

Submission to the Independent Communications Authority of South Africa

Inquiry into Number Portability

28 October 2016

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1 Executive Summary

Telkom welcomes the Authority's timeous inquiry into number portability when competition is increasing in the sector. Number portability is a key enabler of competition in the communication industry and plays a catalyst role to enable customer choice when they want to change from one network operator to another.

The framework under which the industry implements number portability includes the number portability regulations of 2005, the functional specifications for geographic and mobile service numbers and the operational system specifications for geographic and mobile service numbers. The functional specifications define the peripheral relationship issues between recipient and donor operator, while the operational system specifications define the specific procedural and timing issues required between donor and recipient operator. The Number Portability Company is tasked with implementing these operation system specifications.

Telkom has implemented geographic number portability effectively, but challenges have emerged which require the Authority's closer attention. Of major concern to Telkom is the fragmentation of contiguous number blocks sparked by "individual" porting used in conjunction with PRA & BRA services serving corporates, which has become a major impediment for corporate customer's seeking to return to Telkom, and for that matter to any other operator. This practice poses a longer term risk for South Africa's numbering scheme as it fails to provide for corporates customers who are consumers of contiguous number blocks. Fragmentation lowers Telkom's geographic number utilisation levels compromising Telkom's future ability to serve corporates and apply for more geographic numbers if Telkom's utilisation level falls below the threshold set by the Authority. Other issues which should also be addressed include improved legitimate account and customer validation processes and minimum customer information required to effect porting. Valid defined reasons for port rejections should also be established to bring more credibility to port rejections.

Mobile service number porting is a key enabler for Telkom to grow its mobile service business, but Telkom has observed areas which hinder smooth, effective and efficient porting of mobile service customers between mobile service providers. The main areas resulting in aborted or delayed porting are: 1) donor engagement with porting customer against the spirit of the 2 month winback prohibition, 2) account & customer validation and disputes on account information required to effect a port, where the smallest difference in account detail is used by donor operator to delay or reject the port, 3) corporate customer account information where a RICA agent is used/ required to validate account details of employees of the corporate, 4) no line of sight on the valid reasons why port requests are rejected.

Common issues which have emerged for both fixed and mobile porting are: 1) failure by operators to timeously update their routing tables with the CRDB result in ported customers not receiving calls, 2) operators failing to insert their port codes, resulting in billing and routing issues, 3) routing efficiency, caused by not forcing all operators to do direct interconnection while obligating Telkom to offer an indirect porting service in the number portability regulations. Finally the imposed warning message regime imposed through the regulations requires improvement as it is debateable whether it serves the Authority's objective of tariff transparency for the customer.

2 Introduction

1. Telkom SA SOC Limited (“**Telkom**”) welcomes the opportunity to submit its written comments on this important inquiry into number portability published by the Authority on 26 August 2016 in Notice 965 in Government Gazette 40232 and trusts the Authority will find these inputs useful.
2. Should the Authority decide to hold public hearings as part of this inquiry Telkom requests an opportunity to make oral presentations.
3. Telkom has requested confidentiality on certain sections of this submission.

3 Section A - General

SECTION A - GENERAL			
Licensee Details			
Licensee Name	Telkom SA (SOC) Ltd (1991/005476/30)		
Address	61 Oak Avenue Highveld, Techno Park, Centurion		
Contact Person	Andries Matthysen		
Designation	Senior Specialist – Regulatory Technology		
Telephone	012 311 7923		
Email	matthyah@telkom.co.za		
Services Offered by Licensee (select all that are applicable)			
Retail	Voice services using geographic numbers		
Geographic	Voice services using geographic numbers		
Mobile	Mobile service using mobile service numbers		
Wholesale	N/A		
Other (Specify)	Value Added Services using 086 non-geographic numbers		
Any confidential information must be marked as such and a request for confidentiality made in terms of Section 4D of the ICASA Act			
Signature			
Designation	Senior Specialist – Regulatory Technology	Date:	2016-10-28
<p>I, Andries Hendrik Matthysen, in my capacity as Senior Specialist – Regulatory Technology hereby confirm that the information provided herein is true and correct.</p>			
Notes:			

4 Section B – Mobile Number Indicators

SECTION B: MOBILE NUMBER INDICATORS				
Mobile Number Indicators	Indicators		From Inception to Date	Comments
	Total Mobile Numbers Allocated		7000000	From Telkom Number Audit Report of 31 Mar 2016
	Total Mobile Number subscriptions		2707000	From 2016 Annual Financial Statements
	Prepaid		1912500	Split as per active base 31 Mar 2016
	Post-paid		794500	Split as per active base 31 Mar 2016
	Mobile Numbers Ported In		██████	Up to September 2016 (NPC)
	Mobile Numbers Ported Out		██████	Up to September 2016 (NPC)

5 Section C – Geographic Number Indicators

SECTION C: GEOGRAPHIC NUMBER INDICATORS				
Geographic Number Indicators	Indicators		From Inception to Date***	Comments
	Total Geographic Numbers Allocated		40049000	From Telkom Number Audit Report of 31 Mar 2016
	Total Geographic Number* subscriptions		9137746	Active @ 31 Mar 2016
	Prepaid		3217000	Active @ 31 Mar 2016 from 2016 Annual Financial Statements
	Post-paid		██████	Split as per active base 31 Mar 2016
	Geographic Numbers Ported In**		██████	Up to September 2016 (NPC)
	Geographic Numbers Ported Out**		██████	Up to September 2016 (NPC)

*subscriptions may include customers who take more than one number

** includes both individual and blocks of numbers

*** (insert date of porting figures)

6 Telkom response to ICASA's questions

6.1 Question 1

Q1 - Describe your company or personal involvement in numbering portability

Telkom provides fixed line voice services that require the use of geographic numbers (beginning with 01-05).

Telkom also provides mobile voice services that use mobile service numbers (beginning with 0811-0815, 0817 and 0614).

Telkom is subject to the Number Portability Regulations of 2005 for both geographic number porting and mobile (service) number porting.

Telkom is a shareholder in the Number Portability Company that administers the number portability process between licensees as specified in the Operational System Specifications (OSS) defined by the Authority for both geographic and mobile service number porting.

6.2 Question 2

Q2-Describe your company's positioning in the fixed line and/or mobile markets.

Telkom is a large user of geographic numbers.

Telkom Mobile also is also a user of mobile service numbers.

Telkom's vision reflects the way Telkom is positioning itself towards the converging market.

Telkom's vision

"Leading in the converged ICT market through deep and credible relationships and a distinctive customer experience by:

- 1. leading the provision of converged solutions*
- 2. providing a quality network with a reach that is unmatched*
- 3. maintaining our leading brand promise in the business community*
- 4. creating innovative and pervasive broadband consumer services*
- 5. being the wholesale provider of choice*
- 6. being the best place to work for people who are committed and accountable"*

6.3 Question 3

Q3-What would you consider to be the advantages and/or disadvantages with the current number portability framework and administration thereof?

Telkom will address this question from both the geographic and mobile service perspectives.

6.3.1 Geographic number porting

Geographic porting is presently comprised of two forms of porting namely individual and block porting.

6.3.1.1 Individual number porting

The main disadvantages of the individual number portability regulations in Telkom's opinion are:

6.3.1.1.1 Geographic boundary violations disrupting competition and consumers

The portability framework is indifferent to geographic porting. Both port-in and port-out requests sometimes would lead to violation of the geographic boundary conditions stipulated in the Number Portability Regulations undetected. For example:

- Port-out example – a customer seeks to port-out but then relocates once having ported to a new location outside the area where the number is required to be located according to the Numbering Plan Regulations.
- Port-in example - where a customer seeks to port back in to Telkom from another operator but the customer is now located outside the geographic boundary requirement of the Numbering Plan Regulations Telkom find itself in violation of the port-in if it were to proceed to port in the customer.

These geographic boundary restrictions associated with geographic number portability are an impediment to healthy competition and create inconvenience for those customers. As raised before in Telkom's submission on the draft Numbering Plan Regulations of 26 June 2015, Telkom is of the opinion that the best way to resolve this problem is by relaxing the geographic areas through enlarging them by reducing the amount of geographic significant digits from 0NN ABC XXXX to 0NN ABC XXXX.

6.3.1.1.2 Illegal port-out requests

Telkom has encountered instances where it has received a port request initiated by another operator who was approached by the "customer" and then proceeded to process the request just to discover that the legitimate owner of the number did not initiate the port request. As part of the validation process Telkom has now introduced additional validation step to ensure that the request is initiated from the lawful owner of the number before processing the port-out request. However, a more precise amendment to the OSS to address this phenomena could be considered by the Authority to address this issue.

6.3.1.1.3 087 numbers excluded from porting

Another issue which we wish to note is the exclusion of 087 numbers from porting. It is arguable that VoIP is a very flexible voice service that is not bound by geographic location and therefore shouldn't be subject to porting. However, Telkom is of the view that its exclusion from porting may in fact compromise customers' freedom to locate to another operator and the Authority may wish to carefully consider the longer term effect on competition if this regulatory position is left unchanged.

6.3.1.2 Individual porting cause block fragmentation lower number utilisations for Telkom

The present practices observed w.r.t. geographic block porting used for DDI (Direct Dialing Inbound) associated with Telkom's PRA/BRA services is of concern to Telkom and poses a risk to industry in the long term to serve corporates with contiguous number blocks.

In brief:

- i) Telkom uses contiguous number blocks in the provisioning of PRA/BRA services.
- ii) recipient operators only seeks to port out individual numbers within these contiguous number blocks associated with Telkom's PRA/BRA services.

- iii) Porting out of only certain numbers within these contiguous number blocks associated with Telkom's PRA/BRA (DDI) services leads to:
- (1) fragmentation of the contiguous number blocks results in smaller contiguous block sizes being available.
 - (2) Not all numbers in the number blocks are ported out as required, which gives rise to lower utilisation levels of Telkom's geographic numbers.
 - (3) Routing inefficiencies when recipient operators fail to inform Telkom, as per the functional specification and the OSS requirements, of the termination date for the PRA/BRA service, resulting in the greater portion of the unported numbers still being configured in Telkom's network while calls continue to be routed to these numbers, but just to receive a unanswered dial tone. These ports are being forced by recipient operators, as the process required by the OSS and Functional Specification has not been completed, but circumvented.
- iv) Telkom is placed at risk of not being able to obtain number ranges from the Authority due to the lower number utilisation levels arising from this practice.

Failure to comply with the functional specification and the OSS which requires licensees to inform Telkom of the PRA termination date is resulting in inefficiencies within Telkom's network, which are impacting Telkom's network and customers negatively. Telkom elaborates this point comprehensively under Question 5 below.

6.3.2 Mobile service number porting

6.3.2.1 "Winback" is alive

Telkom has observed a drop in mobile service number port-ins during the last few months and an increase in port-in reversals. As the newest entrant in the mobile service market, Telkom is dependent on a successful mobile service number porting regime that will facilitate good competition within the mobile service market. However, Telkom Mobile can only describe the recent drop in mobile service number port-ins as potential evidence that the winback constraint placed on the donor operator have not succeeded in freeing up mobile service customers to freely port to a mobile service provide of their choice. Figure 1 below gives great insight into the trend that has emerged since the beginning of this financial year compared to previous years.

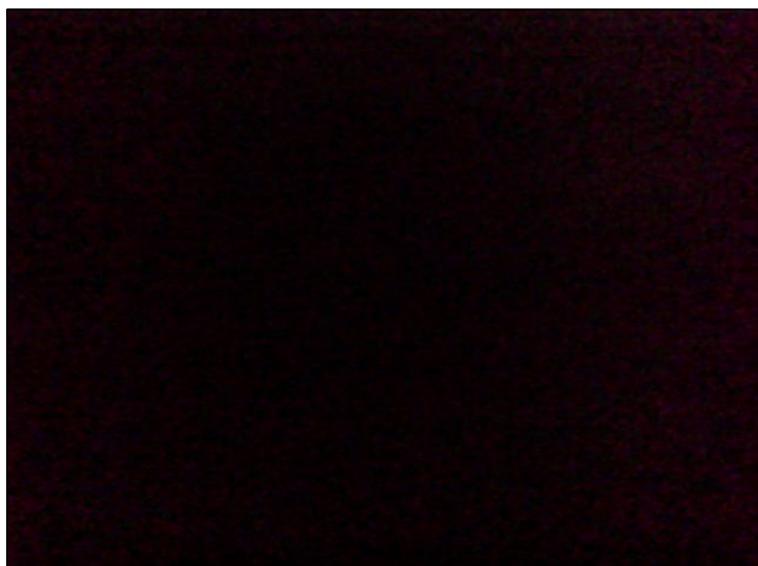


Figure 1 – Telkom Mobile MNP Trends

Further indications are that mobile service port-ins are being frustrated and can be deduced from the average duration it takes for a port between Message 1 to Message 12 of the OSS for MNP in the graph below. What's of particular interest is the period beginning from November 2015 which marks the beginning of the new marketing campaigns by cellular operators and the sudden increase to a much longer average period.

