

**TELECOMMUNICATION REGULATORY
AUTHORITY**

SULTANATE OF OMAN

No.:1/2006

Date 1/3/2006

**DETERMINATION OF THE AUTHORITY ON NUMBER
PORTABILITY UNDER ARTICLE 8. (18) OF THE
TELECOMMUNICATIONS REGULATORY ACT ISSUED
BY THE ROYAL DECREE NO. 30/2002.**

Date of The Hearing: 27/12/2005

Date of Decision: 1/3/2006

**Before: H.E. Sheikh Mohammed Al-Harthy, the Chairman,
Eng. Naashiah Al-Kharusi, Member,
Col. Mohsin Al-Hafeedh, Member.**

A complaint by Omani Qatari Telecommunications Company operating under the trade name of Nawras was filed on 28.11.2005 and subsequently the Authority directed all the parties that are - Nawras, Oman Mobile Telecommnations Company (Oman Mobile) and Oman Telecommunications company (Omantel) to present their pleading on the issue of Number Portability for the Authority's determination.

Brief Background of the Case;

The Sultanate of Oman as per its policy, the Act, and licenses conditions wishes to provide maximum telecommunications facilities to its citizen. One such facility is to offer Number Portability to telecommunications subscribers as set out in article 51/9B. Number Portability, in short means, that regardless of the telecommunications operator from which the subscriber is receiving his service, he is allowed to keep the same number. To this effect TRA first wrote to Omantel (as then Omantel and Oman Mobile was one company being the dominant operator) on 15th March 2003 to prepare for Number Portability and followed it by similar directions by number of letters.

The announcement that Nawras was the best bidder for the second Mobile license was made in June 2004. The license was issued on 19th February 2005, and service to public was launched on 16th March 2005. Nawras started negotiations with Oman Mobile on Number Portability in June 2005, but strenuously started to peruse the matter from September 2005. There were a number of issues pending to be resolved between Oman Mobile and Nawras among which was the MNP issue.

On 18 October 2005, a meeting was held in the Ministry of Transport and Telecommunications, chaired by H.E. the Minister. The meeting was attended by TRA, Oman Mobile, and Nawras. After listening to both parties on issues relating to withdrawal of roaming facility and sharing of locations, the issue of Number Portability was addressed. H.E. gave three (3) months period within which parties must implement Number Portability. There was no objection raised from either party.

In order to ensure progress on all issues to be discussed, TRA officials were instructed to supervise and chair meetings and to this effect every Wednesday a meeting was held at TRA office to record progress on the meeting/negotiation held between the operators.

On 30 November at a meeting held in TRA offices, Oman Mobile stated in this meeting that it would take it 18 to 24 months to implement Number Portability. Nawras in return stated that in this case, as Nawras could be ready to implement Number Portability by 29 January 2006, on the date 3 months period expires, that it be allowed to provide Number Portability to Oman Mobile, as a common Number Portability provider subject to payment by Oman Mobile or Oman Mobile to allow its subscribers to port out to Nawras. The Authority put these options to Oman Mobile and subsequently presented them in writing to which Oman Mobile reply on both options was negative. Meanwhile Nawras submitted a formal complaint requesting the Authority to resolve this dispute.

Taking into account the statements, documents and pleadings of both parties, the following issues were framed by the Authority.

1. Is it possible to order a technical system of mobile Number Portability (M.N.P) independent of and without negotiating or consulting other operators?

2. What timeframe would be realistic for parties to resolve the issue and agree on the solution including installation of this solution to implement Number Portability?
3. Whether or not operators are obliged to implement MNP by 29 January 2006 in accordance with the Directive of His Excellency and the instruction of the TRA issued in its letter dated 1 November 2005 and, if so, what are the consequences of not complying with the above?
4. Whether Nawras should be permitted to port in mobile numbers if the TRA is satisfied and accepts Oman Mobile's arguments that it cannot implement a fully fledged automated MNP system by 29 January 2006?
5. Whether a customer should be required to settle outstandings with the Donor Service Provider (DSP) as a pre-condition for porting his number to the Recipient Service Provider (RSP)?
6. What validation processes should be adopted by the DSP and the RSP when handling an application to port a mobile number from one operator to another and the maximum time allowed for the DSP to validate a porting applicant?
7. Whether the DSP is allowed to directly charge customers for changing their subscription?
8. Whether the operators are entitled to recover any capital expenditure incurred for the design, development, and implementation of MNP in Oman?
9. Whether Omantel is obliged to pay a transit fee for routing calls to ported mobile numbers through the number range owner?
10. Should different tariffs be charged for calls to ported numbers?

