.

Respondent Concern:

186. **Article R8.8:** We strongly believe that the way the article is drafted gives room for exemption to all operators in the market. This contradicts with the purpose of introducing Number Portability to the Bahraini market and will represent a loophole for dominant operators to use to avoid implementing Number Portability. Lightspeed stresses that exemptions should only be made available for new entrants and small operators with a significant low market share.

TRA's Response:

187. Article 8.8 of the Draft Regulation has been replaced by Article 5(c) of the Regulation. TRA has addressed the concern regarding temporary exemption in Paragraphs 59 and 60 above.

Respondent Concern:

188. **Article E6.1:** "Fixed Number Portability is relevant only where there is competition for incoming calls" Lightspeed seeks clarification on this phrase.

TRA's Response:

189. The simple premise underpinning Number Portability is that Subscribers are sensitive about the number on which they receive calls, i.e. incoming calls, as this provides other Subscribers with a convenient means of contacting that Subscriber. Therefore if there is no competition for incoming calls i.e. alternative fixed telephony service providers there is no alternative service provider to which a Number could be Ported.

Respondent Concern:

190. **Article E14.11:** Lightspeed seeks more clarification regarding specific measures that the TRA would impose on operators in the future for tariff transparency.

TRA's Response:

191. The matter of tariff transparency, as addressed in the Explanatory Document, is concerned with informing users about on-net vs. off-net numbers for purposes of estimating the cost of a call. This becomes an issue when operators offer deep on-net discounts that may discourage users from calling numbers that are off-net, or Ported. As per Article 11(h) of the Regulation, Licensees are not allowed to discriminate in charges between Ported and Non-Ported Numbers. Where it is suspected that a Licensee is in breach of this Article, or other provisions in the Telecommunications Law or applicable Licenses, TRA may launch an investigation.

Respondent Concern:

192. **Articles E16.30 and 16.33:** Lightspeed strongly suggests the issuance of standardized Key Performance Indicators (KPI's) such as, but not limited to, date of requesting Porting by the customer, the duration needed for implementing Porting, number of Winback customers, number of times whereby a customer or customers(if any) has(ve) asked for Porting their numbers during the Porting Period; these KPI's are supposed to enable the TRA to govern, monitor and control the operators' performance in meeting all the requirements for the Numbering Portability; such KPI's should be embedded and included in the said regular reporting to ensure the commitment of the operators and this is assumed to highlight clearly the transparency, increase the efficiency and thus protect subscribers.

TRA's Response:

193. The Specifications, which were released for public consultation between January and March, 2010, contained a full list of KPIs for the Number Porting Process. TRA is currently reviewing the responses received to the public consultation and will shortly be publishing the final Specifications.

194. In addition, Article 7 of the Regulation contains high-level KPIs that must be adhered to with respect to the maximum permissible Number Porting Period.

195. Article 4(d)(4) of the Regulation also states the minimum capability of the Central System with respect to performance measurement against the service parameters to be contained in the Specifications.

Respondent Concern:

196. **General Comment:** Lightspeed strongly suggests that TRA should obligate all operators providing Number Portability (when it is implemented) to develop and make available for all Subscribers and at all sales points a user-friendly and educational guide that contains all the clear and simple steps and procedures to the Porting Process.

TRA's Response:

197. TRA agrees with Lightspeed that in the interest of safeguarding the interests of consumers that there should be clear user-friendly, educational guides to Number Portability available to the consumer.

198. The TRA encourages Licensees to agree on a set of minimum guidelines to ensure consistency and user-friendliness for Subscribers across all Licensees. However, as the details of such information is of a commercial nature and may vary across Licensees, the TRA is not minded to mandate in what format or style such information may take.

Mena Telecom's comments on the Regulation

Respondent Concern:

199. **Article R4.4:** The facilities shall be made available no later than 30 September 2009. While Mena Telecom welcomes the introduction of Number Portability, it finds it unreasonable that the TRA sets a deadline for implementation and not issue the specifications required for such implementation. Mena requests that TRA make such specifications available to operators. Clause 4.4 refers to 4.1 and 4.2 which are not sufficiently detailed to show that achieving the requirements is possible by the deadline.

