

Charging for Number Portability

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1 Scope

This document specifies the changing in charging arrangements that will result from number portability.

This document applies to:

- fixed number portability
- mobile number portability
- freephone number portability
- premium rate number portability

and affects all operators in Malta who handle calls to ported numbers.

This document defines in more detail than the Decision what may be charged and gives options for how the charges may be calculated and in what circumstances transitory errors are permissible during the process of porting a number.

2 Definitions

Block Operator: The operator to whom the number block was allocated that contains the number that is being ported.

DDI number: a single number having the form of “abcdxxxx” or “abcdexxx” (known as 4+4 and 5 + 3 DDI respectively) where the digits x are not used for routing in the public network. To avoid any doubts a DDI number is allocated to a single customer but represents a block of 10,000 or 1,000 numbers.

Freephone content provider: Any person that is party to a contract with the provider of freephone services and so is the party identified by an 800 number to whom the calls are ultimately delivered. A Freephone content provider generally pays to receive calls made to freephone numbers. The calls may include normal conversational calls and calls to individual lines and call centres and are not limited to calls to access stored content.

Freephone number: A number in the 800x range.

Premium number: A number in the 50, 51 and 52 range.

Premium service provider: The called party identified by the ‘5’ number to whom the calls are ultimately delivered. The PRSP receives the payments from the terminating operator. The calls consists mainly of normal conversational calls or calls to access stored content.

Recipient operator: Both the recipient operator and any sales agents or other parties acting for them.

Subscriber: Any person who or which is party to a contract with the provider of publicly available electronic communications services for the supply of such services (as defined in the Electronic Communications (Regulation) Act CAP 399)

Note: Where there is a difference between the subscriber and the user, the rights to number portability apply to the subscriber rather than the user. Moreover, wherever the word “subscriber” is used throughout this document, it shall have the same meaning ascribed to it as “Subscriber”.

3 Abbreviations

ID	Identity card number, or passport number where the person does not have a Maltese identity card
CDR	Call Detail Record
CLI	Calling Line Identity

4 Transaction and process charges

Decision 6 of the “Introducing Number Portability in Malta” Report on Consultation and Decision states:

- *Each operator affected by number portability shall bear its own set-up costs,*
- *The donor operator shall not charge the porting subscriber for requesting number portability,*
- *The donor operator and the block operator may charge the recipient operator for the reasonable recurring costs for;*
 - *An unsuccessful porting transaction¹,*
 - *A successful porting transaction,*
- *The recipient operator may charge the subscriber for requesting number portability,*
- *Operators may waive their rights to charges or simplify/modify these arrangements by mutual agreement and with the consent in writing of the MCA.*

This shall be applied as follows:

The donor may charge the recipient a single charge for each porting transaction. This charge should be based on the following costs:

- The costs of the checks necessary to respond to the Authorisation Request and the Instruction Request, and in the case of the fixed operators also the Finalisation Request.
- The costs of the checks necessary to respond to the Authorisation Request in the case of unsuccessful portings.¹
- The manpower for operating the porting contact centre and operating the webservice.
- The costs of applying and managing the network changes, ie the cost of changing data in switches.

The block operator may charge the recipient a single charge for each "subsequent" porting transaction where it has to change its onward routing settings. This charge should be based on the following costs:

- The costs of applying and managing the network changes, ie the cost of changing data in switches.

The following are not eligible for inclusion:

¹ The possibility to charge for unsuccessful portings as part of the Authorisation request was introduced in March 2010. *Reference:* “Number Portability Wholesale Charges” Responses to Consultation & Decision.

- The costs of setting up and maintaining the webservice
- The costs of any software changes or permanent data changes made to the switches and network (they are regarded as set up costs)
- The costs of any hardware or software procured or used for the porting transactions and their maintenance (they are regarded as set up costs)
- The preparation of new routing tables to support the porting of a DDI number because all operators bear these costs

These ineligible costs will be borne by all subscribers.

The costs charged shall be based on the cost of efficient processes.

Where a donor operator makes a site visit or deploys staff at an exchange to interact in real time with the staff of the recipient operator eg to support porting of a number used by a PBX or a DDI number then the donor operator may charge their costs and may charge at one level for normal working hours and a higher level for out of hours working.

Where a donor operator has accepted a porting in the Authorisation Response but subsequently the recipient operator fails to proceed to complete the porting in the times specified for the recipient operator so that the porting fails, the costs may be treated as if the porting were successful because the failure is not due to the donor.

In calculating the charges, an operator may:

- Use the charges set out in table 1 without calculating exact costs, or
- Use the same charges as another operator to achieve a reciprocal arrangement between any two operators without calculating the exact costs, or
- Propose a cost based tariff where they may calculate the costs of successful portings by multiplying the costs of all portings by the proportion of successful ones.