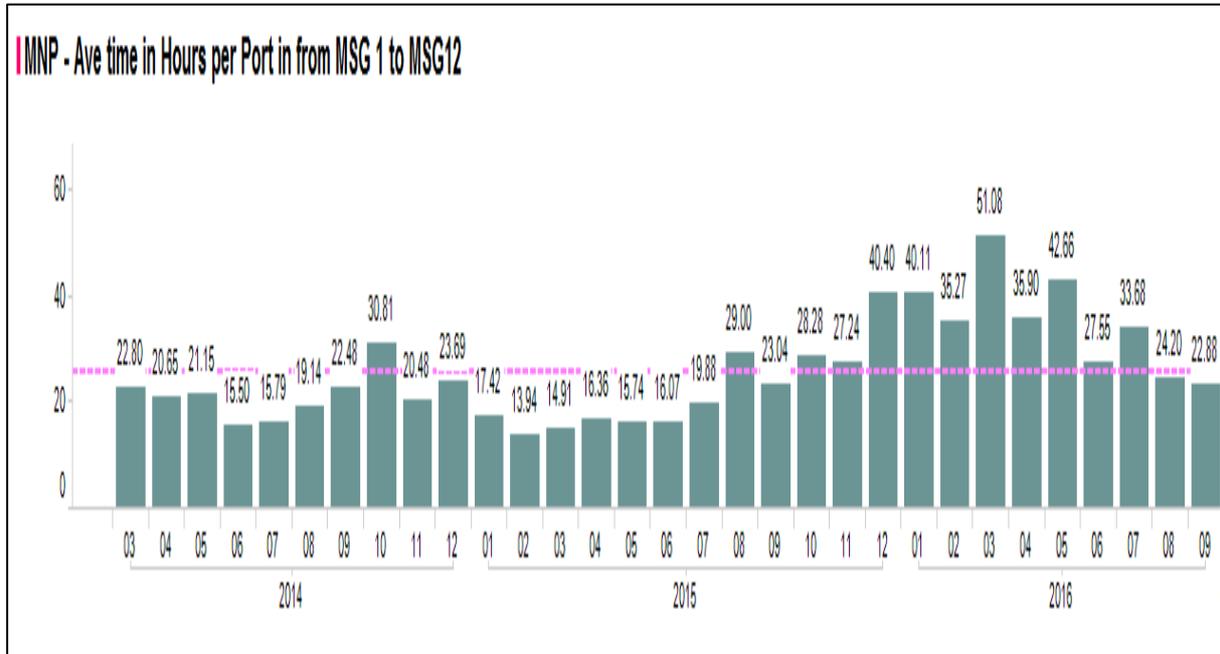


Figure 2- Telkom Mobile measured OSS MNP average time to port in from Vodacom and MTN

Another indicator to keep a watchful eye on is port reversals. Telkom Mobile presents below the amount of port reversals it has received over the last three years. Port reversals occur when a customer, after initiating a port request, decides it wants to abandon the port. As indicated earlier in this submission, when trying to establish what the cause is of the customer decided to abort the port request, customers refuse to provide any reason. This could simply be because the customer doesn't want to port anymore, or has been approach by the donor operator with a more attractive proposition and then doesn't wish to reveal this to Telkom Mobile.

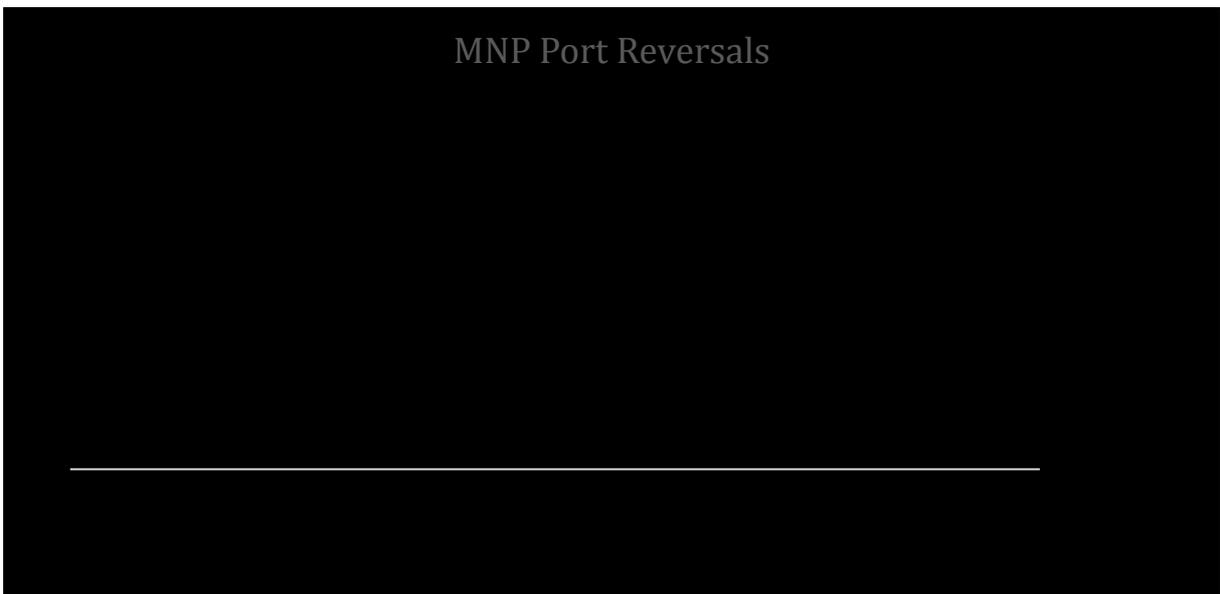


Figure 3-Telkom Prot Reversal Statistics

6.3.3 Routing Efficiencies (for both geographic and mobile service porting)

A general concern applicable to both fixed and mobile ported numbers is that the smaller operators are not inserting their porting code and Telkom find that the call gets routed incorrectly as Telkom does not do any lookup queries on the B number as this is a transit call.

Routing problem example:

Telkom deleted the number, name and porting code of the specific operator and will keep the explanation generic:

“The number ONN ABC XXXX has ported to Operator X. Telkom correctly routes the call to Operator X with the Operator X GNP routing code DXXX prefixed in the B number. Operator X however returns the call back to Telkom with the Operator Z GNP routing code DXXY prefixed in the B number, and Telkom then routes the call to Operator Z.”

In addition the present number portability regime allows for indirect routing to occur, but this gives rise to inefficient routing. All operators now have access to the Central Reference Database (CRDB) of the NPC and there should technically speaking be no reason for any operator to seek any alternative form of routing to complete calls other than via direct routing as direct routing shortens call length and improves quality of service.

6.4 Question 4

Q4-Would you consider the fees structure associated with participating in Number Portability such as cost recovery, subscription to number portability administration and charging of ports to be effective?

Yes, Telkom is of the view that the NPC is run efficiently as the business model is dependent on volumes. The lower the volume of ports the less efficient the porting becomes and the higher the rate per port. Telkom will defer to the NPC's guidance on they determine their fee structure.

The connectivity services offered by the Number Portability Company (NPC) to licensees include:-

1. **Full SOAP Interface** with broadcast capabilities = R10,000-00 per month **PLUS** porting costs = R40.00 per number before rebate (not per number range or block). The SOAP interface consists of a fully automated on line porting access. This service is built using a detailed Interface Specification and a detailed Process Flow for message handling which is supplied to a licensee once they have signed the Geographic Number Portability (GNP) Connection Agreement with NPC;
2. **WebGUI interface** with daily download of ported numbers (SFTP connection) = R5,000-00 per month **PLUS** porting costs = R40.00 per number before rebate (not per number range). The WebGUI service (an Internet based service) is a partial semi-automated service. This is built around the Process Flow documentation referred to above. The Secure File Transfer Protocol (SFTP) connection service allows for the daily download of ported numbers and is used in conjunction with the WebGUI service above or as a standalone method of updating routing tables should the operator not wish to engage in porting;
3. **SFTP connection** for daily downloads of ported numbers = R1 000-00 per month. Either as a daily update (delta) or a full number update service for routing update

purposes only, If however the operator is a either a SOAP or WebGUI user this service is included in the above fees We also provide the ability of taking a full download should tables be out of sync or initially when a new user is brought on board

All operators optionally have access to an online broadcast of ported numbers on a daily basis should they so choose and pay the appropriate subscription fee. The Larger operators use this method together with their on line real time interaction with the CRDB. The smaller operators use the daily download facility in conjunction with the WebGUI interface service to update their routing tables as per the regulations on a daily basis.

1. **The SOAP interface consists of a fully automated online porting access.** This service is built using a detailed Interface Specification and a detailed Process Flow for message handling which is supplied to the operator once the operator has signed the GNP Connection Agreement.
2. **The WebGUI service (an Internet-based service) is a partial semi-automated service.** This is built around the Process Flow documentation referred to above and does not require any development unless the operator wishes to build a small web-based generator program or use Excel possibly to generate numbers which can then be used to cut and paste the port ID into the WebGUI, to avoid duplication of port requests. This could also serve the purpose of being a register of allocated port requests.
3. **The Secure File Transfer Protocol (SFTP) connection service allows for the download of ported numbers (the CRDB)** and is used in conjunction with the WebGUI service above or as a standalone method of updating routing tables should the operator not wish to engage in porting (normally WASPs and Bulk SMS services typically use this service. This consists of a daily update (delta change) as well as a full number update service initially for routing update purposes only. The full download can also be requested as required to synchronize numbers.

All these services are provided against a subscription fee as indicated above and a charge per ported number (not per port request or block).

Telkom is of the opinion that the approach followed by the NPC is efficient and gives effect to the Operational System Specification (OSS) defined by the Authority for both mobile and geographic numbers and is an enabler of customer choice, subject to Telkom's response in question 5.

6.5 Question 5

Q5-Would you say that there is a need to review the block sizes for Number Porting? Please elaborate.
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Telkom believes its is imperative for the Authority to review the number block sizes at this time while at the same time the Authority must remove the ambiguity that exists between contiguous number block porting and individual geographic number porting in the industry. Furthermore, the Authority should appreciate the knock on effect of number block fragmentation on the industry and on Telkom's number utilisation levels for geographic numbers which will hamper its ability to apply for more numbers in future. Telkom presents its rationale below.

6.5.1 What’s the current regulatory requirement for block porting?

The 2005 Numbering Plan Regulations contemplate that contiguous blocks of 10000 and 1000 be ported if the subscriber has been assigned 10 or more numbers in a contiguous number block. In such instances the subscriber is entitled to request porting of the said number block to another operator under 3 specific conditions listed in the regulations. The definition of “block operator” consistently contemplates that the entire number block must be ported.

6.5.2 What is the current industry practice w.r.t. number block porting?

Telkom is currently porting out block sizes as follows:

Numbering Scheme blocks	Contiguous block size	Telkom Product	Customer Type
0NN ABC <u>XXXX</u>	10000	PRA (Primary Rate Access)	Large Corporate
0NN ABC <u>ZXXX</u>	1000	PRA	Medium Corporate
0NN ABC <u>ZYXX</u>	100	PRA (minimum block size normally assigned - 300)	Small Business
0NN ABC <u>ZYFX</u>	10	BRA (Basic Rate Access) (minimum block size normally assigned - 20)	SOHO (Small Office Home Office)

Figure 4 - Telkom illustration of how it uses contiguous number blocks

6.5.3 The existing practice paves the way for smaller block sizes

The difference between what’s required versus what’s actually being practiced is clear from the table above. Block sizes can be reduced and should include block sizes of 100 and 10. But, this review should also bring much needed clarity on what individual geographic porting means, as in Telkom’s opinion there has been a misconception as to what individual geographic porting is, which is resulting in the erosion of contiguous numbers blocks, which are required for to serve corporate business now and in the future.

6.5.4 Risk to block porting - Individual geographic porting fragments contiguous blocks

The regulations contemplate porting of individual geographic numbers (actually individual numbers), which should differ from block porting, but there is an overlap which is creating ambiguity. What happens if the subscriber has at least two numbers but less than 10 and both are located in a contiguous number block? Should this be treated as an individual or block port? By not treating it as a block port it leads to fragmentation of the contiguous number block.

The Authority’s own “**Consumer Guidelines on Geographic Number Porting**”, published on 23 April 2010, adds a further element of ambiguity in that it attempts to explain what individual geographic number porting is when it states: “*Individual Number Portability (INP) refers to a single telephone number or a group of numbers consisting of less than 1 000, assigned to a single account holder, being ported.*”. It goes on to give an example which contains the table below.

Block	Say it	Number	Range	Numbers
10k block	Ten thousand block	011 585 xxxx	011 585 0000 – 011 585 9999	9999+1 = 10,000
1k block	One thousand block	011 585 1xxx	011 585 1000 – 011 585 1999	999+1 = 1000
100 block	One hundred block	011 585 12xx	011 585 1200 - 011 585 1299	99+1 = 100
Individual block	Individual block	011 585 123x	Any number as an individual	

Figure 5 - Table extracted from ICASA's Consumer Guidelines to explain individual geographic number porting

Telkom submits that this attempt by the Authority to explain individual geographic number porting may have given rise to further confusion relating to individual geographic porting and has given rise to a trend where recipient operators only seek to port geographic numbers, as if they are individual geographic numbers only, oblivious to the manner in which these services are provisioned on Telkom's network and how this form of porting is fragmenting contiguous number blocks, creating inefficient routing and leading to lower number utilisation levels for geographic numbers on Telkom's network which in turn impact Telkom's ability to be apply for number blocks in the future from the Authority. This practice will give rise to the same problem for other operators and result in an overall less efficient utilisation of geographic numbers into the future.

Telkom wishes to stress that contiguous number blocks should be preserved by ensuring that the entire block is ported to the recipient operator in order to ensure Telkom's geographic number utilisation levels are not compromised in the process. However, Telkom is fully aware of the fact that this may currently result in additional porting costs for the recipient operator due to the NPC charging per number and not per block. This is however secondary to the main objective which Telkom believes the Authority should be striving to achieve namely preservation of contiguous number blocks. However the NPC could adjust its systems to accommodate such a decision, but this would need to be discussed between the Authority and the NPC and finally embedded in an amended OSS for GNP.

Telkom will now proceed to provide clarity under what circumstances a port should be regarded as a block port and not as an individual geographic number port.

6.5.5 Contiguous number blocks serve specific types of customers

Provisioning services for corporates who have an employee base that also require communication is done differently to that of individual subscribers. Telkom configures either a PRA or BRA service for such corporate customers. In the case of an individual subscriber Telkom enters the entire 10-digit number in the the routing table, while in the case of a corporate customer using either a PRA or BRA service Telkom assigns a contiguous number block to the corporate subscriber at the DSSU switch when provisioning the service.

The routing of incoming calls to a Telkom ISDN PRA or BRA service using a contiguous number block can be determined without having to interrogate the entire 10-digit number. Typically the first 6 digits are sufficient to determine to where the call should be routed. The first 6 digits effectively identify the PRA trunk to where the call needs be routed. The PABX resolves the final leg of the call internally for the corporate to the specific employee's number. It is thus not necessary to insert each and ever number within the number block in the routing tables, but merely specify the contiguous number block's range from a Telkom perspective.