TRA's Response:

200. Please refer to TRA's response in Paragraph 184 above.

Respondent Concern:

201. **Article R6.2:** Regarding the payment by the Recipient Operator to the Donor Operator, is the payment of maximum default reciprocal charge to be considered an alternative/fall back option when negotiations between the Donor and Recipient Operators fall apart.

TRA's Response:

202. TRA confirms Mena's interpretation of the article.

Respondent Concern:

203. **Article R6.2:** The payment by the Recipient Operator to the Donor Operator can be determined through two methods. The first is by negotiations between the Donor and Recipient Operators. Mena understands this option would allow for different charges set by different parties. The second option is based on maximum default reciprocal charges determined by the TRA. Mena telecom would like to know the reason/rationale behind having the charges for Fixed Number Portability (BHD 6.000) higher than Mobile Number Portability (BHD 4.000). Mena telecom believes that mobile number should be higher than fixed Number Portability, not the contrary. Furthermore, Mena Telecom would request the TRA to clarify the reason behind the TRA charging higher.

TRA's Response:

204. Please refer to Paragraphs 49 to 59 of this document for TRA's response.

Respondent Concern:

205. **Articles R7.5 and 7.6:** These articles provide an estimate time for the Porting Process between the Donor and the Recipient Operators, in the case of mobile numbers two working days. Both clauses give the Recipient Operator the right to request an extension beyond those two working days (proposed one working day within two years). Mena

believes it would be reasonable for the TRA to acknowledge the possibility that the Donor Operator too may require an extension beyond the two working days.

TRA's Response:

206. TRA does not agree with this assertion. Since the process is Recipient-led, TRA is of the view that the burden of responsibility is primarily on the Recipient Operator being capable of receiving the number. As such, the Recipient Operator may need some extra time to prepare their systems to receive and serve the Ported Number. The Donor Operator however only needs to acknowledge the Number Porting Request, whether by rejecting the Request on the grounds established in Article 6(g) of the Regulation or by accepting the Request, and then release the number to the Recipient Operator. Neither the acceptance nor rejection would require an extended period of time.

Respondent Concern:

207. **Article R7.9:** Concerning post-pay accounts, Mena would like to inquire whether it is the TRA's intention to make pre-pay account numbers portable.

TRA's Response:

208. The Number Portability requirements apply to all fixed and mobile telecommunications services that use Numbers.

Respondent Concern:

209. **Article R8.2:** This article states that "the Donor Operator shall not engage in Winback". Mena would like to know the measures proposed by the TRA in order to stop/monitor such activity.

TRA's Response:

210. Article 8.2 of the Draft Regulation has been replaced by Article 9 of the Regulation.

211. Whilst TRA has no plans to introduce formal tools to proactively monitor Donor Operator activities with respect to "Winback", Article 9 of the Regulation does provide clarity with respect to the activities TRA would consider as "Winback". TRA will investigate any claims by Recipient Operators or Subscribers that Donor Operators are engaging in such activities and will, as appropriate and necessary, sanction as per the relevant provisions of the Telecommunications Law.

Respondent Concern:

212. **Article R8.4:** TRA expects Mena and other Licensees will bear the operational costs of the Central System. The amount and formula of payment have not been issued by the TRA. Therefore, the market is unable to comment on its viability. This would put unfair and unnecessary costs on new operators such as Mena Telecom.

TRA's Response:

213. Please refer to Paragraphs 49 to 57 of this document for TRA's response.

Respondent Concern:

214. **Article R8.5:** Regarding the Central System measuring the performance of all Licensees, Mena would like to know whether the results will be published.

TRA's Response:

215. In keeping with TRA's policies with respect to transparency and confidentiality, TRA intends to make available periodic reports on the performance of Licensees with respect to Number Portability KPI's, details of which will be published in the Specifications.

Respondent Concern:

216. **Article R8.8:** The TRA reserves the right to exempt Licensees from the requirement to implement Number Portability or any part of its functionality for a limited or unlimited period. Mena is in support of such a measure; however, it would like to know on what criteria/standards the TRA will base its decisions.