Operators may decide to waive charges to reduce administrative costs. This should be done in a non-discriminatory manner but charges may always be waived if the volumes of portings between two operators are similar.

NUMBER PORTABILITY TYPE	CHARGE
Unsuccessful Portings	
Personal Prepaid	€ 0.75
Personal Postpaid	€ 1.20
Non-Personal	€ 1.65
Mobile	
Prepaid	€ 1.35
Post paid	€ 2.25
Non-Personal	€ 2.70
Single Fixed Number (non-PRA)	
Personal	€ 3.45
Non-Personal	€ 4.35
Single Fixed PRA number	€ 12.45
DDI Number	€ 31.15
Freephone	€ 4.35
Premium Rate	€ 4.35

Table 1: Baseline transaction charges (excluding VAT)² applicable from 1st April 2010

5 Call related charges

Call related charging is affected by:

- Different termination rates and on-net discounts for different operators who are exchanging ported numbers affecting retail and interconnection charging
- Additional conveyance charges affecting interconnection charging.

5.1 Retail charging

Retail charging is normally based on CDRs that are collected and then "rated" by the application of charging rates. When a number is ported, different rates may need to be applied before and after the porting. This means that the rating systems will need to:

- Analyse whether or not the number is ported
- Apply different rates at different times of the porting day if the system is to be fully accurate.

The latter requirement may not be practicable especially if the rating system works in batch mode, eg rating all the traffic daily. Also time may be needed for the newly ported numbers to be entered into the rating system. This will especially affect fixed operators who may not do real time rating.

In their retail charging, operators should apply the correct charging as soon as possible after a number has been ported. Where this is not practicable, operators may continue to charge at the rates that apply before the porting until midnight on the working day after the porting has taken place, ie the day when the message of the

² The separate transaction charges applicable for 'Personal' and 'Non-Personal' portings were introduced in March 2010. *Reference*: "Number Portability Wholesale Charges" Responses to Consultation & Decision.

successful porting is broadcast on the webservice. For example if a porting takes place on Tuesday they may continue to charge at the non-ported rates until midnight on Wednesday.

Operators shall not charge more for a call to a ported number served on a given network than they charge for a call to a non-ported number on the same network.

In the case of calls to freephone numbers, operators may charge the freephone content provider differently for a call to a ported freephone number served on their network than they charge for a call to a non-ported number on their network.

5.2 Interconnection charging

Whenever a call is routed differently because of portability, a portability prefix is added to the called party number. This denotes that the number has been found to be ported, and identifies the operator that is currently serving the called party.

The termination charges payable to the recipient network and the conveyance charges payable to the transit operator/s (where applicable) shall be paid by the operator from whose network the call originated. The originating operator will only pay the operator to whom the call was forwarded. The latter will in turn pay the operator to whom the call was subsequently forwarded etc. For example, if an operator A originates a call and sends it to operator B who in turn transits the call to operator C, then the charges will be as follows: A pays B the sum of conveyance charge of B plus termination charge of operator C. B will then pay to C the termination charge of operator C. This is depicted schematically in the diagram below.

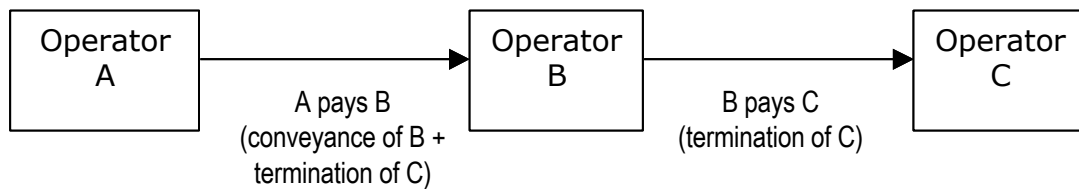


Figure 1: Payments for conveyance

The following diagrams show the sequence of a porting between mobile operators with a fixed incumbent using onward routing and a third mobile operator using All Call Query (direct routing). "R" denotes Retail charge, "T" denotes a Termination charge, "r" denotes Recipient and "d" denotes donor.