This practice of routing contiguous number block in the manner described above is consistent with international standards which Telkom applies in its network for the provisioning of these types of services.

The figure below illustrates how Telkom assigns number blocks to customers using PRA/BRA services.

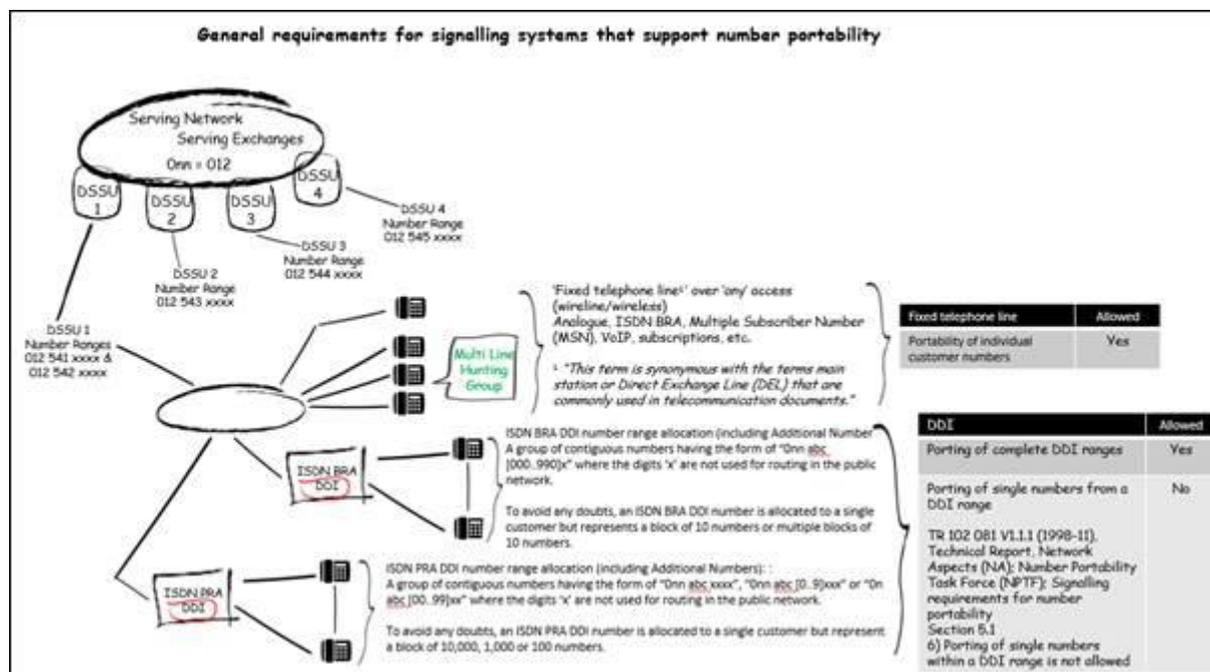


Figure 6- Telkom illustration of the general required to support number portability

6.5.6 How does individual geographic number port impact Telkom?

The 2005 Number Portability Regulations does not defined “individual geographic porting”, although it makes reference to “individual numbers”. The Authority’s “**Consumer Guidelines on Geographic Number Porting**”, attempt to explain “individual geographic porting”, but incorrectly in Telkom’s opinion, which has given rise to recipient operators being allowed to select numbers within a contiguous number block associated with a ISDN PRA/BRA service provisioned by Telkom to service its customer.

The consequences of this misguided form of individual geographic number porting includes:

- Immediate reduction of the contiguous number block size.
- Immediate decrease in Telkom’s utilisation levels of geographic numbers, which may compromise Telkom’s ability to obtain more numbers from the Authority if the utilisation drops below the threshold set by the Authority.
- Less efficient call routing - more detailed interrogation of numbers for resolving correct routing of calls. This will require increased capacity (memory) in the routing tables of the switches, which in turn result in additional cost for Telkom.
- The legacy technology which Telkom uses were not designed to support individual geographic porting within contiguous number blocks assigned to a customer’s PABX. These switches were designed to work with contiguous number blocks which required less deeper interrogation of the number digits.

- e. Stiffles customers from porting back to Telkom, with the same original number blocks which they had before they ported out from Telkom.
- f. Effectively prohibits customers from exercising their right of choice by stifling them from returning to their original service provider/operator due to the fragmentation of their original number block when they were on Telkom's network. This impact on the corporate may in fact be more severe than meets the eye.

6.5.7 Reasons for this fragmentation culture in South Africa

- 1) Not aligning with international standards in this regard that prohibit porting of individual numbers within a PRA (DDI) number block range.
- 2) Failure to acknowledge and apply good technical standards like those found in ETSI, which prohibit the porting of an individual number within a DDI number block range.
- 3) Smaller OLOs are electing to port in only some numbers within the contiguous number block assigned to the Telkom customer, resulting in the majority of numbers in the block, not being ported via the porting process while calls from customer to these numbers are tying up network resources such as routing and signalling, while frustrating customers who dial numbers within the block but then end up receiving number unavailable messages.
- 4) Smaller OLOs fail to comply with section 4(16) of the 2005 Numbering Plan Regulations Functional Specification for Geographic Number Portability which require them to notify Telkom of the PRA terminated date. This causes remaining number block numbers to be active in Telkom's network, while the customer has already ported out. Telkom continues to route calls to these numbers, but there is no customer located behind these numbers. If the entire contiguous number block was ported out this problem would not exist.
- 5) Another challenge that exacerbates this fragmentation problem relates to numbers that previously belonged to a contiguous number block on Telkom's network as part of a PRA (DDI), which have been ported out to a recipient operator, which have subsequently been ported out again to another recipient operator as another individual geographic port, demolishing the long term technical ability to provide PRA (DDI), due to number blocks being dismantled. This practice impacts corporate customers ability to port with their entire number block from one operator to another and disrupts their business.

6.5.8 Longer term impact on the South African numbering scheme for corporate customers

Telkom is of the view that the effect of the manner in which individual geographic number porting is practiced within the Industry as construed seeking to reduce the contiguous block sizes inherently found in the numbering scheme, may in fact compromise the efficiencies associated with network routing to contiguous number blocks.

The minimum contiguous number block size that Telkom provides today is 20 used with its ISDN BRA lines which is compromised of two contiguous number blocks of 10. The limitations of Telkom's legacy switches does not allow for block sizes smaller than this. Telkom recommends the Authority set the smallest block size at 20, and not 10, simply to ensure proper continuity of the customer's services.

In Figure 8 below is an illustration of the inefficiencies impact of the recipient operator failing to inform Telkom of the PRA/BRA termination date.

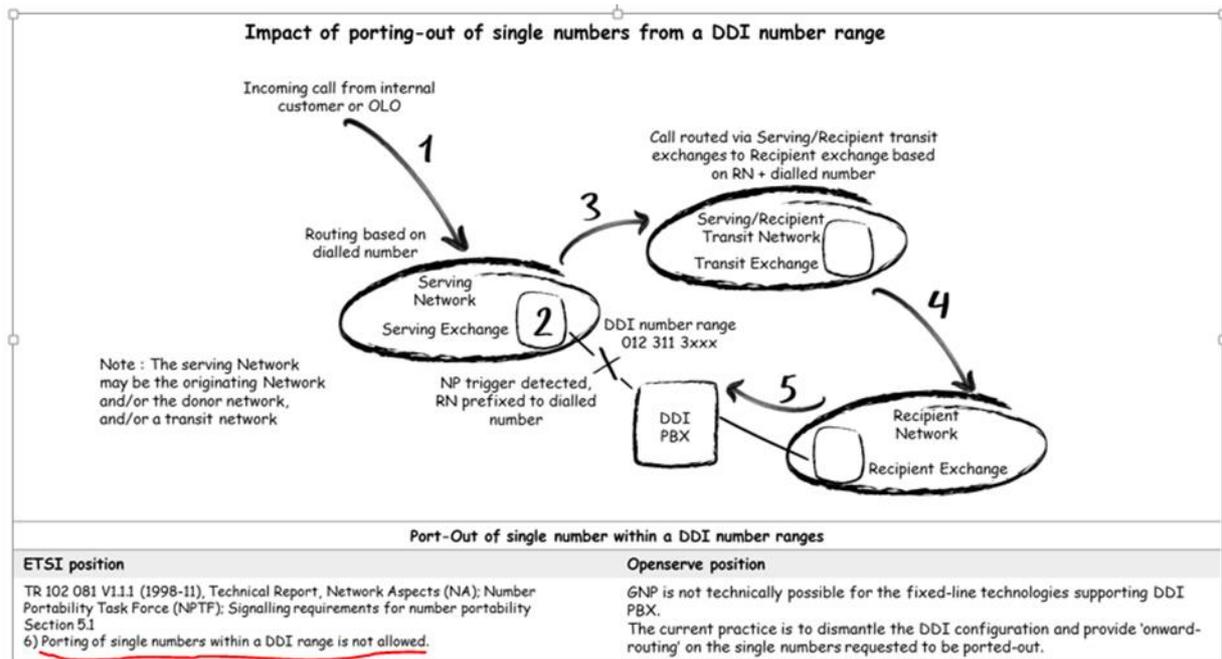


Figure 7 - Telkom illustration of the inefficiencies being introduced due to failure to inform PRA termination date

Impact of porting-out of single numbers from a DDI number range	
Port-Out of single number within a DDI number ranges - impact analysis	
Openserve	Comments
<ul style="list-style-type: none"> a. Single DDI numbers are updated in the CDRB, which allows for NP look-up and subsequently direct NP routing to the Recipient Network b. The remaining numbers are not updated in the CRDB and are merely placed in the Block Operator's spare number list. c. There is no opportunity to terminate the call setup at the earliest number analysis point (e.g. Point-of-Interconnect). It is not best practice and efficient to perform digit analysis of the complete number in the transit network. d. If the remaining numbers were advertised or known to callers, callers will receive a 'Number Unobtainable' tone/indication if said numbers are dialled e. It is a natural inclination that callers cannot distinguish between 'Subscriber Busy' or 'Number Unobtainable' tones/indications, which means callers will continue to redial these numbers f. Repeated calls / traffic generated to unobtainable numbers, result in inefficient traffic, which could exhaust trunk capacity and prevent new calls to be successfully switched 	
Port-Out of single number within a DDI number ranges - Openserve recommendation	
Openserve	
<ul style="list-style-type: none"> a. Porting of single numbers within a DDI range should not be allowed b. Align with ETSI best practice and only allow porting of complete DDI ranges 	

Figure 8 - Summary of Telkom position on the PRA (DDI) problem and position that should be adopted by ICASA.

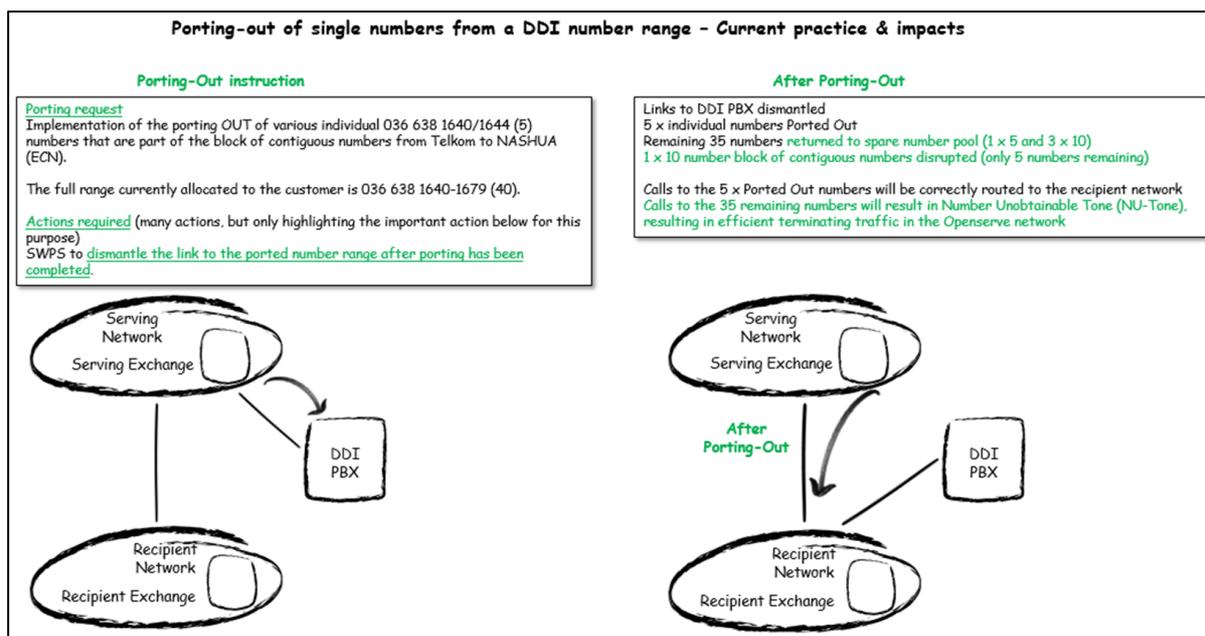


Figure 9 - Illustration of porting out from DDI contiguous number range & consequences

Telkom's view is that porting of a single number within a PRA (DDI) number block associated with PRA services, must not be allowed. Recipient operators should not be allowed the discretion to port out only a selective few numbers within such a continuous number block. This way, it will avoid the introduction of routing and resource inefficiencies in Telkom's network. Alternatively, porting-out of blocks must be made subject to the recipient operator confirming through the process when the port should terminate, failing which there should be no obligation on the donor operator to release the ported numbers until such time as the termination date has been provided for the porting of the entire number block.

Block fragmentation example:

Number block / range	Size of number block	Single numbers PORT-OUT	Number of single numbers PORTED-OUT
012 311 0000 - 9999	10 000	012 311 2233 012 311 4455	2

1. The complete PRA will be recovered and the number range of 10 000 numbers will become spare.
2. The 2 individual numbers will be ported out by creating a 10 digit code point linked to a destination / route which will prefix the required D code and route the call to the new destination.
3. If the remainder of the numbers in the block are called the calling party will receive NU tone / "the number you have dialled does not exist".
4. Telkom's graphic number utilisation level reduces

6.6 Question 6

Q6-What is the mean porting timeframe, in hours, have your subscribers experienced? Do you consider it to be reasonable? If not, please indicate what challenges have you experienced and what measures could be taken to reduce the porting timeframe.