TRA's Response:

217. Please refer to Paragraphs 59 and 60 of this document for TRA's response.

Respondent Concern:

218. **Section R7:** In section 7 'The Porting Process', TRA provides operators with stages of the Porting Process. Mena believes that the role of the Donor Operator is absent and would request the TRA to clarify the role of the Donor and its relationship with both the Recipient Operator and the Central System. Mena would like to further inquire whether the Recipient Operator's name be disclosed to the Donor Operator.

TRA's Response:

219. The Number Porting Process is Recipient-led, which puts most of the procedural responsibilities on the Recipient Operator. The Donor Operator's role is mostly to acknowledge the Number Porting Request and to assist in a smooth handover of the Ported Number from the Donor Operator's network to the Recipient Operator's network. As per Article 4(c) of the Regulation, the Central System forms the channel through which all Number Portability communications must be exchanged. Therefore, the Number Portability Request and all subsequent communications sent and received by both the Donor and Recipient Operators will be exchanged through the Central System.

220. TRA confirms that the Recipient Operators identity will be disclosed to the Donor Operator.

Zain's comments on the Regulation:

Respondent Concern:

221. **Article R2.2:** TRA is already making progress on the introduction of the third mobile operator despite the size of the market, which in any event will further raise the level of competition and no doubt lead to various radical commercial arrangements as has been seen in other countries. This new environment will have a great impact not only on the operators but also on the end-user which could destroy the value of NP. Hence, Zain Bahrain strongly recommends that NP be introduced after the launch of the third mobile operator and only once the market has achieved a certain level of stability. In this way, any disruptions that might be caused as a result of the overlap of NP and the introduction of the third operator can be avoided. In addition, Zain Bahrain respectfully notes that the introduction of fixed line NP prior to the issuance of a consultation on the Regulation for Local Loop Unbundling (LLU) is highly impractical and detrimental to the telecom market as a whole since the market would face a situation in which NP was being implemented in an environment where the regulatory framework is not yet fully established.

TRA's Response:

222. TRA is of the opinion that this statement is no longer applicable as the Access Order for Local Loop Unbundling ("LLU") has been published⁵. Number Portability and LLU are complementary products that synergise well together. In addition, the third mobile operator has launched its services, and is expected to have achieved a 'certain level of stability' by the time Number Portability is introduced.

Respondent Concern:

223. **Article R4.6:** Although the TRA is mentoring the deployment of NP (as an obligation), it should not interfere in the development of the specifications of the intended solutions. Such specifications should be worked out by the industry in accordance with the relevant TRA Regulations.

TRA's Response:

224. Please refer to Paragraphs 45 to 47 of this document for TRA's response. TRA is currently reviewing the responses received from the public consultation and will publish the Specifications shortly.

Respondent Concern:

225. **Article R6.5:** It would be helpful if the TRA could explain what is meant by "incomplete Routing Information" and "Additional conveyance", and also under which call scenario the

⁵ See Access Order No.1 of 2009 regarding Local Loop Unbundling (<http://www.tra.org.bh/en/pdf/AccessOrder1of2009-LocalLoopUnbundling.pdf>)

above could take place. The TRA is kindly requested to elaborate and to more fully explain this paragraph as well as the associated scenarios charges.

TRA's Response:

226. Please refer to Paragraphs 78 and 79 of this document for TRA's response.

Respondent Concern:

227. **Article R6.6:** As in Section 6.5 above, the TRA is asked to elaborate on the basis for the proposed charge of BD 0.0025 and the call-scenario to which it is related.

TRA's Response:

228. Please refer to Paragraphs 78 and 79 of this document for TRA's response.

Respondent Concern:

229. **Article R8.3:** Please refer to the comments under Section 4.6 above. Furthermore, the SLA and QoS need to be shared and agreed between the operators and the Central System Service Provider.

TRA's Response:

230. These comments are duly noted.

231. The SLA and QoS will be done after appointing the solution provider of the Central System. These documents will be defined in line with the requirements stated in the Regulation and Specifications. TRA is minded to develop the SLA and QoS documents with the solution provider selected to implement the Central System, in order to ensure that the service level targets are realistic and achievable.