Legal Position;

The Telecommunications Regulatory Act, states:

"The Licensee shall ascertain the ability of beneficiary in retaining the telecommunication number allocated to him in case of change of beneficiary subscription contract to another licensee"- (Article 51.9B).

The Licenses of both OMTC and Nawras, state:

"The Licensee shall cooperate with other licensed operators in the specification and the development of Number Portability to allow beneficiaries to change to another licensed operator or services provider without a change of number"- (Condition 19.6)

There are a number of provisions in the law and regulations that state that the licensee shall comply with the Authority's decisions. In particular, the licenses of both operators, state:

"In addition to complying with obligations defined in the Telecommunications Regulatory Act and the applicable regulations, and relevant decisions, orders, guidelines published by the Regulatory Authority, the licensee shall comply with any decisions, orders and guidelines issued by the Authority regarding the sharing of the telecommunications facilities or related structures by licensed operators"- (Condition 16.4.2)

General - Mobile Number Portability;

Mobile Number Portability (MNP) is the ability for a GSM mobile subscriber to change the subscription Network within a portability domain whilst retaining his original Mobile Number. In this determination, the number range owner who ports out the number is referred to as the DSP, while the operator to whom the beneficiary wishing to retain his original number is shifting, is referred to as the RSP.

From a technical point of view, supporting MNP requires the introduction of additional mechanisms to route the call to the final destination.

In the absence of Number Portability, the call to a mobile terminal is routed on the basis of the called party number to a gateway switch, which is responsible for the interrogation of the Home Location Register (HLR). The result of the HLR interrogation is a roaming number used to route the call to the current location of the called party.

The porting process is always initiated by the customer with his request to change service provider or network operator. MNP raises some important economic questions. The provision of MNP brings a number of direct and indirect benefits to the customers and also in general to the whole industry, but it implies some additional costs as well.

Arguments

[Issue No. 1]

Is it possible to order a technical system of mobile Number Portability (M.N.P) independent of and without negotiating or consulting other operators?

Technology of Mobile Number Portability;

TRA wrote to Oman Mobile and Omantel on 15th March 2003 and included guidelines on Number Portability that are adopted by TRA. These guidelines suggested that operators implement decentralized database solution to support MNP technology.

According to the European Telecommunications Standards Institute (ETSI), the decision is left to the operators to decide between SRT and IN approaches; however, operators should take into account the regulatory and architectural constraints that may prevail. ETSI has described in detail the technical realization of handling calls to ported GSM mobile number subscribers who wish to port their numbers using both approaches.

According to ETSI, solution to support Number Portability should allow rapid deployment of Number Portability that service providers can migrate between technical solutions. Solution should be developed in such manner that technology should not be presented as a barrier to

implementing Number Portability. Each operator decides about their own network architecture, network functions, and design of internal interfaces as long as external requirements are fulfilled.

European Telecommunications Standards Institute has described the IN and SRF technology approaches for the operators to realize Mobile Number Portability. The two solutions differ with regard to the network functionality and the network equipment used to obtain the routing information required to route the call to the ported customer. Both solutions are standardized and described in the European Telecommunications Standards Institute Technical Specification 123 066.

In general, IN-based and MNP-SRF (call-related) solutions are compatible and may coexist in the same portability domain (i.e. same country.) This however, is not an issue since both Operators have affirmed in their documents presented to TRA that they have adopted SRF approach.

Oman Mobile themselves vide their document presented to TRA stated that “The proposal is to use the INTRA PLMN Direct Routing Principle of the Mobile Number Portability – Signaling Relay Function (MNP – SRF) solution that can be implemented by the FNR node. This solution supports both call related (for instance voice calls) and non call related (i.e. SMS) messages. Since direct routing is proposed, this means that any interrogation of FNR database is to be performed by the operator exclusively in the operator’s own network, and no real time interrogation or synchronization is performed between the networks.”