6.6.1 Telkom Mobile Service Porting

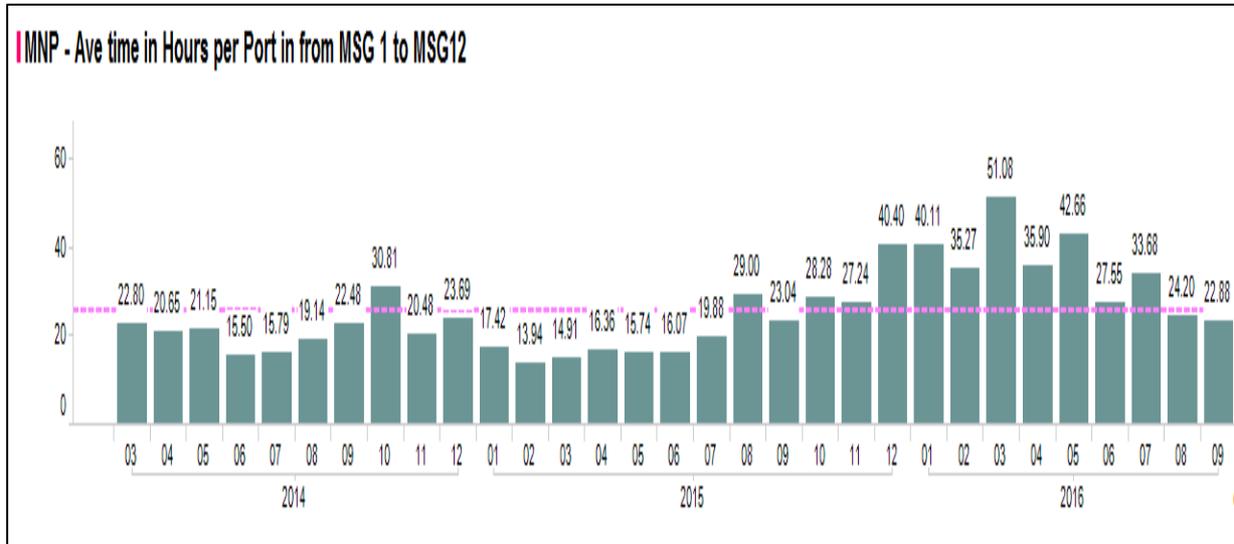


Figure 10 – Average port-in time for mobile service number

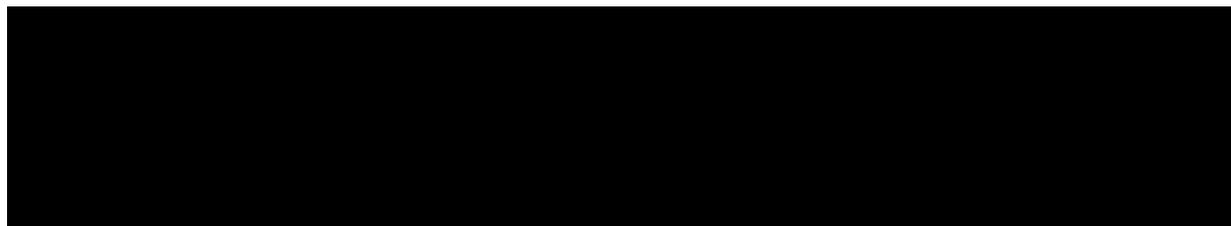
Table 1 - NPC Report – Port Report for Telkom Mobile for September 2016

[Redacted Table Content]

Table 2 – NPC Report - Telkom Mobile port requests rejected by OLOs - breakdown since inception in 2010

[Redacted Table Content]

Table 3 - NPC Report - Reversed Port Breakdown (Sept 2016)



The most common reasons for donor operators rejecting port-in requests to Telkom Mobile since its inception in 2010 and as measured by the NPC are presented in Table 3 below:

Table 3 - NPC Report - reasons for donors rejecting port-in requests to Telkom Mobile since inception of Telkom Mobile

Total	Rejection Reason
3781	SP003 For a postpaid subscriber, the MSISDN, account number, and account holder id number do not match.
2778	SP001 The MSISDN or DN/DN Range is not valid on the donor operator network.
2471	SP009 Other reasons.
2009	SP004 The classification of the account does not match.
1136	SP007 MSISDN, Account Number, Corporate Registration Number do not match, or Port Request is unauthorized
789	SP002 The MSISDN or DN/DN Range is excluded from number portability.
309	SP005 Subscriber in suspension of outgoing or incoming calls due to failure to pay a bill.
37	SP006 MSISDN or DN/DN Range not valid on SP.
22	SP008 Port Request is for an inter-SP port; for this NO, inter-SP ports are handled outside the CRDB.

6.6.1.1 Telkom MNP Analysis

Although the average MNP time to port appears to be reasonable, Telkom Mobile notes that it spends an inordinate amount of time having to engage with the Donor operator when it comes to corporates who wish to port over to Telkom Mobile, prior to going through the NPC process. Due to the delay in this process corporates end up becoming frustrated and abort their port initiative resulting in Telkom Mobile failing to win over the corporate customer.

The main reason for engaging with the Donor operator stems from their data integrity and system issues relating to their corporate customers (multiple mobile subscribers in the company). This problem is exacerbated by lack of continuity in corporate customers’ RICA agents who are suppose to ensure RICA is applied within the corporate when mobile numbers are changed to new employees. This failure leads to inconsistencies in their data integrity with the Donor operator which in turn leads to an additional delay for Telkom Mobile prior to running the port request via the NPC. In an attempt to expedite matters Telkom Mobile engages with the Donor operator and the corporate to assist with the data integrity required by RICA and the number portability process requirements.

In order to reduce porting time for customers Telkom requests the Authority define the absolute maximum set of data required to effect a successful port request and place the obligation on the Donor operator to address within a maximum allowed time.

Telkom recommends that the Authority define the essential set of information required for a mobile customer to successful enable mobile number portability.

6.6.2 Telkom Geographic Porting

Telkom's reaction time frame on port requests are generally sufficient. The graph in Figure 11 illustrate the general consistency with which Telkom Fixed has handled port out requests, with the exception of October 2016, which at the time of finalising this report did not contain the full period of October.

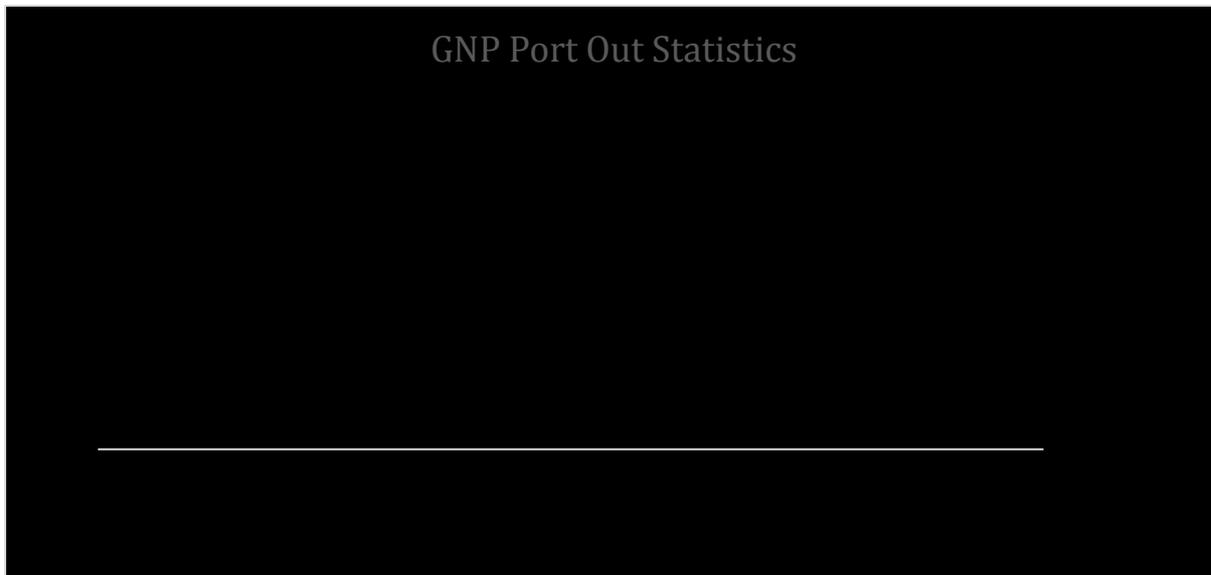


Figure 11 - Telkom GNP Port Out Statistics

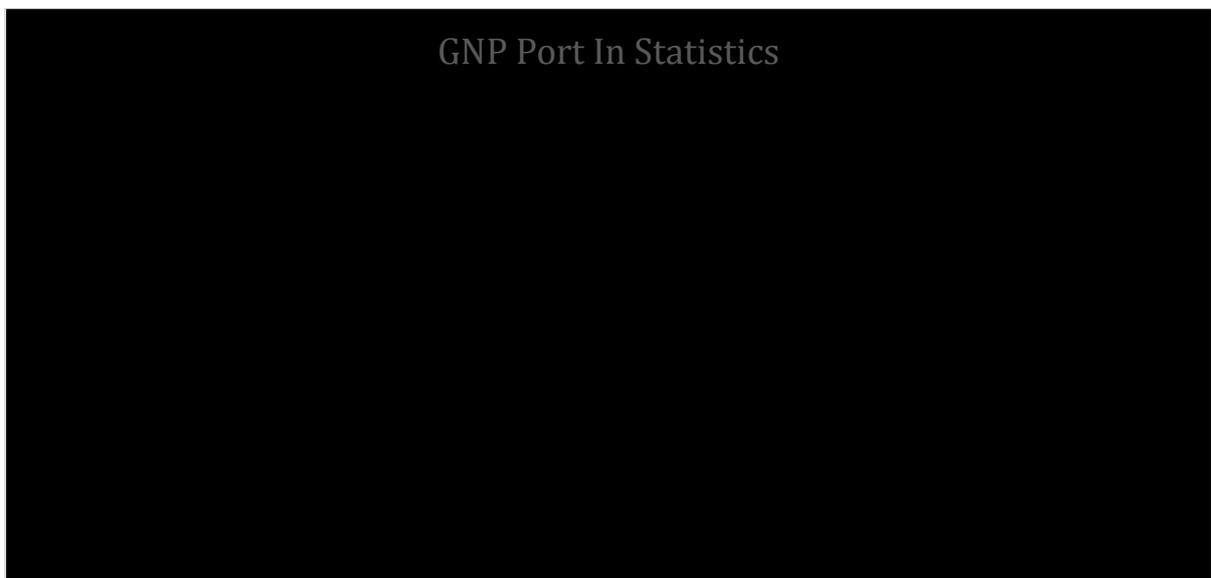


Figure 12 - Telkom GNP Port In Statistics

Table 2 – NPC Report on Industry GNP statistics since inception (2010-04-01 to 2016-08-31)