Respondent Concern:

232. **Article R8.4:** The TRA needs to share with the operators the expected cost to be incurred, in order for the operators to assess and prepare the required budget. The TRA also needs to explain when payment for this is likely to begin and the period of payment: i.e. if it will be monthly, quarterly or annually. The operators also need to know if the operational cost will be divided between the operators equally or based on a utilization basis, as such decisions will directly impact the operators' business.

TRA's Response:

233. Please refer to Paragraphs 49 to 57 of this document for TRA's response.

Respondent Concern:

234. **Article R8.5:** Zain Bahrain believes that the industry (working groups) should be responsible for identifying the best supplier of the Central System. It should also be left to

the industry to decide which third party should establish and administer such a platform, as the SLA and QoS need to be agreed between all parties involved.

TRA's Response:

235. Please refer to Paragraphs 45 to 47 of this document for TRA's response.

Respondent Concern:

236. **Article R8.8:** This [article] conflicts with the main objective that the introduction of NP is relying upon, by referring to Section 2.2(a) of the public consultation documents "TRA considers Number Portability as a user right that will also facilitate the further development of competition in the market" and the approach of EU as a User-Right. TRA should make sure that NP is provided by all Licensees who are entitled to Numbering Assignment, thereby eliminating any anticompetitive practices. Even new entrants should be obliged to abide by this Regulation and from day one. Moreover, the TRA should share with the industry the exact definition of "Newly Licensee" and, whether it is based on the date of launch of the service or the date of granting the license, and for how long the operator may be considered to be a newly Licensee.

TRA's Response:

237. Please refer to Paragraphs 59 and 60 above. Furthermore, a Licensee that is granted a telecommunications License involving the assignment and use of Numbers after the date on which the Number Portability Regulation comes into effect, must comply with the Regulation before launching or introducing any telecommunications service. Please refer to Article 5(a) of the Regulation.

Respondent Concern:

238. **Article E3.10:** Although Zain Bahrain believes the setup cost corresponds to the direct cost of the Hardware and Software needed to allow NP, there are other indirect costs resulting from the increase in the processing time of the network elements and further delays in the call setup time because of the additional interrogation and routing of Ported Numbers. This additional processing and associated indirect costs are proportionate to the number of the Ported Subscribers. Hence, operators will support fewer subscribers on the same Network elements. Zain Bahrain considers that the additional equipment needed for NP will also require periodic SW and HW upgrades depending on the load, and that NW-topology should be mentioned. Moreover, the setup cost should also include the changes to the network for MMS routing rather than only covering the call and SMS routing.

TRA's Response:

239. Zain made no direct comment, enquiry, or argument that TRA can directly address. It is unclear how Licensees will support fewer subscribers on the same network elements, but in all cases, each Licensee shall bear all costs associated with their own implementation of Number Portability as per Article 11(b) of the Regulation.

Respondent Concern:

240. **Article E3.13:** Zain Bahrain observes that the following statement is vague: "... the price paid by the Subscriber to the Recipient Operator for Porting should be equal to the volume dependent incremental cost of Porting". And would like to have a more precise explanation from the TRA.

TRA's Response:

241. The language in the Regulation has been amended to clarify this point. Please refer to Article 11(g) of the Regulation for further details.

Respondent Concern:

242. **Article E4.3:** Zain Bahrain believes that the cost of importing or exporting numbers is the same and would therefore appreciate an explanation from the TRA as to why it has been assumed that the importing is more expensive than exporting in point number 3.

TRA's Response:

243. This statement is no longer applicable as this scenario is no longer valid due to the implementation of Number Portability being mandatory for all Licensees.

Respondent Concern:

244. **Article E4.9:** It is Zain Bahrain's view that this contradicts the main objective of introducing NP and the approach of the European Union as a User-Right. The TRA needs to ensure that NP is provided by all Licensees who are entitled to Numbering-Assignments, thereby eliminating any anticompetitive practices. Even new entrants should be obliged to abide by this Regulation from the outset.

TRA's Response:

245. Please refer to Paragraphs 59 and 60 of this document for TRA's response.

Respondent Concern:

246. **Article E5.2:** The proposed solution should include MMS services.

TRA's Response:

247. TRA agrees that MMS services should be included in the services available to a Ported Number (if offered normally). The Specifications will reflect this requirement.