As a consequence of using direct routing, there is the obligation of defining all the subscribers that have been ported in the NPDB of all operators belonging to the MNP domain. It should be noted that the implementation method of FNR is each mobile operating company’s individual choice”.

Following this reasoning, it is concluded that no matter what technology the operators choose, the two approaches can still coexist in the same domain.

This is contrary to Oman Mobile claim that they cannot place an order of Number Portability platform until the negotiation is completed. In our view these disagreements should not be used by Oman Mobile as a basis to stop ordering the platform.

Our argument here is further underscored by Ericsson document presented by Oman Mobile that stated that Ericsson could use one of Oman Mobile old HLR and upgrade it to function as Flexible Number Register (FNR a terminology used by Ericsson to describe SRF.)

Thus, it is possible to order MNP independently and an operator does not have to wait for negotiations with other operators.

[Issue No. 2]

What time frame would be realistic for parties to resolve the issue and agree on the solution including installation of this solution to implement Number Portability?

TRA instructed Omantel to prepare for Number Portability on 15th March 2003 followed by letters-dated 30th December 2003, 10th February 2004 and 28th February 2004. As determined above, MNP could be installed independent of other operator, and if Omantel would have seriously acted on the issue there is no doubt that Number Portability would have been in place. However, Omantel/Oman Mobile have not taken any steps towards Number Portability with the exception of informing TRA on 13/3/2004 that they are in the process of planning for this system.

During the weekly meeting (on 30 November 2005) held at TRA premises, Oman Mobile claimed that the time span for implementation of Mobile Number Portability would be between 18 to 24 months. (Oman Mobile letter of 10/12/2005 (page 3 Para 14). Since this time was much excessive than even envisaged, the parties were encouraged to consider temporary use of Nawras Database in centralized manner until such time when Oman Mobile was ready to implement the decentralized database.

It is admitted from Oman Mobile statement that it did not take any action on the grounds that they felt any action should only be taken after the agreement, if not signed at last "finalized". It is only when TRA requested evidence to support their claim regarding the time they require that they approached various vendors on 21/12/2005.

Oman Mobile in their submission on the issue dated 26/12/2005 stated - "*9 months time frame for implementation, once the solution/issues are agreed upon /determined by the TRA is realistic*".(Last Para. of covering letter)

Oman Mobile wrote to seven vendors requesting information for implementation of M.N.P. All gave different time frames ranging between 3 months to 6 months + one month for completion of contracting procedures (Ericsson gave three different scenarios ranging between 3 to 6 months, Huawei 9 month, Comverse 22 weeks and Siemens 6 months). Thus, most vendors proposed six months plus one month for completion of contracting procedures.

Nawras reassured TRA that their Database can be configured to operate in a centralized manner and the porting process can also be done manually till Oman Mobile IT system was operational. However, in order to implement the centralized solution (manually or automatically) Oman Mobile needs to upgrade its network to able to consult Nawras centralized database (This has been referred to in the preceding Para).

Furthermore, Oman Mobile has vigorously objected to this approach, as it will require Oman Mobile to relinquish control of its traffic to its competitor. Even if the control of this database is given to the third party, Oman Mobile system is not equipped to connect with Nawras centralized database.

In the Nawras bid document under "Technical Section: Network Subsystem", Nawras had clearly stated that "*Nawras' entry into the Omani GSM market is not tied to Number Portability deployment and Nawras' network implementation schedule independent of Number Portability.*" Nawras itself did not take up this issue seriously until the end of September 2005.

Nawras has made some confusion to Oman Mobile when it proposed in June 2005 a centralized database solution contrary to TRA's instructions issued to both operators. Furthermore, Number Portability, it must be realized is a comparatively new concept. No doubt, that it is very beneficial, however, it is still not available in several OECD countries.

Thus, if we analyze the practical situation, it was not possible on 29th October 2005 for Oman Mobile to implement Number Portability within three months and they needed considerably more time. The time frame presented in Nawras pleadings stated that both companies need about five months from acceptance of specifications to purchase, installation and testing of systems, till service is provided. However, given that Oman Mobile has not efficiently utilized the four months, and to some extent have been slow (see issue No. 3) the request of Oman Mobile that it needs at least nine months from the date of determination is unreasonable.