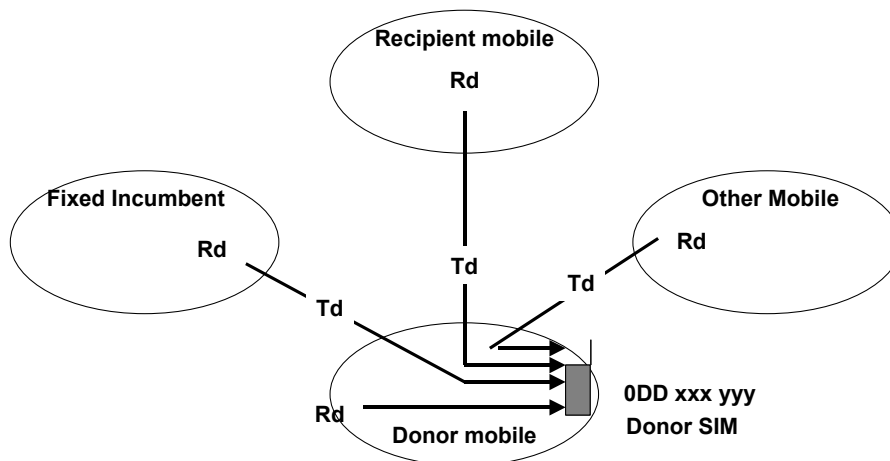


Figure 2: Before porting

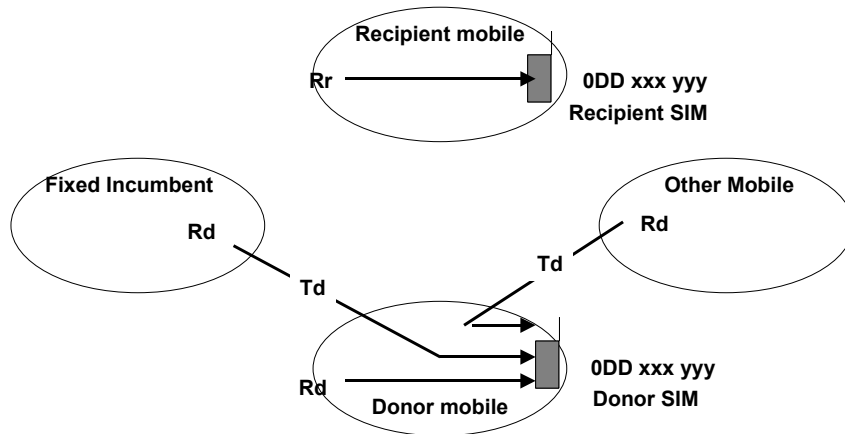


Figure 3: After activation on recipient – short period of overlap

The delay by the donor before deactivating the account and applying onward routing is designed to ensure that other operators who are using All Call Query, which includes all other mobile operators, have time to update their routing database before the donor deactivates the account.

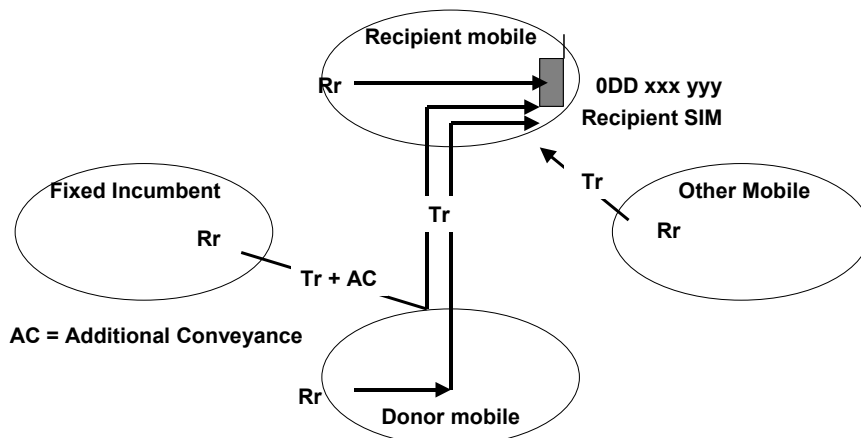


Figure 4: After routing updates

Each terminating operator shall charge its own termination charge for calls that are terminated on its own network. Thus as soon as a number is imported the recipient shall charge its own termination charge for terminating calls to that number.

Each donor/block operator needs to change from charging its own termination charge to charging the termination charge of the recipient plus the additional conveyance charge. There will be a time lag while the charging systems are updated.

The block operator will need to ensure that it can charge differently for exported numbers and this will mean that its charging system must analyse individual numbers. When there are three or more operators of the same type who are porting numbers between each other, the charging system will both have to know that the number is ported and also know which operator it is ported to.

In their interconnection charging, block and donor operators should apply the correct charging as soon as possible after a number has been ported. Where this is not practicable, operators may continue to charge at the rates that apply before the porting until midnight on the working day after the porting has taken place, ie the day when the message of the successful porting is broadcast on the webservice. For

example if a porting takes place on Tuesday they may continue to charge at the non-ported rates until midnight on Wednesday.