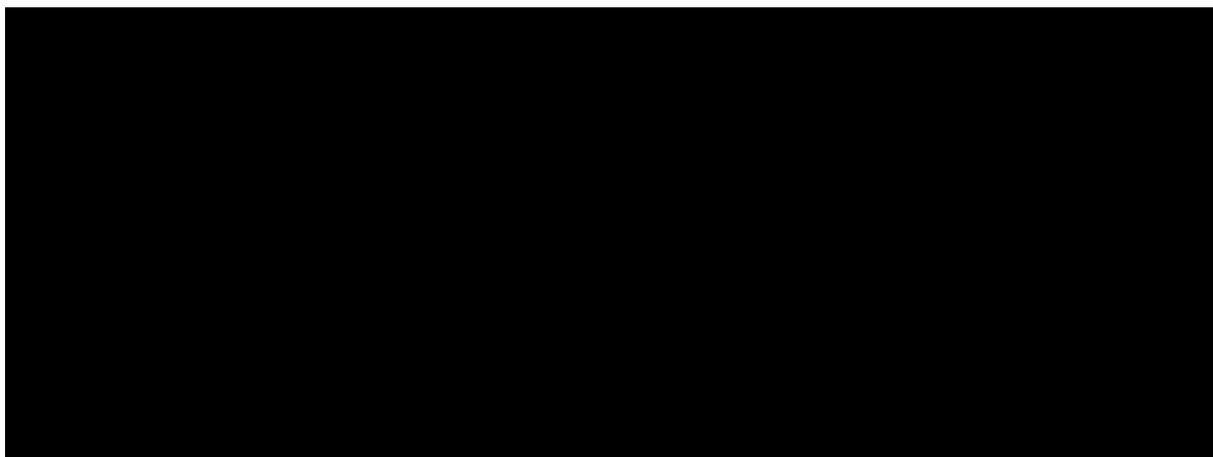
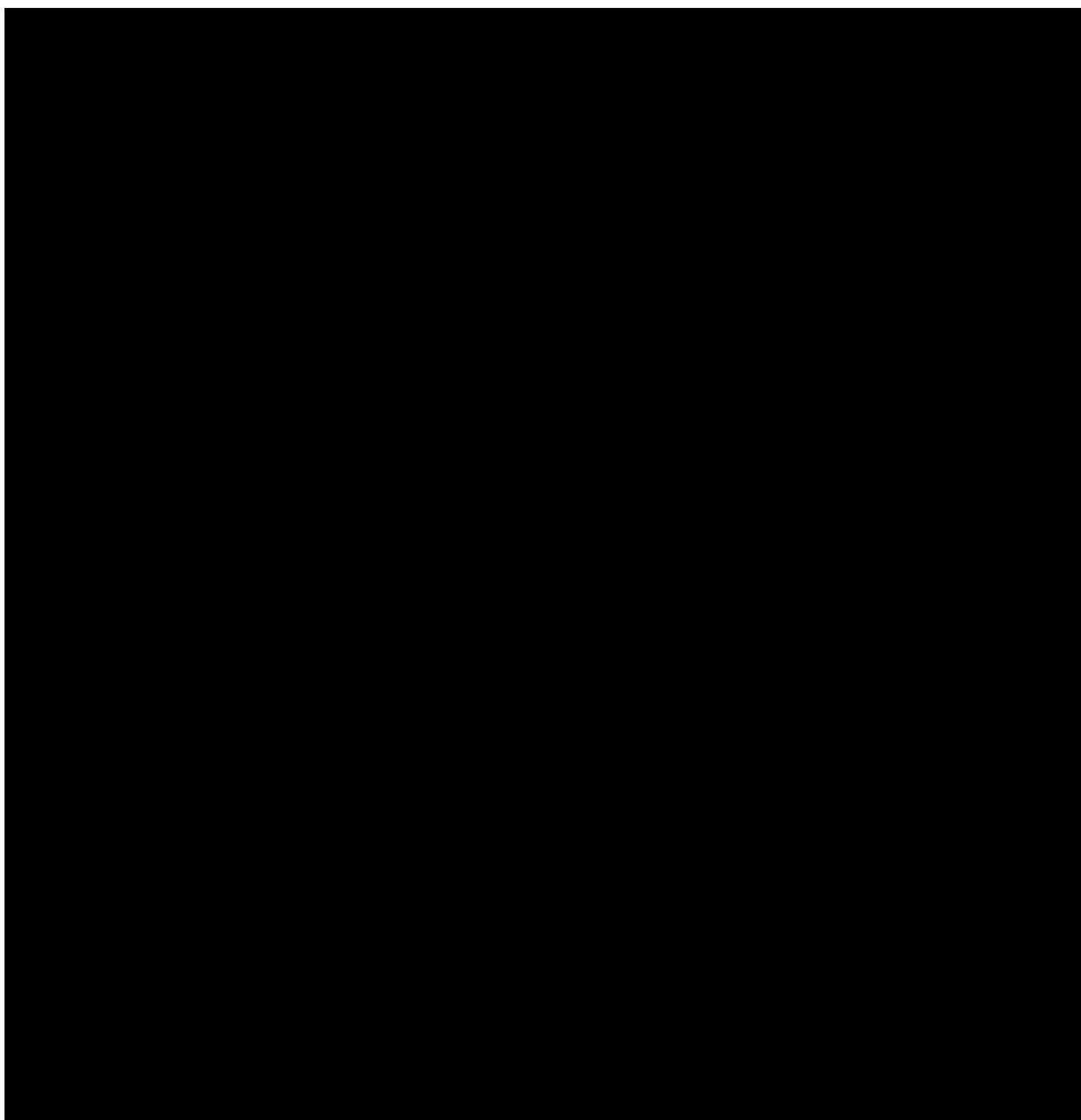
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Table 3 - NPC Report - Ports per Recipient Operator

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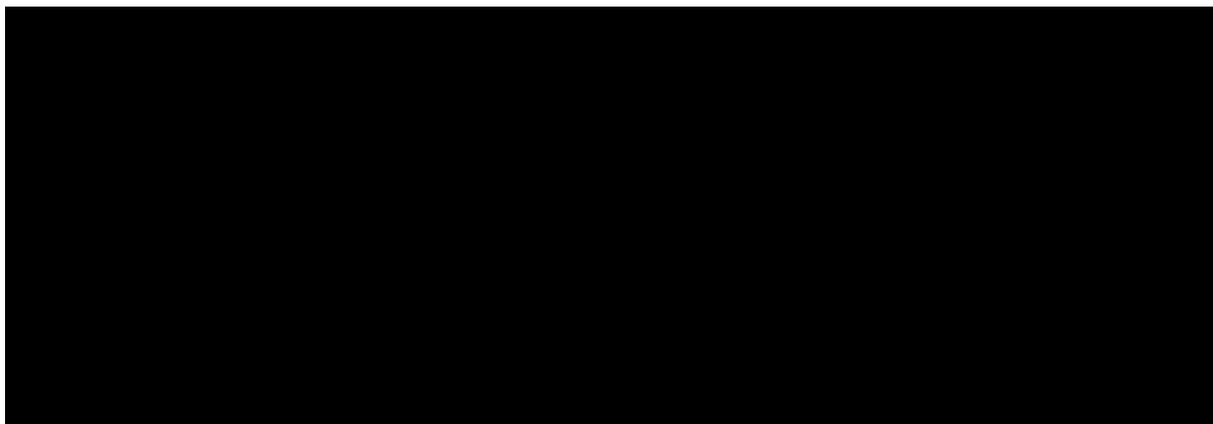


Table 4 - NPC Report - Ports per Donor Network Operator

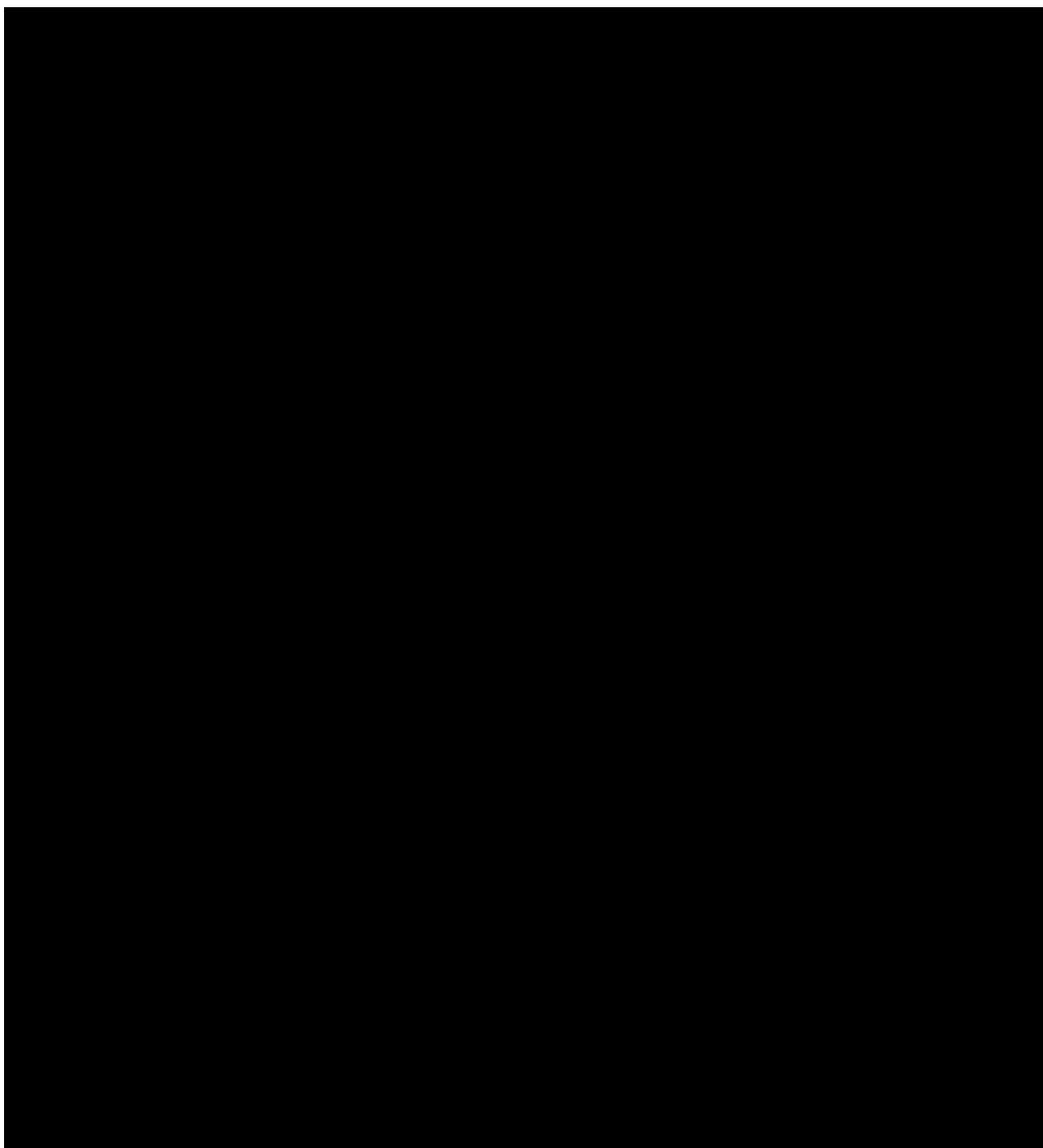


Table 5 - NPC Report since inception (Routing Upodate Time)

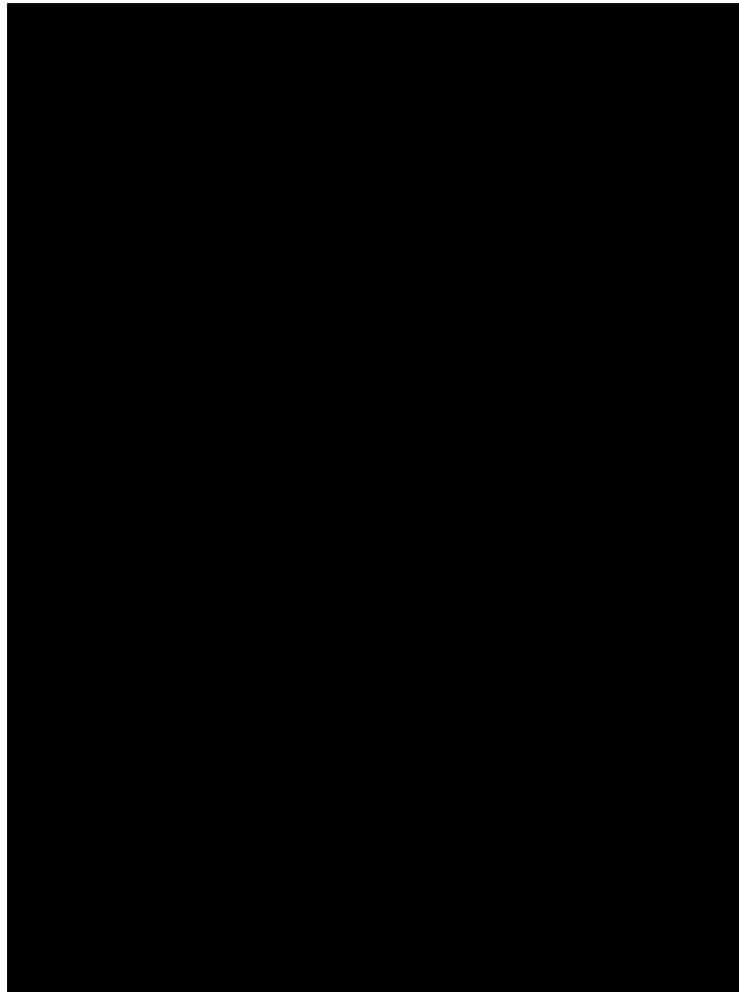
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Table 6 - NPC Report since inception timer violation (Response Spid)

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Table 7- NPC Report - Timer violations (Port Authorisation Time)



Telkom Notes:

- On volume of port out requests – Telkom is the largest user of geographic numbers and by implication, receives the largest volume of port-out requests. The volume of violations will thus be proportional. In addition fixed line technologies often involve complex installation and de-installation (including recovery) of the network. This unfortunately does add to the period it takes to deactivate the service.
- The information that needs to be supplied to request a port needs to be the same for all operators. Vodacom, for example, reject Telkom ports due to the account number and the account id, and after 3 or 4 requests, they accept the port with the same information supplied. They request certain information at the account number and account id, but on TIPCO it is not separate fields. It is one field that Telkom completes with all the necessary information.
- Telkom notes that although it would appear that Telkom has the highest number of violations, by comparison, Telkom in fact has a 93% success rate compared to , which is the party with the next highest port violations, coming in at 84% success rate.

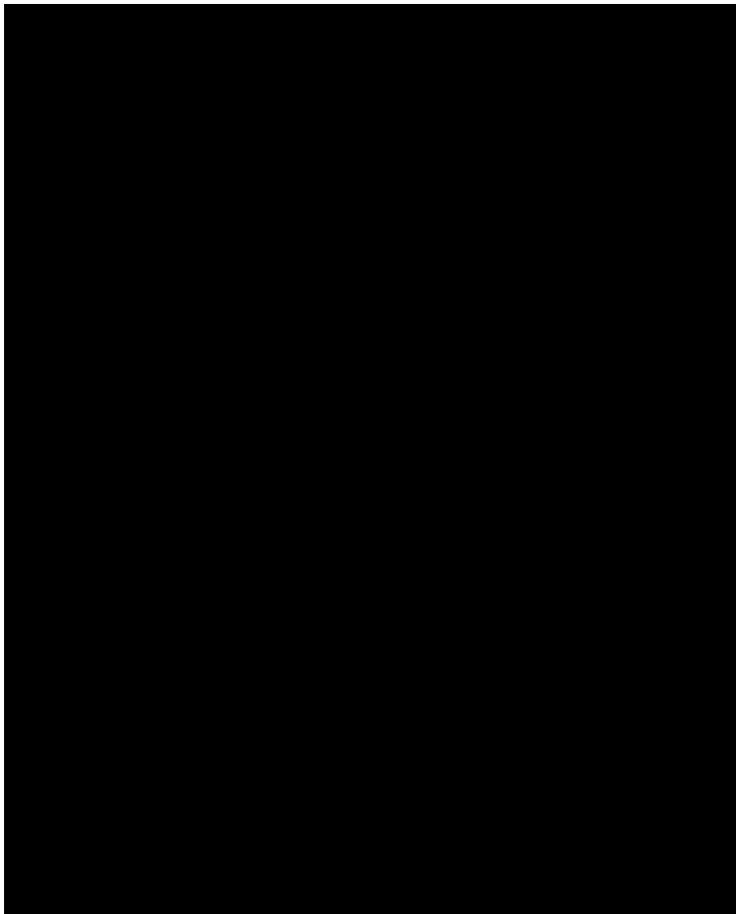
Table 8 - NPC Report since inception (Port Reversal Time)