The Authority considers nine months period was reasonable in October 2005. That period is inclusive of implementation of MNP and all facilitations such as interfacing and modifying the internal applications of Oman Mobile. Since Oman Mobile has not utilized this period efficiently and held back the upgradation of their systems to implement this facility and used this only as excuse that they are awaiting TRA instructions therefore, a nine months period cannot be given now, as it had lost four months since then.

However, all the evidences available to the Authority suggest that Oman Mobile can still order, install and integrate this system within five months.

[Issue No. 3]

Whether or not operators are obliged to implement MNP by 29 January 2006 in accordance with the Directive of His Excellency and the instruction of the TRA issued in its letter dated 1 November 2005 and, if so, what are the consequences of not complying with the above?

On 17th October 2005 roaming in a few regions was withdrawn by Oman Mobile. This created a crisis and as a consequence an urgent meeting was requested with H.E. the Minister by Nawras to resolve this issue. The meeting was held at the Ministry under the chairmanship of H.E. the Minister and was attended by TRA, Oman Mobile, and Nawras. Omantel was not present. In the meeting, H.E. instructed the parties to resolve all the pending issues.

On roaming there was a detailed discussion because that was the main issue on which the meeting was called. Other issues were not really

subject of the meeting that's why Omantel was not invited to the meeting as roaming dispute was between Oman Mobile and Nawras. However, two other issues hindering the progress were co-location and Number Portability. H.E. gave directions to the parties to try to conclude co-location issue within one week and Number Portability within three months. In order to record the progress he directed TRA to chair the operators meetings to ensure and monitor the progress. There was no objection raised by the parties.

Nawras alleges that by H.E. directions, " all operators are obliged to comply with the instructions of the H.E. the Minister and of the TRA and accordingly take all necessary actions to ensure that (MNP) is implemented by 29 January 2006. This obligation derives from the fact that the Telecommunications law and the licences of Omantel, Oman Mobile and Nawras impose an obligation on all operators to comply with all relevant decisions, orders, and guidelines of the TRA. We therefore submit that any failure by any of the operators to comply with the above decision entitles the TRA to impose a penalty in accordance with the provision of the respective operators". (Para 3 of its pleadings the issue No. 1 Pg. 4)

While Oman Mobile stated that, the meeting with H.E the Minister on October 18th 2005 was held to discuss a specific issue related to national roaming. At that meeting, H.E. Minister deliberated with the parties on a number of competition related issues including co-location, national roaming, and Number Portability. It was at that meeting that H.E. the Minister gave his guidance to the parties on all the issues discussed including on Number Portability. It is a mischaracterization of the deliberations at the meeting to suggest that some how Oman Mobile has provided its input to H.E. the Minister that 3 months was a reasonable period to implement number portability. Oman Mobile has not provided any input to H.E. the Minister that 3 months was a reasonable period. (Para 15 pg. 5 of its response to Nawras pleading dated 01/1/2006.)

The Act says:

- *To take the necessary measures to determine the acts or events which prevent competition in the telecommunications sector" (8.14)*
- *"To investigate the complaints filed by the beneficiaries or licensees or any other person, and take the necessary measures in that regard." (8.18)*

The Act is silent about procedures although in order to be transparent and judicious the Authority has introduced "Dispute Resolution Regulations" which although not formally approved by the relevant ministry are being followed. However, if the principles of Natural justice are followed, parties have to be given a chance to be heard (if not both, by writing or verbal pleadings). This was not done in case of Number Portability in the period that preceded Nawras' submission of a formal request for dispute resolution.

There were no formal pleadings presented by the parties. There was no discussion whether MNP is in place or not in either of their systems and of course, Omantel was not even present in the meeting.

It is TRA's view that H.E's directions were more of an informal suggestion to urge the parties to achieve progress rather than an instruction enforceable on a specific date, or a resolution in a dispute as there was no formal complaint until that moment. This is supported by TRA letter of 5 October 2005 and is further evidenced by H.E's letter dated 22nd November 2005 addressed to the chairman of the board of Nawras stating that, *"as far as Number Portability is concerned, a team comprising of Nawras and Oman Mobile to be chaired by TRA has been formulated to consider the mechanism of implementing Number Portability"*.