Respondent Concern:

248. **Article E5.5:** This contradicts a number of sections in the same document, namely:

- a. Article 2.1: As it is clearly mentioned "TRA conducts market research with both consumers and business groups as part of the Strategic and Retail Market Review. One of the

findings of the market research was that “the lack of Number Portability constitutes a significant barrier to switching for both business and residential customers”; therefore, the only obligation to provide NP is as a “User Right”. What is stated above is not a measure to increase competition given that competition in the Kingdom of Bahrain is already mature with many fixed services providers as well as three mobile operators by 2009 with a penetration of 107% at the end of 2008;

- b. Article 4.5: “TRA considers Number Portability as a user right ...”; and
- c. Article 4.6: “... requiring all operators to both export and import numbers and to do so from a given date”; consequently, there should not be any opt-out for any operator.

Therefore, the third mobile operator should be required to make NP available from day one.

TRA’s Response:

249. Please refer to Paragraphs 59 and 60 of this document for TRA’s response.

Respondent Concern:

250. **Article E6.3:** Zain Bahrain would appreciate an explanation from the TRA regarding the following statement: “Any fixed operator with circuit switched technology would be likely to choose to use onward routing at least initially. Could the TRA kindly explain why it has assumed this as Zain Bahrain does not believe that this would necessarily occur?”

TRA’s Response:

251. TRA is of the view that this statement is no longer applicable as all Licensees now use some form of routing (ACQ). Therefore this statement has no further impact or validity.

Respondent Concern:

252. **Article E6.4:** Zain Bahrain believes that Call-Forwarding is an undesirable solution since the Recipient will always depend on the Donor for call completion and this is likely to cause a longer holding time due to longer code analysis and routing, etc.

TRA’s Response:

253. Please refer to Paragraph 85 of this document for TRA’s response

Respondent Concern:

254. **Article E8.4:** Please clarify whether the statement regarding “...they are relatively small companies” refers to market share to size based on budget and revenue? It would be helpful if the TRA were to explain to the market in detail the meaning of the above-mentioned statement. In addition, Zain Bahrain supports the TRA, customer and business advisory groups’ point of view in which it is the Customer’s Right to have Number Portability services regardless of the number of customers or the financial position of the operator, unless the TRA can share with the market the actual and the forecasted data of

the VoIP operators with respect to their market share and their financial position. With regard to the statement that "...some are working in specialist niche markets", Zain Bahrain believes that any operator who applies for any license should know for which segment of the market they are targeting and based on that, the TRA should grant them the appropriate license. Therefore, any mandate or market regulation should include those operators as long as they exist in the Bahraini telecom market. Moreover, their customers should also have the right to have NP service to switch from and to any operator who provides such service.

TRA's Response:

255. The reference to 'relatively small companies' was referring to relative market size. However, the original wording is no longer valid as License type and intended services are now the main criteria and not relative size of the company. Please refer to Paragraph 59 above for more information.

Respondent Concern:

256. **Article E12.13:** All required arrangements should be well-coordinated between the TRA and industry. Zain Bahrain would appreciate advance notification regarding the date of the coordination meeting with the supplier in order to prepare the required materials and so as to have sufficient time to properly detail its concerns. Furthermore, some countries have allowed a third party to offer the complete Central System including O&M against some fees which can be based on Porting activities and/or Traffic handled which can be paid by the recipient.

TRA's Response:

257. The Licensees can communicate with the Central System through XML messages defined in the Specifications. As such, the upgrade of Licensee networks and systems is independent of the implementation of the Central System. However, should the Licensees wish to clarify some points with the selected solution provider for the Central System, the TRA would be happy to coordinate such an effort. Please refer to Paragraph 47 of this document and Article 11 of the Regulation for further details.

Respondent Concern:

258. **Section E13:** From the transparency point of view, Zain Bahrain would be grateful if the TRA would supply an explanation of the methodology used to calculate the charges (e.g. 13.6, 13.7, 13.8 & 13.10).