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Table 9 - NPC Report - Timer violations (Port Return Time)

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Table 10 - NPC Report - Timer violations (Port Notification Time)

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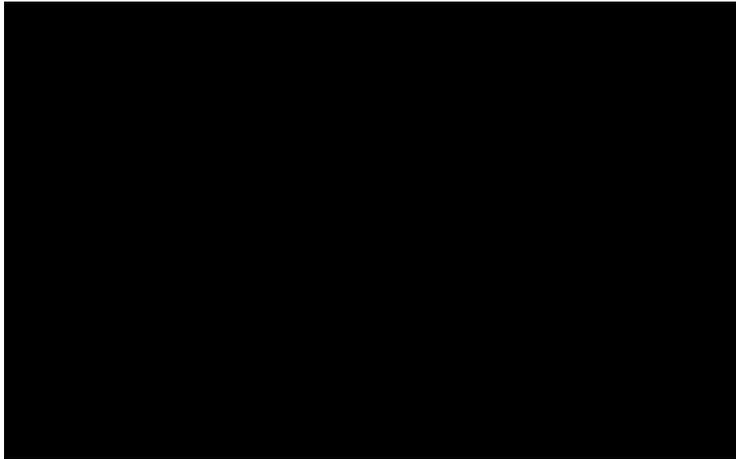


Table 11 - NPC Report Timer violations (Port Deactivation Time)

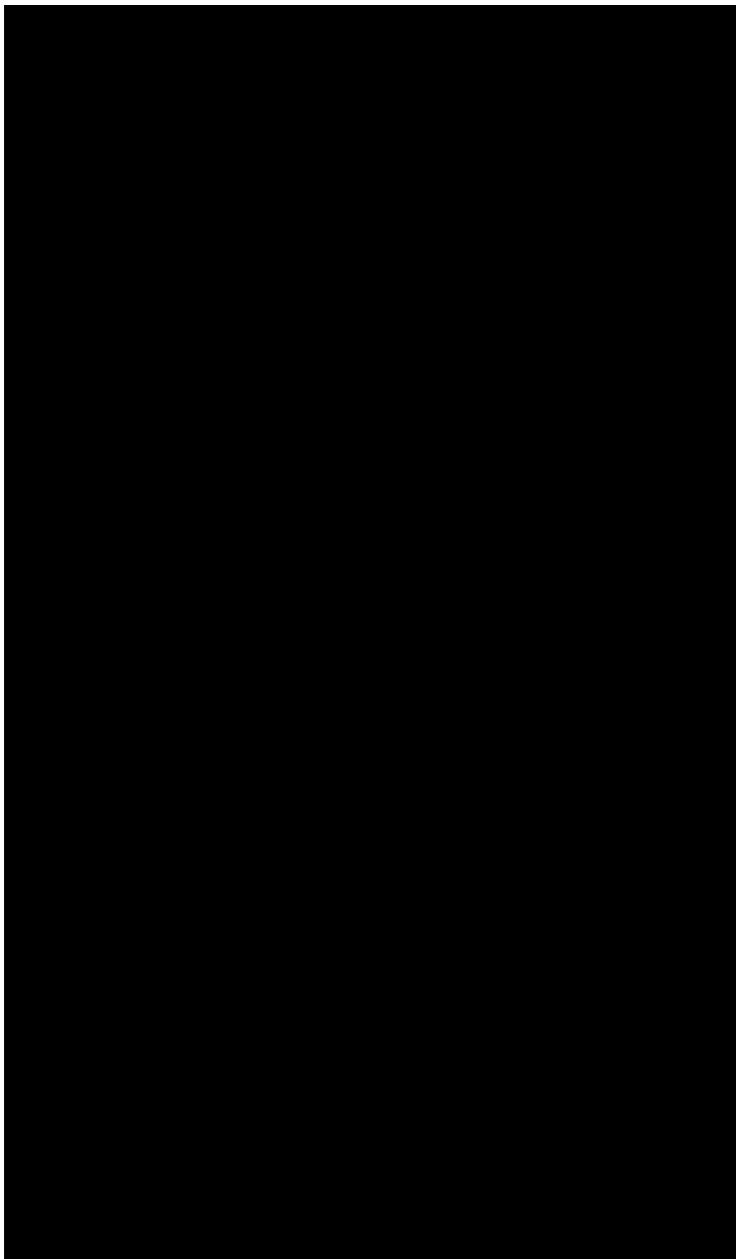


Table 12 - NPC Report Timer Violations (Deferred Termination Time)

Table 13 - NPC Report Port requests rejected (top 6) since inception

Table 14 - NPC Report - Port request rejection reasons since inception (2010-04-01)

Total	Rejection Reason
112131	SP009 Other reasons.
50587	SP029 Account Number is not the account number used by the donor operator for the DN(s) or DN Range for which porting is requested.
31267	SP001 The MSISDN or DN/DN Range is not valid on the donor operator network.
12816	SP005 Subscriber in suspension of outgoing or incoming calls due to failure to pay a bill.
4381	SP006 MSISDN or DN/DN Range not valid on SP.
83	SP027 DN Range is not exclusively used by the operator requesting the port.

13	SP002 The MSISDN or DN/DN Range is excluded from number portability.
10	SP004 The classification of the account does not match.
10	SP008 Port Request is for an inter-SP port; for this NO, inter-SP ports are handled outside the CRDB.
1	SP028 DN(s) or DN Range are excluded from porting under Regulation 3.

Notes:

- SP009 is currently the biggest issue that Telkom faces and the numbers in the table allude to this as well. The difficulty is that it is a generic code and Telkom does not know why the port was rejected, even if one of the other SP codes are applicable. OLO's are also at times apprehensive to provide Telkom with actual details of the rejection.
- When a block is ported to another provider, they are also not allowed to port out individual numbers from within the range to other providers, which is not being adhered to. There should be an SP code for this specific scenario, and it should be made visible to all parties.

6.6.2.1 Telkom GNP Analysis

The NPC port statistics over the entire period since inception in 2010 for geographic number porting, reflect that Telkom generally performs well against the requirements of the GNP OSS.

Of major concern w.r.t. geographic porting is the low level of port-ins which Telkom is achieving. Telkom is of the view that there are several reasons for this, but one of the main impediments is caused by the fragmentation of contiguous number blocks which Telkom has extensively elaborated on in this response. Telkom recommends the Authority investigate this matter further to ascertain the extent of the impact of this on customers who have now been technically constrained due to the fragmentation problem Telkom has highlighted.

6.7 Question 7

Q7-Do you think the current geographic porting at the local area code exchange promotes effective number portability? If not, please elaborate and propose alternatives if any.

For individual geographic number port-out – yes, there is no major problems to give effect to this.

For contiguous block port-out – no, see our explanation in response to question 5. In brief, failure to give proper termination date notice by the recipient operator and the breaking up of PRA (DDI) contiguous number blocks is leading to routing inefficiencies within Telkom's network. In addition Telkom's geographic number utilisation figures reducing because other operators don't port in the entire block.

6.8 Question 8

Q8-What other non-geographic numbers do you think should be subjected to number portability besides mobile numbers?

The primary purpose of number portability is to enable a customer to move to another network provider while keeping its number. Such numbers include geographic numbers assigned to fixed line customers and mobile service numbers assigned to mobile service customers. Another non-geographic set of numbers which are also assigned to customers today is VoIP 087 numbers. They are however not subject to porting at present.

It is arguable that VoIP is a very flexible voice service that is not bound by geographic location and therefore shouldn't be subject to porting. However, Telkom is of the view that its exclusion from porting may in fact compromise customers' freedom to locate to another operator and the Authority may wish to carefully consider the longer term effect on competition if this regulatory position is left unchanged.

There are other non-geographic numbers used in the provisioning of Value Add Services (VAS), but which Telkom submits don't constrain a customer from porting with its assigned number to another network operator. Such numbers associated with VAS, fall outside the scope of mandated number portability and don't constrain a customer from porting.

6.9 Question 9

Q9-Do you think the port back waiting period of two (2) months in the current number portability regulations promotes effective number portability? If not, please elaborate and propose alternatives if any.

Telkom is of the view that the existing 2 month winback prohibition period is sufficient.

The following issues require addressing by the Authority:

1. Failure to disclose list of services not offered by recipient operator

Telkom notes that there are instances where other licensee's persuade customers to port out, but then fail to fully disclose that certain of the customer's existing services will not be provided by them and their service will be disrupted/terminated once the port out has been executed, to the inconvenience of the customer. Once customer's wake up to this reality, they seek to urgently return to Telkom. Telkom recommends that the Authority address this issue, especially from a customer perspective and request recipient operators to disclose upfront which of the customer services with the donor operators, they will not be capable of providing once the customer has ported to them.

2. Port reversals due to winback practices

Another issue which should be addressed by the Authority relates to port-reversals. Although the customer initiates the port-out request with the recipient operator, there exists a trend where port-out request gets reversed.

There are numerous reasons for the port reversals initiated by customers, amongst others they include:

- Erroneously initiated port requests
- Fraudulently submitted ports i.e. the rightful owner of the number has not authorised the port out.
- Network issues
- Change of heart of by the customer, due to:
 - Costs of porting
 - Perceptions of recipient operator's network
 - Potential winback interventions by donor operators

When Telkom Mobile inquires as to why the customer has elected to abort/reverse its port request, in the majority of cases customers refuse to provide their reason for not wanting to continue with the port. What gives rise to this behaviour requires further investigation.

It could simply be that the customer has had an honest changed of mind based on legitimate reasons, or has had a change of mind due to persuasion from external forces, including potentially donor operators engaging in winback in violation of the 2 month winback prohibition.

The fact that customers don't wish to disclose their reason for porting does unfortunately raise the suspicion of whether they have not be prepped and that this may have been part of the donor operator's drive to winback the customer during the course of the port process.

The 2005 Number Portability Regulations allows the porting customer to abort the port if agreed with the recipient customer and Telkom has supports this right of customers. However, the regulations don't provide a specific set of criteria under which the customer may abort the port request.

Telkom requests that the Authority consider introducing the following two criteria which will allow customers to reverse port requests while curb winback attempts by donor operators:

- 1) If a fixed line customer discovers that they will not obtain all their existing services from the recipient operator after it has ported.
- 2) If it can be shown that the customer has been approached by the donor operator to attempt to prevent the port-out of the customer.

6.10 Question 10

Q10-Which provisions of the Number Portability regulations including the functional specifications do you think should be reviewed to improve the efficiency and effectiveness of porting?

Telkom will address this question in 3 sections i.e. 1) the number portability regulations, 2) the functional specification and 3) the operations system specification.

6.10.1 Proposed amendments to the 2005 Number Portability Regulations

Greater penalties should be considered by the Authority for winback practices as a disincentivisation strategy as there is evidence that incumbent operators are engaging subtly in this practice as outlined earlier in this submission.

The regulation should further make provision for the accurate account/service information to be made readily available to customers, should they wish to port to an alternative network. This often results in Port-Out Rejections by OLO's due to inaccurate data being supplied, however this is often not easily available.

6.10.2 Proposed amendments to the Functional Specification

The recipient operator fails to disclose to the porting customer that it can't accommodated all its existing services once the customer has ported out. A good example is a customer who uses both a voice and an ADSL service. Once the customer ports, he then discovers the new operator does not provide an ADSL service due to the manner in which the recipient operator provisions the voice service. The disrupted customer now wants to return to Telkom, but is held ransom by the recipient operator. Telkom submits that to avoid such instances occurring an obligation should be placed on the recipient operator to fully disclose what services of the customer will enjoy continuity if the customer were to port. This empowers the customer to make an informed

decision and avoid the inconvenience of such a ridiculous situation. Alternatively, the Authority should give the customer the freedom to reverse the port without any restriction from the recipient operator.

Telkom can share details with the Authority of a particular case where the age of the prepaid service on the network and the time difference between the activation and port out is shown. In this example, there are approximately 575 cases of these where the service has been active for less than 24 hours on the Telkom network, which happened over a 1 week period.

6.10.3 Proposed amendments to the MNP Operational System Specification

Telkom Mobile has encounters instances where a number has been activated on Telkom Mobile's network, but within a hour the number is ported out to an OLO. Message 9 is involved in this port process.

Telkom has evidence which shows where the age of the prepaid service on the network and the time difference between the activation and port out is shown. In this example, there are approximately 575 cases of these where the service has been active for less than 24 hours on the Telkom network, which happened over a 1 week period. Telkom will gladly provide the Authority with this information to show the challenge faced in this regard.

Telkom requests the Authority to curb this type of incident by considering the introduction of a further prohibition period associated with this timer, so as to give effect to the the 2 month winback prohibition.

Telkom Mobile also encounters violations messages on a continuous basis in relation to the NPC CRBD:

- Message 98: which is a timer violation, where one party has exceeded the time taken to perform a specific action/message, and
- Message 99: which is a message out of sequence violation meaning a message was received by CRDB which was not the message expected (e.g. CRDB expects Message 6 but received Message 8 instead).

For these 2 violations, only Message 99 violations are received from CRDB for both GNP and MNP.

Once again Telkom calls upon the Authority to address this type of impediment which stifles competition and customer choice.