All parties that are Nawras, Oman Mobile and Omantel participated in the meetings / negotiations up to 30th November 2005. It seemed all was going well up to that time when on 30th November Oman Mobile informed the Authority in the follow-up meeting that it would not be ready to implement Number Portability on 29th January 2006. It made very clear that it shall obey the Authority's instruction however, and as the actual situation remains as it is, it is not possible to implement Number Portability on 29th January 2006 (Oman Mobile memo dated 10th December 2005).

The parties have the right to ask for a review of the Authority's decision or request extension of time. Thus when Oman Mobile informed the Authority that it is not possible for it to implement Number Portability on 29th January 2006, The Authority had to consider in the light of the evidence as to whether this request is justified or it is in order to avoid obedience of the Authority direction or to cause hindrance for the other operators.

There is no evidence before the Authority, which may suggest that Oman Mobile is trying to avoid the direction of the Authority because there are letters supporting this, e.g. page 5 Para 21 of Oman Mobile 10th December 2005 letter.

In considering this issue, there are two periods to be taken into account. First is when the Authority wrote a letter to Omantel that is on 5 March 2003 and the second is from 5th October 2005.

On evaluating this, we have to understand the practical situation as well. Oman Mobile has gone through a lot of changes. It was part of Omantel and only was created an independent company from March 2004. Furthermore, only recently some of its parent company shares were floated to public subscription, and the majority of its shares are still held by the government and this is subject to certain administrative procedures in respect of purchases.

Furthermore, by its history Oman Mobile is the dominant operator, but from administrative and management point of view, it is fairly new and thus it maybe inefficient but it is doubted whether it was avoiding the Authority's direction. Thus, with regard to the period up to 5th October 2005 which was followed by H.E's instructions on 18th October 2005, Oman Mobile's difficulty not to have Number Portability in place, can be understood.

As far as the period from 5 October 2005 is concerned, followed by H.E. direction given on 18th October 2005, giving three months to parties to implement Number Portability there is good record that serious discussions and meetings were held to make progress on the issue.

However, from the time of TRA letter of 05th October 2005 and subsequent direction by H.E. on 18/05/2005, Nawras endeavored to meet its obligation but Oman Mobile did very little except attending to the meetings. It should have taken active steps to get ready for Number Portability, which they did not do and simply relied on the statement that it cannot order and implement MNP until the negotiations are complete and TRA orders them to purchase the system. (TRA letter to Oman Mobile dated 21/12/2005, Oman Mobile's reply on 7 February 2006 and minutes of the Hearing Session held on 27/12/2005).

As clearly shown earlier that Oman Mobile did not require any further TRA instructions on this issue as they were told to prepare for decentralized solution, which is an independent system, and in any case, both parties wish to use SRF solution and not “IN” which is also appropriate.

In fact, Oman Mobile only approached vendors when TRA asked it to produce evidence of time frame. Therefore, Oman Mobile has been slow in this situation as pointed earlier in issue number two.

Neither material nor circumstantial evidences have been produced to prove that the delay was intended to hinder Oman Mobile subscribers from moving to Nawras. The delay was because of their inefficiency coupled with phenomenon of going through with setting up new company structure etc.

[Issue No. 4]

Whether Nawras should be permitted to port in mobile numbers if the TRA is satisfied and accepts Oman Mobile's arguments that it cannot implement a fully-fledged automated MNP system by 29 January 2006?

As discussed, in issue No. 2 & 3 above, that 29 January 2006 was unreasonable date to implement Number Portability, TRA based on Nawras' proposal on 30th November 2005 gave Oman Mobile port-out as one of the options to be considered.

However, it has become apparent from the evidence before the Authority that one-way porting requires upgradation of the existing systems by Oman Mobile. It is practically impossible for Nawras to process one-way porting applicants if Oman Mobile does not carryout system upgradation. Therefore, the issue of one-way porting cannot be completed before six months of Oman Mobile's contracting.

Thus, the Authority feels that Oman Mobile needs the same period to implement a permanent solution to introduce Number Portability. Therefore if it is going to be given time, it should be given time so a permanent solution to Number Portability is provided, and not just for one-way porting.