Where $T_r > T_d$, a block/donor operator will lose money per minute in the period between the porting and the updating of the charging. Where $T_r < T_d$, a block/donor operator will gain money per minute in the period between the porting and the updating of the charging. Where the volume of portings is balanced the gains and losses will approximately cancel out. Where there is imbalance they will not. Thus for portings to a new entrant, where there is likely to be imbalance, the existing operators will lose if the terminating rate of the new entrant is higher and therefore they may have a strong incentive to update the charging quickly.

A block operator may charge an additional conveyance charge for onward routing. This charge shall be based on the following costs:

- The costs of the GMSC and one inter-operator transmission link treated under the cost accounting methods applicable as agreed with MCA
- The marginal costs of using any SRF and number portability database but not the capital costs as they are part of the set-up.
- Relevant overheads

Operators may either:

- calculate these costs of additional conveyance and charge a cost based charge, or
- charge the charges given in Table 2, which are based on benchmarking, or
- agree to waive the additional conveyance charges.

	Charge
Additional conveyance across a fixed network	<i>To be decided by MCA</i>
Additional conveyance across a mobile network	<i>To be decided by MCA</i>

Table 2: Baseline additional conveyance charges

5.3 Interconnection charging (freephone)

The following extends the provisions in the Report on further Consultation and Decision: "A Framework for Freephone Services in the 800 range", which was published by the MCA in August 2008.

According to this decision, there are two different types of freephone number:

- Numbers (eg 8000 range) that are free to the caller from both fixed and mobile
- Numbers (eg the 8003, 8004, 8007 ranges) that are free to the caller from fixed but where callers from mobile pay a normal call charge.

5.3.1 Interconnection Charges for calls to numbers that are free to the caller from both fixed and mobile (eg 8000 range)

As established in decision 2.1 of the above mentioned framework, the MCA had determined that for calls to freephone numbers that are free to the caller (i.e., all calls

to the 8000 range and calls from fixed networks to the 800 range), the terminating operator (freephone network provider) shall pay the originating operator one of the following for call origination.

- A charge equal to the originating operator's interconnection termination rate, unless the originating operator's origination rate is regulated in which case the originating rate applies (default option); or
- A charge agreed by negotiation with the originating operator.

If a transit operator is present then the terminating operator (freephone network provider) shall pay the transit operator one of the following:

- For calls to the 800 & 8000 range originating from a fixed network: A charge equal to the termination rate determined by the MCA for calls that terminate on fixed networks (default option); or
- For calls to the 8000 range originating from a mobile network: A charge equal to the terminating rate determined by the MCA for calls that terminate on mobile networks (default option); or
- A charge agreed by negotiation with the transit operator.

A negotiated rate shall apply between the transit operator and originating operator.

In the case of ported freephone numbers, this formulation shall apply to the block operator in same way that it applies to a transit operator.

5.3.2 Interconnection Charges for numbers (that are free to the caller from fixed but where callers from mobile pay a normal call charge (eg the 800X ranges).

As established in decision 2.2 of the above mentioned framework, the MCA also determined that for calls to freephone numbers in the 8003, 8004, 8007 ranges originating from mobile networks where the mobile operator is allowed to charge the caller, the originating mobile operator shall pay the terminating operator (freephone network provider) one of the following:

- a charge that is equal to the termination rate determined by the MCA for calls that terminate on fixed networks (default option).
- a charge agreed by negotiation with the terminating operator.

If a transit operator is present then the transit operator shall pay the terminating operator (freephone network provider) one of the following:

- a charge that is equal to the termination rate determined by the MCA for calls that terminate on fixed networks (default option).
- A charge agreed by negotiation with the terminating operator (freephone network provider).

A negotiated rate shall apply between the transit operator and originating operator.

In the case of ported freephone numbers, this formulation shall apply to the block operator in same way that it applies to a transit operator.

The revenue flows applicable in the case of calls described above in section 5.3.1 and in the case of calls originating from a fixed network as described in section 5.3.2

are reversed to those normally applicable in conventional calls. To this effect the originating operator shall not receive any retail revenues from the subscriber, and the transit operator shall be paid its interconnection charge directly by the terminating operator. Thus the originating operator is incentivised to adopt a direct routing solution.

6 SMS related charges

If all mobile operators in Malta use direct routing then there will be no additional conveyance charge to apply for SMSs originated in Malta.

In principle, there could be an additional conveyance charge payable for use of the SMS/NPDB for handling a SRI_SMS query from operators outside Malta, but the operators have agreed to waive the charge at present. This arrangement could be changed in the longer term.

7 MMS related charges

MMS uses the Internet for the conveyance of messages.

The operators have agreed to waive the any possible additional conveyance charges relating to MMS at present. This arrangement could be changed in the longer term.