6.10.4 Analysing Message timers through the MNP porting process

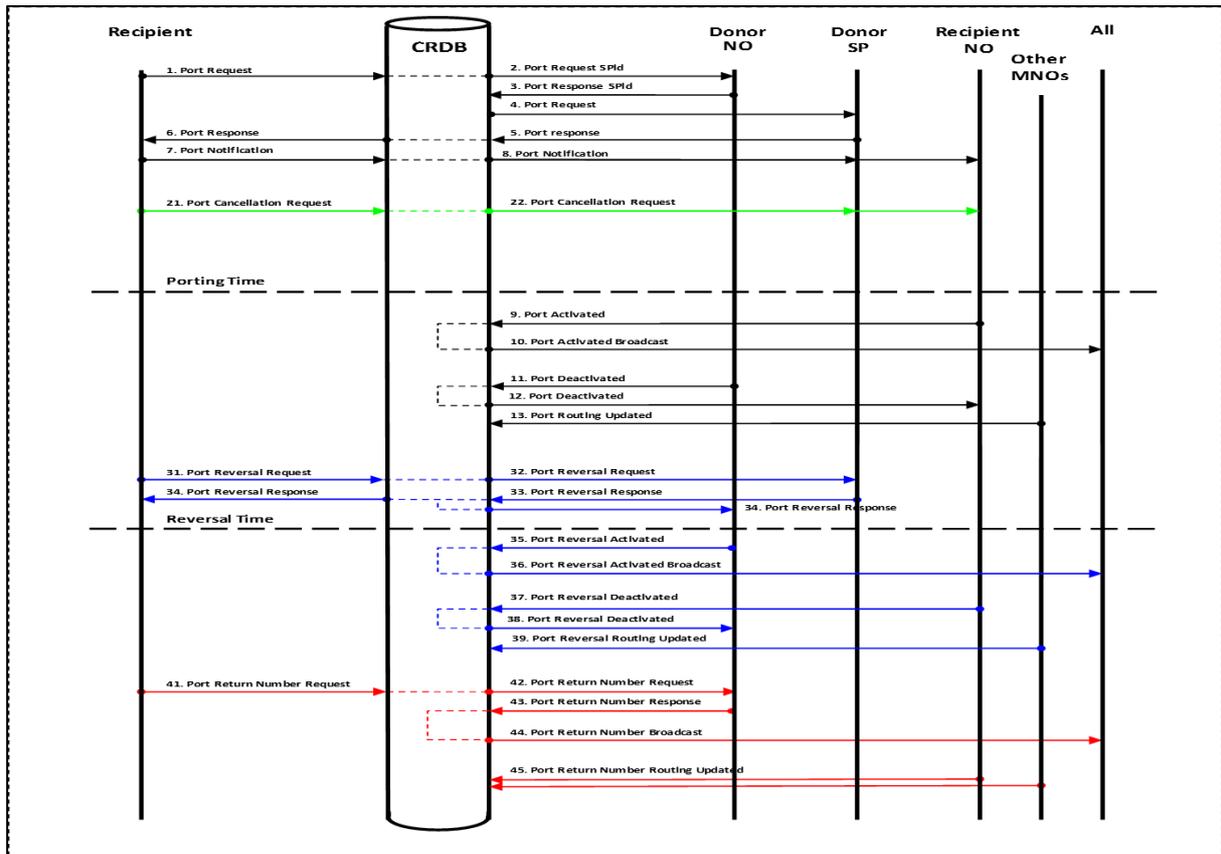


Figure 13- CRDB Message flows from Mobile OSS

Table 15 – Telkom’s comments on MNP OSS Messages

Recipient		Donor	
Comment	Message	Message	Comment
	1		
		2	
		3	
		4	
		5	Delays in response from OLO’s (either authorise or reject) resulting in delays in porting the number to the recipient operator
	6		
	7		
		8	
	21		
		22	
		9	
		10	
		11	If this message is not sent during NST, the result is that the customer ends up with partial

			service e.g. receive calls on the donor network and make calls on the recipient network due to incomplete updating of routing table. This obviously compromises the on boarding experience with the recipient network.
		12	
		13	
	31		
		32	
		33	
	34		
		35	
		36	
		37	
		38	
		39	

6.10.5 Analysing Message timers through the GNP porting process

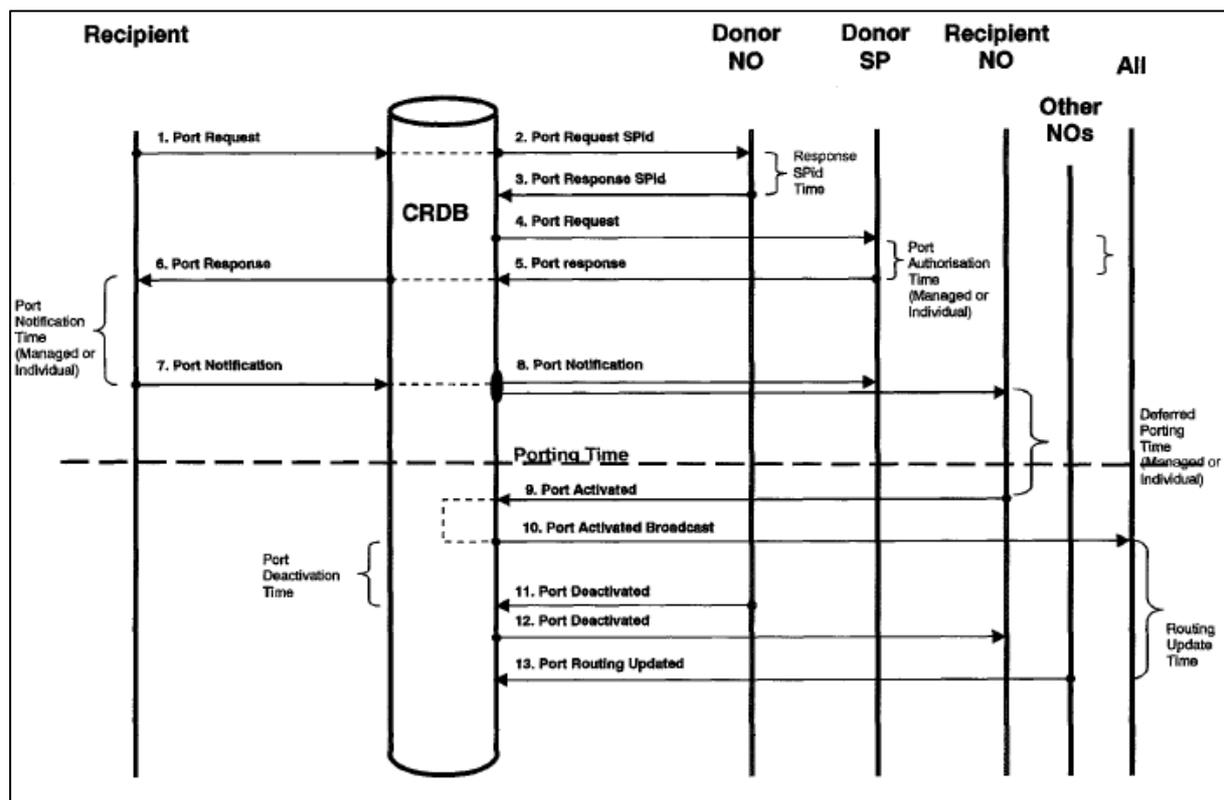


Figure 14 - Geographic Number Portability (GNP) Operational System Specification (OSS) as prescribed by ICASA

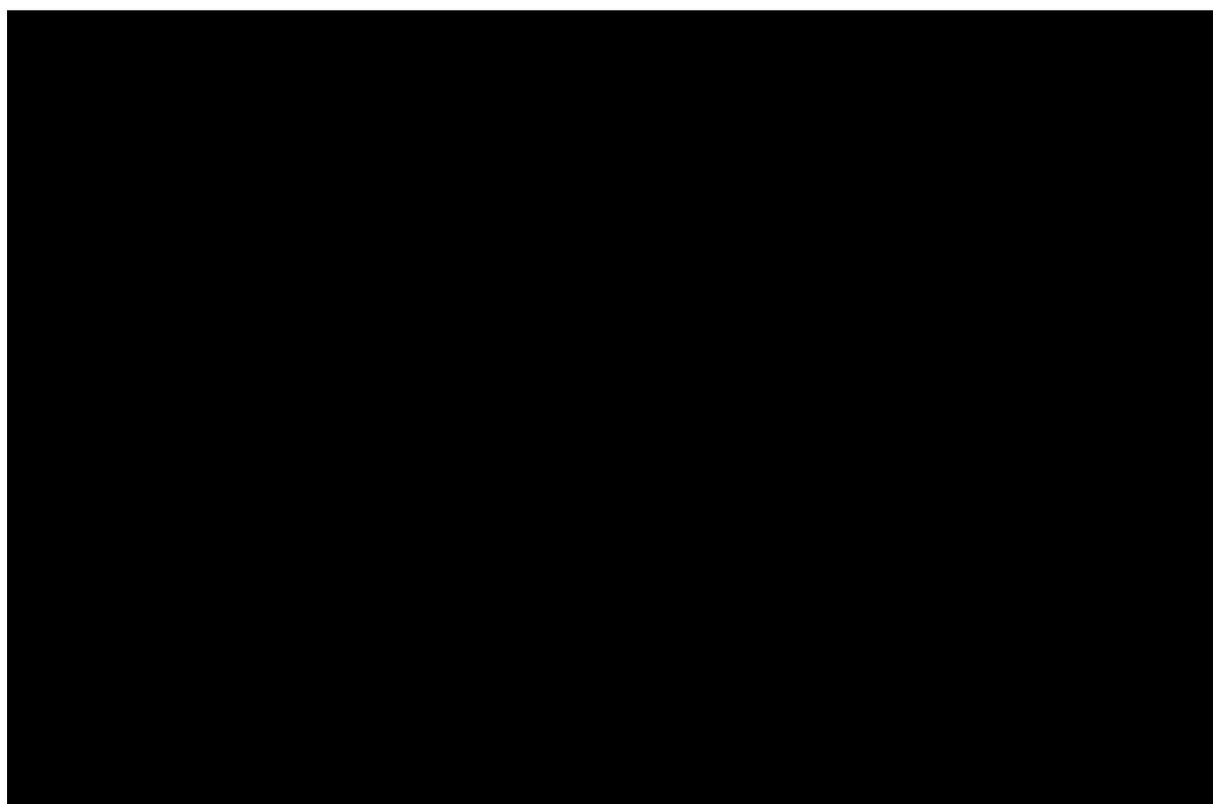
Table 16 - Telkom's comments on the GNP OSS messages

Recipient		Donor	
Comment	Message	Message	Comment

	1		
		2	
		3	
		4	
		5	
	6		
	7		
		8	
		9	
		10	
		11	message 11 is an issue due to Telkom not being able to update routing tables timeously due to reasons that have been stated in section 6.6.2 version 2.1 of the draft.
		12	
		13	

Telkom does not have issues with the other operators.

Table 17-NPC Report - GNP CRDB Message Status Summary



Telkom Note:

- A message violation should be provided to all operators on Message 13, which confirms that routing has been updated on the network. Not ensuring that routing has been updated when a port has completed does have significant impact on customers services when onward routing is not in force on the operators network.

6.11 Question 11

Q11-Do you think the number of days it takes to port should be increased or decreased? Please elaborate and provide alternatives if any.

Geographic porting:

The Function Specification for GNP allows:

- Individual ports – 10 days
- Block ports – 20 days

Telkom is of the view that the porting time for geographic numbers is adequate and does not need to be changed.

Mobile Service number porting:

Telkom is satisfied with the 16 hour porting period for MNP.

Table 18- Telkom recommendation on Port duration for MNP

2005 Number Portability Regulations requirement	Variance with requirement	Telkom proposal
Port in		Telkom would recommend that an additional obligation be placed on licensees to communicate a valid reason for the failure to meet the timeline in order to develop a better process of effective porting. Telkom recommends the Authority apply itself to the reasons and consider setting down valid reasons for rejection.
Port out	The SLA on a PO is 16 hours which is only applicable to the port acceptance phase (message 5). The remainder of the process has a period of 30 days to remain open before it is automatically cancelled.	

6.12 Question 12

Q12-Do you think the current recipient led porting process is effective? Please elaborate and provide alternatives if any

Telkom believes the approach where a customer approaches the recipient operator is the correct one and should not be changed. Validation processes should not be unnecessarily burdensome to keep port rejection levels to a minimum.

Despite winback restrictions being imposed via the regulations, there still is evidence that engagement with customers wishing to port out is occurring. The sudden drop in port-in figures during the period from March to June 2016 is indicative that the incumbent operators have

adopted a new strategy to curb their customers from porting to better value propositions in the market.

There are several indicators pointing to potential winback occurring despite the prohibition thereof in the regulations. They are:

1. the validation SMSs being sent to customers, after the port is initiated, to validate the legitimacy of the port out request,
2. the increase in port reversals, and
3. the delay in finalising the port-out request.

Note, the validation SMS is not a part of the official OSS at present, but by its mere introduction by incumbents, without spelling out the exact steps to be taken once the validation is done, there is room for abuse. Telkom recommends the Authority close these caveats in the process and place timers on the duration of this additional step.

The most recent customer complaint below is evidence of the frustration being experienced by a customer wishing to port to Telkom.

*“Hi,
I hope this is the write email address, I have been experiencing some trouble trying to port my number from Vodacom to Telkom, the Telkom staff have been trying to port the number for me, but unfortunately after all their attempts, I just never seem to receive the SMS with the necessary code for them to proceed with the process.*

Could somebody please give me some advice as to how I can proceed with this?

[REDACTED]

Another area which should be closely scrutinised by the Authority is the early cancellation fees. This practice may also lead to fewer ports constraining customers from porting to better value proposition services.

6.13 Question 13

Q13-Do you think there should be a standard/uniform call routing mechanism? Please elaborate

Routing of calls on a network should remain an operator’s prerogative and Telkom follows international technical routing standards in this regard.

Routing as it relates to number porting however requires a more equitable approach than the prevailing regime imposed by the 2005 Number Portability Regulations.

Section 5(3) of the 2005 Number Portability Regulations placed an obligation on Telkom to provide a service to all other operators whereby it will route calls “directly or indirectly” to ported numbers. This was imposed in a time when there was no Number Porting Company and no Central Reference Number Port Data Base (CRDB). But things have materially changed

since 2005 and the response to Question 4 illustrates just how far the NPC has come since inception to cater for all players in the market.

With all operators now having access to the CRDB of the NPC, indirect routing is no longer required. In the light of the fully liberalised market, this section 5(3) obligation placed on Telkom is therefore outdated. Direct routing will promote efficient routing of calls and also enhance quality of service by shortening the call path route. Instead of a call traversing over 3 networks, it would only route from the one network to the other network with direct routing.