Nawras in advocacy of its issue number 4 of mandatory porting stated that: *it has incurred additional costs by increasing efforts with the view to complying with the three months period set by His Excellency the Minister and the TRA. Nawras is of the opinion that the above deadline is now jeopardized due to the position now adopted by Oman Mobile. Therefore, Nawras submits that it is entitled to claim any additional costs incurred in this regard.*

It stated that: *the actual additional costs will be the subject of another request for determination. For the purpose of this submission, Nawras requests the TRA to declare that in principle Nawras is entitled to be reimbursed for such additional costs.*

As the introduction of MNP is obligatory to Oman Mobile, it is also obligatory to Nawras. Nawras, however, did not make serious efforts until September 2005 to negotiate Number Portability implementation arrangement with its counterpart. Thus, TRA wrote letter to all the parties on 5th October 2005.

There were no instructions given to Nawras to prepare for one-way porting. Nawras itself voluntarily made a statement on 30th November 2005 that it can provide one-way porting, and this has been reviewed by the Authority only as an option to achieve progress in the negotiations. Oman Mobile did not however show its interest to accept it, as it appeared later upon investigation that it is not practical.

Thus the question of reimbursement does not arise. However, as this matter is not pleaded, this statement of the Authority is made as obiter dicta and not as ratio decidendi of the case.

[Issue No. 5]

Whether a customer should be required to settle bills with the Donor Service Provider (DSP) as a pre-condition for porting his numbers to the Receiving Service Provider (RSP)?

Oman Mobile is insisting that customers must settle their outstanding bills with the previous operator before their number is ported to the new operator, as this will stop debt accumulation on the part of porting customers and will preserve the operators' rights. Nawras, on the other hand, do not believe numbers should be used as a security for payment of outstanding bills.

We also noted the comments, which OECD Communication Outlook pointed out that *"In a number of countries, for example, contracts for cellular mobile services are renewed tacitly every year which may mean that a customer can not change service provider until an existing contract has expired. Although, this issue is often one which falls into the policy competence of consumer protection agencies, it nevertheless has implications in creating more market flexibility and thus, increasing effective competition in the market."*

Numbers are not the property of the operators. They are national assets, but the subscribers should not abuse this privilege and hold on to the number without paying for the services. It is obvious that the "Donor Service Provider" claims settlement of its debts before allowing the customer to port to another operator.

[Issue No. 6]

What validation processes should be adopted by the DSP and the RSP when handling an application to port a mobile number from one operator to another and the maximum time allowed for validation of porting requests?

The time scales for the preparation period following a porting request should be such that customers are not deterred from porting their numbers.

It may be advisable to allow sufficient time for the donor operator to check whether a mobile number has been ported without the customer's knowledge or consent. The Donor Service Provider will need to verify whether the customer who has requested porting is the authorized customer by ensuring that the personal information provided is correct.

TRA feels that 2 working days is reasonable time period for authentication process as long as the customer is advised by Recipient

Service Provider that he has an obligation with the current service provider for any existing contracts and outstanding bills as explained above.

[Issue No. 7]

Whether the DSP is allowed to directly charge customers for exporting a number?

Nawras stated in their pleadings that the RSP should be allowed to charge customers a porting fee and this fee maybe waved at RSP's discretion. Furthermore, it proposed a fee of OR 3 per ported number paid by RSP to DSP. Oman Mobile also suggested OR 3, however it felt that the customer should directly pay to DSP.

The study conducted by TRA has described the Administration and Operational costs per operator and per ported number as being ongoing costs that will continue after the initial establishment of the new service (porting of the number) included in this category. All those costs are not directly associated with call processing, some will be related to the creation of entries into the database(s) and its periodic updating of the call control databases while others will be the employee-related and network costs associated with processing new or changed service. These costs per operator and ported number should be recovered by the exporting operator from the importing operator only to the extent that they relate to individual porting subscribers.

The Authority determines that the importing operator (RSP) to charge the customer a one-off fee of OR 3, which is payable to DSP for using MNP. The RSP may waive such fee for the benefit of the customer, if it so wishes.

[Issue No. 8]

Whether the operators are entitled to recover any capital expenditure incurred for the design, development, and implementation of MNP in Oman?