TRA's Response:

259. Please refer to Paragraphs 51 to 57 for TRA's response.

Respondent Concern:

260. **Article E14.10:** The on-net discount cannot be offered to the same number range as for the off-net calls, as the operator has to pay for the physical interconnection links (E1's), signaling links and minutes exchanged, and most of the time, a traffic transit charge is also incurred; all of the above-mentioned costs should not simply be ignored in order to have the on-net as same as the off-net discount. Zain Bahrain considers that offering the on-net discount to make it a same number range discount defeats the whole purpose of NP, as in practical terms, the customers will port their numbers mainly for two reasons: either for a better prices offered or for better quality of service. At the early stages of NP, there will be only a small base of customers, but this will increase with time and as the market further develops, and all operators would like to have both advantages for importing more customers to their network by offering the best on-net tariffs and the best quality of service.

TRA's Response:

261. TRA agrees with the point raised. Numbers Ported out of their respective Number Block are subject to on-net discounts only from it's currently serving Licensees. As per Article 11(h), Licensees must not discriminate with respect to the treatment of Ported and Non Ported Numbers

Respondent Concern:

262. **Article E16.14:** Zain Bahrain believes the whole Porting Process and required specifications for the Porting functionality should be discussed within the industry and cross-checked with the Central System supplier. The targeted time for the Porting Process should be identified and agreed upon by all in order to meet the two days for Porting accordingly.

TRA's Response:

263. The Number Porting solution will be chosen according to the required KPI's and specifications, and not vice versa. Therefore, the specifications should be agreed upon before selection of a Central System supplier, as the Specifications form an integral part of the selection and evaluation process of potential suppliers. TRA has hosted multiple Working Groups meetings with the Licensees to discuss the Specifications, as well as issuing the Specifications for Public Consultation. TRA is satisfied that sufficient time and opportunity has been extended to all Licensees to raise their concerns.

Respondent Concern:

264. **Articles E19.4 and E19.5:** In order to have a real functionality test of Central System and the Porting Process, Zain Bahrain recommends that Number Portability should be started with the Fixed Services, as, in Zain Bahrain's view, the total Fixed Customers are much less than the Mobile customers and consequently, the Fixed Porting percentage will be much less than would be experienced with mobile.

TRA's Response:

265. TRA is of the view that Mobile Number Portability is not only in higher demand among consumers, but should also be easier for Licensees to implement. In addition, as there are only three Licensed Mobile Operators, testing and coordination should be simpler than with Fixed Number Portability. For these reasons, Mobile Number Portability will continue to have a deadline of six months from the date of publication of the Specifications, whereas the other forms of Number Portability will have a deadline of eight months from the date of publication of the Specifications.

Respondent Concern:

266. **Article E19.8:** The proposed Task-Forces should include a commercial Task-Force, as the Commercial Task-Force is needed to identify and agree on the related Business-Rules and code of practice for the intended Porting service.

TRA's Response:

267. This comment is duly noted.

Respondent Concern:

268. **Article E19.11:** The process of Mobile and Fixed NP cannot be run in parallel as the operators' teams and/or the expert individuals who are going to work on the Number Portability are limited, and the effort required for the Number Portability project is huge. Consequently, it is impractical to have different Task-Forces working at the same time on different issues i.e., the IT experts who will participate in the mobile Number Portability project are the same team who will also participate on the fixed Number Portability, despite their daily work and related issues.

TRA's Response:

269. Many of the processes are identical between the Mobile Number Portability and Fixed Number Portability. This allows for a certain degree of overlap in the necessary tasks. In order to cater for the differences, there is a two month gap between the implementation deadline for Mobile Number Portability and Fixed Number Portability.

Respondent Concern:

270. **Articles E19.16 and E19.17:** Zain Bahrain believes that the TRA needs to complete all the technical and commercial specifications of the central database solution before mandating the final date to launch the NP service. As these specifications need to be agreed between the Central System service provider and all involved operators, and it will be the basis to determine the time line required by the operators to meet the agreed upon requirements.

TRA's Response:

271. TRA has amended the deadline for implementation of Number Portability from a fixed date to a period of 6 months for Mobile Number Portability and 8 months for all other forms of

Number Portability. This period is to commence from the date on which the Specifications are published on the TRA website. The Specifications were presented to the Licensees in Working Group meetings hosted by the TRA in September, October and November 2009. The Specifications were subsequently submitted for public consultation from January to March, 2010.

End of Document