Telkom recommends that the Authority now impose direct routing on all licensees as the NPC and CRDB are now well established and all licensees have access to it to ensure direct routing. Furthermore, Telkom requests the Authority to remove the indirect routing obligation placed on Telkom in the 2005 Number Portability Regulations.

6.14 Question 14

Q14-Do you think the processes and the procedures for resolving subscriber complaints and providing subscribers remedies are efficient? Please elaborate

Telkom is of the opinion that the processes and procedures for resolving subscriber complaints related to porting is efficient. Telkom has also noted the ruling against MTN and has actioned its own customer education campaign to alert its customers of their rights and the route of recourse they have at their disposal in the event of porting problems. The URL link below provides Telkom customers with access to any relevant information in the case of a port out problem.

<https://secure.telkom.co.za/today/shop/plan/mobile-number-portability/>

6.14.1 Routing problems

6.14.1.1 Failure to insert Porting Code

A common problem applicable to both fixed and mobile ported numbers which also impacts on customer porting experience is that the smaller operators are not inserting their porting code and Telkom find that the call gets routed incorrectly as Telkom does not do any lookup queries on the B number. This type of issue is not very visible to the customer, and Telkom would recommend a specific obligation be imposed to ensure the insertion of the porting code by operators as this would also assist in avoiding customer frustration associated with porting which is specifically related to routing issues.

Porting code example:

Telkom deleted the specific number and the name and porting code of the specific operator and will keep the explanation generic:

The number 0NN ABC XXXX has ported to Operator X. Telkom correctly routes the call to Operator X with the Operator X GNP routing code DXXX prefixed in the B number. Operator X however returns the call back to Telkom with the Operator Z GNP routing code DXXY prefixed in the B number, and Telkom then routes the call to Operator Z.

Note that the ported customer is unaware of this problem.

6.14.1.2 Failure to timeously update the routing tables with CRDB timeously

A major problem experienced by Telkom Mobile relates to other operators' failure to update the routing tables timeously. The only way Telkom Mobile becomes aware of this, is after the customer has ported in, and once realizing they are not receiving incoming calls from other operators who's routing tables have not been updated. According to the framework routing should be updated within an hour of being reported. However, practically it takes anything from a few hours to over a month (across operators).

Telkom recommend that this matter be interrogated, and measure be put in place which can address this problem speedily in order to ensure customers are better protected and smaller mobile service providers such as Telkom Mobile are not prejudiced in the process.

6.15 Question 15

Q15 – Do you think that consumers are adequately protected by the Number Portability regulations? If not, please elaborate and provide alternatives.

Yes.

In 2005 the Number Portability Regulations and Mobile Number Portability Functional Specification were published.

In 2006 an Mobile Number Portability (MNP) Operational System Specification (OSS) was developed between MTN, Vodacom and Cell C. Telkom has not seen an official gazetted version of this MNP OSS.

In 2007 the Authority gazetted the Geographic Number Portability (GNP) Functional Specification on the understanding that the Authority was satisfied with this GNP OSS.

In 2010 the Authority gazetted the GNP OSS.

In 2010 the Authority publishes a "Consumer Guideline for GNP"

Looking at the timeline, and the development of the industry since 2005 and considering the routing issues which have emerge, evidence of winback occurring combined with the increase in consumer issues related to number portability Telkom submits that it is opportune for a review of the number portability regulations and the associated Functional Specifications and OSS.

From an overarching perspective it issues have emerge on three fronts which require closer scrutiny:

- 1) The 2005 Number Portability Regulations
 - a. Absence of clear definition of "individual geographic number"
 - b. Risk of contiguous number block fragmentation
 - c. Tariff transparency vs warning message mechanism
 - d. Tighter mechanisms to secure improved routing of ported calls i.e. porting codes
 - e. Pre-paid fraud challenges
- 2) The Functional Specifications for particularly MNP, but also for GNP
 - a. MNP
 - i. Winback practices need to be tightened

- ii. Strict customer validation criteria
- b. GNP
 - i. Adherence to critical timing issues i.e. termination date for block porting
- 3) The OSS for particularly MNP, but also for GNP.
 - a. MNP
 - i. Port reversals should be minimised
 - ii. Stricter compliance with certain message timers

Issues around RICA and fraud have also emerged and require closer scrutiny.

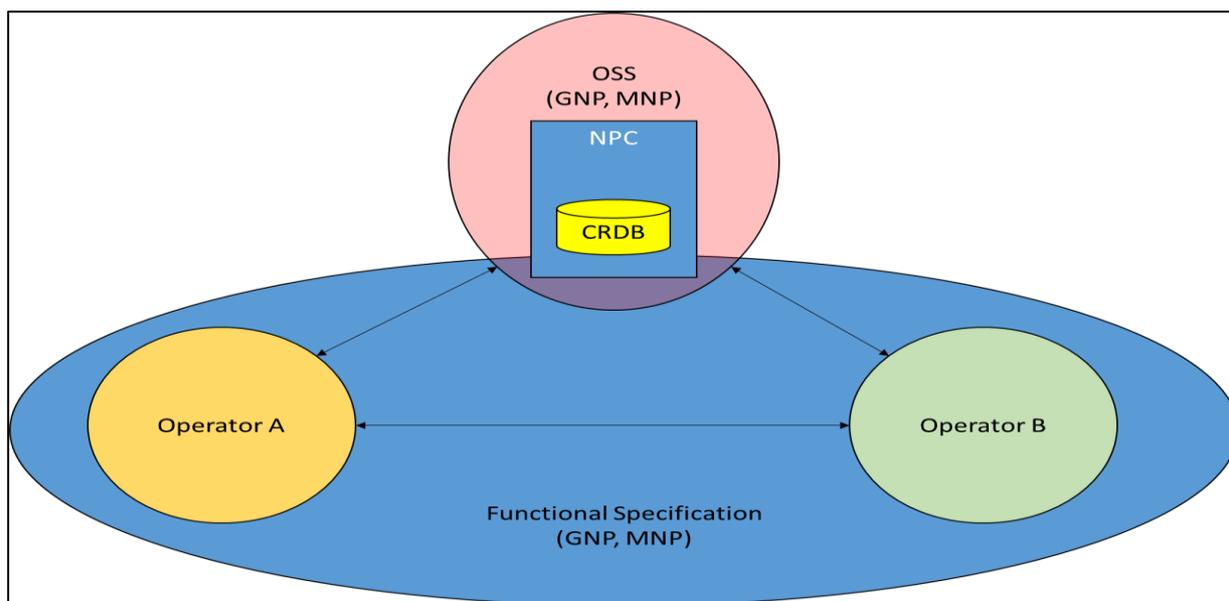


Figure 15 - Scope of the Number Portability Regulations

6.16 Question 16

Q16 - Please submit any other information that you believe the Authority should consider

6.16.1 Unauthorised & fraudulent porting

Prepaid services (mobile) are prone to unauthorised ports due to inadequate validation. Telkom recommends a more transparent process w.r.t. initiation of port requests to minimize unauthorised porting requests. Telkom currently applies a practice where only authorized Telkom personnel have been authorized to initiated porting requests on behalf of Telkom. By controlling the entities who can access the NPC system fraudulent port requests can be minimized. Telkom requests the Authority to amend the OSS to introduce access and traceability measures to minimize fraudulent port requests being initiated by unknow agents of operators.

Unauthorised/fraudulent port requests are approved resulting in financial losses for both subscribers and OLO's. It is very difficult to establish the source of the porting request mainly due to OLO's not co-operating.

- **Remedy 1:** MTN & Vodacom have already implemented a SMS advising subscribers of pending port requests and what actions to take if the port is not authorised. Telkom Mobile is also in the process of meeting IT requirements to implement the same mechanism.

- **Remedy 2:** The porting framework must encourage a level of co-operation between all service providers involved in the porting process in order to facilitate consumer switching. It is necessary to promote an industry framework for cooperation between all relevant service providers in order to facilitate the transparent and inclusive governance of customer porting arrangements so that these can be developed by industry, under appropriate regulatory direction.
- **Remedy 3:** RICA person to be added as one of the validation criteria for prepaid (currently only validating account classification and customer has not ported in the last 60 days).

6.16.2 Porting warning messages for tariff transparency

Holistically the warning message regime instituted by the Authority to enable more tariff transparency for callers when considering the combined effect of clause 7(4) and 7(6) of the regulations is counter productive. The Authority defined each beep warning message to be three beeps long while not lasting more than 2 seconds. If both the call originating operator and the call terminating operator are simultaneously required to play a warning message the combined effect would result in 6 beeps of a maximum of 4 seconds, prolonging the time it takes to connect the customer to the dialed party. The Authority should rethink its approach towards informing calling parties when they make calls to ported numbers.

7(4) “To ensure adequate tariff transparency for callers, where as a result of number portability the termination rate charged for a call to a ported number is more than 10% higher than the termination rate charged by the operator allocated the number block that contains the ported number, the terminating operator shall apply a warning to be agreed with the Authority before connecting the call and shall not charge for the period during which the warning is applied.”

Telkom questions whether this warning message instrument instituted by the Authority on recipient operators achieves the stated objective of the Authority namely to “ensure adequate tariff transparency for callers”? There are several underlying assumptions made by the Authority in Regulation 7(4) which are questionable. These assumptions are:

1. **Assumption 1** – a customer is at risk of incurring higher costs for making calls to a ported number due to the higher termination rate of the recipient operator.
 - a. How big is the risk for increased costs relating to termination rates?
 - i. What is the termination rate difference between licensees?

	01-Oct-16	Delta between similar services	Delta between fixed & mobile
FTR	R 0.10	20%	90%
Asymmetry FTR	R 0.12		
MTR	R 0.13	46%	
MTR asymmetry	R 0.19		

1. The maximum difference in termination rate, without porting, exists between a geographic fixed line customer and the mobile service customer on a new mobile entrant’s network i.e. 90% higher termination rate.
2. The smaller difference in termination rate without porting exists between a Telkom customer and another fixed operator i.e. 20%.
3. Porting normally happens between geographic number operators or between mobile service operators.

4. Requirement 7(4) applies only where the termination rate to the ported number is 10% higher than to the block operator in which the number is contained.
 5. Thus smaller fixed line operators would be required to play the warning message for calls destined to numbers ported-in to them from Telkom Fixed, as they breach the 10% threshold, but not for numbers ported amongst themselves.
 6. Similarly, Telkom Mobile and Cell C will be required to play warning messages for calls destined to numbers ported-in to them from MTN and Vodacom, as they breach the 10% threshold, but not between each other.
 7. This raises an absurd situation where not all ported numbers would attract a warning message, but yet the termination rate is significantly higher.
 8. This is further complicated by the distinction between fixed and mobile, where clearly termination rates to mobile operators are much higher than for fixed both for existing numbers and ported in numbers.
 9. This questions the basis for playing the warning message to achieve tariff transparency.
 - ii. The customer would most likely be using a bundled product for a certain monetary amount. Customer calling patterns therefore dictate how quickly their package is depleted and higher termination rates may play a role in the speed of depletion of package minutes.
 - iii. However, cost impact is muted when factoring in a customer's call distribution patterns. Calling patterns will normally include calls to other customers, including other customers of the recipient operator, which will all attract the same termination rate as the ported customer, or other operators with the same termination rate.
 - iv. So why the need to sound a warning message?
2. **Assumption 2** - Termination rates are transparent to retail customers and correlate to retail rates.
- a. Termination rates are not generally transparent to customers and therefore don't inform their calling behaviour.
 - b. There is no direct link between retail rates and termination rates.
3. **Assumption 3** – warning message will promote competition
- a. fails to align with non-discrimination principle in interconnection regulations (see 10(3) of IRegs)
 - b. Discriminatory treatment of ported customer favour large incumbents
 - c. Gives rise to bad PR for new entrants who would port majority of customers onto their network, and thus counters the Authority's objective of achieving more competition.
 - d. May influence consumer behaviour and distort interconnection traffic flow.
4. **Assumption 4** - Customer Privacy is irrelevant
- a. A ported number would attract the same termination rate as all other customers of the recipient operator, so why disclose the ported customer new network?

7(6) "To ensure adequate tariff transparency for callers from networks where on-net discounts are offered the following shall apply: Where as a result of number portability an

on-net discount that might be expected does not apply and the retail rate charged for a call to the ported number is more than 10% higher than the retail rate with on-net discount for a call to an unported number in the number block that contains the ported number, the originating operator shall apply a warning before connecting the call.

Telkom questions whether this warning message instrument adequately achieves the stated objective of the Authority to “ensure adequate tariff transparency for callers”? There are several underlying assumptions made by the Authority in Regulation 7(6) which are questionable. These assumptions are:

1. **Assumption 1** - there is a cost problem for a calling party when making calls to ported numbers.
 - a. Is there a cost impact on calling party costs?
 - i. The customer would most likely uses a bundled product for a certain monetary amount. Customer calling patterns therefore dictate how quickly their package is depleted and higher termination rates may play a role in the speed of depletion of package minutes.
 - ii. Impact is negligible considering customer call distribution pattern may include calls to other customers of the recipient operator which may all attract the same higher termination rate as ported customer, or other operator enjoying high termination rate.
 - iii. Off-net termination rate to ported customer may result in more than 10% increase in call rate, but overall calling party call distribution pattern may neutralise overall impact on consumer, especially if calls are also made to customers of the recipient networks where the ported customer now resides.
 - iv. So why the need to sound a warning message?
 - b. Telkom is not aware when customers port amongst its interconnection partners, to factor in the changes in retail rates. At best its packages contemplate a generic average for calls to the respective different network. Telkom would not be able to determine in real time whether a customer phoning a ported number will be charges 10% more.

6.16.3 Updating of Routing Tables with CRDB

Telkom's observations on the current practice within the industry indicate that that operators are not always updating their routing tables timeously. This gives rise to calls to ported customers not being completed to them, but without them knowing the problems exists. Telkom Mobile in particular has encountered this problem. This problem also creates perceptual problems for Telkom Mobile relating to its mobile service. Telkom will recommend that the Authority investigate and address this matter in greater depth and tighten the obligation on licensees to ensure their routing tables are synchronized and updated timeously to avoid these types of routing problems.

The End