One of the costs identified by TRA study is Network and System Setup cost. These costs represent the investments made by the operators in their networks and operating systems necessary to implement Mobile Number Portability. In most other jurisdictions, e.g.

throughout the European Community, Operators are required to each bear their own set-up costs, and cannot recover these costs from other Operators.

TRA believes that the same system should apply here. These costs should be borne by each operator individually and operators should not be permitted to recover these costs from other operators.

[Issue No. 9]

Whether Omantel is obliged to pay a transit fee for routing calls to ported mobile numbers through the number range owner?

In Order to provide Number Portability, one has to route the calls. There are two ways of routing calls:

- 1) Direct Routing: This option allows calls to be routed directly from the donor network to the subscription network.
- 2) Indirect Routing: This is an option, which allows calls to be routed via the number range holder network to the ported subscriber's subscription network.

For option, one (1) above the MNP query is done in originating network. The NP database stores the portability and routing information of all subscribers in the portability domain.

All call related messages for ported and other subscribers are acknowledged with appropriate routing information in order to route the call to the recipient network. Both Oman Mobile and Nawras have adopted "Direct Routing: while Omantel has chosen to select "Indirect routing "operation 2 above. It is worth mentioning here that *Omantel has stated that the MNP is being implemented for the benefit of Mobile operators and Omantel do not stand to gain anything from this arrangement. Hence, they have decided to adopt "Indirect Routing" whereby they will forward the MSISDN to the number range owner. Hence, a call from Omantel will always be routed to the network that was originally issued with the number range by utilizing number prefix (95 for Nawras, and 99 or 92 Oman Mobile).*

The MNP platform of the number range owner will analyze the received MSISDN and re-route the request to the appropriate network. If there is no entry in the number portability database of the called

number, then it is assumed to be on the network that the request has arrived at and the request will then be routed to the Home Location Register (HLR) for local processing. The network that was originally allocated the number range will always be responsible for maintaining database record that points to the network that the mobile is currently ported to. It will be the responsibility of the number range owner to verify whether the number is posted and further transfer the call to the recipient network.

On this basis, Omantel has objected to the request of Nawras to pay for any transit charges that are incurred for processing the call to the recipient network. Omantel has recommended in their document submitted for determination that the recipient network operators should be responsible to pay the transit operator (Number range owner) for any transit fees on calls made to ported number.

Omantel in its pleading stated, "There are several costing models practiced internationally in determining who should bear the additional cost for the routing of calls to ported mobile numbers. Cost can be born by-

- The terminating network (the recipient network).
- The network originally associates with the number (the RNO).
- The originating network, or
- Divided among the involved parties.

Local market characteristics have an impact on the decision to determine a costing model for the call routing to ported numbers. In Oman, fixed telephone subscriber represents a clear minority of all telephone users (less than 20%). However, fixed telephone subscribers generate 3 times more traffic to mobile network than mobile subscribers generate to fixed telephones. In terms of interconnection, conveyance fees the cost: revenue ratio is approximately 10:1 seen from an Omantel perspective. Therefore, the cost aspects related to implementation, operation and call routing of MNP should not be borne by Omantel.

Omantel proposes a model of charging based on the logic the one who keeps the revenue stream or the benefiting party should bear the cost for call routing. Upon request from a mobile user, to port a number, it is the RNO/RSO who triggers the chain of actions that leads to the portation. After completion of this event, the RNO/RSO gets the revenues from the ported mobile subscribers.

As a consequence of this, Omantel position is the terminating network (Recipient Network Operator) must bear the additional cost for calls routing to ported numbers." (Last Para pg. 2 & 3 of Omantel Submissions).

TRA study has recommended that when a fixed network does not have access to the mobile number portability database then they may initially route a call to the number range owner but it would then be the responsibility of the receiving mobile network to onward-route the call to the "correct" network. However, the incremental cost associated with call by all processing should be recovered directly from the interconnected operator in the same manner as normal conveyance interconnection charges. These costs should be recovered directly from the interconnected operator to the extent that these are additional costs caused by mobile number portability and over the cost that would have been incurred for routing of the call without mobile number portability.

The study has identified additional call conveyance costs to include database query fees for mobile Number Portability, and additional transport fees for non-optimal routing of calls between networks.

These should be the additional costs caused by mobile Number Portability, over and above the costs that would have been incurred for the routing of calls without mobile Number Portability.

[Issue No. 10]

Should different tariffs be charged for call ported numbers?

Nawras had indicated that calls to ported numbers may be charged differently. In order that a caller knows, it is a ported number, Nawras had proposed setting-up a web-service, and an IVR-solution, where subscribers can check by which operator a called number is serviced. Generally speaking, a caller should not notice a substantial difference

in costs between a call to a non-ported number and a call to a ported number. MNP could, however, raise one complication; the caller may find that there is a noticeable difference in costs to the same number before and after the porting.

Allocating higher costs to the caller would not be fair, as the caller would have difficulty to identify that the number he is calling is a ported number.

Therefore, the Authority decides as follows:

Based on the above, and pursuant to articles (8/18), (28) & (41) of the Telecommunications Regulatory Act issued by the Royal Decree No. 30/2002, and after perusal of all the documents presented in this complaint, hearing pleadings and views of both parties, and after observing all the circumstances and events of this complaint, TRA determines as follows:

Issue 1 It is possible to order MNP independently and an operator does not have to wait for negotiations with other operators.

Issue 2 The Authority considers as reasonable the nine months period proposed by Oman Mobile to implement MNP. As Oman Mobile failed to take the initiative after the instructions of TRA, Oman Mobile cannot benefit from this. Therefore, TRA determines that Oman Mobile must comply with the provision of this facility within five months from the date of issuing this determination, since it had wasted, due to its carelessness and slowness, four precious months since 5th October 2005.

Issue 3 His Excellency's directions on 18th October 2005 were short of determination. These directions were not meant to fix a final date to implement the proposed solution as much as intending to urge both parties to arrive at solutions to the problems facing them. As such, these directions shall not be misinterpreted or be construed out of their context. The meeting was intended to discuss an urgent hot issue, which is roaming, and this subject was brought up generally. None of the points agreed in the meeting are regarded as dispute resolution, as the conditions and procedures to resolve a

dispute were not fulfilled.

- Issue 4** One-way porting requires the same period that Oman Mobile will need to implement MNP according to TRA guidelines. Oman Mobile needs to upgrade its systems to interface with the system of the other party and therefore, a permanent solution for MNP should be provided and not just one-way porting because it is practically impossible. Also Nawras should not rely on the option of one-way porting as a reason to claim any reimbursement, as this was not based on TRA instructions or Oman Mobile's acceptance. It was however, a voluntary decision by Nawras the application of which proved later to be practically impossible.
- Issue 5** The porting out subscriber has to pay his last bill before being allowed to port out. The Recipient Service Provider must take the obligation to advise the porting customer that all his outstanding bills with the previous service provider must be settled within one month or he will risk his number being temporarily disconnected. The outstanding contractual obligations of business customers must be settled according to their contracts
- Issue 6** Two working days is a reasonable time period for authentication process as long as the customer is advised by Recipient Service Provider that he has an obligation with the current service provider for any existing contracts and outstanding bills.
- Issue 7** The Recipient Service Provider may charge the customer a one-off fee of OR 3 payable to the Donor Service Provider for using MNP. The RSP may choose to incur such cost and exempt the customer, at its own discretion.
- Issue 8** Any capital expenditure incurred for the design, development and implementation of MNP in Oman should be borne by each operator individually and operators are not permitted to recover these costs from other operators.

Issue 9 Omantel is not required to pay for call routing and whoever is the beneficiary operator (the recipient operator), should pay for the cost of checking MSISDN and forwarding the call to the destination network of the operator as the latter is the owner of the destination network.

Issue 10 Allocating higher costs to the caller would not be fair as the caller would have difficulty to identify that number he is calling is a ported number. Thus, the cost of calls made from ported numbers should be equal to the cost of the calls made to non-ported numbers of a given operator.

SIGNATURES:

**H.E. Sheikh. Mohammed Al-Harthy,
TRA Chairman.**

**Eng. Naashiah Al-Kharusi
Member of the TRA Temporary Committee**

**Col. Mohsin Al-Hafeedh
Member of the TRA Temporary Committee**